



**List of Measures under Consideration for December 1, 2014**

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## **OVERVIEW**

### ***Background***

The Centers for Medicare & Medicaid Services (CMS) is issuing this List of Measures under Consideration (MUC) (the List) to comply with Section 1890A(a)(2) of the Social Security Act (the Act), which requires the Department of Health and Human Services (DHHS) to make publicly available a list of certain categories of quality and efficiency measures that it is considering for adoption through rulemaking for the Medicare program. Because this List contains measures that were suggested to us by the public, this List contains more measures than will ultimately be adopted by CMS for optional or mandatory reporting programs under Medicare. When organizations, such as physician specialty societies, request that CMS consider measures, CMS makes every effort to include those measures and make them available to the public so that the Measure Applications Partnership (MAP), the multi-stakeholder groups convened as required under 1890A of the Act, can provide their input on all potential measures. CMS will continue its goal of aligning measures across programs. Measure alignment includes establishing core measure sets for use across similar programs, and looking first to existing program measures for use in new programs. Further, CMS programs must balance competing goals of establishing parsimonious sets of measures, while including sufficient measures to facilitate multi-specialty provider participation.

## ***Statutory Requirement***

Section 3014 of the Affordable Care Act (ACA) (P.L. 111-148) created a new Section 1890A of the Social Security Act, which requires that DHHS establish a federal pre-rulemaking process for the selection of certain categories of quality and efficiency measures for use by DHHS. These categories of measures are described in section 1890(b)(7)(B) of the Act. One of the steps in the pre-rulemaking process requires that DHHS make publicly available, not later than December 1<sup>st</sup> annually, a list of quality and efficiency measures DHHS is considering adopting, through the federal rulemaking process, for use in the Medicare program.

The pre-rulemaking process includes the following additional steps:

1. Providing the opportunity for multi-stakeholder groups to provide input not later than February 1<sup>st</sup> annually to DHHS on the selection of quality and efficiency measures;
2. Considering the multi-stakeholder groups' input in selecting quality and efficiency measures;
3. Publishing in the Federal Register the rationale for the use of any quality and efficiency measures that are not endorsed by the entity with a contract under Section 1890 of the Act, which is currently the National Quality Forum (NQF)<sup>1</sup>; and

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<sup>1</sup> The rationale for adopting measures not endorsed by the consensus-based entity will be published in notice-and-comment rulemaking where such measures are proposed and finalized.

4. Assessing the quality and efficiency impact of the use of endorsed measures and making that assessment available to the public at least every three years. (The first report was released in March 2012 and is available at: <https://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/QualityMeasures/Downloads/NationalImpactAssessmentofQualityMeasuresFINAL.PDF>.) The next report is expected to be released in March 2015.

### ***Fulfilling DHHS's Requirement to Make Its Measures under Consideration Publicly Available***

The attached MUC List, which is compiled by CMS, will be posted for CMS on the NQF's website

(<http://www.qualityforum.org/MAP/>). This posting will satisfy an important requirement of the pre-rulemaking process by making public the quality and efficiency measures DHHS is considering for use in the Medicare program. Additionally, CMS's website will indicate that the MUC list is being posted on NQF's website.

### ***Included Measures***

This List identifies the quality and efficiency measures under consideration by the Secretary of DHHS for use under the Medicare program. Measures that appear on this List but are not selected for use under the Medicare program for the current rulemaking cycle will remain under consideration. They remain under consideration only for purposes of the particular program or other use that CMS was considering them for when they were placed on this List. These measures can be selected for those previously

considered purposes and programs/uses in future rulemaking cycles. The 2013 List and the Measures Application Partnership Report can be found at: [http://www.qualityforum.org/Publications/2014/01/MAP Pre-Rulemaking Report 2014 Recommendations on Measures for More than 20 Federal Programs.aspx](http://www.qualityforum.org/Publications/2014/01/MAP_Pre-Rulemaking_Report_2014_Recommendations_on_Measures_for_More_than_20_Federal_Programs.aspx)

### ***Applicable Programs***

The following programs that now implement or will implement quality and efficiency measures have been identified as meeting the criteria listed above. Accordingly, any quality and efficiency measures DHHS considers for these programs must be included in the List of Measures under Consideration:

1. Ambulatory Surgical Center Quality Reporting Program
2. End-Stage Renal Disease (ESRD) Quality Incentive Program
3. Home Health Quality Reporting Program
4. Hospice Quality Reporting Program
5. Hospital-Acquired Condition Reduction Program
6. Hospital Inpatient Quality Reporting Program
7. Hospital Outpatient Quality Reporting Program
8. Hospital Readmission Reduction Program

9. Hospital Value-Based Purchasing Program
10. Inpatient Psychiatric Facility Quality Reporting Program
11. Inpatient Rehabilitation Facility Quality Reporting Program
12. Long-Term Care Hospital Quality Reporting Program
13. Medicare and Medicaid Electronic Health Record (EHR) Incentive Program for Eligible Professionals
14. Medicare and Medicaid EHR Incentive Programs for Eligible Hospitals or Critical Access Hospitals
15. Medicare Shared Savings
16. Medicare Physician Quality Reporting System
17. Physician Compare
18. Physician Feedback/Quality and Resource Utilization Reports
19. Physician Value-Based Payment Modifier Program
20. Prospective Payment System-Exempt Cancer Hospital Quality Reporting Program
21. Skilled Nursing Facility Value-Based Purchasing Program

## ***Measures List Highlights***

Through publication of this List, CMS will make publicly available and seek the multi-stakeholder groups' input on 202 measures under consideration for use in the Medicare program.

We note several important points to consider and highlight:

- ◆ Of the applicable programs covered by the ACA 3014 pre-rulemaking process, all programs contributed measures to this List except the Hospice Quality Reporting Program. All Hospice Quality Reporting measures that CMS is considering for possible future adoption have previously appeared on this List, and CMS has received MAP input on those measures. This Program has submitted no additional measures at this time for consideration for the current rulemaking cycle or subsequent rulemaking cycles.
- ◆ If CMS chooses not to adopt a measure under this List for the current rulemaking cycle, the measure remains under consideration by the Secretary and may be proposed and adopted in subsequent rulemaking cycles.
- ◆ The NQF already endorses many of the measures contained in this List with a number of other measures pending endorsement.
- ◆ Some measures are part of a mandatory reporting program. However, a number of measures, if adopted, would be part of an optional reporting program. Under this type of program, providers or suppliers may choose whether to participate.



- ◆ CMS sought to be inclusive with respect to new measures on this List. For example, two meetings were convened to obtain input and consensus on this List from across the DHHS.
- ◆ CMS will continue aligning measures across programs whenever possible, including establishing “core” measure sets, and, when choosing measures for new programs, it will look first to measures that are currently in existing programs. CMS’s goal is to fill critical gaps in measurement that align with and support the National Quality Strategy.
- ◆ This List includes measures that CMS is currently considering for the Medicare program. Inclusion of a measure on this List does not require CMS to adopt the measure for the identified program.
- ◆ Measures contained on this List had to fill a quality and efficiency measurement need and were assessed for alignment amongst CMS programs when applicable.
- ◆ In an effort to provide a more meaningful List, CMS included only measures that contain adequate specifications.
- ◆ The following components of the DHHS contributed to and supported CMS in a majority of measures on this List:
  1. Office of the Assistant Secretary for Planning and Evaluation
  2. Office of the National Coordinator for Health Information Technology
  3. National Institutes of Health
  4. Agency for Healthcare Research and Quality
  5. Health Resources and Services Administration

6. Centers for Disease Control and Prevention
7. Substance Abuse and Mental Health Services Administration
8. Office of the Assistant Secretary for Planning and Evaluation
9. Indian Health Service
10. Administration for Community Living

### ***How to Navigate the Document***

Headings in this document have been bookmarked to facilitate navigation. This document consists of three tables:

- ◆ List of Measures under Consideration (page 14)
  - This table contains the complete list of measures under consideration with basic information about each measure and the programs for which the measure is being considered.
- ◆ Appendix A: Measure Specifications (page 104)
  - This table details the numerator, denominator, and exclusions for each measure. It also includes the length of time the measure has been in use by any CMS quality reporting program, if applicable.
- ◆ Appendix B: Measure Rationale (page 222)
  - This table describes the rationale for the measure and/or the impact the measure is anticipated to achieve.

Each table is preceded by a legend defining the contents of the columns.

If you have questions or need additional information, please contact [Michelle.Geppi@cms.hhs.gov](mailto:Michelle.Geppi@cms.hhs.gov).

## COUNT OF MEASURES UNDER CONSIDERATION BY PROGRAM<sup>2</sup>

CMS PROGRAM	NUMBER OF MEASURES UNDER CONSIDERATION
Ambulatory Surgical Center Quality Reporting	9
End-Stage Renal Disease Quality Incentive Program	7
Home Health Quality Reporting	1
Hospice Quality Reporting	0
Hospital-Acquired Condition Reduction Program	2
Hospital Inpatient Quality Reporting	29
Hospital Outpatient Quality Reporting	16
Hospital Readmission Reduction Program	1
Hospital Value-Based Purchasing	12
Inpatient Psychiatric Facility Quality Reporting	4
Inpatient Rehabilitation Facility Quality Reporting	6
Long-Term Care Hospital Quality Reporting	4
Medicare and Medicaid EHR Incentive Programs for Eligible Professionals	31
Medicare and Medicaid EHR Incentive Programs for Eligible Hospitals or Critical Access Hospitals	4
Medicare Physician Quality Reporting System <sup>3</sup>	96

<sup>2</sup> A single measure may be under consideration for more than one program.

CMS PROGRAM	NUMBER OF MEASURES UNDER CONSIDERATION
Medicare Shared Savings	116
Physician Compare <sup>4</sup>	96
Physician Feedback/Quality and Resource Utilization Reports <sup>4</sup> (QRUR)	102
Physician Value-Based Payment Modifier <sup>4</sup>	102
Prospective Payment System-Exempt Cancer Hospital Quality Reporting	9
Skilled Nursing Facility Value-Based Purchasing Program	1

<sup>3</sup> Medicare Physician Quality Reporting System:

PQRS is the primary means of collecting physician quality data in the Medicare program. As Physician Compare, Physician Feedback, and Value-Based Modifier programs all take physician quality performance into account, all quality measures under consideration for PQRS would also be under consideration for the Physician Feedback/QRUR, Physician Value-Based Payment Modifier, and Physician Compare programs.

<sup>4</sup> Physician Feedback/QRUR, Physician Value-Based Payment Modifier, and Physician Compare:

Measures that are already finalized and remain current for the Medicare Physician Quality Reporting System, Hospital Inpatient Quality Reporting, and Hospital Outpatient Quality Reporting programs that are not specifically included on this list may also be considered for the Physician Feedback/QRUR, Physician-Value Based Payment Modifier, and Physician Compare programs. Therefore, for future regulatory action for the Physician Feedback/QRUR, Physician Value-Based Payment Modifier, and Physician Compare programs, CMS may consider measures that were included in the 2011, 2012, and 2013 Lists of Measures under Consideration; and measures that have been finalized and remain current in the 2007–2015 Physician Fee Schedule Final Rules, 2002–2015 Inpatient Prospective Payment System Final Rules, and 2008–2015 Hospital Outpatient Prospective Payment System Final Rules. The unique measures developed for these specific programs, such as cost measures, that are not found in the Medicare PQRS program are also included on this list.

## **LIST OF MEASURES UNDER CONSIDERATION**

### ***Table Legend for the List of Measures under Consideration***

CMS has included a list of terms used in the List of Measures under Consideration for clarity and consistency. They are presented below in the order in which they appear as headings in this List.

**MUC ID:** Gives users an identifier to refer to a measure.

- ◆ An “E” prefix indicates a measure that is currently endorsed by the NQF.
- ◆ A “D” prefix indicates a measure that was once endorsed by the NQF but has subsequently been de-endorsed.
- ◆ An “F” prefix indicates a measure that was submitted to the NQF for endorsement but was not endorsed.
- ◆ An “S” prefix indicates a measure that is currently submitted to the NQF for endorsement.
- ◆ An “X” prefix indicates a measure that has yet to be submitted to the NQF for endorsement.

**Measure Title:** Refers to the title of the measure.

**Description:** Gives users more detailed information about the measure, such as medical conditions to be measured, particular outcomes or results that could or should/should not result from the care and patient populations.

**Measure Type:** Refers to the domain of quality that a measure assesses:

- ◆ Process: Refers to a measure that focuses on a process that leads to a certain outcome, meaning that a scientific basis exists for believing that the process, when executed well, will increase the probability of achieving a desired outcome.
- ◆ Outcome: Refers to a measure that assesses the results that are experienced by patients who have received health care.
- ◆ Intermediate Outcome: Refers to a measure that aims to meet specific thresholds of health outcomes.
- ◆ Structure: Refers to a measure that assesses aspects of the health care infrastructure that generally are broad in scope and system wide (for example, staffing level).
- ◆ Efficiency: Refers to a measure concerning the cost of care associated with a specified level of health outcome.
- ◆ Patient Reported Outcome: Refers to a measure that focuses on a patient's report concerning observations of and participation in health care.
- ◆ Cost/Resource Use: Refers to broadly applicable and comparable measures of health services counts (in terms of units or dollars) applied to a population or event (broadly defined to include diagnoses, procedures, or encounters). A resource use measure counts the frequency of defined health system resources; some may further apply a dollar amount (for example, allowable charges, paid amounts, or standardized prices) to each unit of resource use—that is, monetizes the health service or resource use units.
- ◆ Composite: Refers to a measure that contains two or more individual measures, resulting in a single measure and a single score. Composite measures may be composed of one or more process measures and/or one or more outcome measures.

- ◆ Patient Engagement/Experience: Refers to a measure that uses feedback from patients and their families/caregivers about their experience and/or engagement in decision making around care.

**Measure Steward**: Refers to the primary (and secondary, if applicable) party responsible for updating and maintaining a measure.

**CMS Program(s)**: Refers to the applicable Medicare program(s) that may adopt the measure through rulemaking in the future.



**List of Measures under Consideration Table**

MUC ID	Measure Title	Description	Measure Type	Measure Steward	CMS Program(s)
X3719	Normothermia Outcome	This measure evaluates whether patients having surgical procedures under general or neuraxial anesthesia of 60 minutes or more in duration are normothermic within 15 minutes of arrival in PACU	Intermediate Outcome	ASC Quality Collaboration	Ambulatory Surgical Center Quality Reporting
X3720	Unplanned Anterior Vitrectomy	This measure evaluates the number of cataract surgery patients who have an unplanned anterior vitrectomy	Outcome	ASC Quality Collaboration	Ambulatory Surgical Center Quality Reporting
E0515	Ambulatory surgery patients with appropriate method of hair removal	Percentage of ASC admissions with appropriate surgical site hair removal.	Process	ASC Quality Collaboration	Ambulatory Surgical Center Quality Reporting
X3697	O/ASPECS Discharge and Recovery	Multi-item measure: P1: "Discharge instructions include things like symptoms you should watch out for after your procedure, instructions about your medicines, and home care. Before you left the facility, did you receive written discharge instructions?" P2: "Did your doctor or anyone from the facility prepare you for what to expect during your recovery?" P3: "Ways to control pain can include prescription medicine, over-the-counter pain relievers or ice packs, for example. Did your doctor or anyone from the facility give you information about what to do if you had pain as a result of your procedure" (of those that had pain as a result of the procedure). P4: "Before you left, did your doctor or anyone from the	Patient Engagement /Experience	Centers for Medicare & Medicaid Services	Ambulatory Surgical Center Quality Reporting, Hospital Outpatient Quality Reporting

MUC ID	Measure Title	Description	Measure Type	Measure Steward	CMS Program(s)
		<p>facility give you information about what to do if you had nausea or vomiting” (of those that had either nausea or vomiting as a result of either your procedure or anesthesia). P5: “Before you left, did your doctor or anyone from the facility give you information about what to do if you had bleeding as a result of your procedure” (of those that had bleeding as a result of the procedure). P6: “Possible signs of infection include fever, swelling, heat, drainage or redness. Before you left, did your doctor or anyone from the facility give you information about what to do if you had possible signs of infection (of those having signs of infection as a result of the procedure).</p>			
X3699	O/ASPECS Communication	<p>Multi-item measure: P1: “Did your doctor or anyone from the facility give you all the information you needed about your procedure?” P2: “Did your doctor or anyone from the facility give you easy to understand instructions about getting ready for your procedure?” P3: “Did the doctors, nurses and other staff explain things about your procedure in a way that was easy for you to understand?” P4 “Did your doctor or anyone from the facility explain the process of giving anesthesia in a way that was easy to understand? P5: “Did your doctor or anyone from the facility explain the possible side effects of the anesthesia in a way that was easy to understand?”</p>	Patient Engagement /Experience	Centers for Medicare & Medicaid Services	Ambulatory Surgical Center Quality Reporting, Hospital Outpatient Quality Reporting
X3698	O/ASPECS About Facility and Staff	Multi-item measure:	Patient Engagement	Centers for Medicare &	Ambulatory Surgical Center Quality

MUC ID	Measure Title	Description	Measure Type	Measure Steward	CMS Program(s)
		<p>P1: "When you arrived at this facility on the day of your procedure, did the check-in process run smoothly?"</p> <p>P2: "Was the facility clean?"</p> <p>P3: "Were the clerks and receptionists at the facility as helpful as you thought they should be?"</p> <p>P4: "Did the clerks and receptionists at the facility treat you with courtesy and respect?"</p> <p>P5: "Did the doctors, nurses and other staff treat you with courtesy and respect?"</p> <p>P6: "Did the doctors, nurses and other staff make sure you were as comfortable as possible?"</p>	/Experience	Medicaid Services	Reporting, Hospital Outpatient Quality Reporting
X3703	O/ASPECS Recommend	Survey question: Would you recommend this facility to your friends and family? Response options: Definatly no, Probably no, Probably yes, Definatly yes.	Patient Engagement /Experience	Centers for Medicare & Medicaid Services	Ambulatory Surgical Center Quality Reporting, Hospital Outpatient Quality Reporting
X3702	O/ASPECS Overall Facility Rating	Survey Question: Using any number from 0 10 10, where 0 is the worst facility possible and 10 is the best facility possible, what number would you use to rate this facility?	Patient Engagement /Experience	Centers for Medicare & Medicaid Services	Ambulatory Surgical Center Quality Reporting, Hospital Outpatient Quality Reporting
E0326	Care Plan	Percentage of patients aged 65 years and older who have a care plan or surrogate decision maker documented in the medical record or	Process	National Committee for Quality Assurance	Ambulatory Surgical Center Quality Reporting, Hospital

MUC ID	Measure Title	Description	Measure Type	Measure Steward	CMS Program(s)
		documentation in the medical record that a care plan was discussed but the patient did not wish or was not able to name a surrogate decision maker or provide a care plan			Outpatient Quality Reporting
X3717	Delivered Dose of Hemodialysis Above Minimum	Percentage of all patient months whose average delivered dose of hemodialysis (calculated from the last measurements of the month using the UKM or Daugirdas II formula) was a $spKt/V \geq 1.2$ .	Intermediate Outcome	Centers for Medicare & Medicaid Services	End-Stage Renal Disease Quality Incentive Program
X3718	Delivered Dose in Peritoneal Dialysis Above Minimum	Percentage of all patient months whose delivered peritoneal dialysis dose was a weekly Kt/V urea of at least 1.7 within past four months (Adult $\geq 18$ ) or 1.8 within past 6 months (pediatric $<18$ ).	Intermediate Outcome	Centers for Medicare & Medicaid Services	End-Stage Renal Disease Quality Incentive Program
X2051	Delivered Dose of Dialysis Above Minimum - Composite Score	Percentage of all patient months whose delivered dose of dialysis (either hemo or peritoneal) met the specified threshold. This measure is a composite of NQF #0318 and NQF #0249.	Intermediate Outcome	Centers for Medicare & Medicaid Services	End-Stage Renal Disease Quality Incentive Program
E1919	Cultural Competency Implementation Measure	The Cultural Competence Implementation Measure is an organizational survey designed to assist healthcare organizations in identifying the degree to which they are providing culturally competent care and addressing the needs of diverse populations, as well as their adherence to 12 of the 45 NQF-endorsed <sup>®</sup> cultural competency practices prioritized for the survey. The target audience for this survey includes healthcare organizations across a range of health care settings, including hospitals, health plans, community	Process	RAND Corporation	End-Stage Renal Disease Quality Incentive Program

MUC ID	Measure Title	Description	Measure Type	Measure Steward	CMS Program(s)
		clinics, and dialysis organizations. Information from the survey can be used for quality improvement, provide information that can help health care organizations establish benchmarks and assess how they compare in relation to peer organizations, and for public reporting.			
X3716	Cultural Competency Reporting Measure	This reporting measure is designed to collect data needed to score NQF #1919 in the ESRD QIP.	Process	RAND Corporation	End-Stage Renal Disease Quality Incentive Program
X3721	Medications Documentation Reporting	This reporting measure is designed to collect data needed to score NQF #0419 in the ESRD QIP.	Structure	Centers for Medicare & Medicaid Services	End-Stage Renal Disease Quality Incentive Program
E0419	Documentation of Current Medications in the Medical Record	Percentage of specified visits for patients aged 18 years and older for which the eligible professional attests to documenting a list of current medications to the best of his/her knowledge and ability. This list must include ALL prescriptions, over-the-counters, herbals, and vitamin/mineral/dietary (nutritional) supplements AND must contain the medications' name, dosage, frequency and route of administration	Process	Centers for Medicare & Medicaid Services	End-Stage Renal Disease Quality Incentive Program, Medicare Shared Savings
X3704	Percent of Patients with Pressure Ulcers That Are New or Worsened	Percentage of home health episodes of care in which the patient is discharged from home health with one or more pressure ulcer(s) that are Stage 2 - 4 or unstageable due to slough or eschar and are new or worsened since the start or resumption of care. The measure is based on	Intermediate Outcome	Centers for Medicare & Medicaid Services	Home Health Quality Reporting

MUC ID	Measure Title	Description	Measure Type	Measure Steward	CMS Program(s)
		data obtained from the Outcome Assessment and Information Set (OASIS-C1) Data Item Set.			
S0138	National Healthcare Safety Network (NHSN) Catheter-associated Urinary Tract Infection (CAUTI) Outcome	CAUTI can be minimized by a collection of prevention efforts. These include reducing the number of unnecessary indwelling catheters inserted, removing indwelling catheters at the earliest possible time, securing catheters to the patient’s leg to avoid bladder and urethral trauma, keeping the urine collection bag below the level of the bladder, and utilizing aseptic technique for urinary catheter insertion. These efforts will result in decreased morbidity and mortality and reduce healthcare costs. Use of this measure to track CAUTIs through a nationalized standard for HAI monitoring, leads to improved patient outcomes and provides a mechanism for identifying improvements and quality efforts.	Outcome	Centers for Disease Control and Prevention	Hospital Acquired Condition Reduction Program, Hospital Inpatient Quality Reporting, Hospital Value-Based Purchasing, Medicare Shared Savings
S0139	National Healthcare Safety Network (NHSN) Central line-associated Bloodstream Infection (CLABSI) Outcome	CLABSI can be minimized through proper management of the central line. Efforts to improve central line insertion and maintenance practices, with early discontinuance of lines are recommended. These efforts result in decreased morbidity and mortality and reduced healthcare costs.	Outcome	Centers for Disease Control and Prevention	Hospital Acquired Condition Reduction Program, Hospital Inpatient Quality Reporting, Hospital Value-Based Purchasing, Medicare Shared Savings
E0705	Proportion of Patients Hospitalized with Stroke that have a	Percent of adult population aged 18 – 65 years who were admitted to a hospital with stroke, were followed for one-month after discharge, and had one or more potentially avoidable	Outcome	Bridges to Excellence	Hospital Inpatient Quality Reporting

MUC ID	Measure Title	Description	Measure Type	Measure Steward	CMS Program(s)
	Potentially Avoidable Complication (during the Index Stay or in the 30-day Post-Discharge Period)	<p>complications (PACs). PACs may occur during the index stay or during the 30-day post discharge period.</p> <p>Define PACs during each time period as one of three types:</p> <p>(A) PACs during the Index Stay (Hospitalization):</p> <p>(1) PACs related to the anchor condition: The index stay is regarded as having a PAC if during the index hospitalization for stroke the patient develops one or more complications such as hypertensive encephalopathy, malignant hypertension, coma, anoxic brain damage, or respiratory failure etc. that may result directly from stroke or its management.</p> <p>(2) PACs due to Comorbidities: The index stay is also regarded as having a PAC if one or more of the patient’s controlled comorbid conditions is exacerbated during the hospitalization (i.e. it was not present on admission). Examples of these PACs are diabetic emergency with hypo- or hyperglycemia, pneumonia, lung complications, acute myocardial infarction, gastritis, ulcer, GI hemorrhage etc.</p> <p>(3) PACs suggesting Patient Safety Failures: The index stay is regarded as having a PAC if there are one or more complications related to patient safety issues. Examples of these PACs are septicemia, meningitis, other infections, phlebitis, deep vein thrombosis, pulmonary embolism or any of the CMS-defined hospital acquired conditions (HACs).</p>			

MUC ID	Measure Title	Description	Measure Type	Measure Steward	CMS Program(s)
		<p>(B) PACs during the 30-day post discharge period:</p> <p>(1) PACs related to the anchor condition: Readmissions and emergency room visits during the 30-day post discharge period after a stroke are considered as PACs if they are for hypertensive encephalopathy, malignant hypertension, respiratory failure, coma, anoxic brain damage etc.</p> <p>(2) PACs due to Comorbidities: Readmissions and emergency room visits during the 30-day post discharge period are also considered PACs if they are due to an exacerbation of one or more of the patient’s comorbid conditions, such as a diabetic emergency with hypo- or hyperglycemia, pneumonia, lung complications, acute myocardial infarction, acute renal failure etc.</p> <p>(3) PACs suggesting Patient Safety Failures: Readmissions or emergency room visits during the 30-day post discharge period are considered PACs if they are due to sepsis, infections, deep vein thrombosis, pulmonary embolism, or for any of the CMS-defined hospital acquired conditions (HACs).</p>			
E0708	Proportion of Patients Hospitalized with Pneumonia that	Percent of adult population aged 18 – 65 years who were admitted to a hospital with Pneumonia, were followed for one-month after discharge, and had one or more potentially	Outcome	Bridges To Excellence	Hospital Inpatient Quality Reporting



MUC ID	Measure Title	Description	Measure Type	Measure Steward	CMS Program(s)
	have a Potentially Avoidable Complication (during the Index Stay or in the 30-day Post-Discharge Period)	avoidable complications (PACs).			
E0704	Proportion of Patients Hospitalized with AMI that have a Potentially Avoidable Complication (during the Index Stay or in the 30-day Post-Discharge Period)	<p>Percent of adult population aged 18 – 65 years who were admitted to a hospital with acute myocardial infarction (AMI), were followed for one-month after discharge, and had one or more potentially avoidable complications (PACs). PACs may occur during the index stay or during the 30-day post discharge period.</p> <p>define PACs during each time period as one of three types:</p> <p>(A) PACs during the Index Stay (Hospitalization):</p> <p>(1) PACs related to the anchor condition: The index stay is regarded as having a PAC if during the index hospitalization the patient develops one or more complications such as cardiac arrest, ventricular fibrillation, cardiogenic shock, stroke, coma, acute post-hemorrhagic anemia etc. that may result directly due to AMI or its management.</p> <p>(2) PACs due to Comorbidities: The index stay is also regarded as having a PAC if one or more of</p>	Outcome	Bridges to Excellence	Hospital Inpatient Quality Reporting

MUC ID	Measure Title	Description	Measure Type	Measure Steward	CMS Program(s)
		<p>the patient’s controlled comorbid conditions is exacerbated during the hospitalization (i.e. it was not present on admission). Examples of these PACs are diabetic emergency with hypo- or hyperglycemia, tracheostomy, mechanical ventilation, pneumonia, lung complications gastritis, ulcer, GI hemorrhage etc.</p> <p>(3) PACs suggesting Patient Safety Failures: The index stay is regarded as having a PAC if there are one or more complications related to patient safety issues. Examples of these PACs are septicemia, meningitis, other infections, phlebitis, deep vein thrombosis, pulmonary embolism or any of the CMS-defined hospital acquired conditions (HACs).</p> <p>(B) PACs during the 30-day post discharge period:</p> <p>(1) PACs related to the anchor condition: Readmissions and emergency room visits during the 30-day post discharge period after an AMI are considered as PACs if they are for angina, chest pain, another AMI, stroke, coma, heart failure etc.</p> <p>(2) PACs due to Comorbidities: Readmissions and emergency room visits during the 30-day post discharge period are also considered PACs if they are due to an exacerbation of one or more of the patient’s comorbid conditions, such as a diabetic emergency with hypo- or hyperglycemia,</p>			

MUC ID	Measure Title	Description	Measure Type	Measure Steward	CMS Program(s)
		<p>pneumonia, lung complications, tracheostomy, mechanical ventilation etc.</p> <p>(3) PACs suggesting Patient Safety Failures: Readmissions or emergency room visits during the 30-day post discharge period are considered PACs if they are due to sepsis, infections, phlebitis, deep vein thrombosis, or for any of the CMS-defined hospital acquired conditions (HACs).</p>			
E2104	Paired Measures 0702 and 0703; Intensive Care Unit (ICU) Length-of-Stay (LOS) and Intensive Care: In-hospital mortality rate	<p>Paired Measure: Intensive Care Unit (ICU) Length-of-Stay (LOS) paired with Intensive Care: In-hospital mortality rate.</p> <p>E0702 Measure Description: For all patients admitted to the ICU, total duration of time spent in the ICU until time of discharge; both observed and risk-adjusted LOS reported with the predicted LOS measured using the Intensive Care Outcomes Model - Length-of-Stay (ICOMLOS).</p> <p>E0703 Measure Description: For all adult patients admitted to the intensive care unit (ICU), the percentage of patients whose hospital outcome is death; both observed and risk-adjusted mortality rates are reported with predicted rates based on the Intensive Care Outcomes Model - Mortality (ICOMmort).</p>	Outcome	Philip R. Lee Institute for Health Policy Studies	Hospital Inpatient Quality Reporting
E0349	Transfusion Reaction (PSI 16)	The count of medical and surgical discharges for patients age greater than or equal to 18 or in MDC 14 with ICD-9-CM code for transfusion reaction in any secondary diagnosis field.	Outcome	Agency for Healthcare Research & Quality	Hospital Inpatient Quality Reporting

MUC ID	Measure Title	Description	Measure Type	Measure Steward	CMS Program(s)
X3727	Hospital 30-day, all-cause, unplanned risk-standardized days in acute care following pneumonia hospitalization	<p>This measure assesses days spent in acute care after discharge from an acute care setting for a pneumonia hospitalization to provide a patient-centered assessment of the post-discharge period. Acute care utilization after discharge (return to the emergency department, observation stay and readmission), for any reason, is disruptive to patients and caregivers, costly to the healthcare system, and puts patients at additional risk of hospital-acquired infections and complications. Although some hospital returns are unavoidable, they may also result from poor quality of care or inadequate transitional care. When appropriate care transition processes are in place (for example, patient is discharged to a suitable location, communication occurs between clinicians, medications are correctly reconciled, timely follow-up is arranged), fewer patients return to an acute care setting, either for an emergency department (ED) visit, observation stay, or hospital readmission during the 30 days post-discharge. Therefore, this measure is intended to capture the quality of care transitions provided to patients hospitalized with pneumonia by collectively measuring a set of adverse outcomes that can occur post-discharge: ED visits, unplanned observation stays, and unplanned readmissions at any time during the 30 days post-discharge. In order to aggregate all three events, we measure each in terms of days of</p>	Outcome	Centers for Medicare & Medicaid Services	Hospital Inpatient Quality Reporting

MUC ID	Measure Title	Description	Measure Type	Measure Steward	CMS Program(s)
		<p>outcomes. Use of a day-count outcome generates a clinically reasonable and natural weighting scheme such that events that take more days (i.e. days rehospitalized) naturally carry more weight than events taking fewer days (i.e. ED visits). That is, the weight of each component of the composite is determined by its actual impact and burden on patients, not by an arbitrary weighting scheme. We then risk adjust the day count to account for age, gender and comorbidity. The final reported outcome is risk-standardized by subtracting the expected number of acute care days from the predicted number. The risk-standardized days of acute care are multiplied by 100 to represent risk-standardized days of events per 100 admissions.</p>			
X3722	Hospital 30-day, all-cause, unplanned risk-standardized days in acute care following heart failure hospitalization	<p>This measure assesses days spent in acute care after discharge from an acute care setting for a heart failure hospitalization to provide a patient-centered assessment of the post-discharge period. Acute care utilization after discharge (return to the emergency department, observation stay and readmission), for any reason, is disruptive to patients and caregivers, costly to the healthcare system, and puts patients at additional risk of hospital-acquired infections and complications. Although some hospital returns are unavoidable, they may also result from poor quality of care or inadequate transitional care. When appropriate care transition processes are in place (for example,</p>	Outcome	Centers for Medicare & Medicaid Services	Hospital Inpatient Quality Reporting

MUC ID	Measure Title	Description	Measure Type	Measure Steward	CMS Program(s)
		<p>patient is discharged to a suitable location, communication occurs between clinicians, medications are correctly reconciled, timely follow-up is arranged), fewer patients return to an acute care setting, either for an emergency department (ED) visit, observation stay, or hospital readmission during the 30 days post-discharge. Therefore, this measure is intended to capture the quality of care transitions provided to patients hospitalized with heart failure by collectively measuring a set of adverse outcomes that can occur post-discharge: ED visits, unplanned observation stays, and unplanned readmissions at any time during the 30 days post-discharge. In order to aggregate all three events, we measure each in terms of days of outcomes. Use of a day-count outcome generates a clinically reasonable and natural weighting scheme such that events that take more days (i.e. days rehospitalized) naturally carry more weight than events taking fewer days (i.e. ED visits). That is, the weight of each component of the composite is determined by its actual impact and burden on patients, not by an arbitrary weighting scheme. We then risk adjust the day count to account for age, gender and comorbidity. The final reported outcome is risk-standardized by subtracting the expected number of acute care days from the predicted number. The risk-standardized days of acute care are multiplied by 100 to represent risk-standardized days of events per 100 admissions.</p>			

MUC ID	Measure Title	Description	Measure Type	Measure Steward	CMS Program(s)
X3728	Hospital 30-day, all-cause, unplanned risk-standardized days in acute care following acute myocardial infarction (AMI) hospitalization	<p>This measure assesses days spent in acute care after discharge from an acute care setting for an acute myocardial infarction (AMI) hospitalization to provide a patient-centered assessment of the post-discharge period. Acute care utilization after discharge (return to the emergency department, observation stay and readmission), for any reason, is disruptive to patients and caregivers, costly to the healthcare system, and puts patients at additional risk of hospital-acquired infections and complications. Although some hospital returns are unavoidable, they may also result from poor quality of care or inadequate transitional care. When appropriate care transition processes are in place (for example, patient is discharged to a suitable location, communication occurs between clinicians, medications are correctly reconciled, timely follow-up is arranged), fewer patients return to an acute care setting, either for an emergency department (ED) visit, observation stay, or hospital readmission during the 30 days post-discharge. Therefore, this measure is intended to capture the quality of care transitions provided to patients hospitalized with AMI by collectively measuring a set of adverse outcomes that can occur post-discharge: ED visits, unplanned observation stays, and unplanned readmissions at any time during the 30 days post-discharge. In order to aggregate all three events, we measure each in terms of days</p>	Outcome	Centers for Medicare & Medicaid Services	Hospital Inpatient Quality Reporting

MUC ID	Measure Title	Description	Measure Type	Measure Steward	CMS Program(s)
		<p>of outcomes. Use of a day-count outcome generates a clinically reasonable and natural weighting scheme such that events that take more days (i.e. days rehospitalized) naturally carry more weight than events taking fewer days (i.e. ED visits). That is, the weight of each component of the composite is determined by its actual impact and burden on patients, not by an arbitrary weighting scheme. We then risk adjust the day count to account for age, gender and comorbidity. The final reported outcome is risk-standardized by subtracting the expected number of acute care days from the predicted number. The risk-standardized days of acute care are multiplied by 100 to represent risk-standardized days of events per 100 admissions.</p>			
X3620	Hospital-level, risk-standardized payment associated with an episode of care for primary elective total hip and/or total knee arthroplasty (THA/TKA)	This measure estimates hospital-level, risk-standardized payments for a primary elective total THA/TKA episode of care starting with inpatient admission to a short term acute-care facility for Medicare fee-for-service (FFS) patients who are 65 years of age or older.	Outcome	Centers for Medicare & Medicaid Services	Hospital Inpatient Quality Reporting
X3689	Participation in a Patient Safety Culture Survey	<p>Participation in a patient safety culture survey involves</p> <ul style="list-style-type: none"> <li>a) What is the name of the survey?</li> <li>b) How frequently is the survey administered?</li> <li>c) Which staff positions complete the survey?</li> </ul>	Structure	Centers for Medicare & Medicaid Services	Hospital Inpatient Quality Reporting



MUC ID	Measure Title	Description	Measure Type	Measure Steward	CMS Program(s)
		d) Are survey results reported to a centralized location? e) What is the survey response rate?			
E0202	Falls with injury	All documented patient falls with an injury level of minor or greater on eligible unit types in a calendar quarter. Reported as Injury falls per 1000 Patient Days.  (Total number of injury falls / Patient days) X 1000  Measure focus is safety. Target population is adult acute care inpatient and adult rehabilitation patients.	Outcome	American Nurses Association	Hospital Inpatient Quality Reporting
E0642	Cardiac Rehabilitation Patient Referral From an Inpatient Setting	Percentage of patients admitted to a hospital with a primary diagnosis of an acute myocardial infarction or chronic stable angina or who during hospitalization have undergone coronary artery bypass (CABG) surgery, a percutaneous coronary intervention (PCI), cardiac valve surgery (CVS), or cardiac transplantation who are referred to an early outpatient cardiac rehabilitation/secondary prevention program.	Process	American College of Cardiology	Hospital Inpatient Quality Reporting
E0204	Skill mix (Registered Nurse [RN], Licensed Vocational/Practical Nurse [LVN/LPN], unlicensed assistive personnel [UAP],	NSC-12.1 - Percentage of total productive nursing hours worked by RN (employee and contract) with direct patient care responsibilities by hospital unit.  NSC-12.2 - Percentage of total productive nursing hours worked by LPN/LVN (employee	Structure	American Nurses Association	Hospital Inpatient Quality Reporting

MUC ID	Measure Title	Description	Measure Type	Measure Steward	CMS Program(s)
	and contract)	<p>and contract) with direct patient care responsibilities by hospital unit.</p> <p>NSC-12.3 - Percentage of total productive nursing hours worked by UAP (employee and contract) with direct patient care responsibilities by hospital unit.</p> <p>NSC-12.4 - Percentage of total productive nursing hours worked by contract or agency staff (RN, LPN/LVN, and UAP) with direct patient care responsibilities by hospital unit.</p> <p>Note that the skill mix of the nursing staff (NSC-12.1, NSC-12.2, and NSC-12.3) represent the proportions of total productive nursing hours by each type of nursing staff (RN, LPN/LVN, and UAP); NSC-12.4 is a separate rate.</p> <p>Measure focus is structure of care quality in acute care hospital units.</p>			
E0205	Nursing Hours per Patient Day	<p>NSC-13.1 (RN hours per patient day) – The number of productive hours worked by RNs with direct patient care responsibilities per patient day for each in-patient unit in a calendar month.</p> <p>NSC-13.2 (Total nursing care hours per patient day) – The number of productive hours worked by nursing staff (RN,LPN/LVN, and UAP) with direct patient care responsibilities per patient day for each in-patient unit in a calendar month.</p>	Structure	American Nurses Association	Hospital Inpatient Quality Reporting

MUC ID	Measure Title	Description	Measure Type	Measure Steward	CMS Program(s)
		Measure focus is structure of care quality in acute care hospital units.			
E0506	Hospital 30-day, all-cause, risk-standardized readmission rate (RSRR) following pneumonia hospitalization	The measure estimates a hospital-level risk-standardized readmission rate (RSRR) for patients discharged from the hospital with a principal diagnosis of pneumonia. The outcome is defined as unplanned readmission for any cause within 30 days of the discharge date for the index admission. A specified set of planned readmissions do not count as readmissions. The target population is patients 18 and over. CMS annually reports the measure for patients who are 65 years or older and are either enrolled in fee-for-service (FFS) Medicare and hospitalized in non-federal hospitals or are hospitalized in Veterans Health Administration (VA) facilities.	Outcome	Centers for Medicare & Medicaid Services	Hospital Inpatient Quality Reporting, Hospital Readmission Reduction Program
E0468	Hospital 30-day, all-cause, risk-standardized mortality rate (RSMR) following pneumonia hospitalization	The measure estimates a hospital 30-day risk-standardized mortality rate (RSMR), defined as death for any cause within 30 days after the date of admission of the index admission, for patients 18 and older discharged from the hospital with a principal diagnosis of pneumonia. CMS annually reports the measure for patients who are 65 years or older and are either enrolled in fee-for-service (FFS) Medicare and hospitalized in non-federal hospitals or are hospitalized in Veterans Health Administration (VA) facilities.	Outcome	Centers for Medicare & Medicaid Services	Hospital Inpatient Quality Reporting, Hospital Value-Based Purchasing
X0351	Kidney/Urinary	The Kidney/Urinary Tract Infection Clinical	Efficiency	Centers for	Hospital Inpatient

MUC ID	Measure Title	Description	Measure Type	Measure Steward	CMS Program(s)
	Tract Infection Clinical Episode-Based Payment Measure	<p>Episode-Based Payment Measure constructs a clinically coherent group of medical services that can be used to inform providers about their resource use and effectiveness and establish a standard for value-based incentive payments. Kidney/Urinary Tract Infection episodes are defined as the set of services provided to treat, manage, diagnose, and follow up on (including post-acute care) a patient with a kidney/urinary tract infection hospital admission. The Kidney/Urinary Tract Infection Clinical Episode-Based Payment Measure, like the NQF-endorsed Medicare Spending Per Beneficiary (MSPB) measure, assesses the cost of services initiated during an episode that spans the period immediately prior to, during, and following a patient’s hospital stay. In contrast to the MSPB measure, the Kidney/Urinary Tract Infection Clinical Episode-Based Payment Measure includes Medicare payments only for services that are clinically related to the kidney/urinary tract infection treated during the index hospital stay. The measure sums the Medicare payment amounts for clinically related Part A and Part B services provided during this timeframe and attributes them to the hospital at which the index hospital stay occurred or to the physician group primarily responsible for the beneficiary’s care during the index hospital stay. Medicare payments included in this episode-based measure are standardized and risk-adjusted.</p>		Medicare & Medicaid Services	Quality Reporting, Hospital Value-Based Purchasing, Physician Feedback/Quality and Resource Utilization Reports, Physician Value-Based Payment Modifier

MUC ID	Measure Title	Description	Measure Type	Measure Steward	CMS Program(s)
X0352	Knee Replacement/Revision Clinical Episode-Based Payment Measure	<p>The Knee Replacement/Revision Clinical Episode-Based Payment Measure constructs a clinically coherent group of medical services that can be used to inform providers about their resource use and effectiveness and establish a standard for value-based incentive payments. Knee Replacement/Revision episodes are defined as the set of services provided to treat, manage, diagnose, and follow up on (including post-acute care) a patient who receives a knee replacement/revision. The Knee Replacement/Revision Clinical Episode-Based Payment Measure, like the NQF-endorsed Medicare Spending Per Beneficiary (MSPB) measure, assesses the cost of services initiated during an episode that spans the period immediately prior to, during, and following a patient's hospital stay. In contrast to the MSPB measure, the Knee Replacement/Revision Clinical Episode-Based Payment Measure includes Medicare payments only for services that are clinically related to the knee replacement/revision performed during the index hospital stay. The measure sums the Medicare payment amounts for clinically related Part A and Part B services provided during this timeframe and attributes them to the hospital at which the index hospital stay occurred or to the physician group primarily responsible for the beneficiary's care during the index hospital stay. Medicare payments included in this episode-</p>	Efficiency	Centers for Medicare & Medicaid Services	Hospital Inpatient Quality Reporting, Hospital Value-Based Purchasing, Physician Feedback/Quality and Resource Utilization Reports, Physician Value-Based Payment Modifier

MUC ID	Measure Title	Description	Measure Type	Measure Steward	CMS Program(s)
		based measure are standardized and risk-adjusted.			
X0353	Spine Fusion/Refusion Clinical Episode-Based Payment Measure	<p>The Spine Fusion/Refusion Clinical Episode-Based Payment Measure constructs a clinically coherent group of medical services that can be used to inform providers about their resource use and effectiveness and establish a standard for value-based incentive payments. Spine Fusion/Refusion episodes are defined as the set of services provided to treat, manage, diagnose, and follow up on (including post-acute care) a patient who receives a spine fusion/refusion. The Spine Fusion/Refusion Clinical Episode-Based Payment Measure, like the NQF-endorsed Medicare Spending Per Beneficiary (MSPB) measure, assesses the cost of services initiated during an episode that spans the period immediately prior to, during, and following a patient’s hospital stay. In contrast to the MSPB measure, the Spine Fusion/Refusion Clinical Episode-Based Payment Measure includes Medicare payments only for services that are clinically related to the spine fusion/refusion performed during the index hospital stay. The measure sums the Medicare payment amounts for clinically related Part A and Part B services provided during this timeframe and attributes them to the hospital at which the index hospital stay occurred or to the physician group primarily responsible for the beneficiary’s care during the index hospital stay. Medicare payments included</p>	Efficiency	Centers for Medicare & Medicaid Services	Hospital Inpatient Quality Reporting, Hospital Value-Based Purchasing, Physician Feedback/Quality and Resource Utilization Reports, Physician Value-Based Payment Modifier

MUC ID	Measure Title	Description	Measure Type	Measure Steward	CMS Program(s)
		in this episode-based measure are standardized and risk-adjusted.			
X0354	Cellulitis Clinical Episode-Based Payment Measure	<p>The Cellulitis Clinical Episode-Based Payment Measure constructs a clinically coherent group of medical services that can be used to inform providers about their resource use and effectiveness and establish a standard for value-based incentive payments. Cellulitis episodes are defined as the set of services provided to treat, manage, diagnose, and follow up on (including post-acute care) a patient with a cellulitis hospital admission. The Cellulitis Clinical Episode-Based Payment Measure, like the NQF-endorsed Medicare Spending Per Beneficiary (MSPB) measure, assesses the cost of services initiated during an episode that spans the period immediately prior to, during, and following a patient’s hospital stay. In contrast to the MSPB measure, the Cellulitis Clinical Episode-Based Payment Measure includes Medicare payments only for services that are clinically related to the cellulitis treated during the index hospital stay. The measure sums the Medicare payment amounts for clinically related Part A and Part B services provided during this timeframe and attributes them to the hospital at which the index hospital stay occurred or to the physician group primarily responsible for the beneficiary’s care during the index hospital stay. Medicare payments included in this episode-based measure are standardized and risk-adjusted.</p>	Efficiency	Centers for Medicare & Medicaid Services	Hospital Inpatient Quality Reporting, Hospital Value-Based Purchasing, Physician Feedback/Quality and Resource Utilization Reports, Physician Value-Based Payment Modifier

MUC ID	Measure Title	Description	Measure Type	Measure Steward	CMS Program(s)
X0355	Gastrointestinal Hemorrhage Clinical Episode-Based Payment Measure	<p>The Gastrointestinal Hemorrhage Clinical Episode-Based Payment Measure constructs a clinically coherent group of medical services that can be used to inform providers about their resource use and effectiveness and establish a standard for value-based incentive payments. Gastrointestinal Hemorrhage episodes are defined as the set of services provided to treat, manage, diagnose, and follow up on (including post-acute care) a patient with a gastrointestinal hemorrhage hospital admission. The Gastrointestinal Hemorrhage Clinical Episode-Based Payment Measure, like the NQF-endorsed Medicare Spending Per Beneficiary (MSPB) measure, assesses the cost of services initiated during an episode that spans the period immediately prior to, during, and following a patient’s hospital stay. In contrast to the MSPB measure, the Gastrointestinal Hemorrhage Clinical Episode-Based Payment Measure includes Medicare payments only for services that are clinically related to the gastrointestinal hemorrhage treated during the index hospital stay. The measure sums the Medicare payment amounts for clinically related Part A and Part B services provided during this timeframe and attributes them to the hospital at which the index hospital stay occurred or to the physician group primarily responsible for the beneficiary’s care during the index hospital stay. Medicare payments included in this episode-based</p>	Efficiency	Centers for Medicare & Medicaid Services	Hospital Inpatient Quality Reporting, Hospital Value-Based Purchasing, Physician Feedback/Quality and Resource Utilization Reports, Physician Value-Based Payment Modifier



MUC ID	Measure Title	Description	Measure Type	Measure Steward	CMS Program(s)
		measure are standardized and risk-adjusted.			
X0356	Hip Replacement/Revision Clinical Episode-Based Payment Measure	The Hip Replacement/Revision Clinical Episode-Based Payment Measure constructs a clinically coherent group of medical services that can be used to inform providers about their resource use and effectiveness and establish a standard for value-based incentive payments. Hip Replacement/Revision episodes are defined as the set of services provided to treat, manage, diagnose, and follow up on (including post-acute care) a patient who receives a hip replacement/revision. The Hip Replacement/Revision Clinical Episode-Based Payment Measure, like the NQF-endorsed Medicare Spending Per Beneficiary (MSPB) measure, assesses the cost of services initiated during an episode that spans the period immediately prior to, during, and following a patient's hospital stay. In contrast to the MSPB measure, the Hip Replacement/Revision Clinical Episode-Based Payment Measure includes Medicare payments only for services that are clinically related to the hip replacement/revision performed during the index hospital stay. The measure sums the Medicare payment amounts for clinically related Part A and Part B services provided during this timeframe and attributes them to the hospital at which the index hospital stay occurred or to the physician group primarily responsible for the beneficiary's care during the index hospital stay. Medicare payments included	Efficiency	Centers for Medicare & Medicaid Services	Hospital Inpatient Quality Reporting, Hospital Value-Based Purchasing, Physician Feedback/Quality and Resource Utilization Reports, Physician Value-Based Payment Modifier

MUC ID	Measure Title	Description	Measure Type	Measure Steward	CMS Program(s)
		in this episode-based measure are standardized and risk-adjusted.			
E0647	Transition Record with Specified Elements Received by Discharged Patients (Discharges from an Inpatient Facility to Home/Self Care or Any Other Site of Care)	Percentage of patients, regardless of age, discharged from an inpatient facility (e.g., hospital inpatient or observation, skilled nursing facility, or rehabilitation facility) to home or any other site of care, or their caregiver(s), who received a transition record (and with whom a review of all included information was documented) at the time of discharge including, at a minimum, all of the specified elements	Process	American Medical Association - Physician Consortium for Performance Improvement	Inpatient Psychiatric Facility Quality Reporting
E0648	Timely Transmission of Transition Record (Discharges from an Inpatient Facility to Home/Self Care or Any Other Site of Care)	Percentage of patients, regardless of age, discharged from an inpatient facility (e.g., hospital inpatient or observation, skilled nursing facility, or rehabilitation facility) to home or any other site of care for whom a transition record was transmitted to the facility or primary physician or other health care professional designated for follow-up care within 24 hours of discharge	Process	American Medical Association - Physician Consortium for Performance Improvement	Inpatient Psychiatric Facility Quality Reporting
E0141	Patient fall rate	All documented falls, with or without injury, experienced by patients on eligible unit types in a calendar quarter. Reported as Total Falls per 1,000 Patient Days and Unassisted Falls per 1000 Patient Days.  (Total number of falls / Patient days) X 1000  Measure focus is safety.	Outcome	American Nurses Association	Hospital Inpatient Quality Reporting, Inpatient Rehabilitation Facility Quality Reporting, Long-Term Care Hospital Quality Reporting

MUC ID	Measure Title	Description	Measure Type	Measure Steward	CMS Program(s)
		Target population is adult acute care inpatient and adult rehabilitation patients.			
X3701	Hospital-Wide All-Cause Unplanned Readmission Hybrid eMeasure	<p>This eMeasure estimates the hospital-level, risk-standardized rate of unplanned, all-cause readmission after admission for any eligible condition within 30 days of hospital discharge (RSRR). The eMeasure reports a single summary RSRR, derived from the volume-weighted results of five different models, one for each of the following specialty cohorts (grouped by discharge condition categories or procedure categories): surgery/gynecology, general medicine, cardiorespiratory, cardiovascular, and neurology. The eMeasure also indicates the hospital standardized risk ratios (SRR) for each of these five specialty cohorts.</p> <p>This eMeasure is a re-engineering of measure 1789, the Hospital-Wide All-Cause Risk-Standardized Readmission Measure developed for patients 65 years and older using Medicare claims. This reengineered measure uses clinical data elements from patients' electronic health records for risk adjustment in addition to claims data.</p>	Outcome	Centers for Medicare & Medicaid Services	Hospital Inpatient Quality Reporting, Medicare and Medicaid EHR Incentive Programs for Eligible Hospitals or Critical Access Hospitals
X1234	Timely Evaluation of High-Risk Individuals in the Emergency Department	Median time from emergency department (ED) arrival to provider evaluation for individuals triaged at the two highest levels based on a five-level triage system (e.g., triaged as "immediate" or "emergent").	Process	Centers for Medicare & Medicaid Services	Hospital Inpatient Quality Reporting, Medicare and Medicaid EHR Incentive Programs for Eligible Hospitals or Critical Access

MUC ID	Measure Title	Description	Measure Type	Measure Steward	CMS Program(s)
					Hospitals
X3323	Adverse Drug Events: - Inappropriate Renal Dosing of Anticoagulants	Percentage of patient-drug days with administration of anticoagulants requiring renal dosing with at least one error in renal dosing	Process	Centers for Medicare & Medicaid Services	Hospital Inpatient Quality Reporting, Medicare and Medicaid EHR Incentive Programs for Eligible Hospitals or Critical Access Hospitals
X1970	Perinatal Care Cesarean section (PC O2) Nulliparous women with a term, singleton baby in vertex position delivered by cesarean section	This measure assesses the number of nulliparous women with a term, singleton baby in a vertex position who are delivered by a cesarean section. PC O2 is also part of a set of five nationally implemented measures that address perinatal care (PC-01: Elective Delivery, PC-03: Antenatal Steroids, PC-04: Health Care-Associated Bloodstream Infections in Newborns, PC-05: Exclusive Breast Milk Feeding).	Outcome	The Joint Commission	Hospital Inpatient Quality Reporting, Medicare and Medicaid EHR Incentive Programs for Eligible Hospitals or Critical Access Hospitals
E0294	Patient Information	Percentage of patients transferred to another HEALTHCARE FACILITY whose medical record documentation indicated that patient information was communicated to the receiving FACILITY within 60 minutes of departure	Process	University of Minnesota Rural Health Research Center	Hospital Outpatient Quality Reporting
X607	Use of Brain Computed Tomography (CT) in the Emergency Department for Atraumatic Headache	This measure calculates the percentage of Emergency Department (ED) visits for atraumatic headache with a coincident brain computed tomography (CT) study for Medicare beneficiaries.	Efficiency	Centers for Medicare & Medicaid Services	Hospital Outpatient Quality Reporting

MUC ID	Measure Title	Description	Measure Type	Measure Steward	CMS Program(s)
E0295	Physician Information	Percentage of patients transferred to another HEALTHCARE FACILITY whose medical record documentation indicated that physician information was communicated to the receiving FACILITY within 60 minutes of departure	Process	University of Minnesota Rural Health Research Center	Hospital Outpatient Quality Reporting
E0297	Procedures and Tests	Percentage of patients transferred to another healthcare facility whose medical record documentation indicated that procedure and test information was communicated to the receiving FACILITY within 60 minutes of departure	Process	University of Minnesota Rural Health Research Center	Hospital Outpatient Quality Reporting
E0296	Nursing Information	Percentage of patients transferred to another HEALTHCARE FACILITY whose medical record documentation indicated that nursing information was communicated to the receiving FACILITY within 60 minutes of departure	Process	University of Minnesota Rural Health Research Center	Hospital Outpatient Quality Reporting
E0292	Vital Signs	Percentage of patients transferred to another HEALTHCARE FACILITY whose medical record documentation indicated that the entire vital signs record was communicated to the receiving FACILITY within 60 minutes of departure	Process	University of Minnesota Rural Health Research Center	Hospital Outpatient Quality Reporting
E1822	External Beam Radiotherapy for Bone Metastases	This measure reports the percentage of patients, regardless of age, with a diagnosis of painful bone metastases and no history of previous radiation who receive external beam radiation therapy (EBRT) with an acceptable fractionation scheme as defined by the guideline.	Process	American Society for Radiation Oncology	Hospital Outpatient Quality Reporting
E0293	Medication Information	Percentage of patients transferred to another HEALTHCARE FACILITY whose medical record	Process	University of Minnesota Rural	Hospital Outpatient Quality Reporting

MUC ID	Measure Title	Description	Measure Type	Measure Steward	CMS Program(s)
		documentation indicated that medication information was communicated to the receiving FACILITY within 60 minutes of departure		Health Research Center	
E0291	Administrative Communication	Percentage of patients transferred to another healthcare facility whose medical record documentation indicated that administrative information was communicated to the receiving facility within prior to departure	Process	University of Minnesota Rural Health Research Center	Hospital Outpatient Quality Reporting
E1898	Health literacy measure derived from the health literacy domain of the C-CAT	0-100 measure of health literacy related to patient-centered communication, derived from items on the staff and patient surveys of the Communication Climate Assessment Toolkit	Outcome	American Medical Association	Hospital Outpatient Quality Reporting
X2698	AMI episode of care (inpatient hospitalization + 30 days post-discharge)	Hospital-specific, risk-standardized, 30-day episode of care payment for AMI. The measure includes all payments across care settings for the 30-days following an inpatient admission for AMI. The payments are either "stripped" or "standardized" to remove the effect of policy adjustments. The measure uses hierarchical modelling to estimate hospital-level risk-standardized total payments for the 30-day window from admission.	Cost/Resource Use	Centers for Medicare & Medicaid Services	Hospital Value-Based Purchasing
E0351	Death among surgical inpatients with serious, treatable complications (PSI 4)	Percentage of cases having developed specified complications of care with an in-hospital death.	Outcome	Agency for Healthcare Research & Quality	Hospital Value-Based Purchasing

MUC ID	Measure Title	Description	Measure Type	Measure Steward	CMS Program(s)
E1893	Hospital 30-Day, All-Cause, Risk-Standardized Mortality Rate (RSMR) following Chronic Obstructive Pulmonary Disease (COPD) Hospitalization	The measure estimates a hospital-level risk-standardized mortality rate (RSMR), defined as death from any cause within 30 days after the index admission date, for patients 40 and older discharged from the hospital with either a principal diagnosis of COPD or a principal diagnosis of respiratory failure with a secondary diagnosis of acute exacerbation of COPD. CMS will annually report the measure for patients who are 65 years or older, enrolled in fee-for-service (FFS) Medicare, and hospitalized in non-federal hospitals.	Outcome	Centers for Medicare & Medicaid Services	Hospital Value-Based Purchasing
E1663	SUB-2 Alcohol Use Brief Intervention Provided or Offered. SUB-2a Alcohol Use Brief Intervention Received.	The measure is reported as an overall rate which includes all hospitalized patients 18 years of age and older to whom a brief intervention was provided, or offered and refused, and a second rate, a subset of the first, which includes only those patients who received a brief intervention. The Provided or Offered rate (SUB-2), describes patients who screened positive for unhealthy alcohol use who received or refused a brief intervention during the hospital stay. The Alcohol Use Brief Intervention (SUB-2a) rate describes only those who received the brief intervention during the hospital stay. Those who refused are not included.	Process	The Joint Commission	Inpatient Psychiatric Facility Quality Reporting
E1656	TOB-3 Tobacco Use Treatment Provided or Offered at	The measure is reported as an overall rate which includes all hospitalized patients 18 years of age and older to whom tobacco use treatment was provided, or offered and refused, at the time of	Process	The Joint Commission	Inpatient Psychiatric Facility Quality Reporting

MUC ID	Measure Title	Description	Measure Type	Measure Steward	CMS Program(s)
	Discharge AND TOB-3a Tobacco Use Treatment at Discharge	<p>hospital discharge, and a second rate, a subset of the first, which includes only those patients who received tobacco use treatment at discharge. Treatment at discharge includes a referral to outpatient counseling and a prescription for one of the FDA-approved tobacco cessation medications.</p> <p>TOB-3 Patients identified as tobacco product users within the past 30 days who were referred to or refused evidence-based outpatient counseling AND received or refused a prescription for FDA-approved cessation medication upon discharge.</p> <p>TOB-3a Patients who were referred to evidence-based outpatient counseling AND received a prescription for FDA-approved cessation medication upon discharge as well as those who were referred to outpatient counseling and had reason for not receiving a prescription for medication.</p>			
S2634	IRF Functional Outcome Measure: Change in Mobility Score for Medical Rehabilitation Patients	This quality measure estimates the average risk-adjusted mean change in mobility function between admission and discharge for patients discharged from an IRF.	Outcome	Centers for Medicare & Medicaid Services	Inpatient Rehabilitation Facility Quality Reporting



MUC ID	Measure Title	Description	Measure Type	Measure Steward	CMS Program(s)
S2636	IRF Functional Outcome Measure: Discharge Mobility Score for Medical Rehabilitation Patients	This measure calculates the percent of patients who meet or exceed an expected discharge mobility score.	Outcome	Centers for Medicare & Medicaid Services	Inpatient Rehabilitation Facility Quality Reporting
S2635	IRF Functional Outcome Measure: Discharge Self-Care Score for Medical Rehabilitation Patients	This quality measure calculates the percent of patients who meet or exceed an expected discharge self-care score in IRFs.	Outcome	Centers for Medicare & Medicaid Services	Inpatient Rehabilitation Facility Quality Reporting
S2633	IRF Functional Outcome Measure: Change in Self-Care Score for Medical Rehabilitation Patients	This measure estimates the average risk-adjusted mean change in self-care function between admission and discharge for patients discharged from IRFs.	Outcome	Centers for Medicare & Medicaid Services	Inpatient Rehabilitation Facility Quality Reporting
E0371	Venous Thromboembolism Prophylaxis	This measure assesses the number of patients who received venous thromboembolism (VTE) prophylaxis or have documentation why no VTE prophylaxis was given the day of or the day after hospital admission or surgery end date for surgeries that start the day of or the day after hospital admission. This measure is part of a set of six nationally implemented prevention and treatment measures that address VTE (VTE-2: ICU VTE Prophylaxis, VTE-3: VTE Patients with Anticoagulation Overlap Therapy, VTE-4: VTE Patients Receiving UFH with Dosages/Platelet	Process	The Joint Commission	Inpatient Rehabilitation Facility Quality Reporting, Long-Term Care Hospital Quality Reporting

MUC ID	Measure Title	Description	Measure Type	Measure Steward	CMS Program(s)
		Count Monitoring, VTE-5: VTE Warfarin Therapy Discharge Instructions and VTE-6: Hospital Acquired Potentially-Preventable VTE) that are used in The Joint Commission's accreditation process.			
X3705	Compliance with Ventilator Process Elements during LTCH stay	<p>This measure "Compliance with Ventilator Process Elements during LTCH stay" is a paired quality measure (QM#1 and QM#2); it assesses facility-level compliance with Ventilator Process Elements for eligible patients in the LTCH setting.</p> <p>Quality Measure #1: Compliance with Tracheostomy Collar Trial (TCT) or Spontaneous Breathing Trial (SBT) by the end of the first calendar day following admission to the LTCH.</p> <p>Quality Measure #2: Compliance with TCT or SBT during LTCH stay - day 2 through discharge date/ date when patient is fully weaned.</p> <p>Definitions:</p> <p>i. Invasive mechanical ventilation: The use of a device to assist or control pulmonary ventilation, either intermittently or continuously through a tracheostomy or by endotracheal intubation.</p> <p>ii. Tracheostomy Collar Trial: Trial of unassisted breathing via a tracheostomy collar (mask) with aerosol (mist), administered to patients with tracheostomy tubes.</p>	Process	Centers for Medicare & Medicaid Services	Long-Term Care Hospital Quality Reporting

MUC ID	Measure Title	Description	Measure Type	Measure Steward	CMS Program(s)
		<p>iii. Spontaneous Breathing Trial: Trial of unassisted breathing for at least X time period and full ventilator support at night, administered to patients with endotracheal tubes.</p>			
X3706	Ventilator Weaning (Liberation) Rate	<p>This measure assesses facility-level patient weaning (liberation) rate for patients in the LTCH setting. This measure reports the percentage of patients who are discharged from a Long-Term Care Hospital (LTCH) and reported as successfully (fully) weaned at discharge. The measure will analyze and report the fully weaned and not weaned separately for patients discharged alive. The measure will also analyze and report on weaning status of patients who die.</p> <p>Definitions:</p> <p>i. Invasive mechanical ventilation: The use of a device to assist or control pulmonary ventilation, either intermittently or continuously through a tracheostomy or by endotracheal intubation.</p> <p>ii. Weaning covers the entire process of liberating the patient from invasive mechanical ventilation support.</p> <p>iii. Fully weaned: Patients who are discharged alive from a LTCH and require no invasive mechanical ventilation support for 72 consecutive hours or more during 3 consecutive days immediately prior to discharge.</p> <p>iv. Not weaned (invasive mechanical ventilation dependent): Patients who require continuous</p>	Outcome	Centers for Medicare & Medicaid Services	Long-Term Care Hospital Quality Reporting

MUC ID	Measure Title	Description	Measure Type	Measure Steward	CMS Program(s)
		invasive mechanical ventilation support for more than 12 consecutive hours per day during each of the 3 consecutive calendar days immediately prior to discharge.			
X4208	Substance use disorders: percentage of patients aged 18 years and older with a diagnosis of current opioid addiction who were counseled regarding psychosocial AND pharmacologic treatment options for opioid addiction within the 12 month reporting period	This measure is used to assess the percentage of patients aged 18 years and older with a diagnosis of current opioid addiction who were counseled regarding psychosocial and pharmacologic treatment options for opioid addiction within the 12 month reporting period.	Process	American Medical Association - Physician Consortium for Performance Improvement	Medicare and Medicaid EHR Incentive Programs for Eligible Professionals
X4007	Substance use disorders: percentage of patients aged 18 years and older with a diagnosis of current alcohol dependence who were counseled regarding	This measure is used to assess the percentage of patients aged 18 years and older with a diagnosis of current alcohol dependence who were counseled regarding psychosocial AND pharmacologic treatment options for alcohol dependence within the 12 month reporting period.	Process	American Medical Association - Physician Consortium for Performance Improvement	Medicare and Medicaid EHR Incentive Programs for Eligible Professionals

MUC ID	Measure Title	Description	Measure Type	Measure Steward	CMS Program(s)
	psychosocial AND pharmacologic treatment options for alcohol dependence within the 12 month reporting				
E1507	Risky Behavior Assessment or Counseling by Age 18 Years	The percentage of children with documentation of a risk assessment or counseling for risky behaviors by 18 years of age. Four rates are reported: Risk Assessment or Counseling for Alcohol Use, Risk Assessment or Counseling for Tobacco Use, Risk Assessment or Counseling for Other Substance Use, Risk Assessment or Counseling for Sexual Activity.	Process	National Committee for Quality Assurance	Medicare and Medicaid EHR Incentive Programs for Eligible Professionals
E1406	Risky Behavior Assessment or Counseling by Age 13 Years	The percentage of adolescents with documentation of assessment or counseling for risky behavior by the age of 13 years. Four rates are reported: Risk Assessment or Counseling for Alcohol Use, Risk Assessment or Counseling for Tobacco Use, Risk Assessment or Counseling for Other Substance Use, Risk Assessment or Counseling for Sexual Activity.	Process	National Committee for Quality Assurance	Medicare and Medicaid EHR Incentive Programs for Eligible Professionals
X3446	Intimate Partner (Domestic) Violence Screening	Percentage of female patients aged 15-40 years old who were screened for intimate partner (domestic) violence at any time during the reporting period.	Process	Indian Health Service	Medicare and Medicaid EHR Incentive Programs for Eligible Professionals, Medicare Physician Quality Reporting

MUC ID	Measure Title	Description	Measure Type	Measure Steward	CMS Program(s)
					System, Medicare Shared Savings, Physician Compare, Physician Feedback/Quality and Resource Utilization Reports, Physician Value-Based Payment Modifier
X3445	Alcohol Screening and Brief Intervention (ASBI) in the ER	Percentage of patients aged 15 to 34 seen in the ER for injury who were screened for hazardous alcohol use AND provided a brief intervention within 7 days of the ER visit if screened positive.	Process	Indian Health Service	Medicare and Medicaid EHR Incentive Programs for Eligible Professionals, Medicare Physician Quality Reporting System, Medicare Shared Savings, Physician Compare, Physician Feedback/Quality and Resource Utilization Reports, Physician Value-Based Payment Modifier
X3792	Controlling High Blood Pressure	Percentage of patients 18 through 85 years of age who had a diagnosis of hypertension and whose blood pressure was adequately controlled (< 140/90 mmHg) during the measurement period based on the following criteria: <ul style="list-style-type: none"> <li>• Patients 18–59 years of age whose BP was</li> </ul>	Intermediate Outcome	National Committee for Quality Assurance	Medicare Physician Quality Reporting System, Medicare Shared Savings, Physician Compare, Physician

MUC ID	Measure Title	Description	Measure Type	Measure Steward	CMS Program(s)
		<p>&lt;140/90 mm Hg.</p> <ul style="list-style-type: none"> <li>• Patients 60–85 years of age with a diagnosis of diabetes whose BP was &lt;140/90 mm Hg.</li> <li>• Patients 60–85 years of age without a diagnosis of diabetes whose BP was &lt;150/90 mm Hg.</li> </ul>			Feedback/Quality and Resource Utilization Reports, Physician Value-Based Payment Modifier
X3797	Breast Cancer Screening	Percentage of women 50-74 years of age who had a mammogram to screen for breast cancer in the past 27 months.	Process	National Committee for Quality Assurance	Medicare Physician Quality Reporting System, Medicare Shared Savings, Physician Compare, Physician Feedback/Quality and Resource Utilization Reports, Physician Value-Based Payment Modifier
E0032	Cervical Cancer Screening	Percentage of women 21-64 years of age who were screened for cervical cancer using either of the following criteria: 1. Women age 21-64 who had cervical cytology performed every 3 years. 2. Women age 30-64 who had cervical cytology/human papillomavirus (HPV) co-testing performed every 5 years.	Process	National Committee for Quality Assurance	Medicare Physician Quality Reporting System, Medicare Shared Savings, Physician Compare, Physician Feedback/Quality and Resource Utilization Reports, Physician Value-Based Payment Modifier
E2152	Preventive Care and Screening: Unhealthy Alcohol	Percentage of patients aged 18 years and older who were screened at least once within the last 24 months for unhealthy alcohol use using a	Process	American Medical Association - Physician	Medicare and Medicaid EHR Incentive Programs

MUC ID	Measure Title	Description	Measure Type	Measure Steward	CMS Program(s)
	Use: Screening & Brief Counseling	systematic screening method AND who received brief counseling if identified as an unhealthy alcohol user		Consortium for Performance Improvement	for Eligible Professionals, Medicare Physician Quality Reporting System, Medicare Shared Savings, Physician Compare, Physician Feedback/Quality and Resource Utilization Reports, Physician Value-Based Payment Modifier
X3475	Substance Use Screening and Intervention Composite	Percentage of patients aged 18 years and older who were screened at least once within the last 24 months for tobacco use, unhealthy alcohol use, nonmedical prescription drug use, and illicit drug use AND who received an intervention for all positive screening results	Process	American Society of Addiction Medicine	Medicare and Medicaid EHR Incentive Programs for Eligible Professionals, Medicare Physician Quality Reporting System, Medicare Shared Savings, Physician Compare, Physician Feedback/Quality and Resource Utilization Reports, Physician Value-Based Payment Modifier
X3512	Hepatitis C: One-Time Screening for	Percentage of patients aged 18 years and older with one or more of the following: a history of	Process	American Medical Association	Medicare and Medicaid EHR



MUC ID	Measure Title	Description	Measure Type	Measure Steward	CMS Program(s)
	Hepatitis C Virus (HCV) for Patients at Risk	injection drug use, receipt of a blood transfusion prior to 1992, receiving maintenance hemodialysis, OR birthdate in the years 1945–1965 who received a one-time screening for HCV infection			Incentive Programs for Eligible Professionals, Medicare Physician Quality Reporting System, Medicare Shared Savings, Physician Compare, Physician Feedback/Quality and Resource Utilization Reports, Physician Value-Based Payment Modifier
X3816	Hepatitis C: Appropriate Screening Follow-Up for Patients Identified with Hepatitis C Virus (HCV) Infection	Percentage of patients aged 18 years and older with a positive HCV antibody test and either a positive HCV RNA test result or an absent HCV RNA test result who are prescribed treatment or are referred to treatment services for HCV infection	Process	American Medical Association	Medicare and Medicaid EHR Incentive Programs for Eligible Professionals, Medicare Physician Quality Reporting System, Medicare Shared Savings, Physician Compare, Physician Feedback/Quality and Resource Utilization Reports, Physician Value-Based Payment Modifier
X3482	Functional Status	Average change in functional status assessment	Patient	National	Medicare and

MUC ID	Measure Title	Description	Measure Type	Measure Steward	CMS Program(s)
	Outcomes for Patients Receiving Primary Total Knee Replacements	score for 19 years and older with primary total knee arthroplasty (TKA) in the 180-270 days after surgery compared to their initial score within 90 days prior to surgery.	Reported Outcome	Committee for Quality Assurance	Medicaid EHR Incentive Programs for Eligible Professionals, Medicare Physician Quality Reporting System, Medicare Shared Savings, Physician Compare, Physician Feedback/Quality and Resource Utilization Reports, Physician Value-Based Payment Modifier
X3483	Functional Status Outcomes for Patients Receiving Primary Total Hip Replacements	Average change in functional status assessment score for 19 years and older with primary total hip arthroplasty (THA) in the 180-270 days after surgery compared to their initial score within 90 days prior to surgery.	Patient Reported Outcome	National Committee for Quality Assurance	Medicare and Medicaid EHR Incentive Programs for Eligible Professionals, Medicare Physician Quality Reporting System, Medicare Shared Savings, Physician Compare, Physician Feedback/Quality and Resource Utilization Reports, Physician Value-Based Payment Modifier

MUC ID	Measure Title	Description	Measure Type	Measure Steward	CMS Program(s)
X3476	Diabetes: Hemoglobin A1c Overtreatment in the Elderly	Percentage of patients 65 years of age and older with diabetes who had hemoglobin A1c < 7.0% during the measurement period.	Process	National Committee for Quality Assurance	Medicare and Medicaid EHR Incentive Programs for Eligible Professionals, Medicare Physician Quality Reporting System, Medicare Shared Savings, Physician Compare, Physician Feedback/Quality and Resource Utilization Reports, Physician Value-Based Payment Modifier
X3283	Closing the Referral Loop - Critical Information Communicated with Request for Referral	Percentage of referrals sent by a referring provider to another provider for which the referring provider sent a CDA-based Referral Note that included the type of activity requested, reason for referral, preferred timing, problem list, medication list, allergy list, and medical history	Process	National Committee for Quality Assurance	Medicare and Medicaid EHR Incentive Programs for Eligible Professionals, Medicare Physician Quality Reporting System, Medicare Shared Savings, Physician Compare, Physician Feedback/Quality and Resource Utilization Reports, Physician Value-Based Payment

MUC ID	Measure Title	Description	Measure Type	Measure Steward	CMS Program(s)
					Modifier
X3485	Adverse Drug Events - Minimum INR Monitoring for Patients with Atrial Fibrillation on Warfarin	Percentage of patients aged 18 and older with atrial fibrillation/flutter who are on chronic warfarin therapy and received minimum appropriate International Normalized Ratio (INR) monitoring	Process	Office of the National Coordinator for Health Information Technology	Medicare and Medicaid EHR Incentive Programs for Eligible Professionals, Medicare Physician Quality Reporting System, Medicare Shared Savings, Physician Compare, Physician Feedback/Quality and Resource Utilization Reports, Physician Value-Based Payment Modifier
X3300	HIV Screening of STI patients	Percentage of patients diagnosed with an acute STI who were tested for HIV	Process	Centers for Disease Control and Prevention	Medicare and Medicaid EHR Incentive Programs for Eligible Professionals, Medicare Physician Quality Reporting System, Medicare Shared Savings, Physician Compare, Physician Feedback/Quality and Resource Utilization Reports, Physician

MUC ID	Measure Title	Description	Measure Type	Measure Steward	CMS Program(s)
					Value-Based Payment Modifier
X3299	HIV: Ever screened for HIV	Percentage of persons 15-65 ever screened for HIV	Process	Centers for Disease Control and Prevention	Medicare and Medicaid EHR Incentive Programs for Eligible Professionals, Medicare Physician Quality Reporting System, Medicare Shared Savings, Physician Compare, Physician Feedback/Quality and Resource Utilization Reports, Physician Value-Based Payment Modifier
X3773	Optimal Asthma Care 2014	Composite (“optimal” care) measure of the percentage of pediatric and adult patients who have asthma and meet specified targets to control their asthma.	Outcome	MN Community Measurement	Medicare Physician Quality Reporting System, Medicare Shared Savings, Physician Compare, Physician Feedback/Quality and Resource Utilization Reports, Physician Value-Based Payment Modifier
X3768	Primary C-Section	A measure of the percentage of cesarean	Outcome	MN Community	Medicare Physician

MUC ID	Measure Title	Description	Measure Type	Measure Steward	CMS Program(s)
	Rate 2014	deliveries for nulliparous births.		Measurement	Quality Reporting System, Medicare Shared Savings, Physician Compare, Physician Feedback/Quality and Resource Utilization Reports, Physician Value-Based Payment Modifier
E0076	Optimal Vascular Care	Percent of patients aged 18 to 75 with ischemic vascular disease (IVD) who have optimally managed modifiable risk factors demonstrated by meeting all of the numerator targets of this patient level all-or-none composite measure: LDL less than 100, blood pressure less than 140/90, tobacco-free status, and daily aspirin use	Outcome	MN Community Measurement	Medicare Physician Quality Reporting System, Medicare Shared Savings, Physician Compare, Physician Feedback/Quality and Resource Utilization Reports, Physician Value-Based Payment Modifier
X3469	Cognitive Impairment Assessment Among At-Risk Older Adults	Percentage of patients age 80 years or older at the start of the measurement period with documentation in the electronic health record at least once during the measurement period of (1) results from a standardized cognitive impairment assessment tool or (2) a patient or informant interview.	Process	Centers for Medicare & Medicaid Services	Medicare and Medicaid EHR Incentive Programs for Eligible Professionals, Medicare Physician Quality Reporting System, Medicare Shared Savings, Physician Compare,

MUC ID	Measure Title	Description	Measure Type	Measure Steward	CMS Program(s)
					Physician Feedback/Quality and Resource Utilization Reports, Physician Value-Based Payment Modifier
X3053	Functional Status Assessments and Goal Setting for Chronic Pain Due to Osteoarthritis	Percentage of patients 18 years of age and older with a diagnosis of hip or knee osteoarthritis for whom a score from one of a select list of validated pain interference assessment tools was recorded at least twice during the measurement period and for whom a care goal was documented and linked to the initial assessment.	Process	Centers for Medicare & Medicaid Services	Medicare and Medicaid EHR Incentive Programs for Eligible Professionals, Medicare Physician Quality Reporting System, Medicare Shared Savings, Physician Compare, Physician Feedback/Quality and Resource Utilization Reports, Physician Value-Based Payment Modifier
X3466	Coordinating Care - Emergency Department Referrals	Percentage of patients (1) of any age with asthma or (2) ages 18 and over with chest pain who had a visit to the emergency department (not resulting in an inpatient admission), whose emergency department provider attempted to communicate with the patient's primary care provider or their specialist about the patient's visit to the emergency department.	Process	Centers for Medicare & Medicaid Services	Medicare and Medicaid EHR Incentive Programs for Eligible Professionals, Medicare Physician Quality Reporting System, Medicare Shared Savings,

MUC ID	Measure Title	Description	Measure Type	Measure Steward	CMS Program(s)
					Physician Compare, Physician Feedback/Quality and Resource Utilization Reports, Physician Value-Based Payment Modifier
X3465	Coordinating Care - Follow-Up with Eligible Provider	Percentage of patients (1) of any age with asthma or (2) ages 18 and over with chest pain who had a visit to the emergency department (not resulting in an inpatient admission) and had a follow-up visit or contact with their primary care provider or relevant specialist or the provider's designee within 72 hours of the visit to the emergency department.	Process	Centers for Medicare & Medicaid Services	Medicare and Medicaid EHR Incentive Programs for Eligible Professionals, Medicare Physician Quality Reporting System, Medicare Shared Savings, Physician Compare, Physician Feedback/Quality and Resource Utilization Reports, Physician Value-Based Payment Modifier
X3468	Documentation of a Health Care Proxy for Patients with Cognitive Impairment	The percentage of patients with a diagnosis of dementia or a positive result on a standardized tool for assessment of cognitive impairment, with documentation of a designated health care proxy during the measurement period.	Process	Centers for Medicare & Medicaid Services	Medicare and Medicaid EHR Incentive Programs for Eligible Professionals, Medicare Physician Quality Reporting System, Medicare



MUC ID	Measure Title	Description	Measure Type	Measure Steward	CMS Program(s)
					Shared Savings, Physician Compare, Physician Feedback/Quality and Resource Utilization Reports, Physician Value-Based Payment Modifier
X3729	Statin Therapy for the Prevention and Treatment of Cardiovascular Disease	Percentage of high-risk adult patients aged $\geq 21$ years who were previously diagnosed with or currently have an active diagnosis of clinical atherosclerotic cardiovascular disease (ASCVD); OR adult patients aged $\geq 21$ years with any fasting or direct Low-Density Lipoprotein Cholesterol (LDL-C) level $\geq 190$ mg/dL; OR patients aged 40-75 years with a diagnosis of diabetes with a fasting or direct LDL-C level of 70-189 mg/dL; who were prescribed or are already on statin medication therapy during the measurement year.	Process	Centers for Medicare & Medicaid Services	Medicare and Medicaid EHR Incentive Programs for Eligible Professionals, Medicare Physician Quality Reporting System, Medicare Shared Savings, Physician Compare, Physician Feedback/Quality and Resource Utilization Reports, Physician Value-Based Payment Modifier
S2521	Gout: Serum Urate Monitoring	Percentage of patients aged 18 and older with a diagnosis of gout who were either started on urate lowering therapy (ULT) or whose dose of ULT was changed in the year prior to the measurement period, and who had their serum urate level measured within 6 months	Process	American College of Rheumatology	Medicare and Medicaid EHR Incentive Programs for Eligible Professionals, Medicare Physician Quality Reporting

MUC ID	Measure Title	Description	Measure Type	Measure Steward	CMS Program(s)
					System, Medicare Shared Savings, Physician Compare, Physician Feedback/Quality and Resource Utilization Reports, Physician Value-Based Payment Modifier
S2550	Gout: Urate Lowering Therapy	Percentage of patients aged 18 and older with a diagnosis of gout and either tophus/tophi or at least two gout flares (attacks) in the past year who have a serum urate level > 6.0 mg/dL, who are prescribed urate lowering therapy (ULT)	Process	American College of Rheumatology	Medicare and Medicaid EHR Incentive Programs for Eligible Professionals, Medicare Physician Quality Reporting System, Medicare Shared Savings, Physician Compare, Physician Feedback/Quality and Resource Utilization Reports, Physician Value-Based Payment Modifier
E0555	INR Monitoring for Individuals on Warfarin (e-specified version of NQF #0555)	Percentage of individuals at least 18 years of age as of the beginning of the measurement period with at least 56 days of warfarin therapy who receive an International Normalized Ratio (INR) test during each 56-day interval with warfarin.	Process	Centers for Medicare & Medicaid Services	Medicare and Medicaid EHR Incentive Programs for Eligible Professionals, Medicare Physician

MUC ID	Measure Title	Description	Measure Type	Measure Steward	CMS Program(s)
					Quality Reporting System, Medicare Shared Savings, Physician Compare, Physician Feedback/Quality and Resource Utilization Reports, Physician Value-Based Payment Modifier
X3472	Use of Multiple Concurrent Antipsychotics in Children and Adolescents	The percentage of children and adolescents 1–17 years of age who were on two or more concurrent antipsychotic medications.	Process	National Committee for Quality Assurance	Medicare and Medicaid EHR Incentive Programs for Eligible Professionals, Medicare Physician Quality Reporting System, Physician Compare, Physician Feedback/Quality and Resource Utilization Reports, Physician Value-Based Payment Modifier
E1553	Blood Pressure Screening by age 18	The percentage of adolescents who turn 18 years of age in the measurement year who had a blood pressure screening with results.	Process	National Committee for Quality Assurance	Medicare and Medicaid EHR Incentive Programs for Eligible Professionals, Medicare Physician Quality Reporting

MUC ID	Measure Title	Description	Measure Type	Measure Steward	CMS Program(s)
					System, Physician Compare, Physician Feedback/Quality and Resource Utilization Reports, Physician Value-Based Payment Modifier
X3817	Amblyopia Screening in Children	The percentage of children who were screened for the presence of amblyopia at least once by their 6th birthday; and if necessary, were referred appropriately.	Process	Office of the National Coordinator for Health Information Technology/Centers for Medicare & Medicaid Services	Medicare and Medicaid EHR Incentive Programs for Eligible Professionals, Medicare Physician Quality Reporting System, Physician Compare, Physician Feedback/Quality and Resource Utilization Reports, Physician Value-Based Payment Modifier
X3280	ADHD: Symptom Reduction in Follow-up Period	Percentage of children aged 4 through 18 years, with a diagnosis of Attention Deficit Hyperactivity Disorder (ADHD), who demonstrated a 25% reduction in symptoms 6-12 months from baseline as measured using the Vanderbilt ADHD Diagnostic Rating Scale, regardless of treatment prescribed.	Patient Reported Outcome	Office of the National Coordinator for Health Information Technology/Centers for Medicare & Medicaid Services	Medicare and Medicaid EHR Incentive Programs for Eligible Professionals, Medicare Physician Quality Reporting System, Physician Compare, Physician Feedback/Quality and

MUC ID	Measure Title	Description	Measure Type	Measure Steward	CMS Program(s)
					Resource Utilization Reports, Physician Value-Based Payment Modifier
X3513	Annual Hepatitis C Virus (HCV) Screening for Patients who are Active Injection Drug Users	Percentage of patients regardless of age who are active injection drug users who received screening for HCV infection within the 12 month reporting period	Process	American Medical Association	Medicare and Medicaid EHR Incentive Programs for Eligible Professionals, Medicare Shared Savings
E0711	Depression Remission at Six Months	Adults age 18 and older with a diagnosis of major depression or dysthymia and an initial PHQ-9 score greater than nine who achieve remission at six months as demonstrated by a six month ( $\pm$ 30 days) PHQ-9 score of less than five. This measure applies to both patients with newly diagnosed and existing depression identified during the defined measurement period whose current PHQ-9 score indicates a need for treatment.	Patient Reported Outcome	MN Community Measurement	Medicare Shared Savings
X3810	Post-Anesthetic Transfer of Care Measure: Procedure Room to a Post Anesthesia Care Unit (PACU)	Percentage of patients who are under the care of an anesthesia practitioner and are admitted to a PACU in which a post-anesthetic formal transfer of care protocol or checklist which includes the key transfer of care elements is utilized.	Process	American Society of Anesthesiologists	Medicare Physician Quality Reporting System, Medicare Shared Savings, Physician Compare, Physician Feedback/Quality and Resource Utilization Reports, Physician Value-Based Payment

MUC ID	Measure Title	Description	Measure Type	Measure Steward	CMS Program(s)
					Modifier
X3808	Preoperative Use of Aspirin for Patients with Drug-Eluting Coronary Stents	Percentage of patients, aged 18 years and older with a pre-existing drug-eluting coronary stent, who undergo a surgical or therapeutic procedure under anesthesia, who receive aspirin 24 hours prior to surgical start time	Process	American Society of Anesthesiologists	Medicare Physician Quality Reporting System, Medicare Shared Savings, Physician Compare, Physician Feedback/Quality and Resource Utilization Reports, Physician Value-Based Payment Modifier
X3811	Anesthesiology Smoking Abstinence	The percentage of current smokers who abstain from cigarettes prior to anesthesia on the day of elective surgery or procedure.	Intermediate Outcome	American Society of Anesthesiologists	Medicare Physician Quality Reporting System, Medicare Shared Savings, Physician Compare, Physician Feedback/Quality and Resource Utilization Reports, Physician Value-Based Payment Modifier
X3809	Perioperative Temperature Management	Percentage of patients, regardless of age, who undergo surgical or therapeutic procedures under general or neuraxial anesthesia of 60 minutes duration or longer for whom at least one body temperature greater than or equal to 35.5 degrees Celsius (or 95.9 degrees Fahrenheit) was recorded within the 30 minutes immediately	Outcome	American Society of Anesthesiologists	Medicare Physician Quality Reporting System, Medicare Shared Savings, Physician Compare, Physician Feedback/Quality and

MUC ID	Measure Title	Description	Measure Type	Measure Steward	CMS Program(s)
		before or the 15 minutes immediately after anesthesia end time			Resource Utilization Reports, Physician Value-Based Payment Modifier
X3806	Prevention of Post-Operative Nausea and Vomiting (PONV) – Combination	Percentage of patients, aged 18 years and older, who undergo a procedure under an inhalational general anesthetic, AND who have three or more risk factors for post-operative nausea and vomiting (PONV), who receive combination therapy consisting of at least two prophylactic pharmacologic antiemetic agents of different classes preoperatively or intraoperatively	Process	American Society of Anesthesiologists	Medicare Physician Quality Reporting System, Medicare Shared Savings, Physician Compare, Physician Feedback/Quality and Resource Utilization Reports, Physician Value-Based Payment Modifier
X3807	Post-Anesthetic Transfer of Care: Use of Checklist or Protocol for Direct Transfer of Care from Procedure Room to Intensive Care Unit (ICU)	Percentage of patients, regardless of age, who undergo a procedure under anesthesia and are admitted to an Intensive Care Unit (ICU) directly from the anesthetizing location, who have a documented use of a checklist or protocol for the transfer of care from the responsible anesthesia practitioner to the responsible ICU team or team member	Process	American Society of Anesthesiologists	Medicare Physician Quality Reporting System, Medicare Shared Savings, Physician Compare, Physician Feedback/Quality and Resource Utilization Reports, Physician Value-Based Payment Modifier
X3789	Patient Counseled About Health Care Decision-Making	All patients with a diagnosis of a muscular dystrophy (MD), or their caregivers who were counseled about advanced health care decision making, palliative care, or end-of-life issues at	Process	American Academy of Neurology	Medicare Physician Quality Reporting System, Medicare Shared Savings,

MUC ID	Measure Title	Description	Measure Type	Measure Steward	CMS Program(s)
		least once annually.			Physician Compare, Physician Feedback/Quality and Resource Utilization Reports, Physician Value-Based Payment Modifier
X3800	Patient Queried about Pain and Pain Interference with Function	All visits for patients diagnosed with a muscular dystrophy (MD) where the patient was queried about pain and pain interference with function using a validated and reliable instrument.	Process	American Academy of Neurology	Medicare Physician Quality Reporting System, Medicare Shared Savings, Physician Compare, Physician Feedback/Quality and Resource Utilization Reports, Physician Value-Based Payment Modifier
X3801	Nutritional Status or Growth Trajectories Monitored	All visits for patients diagnosed with muscular dystrophy (MD) where the patient's nutritional status or growth trajectories were monitored.	Process	American Academy of Neurology	Medicare Physician Quality Reporting System, Medicare Shared Savings, Physician Compare, Physician Feedback/Quality and Resource Utilization Reports, Physician Value-Based Payment Modifier
X3798	Scoliosis Evaluation	All visits for patients with a diagnosis of a	Process	American Academy	Medicare Physician



MUC ID	Measure Title	Description	Measure Type	Measure Steward	CMS Program(s)
	Ordered	muscular dystrophy (MD) where the patient had a scoliosis evaluation ordered.		of Neurology	Quality Reporting System, Medicare Shared Savings, Physician Compare, Physician Feedback/Quality and Resource Utilization Reports, Physician Value-Based Payment Modifier
X3791	MD Multidisciplinary Care Plan Developed or Updated	All patients diagnosed with a muscular dystrophy (MD) for whom a MD multi-disciplinary care plan was developed, if not done previously, or the plan was updated at least once annually.	Process	American Academy of Neurology	Medicare Physician Quality Reporting System, Medicare Shared Savings, Physician Compare, Physician Feedback/Quality and Resource Utilization Reports, Physician Value-Based Payment Modifier
X3787	Patients with DMD Prescribed Appropriate Disease Modifying Pharmaceutical Therapy	All patients diagnosed with Duchenne muscular dystrophy (DMD) prescribed appropriate DMD disease modifying pharmaceutical therapy.	Process	American Academy of Neurology	Medicare Physician Quality Reporting System, Medicare Shared Savings, Physician Compare, Physician Feedback/Quality and Resource Utilization Reports, Physician Value-Based Payment

MUC ID	Measure Title	Description	Measure Type	Measure Steward	CMS Program(s)
					Modifier
X3794	Plan Of Care For Migraine Or Cervicogenic Headache Developed Or Reviewed	All patients diagnosed with migraine headache or cervicogenic headache who had a headache management plan of care developed or reviewed at least once during the 12 month measurement period.	Process	American Academy of Neurology	Medicare Physician Quality Reporting System, Medicare Shared Savings, Physician Compare, Physician Feedback/Quality and Resource Utilization Reports, Physician Value-Based Payment Modifier
X3796	Migraine Or Cervicogenic Headache Related Disability Functional Status	Percentage of patients age 6 years old and older who have a diagnosis of migraine headache or cervicogenic headache and for whom the number of headache-related disability days during the past 3 months is documented in the medical record.	Process	American Academy of Neurology	Medicare Physician Quality Reporting System, Medicare Shared Savings, Physician Compare, Physician Feedback/Quality and Resource Utilization Reports, Physician Value-Based Payment Modifier
X3786	Quality Of Life Assessment For Patients With Primary Headache Disorders	Percentage of patients with a diagnosis of primary headache disorder whose health related quality of life (HRQoL) was assessed with a tool(s) during at least two visits during the 12 month measurement period AND whose health related quality of life score stayed the same or improved.	Patient-Reported Outcome	American Academy of Neurology	Medicare Physician Quality Reporting System, Medicare Shared Savings, Physician Compare, Physician Feedback/Quality and

MUC ID	Measure Title	Description	Measure Type	Measure Steward	CMS Program(s)
					Resource Utilization Reports, Physician Value-Based Payment Modifier
X3785	Overuse Of Neuroimaging For Patients With Primary Headache And A Normal Neurological Examination	Percentage of patients with a diagnosis of primary headache disorder whose health related quality of life (HRQoL) was assessed with a tool(s) during at least two visits during the 12 month measurement period AND whose health related quality of life score stayed the same or improved.	Process	American Academy of Neurology	Medicare Physician Quality Reporting System, Medicare Shared Savings, Physician Compare, Physician Feedback/Quality and Resource Utilization Reports, Physician Value-Based Payment Modifier
X3784	Plan Of Care Or Referral For Possible Medication Overuse Headache	Percentage of patients diagnosed with medication overuse headache (MOH) within the past 3 months or who screened positive for possible MOH (measure 6a) who had a medication overuse plan of care created or who were referred for this purpose.	Process	American Academy of Neurology	Medicare Physician Quality Reporting System, Medicare Shared Savings, Physician Compare, Physician Feedback/Quality and Resource Utilization Reports, Physician Value-Based Payment Modifier
X3783	Assessment Of Medication Overuse In The Treatment Of	Percentage of patients diagnosed with a primary headache disorder, who are actively taking an acute headache medication and experiencing headaches $\geq$ 15 days per month for 3 months,	Process	American Academy of Neurology	Medicare Physician Quality Reporting System, Medicare Shared Savings,

MUC ID	Measure Title	Description	Measure Type	Measure Steward	CMS Program(s)
	Primary Headache Disorders	who were assessed for medication overuse headache (MOH).			Physician Compare, Physician Feedback/Quality and Resource Utilization Reports, Physician Value-Based Payment Modifier
X3770	Overuse Of Opioid Containing Medications For Primary Headache Disorders	Percentage of patients aged 12 years and older diagnosed with primary headache disorder and taking opioid containing medication who were assessed for opioid containing medication overuse within the 12-month measurement period and treated or referred for treatment if identified as overusing opioid containing medication.	Process	American Academy of Neurology	Medicare Physician Quality Reporting System, Medicare Shared Savings, Physician Compare, Physician Feedback/Quality and Resource Utilization Reports, Physician Value-Based Payment Modifier
X3769	Unnecessary Screening Colonoscopy in Older Adults	Percentage of patients age 86 or older who received an unnecessary screening colonoscopy.	Efficiency	American Gastroenterological Association	Medicare Physician Quality Reporting System, Medicare Shared Savings, Physician Compare, Physician Feedback/Quality and Resource Utilization Reports, Physician Value-Based Payment Modifier
X3765	Overuse of	Percentage of patients age 18 years old and	Process	American Academy	Medicare Physician

MUC ID	Measure Title	Description	Measure Type	Measure Steward	CMS Program(s)
	Barbiturate Containing Medications for Primary Headache Disorders	older with a diagnosis of primary headache who were NOT prescribed barbiturate containing medications related to the primary headache disorder diagnosis during the 12-month measurement period.		of Neurology	Quality Reporting System, Medicare Shared Savings, Physician Compare, Physician Feedback/Quality and Resource Utilization Reports, Physician Value-Based Payment Modifier
X3772	Preventive Migraine Medication Prescribed	Percentage of patients age 18 years old and older diagnosed with migraine headache whose migraine frequency is $\geq 4$ migraine attacks per month or migraine frequency was $\geq 8$ days per month who were prescribed a guideline recommended prophylactic migraine treatment within the 12 month reporting period.	Process	American Academy of Neurology	Medicare Physician Quality Reporting System, Medicare Shared Savings, Physician Compare, Physician Feedback/Quality and Resource Utilization Reports, Physician Value-Based Payment Modifier
X3766	Acute Medication Prescribed for Cluster Headache	Percentage of patients age 18 years old and older with a diagnosis of cluster headache (CH) who were prescribed a guideline recommended acute medication for cluster headache within the 12-month measurement period.	Process	American Academy of Neurology	Medicare Physician Quality Reporting System, Medicare Shared Savings, Physician Compare, Physician Feedback/Quality and Resource Utilization Reports, Physician Value-Based Payment

MUC ID	Measure Title	Description	Measure Type	Measure Steward	CMS Program(s)
					Modifier
X3771	Medication Prescribed for Acute Migraine Attack	Percentage of patients age 12 years and older with a diagnosis of migraine who were prescribed a guideline recommended medication for acute migraine attacks within the 12 month measurement period.	Process	American Academy of Neurology	Medicare Physician Quality Reporting System, Medicare Shared Savings, Physician Compare, Physician Feedback/Quality and Resource Utilization Reports, Physician Value-Based Payment Modifier
X3775	Chronic Opioid Therapy Follow-up Evaluation	All patients 18 and older prescribed opiates for longer than six weeks duration who had a follow-up evaluation conducted at least every three months during COT documented in the medical record.	Process	American Academy of Neurology	Medicare Physician Quality Reporting System, Medicare Shared Savings, Physician Compare, Physician Feedback/Quality and Resource Utilization Reports, Physician Value-Based Payment Modifier
X3776	Consideration of Non-Pharmacologic Interventions	All patients 18 and older prescribed opiates for longer than six weeks duration with whom the clinician discussed non-pharmacologic interventions (e.g. graded exercise, cognitive/behavioral therapy, activity coaching at least once during COT documented in the medical record.	Process	American Academy of Neurology	Medicare Physician Quality Reporting System, Medicare Shared Savings, Physician Compare, Physician Feedback/Quality and

MUC ID	Measure Title	Description	Measure Type	Measure Steward	CMS Program(s)
					Resource Utilization Reports, Physician Value-Based Payment Modifier
X3777	Documentation of Signed Opioid Treatment Agreement	All patients 18 and older prescribed opiates for longer than six weeks duration who signed an opioid treatment agreement at least once during COT documented in the medical record.	Process	American Academy of Neurology	Medicare Physician Quality Reporting System, Medicare Shared Savings, Physician Compare, Physician Feedback/Quality and Resource Utilization Reports, Physician Value-Based Payment Modifier
X3774	Evaluation or Interview for Risk of Opioid Misuse	All patients 18 and older prescribed opiates for longer than six weeks duration evaluated for risk of opioid misuse using a brief validated instrument (e.g. Opioid Risk Tool, SOAAP-R) or patient interview documented at least once during COT in the medical record.	Process	American Academy of Neurology	Medicare Physician Quality Reporting System, Medicare Shared Savings, Physician Compare, Physician Feedback/Quality and Resource Utilization Reports, Physician Value-Based Payment Modifier
X3802	Appropriate follow-up imaging for non-traumatic knee pain	Percentage of imaging studies for patients aged 18 years and older with non-traumatic knee pain who undergo knee magnetic resonance imaging (MRI) or magnetic resonance arthrography	Process	American College of Radiology	Medicare Physician Quality Reporting System, Medicare Shared Savings,

MUC ID	Measure Title	Description	Measure Type	Measure Steward	CMS Program(s)
		(MRA) who are known to have had knee radiographs performed within the preceding 3 months based on information from the radiology information system (RIS), patient-provided radiological history, or other health-care source			Physician Compare, Physician Feedback/Quality and Resource Utilization Reports, Physician Value-Based Payment Modifier
X3803	Appropriate use of imaging for non-traumatic shoulder pain	Percentage of imaging studies for patients aged 18 years and older with non-traumatic shoulder pain who undergo shoulder magnetic resonance imaging (MRI), magnetic resonance arthrography (MRA), or a shoulder ultrasound who are known to have had shoulder radiographs performed within the preceding 3 months based on information from the radiology information system (RIS), patient-provided radiological history, or other health-care source	Process	American College of Radiology	Medicare Physician Quality Reporting System, Medicare Shared Savings, Physician Compare, Physician Feedback/Quality and Resource Utilization Reports, Physician Value-Based Payment Modifier
X3523	Extravasation of contrast following contrast-enhanced computed tomography (CT)	Percentage of final reports for patients aged 18 years and older who received intravenous iodinated contrast for a computed tomography (CT) examination who had an extravasation of contrast  Lower performance rate is the goal.	Outcome	American College of Radiology	Medicare Physician Quality Reporting System, Medicare Shared Savings, Physician Compare, Physician Feedback/Quality and Resource Utilization Reports, Physician Value-Based Payment Modifier
X3781	Use of	Percentage of final reports for patients aged 18	Process	American College	Medicare Physician



MUC ID	Measure Title	Description	Measure Type	Measure Steward	CMS Program(s)
	premedication before contrast-enhanced imaging studies in patients with documented contrast allergy	years and older who had a previously documented contrast reaction who undergo any imaging examination using intravenous iodinated contrast that include documentation that the patients were pre-medicated with corticosteroids with or without H1 antihistamines		of Radiology	Quality Reporting System, Medicare Shared Savings, Physician Compare, Physician Feedback/Quality and Resource Utilization Reports, Physician Value-Based Payment Modifier
X3764	Imaging in adult ED patients with minor head injury	Percent of adult patients who presented within 24 hours of a non-penetrating head injury with a Glasgow coma score (GCS) ≤ 15 and underwent head CT for trauma in the ED who have a documented indication consistent with guidelines prior to imaging	Process	American College of Emergency Physicians (previous steward Partners-Brigham & Women's)	Medicare Physician Quality Reporting System, Medicare Shared Savings, Physician Compare, Physician Feedback/Quality and Resource Utilization Reports, Physician Value-Based Payment Modifier
X3813	Proportion of patients sustaining a ureter injury at the time of any pelvic organ prolapse repair	Percentage of patients undergoing a pelvic organ prolapse repair who sustain an injury to the ureter recognized either during or within 1 month after surgery	Outcome	American Urogynecologic Society	Medicare Physician Quality Reporting System, Medicare Shared Savings, Physician Compare, Physician Feedback/Quality and Resource Utilization Reports, Physician Value-Based Payment

MUC ID	Measure Title	Description	Measure Type	Measure Steward	CMS Program(s) Modifier
X3788	PC-02 Cesarean Section (Provider Level)	This measure assesses the number of nulliparous women with a term, singleton baby in a vertex position delivered by cesarean section. This measure is part of a set of five nationally implemented measures that address perinatal care (PC-01: Elective Delivery, PC-03: Antenatal Steroids, PC-04: Health Care-Associated Bloodstream Infections in Newborns, PC-05: Exclusive Breast Milk Feeding).	Outcome	American Medical Association - Physician Consortium for Performance Improvement	Medicare Physician Quality Reporting System, Medicare Shared Savings, Physician Compare, Physician Feedback/Quality and Resource Utilization Reports, Physician Value-Based Payment Modifier
X3274	Assessment for Psoriatic Arthritis	This measure evaluates the number of all psoriasis patients who are screened for psoriatic arthritis. Doing this helps to prevent structural damage, and maximizes quality of life (QOL).	Process	American Academy of Dermatology	Medicare Physician Quality Reporting System, Medicare Shared Savings, Physician Compare, Physician Feedback/Quality and Resource Utilization Reports, Physician Value-Based Payment Modifier
X3726	Clinical Response to Oral Systemic or Biologic Medications	This measure evaluates the proportion of psoriasis patients receiving systemic or biologic therapy who meet minimal physician- or patient-reported disease activity levels. It is implied that establishment and maintenance of an established minimum level of disease control as measured by physician- and/or patient-reported	Outcome	American Academy of Dermatology	Medicare Physician Quality Reporting System, Medicare Shared Savings, Physician Compare, Physician Feedback/Quality and

MUC ID	Measure Title	Description	Measure Type	Measure Steward	CMS Program(s)
		outcomes will increase patient satisfaction with and adherence to treatment.			Resource Utilization Reports, Physician Value-Based Payment Modifier
X3763	Appropriate follow-up imaging for incidental thyroid nodules in patients	<p>Percentage of final reports for computed tomography (CT) or magnetic resonance imaging (MRI) studies of the chest or neck or ultrasound of the neck for patients aged 18 years and older with no known thyroid disease with a thyroid nodule &lt; 1.0 cm noted incidentally with follow-up imaging recommended</p> <p>Lower performance rate is goal.</p>	Process	American College of Radiology	Medicare Physician Quality Reporting System, Medicare Shared Savings, Physician Compare, Physician Feedback/Quality and Resource Utilization Reports, Physician Value-Based Payment Modifier
X3759	Appropriate follow-up imaging for incidental abdominal lesions	<p>Percentage of final reports for abdominal imaging studies for asymptomatic patients aged 18 years and older with one or more of the following noted incidentally with follow-up imaging recommended:</p> <ul style="list-style-type: none"> <li>- liver lesion &lt; 1.5 cm</li> <li>- kidney lesion &lt; 1.0 cm</li> <li>- adrenal lesion &lt; 4.0 cm</li> </ul> <p>Lower performance rate is goal</p>	Process	American College of Radiology	Medicare Physician Quality Reporting System, Medicare Shared Savings, Physician Compare, Physician Feedback/Quality and Resource Utilization Reports, Physician Value-Based Payment Modifier
X3758	Appropriate age for colorectal cancer screening	Percentage of average-risk patients age 86 or older who underwent screening colonoscopy	Cost/Resource Use	American Society for Gastrointestinal Endoscopy	Medicare Physician Quality Reporting System, Medicare Shared Savings,

MUC ID	Measure Title	Description	Measure Type	Measure Steward	CMS Program(s)
					Physician Compare, Physician Feedback/Quality and Resource Utilization Reports, Physician Value-Based Payment Modifier
X3760	Frequency of inadequate bowel preparation	The percentage of outpatient examinations with “inadequate” bowel preparation that require repeat colonoscopy in one year or less	Cost/Resource Use	American Society for Gastrointestinal Endoscopy	Medicare Physician Quality Reporting System, Medicare Shared Savings, Physician Compare, Physician Feedback/Quality and Resource Utilization Reports, Physician Value-Based Payment Modifier
X3761	Photodocumentation of cecal intubation	The rate of screening and surveillance colonoscopies for which photodocumentation of landmarks of cecal intubation is performed to establish a complete examination	Process	American Society for Gastrointestinal Endoscopy	Medicare Physician Quality Reporting System, Medicare Shared Savings, Physician Compare, Physician Feedback/Quality and Resource Utilization Reports, Physician Value-Based Payment Modifier
E1523	In-hospital	Percentage of asymptomatic patients undergoing	Outcome	The Society for	Medicare Physician

MUC ID	Measure Title	Description	Measure Type	Measure Steward	CMS Program(s)
	mortality following elective open repair of AAAs	open repair of abdominal aortic aneurysms (AAA) who die while in hospital. This measure is proposed for both hospitals and individual providers.		Vascular Surgery	Quality Reporting System, Medicare Shared Savings, Physician Compare, Physician Feedback/Quality and Resource Utilization Reports, Physician Value-Based Payment Modifier
E0465	Perioperative Anti-platelet Therapy for Patients undergoing Carotid Endarterectomy	Percentage of patients undergoing carotid endarterectomy (CEA) who are taking an anti-platelet agent (aspirin or clopidogrel or equivalent such as aggrenox/tiglacor etc) within 48 hours prior to surgery and are prescribed this medication at hospital discharge following surgery	Process	The Society for Vascular Surgery	Medicare Physician Quality Reporting System, Medicare Shared Savings, Physician Compare, Physician Feedback/Quality and Resource Utilization Reports, Physician Value-Based Payment Modifier
X3740	Performing an intraoperative rectal examination at the time of prolapse repair	Percentage of patients having a documented rectal examination at the time of surgery for repair of apical and posterior prolapse.	Process	American Urogynecologic Society	Medicare Physician Quality Reporting System, Medicare Shared Savings, Physician Compare, Physician Feedback/Quality and Resource Utilization Reports, Physician Value-Based Payment

MUC ID	Measure Title	Description	Measure Type	Measure Steward	CMS Program(s)
					Modifier
X3741	Preoperative exclusion of uterine malignancy prior to any pelvic organ prolapse repair	Percentage of patients having documented assessment of abnormal uterine or postmenopausal bleeding prior to surgery for pelvic organ prolapse.	Process	American Urogynecologic Society	Medicare Physician Quality Reporting System, Medicare Shared Savings, Physician Compare, Physician Feedback/Quality and Resource Utilization Reports, Physician Value-Based Payment Modifier
X3742	Preoperative assessment of sexual function prior to any pelvic organ prolapse repair	Percentage of patients having a documented assessment of sexual function prior to surgery for pelvic organ prolapse	Process	American Urogynecologic Society	Medicare Physician Quality Reporting System, Medicare Shared Savings, Physician Compare, Physician Feedback/Quality and Resource Utilization Reports, Physician Value-Based Payment Modifier
X3746	Preoperative assessment of occult stress urinary incontinence prior to any pelvic organ prolapse repair	Percentage of patients undergoing appropriate preoperative evaluation for the indication of stress urinary incontinence per ACOG/AUGS/AUA guidelines	Process	American Urogynecologic Society	Medicare Physician Quality Reporting System, Medicare Shared Savings, Physician Compare, Physician Feedback/Quality and

MUC ID	Measure Title	Description	Measure Type	Measure Steward	CMS Program(s)
					Resource Utilization Reports, Physician Value-Based Payment Modifier
X3744	Proportion of patients sustaining a major viscous injury at the time of any pelvic organ prolapse repair	Percentage of patients undergoing surgical repair of pelvic organ prolapse that is complicated by perforation of a major viscous at the time of index surgery that is recognized intraoperative or within 1 month after surgery	Outcome	American Urogynecologic Society	Medicare Physician Quality Reporting System, Medicare Shared Savings, Physician Compare, Physician Feedback/Quality and Resource Utilization Reports, Physician Value-Based Payment Modifier
X3743	Proportion of patients sustaining a bladder injury at the time of any pelvic organ prolapse repair	Percentage of patients undergoing any surgery to repair pelvic organ prolapse who sustains an injury to the bladder recognized either during or within 1 month after surgery	Outcome	American Urogynecologic Society	Medicare Physician Quality Reporting System, Medicare Shared Savings, Physician Compare, Physician Feedback/Quality and Resource Utilization Reports, Physician Value-Based Payment Modifier
X3745	Preoperative pessary for pelvic organ prolapse attempted	The percentage of patients who have attempted pessary placement for the treatment of pelvic organ prolapse prior to surgical intervention	Process	American Urogynecologic Society	Medicare Physician Quality Reporting System, Medicare Shared Savings,

MUC ID	Measure Title	Description	Measure Type	Measure Steward	CMS Program(s)
					Physician Compare, Physician Feedback/Quality and Resource Utilization Reports, Physician Value-Based Payment Modifier
X3750	Preoperative pessary for pelvic organ prolapse offered	The percentage of patients who have been offered a pessary for the treatment of pelvic organ prolapse prior to surgical intervention.	Process	American Urogynecologic Society	Medicare Physician Quality Reporting System, Medicare Shared Savings, Physician Compare, Physician Feedback/Quality and Resource Utilization Reports, Physician Value-Based Payment Modifier
X3751	Complete assessment and evaluation of patient's pelvic organ prolapse prior to surgical repair	Percentage of patients undergoing surgical repair of pelvic organ prolapse who have a documented, complete characterization of the degree of prolapse in each vaginal compartment, using one of the accepted, objective measurement systems (POP-Q or Baden/Walker)	Process	American Urogynecologic Society	Medicare Physician Quality Reporting System, Medicare Shared Savings, Physician Compare, Physician Feedback/Quality and Resource Utilization Reports, Physician Value-Based Payment Modifier
X3752	Performing	Percentage of patients who undergo cystoscopy	Outcome	American	Medicare Physician



MUC ID	Measure Title	Description	Measure Type	Measure Steward	CMS Program(s)
	cystoscopy at the time of hysterectomy for pelvic organ prolapse to detect lower urinary tract injury	to evaluate for lower urinary tract injury at the time of hysterectomy for pelvic organ prolapse.		Urogynecologic Society	Quality Reporting System, Medicare Shared Savings, Physician Compare, Physician Feedback/Quality and Resource Utilization Reports, Physician Value-Based Payment Modifier
X3747	Door to puncture time for endovascular stroke treatment	Door to puncture time less than 2 hours for patients undergoing endovascular stroke treatment	Intermediate Outcome	Society of Interventional Radiology	Medicare Physician Quality Reporting System, Medicare Shared Savings, Physician Compare, Physician Feedback/Quality and Resource Utilization Reports, Physician Value-Based Payment Modifier
X3756	Clinical Outcome post Endovascular Stroke Treatment	Patients with 90 day mRs score of 0 to 2 post endovascular stroke intervention	Outcome	Society of Interventional Radiology	Medicare Physician Quality Reporting System, Medicare Shared Savings, Physician Compare, Physician Feedback/Quality and Resource Utilization Reports, Physician Value-Based Payment

MUC ID	Measure Title	Description	Measure Type	Measure Steward	CMS Program(s)
					Modifier
X3754	Rate of surgical conversion from lower extremity endovascular revascularization procedure	In patients assigned to endovascular treatment for obstructive arterial disease, the percent of patients who undergo unplanned major amputation or surgical bypass within 48 hours of the index procedure	Outcome	Society of Interventional Radiology	Medicare Physician Quality Reporting System, Medicare Shared Savings, Physician Compare, Physician Feedback/Quality and Resource Utilization Reports, Physician Value-Based Payment Modifier
X3755	Percentage of patients with a retrievable inferior vena cava filter who are appropriately assessed for continued filtration or device removal	Proportion of patients in whom a retrievable IVC filter is placed who, within 3 months post-placement, have a documented assessment for the appropriateness of continued filtration, device removal or the inability to contact the patient with at least two attempts.	Outcome	Society of Interventional Radiology	Medicare Physician Quality Reporting System, Medicare Shared Savings, Physician Compare, Physician Feedback/Quality and Resource Utilization Reports, Physician Value-Based Payment Modifier
X3739	Percentage of patients treated for varicose veins who are treated with saphenous ablation and receive an outcomes survey	Percentage of patients treated for varicose veins (CEAP C2) who are treated with saphenous ablation (with or without adjunctive tributary treatment) that receive a disease specific patient reported outcome survey before and after treatment.	Patient Reported Outcome	Society of Interventional Radiology	Medicare Physician Quality Reporting System, Medicare Shared Savings, Physician Compare, Physician Feedback/Quality and

MUC ID	Measure Title	Description	Measure Type	Measure Steward	CMS Program(s)
	before and after treatment				Resource Utilization Reports, Physician Value-Based Payment Modifier
X3735	Communication and shared decision-making with patients and families for interventional oncology procedures	Percentage of patients who have undergone an interventional oncology ablation or catheter-directed therapy with documentation that the intent of the procedure (e.g., cure, downstaging to curative resection/transplantation, prolongation of survival, palliation) was discussed with the patient and/or family member	Process	Society of Interventional Radiology	Medicare Physician Quality Reporting System, Medicare Shared Savings, Physician Compare, Physician Feedback/Quality and Resource Utilization Reports, Physician Value-Based Payment Modifier
X3732	Adult Kidney Disease: Referral to Hospice	Percentage of patients aged 18 years and older with a diagnosis of ESRD who withdraw from hemodialysis or peritoneal dialysis who are referred to hospice care	Process	Renal Physicians Association; joint copyright with American Medical Association - Physician Consortium for Performance Improvement	Medicare Physician Quality Reporting System, Medicare Shared Savings, Physician Compare, Physician Feedback/Quality and Resource Utilization Reports, Physician Value-Based Payment Modifier
X3780	Coagulation studies in adult patients presenting with chest pain with no	Percentage of emergency department patients aged 18 years and older without coagulopathy or bleeding who received coagulation studies	Process	American College of Emergency Physicians	Medicare Physician Quality Reporting System, Medicare Shared Savings,

MUC ID	Measure Title	Description	Measure Type	Measure Steward	CMS Program(s)
	coagulopathy or bleeding				Physician Compare, Physician Feedback/Quality and Resource Utilization Reports, Physician Value-Based Payment Modifier
X3778	Imaging in pediatric ED patients aged 2 through 17 years with minor head injury	Percent of pediatric patients who presented within 24 hours of a non-penetrating head injury with a Glasgow coma score (GCS) of 14 or 15 and underwent head CT for trauma in the ED who have a documented indication consistent with guidelines (PECARN) prior to imaging	Process	American College of Emergency Physicians	Medicare Physician Quality Reporting System, Physician Compare, Physician Feedback/Quality and Resource Utilization Reports, Physician Value-Based Payment Modifier
X3733	Pediatric Kidney Disease: Discussion of Care Planning	Percentage of patients aged 17 years and younger with a diagnosis of ESRD on hemodialysis or peritoneal dialysis for whom there is documentation of a discussion regarding care planning	Process	Renal Physicians Association; joint copyright with American Medical Association - Physician Consortium for Performance Improvement	Medicare Physician Quality Reporting System, Physician Compare, Physician Feedback/Quality and Resource Utilization Reports, Physician Value-Based Payment Modifier
X2809	ALS Multidisciplinary Care Plan Developed or Updated	Percentage of patients diagnosed with ALS for whom a multi-disciplinary care plan was developed, if not done previously, and the plan was updated at least once annually.	Process	American Academy of Neurology	Medicare Shared Savings

MUC ID	Measure Title	Description	Measure Type	Measure Steward	CMS Program(s)
E2082	HIV Viral Load Suppression	Percentage of patients, regardless of age, with a diagnosis of HIV with a HIV viral load less than 200 copies/mL at last HIV viral load test during the measurement year	Outcome	Health Resources and Services Administration (HRSA) - HIV/AIDS Bureau	Medicare Shared Savings
E2079	HIV medical visit frequency	Percentage of patients, regardless of age, with a diagnosis of HIV who had at least one medical visit in each 6-month period of the 24-month measurement period with a minimum of 60 days between medical visits	Process	Health Resources and Services Administration (HRSA) - HIV/AIDS Bureau	Medicare Shared Savings
X3481	Functional Status Assessment and Goal Achievement for Patients with Congestive Heart Failure	Percentage of patients aged 65 years and older with congestive heart failure who had a target improvement goal defined after completing an initial patient-reported functional status assessment and met the goal after completing a follow-up functional status assessment	Patient Reported Outcome	National Committee for Quality Assurance	Medicare Shared Savings
X3302	Closing the Referral Loop - Specialist Report Sent to Primary Care Physician	Percentage of referrals received for which the receiving provider sent a consultant report back to the referring provider.	Process	National Committee for Quality Assurance	Medicare Shared Savings
E0712	Depression Utilization of the PHQ-9 Tool	Adult patients age 18 and older with the diagnosis of major depression or dysthymia (ICD-9 296.2x, 296.3x or 300.4) who have a PHQ-9 tool administered at least once during the four month measurement period.	Process	MN Community Measurement	Medicare Shared Savings
X2147	Total Per Capita Cost measure for Medicare fee-for-	The ratio of all actual Medicare FFS Parts A and B payments to a medical group practice for beneficiaries attributed to it over a calendar year	Cost/ Resource Use	Centers for Medicare & Medicaid Services	Medicare Shared Savings

MUC ID	Measure Title	Description	Measure Type	Measure Steward	CMS Program(s)
	service Beneficiaries	to all expected payments to the medical group practice, multiplied by the payment for the average beneficiary in the sample.			
X3715	Prevention Quality Indicators #90 (PQI #90)	Prevention Quality Indicators (PQI) overall composite per 100,000 population, ages 18 years and older. Includes admissions for one of the following conditions: diabetes with short-term complications, diabetes with long-term complications, uncontrolled diabetes without complications, diabetes with lower-extremity amputation, chronic obstructive pulmonary disease, asthma, hypertension, heart failure, angina without a cardiac procedure, dehydration, bacterial pneumonia, or urinary tract infection.	Outcome	Agency for Healthcare Research & Quality	Medicare Shared Savings
E2111	Antipsychotic Use in Persons with Dementia	The percentage of individuals 65 years of age and older with dementia who are receiving an antipsychotic medication without evidence of a psychotic disorder or related condition.	Process	Pharmacy Quality Alliance	Medicare Shared Savings
E0055	Comprehensive Diabetes Care: Eye Exam	The percentage of members 18-75 years of age with diabetes (type 1 and type 2) who received a retinal or dilated eye exam during the measurement year or a negative retinal or dilated eye exam in the year prior to the measurement year.	Process	National Committee for Quality Assurance	Medicare Shared Savings
E0056	Diabetes: Foot exam	The percentage of patients 18-75 years of age with diabetes (type 1 and type 2) who received a foot exam (visual inspection with either a sensory exam or a pulse exam) during the measurement year.	Process	National Committee for Quality Assurance	Medicare Shared Savings

MUC ID	Measure Title	Description	Measure Type	Measure Steward	CMS Program(s)
E0070	Coronary Artery Disease (CAD): Beta-Blocker Therapy – Prior Myocardial Infarction (MI) or Left Ventricular Systolic Dysfunction (LVEF < 40%)	"Percentage of patients aged 18 years and older with a diagnosis of coronary artery disease seen within a 12 month period who also have prior MI OR a current or LVEF < 40% who were prescribed beta-blocker therapy There are two reporting criteria for this measure: (1) Patients who are 18 years and older with a diagnosis of CAD or history of cardiac surgery who have a current or prior LVEF < 40% OR (2) Patients who are 18 years and older with a diagnosis of CAD or history of cardiac surgery who have prior myocardial infarction"	Process	American Medical Association - Physician Consortium for Performance Improvement/American College of Cardiology/American Heart Association	Medicare Shared Savings
E0067	Coronary Artery Disease (CAD): Antiplatelet Therapy	Percentage of patients aged 18 years and older with a diagnosis of coronary artery disease seen within a 12 month period who were prescribed aspirin or clopidogrel	Process	American Medical Association - Physician Consortium for Performance Improvement	Medicare Shared Savings
X1033	Coronary Artery Disease (CAD): Symptom Management:	Percentage of patients aged 18 years and older with a diagnosis of coronary artery disease seen within a 12 month period with an evaluation of level of activity and an assessment of whether anginal symptoms are present or absent with appropriate management of anginal symptoms within a 12 month period	Process	American Medical Association - Physician Consortium for Performance Improvement/American College of Cardiology/American Heart Association	Medicare Shared Savings
E0171	Acute Care Hospitalization	Percentage of home health stays in which patients were admitted to an acute care hospital	Outcome	Centers for Medicare &	Medicare Shared Savings

MUC ID	Measure Title	Description	Measure Type	Measure Steward	CMS Program(s)
	(Claims-Based)	during the 60 days following the start of the home health stay.		Medicaid Services	
E0052	Use of Imaging Studies for Low Back Pain	<p>The percentage of members with a primary diagnosis of low back pain who did not have an imaging study (plain x-ray, MRI, CT scan) within 28 days of the diagnosis.</p> <p>The measure is reported as an inverted rate [1 – (numerator/eligible population)]. A higher score indicates appropriate treatment of low back pain (i.e., the proportion for whom imaging studies did not occur).</p>	Process	National Committee for Quality Assurance	Medicare Shared Savings
E0514	MRI Lumbar Spine for Low Back Pain	<p>"This measure calculates the percentage of MRI of the Lumbar Spine studies with a diagnosis of low back pain on the imaging claim and for which the patient did not have prior claims-based evidence of antecedent conservative therapy. Antecedent conservative therapy may include (see subsequent details for codes):</p> <ol style="list-style-type: none"> <li>1. Claim(s) for physical therapy in the 60 days preceding the Lumbar Spine MRI.</li> <li>2. Claim(s) for chiropractic evaluation and manipulative treatment in the 60 days preceding the Lumbar Spine MRI.</li> <li>3. Claim(s) for evaluation and management in the period &gt;28 days and &lt;60 days preceding the Lumbar Spine MRI." </li></ol>	Efficiency	Centers for Medicare & Medicaid Services	Medicare Shared Savings
E0513	Thorax CT: Use of Contrast Material	This measure calculates the ratio of thorax studies that are performed with and without contrast out of all thorax studies performed	Efficiency	Centers for Medicare & Medicaid Services	Medicare Shared Savings



MUC ID	Measure Title	Description	Measure Type	Measure Steward	CMS Program(s)
		(those with contrast, those without contrast, and those with both). The measure is calculated based on a one year window of claims data.			
E2158	Payment-Standardized Medicare Spending Per Beneficiary (MSPB)	The MSPB Measure assesses the cost of services performed by hospitals and other healthcare providers during an MSPB hospitalization episode, which comprises the period immediately prior to, during, and following a patient's hospital stay. Beneficiary populations eligible for the MSPB calculation include Medicare beneficiaries enrolled in Medicare Parts A and B who were discharged from short-term acute hospitals during the period of performance.	Cost/Resource Use	Centers for Medicare & Medicaid Services	Medicare Shared Savings
E2083	Prescription of HIV Antiretroviral Therapy	Percentage of patients, regardless of age, with a diagnosis of HIV prescribed antiretroviral therapy for the treatment of HIV infection during the measurement year	Process	Health Resources and Services Administration (HRSA) - HIV/AIDS Bureau	Medicare Shared Savings
S2510	Skilled Nursing Facility All-Cause 30 Day Post Discharge Readmission Measure	This measure estimates the risk-standardized rate of all-cause, unplanned, hospital readmissions for patients who have been admitted to a Skilled Nursing Facility (SNF) (Medicare fee-for-service [FFS] beneficiaries) within 30 days of discharge from their prior proximal hospitalization. The prior proximal hospitalization is defined as an admission to an IPPS, CAH, or a psychiatric hospital. The measure is based on data for 12 months of SNF admissions.	Outcome	Centers for Medicare & Medicaid Services	Medicare Shared Savings, Skilled Nursing Facility Value-Based Purchasing Program

MUC ID	Measure Title	Description	Measure Type	Measure Steward	CMS Program(s)
		<p>A risk-adjusted readmission rate for each facility is calculated as follows:                      Step 1: Calculate the standardized risk ratio of the predicted number of readmissions at the facility divided by the expected number of readmissions for the same patients if treated at the average facility. The magnitude of the risk-standardized ratio is the indicator of a facility's effects on readmission rates.                      Step 2: The standardized risk ratio is then multiplied by the mean rate of readmission in the population (i.e., all Medicare FFS patients included in the measure) to generate the facility-level standardized readmission rate.                      For this measure, readmissions that are usually for planned procedures are excluded. Please refer to the Appendix, Tables 1 - 5 for a list of planned procedures.                      The measure specifications are designed to harmonize with CMS's hospital-wide readmission (HWR) measure to the greatest extent possible. The HWR (NQF #1789) estimates the hospital-level, risk-standardize rate of unplanned, all-cause readmissions within 30 days of a hospital discharge and uses the same 30-day risk window as the SNFRM.</p>			
X3629	30 Day Unplanned Readmissions for Cancer Patients	Number of hospital-specific 30-day unscheduled and potentially avoidable readmissions following hospitalization among diagnosed malignant cancer patients	Outcome	Alliance of Dedicated Cancer Centers	Prospective Payment System-Exempt Cancer Hospital Quality Reporting
E1641	Hospice and	Percentage of patients with chart documentation	Process	University of North	Prospective Payment

MUC ID	Measure Title	Description	Measure Type	Measure Steward	CMS Program(s)
	Palliative Care – Treatment Preferences	of preferences for life sustaining treatments.		Carolina- Chapel Hill	System-Exempt Cancer Hospital Quality Reporting
E0221	Needle biopsy to establish diagnosis of cancer precedes surgical excision/resection	Percentage of patients presenting with AJCC Stage Group 0, I, II, or III disease, who undergo surgical excision/resection of a primary breast tumor who undergo a needle biopsy to establish diagnosis of cancer preceding surgical excision/resection.	Process	American College of Surgeons	Prospective Payment System-Exempt Cancer Hospital Quality Reporting
E0219	Post breast conservation surgery irradiation	Percentage of female patients, age 18-69, who have their first diagnosis of breast cancer (epithelial malignancy), at AJCC stage I, II, or III, receiving breast conserving surgery who receive radiation therapy within 1 year (365 days) of diagnosis.	Process	American College of Surgeons	Prospective Payment System-Exempt Cancer Hospital Quality Reporting
E0225	At least 12 regional lymph nodes are removed and pathologically examined for resected colon cancer	Percentage of patients >18yrs of age, who have primary colon tumors (epithelial malignancies only), experiencing their first diagnosis, at AJCC stage I, II or III who have at least 12 regional lymph nodes removed and pathologically examined for resected colon cancer. 1b.1. Developer Rationale: Improved survival for patients	Process	American College of Surgeons	Prospective Payment System-Exempt Cancer Hospital Quality Reporting
E0431	Influenza vaccination coverage among healthcare personnel (HCP)	Percentage of healthcare personnel (HCP) who receive the influenza vaccination.	Process	Centers for Disease Control and Prevention	Prospective Payment System-Exempt Cancer Hospital Quality Reporting

MUC ID	Measure Title	Description	Measure Type	Measure Steward	CMS Program(s)
E1716	National Healthcare Safety Network (NHSN) Facility-wide Inpatient Hospital-onset Methicillin-resistant Staphylococcus aureus (MRSA) Bacteremia Outcome Measure	Standardized infection ratio (SIR) of hospital-onset unique blood source MRSA Laboratory-identified events (LabID events) among all inpatients in the facility	Outcome	Centers for Disease Control and Prevention	Prospective Payment System-Exempt Cancer Hospital Quality Reporting
E1717	National Healthcare Safety Network (NHSN) Facility-wide Inpatient Hospital-onset Clostridium difficile Infection (CDI) Outcome Measure	Standardized infection ratio (SIR) of hospital-onset CDI Laboratory-identified events (LabID events) among all inpatients in the facility, excluding well-baby nurseries and neonatal intensive care units (NICUs)	Outcome	Centers for Disease Control and Prevention	Prospective Payment System-Exempt Cancer Hospital Quality Reporting
E1659	Influenza Immunization	Inpatients age 6 months and older discharged during October, November, December, January, February or March who are screened for influenza vaccine status and vaccinated prior to discharge if indicated.	Process	Centers for Medicare & Medicaid Services	Prospective Payment System-Exempt Cancer Hospital Quality Reporting

## **APPENDIX A: MEASURE SPECIFICATIONS**

### ***Table Legend for Measure Specifications.***

CMS has included a list of terms used in the Table of Measure Specifications for clarity and consistency. They are presented below in the order in which they appear as headings in this Table.

**Measure ID:** Gives users an identifier to refer to a measure.

- ◆ An “E” prefix indicates a measure that is currently endorsed by the NQF.
- ◆ A “D” prefix indicates a measure that was once endorsed by the NQF but has subsequently been de-endorsed.
- ◆ An “F” prefix indicates a measure that was submitted to the NQF for endorsement but was not endorsed.
- ◆ An “S” prefix indicates a measure that is currently submitted to the NQF for endorsement.
- ◆ An “X” prefix indicates a measure that has yet to be submitted to the NQF for endorsement.

**Measure Title:** Refers to the title of the measure.

**Numerator:** The numerator reflects the subset of patients in the denominator for whom a particular service has been provided or for whom a particular outcome has been achieved.

**Denominator:** The lower part of a fraction used to calculate a rate, proportion, or ratio. The denominator is associated with a given patient population that may be counted as eligible to meet a measure's inclusion requirements.

**Exclusions:** Exclusions are patients included in an initial population for which there are valid reasons a process or outcome of care has not occurred. These cases are removed from the denominator. When clinical judgment is allowed, these are referred to as "exceptions". Denominator exceptions fall into three general categories: medical reasons, patients' reasons, and system reasons. Exceptions must be captured in a way that they could be reported separately.

**Measure Specifications Table**

MUC ID	Measure Title	Numerator	Denominator	Exclusions
X3719	Normothermia Outcome	Surgery patients with a body temperature equal to or greater than 96.8 Fahrenheit/36 Celsius recorded within fifteen minutes of Arrival in PACU	All patients, regardless of age, undergoing surgical procedures under general or neuraxial anesthesia of greater than or equal to 60 minutes duration	None
X3720	Unplanned Anterior Vitrectomy	All cataract surgery patients who had an unplanned anterior vitrectomy	All cataract surgery patients	None
E0515	Ambulatory surgery patients with appropriate method of hair removal	ASC admissions with surgical site hair removal with a razor or clippers from the scrotal area, or with clippers or depilatory cream from all other surgical sites	All ASC admissions with surgical site hair removal	ASC admissions who perform their own hair removal
X3697	O/ASPECS Discharge and Recovery	Proportions of top box responses (YES, YES DEFINITELY) are calculated for each question. These proportions are then averaged over all questions in the multi-item measure. $(P1 + P2 + P3 + P4 + P5 + P6)/6$	See numerator statement.	Persons younger than 18 years having a surgery or procedure in a hospital outpatient surgery department or ambulatory surgery center, CPT code does not fall between 100021-69990 without Modifier 53 (procedure did not take place); discharged to hospice.
X3699	O/ASPECS Communication	Proportions of top box responses (YES, YES DEFINITELY) are calculated for each question. P4 and P5 count only those who had anesthesia. These proportions are then averaged over all questions in the multi-item measure. $(P1 + P2 + P3 + P4 +$	See numerator statement.	Persons younger than 18 years having a surgery or procedure in a hospital outpatient surgery department or ambulatory surgery center, CPT code does not fall between 100021-69990 without Modifier 53 (procedure did not take place); discharged to hospice.

MUC ID	Measure Title	Numerator	Denominator	Exclusions
		P5)/5		
X3698	O/ASPECS About Facility and Staff	Proportions of top box responses (YES) are calculated for each question. The proportions are then averaged over all questions in the multi-item measure. (P1+P2+P3+P4+P5+P6)/6	See numerator statement.	Persons younger than 18 years having a surgery or procedure in a hospital outpatient surgery department or ambulatory surgery center, CPT code does not fall between 100021-69990 without Modifier 53 (procedure did not take place); discharged to hospice.
X3703	O/ASPECS Recommend	Number of respondents answering "Definitely yes".	Number of respondents answering the survey question	Persons younger than 18 years having a surgery or procedure in a hospital outpatient surgery department or ambulatory surgery center, CPT code does not fall between 100021-69990 without Modifier 53 (procedure did not take place); discharged to hospice.
X3702	O/ASPECS Overall Facility Rating	Number of respondents answering 9 or 10	Number of respondents answering the survey question	Persons younger than 18 years having a surgery or procedure in a hospital outpatient surgery department or ambulatory surgery center, CPT code does not fall between 100021-69990 without Modifier 53 (procedure did not take place); discharged to hospice.
E0326	Care Plan	Patients who have a care plan or surrogate decision maker documented in the medical record or documentation in the medical record that a care plan was discussed but patient did not wish or was not able to name a surrogate decision maker	All patients aged 65 years and older	None



MUC ID	Measure Title	Numerator	Denominator	Exclusions
X3717	Delivered Dose of Hemodialysis Above Minimum	Number of patient months in denominator whose delivered dose of hemodialysis (calculated from the last measurements of the month using the UKM or Daugirdas II formula) was a $spKt/V \geq 1.2$ .	To be included in the denominator for a particular month, the patients must have been on dialysis for at least 90 days and must be dialyzing thrice weekly during the month.	Pediatric home hemodialysis patients and frequent hemodialysis patients ( $\geq 4$ times per week).
X3718	Delivered Dose in Peritoneal Dialysis Above Minimum	Number of patient months in the denominator whose delivered peritoneal dialysis was a weekly $Kt/V_{urea}$ of at least 1.7 within past four months (Adult $\geq 18$ ) or 1.8 within past 6 months (pediatric $<18$ ).	To be included in the denominator for a particular month, the patient must have been on dialysis for at least 90 days.	None
X2051	Delivered Dose of Dialysis Above Minimum - Composite Score	Number of patients months in the denominator whose delivered dose of dialysis met the specified thresholds. The thresholds are as follows: <ul style="list-style-type: none"> <li>• Hemodialysis (all ages): <math>Kt/V \geq 1.2</math></li> <li>• Peritoneal dialysis (pediatric): <math>Kt/V \geq 1.8</math> (within past 6 months)</li> <li>• Peritoneal dialysis (adult): <math>Kt/V \geq 1.7</math> (within past 4 months)</li> </ul>	To be included in the denominator for a particular month, patients need to meet the following requirements that month: <p>Peritoneal dialysis patients: All peritoneal dialysis patients who have been on dialysis for at least 90 days.</p> <p>Hemodialysis patients: Pediatric (<math>&lt;18</math> years old) in-center HD patients who have been on dialysis for 90 days or more and dialyzing thrice weekly, adult (<math>\geq 18</math> years old) patients who have been on dialysis for 90 days or more and dialyzing thrice weekly.</p>	Frequent hemodialysis patients ( $\geq 4$ times per week).
E1919	Cultural	The target audience for this	As mentioned above, the survey	None

MUC ID	Measure Title	Numerator	Denominator	Exclusions
	Competency Implementation Measure	survey includes health care organizations across a range of health care settings, including hospitals, health plans, community clinics, and dialysis organizations. The focus of the measure is the degree to which health care organizations have adopted or implemented 12 of the 45 NQF-endorsed cultural competency preferred practices.	can be used to measure adherence to 12 of the 45-NQF endorsed cultural competence preferred practices. The survey could be used to focus on a particular type of health care organization, or more broadly to collect information across various organization types.	
X3716	Cultural Competency Reporting Measure	Facility reports Cultural Competency survey data to CMS.	N/A	None
X3721	Medications Documentation Reporting	For each eligible patient-visit, facility reports whether or not the patient's list of current medications is documented.	All eligible patient visits.	Patient is in an urgent or emergent medical situation where time is of the essence and to delay treatment would jeopardize the patient's health status.
E0419	Documentation of Current Medications in the Medical Record	Percentage of specified visits for patients aged 18 years and older for which the eligible professional attests to documenting a list of current medications to the best of his/her knowledge and ability. This list must include ALL prescriptions, over-the-counters, herbals, and vitamin/mineral/dietary (nutritional) supplements AND	All visits occurring during the 12 month reporting period for patients aged 18 years and older on the date of the encounter where one or more CPT or HCPCS codes are reported on the claims submission for that encounter. All discussed coding is listed in "2a1.7. Denominator Details" section below.	A patient is not eligible or excluded (B) from the performance denominator (PD) if one or more of the following reason exists:  <ul style="list-style-type: none"> <li>• Patient is in an urgent or emergent medical situation where time is of the essence and to delay treatment would jeopardize the patient's health status.</li> </ul>

MUC ID	Measure Title	Numerator	Denominator	Exclusions
		must contain the medications' name, dosage, frequency and route of administration		
X3704	Percent of Patients with Pressure Ulcers That Are New or Worsened	Number of home health episodes of care in which the patient is discharged from home health with one or more pressure ulcer(s) that are Stage 2 - 4 or unstageable due to slough or eschar and are new or have worsened since the start or resumption of care.	Number of home health episodes of care ending with a discharge during the reporting period, other than those covered by generic or measure-specific exclusions.	Episodes of care ending with a transfer to an inpatient setting or death are excluded from the denominator. HHA's with denominator counts of less than 20 in the sample will be excluded from public reporting owing to small sample size.
S0138	National Healthcare Safety Network (NHSN) Catheter-associated Urinary Tract Infection (CAUTI) Outcome	Total number of observed healthcare-associated CAUTI among patients in bedded inpatient care locations (excluding patients in Level II or III neonatal ICUs).	<p>S.7. Denominator Statement: Total number of indwelling urinary catheter days for each location under surveillance for CAUTI during the data period.</p> <p>S.10. Denominator Exclusions: The following are not considered indwelling catheters by NHSN definitions:</p> <ol style="list-style-type: none"> <li>1. Suprapubic catheters</li> <li>2. Condom catheters</li> <li>3. "In and out" catheterizations</li> <li>4. Nephrostomy tubes</li> </ol> <p>Note, that if a patient has either a nephrostomy tube or a suprapubic catheter and also has an indwelling urinary catheter, the indwelling urinary catheter will be included in the CAUTI surveillance.</p>	<p>The following are not considered indwelling catheters by NHSN definitions:</p> <ol style="list-style-type: none"> <li>1. Suprapubic catheters</li> <li>2. Condom catheters</li> <li>3. "In and out" catheterizations</li> <li>4. Nephrostomy tubes</li> </ol> <p>Note, that if a patient has either a nephrostomy tube or a suprapubic catheter and also has an indwelling urinary catheter, the indwelling urinary catheter will be included in the CAUTI surveillance.</p>

MUC ID	Measure Title	Numerator	Denominator	Exclusions
S0139	National Healthcare Safety Network (NHSN) Central line-associated Bloodstream Infection (CLABSI) Outcome	Total number of observed healthcare-associated CLABSI among patients in bedded inpatient care locations.	<p>S.7. Denominator Statement: Total number of central line days for each location under surveillance for CLABSI during the data period.</p> <p>S.10. Denominator Exclusions: 1. Pacemaker wires and other non-lumened devices inserted into central blood vessels or the heart are excluded as CLs.</p> <p>2. Extracorporeal membrane oxygenation lines, femoral arterial catheters, intraaortic balloon pump devices, and hemodialysis reliable outflow catheters (HeRO) are excluded as CLs.</p> <p>3. Peripheral intravenous lines are excluded as CLs.</p>	<p>1. Pacemaker wires and other non-lumened devices inserted into central blood vessels or the heart are excluded as CLs.</p> <p>2. Extracorporeal membrane oxygenation lines, femoral arterial catheters, intraaortic balloon pump devices, and hemodialysis reliable outflow catheters (HeRO) are excluded as CLs.</p> <p>3. Peripheral intravenous lines are excluded as CLs.</p>
E0705	Proportion of Patients Hospitalized with Stroke that have a Potentially Avoidable Complication (during the Index Stay or in the 30-day Post-Discharge Period)	Outcome: Potentially avoidable complications (PACs) in patients hospitalized for stroke occurring during the index stay or in the 30-day post-discharge period.	Adult patients aged 18 – 65 years who had a relevant hospitalization for stroke (with no exclusions) and were followed for one-month after discharge.	Denominator exclusions include exclusions of either “patients” or “claims” based on the following criteria: (1)“Patients” excluded are those with that have any form of cancer, ESRD (end-stage renal disease), transplants such as lung or heart-lung transplant or complications related to transplants, intracranial trauma, pregnancy and delivery, HIV, or suicide. (2)“Claims” are excluded from the stroke measure if they are considered not relevant to stroke care or are for major surgical services that suggests that stroke may be a

MUC ID	Measure Title	Numerator	Denominator	Exclusions
				comorbidity or complication associated with the procedure e.g. CABG procedure. Patients where the index hospitalization claim is excluded are automatically excluded from both the numerator and the denominator.
E0708	Proportion of Patients Hospitalized with Pneumonia that have a Potentially Avoidable Complication (during the Index Stay or in the 30-day Post-Discharge Period)	Outcome: Potentially avoidable complications (PACs) in patients hospitalized for pneumonia occurring during the index stay or in the 30-day post-discharge period.	Adult patients aged 18 – 65 years who had a relevant hospitalization for Pneumonia (with no exclusions) and were followed for one-month after discharge.	Denominator exclusions include exclusions of either “patients” or “claims” based on the following criteria: (1)“Patients” excluded are those that have any form of cancer (especially cancer of lung and bronchus), thalassemia, sickle-cell disease, ESRD (end-stage renal disease), transplants such as lung or heart-lung transplant or complications related to transplants, pregnancy and delivery, HIV, or suicide. (2)“Claims” are excluded from the Pneumonia measure if they are considered not relevant to pneumonia care or are for major surgical services that suggests that pneumonia may be a comorbidity associated with the procedure e.g. CABG procedure. Patients where the index hospitalization claim is excluded are automatically excluded from both the numerator and the denominator.
E0704	Proportion of Patients Hospitalized with AMI that	Outcome: Potentially avoidable complications (PACs) in patients hospitalized for AMI occurring during the index stay or in the 30-	Adult patients aged 18 – 65 years who had a relevant hospitalization for AMI (with no exclusions) and were followed for one-month	Denominator exclusions include exclusions of either “patients” or “claims” based on the following criteria: (1)“Patients” excluded are those that

MUC ID	Measure Title	Numerator	Denominator	Exclusions
	have a Potentially Avoidable Complication (during the Index Stay or in the 30-day Post-Discharge Period)	day post-discharge period.	after discharge	have any form of cancer, ESRD (end-stage renal disease), transplants such as lung or heart-lung transplant or complications related to transplants, pregnancy and delivery, HIV, or suicide. (2)“Claims” are excluded from the AMI measure if they are considered not relevant to AMI care or are for major surgical services that suggests that AMI may be a comorbidity associated with the procedure e.g. CABG procedure. Patients where the index hospitalization claim is excluded are automatically excluded from both the numerator and the denominator.
E2104	Paired Measures 0702 and 0703; Intensive Care Unit (ICU) Length-of-Stay (LOS) and Intensive Care: In-hospital mortality rate	<p>E0702 Numerator Statement: For all eligible patients admitted to the ICU, the time at discharge from ICU (either death or physical departure from the unit) minus the time of admission (first recorded vital sign on ICU flow sheet)</p> <p>E0703 Numerator Statement: Total number of eligible patients whose hospital outcome is death</p>	<p>E0702 Denominator Statement: Total number of eligible patients who are discharged (including deaths and transfers)</p> <p>E0703 Denominator Statement: Total number of eligible patients who are discharged (including deaths and transfers)</p>	<p>E0702 Exclusions: &lt;18 years of age at time of ICU admission, ICU readmission, &lt;4 hours in ICU, primary admission due to trauma, burns, or immediately post-CABG, admitted to exclude myocardial infarction (MI) and subsequently found without MI or any other acute process requiring ICU care, transfers from another acute care hospital</p> <p>E0703 Exclusions: &lt;18 years of age at time of ICU admission, ICU readmission, &lt;4 hours in ICU, primary admission due to trauma, burns, or immediately post-CABG, admitted to exclude myocardial infarction (MI) and subsequently found without MI or any other acute process</p>

MUC ID	Measure Title	Numerator	Denominator	Exclusions
				requiring ICU care, transfers from another acute care hospital
E0349	Transfusion Reaction (PSI 16)	Discharges 18 years and older or in MDC 14 with ICD-9-CM codes for transfusion reaction in any secondary diagnosis field of all medical and surgical discharges defined by specific DRGs or MS-DRGs	N/A	None
X3727	Hospital 30-day, all-cause, unplanned risk-standardized days in acute care following pneumonia hospitalization	The outcome of the measure is the number of days the patient spends in acute care (ED observation stay, and readmission) during the first 30 days after discharge from the hospital. The outcome can thus range from zero to 30 days, or zero to 300 per 100 discharges. An ED visit is defined as presence of revenue center codes 0450 OR 0451 OR 0452 OR 0459 OR 0981 and an observation stay is defined as revenue center code 0762 (in the outpatient file) OR HCPCS G0378 (in the outpatient file) OR CPT codes 99217-99220 or 99234-99236 (in the carrier file). Days in which an ED visit occurs are counted as 0.5 days of events since ED visits last on average less than a day. ED visits that result in an observation stay	The target population for this measure is patients aged 65 years and older hospitalized for pneumonia and who are either Medicare Fee-for-Service (FFS) beneficiaries admitted to non-federal hospitals or patients admitted to VA hospitals. An index admission is the hospitalization to which the outcome is attributed. These measures include index admissions for patients: -Having a principal discharge diagnosis of pneumonia; -Enrolled in Medicare FFS or are VA beneficiaries; -Aged 65 or over; -Discharged from non-federal acute care hospitals or VA hospitals alive; -Not transferred to another acute care facility; -and, Enrolled in Part A and Part B	This measure excludes index admissions for patients who leave the hospital against medical advice. This measure also excludes index admissions for patients without at least 30 days post-discharge enrollment in FFS Medicare (note that this exclusion applies only to patients who have index admissions in non-VA hospitals).

MUC ID	Measure Title	Numerator	Denominator	Exclusions
		<p>or readmission are not counted. Days of observation stay are calculated on the basis of hours. Total hours are divided by 24 and rounded up to the nearest integer. Any qualifying event in the 30-day post-discharge window is included, except planned readmissions, as defined by the planned readmission algorithm used in the publicly reported CMS 30-day readmission measure for pneumonia.</p>	<p>Medicare for the 12 months prior to the date of the index admission. This requirement is dropped for patients with an index admission within a VA hospital.</p> <p>The denominator includes admissions for patients discharged from the hospital with a principal diagnosis of pneumonia International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM) codes 480.0, 480.1, 480.2, 480.3, 480.8, 480.9, 481, 482.0, 482.1, 482.2, 482.30, 482.31, 482.32, 482.39, 482.40, 482.41, 482.42, 482.49, 482.81, 482.82, 482.83, 482.84, 482.89, 482.9, 483.0, 483.1, 483.8, 485, 486, 487.0, and 488.11; ICD-10-CM codes J120, J121, J122, J1281, J1289, J129, J13, J181, J150, J151, J14, J154, J154, J153, J154, J1520, J1521, J1521, Z16, J1529, J158, J155, J156, A481, J158, J159, J157, J160, J168, J180, J189, J1100, J129, J09119).</p>	
X3722	Hospital 30-day, all-cause, unplanned risk-standardized days in acute	The outcome of the measure is the number of days the patient spends in acute care (ED observation stay, and readmission) during the first 30	The target population for this measure is patients aged 65 years and older hospitalized for heart failure and who are either Medicare Fee-for-Service (FFS)	This measure excludes index admissions for patients who leave the hospital against medical advice. This measure also excludes index admissions for patients without at least 30 days post-discharge



MUC ID	Measure Title	Numerator	Denominator	Exclusions
	care following heart failure hospitalization	<p>days after discharge from the hospital. The outcome can thus range from zero to 30 days, or zero to 300 per 100 discharges. An ED visit is defined as presence of revenue center codes 0450 OR 0451 OR 0452 OR 0459 OR 0981 and an observation stay is defined as revenue center code 0762 (in the outpatient file) OR HCPCS G0378 (in the outpatient file) OR CPT codes 99217-99220 or 99234-99236 (in the carrier file). Days in which an ED visit occurs are counted as 0.5 days of events since ED visits last on average less than a day. ED visits that result in an observation stay or readmission are not counted. Days of observation stay are calculated on the basis of hours. Total hours are divided by 24 and rounded up to the nearest integer. Any qualifying event in the 30-day post-discharge window is included, except planned readmissions, as defined by the planned readmission algorithm used in the publicly reported CMS 30-day readmission measure for heart failure.</p>	<p>beneficiaries admitted to non-federal hospitals or patients admitted to VA hospitals. An index admission is the hospitalization to which the outcome is attributed. These measures include index admissions for patients:</p> <ul style="list-style-type: none"> <li>-Having a principal discharge diagnosis of heart failure;</li> <li>-Enrolled in Medicare FFS or are VA beneficiaries;</li> <li>-Aged 65 or over;</li> <li>-Discharged from non-federal acute care hospitals or VA hospitals alive;</li> <li>-Not transferred to another acute care facility;</li> <li>-and, Enrolled in Part A and Part B Medicare for the 12 months prior to the date of the index admission. This requirement is dropped for patients with an index admission within a VA hospital.</li> </ul> <p>The denominator includes admissions for patients discharged from the hospital with a principal diagnosis of heart failure International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM) codes 402.01, 402.11, 402.91, 404.01, 404.03, 404.11, 404.13, 404.91,</p>	<p>enrollment in FFS Medicare (note that this exclusion applies only to patients who have index admissions in non-VA hospitals).</p>

MUC ID	Measure Title	Numerator	Denominator	Exclusions
			404.93, 428.0, 428.1, 428.20, 428.21, 428.22, 428.23, 428.30, 428.31, 428.32, 428.33, 428.40, 428.41, 428.42, 428.43, 428.9.	
X3728	Hospital 30-day, all-cause, unplanned risk-standardized days in acute care following acute myocardial infarction (AMI) hospitalization	The outcome of the measure is the number of days the patient spends in acute care (ED observation stay, and readmission) during the first 30 days after discharge from the hospital. The outcome can thus range from zero to 30 days, or zero to 300 per 100 discharges. An ED visit is defined as presence of revenue center codes 0450 OR 0451 OR 0452 OR 0459 OR 0981 and an observation stay is defined as revenue center code 0762 (in the outpatient file) OR HCPCS G0378 (in the outpatient file) OR CPT codes 99217-99220 or 99234-99236 (in the carrier file). Days in which an ED visit occurs are counted as 0.5 days of events since ED visits last on average less than a day. ED visits that result in an observation stay or readmission are not counted. Days of observation stay are calculated on the basis of hours. Total hours are divided by 24 and rounded up to the nearest	The target population for this measure is patients aged 65 years and older hospitalized for AMI and who are either Medicare Fee-for-Service (FFS) beneficiaries admitted to non-federal hospitals or patients admitted to VA hospitals. An index admission is the hospitalization to which the outcome is attributed. These measures include index admissions for patients: -Having a principal discharge diagnosis of AMI; -Enrolled in FFS or are VA beneficiaries; -Aged 65 or over; -Discharged from non-federal acute care hospitals or VA hospitals alive; -Not transferred to another acute care facility; -and, Enrolled in Part A and Part B Medicare for the 12 months prior to the date of the index admission. This requirement is dropped for patients with an index admission within a VA hospital.	This measure excludes index admissions for patients who leave the hospital against medical advice. This measure also excludes index admissions for patients without at least 30 days post-discharge enrollment in FFS Medicare (note that this exclusion applies only to patients who have index admissions in non-VA hospitals). An additional exclusion criterion for the AMI cohort is that patients admitted and discharged on the same day are not included as an index admission.

MUC ID	Measure Title	Numerator	Denominator	Exclusions
		integer. Any qualifying event in the 30-day post-discharge window is included, except planned readmissions, as defined by the planned readmission algorithm used in the publicly reported CMS 30-day readmission measure for AMI.	The denominator includes admissions for patients discharged from the hospital with a principal diagnosis of AMI International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM) codes 410.00, 410.01, 410.10, 410.11, 410.20, 410.21, 410.30, 410.31, 410.40, 410.41, 410.50, 410.51, 410.60, 410.61, 410.70, 410.71, 410.80, 410.81, 410.90, 410.91.	
X3620	Hospital-level, risk-standardized payment associated with an episode of care for primary elective total hip and/or total knee arthroplasty (THA/TKA)	Outcome: hospital-level, risk-standardized payment for Medicare patients for a primary elective total hip and/or knee arthroplasty episode of care. Payment timeframe: admission date through 90 days post-admission.	Admissions for Medicare FFS patients: with qualifying THA/TKA procedure; Aged 65 or over; Admitted to non-federal acute care hospitals; Enrolled in Medicare Parts A and B for index and 12 months prior; Not transferred from acute care facility.	<ol style="list-style-type: none"> <li>1) Patients without complete administrative data in the 90 days following the index admission, if alive</li> <li>2) Patients with no payment information during the index admission</li> <li>3) Patients discharged against medical advice (AMA)</li> <li>4) Patients transferred to federal hospitals</li> <li>5) Patients with more than two THA/TKA procedure codes during the admission</li> </ol>
X3689	Participation in a Patient Safety Culture Survey	The facility/hospital conducts a patient safety culture survey among physicians, nurses, technicians, and support staff	None	None
E0202	Falls with injury	Total number of patient falls of injury level minor or greater (whether or not assisted by a	Patient days by Type of Unit during the calendar month.	Other unit types (e.g., pediatric, psychiatric, obstetrical, etc.)

MUC ID	Measure Title	Numerator	Denominator	Exclusions
		staff member) by eligible hospital unit during the calendar month X 1000.		
E0642	Cardiac Rehabilitation Patient Referral From an Inpatient Setting	Number of eligible patients with a qualifying event/diagnosis who have been referred to an outpatient Cardiac Rehabilitation/Secondary Prevention (CR/SP) program prior to hospital discharge or have a documented medical or patient-centered reason why such a referral was not made.	Number of hospitalized patients in the reporting period hospitalized with a qualifying cardiovascular disease event/diagnosis who do not meet any of the criteria listed in the denominator exclusion section below.	<p>Exceptions criteria require documentation of one or more of the following factors that may prohibit cardiac rehabilitation participation: Patient factors (e.g., patient resides in a long-term nursing care facility). Medical factors (e.g., patient deemed by provider to have a medically unstable, life-threatening condition). Health care system factors (e.g., no cardiac rehabilitation/secondary prevention (CR/SP) program available within 60 min of travel time from the patient's home).</p> <p>The only exclusion criterion for this measure is noted below: Patients who expired before discharge.</p>
E0204	Skill mix (Registered Nurse [RN], Licensed Vocational/Practical Nurse [LVN/LPN], unlicensed assistive personnel [UAP], and	<p>Four separate numerators are as follows:</p> <p>RN hours – Productive nursing care hours worked by RNs with direct patient care responsibilities for each hospital in-patient unit during the calendar month.</p> <p>LPN/LVN hours – Productive</p>	Denominator is the total number of productive hours worked by employee or contract nursing staff with direct patient care responsibilities (RN, LPN/LVN, and UAP) for each hospital in-patient unit during the calendar month.	<p>Same as numerator; nursing staff with no direct patient care responsibilities are excluded.</p> <p>Excluded nursing staff: Persons whose primary responsibility is administrative in nature. Specialty teams, patient educators, or case managers who are not assigned to a specific unit. Unit secretaries or clerks, monitor</p>

MUC ID	Measure Title	Numerator	Denominator	Exclusions
	contract)	<p>nursing care hours worked by LPNs/LVNs with direct patient care responsibilities for each hospital in-patient unit during the calendar month.</p> <p>UAP hours – Productive nursing care hours worked by UAP with direct patient care responsibilities for each hospital in-patient unit during the calendar month.</p> <p>Contract or agency hours – Productive nursing care hours worked by nursing staff (contract or agency staff) with direct patient care responsibilities for each hospital in-patient unit during the calendar month.</p>		<p>technicians, and other with no direct patient care responsibilities.</p>
E0205	Nursing Hours per Patient Day	<p>Total number of productive hours worked by nursing staff with direct patient care responsibilities for each hospital inpatient unit during the calendar month.</p>	<p>Denominator is the total number of patient days for each in-patient unit during the calendar month. Patient days must be from the same unit in which nursing care hours are reported.</p>	<p>Patient days from some non-reporting unit types, such as Emergency Department, peri-operative unit, and obstetrics, are excluded.</p>
E0506	Hospital 30-day, all-cause, risk-standardized readmission rate (RSRR) following	<p>The outcome for this measure is 30-day readmission. We define readmission as an inpatient admission for any cause, with the exception of certain planned readmissions, within 30 days</p>	<p>The denominator includes patients 18 and over hospitalized for pneumonia. The measure is currently publicly reported by CMS for those 65 years and older who are either Medicare FFS</p>	<p>For all cohorts, the measure excludes admissions for patients:</p> <ul style="list-style-type: none"> <li>-Discharged against medical advice (AMA);</li> <li>-Admitted with pneumonia within 30 days of discharge from a qualifying index</li> </ul>

MUC ID	Measure Title	Numerator	Denominator	Exclusions
	pneumonia hospitalization	from the date of discharge from the index pneumonia admission. If a patient has more than one unplanned admission within 30 days of discharge from the index admission, only the first one is counted as a readmission. The measure looks for a dichotomous yes or no outcome of whether each admitted patient has an unplanned readmission within 30 days. However, if the first readmission after discharge is considered planned, any subsequent unplanned readmission is not counted as an outcome for that index admission because the unplanned readmission could be related to care provided during the intervening planned readmission rather than during the index admission.	beneficiaries admitted to non-federal hospitals or patients admitted to VA hospitals. In 2014, we propose updating our current definition of pneumonia to include patients with a principal discharge diagnosis of aspiration pneumonia (defined by ICD-9-CM Code 507.0) and patients with a principal discharge diagnosis of sepsis (defined by ICD-9-CM codes 995.91, 995.92, 038, 038.0, 038.1, 038.10, 038.11, 038.12, 038.19, 038.2, 038.3, 038.4, 038.40, 038.41, 038.42, 038.43, 038.44, 038.49, 038.8, 038.9, and 785.52) or respiratory failure (defined by ICD-9-CM codes 518.81, 518.82, 518.84, and 799.1) and a secondary diagnosis of pneumonia coded as present on admission (POA). To be included in the measure cohort used in public reporting, patients must meet the following additional inclusion criteria: enrolled in Part A and Part B Medicare for the 12 months prior to the date of admission, and enrolled in Part A during the index admission (this criterion does not apply to patients discharged from VA hospitals); not transferred to another acute care facility; and	admission (Admissions within 30 days of discharge of an index admission will be considered readmissions. No admission is counted as a readmission and an index admission. The next eligible admission after the 30-day time period following an index admission will be considered another index admission.)  For Medicare FFS patients, the measure additionally excludes admissions for patients: -Without at least 30 days post-discharge enrollment in FFS Medicare

MUC ID	Measure Title	Numerator	Denominator	Exclusions
E0468	Hospital 30-day, all-cause, risk-standardized mortality rate (RSMR) following pneumonia hospitalization	The outcome for this measure is 30-day all-cause mortality. We define mortality as death from any cause within 30 days of the index admission date for patients 18 and older discharged from the hospital with a principal diagnosis of pneumonia.	<p>alive at discharge.</p> <p>The denominator includes patients aged 18 and over admitted to an acute care hospital for pneumonia and with a complete claims history for the 12 months prior to admission. The measure is currently publicly reported by CMS for those 65 years and older who are either Medicare FFS beneficiaries admitted to non-federal hospitals or patients admitted to VA hospitals. In 2014, we propose updating our current definition of pneumonia to include patients with a principal discharge diagnosis of aspiration pneumonia (defined by ICD-9-CM Code 507.0) and patients with a principal discharge diagnosis of sepsis (defined by ICD-9-CM codes 995.91, 995.92, 038, 038.0, 038.1, 038.10, 038.11, 038.12, 038.19, 038.2, 038.3, 038.4, 038.40, 038.41, 038.42, 038.43, 038.44, 038.49, 038.8, 038.9, and 785.52) or respiratory failure (defined by ICD-9-CM codes 518.81, 518.82, 518.84, and 799.1) and a secondary diagnosis of pneumonia coded as present on admission</p>	<p>The measure excludes index admissions for patients:</p> <ol style="list-style-type: none"> <li>1. Discharged alive on the day of admission or the following day who were not transferred;</li> <li>2. With inconsistent or unknown vital status or other unreliable demographic data;</li> <li>3. Enrolled in the Medicare hospice program or VA hospice services any time in the 12 months prior to the index admission, including the first day of the index admission; and</li> <li>4. Who were discharged against medical advice (AMA).</li> </ol> <p>After the above exclusions (#1-4) are applied, the measure randomly selects one index admission per patient per year for inclusion in the cohort. Each episode of care must be mutually independent with the same probability of the outcome. The probability of death increases with each subsequent admission and therefore the episodes of care are not mutually independent. For the three year combined data, when index admissions occur during the transition between measure reporting periods (June and July of each year) and both are randomly selected for inclusion</p>

MUC ID	Measure Title	Numerator	Denominator	Exclusions
			(POA). Patients who are transferred from one acute care facility to another must have a principal discharge diagnosis of pneumonia at both hospitals. The initial hospital for a transferred patient is designated as the responsible institution for the episode.	in the measure, the measure only includes the June admission. The July admissions are excluded from the measure to avoid assigning a single death to two admissions.
X0351	Kidney/Urinary Tract Infection Clinical Episode-Based Payment Measure	The numerator of the Kidney/Urinary Tract Infection Clinical Episode-Based Payment Measure is the sum of a provider's risk-adjusted spending and the preadmission and post-discharge medical services that are clinically related to kidney/urinary tract infection across a provider's eligible kidney/urinary tract infection episodes during the period of performance. A kidney/urinary tract infection episode begins 3 days prior to the initial (i.e., index) admission and extends 30 days following the discharge from the index hospital stay.	A count of the provider's kidney/urinary tract infection episodes during the period of performance.	The exclusion methodology applied to the measure is similar to the one used to calculate the NQF-endorsed Medicare Spending per Beneficiary (MSPB) measure. A beneficiary's episode is excluded if the beneficiary meets any of the following criteria: <ul style="list-style-type: none"> <li>• received Medicare-covered services for which Medicare was not the primary payer during the episode window;</li> <li>• not continuously enrolled in both Parts A and B in the 90 days prior to and during the episode window; or</li> <li>• missing date of birth in the Medicare enrollment database.</li> </ul>
X0352	Knee Replacement/Revision Clinical Episode-Based Payment	The numerator of the Knee Replacement/Revision Clinical Episode-Based Payment Measure is the sum of a provider's risk-adjusted spending and the	A count of the provider's knee replacement/revision episodes during the period of performance.	The exclusion methodology applied to the measure is similar to the one used to calculate the NQF-endorsed Medicare Spending per Beneficiary (MSPB) measure. A beneficiary's episode is



MUC ID	Measure Title	Numerator	Denominator	Exclusions
	Measure	preadmission and post-discharge medical services that are clinically related to the knee replacement/revision across a provider's eligible Knee Replacement/Revision episodes during the period of performance. A knee replacement/revision episode begins 3 days prior to the initial (i.e., index) admission and extends 30 days following the discharge from the index hospital stay.		<p>excluded if the beneficiary meets any of the following criteria:</p> <ul style="list-style-type: none"> <li>• received Medicare-covered services for which Medicare was not the primary payer during the episode window;</li> <li>• not continuously enrolled in both Parts A and B in the 90 days prior to and during the episode window; or</li> <li>• missing date of birth in the Medicare enrollment database.</li> </ul>
X0353	Spine Fusion/Refusion Clinical Episode-Based Payment Measure	The numerator of the Spine Fusion/Refusion Clinical Episode-Based Payment Measure is the sum of a provider's risk-adjusted spending and the preadmission and post-discharge medical services that are clinically related to the spine fusion/refusion across a provider's eligible spine fusion/refusion episodes during the period of performance. A spine fusion/refusion episode begins 3 days prior to the initial (i.e., index) admission and extends 30 days following the discharge from the index hospital stay.	A count of the provider's spine fusion/refusion episodes during the period of performance.	<p>The exclusion methodology applied to the measure is similar to the one used to calculate the NQF-endorsed Medicare Spending per Beneficiary (MSPB) measure. A beneficiary's episode is excluded if the beneficiary meets any of the following criteria:</p> <ul style="list-style-type: none"> <li>• received Medicare-covered services for which Medicare was not the primary payer during the episode window;</li> <li>• not continuously enrolled in both Parts A and B in the 90 days prior to and during the episode window; or</li> <li>• missing date of birth in the Medicare enrollment database.</li> </ul>
X0354	Cellulitis Clinical	The numerator of the Cellulitis	A count of the provider's cellulitis	The exclusion methodology applied to

MUC ID	Measure Title	Numerator	Denominator	Exclusions
	Episode-Based Payment Measure	Clinical Episode-Based Payment Measure is the sum of a provider's risk-adjusted spending and the preadmission and post-discharge medical services that are clinically related to cellulitis across a provider's eligible cellulitis episodes during the period of performance. A cellulitis episode begins 3 days prior to the initial (i.e., index) admission and extends 30 days following the discharge from the index hospital stay.	episodes during the period of performance.	the measure is similar to the one used to calculate the NQF-endorsed Medicare Spending per Beneficiary (MSPB) measure. A beneficiary's episode is excluded if the beneficiary meets any of the following criteria: <ul style="list-style-type: none"> <li>• received Medicare-covered services for which Medicare was not the primary payer during the episode window;</li> <li>• not continuously enrolled in both Parts A and B in the 90 days prior to and during the episode window; or</li> <li>• missing date of birth in the Medicare enrollment database.</li> </ul>
X0355	Gastrointestinal Hemorrhage Clinical Episode-Based Payment Measure	The numerator of the Gastrointestinal Hemorrhage Clinical Episode-Based Payment Measure is the sum of a provider's risk-adjusted spending and the preadmission and post-discharge medical services that are clinically related to gastrointestinal hemorrhage across a provider's eligible gastrointestinal hemorrhage episodes during the period of performance. A gastrointestinal hemorrhage episode begins 3 days prior to the initial (i.e., index) admission and extends 30 days following the discharge from the index hospital stay.	A count of the provider's gastrointestinal hemorrhage episodes during the period of performance.	The exclusion methodology applied to the measure is similar to the one used to calculate the NQF-endorsed Medicare Spending per Beneficiary (MSPB) measure. A beneficiary's episode is excluded if the beneficiary meets any of the following criteria: <ul style="list-style-type: none"> <li>• received Medicare-covered services for which Medicare was not the primary payer during the episode window;</li> <li>• not continuously enrolled in both Parts A and B in the 90 days prior to and during the episode window; or</li> <li>• missing date of birth in the Medicare enrollment database.</li> </ul>

MUC ID	Measure Title	Numerator	Denominator	Exclusions
X0356	Hip Replacement/Revision Clinical Episode-Based Payment Measure	The numerator of the Hip Replacement/Revision Clinical Episode-Based Payment Measure is the sum of a provider's risk-adjusted spending and the preadmission and post-discharge medical services that are clinically related to the hip replacement/revision across a provider's eligible hip replacement/revision episodes during the period of performance. A hip replacement/revision episode begins 3 days prior to the initial (i.e., index) admission and extends 30 days following the discharge from the index hospital stay.	A count of the provider's hip replacement/revision episodes during the period of performance.	The exclusion methodology applied to the measure is similar to the one used to calculate the NQF-endorsed Medicare Spending per Beneficiary (MSPB) measure. A beneficiary's episode is excluded if the beneficiary meets any of the following criteria: <ul style="list-style-type: none"> <li>• received Medicare-covered services for which Medicare was not the primary payer during the episode window;</li> <li>• not continuously enrolled in both Parts A and B in the 90 days prior to and during the episode window; or</li> <li>• missing date of birth in the Medicare enrollment database.</li> </ul>
E0647	Transition Record with Specified Elements Received by Discharged Patients (Discharges from an Inpatient Facility to Home/Self Care or Any Other Site of	Patients or their caregiver(s) who received a transition record (and with whom a review of all included information was documented) at the time of discharge including, at a minimum, all of the following elements: Inpatient Care <ul style="list-style-type: none"> <li>• Reason for inpatient admission, AND</li> <li>• Major procedures and tests performed during inpatient stay</li> </ul>	All patients, regardless of age, discharged from an inpatient facility (e.g., hospital inpatient or observation, skilled nursing facility, or rehabilitation facility) to home/self-care or any other site of care.	Patients who died. Patients who left against medical advice (AMA) or discontinued care.

MUC ID	Measure Title	Numerator	Denominator	Exclusions
	Care)	and summary of results, AND <ul style="list-style-type: none"> <li>• Principal diagnosis at discharge</li> <li>Post-Discharge/ Patient Self-Management</li> <li>• Current medication list, AND</li> <li>• Studies pending at discharge (e.g., laboratory, radiological), AND</li> <li>• Patient instructions</li> <li>Care Plan</li> <li>• Advance directives or surrogate decision maker documented OR</li> <li>• Documented reason for not providing care plan</li> <li>Contact Information/Plan for Follow-up Care</li> <li>• 24-hour/7-day contact information including physician for emergencies related to inpatient stay, AND</li> <li>• Contact information for obtaining results of studies pending at discharge, AND</li> <li>• Plan for follow-up care, AND</li> <li>• Primary physician, other health care professional, or site designated for follow-up care</li> </ul>		
E0648	Timely Transmission of Transition Record (Discharges	Patients for whom a transition record was transmitted to the facility or primary physician or other health care professional designated for follow-up care	All patients, regardless of age, discharged from an inpatient facility (e.g., hospital inpatient or observation, skilled nursing facility, or rehabilitation facility) to	Patients who died Patients who left against medical advice (AMA) or discontinued care

MUC ID	Measure Title	Numerator	Denominator	Exclusions
	from an Inpatient Facility to Home/Self Care or Any Other Site of Care)	within 24 hours of discharge	home/self-care or any other site of care	
E0141	Patient fall rate	<p>Total number of patient falls (with or without injury to the patient and whether or not assisted by a staff member) by hospital unit during the calendar month X 1000.</p> <p>Target population is adult acute care inpatient and adult rehabilitation patients. Eligible unit types include adult critical care, adult step-down, adult medical, adult surgical, adult medical-surgical combined, critical access, adult rehabilitation in-patient.</p>	<p>Patient days by hospital unit during the calendar month.</p> <p>Included Populations:</p> <ul style="list-style-type: none"> <li>•Inpatients, short stay patients, observation patients, and same day surgery patients who receive care on eligible inpatient units for all or part of a day on the following unit types:</li> <li>•Adult critical care, step-down, medical, surgical, medical-surgical combined, critical access, and adult rehabilitation units.</li> <li>•Patients of any age on an eligible reporting unit are included in the patient day count</li> </ul>	Other unit types (e.g., pediatric, psychiatric, obstetrical, etc.)
X3701	Hospital-Wide All-Cause Unplanned Readmission Hybrid eMeasure	The outcome for this measure is unplanned all-cause 30-day readmission. We defined a readmission as an inpatient admission to any acute care facility which occurs within 30 days of the discharge date of an earlier, eligible index admission.	Admissions for patients: Who are matched in the EHR/claims data; Enrolled in Medicare FFS; Aged 65 or over; Discharged from non-federal acute care hospitals; Discharged alive; Not transferred to an acute care facility; Enrolled in Part A for 12 mo prior	<p>The measure excludes admissions for patients:</p> <ul style="list-style-type: none"> <li>•Admitted to Prospective Payment System (PPS)-exempt cancer hospitals</li> </ul> <p>Rationale: These hospitals care for a unique population of patients that cannot reasonably be compared to patients admitted to other hospitals</p> <ul style="list-style-type: none"> <li>•Without at least 30 days of post-discharge enrollment in FFS Medicare</li> </ul>

MUC ID	Measure Title	Numerator	Denominator	Exclusions
				<p>Rationale: The 30-day readmission outcome cannot be assessed in this group since claims data are used to determine whether a patient was readmitted.</p> <ul style="list-style-type: none"> <li>•Discharged against medical advice (AMA)</li> </ul> <p>Rationale: Providers did not have the opportunity to deliver full care and prepare the patient for discharge.</p> <ul style="list-style-type: none"> <li>•Admitted for primary psychiatric diagnoses</li> </ul> <p>Rationale: Patients admitted for psychiatric treatment are typically cared for in separate psychiatric or rehabilitation centers that are not comparable to acute care hospitals.</p> <ul style="list-style-type: none"> <li>•Admitted for rehabilitation</li> </ul> <p>Rationale: These admissions are not typically to an acute care hospital and are not for acute care.</p> <ul style="list-style-type: none"> <li>•Admitted for medical treatment of cancer</li> </ul> <p>Rationale: These admissions have a different mortality and readmission profile than the rest of the Medicare population, and outcomes for these admissions do not correlate well with outcomes for other admissions. Patients with cancer admitted for other diagnoses or for surgical treatment of their cancer remain in the measure.</p>

MUC ID	Measure Title	Numerator	Denominator	Exclusions
X1234	Timely Evaluation of High-Risk Individuals in the Emergency Department	<p>Measure Observation 1: Median time (in minutes) from ED arrival to Qualified Provider Contact for Emergency Department patients triaged with an acuity level of "1-immediate".</p> <p>Measure Observation 2: Median time (in minutes) from ED arrival to Qualified Provider Contact for Emergency Department patients triaged with an acuity level of "2-emergent".</p>	Measure Population: Any emergency department encounter for which individuals with a triage score of "1-Immediate" or "2-Emergent" based on a 5-level triage system.	ED visit for trauma
X3323	Adverse Drug Events: - Inappropriate Renal Dosing of Anticoagulants	The total number of patient-drug days with at least one renal dosing error.	The total number of patient-drug days with administration of anticoagulants requiring renal dosing.	<ol style="list-style-type: none"> <li>1. Admissions for individuals less than 18 years old.</li> <li>2. Admissions that are for observation only.</li> <li>3. Admissions with length of stay greater than or equal to 120 days.</li> <li>4. Admissions with length of stay less than 24 hours.</li> <li>5. Drugs administered in the OR.</li> <li>6. Admissions on dialysis of any kind.</li> <li>7. Antibiotics given less than 2 hours prior to surgery and up to 24 hours post-surgery are ignored. Ignore the first dose of antibiotic more than 2 hours before surgery and the first dose more than 24</li> </ol>

MUC ID	Measure Title	Numerator	Denominator	Exclusions
				hours after surgery. 8. First 96 hours of drugs for patients with labor & delivery codes.
X1970	Perinatal Care Cesarean section (PC O2) Nulliparous women with a term, singleton baby in vertex position delivered by cesarean section	Patients with cesarean sections	Nulliparous patients delivered of a live term singleton newborn in vertex presentation	Excluded Populations: ICD-10-CM Principal Diagnosis Code or ICD-10-CM Other Diagnosis Codes for multiple gestations and other presentations as defined in Appendix A, Table 11.09 Less than 8 years of age Greater than or equal to 65 years of age Length of Stay >120 days Enrolled in clinical trials Gestational Age < 37 weeks or UTD
E0294	Patient Information	Percentage of patients transferred to another HEALTHCARE FACILITY whose medical record documentation indicated that patient information was communicated to the receiving FACILITY within 60 minutes of departure <ul style="list-style-type: none"> <li>• Patient name</li> <li>• Address</li> <li>• Date of birth</li> <li>• Gender</li> <li>• Significant other contact information</li> <li>• Health insurance information</li> </ul>	All emergency department patients who are transferred to another healthcare facility	All emergency department patients not discharged to another healthcare facility
X607	Use of Brain Computed	Of ED visits identified in the denominator, visits with a	ED patients with a primary diagnosis of atraumatic headache.	"This measure uses exceptions from the numerator, rather than exclusions from



MUC ID	Measure Title	Numerator	Denominator	Exclusions
	Tomography (CT) in the Emergency Department for Atraumatic Headache	coincident brain CT study (i.e., brain CT studies on the same day for the same patient).		<p>the denominator</p> <p>The following secondary diagnosis codes are exceptions from the numerator:</p> <ul style="list-style-type: none"> <li>-Anticoagulant use</li> <li>-Lumbar puncture</li> <li>-Dizziness or paresthesia</li> <li>-Lack of coordination</li> <li>-Subarachnoid hemorrhage</li> <li>-Complicated or thunderclap headache</li> <li>-Focal neurologic deficit</li> <li>-Pregnancy</li> <li>-Trauma</li> <li>-HIV</li> <li>-Tumor(s)/mass(es)</li> <li>-Imaging studies for ED patients admitted to the hospital"</li> </ul>
E0295	Physician Information	<p>Percentage of patients transferred to another HEALTHCARE FACILITY whose medical record documentation indicated that physician information was communicated to the receiving FACILITY within 60 minutes of departure</p> <ul style="list-style-type: none"> <li>• Physician or practitioner history and physical</li> <li>• Physician or practitioner orders and plan</li> </ul>	All emergency department patients who are transferred to another healthcare facility	All emergency department patients not transferred to another healthcare facility
E0297	Procedures and Tests	Percentage of patients transferred to another Healthcare Facility whose	All emergency department patients who are transferred to another Healthcare Facility	ED admissions not transferred to another Healthcare facility.

MUC ID	Measure Title	Numerator	Denominator	Exclusions
		medical record documentation indicated that procedure and test information was communicated to the receiving FACILITY within 60 minutes of departure <ul style="list-style-type: none"> <li>• Tests &amp; procedures done</li> <li>• Tests &amp; procedure results sent</li> </ul>		
E0296	Nursing Information	Percentage of patients transferred to another healthcare facility whose medical record documentation indicated that nursing information was communicated to the receiving facility within 60 minutes of departure <ul style="list-style-type: none"> <li>• Assessments/ intervention/response</li> <li>• Impairments</li> <li>• Catheters</li> <li>• Immobilizations</li> <li>• Respiratory support</li> <li>• Oral limitations</li> </ul>	All emergency department patients who are transferred to another healthcare facility	All emergency department patients not discharged to another healthcare facility
E0292	Vital Signs	Percentage of patients transferred to another healthcare facility whose medical record documentation indicated that the entire vital signs record was communicated to the receiving facility within 60 minutes of departure <ul style="list-style-type: none"> <li>• Pulse</li> <li>• Respiratory rate</li> </ul>	All emergency department patients who are transferred to another healthcare facility.	All emergency department patients not discharged to another healthcare facility.

MUC ID	Measure Title	Numerator	Denominator	Exclusions
		<ul style="list-style-type: none"> <li>• Blood pressure</li> <li>• Oxygen saturation</li> <li>• Temperature</li> <li>• Glasgow score (where appropriate)</li> </ul>		
E1822	External Beam Radiotherapy for Bone Metastases	All patients, regardless of age, with painful bone metastases, and no previous radiation to the same anatomic site who receive EBRT with any of the following recommended fractionation schemes: 30Gy/10fxns, 24Gy/6fxns, 20Gy/5fxns, 8Gy/1fxn.	All patients with painful bone metastases and no previous radiation to the same anatomic site who receive EBRT	The medical reasons for denominator exclusions are: 1) Previous radiation treatment to the same anatomic site; 2) Patients with femoral axis cortical involvement greater than 3 cm in length; 3) Patients who have undergone a surgical stabilization procedure; and 4) Patients with spinal cord compression, cauda equina compression or radicular pain
E0293	Medication Information	Percentage of patients transferred to another HEALTHCARE FACILITY whose medical record documentation indicated that medication information was communicated to the receiving FACILITY within 60 minutes of departure <ul style="list-style-type: none"> <li>• Documentation regarding medication history</li> <li>• Allergies</li> <li>• Medications given (MAR)</li> </ul>	All emergency department patients who are transferred to another healthcare facility	All emergency department patients not discharged to another healthcare facility.
E0291	Administrative Communication	Percentage of patients transferred to another healthcare facility whose medical record	All emergency department patients who are transferred to another healthcare facility	All emergency department patients not discharged to another healthcare facility.

MUC ID	Measure Title	Numerator	Denominator	Exclusions
		documentation indicated that administrative information was communicated to the receiving facility prior to departure <ul style="list-style-type: none"> <li>• Nurse communication with receiving hospitals</li> <li>• Practitioner communication with receiving practitioner or transfer coordinator</li> </ul>		
E1898	Health literacy measure derived from the health literacy domain of the C-CAT	Health literacy component of patient-centered communication: an organization should consider the health literacy level of its current and potential populations and use this information to develop a strategy for the clear communication of medical information verbally, in writing and using other media. Measure is scored based on 15 items from the patient survey of the C-CAT and 13 items from the staff survey of the C-CAT. Minimum of 100 patient responses and 50 staff responses.	There are two components to the target population: staff (clinical and nonclinical) and patients. Sites using this measure must obtain at least 50 staff responses and at least 100 patient responses.	Staff respondents who do not have direct contact with patients are excluded from questions that specifically address patient contact.
X2698	AMI episode of care (inpatient hospitalization + 30 days post-discharge)	The outcome for this measure is Medicare payments for an AMI episode of care. The payment timeframe is defined as admission for an index hospitalization through 30 days post-admission. We include	The target population for this measure includes episodes of care (as defined above) for patients who are 65 years of age or older with a principal discharge diagnosis of AMI (as defined by ICD-9 codes 410.xx, excluding	1) Lack of continuous enrollment in Medicare FFS Parts A and B in the 12 months prior to index hospital stay. 2) Lack of continuous enrollment in Medicare FFS Parts A and B in the month following the index hospital stay (if alive).

MUC ID	Measure Title	Numerator	Denominator	Exclusions
		payments for inpatient settings and up to 6 other post-discharge settings (Skilled Nursing Facility, Outpatient, Home Health Agency, Hospice, Carrier, and Durable Medical Equipment).	410.x2) during a qualifying index hospitalization.	<p>3) Patients discharged alive on the day of admission who did not get transferred.</p> <p>4) Transfers into the hospital (excluded from eligibility as an index admission), or transfers to federal hospitals.</p> <p>5) Patients who are discharged against medical advice (AMA).</p> <p>6) Occurred in Maryland hospitals and U.S. territories.</p> <p>7) Episodes for Patients with 0 Payment</p>
E0351	Death among surgical inpatients with serious, treatable complications (PSI 4)	All discharges with a disposition of "deceased" (DISP=20) among cases meeting the inclusion and exclusion rules for the denominator.	All surgical discharges age 18 years and older or MDC 14 (pregnancy, childbirth, and puerperium) defined by specific DRGs or MS-DRGs and an ICD-9-CM code for an operating room procedure, principal procedure within 2 days of admission OR admission type of elective (ATYPE=3) with potential complications of care listed in Death among Surgical definition (e.g., pneumonia, DVT/PE, sepsis, shock/cardiac arrest, or GI hemorrhage/acute ulcer).	<p>Exclude cases:</p> <ul style="list-style-type: none"> <li>• age 90 years and older</li> <li>• transferred to an acute care facility (DISP = 2)</li> <li>• missing discharge disposition (DISP=missing), gender (SEX=missing), age (AGE=missing), quarter (DQTR=missing), year (YEAR=missing) or principal diagnosis (DX1 =missing)</li> </ul>
E1893	Hospital 30-Day, All-Cause, Risk-	The outcome for this measure is 30-day all-cause mortality. We	This claims-based measure can be used in either of two patient	The measure excludes index admissions for patients:

MUC ID	Measure Title	Numerator	Denominator	Exclusions
	Standardized Mortality Rate (RSMR) following Chronic Obstructive Pulmonary Disease (COPD) Hospitalization	define mortality as death from any cause within 30 days from the date of admission for patients 40 and older discharged from the hospital with either a principal diagnosis of COPD or a principal diagnosis of respiratory failure with a secondary diagnosis of acute exacerbation of COPD.	cohorts: (1) patients aged 65 years or older or (2) patients aged 40 years or older.  The cohort includes admissions for patients discharged from the hospital with either a principal diagnosis of COPD OR a principal diagnosis of respiratory failure WITH a secondary diagnosis of acute exacerbation of COPD and with a complete claims history for the 12 months prior to admission.	<ol style="list-style-type: none"> <li>1. Discharged alive on the day of admission or the following day who were not transferred;</li> <li>2. With inconsistent or unknown vital status or other unreliable demographic data;</li> <li>3. Enrolled in the Medicare hospice program any time in the 12 months prior to the index admission, including the first day of the index admission; and</li> <li>4. Who were discharged against medical advice (AMA).</li> </ol>
E1663	SUB-2 Alcohol Use Brief Intervention Provided or Offered. SUB-2a Alcohol Use Brief Intervention Received.	SUB-2 The number of patients who received or refused a brief intervention. SUB-2a The number of patients who received a brief intervention.	The number of hospitalized inpatients 18 years of age and older who screen positive for unhealthy alcohol use or an alcohol use disorder (alcohol abuse or alcohol dependence).	<ul style="list-style-type: none"> <li>• Patients less than 18 years of age</li> <li>• Patient who are cognitively impaired</li> <li>• Patients who refused or were not screened for alcohol use during the hospital stay</li> <li>• Patients who have a duration of stay less than or equal to three days or greater than 120 days</li> <li>• Patients receiving Comfort Measures Only documented</li> </ul>
E1656	TOB-3 Tobacco Use Treatment Provided or Offered at Discharge AND TOB-3a Tobacco Use Treatment at Discharge	TOB-3: The number of patients who received or refused evidence-based outpatient counseling AND received or refused a prescription for FDA-approved cessation medication at discharge TOB-3a: The number of patients who were referred to evidence-	The number of hospitalized inpatients 18 years of age and older identified as current tobacco users	The exclusions to this measure are as follows: <ol style="list-style-type: none"> <li>1. Patients less than 18 years of age</li> <li>2. Patients who are cognitively impaired</li> <li>3. Patients who are not current tobacco users</li> <li>4. Patients who refused or were not screened for tobacco use status during the hospital stay (as tobacco status</li> </ol>

MUC ID	Measure Title	Numerator	Denominator	Exclusions
		based outpatient counseling AND received a prescription for FDA-approved cessation medication at discharge.		cannot be known) 5. Patients who have a length of stay less than or equal to one day or greater than 120 days 6. Patients who expired during the hospital stay 7. Patients who left against medical advice 8. Patients discharged/transferred to another hospital for inpatient care 9. Patients discharged/transferred to a federal health care facility 10. Patients discharged/transferred to hospice 11. Patients who do not reside in the United States
S2634	IRF Functional Outcome Measure: Change in Mobility Score for Medical Rehabilitation Patients	The mean change in mobility function.	Patients discharged from the IRF.	Three exclusion criteria apply to the change in mobility function score quality measure: 1) Patients with incomplete stays: It can be challenging to gather accurate discharge functional status data for patients who experience incomplete stays. Patients with incomplete stays include patients who are unexpectedly discharged to an acute care setting (IPPS, CAH, IPF, or LTCH) due to a medical emergency; patients who die or leave an IRF against medical advice; and patients with a length of stay less than 3 days. 2) Patients who are independent with CARE mobility activities at the time of

MUC ID	Measure Title	Numerator	Denominator	Exclusions
				<p>admission: Patients who are independent with the CARE mobility items at the time of admission are assigned the highest score on all the mobility items, and thus, would not be able to show functional improvement on this same set of items at discharge.</p> <p>3) Patients younger than age 21.</p>
S2636	IRF Functional Outcome Measure: Discharge Mobility Score for Medical Rehabilitation Patients	The number of patients who meet or exceed an expected discharge mobility score.	Patients discharged during the selected time period.	Two exclusion criteria apply to the discharge mobility function score measure: 1) Patients with incomplete stays: It can be challenging to gather accurate discharge functional status data for patients who experience incomplete stays. Patients with incomplete stays include patients who are unexpectedly discharged to an acute-care setting (IPPS, CAH, or LTCH) due to a medical emergency; patients who die or leave an IRF against medical advice; and patients with a length of stay less than 3 days. 2) Patients younger than age 21.
/S2635	IRF Functional Outcome Measure: Discharge Self-Care Score for Medical Rehabilitation Patients	The number of patients who meet or exceed an expected discharge self-care score.	Patients discharged during the selected time period.	Two exclusion criteria apply to the discharge in self-care function quality measure: 1) Patients with incomplete stays: It can be challenging to gather accurate discharge functional status data for patients who experience incomplete stays. Patients with incomplete stays include patients who are unexpectedly



MUC ID	Measure Title	Numerator	Denominator	Exclusions
				<p>discharged to an acute-care setting (IPPS, CAH, IPF, or LTCH) due to a medical emergency; patients who die or leave an IRF against medical advice; and patients with a length of stay less than 3 days.                      2) Patients younger than age 21.</p>
S2633	IRF Functional Outcome Measure: Change in Self-Care Score for Medical Rehabilitation Patients	The mean change in self-care function.	Patients discharged from the IRF.	<p>Four exclusion criteria apply to the change in self-care function score measure:</p> <p>1) Patients with incomplete stays: It can be challenging to gather accurate discharge functional status data for patients who experience incomplete stays. Patients with incomplete stays include patients who are unexpectedly discharged to an acute-care setting (Inpatient Prospective Payment System, Critical Access Hospital, Inpatient Psychiatric Hospital, or LTCH) due to a medical emergency; patients who die; patients who leave an IRF against medical advice; and patients with a length of stay less than 3 days.</p> <p>2) Patients who are independent with CARE self-care activities at the time of admission: Patients who are independent with the CARE self-care items at the time of admission are assigned the highest score on all the self-care items, and thus, would not be able to show functional improvement on this same set of items at discharge.</p>

MUC ID	Measure Title	Numerator	Denominator	Exclusions
				3) Patients in coma, persistent vegetative state, complete paraplegia, and locked-in syndrome are excluded, because they may have limited or less predictable self-care improvement. 4) Patients younger than age 21.
E0371	Venous Thromboembolism Prophylaxis	Patients who received VTE prophylaxis or have documentation why no VTE prophylaxis was given: <ul style="list-style-type: none"> <li>• the day of or the day after hospital admission</li> <li>• the day of or the day after surgery end date for surgeries that start the day of or the day after hospital admission</li> </ul>	All discharged hospital inpatients	<ul style="list-style-type: none"> <li>• Patients less than 18 years of age</li> <li>• Patients who have a length of stay (LOS) less than two days and greater than 120 days</li> <li>• Patients with Comfort Measures Only documented on day of or day after hospital arrival</li> <li>• Patients enrolled in clinical trials related to VTE</li> <li>• Patients who are direct admits to intensive care unit (ICU), or transferred to ICU the day of or the day after hospital admission with ICU LOS greater than or equal to one day</li> <li>• Patients with ICD-9-CM Principal Diagnosis Code of Mental Disorders or Stroke as defined in Appendix A, Table 7.01, 8.1 or 8.2</li> <li>• Patients with ICD-9-CM Principal or Other Diagnosis Codes of Obstetrics or VTE as defined in Appendix A, Table 7.02, 7.03 or 7.04</li> <li>• Patients with ICD-9-CM Principal Procedure Code of Surgical Care Improvement Project (SCIP) VTE selected surgeries as defined in Appendix A,</li> </ul>

MUC ID	Measure Title	Numerator	Denominator	Exclusions
				Tables 5.17, 5.19, 5.20, 5.21, 5.22, 5.23, 5.24
X3705	Compliance with Ventilator Process Elements during LTCH stay	<p>QM#1: The percentage of patients who are admitted to a LTCH on invasive mechanical ventilation and for whom tracheostomy collar trial (TCT) or Spontaneous Breathing Trial (SBT) was assessed, ordered, and performed by the end of the first calendar day following admission to the LTCH.</p> <p>(a) Percentage of patients on invasive mechanical ventilation prior to admission for whom TCT or SBT was assessed, ordered and performed within 24 hours of admission.</p> <p>(b) Percentage of patients for whom TCT or SBT was not assessed, ordered and performed within 24 hours of admission.</p> <p>(c) Percentage of patients for whom TCT or SBT within 24 hours of admission was deemed medically inappropriate.</p> <p>QM#2: The total number of patient ventilator-days for patients discharged (unplanned</p>	<p>All patients admitted to the LTCH requiring invasive mechanical ventilation support of any duration at the time of admission to the LTCH during the reporting period. If a patient has more than one LTCH stay during the reporting period, then, each admission will be included in the measure calculation and reporting for QM#1.</p> <p>For QM#2, the patient population includes all discharged patients who are admitted to a LTCH on invasive mechanical ventilation. If a patient has more than one LTCH stay during the reporting period, then, each discharge will be included in the measure calculation and reporting for QM#2. Denominator for QM#2 is the total number of patient ventilator-days for patients discharged (unplanned discharge, planned discharge, death) during the reporting period who were admitted to the LTCH requiring invasive mechanical ventilation support of any duration at the time of admission to the LTCH.</p>	<p>Patients identified as unweanable at the time of admission to an LTCH are excluded. These include (a) patients who are chronically ventilated (i.e., who have been on invasive mechanical ventilator support for more than 180 days prior to admission to the short-stay acute care hospital (if it this stay preceded the current LTCH stay) or prior to admission to the LTCH, whichever is earlier) [this would include patients on a ventilator due to cerebral palsy since childhood]; or (b) patients with an acute or chronic condition (for e.g., irreversible neurological injury or disease or dysfunction such as ALS, or high (C2) spinal cord injury that has rendered the patient unweanable.</p> <p>This measure also excludes patients admitted to LTCH and requiring on non-invasive mechanical ventilation.</p> <p>LTCHs with denominator counts of less than 20 in the sample during the reporting period will be excluded from public reporting, owing to small sample size.</p>

MUC ID	Measure Title	Numerator	Denominator	Exclusions
		<p>discharge, planned discharge, death) during the reporting period who were admitted to the LTCH requiring invasive mechanical ventilation.</p> <p>(a) Percentage of ventilator days that TCT or SBT was assessed, ordered and performed during each day of invasive mechanical ventilation during the LTCH stay.</p> <p>(b) Percentage of ventilator days that TCT or SBT was not assessed, ordered and performed during each day of invasive mechanical ventilation during the LTCH stay.</p> <p>(c) Percentage of ventilator days that TCT or SBT was deemed medically inappropriate during each day of invasive mechanical ventilation LTCH stay.</p>		
X3706	Ventilator Weaning (Liberation) Rate	<p>The ventilator weaning rate will be calculated and reported for the following four numerator components separately. Each of the numerator components will be calculated and reported as a percentage of all patients requiring invasive mechanical ventilation immediately prior to admission to an LTCH:</p> <p>(a) Fully weaned: Patients who</p>	<p>All patients requiring continuous invasive mechanical ventilation support of any duration immediately prior to admission to an LTCH.</p> <p>Patients discharged (unplanned discharge, planned discharge, death) from the LTCH during the reporting period.</p> <p>If patient has had more than one</p>	<p>Patients identified as unweanable at the time of admission to an LTCH are excluded. These include (a) patients who are chronically ventilated (i.e., who have been on invasive mechanical ventilator support for more than 180 days prior to admission to the short-stay acute care hospital (if it this stay preceded the current LTCH stay) or prior to admission to the LTCH, whichever is earlier) [this would include patients on a ventilator</p>

MUC ID	Measure Title	Numerator	Denominator	Exclusions
		<p>are discharged alive and fully weaned prior to discharge from an LTCH.</p> <p>(b) Not weaned (invasive mechanical ventilation dependent): Patients who are discharged alive and require invasive mechanical ventilation support for more than 12 consecutive hours per day during each of the three consecutive calendar days immediately prior to discharge.</p> <p>(c) Patients who died.</p>	<p>LTCH stay during the reporting period, then, each LTCH stay will be included in the measure calculation and reporting. If patient is admitted to LTCH, weaned, has to return to the short-stay acute care hospital for a procedure, surgery, or some other reason, returns to the LTCH within 3 calendar days, and then, is discharged from the LTCH, this is considered one "patient stay". However, if patient returns to the LTCH after 3 calendar days, a new admission assessment is conducted and this will be the start of a "second patient stay" for this same patient. Each of these two stays will be included in the measure calculation and reporting.</p>	<p>due to cerebral palsy since childhood); or (b) patients with an acute or chronic condition (for e.g., irreversible neurological injury or disease or dysfunction such as ALS, or high (C2) spinal cord injury that has rendered the patient unweanable.</p> <p>This measure also excludes patients admitted to LTCH and requiring on non-invasive mechanical ventilation.</p> <p>LTCHs with denominator counts of less than 20 in the sample during the reporting period will be excluded from public reporting, owing to small sample size.</p>
X4208	Substance use disorders: percentage of patients aged 18 years and older with a diagnosis of current opioid addiction who were counseled regarding	Patients who were counseled regarding psychosocial AND pharmacologic treatment options for opioid addiction within the 12 month reporting period	All patients aged 18 years and older with a diagnosis of current opioid addiction (see the related "Denominator Inclusions/Exclusions")	Denominator Inclusions/Exclusions Inclusions All patients aged 18 years and older with a diagnosis of current opioid addiction The term "opioid addiction" in this context corresponds to the Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition (DSM-IV) classification of opioid dependence that is characterized by a maladaptive pattern of substance use causing clinically

MUC ID	Measure Title	Numerator	Denominator	Exclusions
	psychosocial AND pharmacologic treatment options for opioid addiction within the 12 month reporting period			significant impairment or distress, and manifesting by 3 (or more) of the 7 designated criteria. This classification is distinct from and not to be confused with physical dependence (i.e., tolerance and withdrawal) that is commonly experienced by patients with chronic pain who are treated with opioid analgesics. Refer to the "Rationale" field for additional information regarding this distinction. Exclusions Patients may be excluded from the denominator for medical, patient or system reasons.
X4007	Substance use disorders: percentage of patients aged 18 years and older with a diagnosis of current alcohol dependence who were counseled regarding psychosocial AND pharmacologic treatment options for	Patients who were counseled regarding psychosocial AND pharmacologic treatment options for alcohol dependence within the 12 month reporting period	All patients aged 18 years and older with a diagnosis of current alcohol dependence	None

MUC ID	Measure Title	Numerator	Denominator	Exclusions
	alcohol dependence within the 12 month reporting			
E1507	Risky Behavior Assessment or Counseling by Age 18 Years	Adolescents who had documentation of a Risk Behavior Assessment or Counseling By Age 18 Years.	Adolescents with a visit who turned 18 years of age in the measurement year.	None
E1406	Risky Behavior Assessment or Counseling by Age 13 Years	Adolescents who had documentation of a Risk Behavior Assessment or Counseling By Age 13 Years.	Adolescents with a visit who turned 13 years of age in the measurement year.	None
X3446	Intimate Partner (Domestic) Violence Screening	<p>1. GPRA: Patients screened for or diagnosed with IPV/DV during the report period. Note: This numerator does not include refusals.</p> <p>A. Patients with documented IPV/DV exam. B. Patients with IPV/DV related diagnosis. C. Patients provided with IPV/DV patient education or counseling.</p> <p>2. Patients with documented refusal in past year of an IPV/DV exam or IPV/DV related education</p>	<p>Female Active Clinical patients ages 13 and older. Female Active Clinical patients ages 15 through 40. (GPRA Denominator) Female User Population patients ages 13 and older.</p>	None
X3445	Alcohol Screening and Brief Intervention	<p>Numerators</p> <p>1. Number of visits where patients were screened in the ER for hazardous alcohol use.</p>	1. Number of visits for Active Clinical Plus BH patients age 15 through 34 seen in the ER for injury during the report period.	None

MUC ID	Measure Title	Numerator	Denominator	Exclusions
	(ASBI) in the ER	<p>A. Number of visits where patients were screened positive (also used as denominator #2)</p> <p>2. Number of visits where patients were provided a brief negotiated interview (BNI) at or within seven days of the ER visit (used only with denominator #2).</p> <p>A. Number of visits where patients were provided a BNI at the ER visit.</p> <p>B. Number of visits where patients were provided a BNI not at the ER visit but within seven days of the ER visit.</p>	<p>Broken down by gender and age groups of 15 through 24 and 25 through 34.</p> <p>2. Number of visits for Active Clinical Plus BH patients age 15 through 34 seen in the ER for injury and screened positive for hazardous alcohol use during the report period. Broken down by gender and age groups of 15 through 24 and 25 through 34.</p> <p>3. Number of visits for User Population patients age 15 through 34 seen in the ER for injury during the report period. Broken down by gender and age groups of 15 through 24 and 25 through 34.</p> <p>4. Number of visits for User Population patients age 15 through 34 seen in the ER for injury and screened positive for hazardous alcohol use during the report period. Broken down by gender and age groups of 15 through 24 and 25 through 34.</p>	
X3792	Controlling High Blood Pressure	Patients whose most recent blood pressure is adequately controlled during the measurement period.	Patients 18 through 85 years of age who had a diagnosis of essential hypertension within the first six months of the measurement period or any time prior to the measurement period	None



MUC ID	Measure Title	Numerator	Denominator	Exclusions
X3797	Breast Cancer Screening	Women with one or more mammograms any time on or between October 1, 27 months prior to the measurement period, and December 31 of the measurement period, not to precede the patient's 50 <sup>th</sup> birthday.	Women 52-74 years of age with a visit during the measurement period	Women who had a bilateral mastectomy or for whom there is evidence of two unilateral mastectomies
E0032	Cervical Cancer Screening	Either: 1. Women age 21-64 who had cervical cytology performed during the measurement period or in the 2 years prior to the measurement period. 2. Women age 30-64 who had cervical cytology/human papillomavirus (HPV) co-testing performed during the measurement period or in the 4 years prior to the measurement period	Women 24-64 years of age with a visit during the measurement period	Women who had a hysterectomy with no residual cervix
E2152	Preventive Care and Screening: Unhealthy Alcohol Use: Screening & Brief Counseling	<p>Patients who were screened at least once within the last 24 months for unhealthy alcohol use using a systematic screening method AND who received brief counseling if identified as an unhealthy alcohol user</p> <p>Definitions: Systematic screening method - For purposes of this measure, one of the following systematic</p>	All patients aged 18 years and older who were seen twice for any visits or who had at least one preventive care visit during the 12 month measurement period	Documentation of medical reason(s) for not screening for unhealthy alcohol use (e.g., limited life expectancy, other medical reasons)

MUC ID	Measure Title	Numerator	Denominator	Exclusions
		<p>methods to assess unhealthy alcohol use must be utilized. Systematic screening methods and thresholds for defining unhealthy alcohol use include:                      AUDIT Screening Instrument (score <math>\geq 8</math>)                      AUDIT-C Screening Instrument (score <math>\geq 4</math> for men; score <math>\geq</math> for women)                      Single Question Screening - How many times in the past year have you had 5 (for men) or 4 (for women and all adults older than 65 y) or more drinks in a day? (response <math>\geq 2</math>)</p> <p>Brief counseling - Brief counseling for unhealthy alcohol use refers to one or more counseling sessions, a minimum of 5-15 minutes, which may include: feedback on alcohol use and harms; identification of high risk situations for drinking and coping strategies; increased motivation and the development of a personal plan to reduce drinking.</p>		
X3475	Substance Use Screening and Intervention Composite	Patients who received the following substance use screenings at least once within the last 24 months AND who	All patients aged 18 years and older who were seen twice for any visits or who had at least one preventive care visit during the 12	EXCEPTION (not exclusion): 1) Tobacco Component - Documentation of medical reason(s) for not screening for tobacco use (e.g., limited life expectancy,

MUC ID	Measure Title	Numerator	Denominator	Exclusions
		<p>received an intervention for all positive screening results:</p> <p>1) Tobacco use component - Patients who were screened for tobacco use at least once within the last 24 months AND who received tobacco cessation intervention if identified as a tobacco user</p> <p>2) Unhealthy Alcohol Use Component - Patients who were screened for unhealthy alcohol use using a systematic screening method at least once within the last 24 months AND who received brief counseling if identified as an unhealthy alcohol user</p> <p>3) Drug use component (nonmedical prescription drug use and illicit drug use) - Patients who were screened for nonmedical prescription drug use and illicit drug use at least once within the last 24 months using a systematic screening method AND who received brief counseling if identified as a nonmedical prescription drug user or illicit drug user</p>	<p>month measurement period</p>	<p>other medical reasons)</p> <p>2) Alcohol Component - Documentation of medical reason(s) for not screening for unhealthy alcohol use (e.g., limited life expectancy, other medical reasons)</p> <p>3) Drug Component - Documentation of medical reason(s) for not screening for nonmedical prescription drug use and illicit drug use (e.g., limited life expectancy, other medical reasons)</p>

MUC ID	Measure Title	Numerator	Denominator	Exclusions
X3512	Hepatitis C: One-Time Screening for Hepatitis C Virus (HCV) for Patients at Risk	Patients who received one-time screening for HCV infection Screening for HCV infection includes current or prior receipt of: HCV antibody test, HCV RNA test or recombinant immunoblot assay (RIBA) test	All patients aged 18 years and older who were seen twice for any visit or who had at least one preventive care visit within the 12 month reporting period with one or more of the following: a history of injection drug use, receipt of a blood transfusion prior to 1992, receiving maintenance hemodialysis, OR birthdate in the years 1945–1965	Exclusions: Patients with a diagnosis of chronic hepatitis C  Exceptions: Documentation of medical reason(s) for not receiving one-time HCV antibody test (e.g., advanced disease, limited life expectancy, other medical reasons)  Documentation of patient reason(s) for not receiving one-time HCV antibody test (e.g., patient declined, other patient reasons)
X3816	Hepatitis C: Appropriate Screening Follow-Up for Patients Identified with Hepatitis C Virus (HCV) Infection	Patients who are prescribed treatment or are referred to treatment services for HCV infection	All patients aged 18 years and older with a positive HCV antibody test and either a positive HCV RNA test result or an absent HCV RNA test result	Exceptions: Documentation of medical reason(s) for not being referred to treatment services for HCV infection (e.g., advanced disease, limited life expectancy, other medical reasons) Documentation of patient reason(s) for not being referred to treatment services for HCV infection (e.g., patient declined, other patient reasons)
X3482	Functional Status Outcomes for Patients Receiving Primary Total Knee	Continuous Variable: Measure Observations: Average change in functional status assessment score (before and after surgery)	Continuous Variable: Eligible Population: Adults, aged 19 and older during the measurement period, with a primary total knee arthroplasty (TKA) in the first 90 days of the measurement period or the last	None

MUC ID	Measure Title	Numerator	Denominator	Exclusions
	Replacements		<p>270 days in the year prior to the measurement period and an encounter during the measurement period</p> <p>Measure Population: Patients must meet the following criteria to be counted in the numerator:</p> <ol style="list-style-type: none"> <li>1. A patient reported functional status assessment (i.e., VR-12, PROMIS-10-Global Health, KOOS) completed in the 3 months prior to or including the day of surgery</li> <li>2. A patient reported functional status assessment (i.e., VR-12, PROMIS-10-Global Health, KOOS) completed during the 6-9 months after surgery</li> <li>3. DO NOT have an acute fracture of hip or lower limb at the time of TKA</li> <li>4. DO NOT have severe cognitive impairment</li> </ol> <p>For a functional status assessment to be completed, the score must be documented in the EHR</p>	
X3483	Functional Status Outcomes for Patients	Continuous Variable: Measure Observations: Average change in functional status assessment score (before	Continuous Variable: Eligible Population: Adults, aged 19 and older during the measurement period, with a	None

MUC ID	Measure Title	Numerator	Denominator	Exclusions
	Receiving Primary Total Hip Replacements	and after surgery)	<p>primary or total hip arthroplasty (THA) in the first 90 days of the measurement period or the last 270 days in the year prior to the measurement period and an encounter during the measurement period.</p> <p>Measure Population: Patients must meet the following criteria to be counted in the numerator:</p> <ol style="list-style-type: none"> <li>1. A patient reported functional status assessment (i.e., VR-12, PROMIS-10-Global Health, HOOS) completed in the 3 months prior to or including the day of surgery</li> <li>2. A patient reported functional status assessment (i.e., VR-12, PROMIS-10-Global Health, HOOS) completed during the 6-9 months after surgery</li> <li>3. DO NOT have an acute fracture of hip or lower limb at the time of THA</li> <li>4. DO NOT have severe cognitive impairment</li> </ol> <p>For a functional status assessment to be completed, the score must be documented in the EHR</p>	
X3476	Diabetes:	Patients whose most recent A1c	Patients 65 years of age and older	None

MUC ID	Measure Title	Numerator	Denominator	Exclusions
	Hemoglobin A1c Overtreatment in the Elderly	level is < 7.0%	with diabetes who are on antihyperglycemic medications with a visit during the measurement period	
X3283	Closing the Referral Loop - Critical Information Communicated with Request for Referral	Referrals for which the referring provider sent a CDA-based Referral Note that included the type of activity requested, reason for referral, preferred timing, problem list, medication list, allergy list, and medical history.	Referrals sent by a referring provider to another provider during the measurement period.	None
X3485	Adverse Drug Events - Minimum INR Monitoring for Patients with Atrial Fibrillation on Warfarin	Patients who had at least 1 INR in each 90-day interval of the measurement period during which they are on warfarin therapy	Patients aged 18 and older with atrial fibrillation or atrial flutter who had been on chronic warfarin therapy for at least 180 days before the start of the measurement period. Patients should have at least one outpatient visit during the measurement period.	Patients on any of the following medications at any point during the measurement year: dabigatran, rivaroxaban, apixaban
X3300	HIV Screening of STI patients	Patients with an HIV test during period extending from 30 days before STI diagnosis to 120 days after STI diagnosis	Patients diagnosed with an acute STI during the one year period ending 120 days prior to the end of the measurement year. STIs include: primary and secondary syphilis, gonorrhea, chlamydia, & trichomonas.	Patients diagnosed with HIV/AIDS on or before the date of STI diagnosis
X3299	HIV: Ever screened for HIV	Patients with documentation of an HIV test, including all persons with evidence of HIV/AIDS	Patients age 15-65 with at least one outpatient visit during the one year measurement period.	None

MUC ID	Measure Title	Numerator	Denominator	Exclusions
X3773	Optimal Asthma Care 2014	<p>The number of asthma patients who meet ALL of the following targets:</p> <p>A) Asthma well-controlled (take the most recent asthma control tool available during the measurement period (07/01/2013 to 06/30/2014)):</p> <ul style="list-style-type: none"> <li>· Patient has an Asthma Control Test (ACT) score of 20 or above (taken from most recent Asthma Control Test on file) – for patients 12 and older</li> </ul> <p>OR</p> <ul style="list-style-type: none"> <li>· Patient has a Childhood Asthma Control Test (C-ACT) score of 20 or above (taken from most recent C-ACT on file) – for patients 11 and younger</li> </ul> <p>OR</p> <ul style="list-style-type: none"> <li>· Patient has an Asthma Control Questionnaire (ACQ) score of 0.75 or lower (taken from most recent ACQ on file) – for patients 17 and older</li> </ul> <p>OR</p> <ul style="list-style-type: none"> <li>· Patient has an Asthma Therapy Assessment Questionnaire (ATAQ) score of 0 (taken from most recent ATAQ) – for children, adolescents, and adults.</li> </ul> <p>B) Patient not at elevated risk of</p>	<p>Established patient who meets each of the following criteria is included in the population:</p> <ul style="list-style-type: none"> <li>· Patient was age 5 to 50 at the start of the measurement period (date of birth was on or between 07/01/1963 to 07/01/2008). <ul style="list-style-type: none"> <li>o Age 5-17 at the start of the measurement period (date of birth was on or between 07/01/1996 to 07/01/2008).</li> <li>o Age 18-50 at the start of the measurement period (date of birth was one or between 07/01/1963 to 06/30/1996).</li> </ul> </li> <li>· Patient was seen by an eligible provider in an eligible specialty face-to-face at least two times during the last two measurement periods (07/01/2012 to 06/30/2014) with visits coded with an asthma ICD-9 code (in any position, not only primary). Use this date of service range when querying the practice management or EMR system to allow a count of the visits within the measurement period.</li> <li>· Patient was seen by an eligible provider in an eligible specialty face-to-face at least one time during the measurement period</li> </ul>	<p>Patient was a permanent nursing home resident during the measurement period.</p> <ul style="list-style-type: none"> <li>· Patient was in hospice at any time during the measurement period.</li> <li>· Patient died prior to the end of the measurement period.</li> <li>· Documentation that diagnosis was coded in error.</li> <li>· Patients with any of the following diagnoses (see Table 2): <ul style="list-style-type: none"> <li>o Cystic fibrosis (ICD-9 diagnosis codes 277.00-277.09).</li> <li>o COPD (ICD-9 diagnosis codes 491.20-491.22, 493.20-493.22, 496, 506.4).</li> <li>o Emphysema (ICD-9 diagnosis codes 492.0, 492.8, 518.1, 518.2).</li> <li>o Acute respiratory failure (ICD-9 diagnosis codes 518.81).</li> </ul> </li> </ul>



MUC ID	Measure Title	Numerator	Denominator	Exclusions
		<p>exacerbation:</p> <ul style="list-style-type: none"> <li>· Patient reports values for both of the following questions (asked/documentated within the measurement period):                             <ul style="list-style-type: none"> <li>o Number of emergency department visits not resulting in a hospitalization due to asthma in last 12 months</li> </ul> </li> <li>AND                             <ul style="list-style-type: none"> <li>o Number of inpatient hospitalizations requiring an overnight stay due to asthma in last 12 months.</li> </ul> </li> <li>· The total number of emergency department visits and hospitalizations due to asthma must be less than 2.</li> </ul> <p>C) Patient has been educated about his or her asthma and self-management of the condition and also has a written asthma management plan present (created or reviewed and revised within the measurement period (07/01/2013 to 06/30/2014)): Patient has a written asthma management plan in the chart with the following documented:</p> <ul style="list-style-type: none"> <li>o Plan contains information on medication doses and purposes of these medications.</li> <li>o Plan contains information on</li> </ul>	<p>(07/01/2013 to 06/30/2014) for any reason. This may or may not include one of the face-to-face asthma visits.</p> <ul style="list-style-type: none"> <li>· Diagnosis of Asthma; ICD-9 diagnosis codes include: 493.00-493.12, 493.81, 493.82-493.92.</li> </ul>	

MUC ID	Measure Title	Numerator	Denominator	Exclusions
		<p>how to recognize and what to do during an exacerbation.</p> <ul style="list-style-type: none"> <li>o Plan contains information on the patient's triggers.</li> </ul>		
X3768	Primary C-Section Rate 2014	<p>The number of live, singleton, vertex position, term (greater or equal to 37 weeks gestation) newborns who were delivered via cesarean section.</p> <p>When no prenatal care is provided by the medical group/clinic, the C-section delivery is not included in the numerator calculation for the C-section rate. (</p>	<p>Patients who meet each of the following criteria is included in the measure denominator:</p> <ul style="list-style-type: none"> <li>· Female patient was nulliparous and of any age.</li> <li>· Patient had a single liveborn delivery.</li> <li>· Patient had vertex position delivery of a term (greater or equal to 37 weeks gestation) baby via a vaginal or cesarean birth.</li> <li>· Patient had at least one prenatal care visit with an eligible provider in an eligible specialty in the medical group prior to the onset of labor.</li> </ul> <p>Patient was delivered by an eligible provider in an eligible specialty who had a delivery date during the measurement period (07/01/2013 to 06/30/2014).</p>	<p>Patient had pregnancy with multiple gestations; Patient had pregnancy with a stillborn; patient had delivery with a non-vertex fetal position</p>
E0076	Optimal Vascular Care	<p>Patients ages 18 to 75 with ischemic vascular disease (IVD) who meet all of the following targets from the most recent visit during the measurement period: Blood Pressure less than 140/90, Tobacco-Free Status, Daily</p>	<p>Patients ages 18 to 75 with ischemic vascular disease who have at least two visits for this condition over the last two measurement periods and at least one visit in the last measurement period.</p>	<p>Valid exclusions include patients who had died during the measurement period, patients in hospice during the measurement period, patients who were permanent nursing home residents during the measurement period, or patients who were coded with IVD in</p>

MUC ID	Measure Title	Numerator	Denominator	Exclusions
		Aspirin Use (unless contraindicated). Values are collected as the most recent during the measurement period (January 1 through December 31).		error.
X3469	Cognitive Impairment Assessment Among At-Risk Older Adults	Patients with results from a standardized cognitive impairment assessment tool, or a patient or informant interview documented in the electronic health record (EHR) at least once during the measurement period.	Patients age 80 or older with a visit during the measurement period.	Patients diagnosed with cognitive impairment or dementia before the start of the measurement period and whose diagnosis remained active throughout the measurement period.
X3053	Functional Status Assessments and Goal Setting for Chronic Pain Due to Osteoarthritis	Patients for whom a score from one of a select list of pain interference assessment tools was recorded at least twice during the measurement period and for whom a care goal was documented and linked to the initial assessment	Patients 18 years of age and older with a diagnosis of hip or knee osteoarthritis and an encounter during the measurement period who have their first encounter within the first 335 days of the measurement period	None
X3466	Coordinating Care - Emergency Department Referrals	Patients whose ED visit provider communicated information about the visit to their primary care provider or a specialist provider by making a telephone call or scheduling a follow up appointment with an ambulatory care provider during the visit, or transmission of electronic notification or transmission of	Patients (1) of any age with asthma, or (2) age 18 and over with chest pain, who had a visit to the emergency department (not resulting in an inpatient admission)	None

MUC ID	Measure Title	Numerator	Denominator	Exclusions
		the visit record within 24 hours of the visit.		
X3465	Coordinating Care - Follow-Up with Eligible Provider	Patients who were contacted by telephone by their primary care provider, relevant specialist, or their designee, or had a follow up office visit with their primary care provider, relevant specialist, or their designee within 72 hours of the visit to the emergency department.	Patients (1) of any age with asthma, or (2) age 18 and over with chest pain, who had a visit to the emergency department (not resulting in an inpatient admission), and whose emergency department provider communicated information about the visit to the primary care provider or relevant specialist through: a telephone call, transmission of electronic notification, or transmission of the visit record.	None
X3468	Documentation of a Health Care Proxy for Patients with Cognitive Impairment	Patients for whom documentation of a designated health care proxy in the medical record has been confirmed during the measurement period.	All patients with (1) a positive result on a standardized assessment for cognitive impairment or (2) a diagnosis of dementia or cognitive impairment, regardless of age, prior to the start of the measurement period.	None
X3729	Statin Therapy for the Prevention and Treatment of Cardiovascular Disease	Patients who are current statin medication therapy users or who receive an order (prescription) to receive statin medication therapy	"Denominator 1: Patients aged $\geq$ 21 years at the beginning of the measurement period with clinical ASCVD diagnosis Denominator 2: Patients aged $\geq$ 21 years at the beginning of the measurement period with any fasting or direct laboratory result	Exclusions: None Exceptions: <ul style="list-style-type: none"> <li>• Patients with adverse effect, allergy or intolerance to statin medication therapy</li> <li>• Patient who have an active diagnosis of pregnancy or breastfeeding</li> <li>• Patients who are receiving palliative care</li> </ul>

MUC ID	Measure Title	Numerator	Denominator	Exclusions
			of LDL-C $\geq$ 190 mg/dL Denominator 3: Patients aged 40 through 75 years at the beginning of the measurement period with Type 1 or Type 2 Diabetes with the highest fasting or direct laboratory test result of LDL-C 70 – 189 mg/dL in the measurement year or two years prior to the beginning of the measurement period"	<ul style="list-style-type: none"> <li>• Patients with active liver disease or hepatic disease or insufficiency</li> <li>• Patients with End Stage Renal Disease (ESRD)</li> <li>• Fasting or Direct LDL-C laboratory test result of &lt; 70 mg/dL for Diabetes diagnosis who are not currently receiving statin medication therapy"</li> </ul>
S2521	Gout: Serum Urate Monitoring	Patients whose serum urate level was measured within six months after initiating ULT or after changing the dose of ULT	Adult patients aged 18 and older with a diagnosis of gout who were either started on urate lowering therapy (ULT) or whose dose of ULT was changed in the year prior to the measurement period	None
S2550	Gout: Urate Lowering Therapy	Number of patients who are prescribed urate lowering therapy.	Adult patients aged 18 and older with a diagnosis of gout and a serum urate level > 6.0 mg/dL who have at least one of the following: presence of tophus/tophi or two or more gout flares (attacks) in the past year	None
E0555	INR Monitoring for Individuals on Warfarin (e-specified version of NQF #0555)	Individuals in the denominator who have at least one INR monitoring test during each 56-day interval with warfarin.	Individuals at least 18 years of age as of the beginning of the measurement period with warfarin therapy for at least 56 days and have at least one outpatient visit during the measurement period.	Individuals who are monitoring INR at home

MUC ID	Measure Title	Numerator	Denominator	Exclusions
X3472	Use of Multiple Concurrent Antipsychotics in Children and Adolescents	Children and adolescents on two or more concurrent antipsychotic medications for greater than or equal to 90 days during the measurement year.	Children and adolescents 1-17 years of age with a visit during the measurement year, with greater than or equal to 90 days of continuous antipsychotic medication treatment during the measurement year.	None
E1553	Blood Pressure Screening by age 18	Adolescents who had documentation in the medical record of blood pressure screening and whether results are abnormal at least once in the measurement period or the year prior.	Adolescents with a visit who turned 18 years old in the measurement period.	None
X3817	Amblyopia Screening in Children	Children who were screened to detect the presence of amblyopia between their 3rd and 6th birthdays, and if necessary, were referred to an eye care specialist.	Children who turn 6 years of age during the measurement period and who had at least one visit during the measurement period.	None
X3280	ADHD: Symptom Reduction in Follow-up Period	Children who demonstrated a 25% reduction in the mean response for either or both ADHD symptom screen subsegments 6-12 months from baseline assessment as measured using the Vanderbilt ADHD Diagnostic Rating Scale.	Children aged 4 through 18 years, with a visit during the measurement period, and with an active diagnosis of ADHD, and who meet the diagnostic threshold of the Vanderbilt ADHD Diagnostic Rating Scale at the time of baseline assessment, and with baseline mean responses documented for the ADHD symptom screen subsegments for the Vanderbilt ADHD Diagnostic	None

MUC ID	Measure Title	Numerator	Denominator	Exclusions
			Rating Scale during the 6 months prior to the measurement period.	
X3513	Annual Hepatitis C Virus (HCV) Screening for Patients who are Active Injection Drug Users	Patients who received screening for HCV infection within the 12 month reporting period Screening for HCV infection includes: HCV antibody test or HCV RNA test	All patients, regardless of age, who were seen twice for any visit or who had at least one preventive care visit within the 12 month reporting period who are active injection drug users Active injection drug users are those who have injected any drug(s) within the past 12 months	Exclusions: Patients with a diagnosis of chronic hepatitis C  Exceptions: Documentation of medical reason(s) for not receiving annual screening for HCV (e.g., advanced disease, limited life expectancy, other medical reasons)  Documentation of patient reason(s) for not receiving annual screening for HCV (e.g., patient declined, other patient reasons)
E0711	Depression Remission at Six Months	Adults age 18 and older with a diagnosis of major depression or dysthymia and an initial PHQ-9 score greater than nine who achieve remission at six months as demonstrated by a six month (± 30 days) PHQ-9 score of less than five.	Adults age 18 and older; no upper age limit Have the diagnosis of major depression or dysthymia defined by any of the following ICD-9 codes: 296.2x Major depressive disorder, single episode 296.3x Major depressive disorder, recurrent episode 300.4 Dysthymic disorder AND PHQ-9 Score is greater than nine. For primary care providers the diagnosis codes can be in any position (primary or secondary). For behavioral health providers	Denominator exclusions include death, permanent nursing home resident or receiving hospice or palliative care any time during the measurement period. Bipolar Disorder or Personality Disorder (in any position), ICD-9 Codes include: 296.00, 296.01, 296.02, 296.03, 296.04, 296.05, 296.06, 296.10, 296.11, 296.12, 296.13, 296.14, 296.15, 296.16, 296.40, 296.41, 296.42, 296.43, 296.44, 296.45, 296.46, 296.50, 296.51, 296.52, 296.53, 296.54, 296.55, 296.56, 296.60, 296.61, 296.62, 296.63, 296.64, 296.65, 296.66, 296.7, 296.80, 296.81, 296.82, 296.89, 301.0, 301.1, 301.10, 301.11, 301.12, 301.1, 301.2, 301.20, 301.21, 301.22, 301.3, 301.4, 301.5, 301.50, 301.51,

MUC ID	Measure Title	Numerator	Denominator	Exclusions
			<p>the diagnosis codes need to be in the primary position. This is to more accurately define major depression and exclude patients who may have other more serious mental health diagnoses (e.g. schizophrenia, psychosis) with a secondary diagnosis of depression.</p> <p>Patients who do not have a six month <math>\pm</math> 30 day PHQ-9 score obtained are included in the denominator for this measure.</p>	<p>301.59, 301.6, 301.7, 301.8, 301.81, 301.82, 301.83, 301.84, 301.89, 301.9</p>
X3810	<p>Post-Anesthetic Transfer of Care Measure: Procedure Room to a Post Anesthesia Care Unit (PACU)</p>	<p>All age patients who have been cared for by an anesthesia practitioner and are transferred directly from the procedure room to post-anesthesia care unit (PACU) for post-procedure care for whom a checklist or protocol which includes the key transfer of care elements is utilized.</p> <ul style="list-style-type: none"> <li>• All age patients under the care of an anesthesia practitioner AND</li> <li>• Are transferred to another practitioner in a PACU following completion of the anesthetic care AND a transfer of care protocol or handoff tool/checklist that includes the required key handoff elements is used. The key</li> </ul>	<p>All age patients who are cared for by an anesthesia practitioner and are transferred directly from the procedure room to the PACU upon completion of the anesthetic.</p> <ul style="list-style-type: none"> <li>• All age patients under the care of an anesthesia practitioner AND</li> <li>• Who are transferred directly to the PACU at the completion of the anesthetic.</li> <li>• This measure does not include transfer of care during an anesthetic or to the ICU.</li> </ul>	<p>All age patients who have been cared for by an anesthesia practitioner who are not admitted from the operating room directly to a PACU.</p>



MUC ID	Measure Title	Numerator	Denominator	Exclusions
		handoff elements that must be included in the transition of care include: 1. Identification of patient 2. Identification of responsible practitioner (PACU nurse or advanced practitioner) 3. Discussion of pertinent medical history 4. Discussion of the surgical/procedure course (procedure, reason for surgery, procedure performed) 5. Intraoperative anesthetic management and issues/concerns. 6. Expectations/Plans for the early post-procedure period. 7. Opportunity for questions and acknowledgement of understanding of report from the receiving PACU team		
X3808	Preoperative Use of Aspirin for Patients with Drug-Eluting Coronary Stents	Patients who receive aspirin 24 hours prior to surgical start time Definition: Patient reports taking aspirin OR hospital staff administered aspirin The foregoing list of medications/drug names is based on clinical guidelines and other evidence. The specified drugs	All patients, aged 18 years and older with a pre-existing drug-eluting coronary stent, who undergo a surgical or therapeutic procedure under anesthesia	Exclusions: None  Exceptions: Documentation of medical reasons for not receiving aspirin 24 hours prior to anesthesia start time (e.g., risks of preoperative aspirin therapy are greater than the risks of withholding aspirin, other medical reasons)

MUC ID	Measure Title	Numerator	Denominator	Exclusions
		<p>were selected based on the strength of evidence for their clinical effectiveness. This list of selected drugs may not be current. Physicians and other health care professionals should refer to the FDA's web site page entitled "Drug Safety Communications" for up-to-date drug recall and alert information when prescribing medications.</p>		
X3811	Anesthesiology Smoking Abstinence	<p>Patients as defined in the Denominator who are identified as current cigarette smokers and who abstained from smoking prior to anesthesia on the day of surgery or procedure. Abstinence may be defined by either patient self-report or an exhaled carbon monoxide level of &lt; 10 ppm.</p> <p>Numerator Includes: Patients 18 and older AND Are evaluated in preparation for elective surgical, diagnostic, or pain procedure in settings that include routine screening for smoking status with instruction to abstain from smoking on the day of surgery or procedure AND</p>	<p>All patients aged 18 years and older who are evaluated in preparation for elective surgical, diagnostic, or pain procedure in settings that include routine screening for smoking status with instruction to abstain from smoking on the day of surgery or procedure.</p> <p>Denominator Includes: Patients 18 and older AND Are evaluated in preparation for elective surgical, diagnostic, or pain procedure in settings that include routine screening for smoking status with instruction to abstain from smoking on the day of surgery or procedure AND</p>	Non-elective emergent surgery

MUC ID	Measure Title	Numerator	Denominator	Exclusions
		Are identified as current cigarette smokers AND Abstained from smoking prior to anesthesia on the day of surgery or procedure	Are identified as current cigarette smokers	
X3809	Perioperative Temperature Management	Patients for whom at least one body temperature greater than or equal to 35.5 degrees Celsius (or 95.9 degrees Fahrenheit) was recorded within the 30 minutes immediately before or the 15 minutes immediately after anesthesia end time	All patients, regardless of age, who undergo surgical or therapeutic procedures under general or neuraxial anesthesia of 60 minutes duration or longer	Exclusions: Patients undergoing: Cardiopulmonary bypass: 00561, 00562, 00563, 00566, 00567, 00580 Regional nerve block: 01958, 01960, 01967, 01991, 01992 Monitored anesthesia care: any CPT code with -QS modifier  Exceptions: Documentation of one of the following medical reason(s) for not achieving at least one body temperature greater than or equal to 35.5 degrees Celsius or 95.9 degrees Fahrenheit within the 30 minutes immediately before or the 15 minutes immediately after anesthesia end time Emergency cases Intentional hypothermia
X3806	Prevention of Post-Operative Nausea and Vomiting (PONV) – Combination	Patients who receive combination therapy consisting of at least two prophylactic pharmacologic anti-emetic agents of different classes preoperatively or intraoperatively Definition: The recommended	All patients, aged 18 years and older, who undergo a procedure under an inhalational general anesthetic, AND who have three or more risk factors for PONV Definition:	Exclusions: None  Exceptions: Documentation of medical reason(s) for not administering combination therapy of at least two prophylactic pharmacologic anti-emetic agents of different classes (e.g., intolerance or other medical reason)

MUC ID	Measure Title	Numerator	Denominator	Exclusions
		<p>first- and second-line classes of pharmacologic anti-emetics for PONV prophylaxis in patients at moderate to severe risk of PONV include (but are not limited to):</p> <ul style="list-style-type: none"> <li>• 5-hydroxytryptamine (5-HT<sub>3</sub>) receptor antagonists</li> <li>• dexamethasone</li> <li>• phenothiazine</li> <li>• phenylethylamines</li> <li>• butyrophenones</li> <li>• antihistamines</li> <li>• anticholinergics</li> </ul> <p>The foregoing list of medications/drug names is based on clinical guidelines and other evidence. The specified drugs were selected based on the strength of evidence for their clinical effectiveness. This list of selected drugs may not be current. Physicians and other health care professionals should refer to the FDA's web site page entitled "Drug Safety Communications" for up-to-date drug recall and alert information when prescribing medications.</p>	<p>Risk factors for PONV are:</p> <ol style="list-style-type: none"> <li>1. female gender,</li> <li>2. history of PONV or a history of motion sickness,</li> <li>3. non-smoker, and</li> <li>4. intended administration of opioids for post-operative analgesia</li> </ol> <p>Any procedure including surgical, therapeutic or diagnostic This includes use of opioids given intraoperatively and whose effects extend into the post anesthesia care unit (PACU) or post-operative period, or opioids given in the PACU, or opioids given after discharge from the PACU.</p>	
X3807	Post-Anesthetic Transfer of Care: Use of Checklist or Protocol for	Patients who have a documented use of a checklist or protocol for the transfer of care from the responsible anesthesia	All patients, regardless of age, who undergo a procedure under anesthesia and are admitted to an ICU directly from the anesthetizing	None

MUC ID	Measure Title	Numerator	Denominator	Exclusions
	Direct Transfer of Care from Procedure Room to Intensive Care Unit (ICU)	practitioner to the responsible ICU team or team member Definition: The key handoff elements that must be included in the transfer of care protocol or checklist include: 1. Identification of patient, key family member(s) or patient surrogate 2. Identification of responsible practitioner (primary service) 3. Discussion of pertinent medical history 4. Discussion of the surgical/procedure course (procedure, reason for surgery, procedure performed) 5. Intraoperative anesthetic management and issue/concerns to include things such as airway, hemodynamic, narcotic, sedation level and paralytic management and intravenous fluids/blood products and urine output during the procedure 6. Expectations/Plans for the early post-procedure period to include things such as the anticipated course (anticipatory guidance), complications,	location Any procedure including surgical, therapeutic or diagnostic	

MUC ID	Measure Title	Numerator	Denominator	Exclusions
		need for laboratory or ECG and medication administration 7. Opportunity for questions and acknowledgement of understanding of report from the receiving ICU team		
X3789	Patient Counseled About Health Care Decision-Making	Patients or caregivers who were counseled about advanced health care decision-making, palliative care, or end-of-life issues at least once annually.	All patients with a diagnosis of a muscular dystrophy.	Exceptions: Medical exception for not counseling about advanced health care decision making, palliative care or end-of-life issues (i.e., patient is unable to communicate and caregiver is not available; not indicated because of early stage of disease without any comorbid complications)
X3800	Patient Queried about Pain and Pain Interference with Function	Patient visits where the patient was queried about pain and pain interference with function using a validated and reliable instrument.	All visits for patients diagnosed with a muscular dystrophy.	Exceptions: Patient reason for not querying about pain and pain interference with function (i.e., patient declines to respond to questions)
X3801	Nutritional Status or Growth Trajectories Monitored	Patient visits where the patient's nutritional status or growth trajectories were monitored.	All visits for patients diagnosed with muscular dystrophy.	Exceptions: Medical reason for not monitoring for nutrition or growth trajectory problems or referring for these purposes (i.e., patient is already being following by a nutritionist or other qualified specialist for these issues); • Patient reason for not monitoring for nutrition or growth trajectory problems or referring for these purposes (i.e., patient or family caregiver declines); • System reason for not monitoring for

MUC ID	Measure Title	Numerator	Denominator	Exclusions
				nutrition or growth trajectory problems or referring for these purposes (i.e., patient is unable to travel)
X3798	Scoliosis Evaluation Ordered	Patients who had a scoliosis evaluation ordered.	All visits for patients with a diagnosis of a muscular dystrophy.	Medical reason for not ordering a scoliosis evaluation (i.e., patient cannot tolerate evaluation, MD phenotype not associated with scoliosis); • Patient reason for not ordering a scoliosis evaluation (i.e., patient or family caregiver declines evaluation); • System reason for not ordering a scoliosis evaluation (i.e., patient has no insurance coverage for x-rays or referral for consultation evaluation)
X3791	MD Multidisciplinary Care Plan Developed or Updated	Patients for whom a MD multidisciplinary care plan was developed, if not done previously, or the plan was updated at least once annually.	All patients diagnosed with a muscular dystrophy.	Exceptions: Medical reason for not developing or updating a multidisciplinary care plan (i.e., plan was updated within 12 months of the date of the encounter); • Patient reason for not developing or updating a multidisciplinary care plan (i.e., patient or family caregiver declines); • System reason for not developing or reviewing a multidisciplinary care plan (i.e., patient has no insurance to cover the cost of a seeing specialists or other clinicians in a multidisciplinary care plan, cannot travel to see specialist, multidisciplinary services unavailable)
X3787	Patients with DMD Prescribed	Patients prescribed appropriate DMD disease modifying	All patients diagnosed with Duchenne muscular dystrophy	Exceptions: Medication exception for not prescribing disease modifying

MUC ID	Measure Title	Numerator	Denominator	Exclusions
	Appropriate Disease Modifying Pharmaceutical Therapy	pharmaceutical therapy.	(DMD).	pharmaceutical therapy (i.e., medical contraindication; patient already on corticosteroid; may not be medically appropriate depending upon functional capability, age, and existing risk factors); <ul style="list-style-type: none"> <li>• Patient exception for not prescribing disease modifying pharmaceutical therapy (i.e., patient or family caregiver declines);</li> <li>• System exception for not prescribing disease modifying pharmaceutical therapy (i.e., patient has no insurance to cover prescription and cannot afford it)</li> </ul>
X3794	Plan Of Care For Migraine Or Cervicogenic Headache Developed Or Reviewed	Patients who had a headache management plan of care for migraine headache or cervicogenic headache developed or reviewed by the clinician at least once during the 12 month measurement period.	All patients diagnosed with migraine headache or cervicogenic headache.	Exceptions: Medical exceptions for not developing or reviewing a plan of care for migraine or cervicogenic headache (i.e., patient is cognitively impaired, cannot communicate and no caregiver is available)
X3796	Migraine Or Cervicogenic Headache Related Disability Functional Status	Number of days during the past 3 months, as categorized by patients or their caregivers, that they are unable to perform common daily activities (e.g., school, work, household chores, social activities, Independent Activities of Daily Living (IADLs), etc.) due to migraine headache or cervicogenic headache.	All patients age 6 years old and older who have a diagnosis of migraine headache or cervicogenic headache.	Exceptions: Medication exception for not administering a disability tool (i.e., patient has a cognitive or neuropsychiatric impairment that impairs his/her ability to complete the survey); Patient exception for not administering a disability tool (i.e., patient has the inability to read and/or write in order to complete the questionnaire); System exception for not administering a disability tool (i.e., patient does not have insurance to cover the cost of the quality



MUC ID	Measure Title	Numerator	Denominator	Exclusions
X3786	Quality Of Life Assessment For Patients With Primary Headache Disorders	Patient whose health related quality of life was assessed with a tool(s) during at least two visits during the 12 month measurement period AND whose health related quality of life score stayed the same or improved.	All patients with a diagnosis with a primary headache disorder.	of life assessment). Exceptions: Medication exception for not assessing for QoL (i.e., patient has a cognitive or neuropsychiatric impairment that impairs his/her ability to complete the HRQoL survey); Patient exception for not assessing for QoL (i.e., patient has the inability to read and/or write in order to complete the HRQoL questionnaire
X3785	Overuse Of Neuroimaging For Patients With Primary Headache And A Normal Neurological Examination	Patients with a normal neurological examination for whom advanced brain imaging (CTA, CT, MRA or MRI) was NOT ordered.	All patients with a diagnosis of primary headache.	Exceptions: Medical exceptions for ordering an advanced brain imaging study (i.e., patient has an abnormal neurological examination; patient has the coexistence of seizures, or both; recent onset of severe headache; change in the type of headache; signs of increased intracranial pressure (e.g., papilledema, absent venous pulsations on fundoscopic examination, altered mental status, focal neurologic deficits, signs of meningeal irritation); HIV-positive patients with a new type of headache; immunocompromised patient with unexplained headache symptoms; patient on coagulopathy/anti-coagulation or anti-platelet therapy; very young patients with unexplained headache symptoms); System exceptions for ordering an advanced brain imaging study (i.e., needed as part of a clinical trial; other clinician ordered the study).

MUC ID	Measure Title	Numerator	Denominator	Exclusions
X3784	Plan Of Care Or Referral For Possible Medication Overuse Headache	Patients who had a medication overuse headache plan of care created or who were referred for this purpose.	All patients a diagnosis of medication overuse headache within the past three months or who screened positive for possible medication overuse headache (measure 6a).	Exceptions: Medical exception for not creating a medication overuse plan of care or referring the patient for this purpose (i.e., patient already has an active plan of care in place)
X3783	Assessment Of Medication Overuse In The Treatment Of Primary Headache Disorders	Patients who were assessed for medication overuse headache (MOH).	All patients diagnosed with a primary headache disorder, who are actively taking an acute headache medication and experiencing headaches $\geq 15$ days per month for 3 months, who were assessed for medication overuse headache (MOH).	Exceptions: Medical Exception for not assessing the patient for MOH (i.e., patient has already had MOH ruled out within the past three months; the abortive pain medication is medically appropriate for a non-headache condition)
X3770	Overuse Of Opioid Containing Medications For Primary Headache Disorders	Patients assessed for opioid containing medication overuse within the 12-month measurement period and treated or referred for treatment if identified as overusing opioid containing medication	All patients aged 12 years and older diagnosed with a primary headache disorder and taking opioid containing medication.	Exceptions: Medical exception for not assessing, treating, or referring patient for treatment of opioid medication overuse (i.e., patient already assessed and treated for opioid use disorder within the last year; patient has a documented failure of non-opioid options and does not have an opioid use disorder; patient has contraindications to all other medications for primary headache).
X3769	Unnecessary Screening Colonoscopy in Older Adults	"Colonoscopy examinations performed on patients aged 86 and older for screening purposes only.  Denominator Criteria (Eligible	Colonoscopy examinations performed on patients aged 86 and older for screening purposes only reported with CPT / HCPCS codes 45378, 45380, 45381, 45383, 45384, 45385, and G0121.	None

MUC ID	Measure Title	Numerator	Denominator	Exclusions
		<p>Cases):                      Patients aged <math>\geq 65</math> years on the date of the procedure                      AND                      Patient encounter during the reporting period (CPT or HCPCS):                      45378, 45380, 45381, 45383, 45384, 45385, and G0121</p>		
X3765	Overuse of Barbiturate Containing Medications for Primary Headache Disorders	Patients who were NOT prescribed barbiturate containing medications related to the primary headache disorder diagnosis during the 12-month measurement period.	All patients age 18 years old and older diagnosed with a primary headache disorder.	Exceptions: Medical exception for prescribing a barbiturate containing medications for primary headache disorder (i.e., use as a last resort for a patient who has failed all other guideline recommended medications for headache or who have contraindications; may be considered for rescue therapy in a supervised setting for acute migraine when sedation side effects will not put the patient at risk and when the risk abuse has been addressed).
X3772	Preventive Migraine Medication Prescribed	Patients whose migraine frequency is $\geq 4$ migraine attacks per month or migraine frequency was $\geq 8$ days per month who were prescribed a guideline recommended prophylactic migraine treatment within the 12 month reporting period.	All patients age 18 years old and older diagnosed with migraine headache.	Exceptions: Medical exception for not prescribing a prophylactic medication for migraine (i.e., patient migraine frequency $< 8$ days per month or $< 4$ attacks per month; patient is already on a prophylactic medication for migraine; patient has failed all prophylactic medications; patient has a contraindication to all migraine preventive treatments; patient adequately responding to non-pharmacologic preventive treatment);

MUC ID	Measure Title	Numerator	Denominator	Exclusions
				Patient exception for not prescribing a prophylactic medication for migraine (i.e., patient declines any prophylactic medication for migraine); System exception for not prescribing a prophylactic medication for migraine (i.e., patient has no insurance coverage for any prophylactic migraine medication)
X3766	ACUTE MEDICATION PRESCRIBED FOR CLUSTER HEADACHE	Patients who were prescribed a guideline recommended acute medication for cluster headache within the 12 month measurement period.	All patients age 18 years old and older with a diagnosis of cluster headache.	Exceptions: Medical exception for not prescribing a guideline recommended acute CH medication (i.e., guideline recommended medication is medically contraindicated or ineffective for the patient; patient reports no CH attacks within the past 12 months; CH are sufficiently controlled with over the counter [OTC] medications; patient is already on an effective prescribed acute CH medication); Patient exception for not prescribing a guideline recommended acute CH medication (i.e., patient declines any prescription of an acute CH medication); System exception for not prescribing a guideline recommended acute CH medication (i.e., patient does not have insurance to cover the cost of any prescribed an acute CH medications)
X3771	MEDICATION PRESCRIBED FOR ACUTE MIGRAINE	Patients who were prescribed a guideline recommended medication for acute migraine attacks within the 12 month	All patients age 12 years old and older with a diagnosis of migraine headache.	Exceptions: Medical exception for not prescribing a guideline recommended acute migraine medication (i.e., guideline recommended medication is medically

MUC ID	Measure Title	Numerator	Denominator	Exclusions
	ATTACK	measurement period.		contraindicated or ineffective for the patient; migraines are effectively controlled with OTC medications or with NSAIDs; patient is already on an effective acute migraine medication prescribed by another clinician; patient has no pain with migraine); Patient exception for not prescribing a guideline recommended acute migraine medication (i.e., patient declines a prescription for any acute migraine medication); System exception for not prescribing a guideline recommended acute migraine medication (i.e., patient does not have insurance to cover the cost of prescribed abortive migraine medication)
X3775	Chronic Opioid Therapy Follow-up Evaluation	Patients who had a follow-up evaluation conducted at least every three months during COT.	All patients 18 and older prescribed opiates for longer than six weeks duration.	None
X3776	Consideration of Non-Pharmacologic Interventions	Patients with whom the clinician discussed non-pharmacologic interventions (e.g. graded exercise, cognitive/behavioral therapy, activity coaching) for chronic pain at least once during COT.	All patients 18 and older prescribed opiates for longer than six weeks duration.	None
X3777	Documentation of Signed Opioid Treatment Agreement	Patients who signed an opioid treatment agreement at least once during COT.	All patients 18 and older prescribed opiates for longer than six weeks duration.	None
X3774	Evaluation or	Patients evaluated for risk of	All patients 18 and older	None

MUC ID	Measure Title	Numerator	Denominator	Exclusions
	Interview for Risk of Opioid Misuse	misuse of opiates by using a brief validated instrument (e.g. Opioid Risk Tool, SOAAP-R) or patient interview at least once during COT.	prescribed opiates for longer than six weeks duration.	
X3802	Appropriate follow-up imaging for non-traumatic knee pain	<p>Imaging studies for patients known to have had knee radiographs performed within the preceding 3 months based on information from the RIS, patient-provided radiological history, or other health-care source</p> <p>Note: Images and/or results of prior knee radiographs should be available to the radiologist at the time of the knee MRI or MRA. If the report, but not images, from prior radiographs are available, this should be noted in the final report.</p>	All imaging studies for patients aged 18 years and older with non-traumatic knee pain who undergo knee MRI or MRA	None
X3803	Appropriate use of imaging for non-traumatic shoulder pain	<p>Imaging studies for patients known to have had shoulder radiographs performed within the preceding 3 months based on information from the RIS, patient-provided radiological history, or other health-care source</p> <p>Note: Images and/or results of</p>	All imaging studies for patients aged 18 years and older with non-traumatic shoulder pain who undergo shoulder MRI, MRA, or a shoulder ultrasound	None

MUC ID	Measure Title	Numerator	Denominator	Exclusions
		<p>prior shoulder radiographs should be available to radiologist at the time of the shoulder MRI, MRA, or ultrasound. If the report, but not images, from prior radiographs are available, this should be noted in the final report.</p>		
X3523	<p>Extravasation of contrast following contrast-enhanced computed tomography (CT)</p>	<p>Final reports for patients who had an extravasation of contrast</p> <p>Definition: Extravasation- Although most patients complain of initial swelling or tightness, and/or stinging or burning pain at the site of extravasation, some experience little or no discomfort. On physical examination, the extravasation site may be edematous, erythematous, and tender (ACR Contrast Manual, 2013)</p>	<p>All final reports for patients aged 18 years and older who received intravenous iodinated contrast for a CT examination</p>	None
X3781	<p>Use of premedication before contrast-enhanced imaging studies in patients with documented contrast allergy</p>	<p>Final reports for patients who were pre-medicated with corticosteroids with or without H1 antihistamines</p>	<p>All final reports for patients aged 18 years and older with a previously documented contrast reaction who undergo any imaging examination using intravenous iodinated contrast</p> <p>Definition: Contrast reaction: allergic-like</p>	None

MUC ID	Measure Title	Numerator	Denominator	Exclusions
			reaction following a prior imaging examination with intravenous iodinated contrast	
X3764	Imaging in adult ED patients with minor head injury	<p>Number of denominator patients who have a documented indication consistent with the ACEP clinical policy for mild traumatic brain injury prior to imaging</p> <p>Indications for Head CT in patients presenting to the ED for mild traumatic brain injury:</p> <p>Patients with loss of consciousness or posttraumatic amnesia AND</p> <ul style="list-style-type: none"> <li>• Headache OR; Vomiting OR;</li> <li>Age&gt;60 OR; Drug/alcohol intoxication OR; Short-term memory deficits OR; Evidence of trauma above the clavicles OR;</li> <li>Posttraumatic seizure OR;</li> <li>GCS&lt;15 OR; Focal neurological deficit OR Coagulopathy</li> </ul> <p>Patients without loss of consciousness or posttraumatic amnesia AND</p> <ul style="list-style-type: none"> <li>• Severe headache OR; Vomiting OR; Age&gt;65 OR; GCS&lt;15 OR;</li> <li>Physical signs of a basilar skull</li> </ul>	Number of adult patients undergoing head CT for trauma who presented within 24 hours of a non-penetrating head injury with a Glasgow Coma Scale (GCS)≤15	<p>Exclusions: Number of adult patients undergoing head CT for trauma who presented within 24 hours of a non-penetrating head injury with a Glasgow Coma Scale (GCS)≤15</p> <p>Exception: Also consider potential exclusions from MTBI Pathway:</p>



MUC ID	Measure Title	Numerator	Denominator	Exclusions
		fracture OR; Focal neurological deficit OR; Coagulopathy OR Dangerous Mechanism  Patient taking anticoagulation (warfarin, fractionated or unfractionated heparin) or has a documented coagulation disorder Dangerous mechanism of injury includes: ejection from a motor vehicle, a pedestrian struck, and a fall from a height of more than 3 feet or 5 stairs.		
X3813	Proportion of patients sustaining a ureter injury at the time of any pelvic organ prolapse repair	Number of patients receiving a ureter injury at the time of a pelvic organ prolapse procedure, with repair during the procedure or subsequently up to 1 month postoperatively	Denominator = All patients undergoing anterior or apical pelvic organ prolapse (POP) surgery: All patients with any of the following prolapse surgery codes: 57280, 57282, 57283, 57425 (colpopexies) 57240, 57284, 57285, 57423 (anterior repairs) 57200, 57260, 57265 (colporrhaphy and combined) 57268, 57270, 57556 (enterocele repair) 58263, 58270, 58280, 58292, 58294 (hyst w/ enterocele repair) 58400, uterine suspension 57120 colpocleisis	Patients with a gynecologic or other pelvic malignancy noted at the time of hysterectomy

MUC ID	Measure Title	Numerator	Denominator	Exclusions
X3788	PC-02 Cesarean Section (Provider Level)	Patients with cesarean sections with ICD-9-CM Principal Procedure Code or ICD-9-CM Other Procedure Codes for cesarean section	Nulliparous patients delivered of a live term singleton newborn in vertex presentation ICD-9-CM Principal or Other Diagnosis Codes for pregnancy	<ul style="list-style-type: none"> <li>• ICD-9-CM Principal Diagnosis Code or ICD-9-CM Other Diagnosis Codes for contraindications to vaginal delivery</li> <li>• Less than 8 years of age</li> <li>• Greater than or equal to 65 years of age</li> <li>• Length of Stay &gt;120 days</li> <li>• Enrolled in clinical trials</li> <li>• Gestational Age &lt; 37 weeks</li> </ul>
X3274	Assessment for Psoriatic Arthritis	<p>Patients who are “screened” for psoriatic arthritis.</p> <p>”Screening” for psoriatic arthritis must, at a minimum, include inquiry about the presence or absence of joint symptoms including any of the following: morning stiffness, pain, redness, and/or swelling of joints. If a dermatologist wishes to perform additional optional screening measures, these may include physical examination (e.g. visualization of joints, surrounding structures (entheses) and fingers/toes for dactylitis) and/or use of a validated psoriatic arthritis screening instrument (Psoriatic Arthritis Screening and Evaluation) 2,3, ToPAS (Toronto Psoriatic Arthritis Screening) 4 or PEST (Psoriasis Epidemiology</p>	All patients with a diagnosis of psoriasis.	None

MUC ID	Measure Title	Numerator	Denominator	Exclusions
		<p>Screening Tool) 5.</p> <p>Numerator Instructions: To satisfy this measure, presence or absence of joint symptoms should be documented at least once during the reporting period.</p>		
X3726	Clinical Response to Oral Systemic or Biologic Medications	<p>Patients who have a documented physician global assessment (PGA; 6-point scale), body surface area (BSA), psoriasis area and severity index (PASI) and/or dermatology life quality index (DLQI) that meet any one of the below specified benchmarks.</p> <p>Numerator Instructions: To satisfy this measure, a patient must achieve any ONE of the following:</p> <ul style="list-style-type: none"> <li>a. PGA (6-point scale) &lt; 2 (clear to mild skin disease)</li> <li>b. BSA &lt; 3% (mild disease)</li> <li>c. PASI &lt; 3 (no or minimal disease)</li> <li>d. DLQI &lt; 5 (no effect or small effect on patient's quality of life).9,10</li> </ul>	All patients with a diagnosis of psoriasis and treated with an oral systemic or biologic medication for psoriasis for at least 6 months.	<p>Any patient for whom it is documented that he/she declines therapy change in order to achieve better disease control as measured by PGA, BSA, PASI or DLQI.</p> <p>- Any patient who has contraindications to or has experienced adverse effects or lack of efficacy with all other therapy options.</p>
X3763	Appropriate follow-up imaging for incidental	Final reports for CT or MRI of the chest or neck or ultrasound of the neck with follow-up imaging recommended	All final reports for CT or MRI studies of the chest or neck or ultrasound of the neck for patients aged 18 and older with a thyroid	<p>Exclusions: None</p> <p>Exceptions: Documentation of medical reason(s) for not including</p>

MUC ID	Measure Title	Numerator	Denominator	Exclusions
	thyroid nodules in patients		nodule < 1.0 cm noted	documentation that follow up imaging is not needed (e.g., patient has multiple endocrine neoplasia, patient has cervical lymphadenopathy, other medical reason(s))
X3759	Appropriate follow-up imaging for incidental abdominal lesions	Final reports for abdominal imaging studies with follow-up imaging recommended	All final reports for abdominal imaging studies for patients aged 18 years and older with one or more of the following noted: - liver lesion < 1.5 cm - kidney lesion < 1.0 cm - adrenal lesion < 4.0 cm	Exclusions: None  Exceptions: Documentation of medical reason(s) that follow-up imaging is indicated (e.g., patient has a known malignancy that can metastasize, other medical reason(s))
X3758	Appropriate age for colorectal cancer screening	Patients aged 86 and older who received a routine colonoscopy screening for colorectal cancer	All patients aged 50 and older who receive a routine colonoscopy screening for colorectal cancer	Patient under the age of 86 on the date of the procedure  Patient 86 and older received a routine colonoscopy for a reason other than the following: an assessment of signs/symptoms of GI tract illness, and/or the patient is considered high risk, and/or to follow up previously diagnosed advanced lesions
X3760	Frequency of inadequate bowel preparation	Number of patients recommended for early repeat colonoscopy in one year or less due to inadequate bowel preparation	Patients aged 50-75 for whom a screening or surveillance colonoscopy was performed	None
X3761	Photodocumentation of cecal intubation	Number of patients undergoing screening or surveillance colonoscopy who have photodocumentation of	Patients aged 50-75 for whom a screening or surveillance colonoscopy was performed	Exclusions: post-surgical anatomy  Exceptions: CPT Modifiers 52, 53, 73, 74

MUC ID	Measure Title	Numerator	Denominator	Exclusions
		landmarks of cecal intubation to establish a complete examination		
E1523	In-hospital mortality following elective open repair of AAAs	Mortality following elective open repair of asymptomatic AAAs in men with < 6 cm dia and women with < 5.5 cm dia AAAs	All elective open repairs of asymptomatic AAAs in men with < 6 cm dia and women with < 5.5 cm dia AAAs	= 6 cm minor diameter - men = 5.5 cm minor diameter - women Symptomatic AAAs that required urgent/emergent (non-elective) repair
E0465	Perioperative Anti-platelet Therapy for Patients undergoing Carotid Endarterectomy	Patients over age 18 undergoing carotid endarterectomy who received anti-platelet agents such as aspirin or aspirin-like agents, or P2y12 antagonists within 48 hours prior to the initiation of surgery AND are prescribed this medication at hospital discharge following surgery.	Patients over age 18 undergoing carotid endarterectomy.	Patients with known intolerance to anti-platelet agents such as aspirin or aspirin-like agents, or P2y12 antagonists, or those on heparin or other intravenous anti-coagulants; patients with active bleeding or undergoing urgent or emergent operations or endarterectomy combined with cardiac surgery. Patients with known intolerance to anti-platelet agents such as aspirin or aspirin-like agents, or P2y12 antagonists, or those on or other intravenous anti-coagulants; patients with active bleeding or undergoing urgent or emergent operations or endarterectomy combined with cardiac surgery.
X3740	Performing an intraoperative rectal examination at the time of prolapse repair	Number of patients in whom an intraoperative rectal examination was performed and documented. These would be identified by chart review or entry into the Registry.	Denominator = All patients undergoing apical or posterior pelvic organ prolapse (POP) surgery: All patients with any of the following prolapse surgery codes: 57280, 57282, 57283, 57425 (colpopexies)	Patients who have undergone prior total proctectomy Patients who have exclusively anterior compartment repairs

MUC ID	Measure Title	Numerator	Denominator	Exclusions
			45560, 57250, 57210 (posterior repairs) 57200, 57260, 57265 (colporrhaphy and combined) 57268, 57270, 57556 (enterocele repair) 58263, 58270, 58280, 58292, 58294 (hyst w/ enterocele repair) 58400, uterine suspension 57120 colpocleisis : 56800, 56810 (introital repair/ perineoplasty)	
X3741	Preoperative exclusion of uterine malignancy prior to any pelvic organ prolapse repair	Number of patients that were asked about abnormal uterine or postmenopausal bleeding, or those that had an ultrasound and/or endometrial sampling of any kind. These would be identified by chart review or entry into the Registry.	The number of patients undergoing hysterectomy for pelvic organ prolapse. Hysterectomy (identified by CPT codes) performed for the indication of pelvic organ prolapse (identified by supporting ICD9/ICD10 codes) The prolapse codes for ICD9 -> ICD-10 are detailed below, respectively: 618.01 -> N81.10, Cystocele, midline 618.02 -> N81.12, Cystocele, lateral 618.03 -> N81.0, Urethrocele 618.04 -> N81.6, Rectocele 618.05 -> N81.81, Perineocele 618.2 -> N81.2, Incomplete uterovaginal prolapse 618.3 -> N81.3, Complete	Patients who have undergone a prior hysterectomy

MUC ID	Measure Title	Numerator	Denominator	Exclusions
			<p>uterovaginal prolapse                      618.4 -&gt; N81.4, Uterovaginal prolapse, unspecified                      618.6 -&gt; N81.5, Vaginal enterocele                      618.7 -&gt; N81.89, Old laceration of muscles of pelvic floor                      618.81 -&gt; N81.82, incompetence or weakening of pubocervical tissue                      618.82 -&gt; N81.83, incompetence or weakening of rectovaginal tissue                      618.83 -&gt; N81.84, pelvic muscle wasting</p> <p>CPT codes for hysterectomy are:                      57530 Trachelectomy                      58150 Total Abdominal Hysterectomy (Corpus and Cervix), w/ or w/out Removal of Tube(s), w/ or w/out Removal of Ovary(s)                      58152 Total Abdominal Hysterectomy (Corpus and Cervix), w/ or w/out Removal of Tube(s), w/ or w/out Removal of Ovary(s), with Colpo-Urethrocystopexy (e.g. Marshall-Marchetti-Krantz, Burch)                      58180 Supracervical Abdominal Hysterectomy (Subtotal Hysterectomy), w/ or w/out Removal of Tube(s), w/ or w/out Removal of Ovary(s)                      58260 Vaginal Hysterectomy, for</p>	

MUC ID	Measure Title	Numerator	Denominator	Exclusions
			Uterus 250 G or Less 58262 Vaginal Hysterectomy, for Uterus 250 G or Less, with Removal of Tube(s), and/or Ovary(s) 58263 Vaginal Hysterectomy, for Uterus 250 G or Less, with Removal of Tube(s), and/or Ovary(s), with Repair of Enterocele 58267 Vaginal Hysterectomy, for Uterus 250 G or Less, with Colpo-Urethrocystopexy (Marshall-Marchetti-Krantz Type, Pereyra Type), w/ or w/out Endoscopic Control 58270 Vaginal Hysterectomy, for Uterus 250 G or Less, with Repair of Enterocele 58275 Vaginal Hysterectomy, with Total or Partial Vaginectomy 58280 Vaginal Hysterectomy, with Total or Partial Vaginectomy, with Repair of Enterocele 58290 Vaginal Hysterectomy, for Uterus Greater than 250 G 58291 Vaginal Hysterectomy, for Uterus Greater than 250 G, with Removal of Tube(s) and/or Ovary(s) 58292 Vaginal Hysterectomy, for Uterus Greater than 250 G, with Removal of Tube(s) and/or	



MUC ID	Measure Title	Numerator	Denominator	Exclusions
			<p>Ovary(s), with Repair of Enterocele</p> <p>58293 Vaginal Hysterectomy, for Uterus Greater than 250 G, with Colpo-Urethrocystopexy (Marshall-Marchetti-Krantz Type, Pereyra Type)</p> <p>58294 Vaginal Hysterectomy, for Uterus Greater than 250 G, with Repair of Enterocele</p> <p>58541 Laparoscopy, Surgical, Supracervical Hysterectomy, for Uterus 250 G or Less</p> <p>58542 Laparoscopy, Surgical, Supracervical Hysterectomy, for Uterus 250 G or Less, with Removal of Tube(s) and/or Ovary(s)</p> <p>58543 Laparoscopy, Surgical, Supracervical Hysterectomy, for Uterus Greater than 250 G</p> <p>58544 Laparoscopy, Surgical, Supracervical Hysterectomy, for Uterus Greater than 250 G, with Removal of Tube(s) and/or Ovary(s)</p> <p>58550 Laparoscopy, Surgical, with Vaginal Hysterectomy, for Uterus 250 G or Less</p> <p>58552 Laparoscopy, Surgical, with Vaginal Hysterectomy, for Uterus 250 G or Less, with Removal of Tube(s) and/or Ovary(s)</p>	

MUC ID	Measure Title	Numerator	Denominator	Exclusions
			58553 Laparoscopy, Surgical, with Vaginal Hysterectomy, for Uterus Greater than 250 G 58554 Laparoscopy, Surgical, with Vaginal Hysterectomy, for Uterus Greater than 250 G, with Removal of Tube(s) and/or Ovary(s) 58570 Laparoscopy, Surgical, with Total Hysterectomy, for Uterus 250 G or Less 58571 Laparoscopy, Surgical, with Total Hysterectomy, for Uterus 250 G or Less, with Removal of Tube(s) and/or Ovary(s) 58572 Laparoscopy, Surgical, with Total Hysterectomy, for Uterus Greater than 250 G 58573 Laparoscopy, Surgical, with Total Hysterectomy, for Uterus Greater than 250 G, with Removal of Tube(s) and/or Ovary(s) 57120 colpocleisis	
X3742	Preoperative assessment of sexual function prior to any pelvic organ prolapse repair	Number of female patients who undergo a preoperative assessment of sexual function	Denominator = All patients undergoing pelvic organ prolapse (POP) surgery: All patients with any of the following prolapse surgery codes: 57280, 57282, 57283, 57425 (colpopexies) 57240, 57284, 57285, 57423 (anterior repairs) 45560, 57250, 57210 (posterior	None

MUC ID	Measure Title	Numerator	Denominator	Exclusions
			repairs) 57200, 57260, 57265 (colporrhaphy and combined) 57268, 57270, 57556 (enterocele repair) 58263, 58270, 58280, 58292, 58294 (hyst w/ enterocele repair) 58400, uterine suspension 57120 colpocleisis	
X3746	Preoperative assessment of occult stress urinary incontinence prior to any pelvic organ prolapse repair	Number of patients undergoing preoperative assessment including: 1) history asking about incontinence and its character. 2) Urinalysis documented 3) physical exam testing for stress incontinence or occult stress incontinence if patient denies symptoms of stress incontinence.	Denominator = All patients undergoing pelvic organ prolapse (POP) surgery: All patients with any of the following prolapse surgery codes: 57280, 57282, 57283, 57425 (colpopexies) 57240, 57284, 57285, 57423 (anterior repairs) 45560, 57250, 57210 (posterior repairs) 57200, 57260, 57265 (colporrhaphy and combined) 57268, 57270, 57556 (enterocele repair) 58263, 58270, 58280, 58292, 58294 (hyst w/ enterocele repair) 58400, uterine suspension 57120 colpocleisis	<ul style="list-style-type: none"> <li>• Patients with a gynecologic or other pelvic malignancy noted at the time of hysterectomy</li> </ul>
X3744	Proportion of patients sustaining a major viscous	The number of patients receiving a major viscous injury with repair at the time of initial surgery or subsequently up to 1 month	Denominator = All patients undergoing pelvic organ prolapse (POP) surgery: All patients with any of the following prolapse	<ul style="list-style-type: none"> <li>• Patients with a gynecologic or other pelvic malignancy noted at the time of hysterectomy</li> </ul>

MUC ID	Measure Title	Numerator	Denominator	Exclusions
	injury at the time of any pelvic organ prolapse repair	postoperatively	surgery codes: 57280, 57282, 57283, 57425 (colpopexies) 57240, 57284, 57285, 57423 (anterior repairs) 45560, 57250, 57210 (posterior repairs) 57200, 57260, 57265 (colporrhaphy and combined) 57268, 57270, 57556 (enterocele repair) 58263, 58270, 58280, 58292, 58294 (hyst w/ enterocele repair) 58400, uterine suspension 57120 colpocleisis	
X3743	Proportion of patients sustaining a bladder injury at the time of any pelvic organ prolapse repair	Total number of patient's receiving a bladder injury at the time of surgery to repair a pelvic organ prolapse with repair during the procedure or subsequently up to 1 month post-surgery	Denominator = All patients undergoing anterior or apical pelvic organ prolapse (POP) surgery: All patients with any of the following prolapse surgery codes: 57280, 57282, 57283, 57425 (colpopexies) 57240, 57284, 57285, 57423 (anterior repairs) 57200, 57260, 57265 (colporrhaphy and combined) 57268, 57270, 57556 (enterocele repair) 58263, 58270, 58280, 58292, 58294 (hyst w/ enterocele repair) 58400, uterine suspension	Exclusions: • Patients with a gynecologic or other pelvic malignancy noted at the time of hysterectomy  Exceptions: Patients having concurrent surgery involving bladder neoplasia or otherwise to treat a bladder specific problem

MUC ID	Measure Title	Numerator	Denominator	Exclusions
X3745	Preoperative pessary for pelvic organ prolapse attempted	Number of patients that who have attempted pessary placement for the treatment of pelvic organ prolapse prior to surgical intervention. These would be identified by chart review or entry into the Registry.	57120 colpocleisis  Denominator = All patients undergoing pelvic organ prolapse (POP) surgery: All patients with any of the following prolapse surgery codes: 57280, 57282, 57283, 57425 (colpopexies) 57240, 57284, 57285, 57423 (anterior repairs) 45560, 57250, 57210 (posterior repairs) 57200, 57260, 57265 (colporrhaphy and combined) 57268, 57270, 57556 (enterocele repair) 58263, 58270, 58280, 58292, 58294 (hyst w/ enterocele repair) 58400, uterine suspension 57120 colpocleisis	Patients requiring surgery for a gynecologic condition who also have concurrent prolapse surgery. For example a patient with endometrial cancer who has a concurrent prolapse surgery
X3750	Preoperative pessary for pelvic organ prolapse offered	Number of patients that who have been offered a pessary for the treatment of pelvic organ prolapse prior to surgical intervention. These would be identified by chart review or entry into the Registry.	Denominator = All patients undergoing pelvic organ prolapse (POP) surgery: All patients with any of the following prolapse surgery codes: 57280, 57282, 57283, 57425 (colpopexies) 57240, 57284, 57285, 57423 (anterior repairs) 45560, 57250, 57210 (posterior repairs) 57200, 57260, 57265	Patients requiring surgery for a gynecologic condition who also have concurrent prolapse surgery. For example a patient with endometrial cancer who has a concurrent prolapse surgery

MUC ID	Measure Title	Numerator	Denominator	Exclusions
			(colporrhaphy and combined) 57268, 57270, 57556 (enterocele repair) 58263, 58270, 58280, 58292, 58294 (hyst w/ enterocele repair) 58400, uterine suspension 57120 colpocleisis	
X3751	Complete assessment and evaluation of patient's pelvic organ prolapse prior to surgical repair	Number of patients that received a complete characterization of each vaginal compartment using an objective measurement of stage or grade of pelvic organ prolapse (i.e. POPQ, or Baden/Walker) as part of the assessment and evaluation of their pelvic organ prolapse. These would be identified by chart review or entry into the Registry.	Denominator = All patients undergoing pelvic organ prolapse (POP) surgery: All patients with any of the following prolapse surgery codes: 57280, 57282, 57283, 57425 (colpopexies) 57240, 57284, 57285, 57423 (anterior repairs) 45560, 57250, 57210 (posterior repairs) 57200, 57260, 57265 (colporrhaphy and combined) 57268, 57270, 57556 (enterocele repair) 58263, 58270, 58280, 58292, 58294 (hyst w/ enterocele repair) 58400, uterine suspension 57120 colpocleisis	None
X3752	Performing cystoscopy at the time of hysterectomy for pelvic organ prolapse to	Numerator is the number of patients in whom an intraoperative cystoscopy was performed to evaluate for lower urinary tract injury at the time of hysterectomy for pelvic organ	The number of patients undergoing hysterectomy for pelvic organ prolapse. Hysterectomy (identified by CPT codes) performed for the indication of pelvic organ prolapse	None

MUC ID	Measure Title	Numerator	Denominator	Exclusions
	detect lower urinary tract injury	prolapse.	<p>(identified by supporting ICD9/ICD10 codes) The prolapse codes for ICD9 -&gt; ICD-10 are detailed below, respectively:            618.01 -&gt; N81.10, Cystocele, midline            618.02 -&gt; N81.12, Cystocele, lateral            618.03 -&gt; N81.0, Urethrocele            618.04 -&gt; N81.6, Rectocele            618.05 -&gt; N81.81, Perineocele            618.2 -&gt; N81.2, Incomplete uterovaginal prolapse            618.3 -&gt; N81.3, Complete uterovaginal prolapse            618.4 -&gt; N81.4, Uterovaginal prolapse, unspecified            618.6 -&gt; N81.5, Vaginal enterocele            618.7 -&gt; N81.89, Old laceration of muscles of pelvic floor            618.81 -&gt; N81.82, incompetence or weakening of pubocervical tissue            618.82 -&gt; N81.83, incompetence or weakening of rectovaginal tissue            618.83 -&gt; N81.84, pelvic muscle wasting</p> <p>CPT codes for hysterectomy are:            57530 Trachelectomy            58150 Total Abdominal Hysterectomy (Corpus and Cervix),</p>	

MUC ID	Measure Title	Numerator	Denominator	Exclusions
			w/ or w/out Removal of Tube(s), w/ or w/out Removal of Ovary(s) 58152 Total Abdominal Hysterectomy (Corpus and Cervix), w/ or w/out Removal of Tube(s), w/ or w/out Removal of Ovary(s), with Colpo-Urethrocystopexy (e.g. Marshall-Marchetti-Krantz, Burch) 58180 Supracervical Abdominal Hysterectomy (Subtotal Hysterectomy), w/ or w/out Removal of Tube(s), w/ or w/out Removal of Ovary(s) 58260 Vaginal Hysterectomy, for Uterus 250 G or Less 58262 Vaginal Hysterectomy, for Uterus 250 G or Less, with Removal of Tube(s), and/or Ovary(s) 58263 Vaginal Hysterectomy, for Uterus 250 G or Less, with Removal of Tube(s), and/or Ovary(s), with Repair of Enterocele 58267 Vaginal Hysterectomy, for Uterus 250 G or Less, with Colpo- Urethrocystopexy (Marshall- Marchetti-Krantz Type, Pereyra Type), w/ or w/out Endoscopic Control 58270 Vaginal Hysterectomy, for Uterus 250 G or Less, with Repair of Enterocele	



MUC ID	Measure Title	Numerator	Denominator	Exclusions
			58275 Vaginal Hysterectomy, with Total or Partial Vaginectomy 58280 Vaginal Hysterectomy, with Total or Partial Vaginectomy, with Repair of Enterocele 58290 Vaginal Hysterectomy, for Uterus Greater than 250 G 58291 Vaginal Hysterectomy, for Uterus Greater than 250 G, with Removal of Tube(s) and/or Ovary(s) 58292 Vaginal Hysterectomy, for Uterus Greater than 250 G, with Removal of Tube(s) and/or Ovary(s), with Repair of Enterocele 58293 Vaginal Hysterectomy, for Uterus Greater than 250 G, with Colpo-Urethrocystopexy (Marshall-Marchetti-Krantz Type, Pereyra Type) 58294 Vaginal Hysterectomy, for Uterus Greater than 250 G, with Repair of Enterocele 58541 Laparoscopy, Surgical, Supracervical Hysterectomy, for Uterus 250 G or Less 58542 Laparoscopy, Surgical, Supracervical Hysterectomy, for Uterus 250 G or Less, with Removal of Tube(s) and/or Ovary(s) 58543 Laparoscopy, Surgical,	

MUC ID	Measure Title	Numerator	Denominator	Exclusions
			Supracervical Hysterectomy, for Uterus Greater than 250 G 58544 Laparoscopy, Surgical, Supracervical Hysterectomy, for Uterus Greater than 250 G, with Removal of Tube(s) and/or Ovary(s) 58550 Laparoscopy, Surgical, with Vaginal Hysterectomy, for Uterus 250 G or Less 58552 Laparoscopy, Surgical, with Vaginal Hysterectomy, for Uterus 250 G or Less, with Removal of Tube(s) and/or Ovary(s) 58553 Laparoscopy, Surgical, with Vaginal Hysterectomy, for Uterus Greater than 250 G 58554 Laparoscopy, Surgical, with Vaginal Hysterectomy, for Uterus Greater than 250 G, with Removal of Tube(s) and/or Ovary(s) 58570 Laparoscopy, Surgical, with Total Hysterectomy, for Uterus 250 G or Less 58571 Laparoscopy, Surgical, with Total Hysterectomy, for Uterus 250 G or Less, with Removal of Tube(s) and/or Ovary(s) 58572 Laparoscopy, Surgical, with Total Hysterectomy, for Uterus Greater than 250 G 58573 Laparoscopy, Surgical, with Total Hysterectomy, for Uterus	

MUC ID	Measure Title	Numerator	Denominator	Exclusions
			Greater than 250 G, with Removal of Tube(s) and/or Ovary(s)	
X3747	Door to puncture time for endovascular stroke treatment	Patients with acute ischemic stroke undergoing endovascular stroke treatment who have a door to puncture time of less than 2 hours	All patients with acute ischemic stroke undergoing endovascular stroke treatment	Patients who are transferred from one institution to another with a known diagnosis of acute ischemic stroke for endovascular stroke treatment; In-patients with newly diagnosed acute ischemic stroke considered for endovascular stroke treatment
X3756	Clinical Outcome post Endovascular Stroke Treatment	Patients with acute ischemic stroke undergoing endovascular stroke treatment who have a mRs of 0 to 2 at 90 days	All patients with acute ischemic stroke undergoing endovascular stroke treatment	None
X3754	Rate of surgical conversion from lower extremity endovascular revascularization procedure	Number of patients undergoing major amputation or open surgical bypass within 48 hours of the index endovascular lower extremity revascularization procedure	Patients undergoing endovascular lower extremity revascularization	Patient in denominator with planned hybrid or staged procedure
X3755	Percentage of patients with a retrievable inferior vena cava filter who are appropriately assessed for continued filtration or device removal	Number of patients in whom a retrievable IVC filter is placed who, within 3 months post-placement, either have a) the filter removed; b) documented re-assessment for the appropriateness of filter removal; or c) documentation of at least two attempts to reach the patient to arrange a clinical re-assessment for the	All patients who have a retrievable IVC filter placed with the intent for potential removal at time of placement	None

MUC ID	Measure Title	Numerator	Denominator	Exclusions
		appropriateness of filter removal		
X3739	Percentage of patients treated for varicose veins who are treated with saphenous ablation and receive an outcomes survey before and after treatment	Number of patients who are treated for varicose veins with saphenous ablation and receive an outcomes survey before and after treatment	All patients who are treated for varicose veins with saphenous ablation	None
X3735	Communication and shared decision-making with patients and families for interventional oncology procedures	Patients who have undergone a percutaneous ablation procedure, bland embolization of a malignancy, chemoembolization or radioembolization with documentation that the intent of the procedure was discussed with the patient, and/or family member	Patients who have undergone a percutaneous ablation procedure, bland embolization of a malignancy, chemoembolization or radioembolization	None
X3732	Adult Kidney Disease: Referral to Hospice	Patients who are referred to hospice care	All patients aged 18 years and older with a diagnosis of ESRD who withdraw from hemodialysis or peritoneal dialysis	Documentation of patient reason(s) for not referring to hospice care (e.g., patient declined, other patient reasons)
X3780	Coagulation studies in adult patients presenting with	Denominator patients who received coagulation studies (PT or PTT tests)	All emergency department patients aged 18 years and older presenting with chest pain, without coagulopathy or bleeding	Exclusions: <ul style="list-style-type: none"> <li>• Diagnosis of stroke</li> <li>• Diagnosis of TIA</li> <li>• Diagnosis of DVT</li> </ul>

MUC ID	Measure Title	Numerator	Denominator	Exclusions
	chest pain with no coagulopathy or bleeding			<ul style="list-style-type: none"> <li>• Diagnosis of Acute Coronary Syndromes</li> <li>• Chronic liver disease</li> <li>• hereditary coagulopathy (286 and 286.Xcoagulation defects), hematologic diseases (289 and 289.X other blood disease</li> <li>• taking or being prescribed anticoagulant, anti-platelet or coagulation cascade modifying therapy, or documented concern for coagulopathy or DIC.</li> <li>• Pregnancy codes</li> <li>• Patients receiving TPA for stroke</li> </ul> <p>Exceptions:</p> <ul style="list-style-type: none"> <li>• traumatic injury with concern for DIC</li> <li>• medical illness with concern for DIC</li> </ul>
X3778	Imaging in pediatric ED patients aged 2 through 17 years with minor head injury	<p>"Number of denominator patients classified as low risk according to the PECARN clinical policy for mild traumatic brain injury prior to imaging</p> <p>Identification as low-risk:</p> <ul style="list-style-type: none"> <li>- No signs of altered mental status</li> <li>- No signs of basilar skull fracture</li> <li>- No history of LOC</li> <li>- No history of vomiting</li> <li>- No severe mechanism of injury</li> <li>- No severe headache"</li> </ul>	Number of patients aged 2 to 17 years undergoing head CT for trauma who presented within 24 hours of a non-penetrating head injury with a Glasgow Coma Scale (GCS) of 14 or 15	<p>Exclusions:</p> <ul style="list-style-type: none"> <li>"• Ventricular shunt</li> <li>• Multisystem trauma</li> <li>• Coagulopathy</li> <li>- History of bleeding disorder such as hemophilia</li> <li>- History of clotting disorder</li> <li>- Documented concern for coagulopathy</li> <li>- Current treatment with an anticoagulant medication below:</li> <li>§ Argatroban</li> <li>§ Arixtra (Fondaparinux)</li> <li>§ Fragmin (Dalteparin)</li> <li>§ Heparin IV</li> <li>§ Innohep (Tinzaparin)</li> </ul>

MUC ID	Measure Title	Numerator	Denominator	Exclusions
				§ Lovenox (Enoxaparin) § Pradaxa (Dabigatran) § Warfarin (Coumadin) • Thrombocytopenia or patients on any of the following medications affecting platelet function: - Aggrenox (ASA/dipyridamole) - Plavix (Clopidogrel) - Ticlid (Ticlopidine)"
X3733	Pediatric Kidney Disease: Discussion of Care Planning	Patients for whom there is documentation of a discussion regarding care planning Note: Although the discussion can take place with other providers, the physician overseeing the dialysis should confirm that the conversation has been undertaken either [i] directly by the nephrologist or dialysis center staff, or [ii] by another physician overseeing the patient's care. Discussion should result in a plan to establish treatment goals based on patient's medical condition and prognosis. Discussion must endorse a family centered approach and treatment goals must be determined. The benefits and burdens of dialysis should be discussed, and the quality of the	All patients aged 17 years and younger with a diagnosis of ESRD on hemodialysis or peritoneal dialysis	None

MUC ID	Measure Title	Numerator	Denominator	Exclusions
		life of the individual be taken into account. Kidney transplant should be discussed if appropriate.		
X2809	ALS Multidisciplinary Care Plan Developed or Updated	Patients for whom a multi-disciplinary care plan was developed, if not done previously, and the plan was updated at least once annually.	All patients with a diagnosis of amyotrophic lateral sclerosis.	A system reason exclusion has been included for patients who have no insurance to cover the cost of a multidisciplinary care plan.
E2082	HIV Viral Load Suppression	Number of patients in the denominator with a HIV viral load less than 200 copies/mL at last HIV viral load test during the measurement year	Number of patients, regardless of age, with a diagnosis of HIV with at least one medical visit in the measurement year	None
E2079	HIV medical visit frequency	Number of patients in the denominator who had at least one medical visit in each 6-month period of the 24-month measurement period with a minimum of 60 days between first medical visit in the prior 6-month period and the last medical visit in the subsequent 6-month period. (Measurement period is a consecutive 24-month period of time	Number of patients, regardless of age, with a diagnosis of HIV with at least one medical visit in the first 6 months of the 24-month measurement period	Patients who died at any time during the 24-month measurement period.
X3481	Functional Status Assessment and Goal Achievement for	Patients who completed initial and follow-up functional status assessments using a qualifying tool, set a goal with their provider for a change in	Adults aged 65 years and older who had at least one outpatient encounter during the measurement year and an active diagnosis of heart failure	Patients with severe cognitive impairment

MUC ID	Measure Title	Numerator	Denominator	Exclusions
	Patients with Congestive Heart Failure	functional status score and who met the target goal by the follow-up functional status assessment		
X3302	Closing the Referral Loop - Specialist Report Sent to Primary Care Physician	Referrals received for which a consultant report is sent back to the referring provider	Referrals received by a provider during the measurement period.	None
E0712	Depression Utilization of the PHQ-9 Tool	Adult patients age 18 and older with the diagnosis of major depression or dysthymia (ICD-9 296.2x, 296.3x or 300.4) who have a PHQ-9 tool administered at least once during the four month measurement period.	<p>Adults age 18 and older; no upper age limit</p> <p>Have the diagnosis of major depression or dysthymia defined by any of the following ICD-9 codes:</p> <p>296.2x Major depressive disorder, single episode</p> <p>296.3x Major depressive disorder, recurrent episode</p> <p>300.4 Dysthymic disorder</p> <p>For primary care providers the diagnosis codes can be in any position (primary or secondary). For behavioral health providers the diagnosis codes need to be in the primary position. This is to more accurately define major depression and exclude patients who may have other more serious mental health diagnoses (e.g. schizophrenia, psychosis) with a secondary diagnosis of</p>	<p>Denominator exclusions include death, permanent nursing home resident or receiving hospice or palliative care any time during the measurement period. Bipolar Disorder or Personality Disorder (in any position), ICD-9 Codes include:</p> <p>296.00, 296.01, 296.02, 296.03, 296.04, 296.05, 296.06, 296.10, 296.11, 296.12, 296.13, 296.14, 296.15, 296.16, 296.40, 296.41, 296.42, 296.43, 296.44, 296.45, 296.46, 296.50, 296.51, 296.52, 296.53, 296.54, 296.55, 296.56, 296.60, 296.61, 296.62, 296.63, 296.64, 296.65, 296.66, 296.7, 296.80, 296.81, 296.82, 296.89, 301.0, 301.1, 301.10, 301.11, 301.12, 301.1 , 301.2, 301.20, 301.21, 301.22, 301.3, 301.4, 301.5, 301.50, 301.51, 301.59, 301.6, 301.7, 301.8, 301.81, 301.82, 301.83, 301.84, 301.89, 301.9</p>



MUC ID	Measure Title	Numerator	Denominator	Exclusions
X2147	Total Per Capita Cost Measure for Medicare Fee-for-Service Beneficiaries	The sum of the payment-standardized actual Medicare Part A and Part B costs during the calendar year for all Medicare beneficiaries who were attributed to the medical group practice, multiplied by the actual Medicare FFS Part A and Part B payments for the average beneficiary in the sample. Note: Actual costs above the 99 <sup>th</sup> percentile are set to the cost at the 99 <sup>th</sup> percentile.	depression.  The sum of the payment-standardized expected (based on beneficiary medical histories) Medicare Part A and Part B costs during the calendar year for all Medicare beneficiaries who were attributed to the medical group practice.	Exclusions: <ul style="list-style-type: none"> <li>• Beneficiaries without Medicare FFS Parts A and B coverage for all 12 months of the calendar year</li> <li>• Beneficiaries who died in the calendar year</li> <li>• Beneficiaries without a prior calendar year Hierarchical Condition Category risk score (which is used to compute expected beneficiary costs)</li> <li>• Beneficiaries for whom non-risk-adjusted total Medicare costs were in the bottom one percent of the distribution of costs for all beneficiaries</li> <li>• Beneficiaries who resided outside the United States</li> <li>• Beneficiaries attributed to a Rural Health Clinic, Federally Qualified Health Center, Method 2 Critical Access Hospital, or Elected Teaching Amendment Hospitals.</li> </ul>
X3715	Prevention Quality Indicators #90 (PQI #90)	Discharges, for patients ages 18 years and older, that meet the inclusion and exclusion rules for the numerator in any of the following PQIs: <ul style="list-style-type: none"> <li>• PQI #1 Diabetes Short-Term Complications Admission Rate</li> <li>• PQI #3 Diabetes Long-Term Complications Admission Rate</li> <li>• PQI #5 Chronic Obstructive</li> </ul>	Population ages 18 years and older in metropolitan area <sup>†</sup> or county. Discharges in the numerator are assigned to the denominator based on the metropolitan area or county of the patient residence, not the metropolitan area or county of the hospital where the discharge occurred.	None

MUC ID	Measure Title	Numerator	Denominator	Exclusions
		Pulmonary Disease (COPD) or Asthma in Older Adults Admission Rate • PQI #7 Hypertension Admission Rate • PQI #8 Heart Failure Admission Rate • PQI #10 Dehydration Admission Rate • PQI #11 Bacterial Pneumonia Admission Rate • PQI #12 Urinary Tract Infection Admission Rate • PQI #13 Angina Without Procedure Admission Rate • PQI #14 Uncontrolled Diabetes Admission Rate • PQI #15 Asthma in Younger Adults Admission Rate • PQI #16 Lower-Extremity Amputation among Patients with Diabetes Rate Discharges that meet the inclusion and exclusion rules for the numerator in more than one of the above PQIs are counted only once in the composite numerator.		
E2111	Antipsychotic Use in Persons with Dementia	The number of patients in the denominator who had at least one prescription and > 30 days supply for any antipsychotic	All patients 65 years of age and older continuously enrolled during the measurement period with a diagnosis of dementia and/or two	None

MUC ID	Measure Title	Numerator	Denominator	Exclusions
		<p>medication during the measurement period and do not have a diagnosis of schizophrenia, bipolar disorder, Huntington's disease or Tourette's Syndrome.</p>	<p>or more prescription claims and &gt;60 days supply for a cholinesterase inhibitor or an NMDA receptor antagonist.</p>	
E0055	Comprehensive Diabetes Care: Eye Exam	<p>Members who received an eye screening for diabetic retinal disease. This includes diabetics who had the following:</p> <ul style="list-style-type: none"> <li>- A retinal or dilated eye exam by an eye care professional (optometrist or ophthalmologist) in the measurement year</li> </ul> <p>OR</p> <ul style="list-style-type: none"> <li>- A negative retinal exam or dilated eye exam (negative for retinopathy) by an eye care professional in the year prior to the measurement year.</li> </ul> <p>For exams performed in the year prior to the measurement year, a result must be available.</p>	<p>Members 18-75 years of age by the end of the measurement year who had a diagnosis of diabetes (type 1 or type 2) during the measurement year or the year prior to the measurement year.</p>	<p>Exclude members with a diagnosis of polycystic ovaries who did not have a face-to-face encounter, in any setting, with a diagnosis of diabetes during the measurement year or the year prior to the measurement year. Diagnosis may occur at any time in the member's history, but must have occurred by the end of the measurement year.</p> <p>Exclude members with gestational or steroid-induced diabetes who did not have a face-to-face encounter, in any setting, with a diagnosis of diabetes during the measurement year or the year prior to the measurement year. Diagnosis may occur during the measurement year or the year prior to the measurement year, but must have occurred by the end of the measurement year.</p>
E0056	Diabetes: Foot exam	<p>Patients who received a foot exam (visual inspection with either a sensory exam or a pulse exam) during the measurement year.</p>	<p>Patients 18-75 years of age by the end of the measurement year who had a diagnosis of diabetes (type 1 or type 2) during the measurement year or the year prior to the measurement year.</p>	<p>Exclude patients with a diagnosis of polycystic ovaries who did not have a face-to-face encounter, in any setting, with a diagnosis of diabetes during the measurement year or the year prior to the measurement year. Diagnosis may</p>

MUC ID	Measure Title	Numerator	Denominator	Exclusions
				<p>occur at any time in the patient's history, but must have occurred by the end of the measurement year.</p> <p>Exclude patients with gestational or steroid-induced diabetes who did not have a face-to-face encounter, in any setting, with a diagnosis of diabetes during the measurement year or the year prior to the measurement year. Diagnosis may occur during the measurement year or the year prior to the measurement year, but must have occurred by the end of the measurement year.</p>
E0070	Coronary Artery Disease (CAD): Beta-Blocker Therapy – Prior Myocardial Infarction (MI) or Left Ventricular Systolic Dysfunction (LVEF < 40%)	<p>REPORTING CRITERIA 1: Patients who were prescribed beta-blocker therapy</p> <p>REPORTING CRITERIA 2: Patients who were prescribed beta-blocker therapy</p>	<p>REPORTING CRITERIA 1: All patients aged 18 years and older with a diagnosis of coronary artery disease or history of cardiac surgery seen within a 12 month period who also have a current or prior LVEF &lt; 40%</p> <p>REPORTING CRITERIA 2: All patients aged 18 years and older with a diagnosis of coronary artery disease or history of cardiac surgery seen within a 12 month period who also have prior MI</p>	<p>Documentation of medical reason(s) for not prescribing beta-blocker therapy (e.g., allergy, intolerant, bradycardia, AV block without permanent pacemaker, arrhythmia, hypotension, asthma, other medical reasons)</p> <p>Documentation of patient reason(s) for not prescribing beta-blocker therapy (e.g., patient declined, other patient reasons)</p> <p>Documentation of system reason(s) for not prescribing beta-blocker therapy (e.g., other reasons attributable to the health care system)</p> <p>Documentation of patient reason(s) for not prescribing aspirin or clopidogrel (e.g., patient declined, other patient reasons)</p>

MUC ID	Measure Title	Numerator	Denominator	Exclusions
				Documentation of system reason(s) for not prescribing aspirin or clopidogrel (e.g., lack of drug availability, other reasons attributable to the health care system)
E0067	Coronary Artery Disease (CAD): Antiplatelet Therapy	Patients who were prescribed aspirin or clopidogrel	All patients aged 18 years and older with a diagnosis of coronary artery disease seen within a 12 month period	Documentation of medical reason(s) for not prescribing aspirin or clopidogrel (e.g., allergy, intolerant, receiving other thienopyridine therapy, bleeding coagulation disorders, receiving warfarin therapy, other medical reasons) Documentation of patient reason(s) for not prescribing aspirin or clopidogrel (e.g., patient declined, other patient reasons) Documentation of system reason(s) for not prescribing aspirin or clopidogrel (e.g., lack of drug availability, other reasons attributable to the health care system)
X1033	Coronary Artery Disease (CAD): Symptom Management:	Patients with appropriate management of anginal symptoms within a 12 month period	All patients aged 18 years and older with a diagnosis of coronary artery disease seen within a 12 month period with an evaluation of level of activity and an assessment of whether anginal symptoms are present or absent	None
E0171	Acute Care Hospitalization (Claims-Based)	Number of home health stays for patients who have a Medicare claim for an admission to an acute care hospital in the 60 days	Number of home health stays that begin during the 12-month observation period. A home health stay is a sequence of home	Home health stays that begin with a Low Utilization Payment Adjustment (LUPA) claim. Home health stays in which the patient receives service from multiple

MUC ID	Measure Title	Numerator	Denominator	Exclusions
		following the start of the home health stay.	health payment episodes separated from other home health payment episodes by at least 60 days.	agencies during the first 60 days. Home health stays for patients who are not continuously enrolled in fee-for-service Medicare for the 6 months prior to and the 60 days following the start of the home health stay or until death.
E0052	Use of Imaging Studies for Low Back Pain	<p>Members who received an imaging study (plain x-ray, MRI, CT scan) conducted on the index episode start date or in the 28 days following the index episode start date.</p> <p>A diagnosis code from Table LBP-A must be in conjunction with an imaging study code in Table LBP-D.</p>	All members aged 18 years at the beginning of the measurement year to 50 years by the end of the measurement year who had an outpatient or ED encounter with a principal diagnosis of low back pain during period starting at the beginning of the measurement year through 28 days prior to the end of the measurement year	<p>Exclude patients with a low back pain diagnosis during the 180 days prior to the index episode start date.</p> <p>Exclude patients who have a diagnosis for which an imaging study in the presence of low back pain is clinically indicated.</p> <ul style="list-style-type: none"> <li>- Cancer: Exclude members who with a diagnosis of cancer. Look as far back as possible in the member's history through 28 days after the index episode start date.</li> <li>- Recent trauma, intravenous drug abuse, neurological impairment: Exclude members who have any of these diagnoses in the 12 months prior to the index episode start date through 28 days after the index episode start date.</li> </ul>
E0514	MRI Lumbar Spine for Low Back Pain	MRI of the lumbar spine studies with a diagnosis of low back pain (from the denominator) without the patient having claims-based evidence of prior antecedent conservative therapy.	MRI of the lumbar spine studies with a diagnosis of low back pain on the imaging claim.	<p>Indications for measure exclusion include any patients with the following procedures or diagnosis codes:</p> <ul style="list-style-type: none"> <li>• Patients with lumbar spine surgery in the 90 days prior to MRI:</li> <li>• Cancer (Within 12 months prior to MRI procedure. A cancer exclusion diagnosis must be in one of the diagnoses fields of any inpatient, outpatient or Carrier</li> </ul>

MUC ID	Measure Title	Numerator	Denominator	Exclusions
				<p>claims) • Trauma: (Within 45 days prior to MRI procedure. An exclusion diagnosis must be in one of the diagnoses fields of any inpatient, outpatient or Carrier claims)</p> <p>• IV Drug Abuse: (Within 12 months prior to MRI procedure. An exclusion diagnosis must be in one of the diagnoses fields of any inpatient, outpatient or Carrier claims.)</p> <p>• Neurologic Impairment: (Within 12 months prior to MRI procedure. An exclusion diagnosis must be in one of the diagnoses fields of any inpatient, outpatient or Carrier claims.)</p> <p>• Human Immunodeficiency Virus (HIV): (Within 12 months prior to MRI procedure An exclusion diagnosis must be in one of the diagnoses fields of any inpatient, outpatient or Carrier claims.)</p> <p>• Unspecified Immune Deficiencies: (Within 12 months prior to MRI procedure. An exclusion diagnosis must be in one of the diagnoses fields of any inpatient, outpatient or Carrier claims.)</p> <p>• Intrapinal abscess: (An exclusion diagnosis must be in one of the diagnoses fields on the MRI lumbar spine claim.)</p>
E0513	Thorax CT: Use of Contrast Material	The number of thorax CT studies with and without contrast (combined studies).	The number of thorax CT studies performed (with contrast, without contrast or both with and without contrast).	None

MUC ID	Measure Title	Numerator	Denominator	Exclusions
E2158	Payment-Standardized Medicare Spending Per Beneficiary (MSPB)	The numerator for a hospital's MSPB Measure is the hospital's average MSPB Amount, which is defined as the sum of standardized, risk-adjusted spending across all of a hospital's eligible episodes divided by the number of episodes for that hospital.	The denominator for a hospital's MSPB Measure is the median MSPB Amount across all episodes nationally.	None
E2083	Prescription of HIV Antiretroviral Therapy	Number of patients from the denominator prescribed HIV antiretroviral therapy during the measurement year	Number of patients, regardless of age, with a diagnosis of HIV with at least one medical visit in the measurement year	None
S2510	Skilled Nursing Facility All-Cause 30 Day Post Discharge Readmission Measure	The numerator is defined as the risk-adjusted estimate of the number of unplanned readmissions that occurred within 30 days from discharge from the prior proximal acute hospitalization.	The denominator includes all patients who have been admitted to a SNF within one day of discharge from a prior proximal hospitalization, taking denominator exclusions into account.	Numerator exclusions: We exclude for planned readmissions as per the HWR measure. Denominator exclusions: The following are excluded from the denominator: 1. SNF stays where the patient had one or more intervening post-acute care (PAC) admissions (inpatient rehabilitation facility [IRF] or long-term care hospital [LTCH]) which occurred either between the prior proximal hospital discharge and SNF admission or after the SNF discharge, within the 30-day risk window. Also excluded are SNF admissions where the patient had multiple SNF admissions after the prior proximal hospitalization, within the 30-day risk window.



MUC ID	Measure Title	Numerator	Denominator	Exclusions
				<p>2. SNF stays with a gap of greater than 1 day between discharge from the prior proximal hospitalization and the SNF admission.</p> <p>3. SNF stays where the patient did not have at least 12 months of FFS Medicare enrollment prior to the proximal hospital discharge (measured as enrollment during the month of proximal hospital discharge and for the 11 months prior to that discharge).</p> <p>4. SNF stays in which the patient did not have FFS Medicare enrollment for the entire risk period (measured as enrollment during the month of proximal hospital discharge and the month following the month of discharge).</p> <p>5. SNF stays in which the principal diagnosis for the prior proximal hospitalization was for the medical treatment of cancer. Patients with cancer whose principal diagnosis from the prior proximal hospitalization was for other diagnoses or for surgical treatment of their cancer remain in the measure.</p> <p>6. SNF stays where the patient was discharged from the SNF against medical advice.</p> <p>7. SNF stays in which the principal primary diagnosis for the prior proximal hospitalization was for “rehabilitation care; fitting of prostheses and for the adjustment of devices”.</p>

MUC ID	Measure Title	Numerator	Denominator	Exclusions
X3629	30 Day Unplanned Readmissions for Cancer Patients	Total number of unscheduled readmissions within 30 days of index admission	Total PPS-Exempt Cancer Center admissions within the reporting year for patients [aged 18+] discharged alive from the facility with an active malignant cancer diagnosis	<p>Numerator Exclusions: Medical exclusions (1P) only are permitted for this measure, for example, patients who develop metastatic disease progression and/or planned therapy (for example chemotherapy)</p> <p>Denominator Exclusions:</p> <ol style="list-style-type: none"> <li>1. Patients readmitted to another acute care center Rationale: Full data for admissions outside of index facility may be unavailable. This also includes admissions for primary diagnoses of psychiatric disease (cared for in separate psychiatric or rehabilitation centers and do not compare to acute care facilities).</li> <li>2. Patients that left Against Medical Advice in the index admission Rationale: Hospital had limited opportunity to implement high quality care.</li> <li>3. Patients that were transferred to Another Acute Care facility in the index admission Rationale: This does not capture the target population of patients who may benefit from the specifications of the measure.</li> <li>4. Admissions for patients without 30 days of post-discharge data Rationale: This is necessary in order to identify readmissions in the dataset.</li> </ol>

MUC ID	Measure Title	Numerator	Denominator	Exclusions
				5. Admissions for patients without a complete enrollment history for the 12 months prior to admission Rationale: This is necessary to capture historical data for (pending) risk adjustment.
E1641	Hospice and Palliative Care – Treatment Preferences	Patients whose medical record includes documentation of life sustaining preferences	Seriously ill patients enrolled in hospice OR receiving specialty palliative care in an acute hospital setting.	Patients with length of stay < 1 day in palliative care or < 7 days in hospice
E0221	Needle biopsy to establish diagnosis of cancer precedes surgical excision/resection	Patient whose date of needle biopsy precedes the date of surgery.	Women with AJCC Stage 0, I, II, or II breast cancer undergoing surgery: <ul style="list-style-type: none"> <li>• Women</li> <li>• Age ≥18 at time of diagnosis</li> <li>• Known or assumed first or only cancer diagnosis</li> <li>• Primary tumors of the breast</li> <li>• Epithelial invasive malignancy only</li> <li>• Surgically treated</li> <li>• Diagnosis and all or part of first course of treatment performed at the reporting facility</li> </ul>	Exclusions: Men; not a first or only cancer diagnosis; non-epithelial tumors; metastatic disease (AJCC Stage IV); not treated surgically; died before surgery
E0219	Post breast conservation surgery irradiation	Radiation therapy to the breast is initiated within 1 year (365 days) of the date of diagnosis	Include, if all of the following characteristics are identified: Women Age 18-69 at time of diagnosis Known or assumed to be first or only cancer diagnosis Primary tumors of the breast	Exclude, if any of the following characteristics are identified: Men Under age 18 at time of diagnosis Over age 69 at time of diagnosis Second or subsequent cancer diagnosis Tumor not originating in the breast

MUC ID	Measure Title	Numerator	Denominator	Exclusions
			Epithelial malignancy only AJCC Stage I, II, or III Surgical treatment by breast conservation surgery (surgical excision less than mastectomy) All or part of 1st course of treatment performed at the reporting	Non-epithelial malignancies Stage 0, in-situ tumor Stage IV, metastatic tumor None of 1st course therapy performed at reporting facility Died within 12 months (365 days) of diagnosis
E0225	At least 12 regional lymph nodes are removed and pathologically examined for resected colon cancer	≥12 regional lymph nodes pathologically examined.	Regional Lymph Nodes Positive	Exclude, if any of the following characteristics are identified: Age <18; not a first or only cancer diagnosis; non-epithelial and non-invasive tumors; metastatic disease (AJCC Stage IV); not treated surgically at the reporting facility
E0431	Influenza vaccination coverage among healthcare personnel (HCP)	HCP in the denominator population who during the time from October 1 (or when the vaccine became available) through March 31 of the following year: (a) received an influenza vaccination administered at the healthcare facility, or reported in writing (paper or electronic) or provided documentation that influenza vaccination was received elsewhere; or (b) were determined to have a medical contraindication/condition of	Number of HCP who are working in the healthcare facility for at least 1 working day between October 1 and March 31 of the following year, regardless of clinical responsibility or patient contact. Denominators are to be calculated separately for: (a) Employees: all persons who receive a direct paycheck from the reporting facility (i.e., on the facility's payroll). (b) Licensed independent practitioners: include physicians (MD, DO), advanced practice	None

MUC ID	Measure Title	Numerator	Denominator	Exclusions
		severe allergic reaction to eggs or to other component(s) of the vaccine, or history of Guillain-Barré Syndrome within 6 weeks after a previous influenza vaccination; or (c) declined influenza vaccination; or (d) persons with unknown vaccination status or who do not otherwise meet any of the definitions of the above-mentioned numerator categories. Numerators are to be calculated separately for each of the above groups.	nurses, and physician assistants only who are affiliated with the reporting facility who do not receive a direct paycheck from the reporting facility. (c) Adult students/trainees and volunteers: include all adult students/trainees and volunteers who do not receive a direct paycheck from the reporting facility.	
E1716	National Healthcare Safety Network (NHSN) Facility-wide Inpatient Hospital-onset Methicillin-resistant Staphylococcus aureus (MRSA) Bacteremia Outcome Measure	Total number of observed hospital-onset unique blood source MRSA LabID events among all inpatients in the facility	Total number of expected hospital-onset unique blood source MRSA LabID events, calculated using the facility's number of inpatient days, bedsize, affiliation with medical school, and community-onset MRSA bloodstream infection admission prevalence rate.	Data from patients who are not assigned to an inpatient bed are excluded from the denominator counts. These include outpatient clinic and emergency department visits.
E1717	National Healthcare Safety Network	Total number of observed hospital-onset CDI Lab ID events among all inpatients in the	Total number of expected hospital-onset CDI LabID events, calculated using the facility's	Data from patients who are not assigned to an inpatient bed are excluded from the denominator counts, including outpatient

MUC ID	Measure Title	Numerator	Denominator	Exclusions
	(NHSN) Facility-wide Inpatient Hospital-onset Clostridium difficile Infection (CDI) Outcome Measure	facility, excluding well baby-nurseries and NICUs	number of inpatient days, bedsize, affiliation with medical school, microbiological test used to identify C. difficile, and community-onset CDI admission prevalence	clinic and emergency department visits. Additionally, data from well-baby nurseries and NICUs are excluded from the denominator count.
E1659	Influenza Immunization	Inpatient discharges who were screened for influenza vaccine status and were vaccinated prior to discharge if indicated.	Acute care hospitalized inpatients age 6 months and older discharged during October, November, December, January, February or March.	Excluded patients consist of the following; Patients who expire prior to hospital discharge and patients with an organ transplant during the current hospitalization. See the 2a1.9 for ICD-9 and ICD-10 tables for transplants. Patients who have a Length of Stay greater than 120 days. Patients who are transferred or discharged to another acute care hospital. Patients who leave Against Medical Advice (AMA).

## **APPENDIX B: MEASURE RATIONALE**

### ***Measure Rationale Table Legend***

**Measure ID:** Gives users an identifier to refer to a measure.

- ◆ An “E” prefix indicates a measure that is currently endorsed by the NQF.
- ◆ A “D” prefix indicates a measure that was once endorsed by the NQF but has subsequently been de-endorsed.
- ◆ An “F” prefix indicates a measure that was submitted to the NQF for endorsement but was not endorsed.
- ◆ An “S” prefix indicates a measure that is currently submitted to the NQF for endorsement.
- ◆ An “X” prefix indicates a measure that has yet to be submitted to the NQF for endorsement.

**Measure Title:** Refers to the title of the measure.

**Rationale:** Refers to the rationale and/or impact the measure is anticipated to achieve.

**Measure Rationale Table**

MUC ID	Measure Title	Rationale
X3719	Normothermia Outcome	Anesthetic-induced thermoregulatory impairment may cause perioperative hypothermia, which is associated with adverse outcomes.
X3720	Unplanned Anterior Vitrectomy	Cataract surgery is a commonly performed operation and should be associated with low intra-operative morbidity.
E0515	Ambulatory surgery patients with appropriate method of hair removal	<p>The literature regarding preoperative hair removal has been systematically reviewed twice, once by Kjonniksen et al in 2002 and again by Tanner et al in 2007. Three randomized controlled trials (Alexander et al 1983, Balthazar et al 1983, Ko et al 1992) compared the rates of infection at the surgical site when hair removal at the site was performed with clippers or with razors. A statistically significant difference in infection rates in the pooled results (Tanner et al 2007) was seen, with 2.8% of the patients who were shaved developing a surgical site infection compared with 1.4% rate of surgical site infection in the patients who were clipped. Additional randomized controlled trials (Court-Brown 1981, Powis et al 1976, Seropian 1971, Thur de Koos 1983) have demonstrated that patients were more likely to develop a surgical site infection when shaved as compared to having hair removal with a depilatory. Observational studies have suggested that no hair removal is less likely to result in surgical site infection, but this has not been confirmed in randomized controlled trials.</p> <p>The HICPAC/CDC Guideline for Prevention of Surgical Site Infection (Mangram et al 1999), the Association of Operating Room Nurses Recommended Practices for Preoperative Patient Skin Antisepsis (AORN 2002) and the SHEA/IDSA Strategies to Prevent Surgical Site Infections in Acute Care Hospitals (Anderson et al 2008) are consistent with the intent of this measure.</p> <p>Alexander JW, Fischer JE, Boyajian M, Palmquist J, Morris MJ. The influence of hair-removal methods on wound infections. Arch Surg. 1983 Mar;118(3):347-52.</p> <p>Anderson DJ, Kaye KS, Classen D, Arias KM, Podgorny K, Burstin H, Calfee DP, Coffin SE, Dubberke ER, Fraser V, Gerding DN, Griffin FA, Gross P, Klompas M, Lo E, Marschall J, Mermel LA, Nicolle L, Pegues DA, Perl TM, Saint S, Salgado CD, Weinstein RA, Wise R, Yokoe DS. Strategies to prevent surgical site infections in acute care hospitals. Infect Control Hosp Epidemiol 2008 Oct;29 Suppl 1:S51-61.</p> <p>Association of Operating Room Nurses. Recommended practices for skin preparation of patients. AORN J. 2002 Jan;75(1):184-7.</p> <p>Balthazar ER, Colt JD, Nichols RL. Preoperative hair removal: a random prospective study of shaving versus clipping.</p>



MUC ID	Measure Title	Rationale
		<p>South Med J. 1982 Jul;75(7):799-801.</p> <p>Court-Brown CM. Preoperative skin depilation and its effect on postoperative wound infections. J R Coll Surg Edinb. 1981 Jul;26(4):238-41.</p> <p>Kjonniksen I, Andersen BM, Sondenaa VG, Segadal L. Preoperative hair removal--a systematic literature review. AORN J. 2002 May;75(5):928-38, 940.</p> <p>Ko W, Lazenby WD, Zelano JA, Isom OW, Krieger KH. Effects of shaving methods and intraoperative irrigation on suppurative mediastinitis after bypass operations. Ann Thorac Surg. 1992 Feb;53(2):301-5.</p> <p>Powis SJ, Waterworth TA, Arkell DG. Preoperative skin preparation: clinical evaluation of depilatory cream. Br Med J. 1976 Nov 13;2(6045):1166-8.</p> <p>Seropian R, Reynolds BM. Wound infections after preoperative depilatory versus razor preparation. Am J Surg. 1971 Mar;121(3):251-4.</p> <p>Tanner J, Moncaster K, Woodings D. Preoperative hair removal to reduce surgical site infection. Cochrane Database Syst Rev. 2006 Jul 19;3:CD004122.</p> <p>Thur de Koos P, McComas B. Shaving versus skin depilatory cream for preoperative skin preparation. A prospective study of wound infection rates. Am J Surg. 1983 Mar;145(3):377-8.</p>
X3697	O/ASPECS Discharge and Recovery	Patient experience of care measures are a CMS priority
X3699	O/ASPECS Communication	Patient experience of care measures are a CMS priority
X3698	O/ASPECS About Facility and Staff	Patient experience of care measures are a CMS priority
X3703	O/ASPECS Recommend	Patient experience of care measures are a CMS priority
X3702	O/ASPECS Overall Facility Rating	Patient experience of care measures are a CMS priority
E0326	Care Plan	This measure would be consistent with a legislative mandate affecting Medicare beneficiaries, the Patient Self

MUC ID	Measure Title	Rationale
		<p>Determination Act (PSDA), approved in 1990. The act requires that beneficiaries be informed about their rights to self-determination and the use of advance directives, and identifies particular facilities accountable for providing the information. Despite this, a recent cancer research study had found that most patients had not spoken extensively to health professionals or close persons about the future. Furthermore, a recent meta-analysis found that awareness of patients' and surrogates' decision-making characteristics and communication styles can help clinicians identify potential barriers and variations in patterns of communication. To that end, the authors contend that initial and ongoing assessments of patients' and surrogates' communication style and characteristics must be incorporated into the plan of care (Melhado 2011). A cross-sectional study out of Oklahoma found that among community dwelling older persons, a living will is a positive first step towards healthcare planning and designating a power of attorney. They also found that the state's effort to increase the use of advance directives among older residents was successful, indicating that organizations have the power to influence people with respect ACP (Mcauley 2008). An observational study from La Crosse County, Wisconsin found that a system for ACP can be managed in a geographic region so that, at the time of death, almost all adults have a care plan that is specific and available and treatment is consistent with their plan. The data from this study suggest that quality efforts have improved the prevalence, clarity, and specificity of ACPs (Hammes 2010).</p> <p>Barnes KA, Barlow CA, Harrington J, Orndel K, Tookman A, King M, &amp; Jones L. (2011). Advance Care Planning Discussions in Advanced Cancer: Analysis of Dialogues Between Patients and Care Planning Mediators. <i>Palliative &amp; Supportive Care</i>;9(1):73-9.</p> <p>Basanta WE. (2002). Advance Directives and Life-Sustaining Treatment: A Legal Primer. <i>Hematology/Oncology Clinics of North America</i>;16(6):1381-96.</p> <p>Garand L, Drew MA, Lingler JH, &amp; DeKosky ST. (2011). Incidence and Predictors of Advance Care Planning Among Persons With Cognitive Impairment. <i>American Journal of Geriatric Psychiatry</i>;18(8):712-20.</p> <p>Hammes BJ, Rooney BL, &amp; Gundrum JD. (2010). A Comparative, Retrospective, Observational Study of the Prevalence, Availability, and Specificity of Advance Care Plans in a County that Implemented an Advance Care Planning Microsystem. <i>Journal of the American Geriatrics Society</i>;58(7):1249-55.</p> <p>Mcauley WJ, McCutcheon ME, &amp; Travis SS. (2008). Advance Directives for Health Care Among Older Community Residents. <i>Journal of Health &amp; Human Services Administration</i>, 30(4), 402-419.</p> <p>Melhado LW &amp; Byers JF. (2011). Patients' and Surrogates' Decision-Making Characteristics Withdrawing, Withholding, and Continuing Life-Sustaining Treatments. <i>Journal of Hospice &amp; Palliative Nursing</i>;13(1):16-28.</p> <p>Sampson EL, Jones L, Thune-Boyle IC, Kukkastenvemas R, King M, Leurent B, Tookman A, &amp; Blanchard MR. Palliative assessment and advance care planning in severe dementia: An exploratory randomized controlled trial of a complex intervention. <i>Palliative Care</i>;25(3):197-209.</p>

MUC ID	Measure Title	Rationale
		<p>Sanders A, Schepp M, &amp; Baird M. (2011). Partial do-not-resuscitate orders: A Hazard to Patient Safety and Clinical Outcomes? <i>Critical Care Medicine</i>;39(1):14-8.</p> <p>Tung EE, Vickers KS, Lackore K, Cabanela R, Hathaway J, &amp; Chaudhry R. (2011). Clinical Decision Support Technology to Increase Advance Care Planning in the Primary Care Setting. <i>American Journal of Hospice and Palliative Medicine</i>;28(4):230-5.</p>
X3717	Delivered Dose of Hemodialysis Above Minimum	This is a revision of the existing NQF measure 0249. The measure has been revised to include both adult and pediatric patients
X3718	Delivered Dose in Peritoneal Dialysis Above Minimum	This is a revision of the existing NQF measure 0318. The measure has been revised to include both adult and pediatric patients
X2051	Delivered Dose of Dialysis Above Minimum - Composite Score	This measure is a composite of two existing Kt/V dialysis adequacy measures. It permits assessment for all dialysis patients included in those two measures with a single composite score, avoiding the systematic exclusion of pediatric and peritoneal dialysis patients from assessment in the QIP.
E1919	Cultural Competency Implementation Measure	<p>Numerous studies have documented the existence of significant disparities in access to health care, outcomes, and health status among racial and ethnic minorities. Studies conducted across a variety of healthcare settings have found that racial/ethnic minority patients as well as those with low socioeconomic status or LEP report worse experiences of care, compared with whites, those with higher socioeconomic status, and English speakers. Growing evidence points to the fact that minority populations tend to receive lower quality of care even when factors such as access, health insurance, and income are taken into account. In short, racial and ethnic minorities face disproportionately higher rates of disease, disability, and mortality. For example, compared to whites, African Americans have higher death rates from heart disease, diabetes, AIDS, and cancer, and American Indians and Alaskan Natives have lower life expectancies and higher rates of infant mortality. Despite the fact that health care systems in the U.S. have improved over time, that racial and ethnic disparities have been widely documented, and that numerous attempts have been made to reduce or eliminate these disparities, they continue to be widespread and pervasive. No doubt the causes of these health disparities are the result of multiple factors including bias (conscious or unconscious) on the part of the providers, differences in patients' expectations, miscommunication</p>

MUC ID	Measure Title	Rationale
		<p>caused by cultural differences, and organizational factors that impact the quality of patient–provider interactions. However, there is also growing evidence that a major contributor to healthcare disparities is a lack of culturally competent care. Cultural competence can be defined as the ongoing capacity of healthcare systems, organizations, and professionals to provide diverse populations high quality care that is safe, patient and family centered, evidence-based, and equitable. To be culturally competent, health care providers have to employ various interpersonal and organizational strategies to overcome or at the very least reduce the barriers to access, communication, and understanding that stem from racial, ethnic, cultural, and linguistic differences. Providing culturally appropriate care has the potential to reduce disparities and improve outcomes while at the same time improving patient satisfaction. In recent years, more and more organizations have begun exploring ways to improve cultural competency—that is, to ensure that diverse patient populations receive high-quality care that is safe, patient and family centered, evidence-based, and equitable. The National Quality Forum (NQF), an organization dedicated to improving healthcare quality, aims to promote culturally competent care, to reduce disparities, and to make care more patient-centered by endorsing a comprehensive framework for measuring and reporting cultural competency. It also endorsed a set of 45 preferred practices to provide culturally competent care. The framework and practices were published in an NQF report titled, "A Comprehensive Framework and Preferred Practices for Measuring and Reporting Cultural Competency", and cover issues such as communication, community engagement and workforce training, and providing healthcare systems with practices they can implement to help reduce persistent disparities in healthcare and create higher-quality, more patient-centered care.</p>
X3716	Cultural Competency Reporting Measure	<p>Numerous studies have documented the existence of significant disparities in access to health care, outcomes, and health status among racial and ethnic minorities. Studies conducted across a variety of healthcare settings have found that racial/ethnic minority patients as well as those with low socioeconomic status or LEP report worse experiences of care, compared with whites, those with higher socioeconomic status, and English speakers. Growing evidence points to the fact that minority populations tend to receive lower quality of care even when factors such as access, health insurance, and income are taken into account. In short, racial and ethnic minorities face disproportionately higher rates of disease, disability, and mortality. For example, compared to whites, African Americans have higher death rates from heart disease, diabetes, AIDS, and cancer, and American Indians and Alaskan Natives have lower life expectancies and higher rates of infant mortality. Despite the fact that health care systems in the U.S. have improved over time, that racial and ethnic disparities have been widely documented, and that numerous attempts have been made to reduce or eliminate these disparities, they continue to be widespread and pervasive. No doubt the causes of these health disparities are the result of multiple factors including bias (conscious or unconscious) on the part of the providers, differences in patients’ expectations, miscommunication</p>

MUC ID	Measure Title	Rationale
		<p>caused by cultural differences, and organizational factors that impact the quality of patient–provider interactions. However, there is also growing evidence that a major contributor to healthcare disparities is a lack of culturally competent care. Cultural competence can be defined as the ongoing capacity of healthcare systems, organizations, and professionals to provide diverse populations high quality care that is safe, patient and family centered, evidence-based, and equitable. To be culturally competent, health care providers have to employ various interpersonal and organizational strategies to overcome or at the very least reduce the barriers to access, communication, and understanding that stem from racial, ethnic, cultural, and linguistic differences. Providing culturally appropriate care has the potential to reduce disparities and improve outcomes while at the same time improving patient satisfaction. In recent years, more and more organizations have begun exploring ways to improve cultural competency—that is, to ensure that diverse patient populations receive high-quality care that is safe, patient and family centered, evidence-based, and equitable. The National Quality Forum (NQF), an organization dedicated to improving healthcare quality, aims to promote culturally competent care, to reduce disparities, and to make care more patient-centered by endorsing a comprehensive framework for measuring and reporting cultural competency. It also endorsed a set of 45 preferred practices to provide culturally competent care. The framework and practices were published in an NQF report titled, "A Comprehensive Framework and Preferred Practices for Measuring and Reporting Cultural Competency", and cover issues such as communication, community engagement and workforce training, and providing healthcare systems with practices they can implement to help reduce persistent disparities in healthcare and create higher-quality, more patient-centered care.</p>
X3721	Medications Documentation Reporting	<p>In 2005, the rate of medication errors during hospitalization was estimated to be 52 per 100 admissions, or 70 per 1,000 patient days. Emerging research suggests the scope of medication-related errors in ambulatory settings is as or more extensive than during hospitalization. Ambulatory visits result in a prescription for medication 50 to 70% of the time. One study estimated the rate of adverse drug events (ADE) in the ambulatory setting to be 27 per 100 patients. It is estimated that between 2004 and 2005, in the United States 701,547 patients were treated for ADEs in emergency departments and 117,318 patients were hospitalized for injuries caused by an ADE. Individuals aged 65 years and older are more likely than any other population group to require treatment in the emergency department for ADEs (American Medical Association (AMA), 2010). In the United States, it is estimated that in any given week, most adults aged 18 years and older take at least one prescription medication, OTC drug, vitamin, mineral, herbal product or supplement, while 10 percent take five or more. Overall, 26 percent of the population takes herbal products and supplements, and 30 percent of prescription drug users take an herbal product or supplement. In all settings of care, drug-drug interactions are significant, but undetected causes of ADEs. Drug-drug interactions—including interactions between drugs a patient is known to be taking—are frequently not recognized. Controversy,</p>

MUC ID	Measure Title	Rationale
		confusion and uncertainty about the significance of many drug-drug interactions further increase risk and opportunity for ADEs (AMA, 2010).
E0419	Documentation of Current Medications in the Medical Record	Meets gap in medication reconciliation measures and aligns with PQRS and MU. In 2005, the rate of medication errors during hospitalization was estimated to be 52 per 100 admissions, or 70 per 1,000 patient days. Emerging research suggests the scope of medication-related errors in ambulatory settings is as or more extensive than during hospitalization. Ambulatory visits result in a prescription for medication 50 to 70% of the time. One study estimated the rate of adverse drug events (ADE) in the ambulatory setting to be 27 per 100 patients. It is estimated that between 2004 and 2005, in the United States 701,547 patients were treated for ADEs in emergency departments and 117,318 patients were hospitalized for injuries caused by an ADE. Individuals aged 65 years and older are more likely than any other population group to require treatment in the emergency department for ADEs (American Medical Association (AMA), 2010). In the United States, it is estimated that in any given week, most adults aged 18 years and older take at least one prescription medication, OTC drug, vitamin, mineral, herbal product or supplement, while 10 percent take five or more. Overall, 26 percent of the population takes herbal products and supplements, and 30 percent of prescription drug users take an herbal product or supplement. In all settings of care, drug-drug interactions are significant, but undetected causes of ADEs. Drug-drug interactions—including interactions between drugs a patient is known to be taking—are frequently not recognized. Controversy, confusion and uncertainty about the significance of many drug-drug interactions further increase risk and opportunity for ADEs (AMA, 2010).
X3704	Percent of Patients with Pressure Ulcers That Are New or Worsened	Studies have demonstrated that while pressure ulcers may be relatively rare in the home health setting, they have a substantial adverse impact on patient quality of life, and incidence is associated with an increased morbidity and mortality. They are a national focus because they are widely seen as preventable with sufficient risk assessment and quality care provision. This measure is envisioned to encourage agencies to implement actions that can reduce the development of new pressure ulcers and facilitate healing to prevent the worsening of existing pressure ulcers. Additionally, the measure will provide home health agencies and consumers with information that will enable them to monitor the quality of care received by all patients at risk of developing pressure ulcers.
S0138	National Healthcare Safety Network (NHSN) Catheter-	Measure has been revised and now in NQF re-endorsement process. CAUTI can be minimized by a collection of prevention efforts. These include reducing the number of unnecessary indwelling catheters inserted, removing indwelling catheters at the earliest possible time, securing catheters to the patient’s leg to avoid bladder and urethral trauma, keeping the urine collection bag below the level of the bladder, and utilizing aseptic technique for urinary catheter insertion. These efforts will result in decreased morbidity and

MUC ID	Measure Title	Rationale
	associated Urinary Tract Infection (CAUTI) Outcome	<p>mortality and reduce healthcare costs. Use of this measure to track CAUTIs through a nationalized standard for HAI monitoring, leads to improved patient outcomes and provides a mechanism for identifying improvements and quality efforts.</p> <p>Additionally, CDC has added another risk adjustment methodology besides the Standardized Infection Ratio. The two risk adjustment methodologies are:</p> <ol style="list-style-type: none"> <li>1. Standardized Infection Ratio (annual and quarter aggregation)</li> </ol> <p>The SIR is constructed by using an indirect standardization method for summarizing HAI experience across any number of stratified groups of data. CAUTI incidence rates stratified by patient care location type and in some instances, location bed size and type of medical school affiliation which form the basis of the population standardization. Example: predicted numbers of CAUTI (and CAUTI rates) in a medical ICU are not the same as in an SICU. See also Scientific Validity section for further information on risk adjustment and variables.</p> <ol style="list-style-type: none"> <li>2. Adjusted Ranking Metric (annual aggregation)</li> </ol> <p>The adjusted ranking metric (ARM) combines the method of indirect standardization with a Bayesian random effects hierarchical model to account for the potentially low precision and/or reliability inherent in the unadjusted SIR mentioned above. A Bayesian posterior distribution constructed through Monte Carlo Markov Chain sampling is used to produce the adjusted numerator.</p>
S0139	National Healthcare Safety Network (NHSN) Central line-associated Bloodstream Infection (CLABSI) Outcome	<p>Updated version of a current measure in IQR, HVBP, and HACRP</p> <p>CLABSI can be minimized through proper management of the central line. Efforts to improve central line insertion and maintenance practices, with early discontinuance of lines are recommended. These efforts result in decreased morbidity and mortality and reduced healthcare costs. Use of this measure to track CLABSIs through a nationalized standard for HAI monitoring, leads to improved patient outcomes and provides a mechanism for identifying improvements and evaluating prevention efforts. Additionally, CDC has added another risk adjustment methodology besides the Standardized Infection Ratio. The two risk adjustment methodologies are:</p> <ol style="list-style-type: none"> <li>1. Standardized Infection Ratio (annual and quarter aggregation)</li> </ol> <p>The SIR is constructed by using an indirect standardization method for summarizing HAI experience across any number of stratified groups of data. CLABSI incidence rates stratified by patient care location type and in some instances, location bed size and type of medical school affiliation which form the basis of the population standardization. Example: predicted numbers of CLABSI (and CLABSI rates) in a medical ICU are not the same as in an NICU. See also Scientific Validity section for further information on risk adjustment and variables.</p> <ol style="list-style-type: none"> <li>2. Adjusted Ranking Metric (annual aggregation)</li> </ol> <p>The adjusted ranking metric (ARM) combines the method of indirect standardization with a Bayesian random effects</p>



MUC ID	Measure Title	Rationale
		<p>hierarchical model to account for the potentially low precision and/or reliability inherent in the unadjusted SIR mentioned above. A Bayesian posterior distribution constructed through Monte Carlo Markov Chain sampling is used to produce the adjusted numerator.</p>
E0705	<p>Proportion of Patients Hospitalized with Stroke that have a Potentially Avoidable Complication (during the Index Stay or in the 30-day Post-Discharge Period)</p>	<p>Hospital acquired conditions (HACs) have been defined by the Centers for Medicare and Medicaid (CMS) under the proposed rules for 2008 and 2009 and are avoidable conditions in hospitalized patients. Our potentially avoidable complications (PACs) go beyond the CMS defined HACs and identify conditions related to the index condition, to comorbidities that got exacerbated, as well as those related to patient safety failures. While there is a general understanding of the nature of care failures during hospitalizations or post-discharge such as readmissions and emergency room visits, there has been no attempt to measure the magnitude or the type of potentially avoidable complications, and the cost reductions that would ensue if a payment model encouraged care to be optimized at benchmarks achieved in studies.</p> <p>Well-managed patients with stroke should rarely incur a potentially avoidable complication such as an emergency room visit post-discharge, and readmissions related to stroke should occur only in the rarest of circumstances. The enclosed workbook entitled NQF_Stroke_PACs_Risk_Adjustment 2.16.10.xls lists the types of PACs, their frequency and costs as calculated in our national database, for both the inpatient stays and readmissions (see tabs CIP_Index_PAC_Stays and CIP_PAC_Readmissions). The PAC Overview tab shows that 57.8% of all hospitalizations for stroke had a PAC, with 53% of index stays having a PAC during the initial hospitalization. Of these PACs, over 18.5% were incurred for direct complications of stroke, another 47% for acute exacerbation of a comorbidity, and another 34.4% due to patient safety failures such as sepsis and other widespread infections, complications of surgical procedures, phlebitis and deep vein thrombosis or CMS-defined hospital acquired conditions. The primary cause for readmissions and emergency room visits during the 30-day post-discharge period was due to a hypertensive encephalopathy, diabetic emergency with hypo- or hyperglycemia, pneumonia or lung complications, or patient safety failures such as skin or wound infections or sepsis. The ability to clearly identify the type and frequency of each PAC creates a highly actionable measure for all providers that are managing or co-managing the patient, as well as for the health plan with whom the patient is a member.</p>
E0708	<p>Proportion of Patients Hospitalized with Pneumonia that have a Potentially</p>	<p>A study from the Boston Medical Center, Boston MA, demonstrated that although one in five hospitalizations are complicated by post-discharge adverse events, development of a strong discharge services program for patients admitted for medical conditions reduced hospital utilization within 30 days of discharge.</p> <p>Umscheid et al used 2002 estimates of hospital-acquired infections (HAI) and determined the range of HAI risk reductions from US studies. They report that 18%-82% of blood-stream infections, 46%-55% of ventilator associated pneumonia, 17% - 69% of urinary tract infections and 26%-54% of surgical site infections are preventable. Healy et al</p>



MUC ID	Measure Title	Rationale
	Avoidable Complication (during the Index Stay or in the 30-day Post-Discharge Period)	analyzed complications in hospitalized surgical patients and reported that between 39% and 61% of major complications (wound infections, pneumonia, urinary tract infections, arrhythmias, respiratory failure, gastrointestinal complications, deep vein thrombosis) and about an equal percent of minor complications could have been avoided. The National Pressure Ulcer Advisory Panel (NPUAP) reported in 2001 that pressure ulcer prevention programs had reported 50% or greater reductions in facility-acquired pressure ulcers. Similarly, appropriate prophylaxis could reduce the risk of venous thromboembolism by 45% in acutely ill medical patients, and a recent study found a 50% reduction in thromboembolic events with extended pharmacologic prophylaxis. Adequate evidence-based treatment protocols in preventing contrast nephropathy and adequate drug dosing have demonstrated a risk reduction between 52% and 90% in the incidence of acute renal failure in patients in the intensive care unit. Additionally, use of electronic medical systems has demonstrated that in a sample hospital that used prompts for protocols for nursing care, infection rates dropped 88%, bedsores were reduced and compliance to guidelines for care of patients on ventilator increased by 77%.
E0704	Proportion of Patients Hospitalized with AMI that have a Potentially Avoidable Complication (during the Index Stay or in the 30-day Post-Discharge Period)	"High priority aspect of healthcare: Acute Myocardial Infarction (AMI) is a common cause of hospitalization and the initial cost of treatment of AMI has been estimated to begin at approximately \$10,000. However, due to considerable variability in costs of care of typical AMI patients, the average costs per patient is close to \$15,000. Extrapolated to the more than 200,000 Medicare beneficiaries who are annually hospitalized with AMI, the costs related to initial hospitalizations from AMI could be upwards of \$3 billion. Moreover, when AMI admissions incur potentially avoidable complications, these costs can go up several fold and are truly a waste within the healthcare system."
E2104	Paired Measures 0702 and 0703; Intensive Care Unit (ICU) Length-of-Stay	Angus DC, Linde-Zwirble WT, Sirio CA, et al. The effect of managed care on ICU length of stay: implications for Medicare. JAMA. Oct 2 1996;276(13):1075-1082. Wu AW, Pronovost P, Morlock L. ICU incident reporting systems. J Crit Care. Jun 2002;17(2):86-94. Young MP, Birkmeyer JD. Potential reduction in mortality rates using an intensivist model to manage intensive care units. Eff Clin Pract. Nov-Dec 2000;3(6):284-289. Cullen DJ, Sweitzer BJ, Bates DW, Burdick E, Edmondson A, Leape LL. Preventable adverse drug events in

MUC ID	Measure Title	Rationale
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E0349	Transfusion Reaction (PSI 16)	<p>Transfusion reaction is a health outcome measure. This measure captures illness or injury resulting from administration of mismatched blood or blood products, based on ABO or Rh antigens. These events are considered to be almost entirely preventable. For example, the 2011 Update of the NQF Serious Reportable Events in Healthcare includes this specification of "Patient death or serious injury associated with unsafe administration of blood products": "Unsafe administration includes, but is not limited to hemolytic reactions and administering a) blood or blood products to the wrong patient; b) the wrong type; or c) blood or blood products that have been improperly stored or handled." Similarly, "Hemolytic transfusion reaction involving administration of blood or blood products having major blood group incompatibilities" is classified as a sentinel event by The Joint Commission.</p> <p>Preoperative evaluation of a patient for blood transfusion includes (1) reviewing previous medical records, (2) conducting a patient or family interview, and (3) reviewing laboratory test results.</p> <p>American Society of Anesthesiologists Task Force on Perioperative Blood Transfusion and Adjuvant Therapies. Practice guidelines for perioperative blood transfusion and adjuvant therapies: an updated report by the American Society of Anesthesiologists Task Force on Perioperative Blood Transfusion and Adjuvant Therapies. Anesthesiology. 2006 Jul;105(1):198-208.</p> <p>According to one recent review (Janatpour KA, Kalmin ND, Jensen HM, Holland PV. Clinical outcomes of ABO-incompatible RBC transfusions. Am J Clin Pathol 2008; 129(2):276-81), "the most frequent error leading to transfusion of ABO-incompatible blood is failure of the final patient identification check at the bedside, leading to transfusion of properly labeled blood to a recipient other than the one intended. In a recent report from Ireland's hemovigilance system, more than half of all adverse reactions to blood transfusion were caused by the patient being</p>

MUC ID	Measure Title	Rationale
		<p>given the wrong blood component. The relative distribution of errors in our cases and survey results are similar to those in other reports, with failures in pretransfusion verification of patient identification comprising a majority of all errors, followed by laboratory errors, and errors in sample collection and labeling... With an increased awareness of the root causes of transfusion errors, hospitals have taken steps to address them, such as requiring 2 pre-transfusion samples to confirm a patient’s initial ABO blood type result (independent of the American Association of Blood Banks standard requiring 2 determinations of the recipient’s ABO type if using computer crossmatching). In theory, requiring a second sample to confirm the ABO blood type could significantly reduce ABO-incompatible transfusion because the vast majority of errors are due to sample collection and labeling and bedside errors. A reduction in the use of stationary refrigerators in the operating room is reported to have reduced some transfusion errors... Various devices have also been introduced to minimize errors in sample collection and transfusion to the intended recipient and have prevented some errors. These are summarized in a recent review. However, it is difficult to know whether actual use of these devices is widespread and their effectiveness in preventing ABO-incompatible transfusions.... Quality improvement dictates that analysis of adverse sentinel events such as ABO-incompatible transfusions be performed. When such an event has been identified, corrective measures should be instituted to prevent recurrences.</p>
X3727	Hospital 30-day, all-cause, unplanned risk-standardized days in acute care following pneumonia hospitalization	<p>The goal of this measure is to improve patient outcomes by providing patients, physicians, and hospitals with information about hospital-level, risk-standardized outcomes following hospitalization for pneumonia. Measurement of patient outcomes allows for a broad view of quality of care that cannot be captured entirely by individual process-of-care measures. Safely transitioning patients from hospital to home requires a complex series of tasks which would be cumbersome to capture individually as process measures: timely and effective communication between providers, prevention of and response to complications, patient education about post-discharge care and self-management, and timely follow-up, and more. Inadequate transitional care contributes to a variety of adverse outcomes post-discharge, including readmission, need for observation, and emergency department evaluation. There already exist measures for readmission, but there are no current measures for ED utilization and observation stay. It is thus difficult for providers and consumers to gain a complete picture of post-discharge outcomes. Moreover, separately reporting each outcome encourages “gaming,” such as recategorizing readmission stays as observation stays to avoid a readmission outcome. By constructing a composite of outcomes that are important to patients, we can produce a more complete picture of post-discharge outcomes that better informs consumers about care quality and incentivizes global improvement in outcomes.</p> <p>Pneumonia results in approximately 1.2 million hospital admissions each year and accounts for more than \$10 billion annually in hospital expenditures. Among patients over 65 years of age, it is the second leading cause of</p>

MUC ID	Measure Title	Rationale
		<p>hospitalization, and is the leading infectious cause of death (Lindenauer et al., 2011). Approximately 20% of pneumonia patients were rehospitalized within thirty days, representing the second-highest proportion of all rehospitalizations at 6.3% (Jencks et al., 2009).</p> <p>Acute care utilization after discharge (return to the emergency department, observation stay and readmission), for any reason, is disruptive to patients and caregivers, costly to the healthcare system, and puts patients at additional risk of hospital-acquired infections and complications. Although some readmissions are unavoidable, they may also result from poor quality of care or inadequate transitional care. Transitional care includes effective discharge planning, transfer of information at the time of discharge, patient assessment and education, and coordination of care and monitoring in the post-discharge period. Numerous studies have found an association between quality of inpatient or transitional care and early (typically 30-day) readmission rates for a wide range of conditions including pneumonia (Frankl et al., 1991; Corrigan et al., 1992; Oddone et al., 1996; Ashton et al., 1997; Benbassat et al., 2000; Courtney et al., 2003; Halfon et al., 2006; Dean et al., 2006).</p> <p>Several studies also have reported on the relationship between inpatient admissions and other types of hospital care including ED visits and observation stays. ED visits represent a significant proportion of post-discharge acute care utilization. Two recent studies conducted in patients of all ages have shown that 9.5% of patients return to the ED within 30 days of hospital discharge and that about 12% of these patients are discharged from the ED and are not captured by current CMS readmissions measures (Rising et al., 2013; Vashi et al., 2013).</p> <p>Additionally, over the past decade, the use of observation stays has rapidly increased. Specifically, between 2001 and 2008, the use of observation services increased nearly three-fold (Venkatesh et al., 2011) and significant variation has been demonstrated in the use of observation services for conditions such as chest pain (Schuur et al., 2011). These rising rates of observation stays among Medicare beneficiaries have gained the attention of patients, providers, and policymakers (Feng et al., 2012; Rising et al., 2013; Vashi et al., 2013). A report from the Office of the Inspector General (OIG) notes that in 2012, Medicare beneficiaries had 1.5 million observation stays. Many of these observation stays lasted longer than the intended one day. The OIG report also notes the potential relationship between hospital use of observation stays as an alternative to short-stay inpatient hospitalizations as a response to changing hospital payment incentives (Wright, 2013).</p> <p>Thus, in the context of the publicly reported CMS 30-day readmission measures, the increasing use of ED visits and observation stays has raised concerns that current readmission measures do not capture the full range of unplanned acute care in the post-discharge period. In particular, there exists concern that high use of observation stays could in some cases replace readmissions, and hospitals with high rates of observation stays in the post-discharge period may therefore have low readmission rates that do not accurately reflect the quality of care (Carlson, 2013).</p> <p>References</p>

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X3722	Hospital 30-day, all-cause, unplanned risk-standardized days in acute care following heart failure hospitalization	<p>The goal of this measure is to improve patient outcomes by providing patients, physicians, and hospitals with information about hospital-level, risk-standardized outcomes following hospitalization for heart failure. Measurement of patient outcomes allows for a broad view of quality of care that cannot be captured entirely by individual process-of-care measures. Safely transitioning patients from hospital to home requires a complex series of tasks which would be cumbersome to capture individually as process measures: timely and effective communication between providers, prevention of and response to complications, patient education about post-discharge care and self-management, and timely follow-up, and more. Inadequate transitional care contributes to a variety of adverse outcomes post-discharge, including readmission, need for observation, and emergency department evaluation. There already exist measures for readmission, but there are no current measures for ED utilization and observation stay. It is thus difficult for providers and consumers to gain a complete picture of post-discharge outcomes. Moreover, separately reporting each outcome encourages "gaming," such as recategorizing readmission stays as observation stays to avoid a readmission outcome. By constructing a composite of outcomes that are important to patients, we can produce a more complete picture of post-discharge outcomes that better informs consumers about care quality and incentivizes global improvement in outcomes.</p> <p>Heart failure is the most common principal discharge diagnosis among older adults and the third highest for hospital reimbursements in 2005 (CMS, 2006) and the leading cause of death and readmission among Medicare beneficiaries, with nearly half of heart failure patients expected to return to the hospital within six months of discharge (Jencks et al., 2009; Krumholz et al., 1997; Lloyd-Jones et al., 2010). Readmission rates following discharge for heart failure are high and variable across hospitals in the United States (Krumholz et al., 2009; Bernheim et al., 2010). For example, for the time period of July 2011-June 2012, publicly reported 30-day risk-standardized readmission rates ranged from 17.5% to 30.3% for patients admitted with heart failure (CMS, 2013)</p> <p>Acute care utilization after discharge (return to the emergency department, observation stay and readmission), for any reason, is disruptive to patients and caregivers, costly to the healthcare system, and puts patients at additional risk of hospital-acquired infections and complications. Although some readmissions are unavoidable, they may also result from poor quality of care or inadequate transitional care. Transitional care includes effective discharge planning, transfer of information at the time of discharge, patient assessment and education, and coordination of care and monitoring in the post-discharge period. Numerous studies have found an association between quality of</p>



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		<p>inpatient or transitional care and early (typically 30-day) readmission rates for a wide range of conditions including heart failure (Frankl et al., 1991; Corrigan et al., 1992; Oddone et al., 1996; Ashton et al., 1997; Benbassat et al., 2000; Courtney et al., 2003; Halfon et al., 2006; Hernandez et al., 2010).</p> <p>Several studies also have reported on the relationship between inpatient admissions and other types of hospital care including ED visits and observation stays. ED visits represent a significant proportion of post-discharge acute care utilization. Two recent studies conducted in patients of all ages have shown that 9.5% of patients return to the ED within 30 days of hospital discharge and that about 12% of these patients are discharged from the ED and are not captured by current CMS readmissions measures (Rising et al., 2013; Vashi et al., 2013).</p> <p>Additionally, over the past decade, the use of observation stays has rapidly increased. Specifically, between 2001 and 2008, the use of observation services increased nearly three-fold (Venkatesh et al., 2011) and significant variation has been demonstrated in the use of observation services for conditions such as chest pain (Schuur et al., 2011). These rising rates of observation stays among Medicare beneficiaries have gained the attention of patients, providers, and policymakers (Feng et al., 2012; Rising et al., 2013; Vashi et al., 2013). A report from the Office of the Inspector General (OIG) notes that in 2012, Medicare beneficiaries had 1.5 million observation stays. Many of these observation stays lasted longer than the intended one day. The OIG report also notes the potential relationship between hospital use of observation stays as an alternative to short-stay inpatient hospitalizations as a response to changing hospital payment incentives (Wright, 2013).</p> <p>Thus, in the context of the publicly reported CMS 30-day readmission measures, the increasing use of ED visits and observation stays has raised concerns that current readmission measures do not capture the full range of unplanned acute care in the post-discharge period. In particular, there exists concern that high use of observation stays could in some cases replace readmissions, and that hospitals with high rates of observation stays in the post-discharge period may therefore have low readmission rates that do not accurately reflect the quality of care (Carlson et al., 2013).</p> <p>Ashton CM, Del Junco DJ, Soucek J, Wray NP, Mansyur CL. The association between the quality of inpatient care and early readmission: a meta-analysis of the evidence. <i>Med Care</i>. Oct 1997;35(10):1044-1059.</p> <p>Benbassat J, Taragin M. Hospital readmissions as a measure of quality of health care: advantages and limitations. <i>Archives of Internal Medicine</i>. Apr 24 2000;160(8):1074-1081.</p> <p>Bernheim SM, Grady JN, Lin Z, Wang Y, Savage SV, Bhat KR, et al. National patterns of risk-standardized mortality and readmission for acute myocardial infarction and heart failure. Update on publicly reported outcomes measures based on the 2010 release. <i>Circ Cardiovasc Qual Outcomes</i> 2010;3:459-67.</p> <p>Carlson J. Faulty Gauge? Readmissions are down, but observational-status patients are up and that could skew Medicare numbers. <i>Modern Healthcare</i>. June 8, 2013 2013.</p>

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		<p>Part of the Equation. <i>Annals of Emergency Medicine</i>.                      Schuur JD, Baugh CW, Hess EP, Hilton JA, Pines JM, Asplin BR. Critical pathways for post-emergency outpatient diagnosis and treatment: tools to improve the value of emergency care. <i>Academic emergency medicine: official journal of the Society for Academic Emergency Medicine</i>. Jun 2011;18(6):e52-63.                      Vashi AA, Fox JP, Carr BG, et al. Use of hospital-based acute care among patients recently discharged from the hospital. <i>JAMA : the journal of the American Medical Association</i>. Jan 23 2013;309(4):364-371.                      Venkatesh AK, Geisler BP, Gibson Chambers JJ, Baugh CW, Bohan JS, Schuur JD. Use of observation care in US emergency departments, 2001 to 2008. <i>PloS one</i>. 2011;6(9):e24326.                      Wright S. <i>Hospitals' Use of Observation Stays and Short Inpatient Stays for Medicare Beneficiaries</i>. Washington, DC: OIG;2013.</p>
X3728	Hospital 30-day, all-cause, unplanned risk-standardized days in acute care following acute myocardial infarction (AMI) hospitalization	<p>The goal of this measure is to improve patient outcomes by providing patients, physicians, and hospitals with information about hospital-level, risk-standardized outcomes following hospitalization for AMI. Measurement of patient outcomes allows for a broad view of quality of care that cannot be captured entirely by individual process-of-care measures. Safely transitioning patients from hospital to home requires a complex series of tasks which would be cumbersome to capture individually as process measures: timely and effective communication between providers, prevention of and response to complications, patient education about post-discharge care and self-management, and timely follow-up, and more. Inadequate transitional care contributes to a variety of adverse outcomes post-discharge, including readmission, need for observation, and emergency department evaluation. There already exist measures for readmission, but there are no current measures for ED utilization and observation stay. It is thus difficult for providers and consumers to gain a complete picture of post-discharge outcomes. Moreover, separately reporting each outcome encourages "gaming," such as recategorizing readmission stays as observation stays to avoid a readmission outcome. By constructing a composite of outcomes that are important to patients, we can produce a more complete picture of post-discharge outcomes that better informs consumers about care quality and incentivizes global improvement in outcomes.</p> <p>Acute myocardial infarction (AMI) is among the most common principal hospital discharge diagnoses among Medicare beneficiaries, and, in 2008, it was the sixth most expensive condition billed to Medicare, accounting for 4.8% of Medicare's hospital bill (Wier and Andrews, 2011). Readmission rates following discharge for AMI are high. For example, between July 2005 and June 2008, the median 30-day readmission rate for AMI was 19.9%, with a range of 15.3% to 29.4% (Krumholz et al., 2009).</p> <p>Acute care utilization after discharge (return to the emergency department, observation stay and readmission), for any reason, is disruptive to patients and caregivers, costly to the healthcare system, and puts patients at additional</p>

MUC ID	Measure Title	Rationale
		<p>risk of hospital-acquired infections and complications. Although some readmissions are unavoidable, they may also result from poor quality of care or inadequate transitional care. Transitional care includes effective discharge planning, transfer of information at the time of discharge, patient assessment and education, and coordination of care and monitoring in the post-discharge period. Numerous studies have found an association between quality of inpatient or transitional care and early (typically 30-day) readmission rates for a wide range of conditions including AMI (Frankl et al., 1991; Corrigan et al., 1992; Oddone et al., 1996; Ashton et al., 1997; Benbassat et al., 2000; Courtney et al., 2003; Halfon et al., 2006; Bondestam et al., 1995; Carlhed et al., 2009).</p> <p>Several studies have reported on the relationship between inpatient admissions and other types of hospital care including ED visits and observation stays. ED visits represent a significant proportion of post-discharge acute care utilization. Two recent studies conducted in patients of all ages have shown that 9.5% of patients return to the ED within 30 days of hospital discharge and that about 12% of these patients are discharged from the ED and are not captured by current CMS readmissions measures (Rising et al., 2013; Vashi et al., 2013).</p> <p>Additionally, over the past decade, the use of observation stays has rapidly increased. Specifically, between 2001 and 2008, the use of observation services increased nearly three-fold (Venkatesh et al., 2011) and significant variation has been demonstrated in the use of observation services for conditions such as chest pain (Schuur et al., 2011). These rising rates of observation stays among Medicare beneficiaries have gained the attention of patients, providers, and policymakers (Feng et al., 2012; Rising et al., 2013; Vashi et al., 2013). A report from the Office of the Inspector General (OIG) notes that in 2012, Medicare beneficiaries had 1.5 million observation stays. Many of these observation stays lasted longer than the intended one day. The OIG report also notes the potential relationship between hospital use of observation stays as an alternative to short-stay inpatient hospitalizations as a response to changing hospital payment incentives (Wright, 2013).</p> <p>Thus, in the context of the publicly reported CMS 30-day readmission measures, the increasing use of ED visits and observation stays has raised concerns that current readmission measures do not capture the full range of unplanned acute care in the post-discharge period. In particular, there exists concern that high use of observation stays could in some cases replace readmissions, and that hospitals with high rates of observation stays in the post-discharge period may therefore have low readmission rates that do not accurately reflect the quality of care (Carlson et al., 2013).</p> <p>Ashton CM, Del Junco DJ, Soucek J, Wray NP, Mansyur CL. The association between the quality of inpatient care and early readmission: a meta-analysis of the evidence. <i>Med Care.</i> Oct 1997;35(10):1044-1059.</p> <p>Benbassat J, Taragin M. Hospital readmissions as a measure of quality of health care: advantages and limitations. <i>Archives of Internal Medicine.</i> Apr 24 2000;160(8):1074-1081.</p> <p>Bondestam E, Breikss A, Hartford M. Effects of early rehabilitation on consumption of medical care during the first</p>

MUC ID	Measure Title	Rationale
		<p>year after acute myocardial infarction in patients &gt; or = 65 years of age. American Journal of Cardiology. 1995;75(12):767-771.</p> <p>Carlhed R, Bojestig M, Peterson A, et al. Improved clinical outcome after acute myocardial infarction in hospitals participating in a Swedish quality improvement initiative. Circulation. Cardiovascular Quality &amp; Outcomes. 2009;2(5):458-464.</p> <p>Carlson J. Faulty Gauge? Readmissions are down, but observational-status patients are up and that could skew Medicare numbers. Modern Healthcare. June 8, 2013 2013.</p> <p>Corrigan JM, Martin JB. Identification of factors associated with hospital readmission and development of a predictive model. Health Serv Res. Apr 1992;27(1):81-101.</p> <p>Courtney EDJ, Ankrett S, McCollum PT. 28-Day emergency surgical re-admission rates as a clinical indicator of performance. Ann R Coll Surg Engl. Mar 2003;85(2):75-78.</p> <p>Feng Z, Wright B, Mor V. Sharp rise in Medicare enrollees being held in hospitals for observation raises concerns about causes and consequences. Health affairs (Project Hope). Jun 2012;31(6):1251-1259.</p> <p>Frankl SE, Breeling JL, Goldman L. Preventability of emergent hospital readmission. Am J Med. Jun 1991;90(6):667-674.</p> <p>Halfon P, Egli Y, Pr, et al. Validation of the potentially avoidable hospital readmission rate as a routine indicator of the quality of hospital care. Medical Care. Nov 2006;44(11):972-981.</p> <p>Oddone EZ, Weinberger M, Horner M, et al. Classifying general medicine readmissions. Are they preventable? Veterans Affairs Cooperative Studies in Health Services Group on Primary Care and Hospital Readmissions. Journal of General Internal Medicine. 1996;11(10):597-607.</p> <p>Rising KL, White LF, Fernandez WG, Boutwell AE. Emergency Department Visits After Hospital Discharge: A Missing Part of the Equation. Annals of Emergency Medicine.</p> <p>Schuur JD, Baugh CW, Hess EP, Hilton JA, Pines JM, Asplin BR. Critical pathways for post-emergency outpatient diagnosis and treatment: tools to improve the value of emergency care. Academic emergency medicine : official journal of the Society for Academic Emergency Medicine. Jun 2011;18(6):e52-63.</p> <p>Vashi AA, Fox JP, Carr BG, et al. Use of hospital-based acute care among patients recently discharged from the hospital. JAMA : the journal of the American Medical Association. Jan 23 2013;309(4):364-371.</p> <p>Venkatesh AK, Geisler BP, Gibson Chambers JJ, Baugh CW, Bohan JS, Schuur JD. Use of observation care in US emergency departments, 2001 to 2008. PloS one. 2011;6(9):e24326.</p> <p>Wier, L.M. (Thomson Reuters), and Andrews, R.M. (AHRQ).The National Hospital Bill: The Most Expensive Conditions by Payer, 2008. HCUP Statistical Brief #107. March 2011. Agency for Healthcare Research and Quality, Rockville, MD. <a href="http://www.hcupus.ahrq.gov/reports/statbriefs/sb107.pdf">http://www.hcupus.ahrq.gov/reports/statbriefs/sb107.pdf</a>.</p>

MUC ID	Measure Title	Rationale
		Wright S. Hospitals' Use of Observation Stays and Short Inpatient Stays for Medicare Beneficiaries. Washington, DC: OIG; 2013.
X3620	Hospital-level, risk-standardized payment associated with an episode of care for primary elective total hip and/or total knee arthroplasty (THA/TKA)	<p>Due to their frequency and cost, THA and TKA are priority areas for outcome measure development. More than one third of the US population 65 years and older suffers from osteoarthritis [1]. Between 2009 and 2012, there were 337,419 THA procedures and 750,569 TKA procedures for Medicare fee-for-service patients 65 years and older [2]. Estimates place the annual insurer cost of osteoarthritis in the US at \$149 billion, with Medicare direct payments to hospitals for THA/TKA exceeding \$15 billion annually [3]. Further, there are conflicting data regarding costs after total joint arthroplasty, with evidence to support both increased [4] and decreased costs [5] following arthroplasty, suggesting there is great variation in the costs of a full episode of care for THA and TKA.</p> <p>Clinical outcomes for THA and TKA depend not only on the surgeon performing the procedure, but on care coordination across provider groups and specialties, and the patient's engagement in his or her recovery. Even the very best surgeon will not get outstanding results if there are gaps in the quality of care for the patient before, during, and after surgery. The goal of hospital-level resource use measurement is to capture the full spectrum of care in order to incentivize collaboration and shared responsibility for improving patients' health and reducing the burden of their disease.</p> <p>Variation in the cost of a THA or TKA episode of care is often related to the quality of care, where complications and readmissions increase the total payment for post-surgical care. Given the well-documented variation in readmission and complication rates following THA and TKA, there is expected variation in total episode of care costs for the procedures [6]. Birkmeyer et al. found that the average 30-day cost increased by \$2,436 among hospitals with the highest quintile of complication rates, compared to the lowest quintile following THA [7]. The same study also found that rehabilitation costs accounted for 50% of "excess" payments among those undergoing THA. Miller et al. found that a major driver of differences in episode payments for THA was that hospitals within Accountable Care Organizations (ACO) had smaller payments for post-discharge care compared to non-ACO hospitals [8]. Taken together, these studies suggest that much of the variation in total episode costs arises in the post-acute setting.</p> <p>Health systems have taken notice of opportunities to improve value by encouraging collaboration of care between hospitals and post-acute providers. The Centers for Medicare &amp; Medicaid Services' (CMS's) Bundled Payment for Care Improvement initiative aims to assess the feasibility and effectiveness of various models of bundled payments [9]. One analysis of hospitals found that the overall episode of care, particularly post-discharge care, was less expensive in hospitals affiliated with Integrated Delivery Systems [10]. Transparency regarding the variation of episode of care payments triggered by THA and TKA helps to guide health systems and providers towards improvement in the value of care.</p>

MUC ID	Measure Title	Rationale
		<ol style="list-style-type: none"> <li>1. Centers for Disease Control and Prevention (CDC). Osteoarthritis. 2011; <a href="http://www.cdc.gov/arthritis/basics/osteoarthritis.htm">http://www.cdc.gov/arthritis/basics/osteoarthritis.htm</a>. Accessed August 13, 2013.</li> <li>2. Suter LG, Grady JN, Lin Z, et al. 2013 Measure Updates and Specifications: Elective Primary Total Hip Arthroplasty (THA) And/Or Total Knee Arthroplasty (TKA) All-Cause Unplanned 30-Day Risk-Standardized Readmission Measure (Version 2.0). March 2013.</li> <li>3. Miller DC, Gust C, Dimick JB, Birkmeyer N, Skinner J, Birkmeyer JD. Large variations in Medicare payments for surgery highlight savings potential from bundled payment programs. <i>Health affairs (Project Hope)</i>. Nov 2011;30(11):2107-2115.</li> <li>4. Bozic KJ, Stacey B, Berger A, Sadosky A, Oster G. Resource utilization and costs before and after total joint arthroplasty. <i>BMC health services research</i>. 2012;12:73.</li> <li>5. Hawker GA, Badley EM, Croxford R, et al. A population-based nested case-control study of the costs of hip and knee replacement surgery. <i>Med Care</i>. 2009;47(7):732-741.</li> <li>6. Suter LG, et al., Medicare Hospital Quality Chartbook 2013: Performance Report on Outcome Measures, 2013.</li> <li>7. Birkmeyer JD, Gust C, Dimick JB, Birkmeyer NJ, Skinner JS. Hospital quality and the cost of inpatient surgery in the United States. <i>Annals of surgery</i>. 2012;255(1):1-5.</li> <li>8. Miller DC, Ye Z, Gust C, Birkmeyer JD. Anticipating the effects of accountable care organizations for inpatient surgery. <i>JAMA surgery</i>. Jun 2013;148(6):549-554.</li> <li>9. CMS. Bundled Payments for Care Improvement (BPCI) Initiative: General Information. <a href="http://innovation.cms.gov/initiatives/bundled-payments/">http://innovation.cms.gov/initiatives/bundled-payments/</a> [accessed Jan 7, 2014]</li> <li>10. Miller DC, Ye Z, Gust C, Birkmeyer JD. Anticipating the effects of accountable care organizations for inpatient surgery. <i>JAMA surgery</i>. Jun 2013;148(6):549-554.</li> </ol>
X3689	Participation in a Patient Safety Culture Survey	<p>A Patient Safety Culture Survey is TJC element of performance.</p> <p>Making care safer is a priority for CMS and as such is one of the CMS quality goals. One way to implement this goal would be to create a patient safety culture assessment measure.</p> <p>This structural measure will allow us to gain an understanding of the patient safety culture assessment landscape without adding undue reporting burden to hospitals.</p> <p>Safety culture surveys are useful for measuring organizational conditions that can lead to adverse events and patient harm in healthcare organizations.</p> <p>They can be used to:</p> <ul style="list-style-type: none"> <li>■raise staff awareness about patient safety</li> <li>■diagnose and assess the current status of patient safety culture</li> </ul>



MUC ID	Measure Title	Rationale
		<ul style="list-style-type: none"> <li>■ identify strengths and areas for improvement</li> <li>■ examine trends in patient safety culture and trends overtime</li> </ul>
E0202	Falls with injury	<p>The measure focus addresses several national health goals and priorities, for example:</p> <ol style="list-style-type: none"> <li>1. Recently enacted Centers for Medicare and Medicaid Services regulations limit hospital reimbursement for care related to fall related injuries.</li> <li>2. The falls measures fits within the priorities set forth by the National Priorities Partnership. Specifically, it fits within the national priority of Making Care Safer (National Priorities Partnership, 2011).</li> <li>3. As part of their National Patient Safety Goals, The Joint Commission requires hospitals to reduce the risk of patient harm resulting falls and to implement a falls reduction program.</li> </ol> <p>Other evidence: Falls are one of the most common inpatient adverse events, with estimates of between 2 and 5 falls per 1,000 patient days (Agostini, Baker, &amp; Gogardus, 2001; Oliver et al., 2007; Unruh, 2002; Shorr et al., 2002, 2008). In quarter 3 of 2009, fall rates for nursing units in participating NDNQI hospitals averaged 3.2 per 1000 patient days (median = 2.8 per 1000 patient days). About 30% of falls result in injury, disability, or death (Shorr, 2008) – particularly in older adults. Injury falls lead to as much as a 61% increase in patient-care costs and lengthen a patient’s hospital stay (Fitzpatrick, 2011). Jorgensen (2011) estimated that by 2020 the direct and indirect costs of injuries related to falls will reach \$54.9 billion. In addition injury falls are a significant source of liability for hospitals. Agnostini, J.V., Baker, D.I., &amp; Bogardus, S.T. (2001). Prevention of falls in hospitalized and institutionalized older people. In Making health care safer: A critical analysis of patient safety practices (pp. 281-299). Evidence Report/Technology Assessment Number 43, AHRQ publication No. 01-E058. Rockville, MD: Agency for Healthcare Research and Quality.</p> <p>Fitzpatrick, M.A. (2011, March). Meeting the challenge of fall reduction [Supplement]. American Nurse Today, p. 1.</p> <p>Jorgensen, J. (2011, March). Reducing patient falls: A call to action [Supplement]. American Nurse Today, p. 2-3.</p> <p>National Priorities Partnership. (2011, September). Input to the Secretary of Health and Human Services on Priorities for the National Quality Strategy. Retrieved from: <a href="http://www.qualityforum.org/Home.aspx">http://www.qualityforum.org/Home.aspx</a></p> <p>Oliver, D., Connelly, J.B., Victor, C.R. et al. (2007). Strategies to prevent falls and fractures in hospitals and care homes and effect of cognitive impairment. 384, 82.</p> <p>Shorr, R.I., Guillen, M.k. Rosenblatt, L.C. (2002). Restraint use, restrain orders, and the risk of falls in hospitalized patients. Journal of the American Geriatric Society, 50, 526-529.</p> <p>Shorr, R.I., Mion, L.C., Chandler, M., et al. (2008). Improving the capture of fall events in hospitals: Combining a service for evaluating inpatient falls with an incident report system. Journal of the American Geriatric Society, 56, 701-704.</p>



MUC ID	Measure Title	Rationale
		Unruh, L. (2002). Trends in adverse events in hospitalized patients. <i>Journal of Healthcare Quality</i> , 24, 4-10.
E0642	Cardiac Rehabilitation Patient Referral From an Inpatient Setting	<ol style="list-style-type: none"> <li>1. Cardiac rehabilitation/secondary prevention programs (CR/SP) improve patient outcomes, including quality of life, function, recurrent myocardial infarction, and mortality.</li> <li>2. CR/SP is underutilized with geographic variability and decreased participation by patients with economic disadvantages, women and older patients.</li> <li>3. The CR/SP performance measures were developed for use in systematic quality improvement projects to close this treatment gap.</li> <li>4. Use of systematic referral processes and tools have been shown to increase CR/SP referral.</li> <li>5. Enrollment and participation in CR/SP, not referral, have been shown to improve patient outcomes. However, referral is necessary for patients to enroll and participate in CR/SP. The strength of provider referral to CR has been shown to correlate with participation in CR.</li> </ol>
E0204	Skill mix (Registered Nurse [RN], Licensed Vocational/Practical Nurse [LVN/LPN], unlicensed assistive personnel [UAP], and contract)	<p>With the increasing concerns about cost and quality of patient care over the past 2 decades, hospital nurse staffing has become a major focus in examining health care workforce relationships with patient outcomes. Nurses are the largest group of clinical providers of care in healthcare systems. The Institute of Medicine recently concluded, in its report, <i>The Future of Nursing: Leading Changing, Advancing Health</i> (2010), that nurses are vital in providing quality care to patients.</p> <p>A large body of research has demonstrated that higher nurse staffing levels are significantly associated with better patient outcomes, including shorter length of stay and lower rates of mortality, failure to rescue, hospital acquired infections, falls, medication errors, and pressure ulcers (Blegen, Goode, Spetz, Vaughn, &amp; Park, 2011; Kane, Shamliyan, Mueller, Duval, &amp; Wilt, 2007; Lake &amp; Cheung, 2006; Lang, Hodge, Olson, Romano, &amp; Kravitz, 2004; Lankshear, Sheldon, &amp; Maynard, 2005; Needleman et al., 2011; Stone et al., 2007; Unruh, 2008).</p> <p>The Agency for Healthcare Research and Quality (AHRQ) conducted a comprehensive and systematic review of the 97 observational studies on the relationship between nurse staffing and patient outcomes published between 1990 and 2006. This AHRQ's meta-analysis found a strong and consistent relationship between nurse staffing and specific patient outcomes (mortality and length of stay), particularly for patients in intensive care units and surgical units (Kane et al., 2007). For example, length of stay was shorter by 24% in intensive care units and by 31% in surgical units as 1 RN per patient day was increased. In addition, nurse staffing affects care costs. There was evidence that an additional RN hour per patient day or a 10% increase in the proportion of RNs decreased the odds of patients' pneumonia by 8.9% or 9.5%, respectively (Cho, 2003).</p> <p>American Nurses Association (ANA). (2012). <i>ANA's Principles for Nurse Staffing</i>, 2nd Edition, Nursebooks.org, Silver Spring, MD.</p>

MUC ID	Measure Title	Rationale
		<p>Blegen, M. A., Goode, C. J., Spetz, J., Vaughn, T., &amp; Park, S. H. (2011). Nurse staffing effects on patient outcomes: safety-net and non-safety-net hospitals. <i>Medical Care</i>, 49(4), 406-414.</p> <p>Cho, S. H., Ketefian, S., Barkauskas, V. H., &amp; Smith, D. G. (2003). The effects of nurse staffing on adverse events, morbidity, mortality, and medical costs. <i>Nursing Research</i>, 52(2), 71-79.</p> <p>Elliott, M.N., Kanouse, D.E., Edwards, C.A., &amp; Hilborne, L.H. (2009). Components of care vary in importance for overall patient-reported experience by type of hospitalization. <i>Medicare Care</i>, (47), 842–849.</p> <p>Institute of Medicine. (2011). <i>The future of nursing: Leading change, advancing health</i>. Wahington, D.C.: National Academies Press.</p> <p>Kane, R. L., Shamliyan, T. A., Mueller, C., Duval, S., &amp; Wilt, T. J. (2007). The association of registered nurse staffing levels and patient outcomes: systematic review and meta-analysis. <i>Medical Care</i>, 45(12), 1195-1204.</p> <p>Kutney-Lee, A., McHugh, M.D., Sloane, D.M., Cimiotti, J.P., Flynn, L., Neff, D.F., Aiken, L.H. (2009). Nursing: a key to patient satisfaction. <i>Health Affairs</i>, 28(4). Epub 2009 Jun 12.</p> <p>Lake, E. T., &amp; Cheung, R. B. (2006). Are Patient Falls and Pressure Ulcers Sensitive to Nurse Staffing? <i>Western Journal of Nursing Research</i>, 28(6), 654-677.</p> <p>Lang, T. A., Hodge, M., Olson, V., Romano, P. S., &amp; Kravitz, R. L. (2004). Nurse-patient ratios: a systematic review on the effects of nurse staffing on patient, nurse employee, and hospital outcomes. <i>Journal of Nursing Administration</i>, 34(7-8), 326-337.</p> <p>Lankshear, A. J., Sheldon, T. A., &amp; Maynard, A. (2005). Nurse staffing and healthcare outcomes: a systematic review of the international research evidence. <i>Advances in Nursing Science</i>, 28(2), 163-174.</p> <p>Needleman, J., Buerhaus, P., Pankratz, V. S., Leibson, C. L., Stevens, S. R., &amp; Harris, M. (2011). Nurse staffing and inpatient hospital mortality. <i>New England Journal of Medicine</i>, 364(11), 1037-1045.</p> <p>Nursing Alliance for Quality Care (NAQC). (2013). <i>Fostering successful patient and family engagement: Nursing's critical role</i>. Washington, DC: NAQC.</p> <p>Press Ganey. (2013). <i>The rising tide measure: Communication with nurses</i>. South Bend, IN: Press Ganey.</p> <p>Stone, P. W., Mooney-Kane, C., Larson, E. L., Horan, T., Glance, L. G., Zwanziger, J., &amp; Dick, A. W. (2007). Nurse working conditions and patient safety outcomes. <i>Medical Care</i>, 45(6), 571-578.</p> <p>Unruh, L. (2008). Nurse staffing and patient, nurse, and financial outcomes. <i>The American Journal of Nursing</i>, 108(1), 62-71.</p>
E0205	Nursing Hours per Patient Day	<p>With the increasing concerns about cost and quality of patient care over the past 2 decades, hospital nurse staffing has become a major focus in examining health care workforce relationships with patient outcomes. Nurses are the largest group of clinical providers of care in healthcare systems. The Institute of Medicine recently concluded, in its</p>

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		<p>report, <i>The Future of Nursing: Leading Changing, Advancing Health</i> (2010), that nurses are vital in providing quality care to patients.</p> <p>A large body of research has demonstrated that higher nurse staffing levels are significantly associated with better patient outcomes, including shorter length of stay and lower rates of mortality, failure to rescue, hospital acquired infections, falls, medication errors, and pressure ulcers (Blegen, Goode, Spetz, Vaughn, &amp; Park, 2011; Kane, Shamliyan, Mueller, Duval, &amp; Wilt, 2007; Lake &amp; Cheung, 2006; Lang, Hodge, Olson, Romano, &amp; Kravitz, 2004; Lankshear, Sheldon, &amp; Maynard, 2005; Needleman et al., 2011; Stone et al., 2007; Unruh, 2008).</p> <p>The Agency for Healthcare Research and Quality (AHRQ) conducted a comprehensive and systematic review of the 97 observational studies on the relationship between nurse staffing and patient outcomes published between 1990 and 2006. This AHRQ's meta-analysis found a strong and consistent relationship between nurse staffing and specific patient outcomes (mortality and length of stay), particularly for patients in intensive care units and surgical units (Kane et al., 2007). For example, length of stay was shorter by 24% in intensive care units and by 31% in surgical units as 1 RN per patient day was increased. In addition, nurse staffing affects care costs. There was evidence that an additional RN hour per patient day or a 10% increase in the proportion of RNs decreased the odds of patients' pneumonia by 8.9% or 9.5%, respectively (Cho, 2003).</p> <p>American Nurses Association (ANA). (2012). <i>ANA's Principles for Nurse Staffing</i>, 2nd Edition, Nursebooks.org, Silver Spring, MD.</p> <p>Blegen, M. A., Goode, C. J., Spetz, J., Vaughn, T., &amp; Park, S. H. (2011). Nurse staffing effects on patient outcomes: safety-net and non-safety-net hospitals. <i>Medical Care</i>, 49(4), 406-414.</p> <p>Cho, S. H., Ketefian, S., Barkauskas, V. H., &amp; Smith, D. G. (2003). The effects of nurse staffing on adverse events, morbidity, mortality, and medical costs. <i>Nursing Research</i>, 52(2), 71-79.</p> <p>Elliott, M.N., Kanouse, D.E., Edwards, C.A., &amp; Hilborne, L.H. (2009). Components of care vary in importance for overall patient-reported experience by type of hospitalization. <i>Medicare Care</i>, (47), 842-849.</p> <p>Institute of Medicine. (2011). <i>The future of nursing: Leading change, advancing health</i>. Wahington, D.C.: National Academies Press.</p> <p>Kane, R. L., Shamliyan, T. A., Mueller, C., Duval, S., &amp; Wilt, T. J. (2007). The association of registered nurse staffing levels and patient outcomes: systematic review and meta-analysis. <i>Medical Care</i>, 45(12), 1195-1204.</p> <p>Kutney-Lee, A., McHugh, M.D., Sloane, D.M., Cimiotti, J.P., Flynn, L., Neff, D.F., Aiken, L.H. (2009). Nursing: a key to patient satisfaction. <i>Health Affairs</i>, 28(4). Epub 2009 Jun 12.</p> <p>Lake, E. T., &amp; Cheung, R. B. (2006). Are Patient Falls and Pressure Ulcers Sensitive to Nurse Staffing? <i>Western Journal of Nursing Research</i>, 28(6), 654-677.</p> <p>Lang, T. A., Hodge, M., Olson, V., Romano, P. S., &amp; Kravitz, R. L. (2004). Nurse-patient ratios: a systematic review on</p>

MUC ID	Measure Title	Rationale
		<p>the effects of nurse staffing on patient, nurse employee, and hospital outcomes. <i>Journal of Nursing Administration</i>, 34(7-8), 326-337.</p> <p>Lankshear, A. J., Sheldon, T. A., &amp; Maynard, A. (2005). Nurse staffing and healthcare outcomes: a systematic review of the international research evidence. <i>Advances in Nursing Science</i>, 28(2), 163-174.</p> <p>Needleman, J., Buerhaus, P., Pankratz, V. S., Leibson, C. L., Stevens, S. R., &amp; Harris, M. (2011). Nurse staffing and inpatient hospital mortality. <i>New England Journal of Medicine</i>, 364(11), 1037-1045.</p> <p>Nursing Alliance for Quality Care (NAQC). (2013). <i>Fostering successful patient and family engagement: Nursing's critical role</i>. Washington, DC: NAQC.</p> <p>Press Ganey. (2013). <i>The rising tide measure: Communication with nurses</i>. South Bend, IN: Press Ganey.</p> <p>Stone, P. W., Mooney-Kane, C., Larson, E. L., Horan, T., Glance, L. G., Zwanziger, J., &amp; Dick, A. W. (2007). Nurse working conditions and patient safety outcomes. <i>Medical Care</i>, 45(6), 571-578.</p> <p>Unruh, L. (2008). Nurse staffing and patient, nurse, and financial outcomes. <i>The American Journal of Nursing</i>, 108(1), 62-71.</p>
E0506	Hospital 30-day, all-cause, risk-standardized readmission rate (RSRR) following pneumonia hospitalization	<p>The Medicare Payment Advisory Commission (MedPAC) has called for hospital-specific public reporting of readmission rates, identifying pneumonia as a priority condition (MedPAC, 2007). MedPAC finds that readmissions are common, costly, and often preventable. Based on 2005 Medicare data, MedPAC estimates that about 8.9% of Medicare pneumonia admissions were followed by a readmission within 15 days, accounting for more than 74,000 admissions at a cost of \$533 million. Pneumonia results in approximately 1.2 million hospital admissions each year and accounts for more than \$10 billion annually in hospital expenditures. Among patients over 65 years of age, it is the second leading cause of hospitalization, and is the leading infectious cause of death (Lindenauer et. al., 2011). Approximately 20% of pneumonia patients were rehospitalized within thirty days, representing the second-highest proportion of all rehospitalizations at 6.3% (Jencks 2009). Pneumonia readmission is a costly event and represents an undesirable outcome of care from the patient's perspective, and highly disparate pneumonia readmission rates among hospitals suggest there is room for improvement. (MedPAC 2007, Bernheim 2010).</p> <p>References:</p> <p>Bernheim SM, et al. 2010 Measures Maintenance Technical Report: Acute Myocardial Infarction, Heart Failure and Pneumonia 30-day Risk Standardized Mortality Rate. 2010 Available at: <a href="http://www.qualitynet.org/dcs/ContentServer?c=Page&amp;pagename=QnetPublic/Page/QnetTier3&amp;cid=1163010421830">http://www.qualitynet.org/dcs/ContentServer?c=Page&amp;pagename=QnetPublic/Page/QnetTier3&amp;cid=1163010421830</a></p> <p>Jencks SF, Williams MV, Coleman EA. Rehospitalizations among patients in the Medicare fee-for-service program. <i>N Engl J Med</i>. 2009 Apr 2;360(14):1418-28.</p>

MUC ID	Measure Title	Rationale
		Lindenauer PK, Normand SL, Drye EE, et al. Development, validation, and results of a measure of 30-day readmission following hospitalization for pneumonia. J Hosp Med. 2011;6(3):142-150 Report to the Congress: Promoting Greater Efficiency in Medicare. Washington, DC: Medicare Payment Advisory Commission, 2007.
E0468	Hospital 30-day, all-cause, risk-standardized mortality rate (RSMR) following pneumonia hospitalization	Among patients over 65 years of age, pneumonia is the second leading cause of hospitalization, and is the leading infectious cause of death (Lindenauer et al., 2011). Many current hospital interventions are known to decrease the risk of death within 30 days of hospital admission (Jha et. al., 2007). Current process-based performance measures, however, cannot capture all the ways that care within the hospital might influence outcomes. As a result, many stakeholders, including patient organizations, are interested in outcomes measures that allow patients and providers to assess relative outcomes performance for hospitals (Bratzler et al., 2007). References: Bratzler, DW, Nsa W, Houck PM. Performance measures for pneumonia: are they valuable, and are process measures adequate. Current Opinion in Infectious Diseases. 20(2):182-189, April 2007. Jha AK, Orav EJ, Li Z, Epstein AM. The inverse relationship between mortality rates and performance in the Hospital Quality Alliance measures. Health Aff (Millwood) 2007 Jul-Aug;26(4):1104-10. Lindenauer PK, Normand SL, Drye EE, et al. Development, validation, and results of a measure of 30-day readmission following hospitalization for pneumonia. J Hosp Med. 2011;6(3):142-150
X0351	Kidney/Urinary Tract Infection Clinical Episode-Based Payment Measure	CMS is constructing episodes of care because they allow meaningful comparisons between providers based on resource use for certain clinical conditions or procedures, as noted in the recent National Quality Forum draft report for the "Episode Grouper Evaluation Criteria" project (see National Quality Forum (NQF) "Comment on the Proposed Recommendations for Evaluating Episode Groupers." (2014) Available at <a href="http://www.qualityforum.org/ProjectMaterials.aspx?projectID=73777">http://www.qualityforum.org/ProjectMaterials.aspx?projectID=73777</a> ) and in various peer-reviewed articles (see Peter S. Hussey, Melony E. Sorbero, Ateev Mehrotra, Hangsheng Liu and Cheryl L. Damberg. "Episode-Based Performance Measurement And Payment: Making It A Reality." Health Affairs, 28, no.5 (2009):1406-1417. Available at <a href="http://content.healthaffairs.org/content/28/5/1406.full.pdf">http://content.healthaffairs.org/content/28/5/1406.full.pdf</a> ). Furthermore, CMS is constructing episodes of care in response to the mandate in Section 3003 of the Affordable Care Act (ACA) of 2010 that the Secretary of the Department of Health and Human Services (HHS) develop an episode grouper to improve care efficiency and quality (Patient Protection and Affordable Care Act, Pub. L. No. 111-148, § 3003, 124 Stat. 366 (2010)).
X0352	Knee	CMS is constructing episodes of care because they allow meaningful comparisons between providers based on

MUC ID	Measure Title	Rationale
	Replacement/ Revision Clinical Episode-Based Payment Measure	resource use for certain clinical conditions or procedures, as noted in the recent National Quality Forum draft report for the “Episode Grouper Evaluation Criteria” project (see National Quality Forum (NQF) “Comment on the Proposed Recommendations for Evaluating Episode Groupers.” (2014) Available at <a href="http://www.qualityforum.org/ProjectMaterials.aspx?projectID=73777">http://www.qualityforum.org/ProjectMaterials.aspx?projectID=73777</a> ) and in various peer-reviewed articles (see Peter S. Hussey, Melony E. Sorbero, Ateev Mehrotra, Hangsheng Liu and Cheryl L. Damberg. “Episode-Based Performance Measurement And Payment: Making It A Reality.” Health Affairs, 28, no.5 (2009):1406-1417. Available at <a href="http://content.healthaffairs.org/content/28/5/1406.full.pdf">http://content.healthaffairs.org/content/28/5/1406.full.pdf</a> ). Furthermore, CMS is constructing episodes of care in response to the mandate in Section 3003 of the Affordable Care Act (ACA) of 2010 that the Secretary of the Department of Health and Human Services (HHS) develop an episode grouper to improve care efficiency and quality (Patient Protection and Affordable Care Act, Pub. L. No. 111-148, § 3003, 124 Stat. 366 (2010)).
X0353	Spine Fusion/ Refusion Clinical Episode-Based Payment Measure	CMS is constructing episodes of care because they allow meaningful comparisons between providers based on resource use for certain clinical conditions or procedures, as noted in the recent National Quality Forum draft report for the “Episode Grouper Evaluation Criteria” project (see National Quality Forum (NQF) “Comment on the Proposed Recommendations for Evaluating Episode Groupers.” (2014) Available at <a href="http://www.qualityforum.org/ProjectMaterials.aspx?projectID=73777">http://www.qualityforum.org/ProjectMaterials.aspx?projectID=73777</a> ) and in various peer-reviewed articles (see Peter S. Hussey, Melony E. Sorbero, Ateev Mehrotra, Hangsheng Liu and Cheryl L. Damberg. “Episode-Based Performance Measurement And Payment: Making It A Reality.” Health Affairs, 28, no.5 (2009):1406-1417. Available at <a href="http://content.healthaffairs.org/content/28/5/1406.full.pdf">http://content.healthaffairs.org/content/28/5/1406.full.pdf</a> ). Furthermore, CMS is constructing episodes of care in response to the mandate in Section 3003 of the Affordable Care Act (ACA) of 2010 that the Secretary of the Department of Health and Human Services (HHS) develop an episode grouper to improve care efficiency and quality (Patient Protection and Affordable Care Act, Pub. L. No. 111-148, § 3003, 124 Stat. 366 (2010)).
X0354	Cellulitis Clinical Episode-Based Payment Measure	CMS is constructing episodes of care because they allow meaningful comparisons between providers based on resource use for certain clinical conditions or procedures, as noted in the recent National Quality Forum draft report for the “Episode Grouper Evaluation Criteria” project (see National Quality Forum (NQF) “Comment on the Proposed Recommendations for Evaluating Episode Groupers.” (2014) Available at <a href="http://www.qualityforum.org/ProjectMaterials.aspx?projectID=73777">http://www.qualityforum.org/ProjectMaterials.aspx?projectID=73777</a> ) and in various peer-reviewed articles (see Peter S. Hussey, Melony E. Sorbero, Ateev Mehrotra, Hangsheng Liu and Cheryl L. Damberg. “Episode-Based Performance Measurement And Payment: Making It A Reality.” Health Affairs, 28, no.5 (2009):1406-1417. Available at <a href="http://content.healthaffairs.org/content/28/5/1406.full.pdf">http://content.healthaffairs.org/content/28/5/1406.full.pdf</a> ). Furthermore, CMS is constructing episodes of care in response to the mandate in Section 3003 of the Affordable Care Act (ACA) of 2010 that the Secretary of the Department of Health and Human Services (HHS) develop an episode grouper to improve care efficiency and quality

MUC ID	Measure Title	Rationale
		(Patient Protection and Affordable Care Act, Pub. L. No. 111-148, § 3003, 124 Stat. 366 (2010)).
X0355	Gastrointestinal Hemorrhage Clinical Episode-Based Payment Measure	<p>CMS is constructing episodes of care because they allow meaningful comparisons between providers based on resource use for certain clinical conditions or procedures, as noted in the recent National Quality Forum draft report for the “Episode Grouper Evaluation Criteria” project (see National Quality Forum (NQF) “Comment on the Proposed Recommendations for Evaluating Episode Groupers.” (2014) Available at <a href="http://www.qualityforum.org/ProjectMaterials.aspx?projectID=73777">http://www.qualityforum.org/ProjectMaterials.aspx?projectID=73777</a>) and in various peer-reviewed articles (see Peter S. Hussey, Melony E. Sorbero, Ateev Mehrotra, Hangsheng Liu and Cheryl L. Damberg. “Episode-Based Performance Measurement And Payment: Making It A Reality.” Health Affairs, 28, no.5 (2009):1406-1417. Available at <a href="http://content.healthaffairs.org/content/28/5/1406.full.pdf">http://content.healthaffairs.org/content/28/5/1406.full.pdf</a>). Furthermore, CMS is constructing episodes of care in response to the mandate in Section 3003 of the Affordable Care Act (ACA) of 2010 that the Secretary of the Department of Health and Human Services (HHS) develop an episode grouper to improve care efficiency and quality (Patient Protection and Affordable Care Act, Pub. L. No. 111-148, § 3003, 124 Stat. 366 (2010)).</p>
X0356	Hip Replacement/ Revision Clinical Episode-Based Payment Measure	<p>CMS is constructing episodes of care because they allow meaningful comparisons between providers based on resource use for certain clinical conditions or procedures, as noted in the recent National Quality Forum draft report for the “Episode Grouper Evaluation Criteria” project (see National Quality Forum (NQF) “Comment on the Proposed Recommendations for Evaluating Episode Groupers.” (2014) Available at <a href="http://www.qualityforum.org/ProjectMaterials.aspx?projectID=73777">http://www.qualityforum.org/ProjectMaterials.aspx?projectID=73777</a>) and in various peer-reviewed articles (see Peter S. Hussey, Melony E. Sorbero, Ateev Mehrotra, Hangsheng Liu and Cheryl L. Damberg. “Episode-Based Performance Measurement And Payment: Making It A Reality.” Health Affairs, 28, no.5 (2009):1406-1417. Available at <a href="http://content.healthaffairs.org/content/28/5/1406.full.pdf">http://content.healthaffairs.org/content/28/5/1406.full.pdf</a>). Furthermore, CMS is constructing episodes of care in response to the mandate in Section 3003 of the Affordable Care Act (ACA) of 2010 that the Secretary of the Department of Health and Human Services (HHS) develop an episode grouper to improve care efficiency and quality (Patient Protection and Affordable Care Act, Pub. L. No. 111-148, § 3003, 124 Stat. 366 (2010)).</p>
E0647	Transition Record with Specified Elements Received by Discharged Patients	<p>This measure is important to decrease cost, address gaps in care, and enhance coordination of communication.</p> <p>Cost</p> <ul style="list-style-type: none"> <li>• In 2006, there were over 39 million hospital discharges; of those, 13 percent of these patients are repeatedly hospitalized and use 60 percent of the healthcare resources.</li> <li>• A 2007 report by the Medicare Payment Advisory Commission estimated approximately 18 percent of admissions result in readmissions within 30 days, costing CMS \$15 billion.</li> </ul> <p>Gaps in Care:</p>



MUC ID	Measure Title	Rationale
	(Discharges from an Inpatient Facility to Home/Self Care or Any Other Site of Care)	<ul style="list-style-type: none"> <li>• Sabogal and colleagues found that uncoordinated transitions between sites of care, even within the same institution, and between caregivers increase hospital readmissions, medical errors, duplication of services, and waste of resources.</li> <li>• Moore and colleagues examined three types of discontinuity of care among older patients transferred from the hospital: medication, test result follow-up, and initiation of a recommended work-up. They found that nearly 50 percent of hospitalized patients experienced at least one discontinuity and that patients who did not have a recommended work-up initiated were six times more likely to be re-hospitalized.</li> <li>• A prospective, cross-sectional study by Roy and colleagues found that approximately 40 percent of patients have pending test results at the time of discharge and that 10 percent of these require some ac Emergency Department Visits</li> <li>• The 2008 National Health Statistics Report determined that 2.3 million (2 percent) emergency department visits are from patients who were discharged from the hospital within the previous 7 days. The report also cited the following:             <ul style="list-style-type: none"> <li>• Ten percent of the 2.3 million emergency department visits were for complications related to their recent hospitalization, and</li> <li>• The uninsured are 3 times more likely to visit the emergency department.</li> </ul> </li> <li>Medication errors:             <ul style="list-style-type: none"> <li>• An estimated 60 percent of medication errors occur during times of transition: upon admission, transfer, or discharge of a patient.</li> <li>• During care transitions, patients receive medications from different prescribers who rarely have access to patients' comprehensive medication list.</li> <li>• Forster and colleagues found that 19 percent of discharged patients experienced an associated adverse event within three weeks of leaving the hospital; 66 percent of these were adverse drug events.</li> </ul> </li> </ul> <p>Coleman EA, Min S, Chomiak A, Kramer AM. 2004. Post-hospital care transitions: patterns, complications, and risk identification. <i>Health Services Research</i> 39:1449–1465.</p> <p>Agency for Healthcare Research and Quality (ARHQ). 1999. Outcomes by Patient and Hospital Characteristics for All Discharges. Available at: <a href="http://www.ahrq.gov/HCUFnet.asp">http://www.ahrq.gov/HCUFnet.asp</a>.</p> <p>Kramer A, Eilertsen T, Lin M, Hutt E. 2000. Effects of nurse staffing on hospital transfer quality measures for new admissions. Pp. 9.1–9.22. Inappropriateness of Minimum Nurse Staffing Ratios for Nursing Homes. Health Care Financing Administration.</p> <p>Hutt E, Ecord M, Eilertsen TB, et al. Precipitants of emergency room visits and acute hospitalization in short-stay Medicare nursing home residents. <i>J Am Geriatr Soc</i> 2001; 50: 223-229.</p>



MUC ID	Measure Title	Rationale
		<p>Jack BW, Chetty VK, Anthony D, et al. A reengineered hospital discharge program to decrease rehospitalization. <i>Ann Intern Med</i> 2009; 150:178-187.</p> <p>Agency for Healthcare Research and Quality (AHRQ). 2006. Outcomes by Patient and Hospital Characteristics for All Discharges. Available at: <a href="http://www.ahrq.gov/HCUPnet.asp">http://www.ahrq.gov/HCUPnet.asp</a>.</p> <p>Medicare Payment Advisory Commission. A data book: Healthcare spending and the Medicare program. June 2007. Available at: <a href="http://www.medpac.gov/documents/Jun07DataBook_Entire_report.pdf">http://www.medpac.gov/documents/Jun07DataBook_Entire_report.pdf</a>.</p> <p>Harris G. Report finds a heavy toll from medication errors, <i>N.Y. Times</i> (July 21, 2006). Available at: <a href="http://www.nytimes.com/2006/07/21/health/21drugerrors.html?ex=1311134400&amp;en=8f34018d05534d7a&amp;ei=5088&amp;partner=rssnyt&amp;emc=rss">http://www.nytimes.com/2006/07/21/health/21drugerrors.html?ex=1311134400&amp;en=8f34018d05534d7a&amp;ei=5088&amp;partner=rssnyt&amp;emc=rss</a>.</p> <p>Sabogal F, Coots-Miyazaki M, Lett JE. Effective care transitions interventions: Improving patient safety and healthcare quality. <i>CAHQ Journal</i> 2007 (Quarter 2).</p> <p>Moore C, Wisnevesky J, Williams S, McGinn T. 2003. Medical errors related to discontinuity of care from an inpatient to an outpatient setting. <i>Journal of General Internal Medicine</i> 18:646–651.</p> <p>Roy CL, Poon EG, Karson AS, et al. Patient safety concerns arising from test results that return after hospital discharge. <i>Ann Intern Med</i> 2005;143(2):121-128.</p> <p>Burt CW, McCaig LF, Simon AE. Emergency department visits by persons recently discharged from US hospitals. <i>National Health Statistics Reports</i>, July 24, 2008; Number 6.</p> <p>Rozich JD &amp; Resar, RK. 2001. Medication safety: One organization’s approach to the challenge. <i>J. Clin. Outcomes Manag.</i> 8:27-34.</p> <p>Partnership for Solutions. 2002. <i>Chronic Conditions: Making the Case for Ongoing Care</i>. Baltimore MD: The Johns Hopkins University.</p> <p>Forster AJ, Murff HJ, Peterson JF, et al. The incidence and severity of adverse events affecting patients after discharge from the hospital. <i>Ann Intern Med</i> 2003;138(3):161-167.</p>
E0648	Timely Transmission of Transition Record (Discharges from an Inpatient Facility to Home/Self	<p>This measure is important to decrease cost, address gaps in care, and enhance coordination of communication.</p> <p>Cost</p> <ul style="list-style-type: none"> <li>• In 2006, there were over 39 million hospital discharges; of those, 13 percent of these patients are repeatedly hospitalized and use 60 percent of the healthcare resources.</li> <li>• A 2007 report by the Medicare Payment Advisory Commission estimated approximately 18 percent of admissions result in readmissions within 30 days, costing CMS \$15 billion.</li> </ul> <p>Gaps in Care:</p> <ul style="list-style-type: none"> <li>• Sabogal and colleagues found that uncoordinated transitions between sites of care, even within the same</li> </ul>

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	Care or Any Other Site of Care)	<p>institution, and between caregivers increase hospital readmissions, medical errors, duplication of services, and waste of resources.</p> <ul style="list-style-type: none"> <li>• Moore and colleagues examined three types of discontinuity of care among older patients transferred from the hospital: medication, test result follow-up, and initiation of a recommended work-up. They found that nearly 50 percent of hospitalized patients experienced at least one discontinuity and that patients who did not have a recommended work-up initiated were six times more likely to be re-hospitalized.</li> <li>• A prospective, cross-sectional study by Roy and colleagues found that approximately 40 percent of patients have pending test results at the time of discharge and that 10 percent of these require some ac Emergency Department Visits</li> <li>• The 2008 National Health Statistics Report determined that 2.3 million (2 percent) emergency department visits are from patients who were discharged from the hospital within the previous 7 days. The report also cited the following: <ul style="list-style-type: none"> <li>• Ten percent of the 2.3 million emergency department visits were for complications related to their recent hospitalization, and</li> <li>• The uninsured are 3 times more likely to visit the emergency department.</li> </ul> </li> </ul> <p>Medication errors:</p> <ul style="list-style-type: none"> <li>• An estimated 60 percent of medication errors occur during times of transition: upon admission, transfer, or discharge of a patient.</li> <li>• During care transitions, patients receive medications from different prescribers who rarely have access to patients' comprehensive medication list.</li> <li>• Forster and colleagues found that 19 percent of discharged patients experienced an associated adverse event within three weeks of leaving the hospital; 66 percent of these were adverse drug events.</li> </ul> <p>Coleman EA, Min S, Chomiak A, Kramer AM. 2004. Post-hospital care transitions: patterns, complications, and risk identification. Health Services Research 39:1449–1465.</p> <p>Agency for Healthcare Research and Quality (AHRQ). 1999. Outcomes by Patient and Hospital Characteristics for All Discharges. Available at: <a href="http://www.ahrq.gov/HCUPnet.asp">http://www.ahrq.gov/HCUPnet.asp</a>.</p> <p>Kramer A, Eilertsen T, Lin M, Hutt E. 2000. Effects of nurse staffing on hospital transfer quality measures for new admissions. Pp. 9.1–9.22. Inappropriateness of Minimum Nurse Staffing Ratios for Nursing Homes. Health Care Financing Administration.</p> <p>Hutt E, Ecord M, Eilertsen TB, et al. Precipitants of emergency room visits and acute hospitalization in short-stay Medicare nursing home residents. J Am Geriatr Soc 2001; 50: 223-229.</p> <p>Jack BW, Chetty VK, Anthony D, et al. A reengineered hospital discharge program to decrease rehospitalization. Ann</p>

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		<p>Intern Med 2009; 150:178-187.</p> <p>Agency for Healthcare Research and Quality (ARHQ). 2006. Outcomes by Patient and Hospital Characteristics for All Discharges. Available at: <a href="http://www.ahrq.gov/HCUPnet.asp">http://www.ahrq.gov/HCUPnet.asp</a>.</p> <p>Medicare Payment Advisory Commission. A data book: Healthcare spending and the Medicare program. June 2007. Available at: <a href="http://www.medpac.gov/documents/Jun07DataBook_Entire_report.pdf">http://www.medpac.gov/documents/Jun07DataBook_Entire_report.pdf</a>.</p> <p>Harris G. Report finds a heavy toll from medication errors, N.Y. Times (July 21, 2006). Available at: <a href="http://www.nytimes.com/2006/07/21/health/21drugerrors.html?ex=1311134400&amp;en=8f34018d05534d7a&amp;ei=5088&amp;partner=rssnyt&amp;emc=rss">http://www.nytimes.com/2006/07/21/health/21drugerrors.html?ex=1311134400&amp;en=8f34018d05534d7a&amp;ei=5088&amp;partner=rssnyt&amp;emc=rss</a>.</p> <p>Sabogal F, Coots-Miyazaki M, Lett JE. Effective care transitions interventions: Improving patient safety and healthcare quality. CAHQ Journal 2007 (Quarter 2).</p> <p>Moore C, Wisnevesky J, Williams S, McGinn T. 2003. Medical errors related to discontinuity of care from an inpatient to an outpatient setting. Journal of General Internal Medicine 18:646–651.</p> <p>Roy CL, Poon EG, Karson AS, et al. Patient safety concerns arising from test results that return after hospital discharge. Ann Intern Med 2005;143(2):121-128.</p> <p>Burt CW, McCaig LF, Simon AE. Emergency department visits by persons recently discharged from US hospitals. National Health Statistics Reports, July 24, 2008; Number 6.</p> <p>Rozich JD &amp; Resar, RK. 2001. Medication safety: One organization’s approach to the challenge. J. Clin. Outcomes Manag. 8:27-34.</p> <p>Partnership for Solutions. 2002. Chronic Conditions: Making the Case for Ongoing Care. Baltimore MD: The Johns Hopkins University.</p> <p>Forster AJ, Murff HJ, Peterson JF, et al. The incidence and severity of adverse events affecting patients after discharge from the hospital. Ann Intern Med 2003;138(3):161-167.</p>
E0141	Patient fall rate	<p>The measure focus addresses several national health goals and priorities, for example:</p> <ol style="list-style-type: none"> <li>1. Recently enacted Centers for Medicare and Medicaid Services regulations limit hospital reimbursement for care related to fall related injuries.</li> <li>2. The falls measures fits within the priorities set forth by the National Priorities Partnership. Specifically, it fits within the national priority of Making Care Safer (National Priorities Partnership, 2011).</li> <li>3. As part of their National Patient Safety Goals, The Joint Commission requires hospitals to reduce the risk of patient harm resulting falls and to implement a falls reduction program.</li> </ol> <p>Other evidence: Falls are one of the most common inpatient adverse events, with estimates of between 2 and 5 falls per 1,000 patient days (Agostini, Baker, &amp; Gogardus, 2001; Oliver et al., 2007; Unruh, 2002; Shorr et al., 2002, 2008).</p>

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		<p>In quarter 3 of 2009, fall rates for nursing units in participating NDNQI hospitals averaged 3.2 per 1000 patient days (median = 2.8 per 1000 patient days). About 30% of falls result in injury disability or death (Shorr, 2008) – particularly in older adults. Injury falls lead to as much as a 61% increase in patient-care costs and lengthen a patient’s hospital stay (Fitzpatrick, 2011). Jorgensen (2011) estimated that by 2020 the direct and indirect costs of injuries related to falls will reach \$54.9 billion. In addition injury falls are a significant source of liability for hospitals.</p> <p>Agnostini, J.V., Baker, D.I., &amp; Bogardus, S.T. (2001). Prevention of falls in hospitalized and institutionalized older people. In Making health care safer: A critical analysis of patient safety practices (pp.281-299). Evidence Report/Technology Assessment Number 43, AHRQ publication No. 01-E058. Rockville, MD: Agency for Healthcare Research and Quality.</p> <p>Fitzpatrick, M.A. (2011, March). Meeting the challenge of fall reduction [Supplement]. American Nurse Today, p. 1.</p> <p>Jorgensen, J. (2011, March). Reducing patient falls: A call to action [Supplement]. American Nurse Today, p. 2-3.</p> <p>National Priorities Partnership. (2011, September). Input to the Secretary of Health and Human Services on Priorities for the National Quality Strategy. Retrieved from: <a href="http://www.qualityforum.org/Home.aspx">http://www.qualityforum.org/Home.aspx</a></p> <p>Oliver, D., Connelly, J.B., Victor, C.R. et al. (2007). Strategies to prevent falls and fractures in hospitals and care homes and effect of cognitive impairment. 384, 82.</p> <p>Shorr, R.I., Guillen, M.k. Rosenblatt, L.C. (2002). Restraint use, restrain orders, and the risk of falls in hospitalized patients. Journal of the American Geriatric Society, 50, 526-529.</p> <p>Shorr, R.I., Mion, L.C., Chandler, M., et al. (2008). Improving the capture of fall events in hospitals: Combining a service for evaluating inpatient falls with an incident report system. Journal of the American Geriatric Society, 56, 701-704.</p> <p>Unruh, L. (2002). Trends in adverse events in hospitalized patients. Journal of Healthcare Quality, 24, 4-10.</p>
X3701	Hospital-Wide All-Cause Unplanned Readmission Hybrid eMeasure	<p>Currently, the Centers for Medicare &amp; Medicaid Services (CMS) publicly reports risk-standardized readmission rates (RSRRs) for several conditions, including acute myocardial infarction (AMI), heart failure (HF), pneumonia, and hip and knee arthroplasty. CMS has also developed hospital readmission measures for stroke and chronic obstructive pulmonary disease (COPD). While it is helpful to assess readmission rates for specific groups of patients, these conditions account for only a small proportion of total readmissions. In 2013, CMS began publicly reporting a hospital-wide, all-condition readmission measure which provides a broader assessment of the quality of care at hospitals. This measure, which uses the same cohort and outcome definitions as the proposed eMeasure, includes 93% of admissions to acute care non-federal hospitals of Medicare Fee-for-Service patients over age 65 who are discharged alive to the non-acute care setting. The measure captures 92% of readmissions following eligible</p>

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		<p>admissions.</p> <p>The proposed measure will build on the hospital-wide readmission measure by using clinical data elements derived from electronic health records (EHR), such as laboratory test values and vital signs, to risk adjust for patient-level factors that influence readmission. The proliferation of EHR systems and standardization of extraction and reporting of clinical data for quality measurement provide an opportunity to integrate these data into measures of hospital performance. This effort is also responsive to the preference expressed by the clinical community for the use of clinical data to adjust for patients' severity of illness in hospital outcome measures.</p>
X1234	Timely Evaluation of High-Risk Individuals in the Emergency Department	<p>This is a new eCQM that assesses a different aspect of ED provider care, and specifically assesses provider timeliness to evaluation.</p> <p>The anticipated effect of implementing this measure would be to reduce the time for high risk patients to be seen by a physician in the emergency department and thereby reduce adverse events (i.e., morbidity and mortality). High-risk individuals are identified by assignment of the highest or most urgent score from a valid triage system.</p>
X3323	Adverse Drug Events: - Inappropriate Renal Dosing of Anticoagulants	<p>Additional process measure to assess medication adverse drug event associated with widely used anticoagulants.</p> <p>The anticipated effect of implementing this measure would be to reduce or eliminate inpatient anticoagulant dosing errors that could lead to adverse drug events (ADEs) for patients with renal impairment. Anticoagulants are one of three high risk drug classes targeted in the National Action Plan for Adverse Drug Event Prevention.</p>
X1970	Perinatal Care Cesarean section (PC O2) Nulliparous women with a term, singleton baby in vertex position delivered by cesarean section	<p>PC O2 is newly specified for electronic health records.</p> <p>Rationale: The removal of any pressure to not perform a cesarean birth has led to a skyrocketing of hospital, state and national cesarean section (CS) rates. Some hospitals now have CS rates over 50%. Hospitals with CS rates at 15-20% have infant outcomes that are just as good and better maternal outcomes (Gould et al., 2004). There are no data that higher rates improve any outcomes, yet the CS rates continue to rise. This measure seeks to focus attention on the most variable portion of the CS epidemic, the term labor CS in nulliparous women. This population segment accounts for the large majority of the variable portion of the CS rate, and is the area most affected by subjectivity.</p> <p>As compared to other CS measures, what is different about NTSV CS rate (Low-risk Primary CS in first births) is that there are clear cut quality improvement activities that can be done to address the differences. Main et al. (2006) found that over 60% of the variation among hospitals can be attributed to first birth labor induction rates and first birth early labor admission rates. The results showed if labor was forced when the cervix was not ready the</p>

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		<p>outcomes were poorer. Alfirevic et al. (2004) also showed that labor and delivery guidelines can make a difference in labor outcomes. Many authors have shown that physician factors, rather than patient characteristics or obstetric diagnoses are the major driver for the difference in rates within a hospital (Berkowitz, et al., 1989; Goyert et al., 1989; Luthy et al., 2003). The dramatic variation in NTSV rates seen in all populations studied is striking according to Menacker (2006). Hospitals within a state (Coonrod et al., 2008; California Office of Statewide Hospital Planning and Development [OSHPD], 2007) and physicians within a hospital (Main, 1999) have rates with a 3-5 fold variation. Available at: <a href="https://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/MMS/CallforPublicComment.html">https://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/MMS/CallforPublicComment.html</a>.</p>
E0294	Patient Information	<p>Patients who are transferred from an Emergency Department to another acute facility are excluded from the calculation of most national quality measures, such as the Hospital Compare measures. In addition, limited attention has been paid to the development and implementation of quality measures specifically focused on patient transfers between Emergency Departments and other facilities. This type of measure is important for all healthcare facilities, but is especially important for small rural hospitals, which transfer a higher proportion of Emergency Department patients to other hospitals than do larger urban facilities (Newgard CD 2006, Wakefield DS 2004, Ellerbeck EF 2004, Baldwin LM 2004, Westfall JM 2006).</p> <p>Communication problems are a major contributing factor to adverse events in hospitals, accounting for 65% of sentinel events tracked by the Joint Commission (JCAHO 2007). In addition, research indicates that deficits exist in the transfer of patient information between hospitals and primary care physicians in the community (Kripalani S 2007), and between hospitals and long term facilities (Cortes T 2004). The Joint Commission has adopted National Patient Safety Goal #2, "Improve the Effectiveness of Communication Among Caregivers." Requirement 2E for this goal requires all accredited hospitals to implement a standardized approach to hand-off communications, including nursing and physician hand-offs from the emergency department to inpatient units, other hospitals, and other types of health care facilities. The process must include a method of communicating up-to-date information regarding the patient's care, treatment and services, condition and any recent or anticipated changes (JCAHO-2 2007).</p> <ol style="list-style-type: none"> <li>1. Leape, L., Brennan, T., Laird, N. et al. The Nature of Adverse Events in Hospitalized Patients. Results of the Harvard Medical Practice Study II. <i>New England Journal of Medicine</i> 324:377-384, 1991.</li> <li>2. Thomas, E., Studdert, D., Burstin, H. et al. Incidence and Types of Adverse Events and Negligent Care in Utah and Colorado. <i>Medical Care</i> 38:261-271, 2000.</li> <li>3. Schenkel, S. Promoting Patient Safety and Preventing Medical Error in Emergency Departments. <i>Academic Emergency Medicine</i> 7:1204-1222, 2000.</li> <li>4. Welch, S., Augustine, J., Camago, C. and Reese, C. Emergency Department Performance Measures and</li> </ol>

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		<p>Benchmarking Summit. Academic Emergency Medicine, 13(10):1074-1080, 2006.</p> <p>5. Newgard CD, McConnell KJ, Hedges JR. Variability of trauma transfer practices among non-tertiary care hospital emergency departments. . Academic Emergency Medicine 13:746-754, 2006.</p> <p>6. Wakefield DS, Ward M, Miller T, et al. Intensive care unit utilization and interhospital transfers as potential indicators of rural hospital quality. Journal of Rural Health. 20:394-400, 2004.</p> <p>7. Ellerbeck EF, Bhimaraj A, Perpich D. Organization of care for acute myocardial infarction in rural and urban hospitals in Kansas. Journal of Rural Health. 20:363-367, 2004.</p> <p>8. Baldwin LM, MacLehose RF, Hart LG et al. Quality of care for acute myocardial infarction in rural and urban US hospitals. Journal of Rural Health, 20:99-108, 2004.</p> <p>9. Westfall JM, Van Vorst RF, McGloin J, Selker HP. Triage and diagnosis of chest pain in rural hospitals: Implementation of the ACI-TIPI in the High Plains Research Network. Annals of Family Medicine. 4:153-158, 2006.</p> <p>10. Joint Commission on Accreditation of Healthcare Organizations. Sentinel Events Statistics. Available at: <a href="http://www.jointcommission.org/SentinelEvents/Statistics/">http://www.jointcommission.org/SentinelEvents/Statistics/</a>. Accessed July 18, 2007.</p> <p>11. Kripalani, S., LeFevre, F., Phillips, C. et al. Deficits in Communication and Information Transfer between Hospital-Based and Primary Care Physicians: Implications for Patient Safety and Continuity of Care. JAMA 297(8):831-841, 2007.</p> <p>12. Cortes T., Wexler S. and Fitzpatrick J. The transition of elderly patients between hospitals and nursing homes. Improving nurse-to-nurse communication. Journal of Gerontological Nursing. 30(6):10-5, 2004.</p> <p>13. Joint Commission on Accreditation of Healthcare Organizations. 2008 National Patient Safety Goals. Available at: <a href="http://www.jointcommission.org/PatientSafety/NationalPatientSafetyGoals/08_hap_npsgs.htm">http://www.jointcommission.org/PatientSafety/NationalPatientSafetyGoals/08_hap_npsgs.htm</a>. Accessed July 18, 2007.</p>
X607	Use of Brain Computed Tomography (CT) in the Emergency Department for Atraumatic Headache	Development of efficiency measures is one of the primary objectives highlighted by both the 2012 report on the National Quality Strategy and the Centers for Medicare & Medicaid Services (CMS). This measure's concept is similar to one which was identified within the 2011 release of the Choosing Wisely campaign recommendations as an area of concern. Moreover, there is evidence that diagnostic imaging for headaches is overused, with only 2% of patient scans yielding pathology. Unnecessary imaging is costly and needlessly exposes patients to radiation.
E0295	Physician Information	Patients who are transferred from an Emergency Department to another acute facility are excluded from the calculation of most national quality measures, such as the Hospital Compare measures. In addition, limited attention



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		<p>has been paid to the development and implementation of quality measures specifically focused on patient transfers between Emergency Departments and other facilities. This type of measure is important for all healthcare facilities, but is especially important for small rural hospitals, which transfer a higher proportion of Emergency Department patients to other hospitals than do larger urban facilities (Newgard CD 2006, Wakefield DS 2004, Ellerbeck EF 2004, Baldwin LM 2004, Westfall JM 2006).</p> <p>Communication problems are a major contributing factor to adverse events in hospitals, accounting for 65% of sentinel events tracked by the Joint Commission (JCAHO 2007). In addition, research indicates that deficits exist in the transfer of patient information between hospitals and primary care physicians in the community (Kripalani S 2007), and between hospitals and long term facilities (Cortes T 2004). The Joint Commission has adopted National Patient Safety Goal #2, "Improve the Effectiveness of Communication Among Caregivers." Requirement 2E for this goal requires all accredited hospitals to implement a standardized approach to hand-off communications, including nursing and physician hand-offs from the emergency department to inpatient units, other hospitals, and other types of health care facilities. The process must include a method of communicating up-to-date information regarding the patient's care, treatment and services, condition and any recent or anticipated changes (JCAHO-2 2007).</p> <ol style="list-style-type: none"> <li>1. Leape, L., Brennan, T., Laird, N. et al. The Nature of Adverse Events in Hospitalized Patients. Results of the Harvard Medical Practice Study II. <i>New England Journal of Medicine</i> 324:377-384, 1991.</li> <li>2. Thomas, E., Studdert, D., Burstin, H. et al. Incidence and Types of Adverse Events and Negligent Care in Utah and Colorado. <i>Medical Care</i> 38:261-271, 2000.</li> <li>3. Schenkel, S. Promoting Patient Safety and Preventing Medical Error in Emergency Departments. <i>Academic Emergency Medicine</i> 7:1204-1222, 2000.</li> <li>4. Welch, S., Augustine, J., Camago, C. and Reese, C. Emergency Department Performance Measures and Benchmarking Summit. <i>Academic Emergency Medicine</i>, 13(10):1074-1080, 2006.</li> <li>5. Newgard CD, McConnell KJ, Hedges JR. Variability of trauma transfer practices among non-tertiary care hospital emergency departments. <i>Academic Emergency Medicine</i> 13:746-754, 2006.</li> <li>6. Wakefield DS, Ward M, Miller T, et al. Intensive care unit utilization and interhospital transfers as potential indicators of rural hospital quality. <i>Journal of Rural Health</i>. 20:394-400, 2004.</li> <li>7. Ellerbeck EF, Bhimaraj A, Perpich D. Organization of care for acute myocardial infarction in rural and urban hospitals in Kansas. <i>Journal of Rural Health</i>. 20:363-367, 2004.</li> <li>8. Baldwin LM, MacLehose RF, Hart LG et al. Quality of care for acute myocardial infarction in rural and urban US hospitals. <i>Journal of Rural Health</i>, 20:99-108, 2004.</li> <li>9. Westfall JM, Van Vorst RF, McGloin J, Selker HP. Triage and diagnosis of chest pain in rural hospitals: Implementation of the ACI-TIPI in the High Plains Research Network. <i>Annals of Family Medicine</i>. 4:153-158, 2006.</li> </ol>



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		<p>10. Joint Commission on Accreditation of Healthcare Organizations. Sentinel Events Statistics. Available at: <a href="http://www.jointcommission.org/SentinelEvents/Statistics/">http://www.jointcommission.org/SentinelEvents/Statistics/</a>. Accessed July 18, 2007.</p> <p>11. Kripalani, S., LeFevre, F., Phillips, C. et al. Deficits in Communication and Information Transfer between Hospital-Based and Primary Care Physicians: Implications for Patient Safety and Continuity of Care. JAMA 297(8):831-841, 2007.</p> <p>12. Cortes T., Wexler S. and Fitzpatrick J. The transition of elderly patients between hospitals and nursing homes. Improving nurse-to-nurse communication. Journal of Gerontological Nursing. 30(6):10-5, 2004.</p> <p>13. Joint Commission on Accreditation of Healthcare Organizations. 2008 National Patient Safety Goals. Available at: <a href="http://www.jointcommission.org/PatientSafety/NationalPatientSafetyGoals/08_hap_npsgs.htm">http://www.jointcommission.org/PatientSafety/NationalPatientSafetyGoals/08_hap_npsgs.htm</a>. Accessed July 18, 2007.</p>
E0297	Procedures and Tests	<p>Patients who are transferred from an Emergency Department to another acute facility are excluded from the calculation of most national quality measures, such as the Hospital Compare measures. In addition, limited attention has been paid to the development and implementation of quality measures specifically focused on patient transfers between Emergency Departments and other facilities. This type of measure is important for all healthcare facilities, but is especially important for small rural hospitals, which transfer a higher proportion of Emergency Department patients to other hospitals than do larger urban facilities (Newgard CD 2006, Wakefield DS 2004, Ellerbeck EF 2004, Baldwin LM 2004, Westfall JM 2006).</p> <p>Communication problems are a major contributing factor to adverse events in hospitals, accounting for 65% of sentinel events tracked by the Joint Commission (JCAHO 2007). In addition, research indicates that deficits exist in the transfer of patient information between hospitals and primary care physicians in the community (Kripalani S 2007), and between hospitals and long term facilities (Cortes T 2004). The Joint Commission has adopted National Patient Safety Goal #2, "Improve the Effectiveness of Communication Among Caregivers." Requirement 2E for this goal requires all accredited hospitals to implement a standardized approach to hand-off communications, including nursing and physician hand-offs from the emergency department to inpatient units, other hospitals, and other types of health care facilities. The process must include a method of communicating up-to-date information regarding the patient's care, treatment and services, condition and any recent or anticipated changes (JCAHO-2 2007).</p> <p>1. Leape, L., Brennan, T., Laird, N. et al. The Nature of Adverse Events in Hospitalized Patients. Results of the Harvard Medical Practice Study II. New England Journal of Medicine 324:377-384, 1991.</p> <p>2. Thomas, E., Studdert, D., Burstin, H. et al. Incidence and Types of Adverse Events and Negligent Care in Utah and Colorado. Medical Care 38:261-271, 2000.</p>

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		<p>3. Schenkel, S. Promoting Patient Safety and Preventing Medical Error in Emergency Departments. Academic Emergency Medicine 7:1204-1222, 2000.</p> <p>4. Welch, S., Augustine, J., Camago, C. and Reese, C. Emergency Department Performance Measures and Benchmarking Summit. Academic Emergency Medicine, 13(10):1074-1080, 2006.</p> <p>5. Newgard CD, McConnell KJ, Hedges JR. Variability of trauma transfer practices among non-tertiary care hospital emergency departments. . Academic Emergency Medicine 13:746-754, 2006.</p> <p>6. Wakefield DS, Ward M, Miller T, et al. Intensive care unit utilization and interhospital transfers as potential indicators of rural hospital quality. Journal of Rural Health. 20:394-400, 2004.</p> <p>7. Ellerbeck EF, Bhimaraj A, Perpich D. Organization of care for acute myocardial infarction in rural and urban hospitals in Kansas. Journal of Rural Health. 20:363-367, 2004.</p>
E0296	Nursing Information	<p>Patients who are transferred from an Emergency Department to another acute facility are excluded from the calculation of most national quality measures, such as the Hospital Compare measures. In addition, limited attention has been paid to the development and implementation of quality measures specifically focused on patient transfers between Emergency Departments and other facilities. This type of measure is important for all healthcare facilities, but is especially important for small rural hospitals, which transfer a higher proportion of Emergency Department patients to other hospitals than do larger urban facilities (Newgard CD 2006, Wakefield DS 2004, Ellerbeck EF 2004, Baldwin LM 2004, Westfall JM 2006).</p> <p>Communication problems are a major contributing factor to adverse events in hospitals, accounting for 65% of sentinel events tracked by the Joint Commission (JCAHO 2007). In addition, research indicates that deficits exist in the transfer of patient information between hospitals and primary care physicians in the community (Kripalani S 2007), and between hospitals and long term facilities (Cortes T 2004). The Joint Commission has adopted National Patient Safety Goal #2, "Improve the Effectiveness of Communication Among Caregivers." Requirement 2E for this goal requires all accredited hospitals to implement a standardized approach to hand-off communications, including nursing and physician hand-offs from the emergency department to inpatient units, other hospitals, and other types of health care facilities. The process must include a method of communicating up-to-date information regarding the patient's care, treatment and services, condition and any recent or anticipated changes (JCAHO-2 2007).</p> <p>1. Leape, L., Brennan, T., Laird, N. et al. The Nature of Adverse Events in Hospitalized Patients. Results of the Harvard Medical Practice Study II. New England Journal of Medicine 324:377-384, 1991.</p> <p>2. Thomas, E., Studdert, D., Burstin, H. et al. Incidence and Types of Adverse Events and Negligent Care in Utah and Colorado. Medical Care 38:261-271, 2000.</p> <p>3. Schenkel, S. Promoting Patient Safety and Preventing Medical Error in Emergency Departments. Academic</p>

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		<p>Emergency Medicine 7:1204-1222, 2000.</p> <p>4. Welch, S., Augustine, J., Camago, C. and Reese, C. Emergency Department Performance Measures and Benchmarking Summit. Academic Emergency Medicine, 13(10):1074-1080, 2006.</p> <p>5. Newgard CD, McConnell KJ, Hedges JR. Variability of trauma transfer practices among non-tertiary care hospital emergency departments. . Academic Emergency Medicine 13:746-754, 2006.</p> <p>6. Wakefield DS, Ward M, Miller T, et al. Intensive care unit utilization and interhospital transfers as potential indicators of rural hospital quality. Journal of Rural Health. 20:394-400, 2004.</p> <p>7. Ellerbeck EF, Bhimaraj A, Perpich D. Organization of care for acute myocardial infarction in rural and urban hospitals in Kansas. Journal of Rural Health. 20:363-367, 2004.</p>
E0292	Vital Signs	<p>Patients who are transferred from an Emergency Department to another acute facility are excluded from the calculation of most national quality measures, such as the Hospital Compare measures. In addition, limited attention has been paid to the development and implementation of quality measures specifically focused on patient transfers between Emergency Departments and other facilities. This type of measure is important for all healthcare facilities, but is especially important for small rural hospitals, which transfer a higher proportion of Emergency Department patients to other hospitals than do larger urban facilities (Newgard CD 2006, Wakefield DS 2004, Ellerbeck EF 2004, Baldwin LM 2004, Westfall JM 2006).</p> <p>Communication problems are a major contributing factor to adverse events in hospitals, accounting for 65% of sentinel events tracked by the Joint Commission (JCAHO 2007). In addition, research indicates that deficits exist in the transfer of patient information between hospitals and primary care physicians in the community (Kripalani S 2007), and between hospitals and long term facilities (Cortes T 2004). The Joint Commission has adopted National Patient Safety Goal #2, "Improve the Effectiveness of Communication Among Caregivers." Requirement 2E for this goal requires all accredited hospitals to implement a standardized approach to hand-off communications, including nursing and physician hand-offs from the emergency department to inpatient units, other hospitals, and other types of health care facilities. The process must include a method of communicating up-to-date information regarding the patient's care, treatment and services, condition and any recent or anticipated changes (JCAHO-2 2007).</p> <p>1. Leape, L., Brennan, T., Laird, N. et al. The Nature of Adverse Events in Hospitalized Patients. Results of the Harvard Medical Practice Study II. New England Journal of Medicine 324:377-384, 1991.</p> <p>2. Thomas, E., Studdert, D., Burstin, H. et al. Incidence and Types of Adverse Events and Negligent Care in Utah and Colorado. Medical Care 38:261-271, 2000.</p> <p>3. Schenkel, S. Promoting Patient Safety and Preventing Medical Error in Emergency Departments. Academic Emergency Medicine 7:1204-1222, 2000.</p>

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		<p>4. Welch, S., Augustine, J., Camago, C. and Reese, C. Emergency Department Performance Measures and Benchmarking Summit. <i>Academic Emergency Medicine</i>, 13(10):1074-1080, 2006.</p> <p>5. Newgard CD, McConnell KJ, Hedges JR. Variability of trauma transfer practices among non-tertiary care hospital emergency departments. . <i>Academic Emergency Medicine</i> 13:746-754, 2006.</p> <p>6. Wakefield DS, Ward M, Miller T, et al. Intensive care unit utilization and interhospital transfers as potential indicators of rural hospital quality. <i>Journal of Rural Health</i>. 20:394-400, 2004.</p> <p>7. Ellerbeck EF, Bhimaraj A, Perpich D. Organization of care for acute myocardial infarction in rural and urban hospitals in Kansas. <i>Journal of Rural Health</i>. 20:363-367, 2004.</p> <p>8. Baldwin LM, MacLehose RF, Hart LG et al. Quality of care for acute myocardial infarction in rural and urban US hospitals. <i>Journal of Rural Health</i>, 20:99-108, 2004.</p> <p>9. Westfall JM, Van Vorst RF, McGloin J, Selker HP. Triage and diagnosis of chest pain in rural hospitals: Implementation of the ACI-TIPI in the High Plains Research Network. <i>Annals of Family Medicine</i>. 4:153-158, 2006.</p> <p>10. Joint Commission on Accreditation of Healthcare Organizations. Sentinel Events Statistics. Available at: <a href="http://www.jointcommission.org/SentinelEvents/Statistics/">http://www.jointcommission.org/SentinelEvents/Statistics/</a>. Accessed July 18, 2007.</p> <p>11. Kripalani, S., LeFevre, F., Phillips, C. et al. Deficits in Communication and Information Transfer between Hospital-Based and Primary Care Physicians: Implications for Patient Safety and Continuity of Care. <i>JAMA</i> 297(8):831-841, 2007.</p> <p>12. Cortes T., Wexler S. and Fitzpatrick J. The transition of elderly patients between hospitals and nursing homes. Improving nurse-to-nurse communication. <i>Journal of Gerontological Nursing</i>. 30(6):10-5, 2004.</p> <p>13. Joint Commission on Accreditation of Healthcare Organizations. 2008 National Patient Safety Goals. Available at: <a href="http://www.jointcommission.org/PatientSafety/NationalPatientSafetyGoals/08_hap_npsgs.htm">http://www.jointcommission.org/PatientSafety/NationalPatientSafetyGoals/08_hap_npsgs.htm</a>. Accessed July 18, 2007.</p>
E1822	External Beam Radiotherapy for Bone Metastases	<p>The measure is developed from the recommendations by the clinical-practice guideline. This measure is intended to close the gap in the demonstrated treatment variation and ensure the use of an appropriate fractionation schedule. The measure also takes into account the effective schedule for relieving pain from bone metastases, patient preferences and the time and cost effectiveness.</p> <p>Population: The measure is applicable to all patients, regardless of age with a diagnosis of painful bone metastases who are prescribed EBRT unless there is a documented exclusion as specified.</p> <p>1. Jeremic B, Shibamoto Y, Acimovic L, et al. A randomized trial of three single-dose radiation therapy regimens in the treatment of metastatic bone pain. <i>Int J Radiat Oncol Biol Phys</i> 1998;42:161–167.</p> <p>2. Bone Pain Trial Working Party. 8 Gy single fraction radiotherapy for the treatment of metastatic skeletal pain:</p>

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		<p>Randomized comparison with a multifraction schedule over 12 months of patient follow-up. Radiother Oncol 1999;52:111–121.</p> <p>3. Roos D, Turner S, O’Brien P, et al. Randomized trial of 8 Gy in 1 versus 20 Gy in 5 fractions of radiotherapy for neuropathic pain due to bone metastases (Trans-Tasman Radiation Oncology Group, TROG 96.05). Radiother Oncol 2005;75: 54–63.</p> <p>4. Hartsell W, Konski A, Scott C, et al. Randomized trial of short versus long-course radiotherapy for palliation of painful bone metastases. J Natl Cancer Inst 2005;97:798–804.</p>
E0293	Medication Information	<p>Patient safety studies have identified the Emergency Department as the location within a hospital that has the highest percentage of preventable and negligent adverse events.1-2 Increasing attention is being paid to prevention of medical errors in Emergency Department settings, but considerable work still needs to be done to develop performance measures for Emergency Department care.3-4</p> <p>Patients who are transferred from an Emergency Department to another facility are excluded from the calculation of most national quality measures, such as the Hospital Compare measures. In addition, limited attention has been paid to the development and implementation of quality measures specifically focused on patient transfers between Emergency Departments and other facilities. This type of measure is important for all healthcare facilities, but is especially important for small rural hospitals, which transfer a higher proportion of Emergency Department patients to other facilities than do larger urban facilities.5-9</p> <p>1. Leape, L., Brennan, T., Laird, N. et al. The Nature of Adverse Events in Hospitalized Patients. Results of the Harvard Medical Practice Study II. New England Journal of Medicine 324:377-384, 1991.</p> <p>2. Thomas, E., Studdert, D., Burstin, H. et al. Incidence and Types of Adverse Events and Negligent Care in Utah and Colorado. Medical Care 38:261-271, 2000.</p> <p>3. Schenkel, S. Promoting Patient Safety and Preventing Medical Error in Emergency Departments. Academic Emergency Medicine 7:1204-1222, 2000.</p> <p>4. Welch, S., Augustine, J., Camago, C. and Reese, C. Emergency Department Performance Measures and Benchmarking Summit. Academic Emergency Medicine, 13(10):1074-1080, 2006.</p> <p>5. Newgard CD, McConnell KJ, Hedges JR. Variability of trauma transfer practices among non-tertiary care hospital emergency departments. . Academic Emergency Medicine 13:746-754, 2006.</p> <p>6. Wakefield DS, Ward M, Miller T, et al. Intensive care unit utilization and interhospital transfers as potential indicators of rural hospital quality. Journal of Rural Health. 20:394-400, 2004.</p> <p>7. Ellerbeck EF, Bhimaraj A, Perpich D. Organization of care for acute myocardial infarction in rural and urban</p>

MUC ID	Measure Title	Rationale
		<p>hospitals in Kansas. Journal of Rural Health. 20:363-367, 2004.</p> <p>8. Baldwin LM, MacLehose RF, Hart LG et al. Quality of care for acute myocardial infarction in rural and urban US hospitals. Journal of Rural Health, 20:99-108, 2004.</p> <p>9. Westfall JM, Van Vorst RF, McGloin J, Selker HP. Triage and diagnosis of chest pain in rural hospitals: Implementation of the ACI-TIPI in the High Plains Research Network. Annals of Family Medicine. 4:153-158, 2006.</p> <p>10. Joint Commission on Accreditation of Healthcare Organizations. Sentinel Events Statistics. Available at: <a href="http://www.jointcommission.org/SentinelEvents/Statistics/">http://www.jointcommission.org/SentinelEvents/Statistics/</a>. Accessed July 18, 2007.</p> <p>11. Kripalani, S., LeFevre, F., Phillips, C. et al. Deficits in Communication and Information Transfer between Hospital-Based and Primary Care Physicians: Implications for Patient Safety and Continuity of Care. JAMA 297(8):831-841, 2007.</p> <p>12. Cortes T., Wexler S. and Fitzpatrick J. The transition of elderly patients between hospitals and nursing homes. Improving nurse-to-nurse communication. Journal of Gerontological Nursing. 30(6):10-5, 2004.</p> <p>13. Joint Commission on Accreditation of Healthcare Organizations. 2008 National Patient Safety Goals. Available at: <a href="http://www.jointcommission.org/PatientSafety/NationalPatientSafetyGoals/08_hap_npsgs.htm">http://www.jointcommission.org/PatientSafety/NationalPatientSafetyGoals/08_hap_npsgs.htm</a>. Accessed July 18, 2007.</p>
E0291	Administrative Communication	<p>Communication problems are a major contributing factor to adverse events in hospitals, accounting for 65% of sentinel events tracked by the Joint Commission (JCAHO 2007). In addition, research indicates that deficits exist in the transfer of patient information between hospitals and primary care physicians in the community (Kripalani S 2007), and between hospitals and long term facilities (Cortes T 2004). The Joint Commission has adopted National Patient Safety Goal #2, "Improve the Effectiveness of Communication Among Caregivers." Requirement 2E for this goal requires</p>
E1898	Health literacy measure derived from the health literacy domain of the C-CAT	<p>Evidence generated through national validation study of C-CAT instrument, including surveys of patients and staff. Results of study demonstrated that better scores on the measure of health literacy is correlated to important indicators of health care quality. Multivariate analysis showed that a 5-point increase in the measure results in more than a 1/3 greater odds that patients would report receiving high-quality medical care (OR 1.40, 95% CI 1.22-1.61) and a more than 25% greater odds that patients would report a belief that their medical records are kept private (OR 1.28, 95% CI 1.10-1.47). Likewise, a 5-point increase in the measure score is correlated with a more than 25% decrease in the odds a patient would believe that a mistake made in their care would be hidden from them (OR 0.73, 95% CI 0.62-0.86).</p> <p>Additional evidence of the importance of health literacy to patient-centered communication from Improving Communication -- Improving Care: How Health Care Organizations Can Ensure Effective, Patient-Centered</p>

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		<p>Communication with People from Diverse Populations.  <a href="http://www.ama-assn.org/resources/doc/ethics/pcc-consensus-report.pdf">http://www.ama-assn.org/resources/doc/ethics/pcc-consensus-report.pdf</a></p>
X2698	AMI episode of care (inpatient hospitalization + 30 days post-discharge)	<p>This is a high priority (per episode) resource use measure. AMI is a condition with a substantial range in costs of care and for which there are well-established publicly reported quality measures; therefore, it is an ideal condition for assessing relative value for an episode of care that begins with an acute hospitalization. Moreover, AMI is one of the leading cause of hospitalization for Americans over 65 years old and costs the US roughly \$18 billion annually. Medicare payments are difficult to interpret in isolation. Some high payment hospitals may have better clinical outcomes when compared with low payment hospitals; other high payment hospitals may not. For this reason, the value of hospital care is more clearly assessed when pairing hospital payments with hospital quality. A measure of payments for Medicare patients during an episode of care for AMI aligned with current quality of care measures will facilitate profiling hospital value (payments and quality). This measure, which uses standardized payments, reflects differences in the management of care for patients with AMI both during hospitalization and immediately post-discharge. By focusing on one specific condition, value assessments may provide actionable feedback to hospitals and incentivize targeted improvements in care. This measure is harmonized with NQF E0230.</p>
E0351	Death among surgical inpatients with serious, treatable complications (PSI 4)	<p>Silber and colleagues have published a series of studies establishing the construct validity of failure to rescue rates through their associations with hospital characteristics and other measures of hospital performance. Among patients admitted for cholecystectomy and transurethral prostatectomy, failure to rescue was independent of severity of illness at admission, but was significantly associated with the presence of surgical housestaff and a lower percentage of board-certified anesthesiologists.<sup>31</sup> The adverse occurrence rate was independent of this hospital characteristic. In a larger sample of 74,647 patients who underwent general surgical procedures in 1991-92, lower failure to rescue rates were found at hospitals with high ratios of registered nurses to beds.<sup>68</sup> Failure rates were strongly associated with risk adjusted mortality rates, as expected, but not with complication rates.<sup>143</sup> Finally, among 16,673 patients admitted for coronary artery bypass surgery, failure rates were lower (whereas complication rates were higher) at hospitals with magnetic resonance imaging facilities, bone marrow transplantation units, or approved residency training programs.</p> <p>More recently, Needleman and Buerhaus, confirmed that higher registered nurse staffing (RN hours/adjusted patient day) and better nursing skill mix (RN hours/licensed nurse hours) were consistently associated with lower failure to rescue rates among major surgery patients from 799 hospitals in 11 states in 1997, even using administrative data to define complications. An increase from the 25th to the 75th percentile on these two measures of staffing was associated with 5.9% (95% CI, 1.5% to 10.2%) and 3.9% (95% CI, -1.1% to 8.8%) decreases, respectively, in the rate of failure-to-rescue among major surgery patients.<sup>138</sup> These associations were inconsistent</p>



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		among medical patients, in that nursing skill mix was associated with the failure-to-rescue rate (rate ratio 0.81, 95% CI 0.66-1.00) but aggregate registered nurse staffing was not (rate ratio 1.00, 95% CI 0.99-1.01). An increase from the 25th to the 75th percentile on nursing skill mix was associated with a 2.5% (95% CI, 0.0% to 5.0%) decrease in the failure-to-rescue rate among medical patients.
E1893	Hospital 30-Day, All-Cause, Risk-Standardized Mortality Rate (RSMR) following Chronic Obstructive Pulmonary Disease (COPD) Hospitalization	<p>The prevalence of heart failure (HF) in the United States (U.S.) is high, with 5.2 million Americans currently diagnosed with this condition (Rosamond et al., 2007). HF incidence increases with age and approaches 10 per 1000 population after age 65 (Rosamond et al., 2007). HF is one of the most common causes for hospital admissions among Medicare beneficiaries (Merrill and Elixhauser, 2005) and hospital discharges for HF increased 175% from 1979 to 2004 (Rosamond et al., 2007). A recent study reported that more than 2.5 million Medicare Fee-for-Service (FFS) beneficiaries were hospitalized for HF during 2001-2005, and more than 1 in 10 Medicare beneficiaries died within 30 days of hospitalization (Curtis et al., 2008). Thirty-day HF mortality rates vary considerably across hospitals (Rosenthal et al., 2000) and hospitals that perform well on the Hospital Quality Alliance (HQA) performance measures have lower risk-adjusted mortality rates (Jha et al., 2007).</p> <p>The high prevalence and considerable morbidity and mortality associated with HF create an economic burden on the healthcare system. In 2005, HF was the fifth most expensive condition treated in U.S. hospitals, accounting for 3.5% of the national hospital bill. It was also the second most expensive condition billed to Medicare that year, accounting for 5.5% of Medicare's hospital bill (Andrews and Elixhauser, 2007).</p> <p>Many current hospital interventions are known to decrease the risk of death within 30 days of hospital admission. Current process-based performance measures, however, cannot capture all the ways that care within the hospital might influence outcomes. As a result, many stakeholders, including patient organizations, are interested in outcomes measures that would permit groups of providers to assess their relative outcomes performance for the purpose of internal quality improvement or public reporting.</p> <p>Mortality of patients with HF represents a significant outcome potentially related to quality of care. This rate-based indicator identifies an undesirable outcome of care. High rates warrant investigation into the quality of care provided.</p>
E1663	SUB-2 Alcohol Use Brief Intervention Provided or Offered. SUB-2a Alcohol Use	Excessive use of alcohol and drugs has a substantial harmful impact on health and society in the United States. It is a drain on the economy, and a source of enormous personal tragedy (The National Quality Forum, A consensus Report, 2007). In 1998 the economic costs to society were 185 billion dollars for alcohol misuse and 143 billion dollars for drug misuse (Harwood 2000). Health care spending was 19 billion dollars for alcohol problems and 14 billion dollars was spent treating drug problems. Nearly a quarter of a trillion dollars per year in lost productivity is attributable to substance use. More than 537,000 die each year as a consequence of alcohol, drug, and tobacco use,



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	Brief Intervention Received.	making use of these substances the cause of one out of four deaths in the United States (Mokdad 2004). An estimated 22.6 million adolescents and adults meet criteria for a substance use disorder. In a multi-state study that screened 459,599 patients in general hospital and medical settings, 23% of patients screened positive (Madras 2009). Clinical trials have demonstrated that brief interventions, especially prior to the onset of addiction, significantly improve health and reduce costs, and that similar benefits occur in those with addictive disorders who are referred to treatment (Fleming 2002). In a study on the provision of evidence-based care and preventive services provided in hospitals for 30 different medical conditions, quality varied substantially according to diagnosis. Adherence to recommended practices for treatment of substance use ranked last, with only 10% of patients receiving proper care (Gentilello 2005). Currently, less than one in twenty patients with an addiction are referred for treatment (Gentilello 1999). Hospitalization provides a prime opportunity to address the entire spectrum of substance use problems within the health care system (Bernstein 2005).
E1656	TOB-3 Tobacco Use Treatment Provided or Offered at Discharge AND TOB-3a Tobacco Use Treatment at Discharge	Tobacco use is the single greatest cause of disease in the United States today and accounts for more than 435,000 deaths each year (CDC MMWR 2008; McGinnis 1993). Smoking is a known cause of multiple cancers, heart disease, and stroke, complications of pregnancy, chronic obstructive pulmonary disease, other respiratory problems, poorer wound healing, and many other diseases (DHHS 2004). Tobacco use creates a heavy cost to society as well as to individuals. Smoking-attributable health care expenditures are estimated at 96 billion dollars per year in direct medical expenses and 97 billion dollars in lost productivity (CDC 2007). There is strong and consistent evidence that tobacco dependence interventions, if delivered in a timely and effective manner, significantly reduce the smoker's risk of suffering from tobacco-related disease and improved outcomes for those already suffering from a tobacco-related disease (DHHS 2000; Baumeister 2007; Lightwood 2003 and 1997; Rasmussen 2005; Hurley 2005; Critchley 2004; Ford 2007; Rigotti 2008). Effective, evidence-based tobacco dependence interventions have been clearly identified and include clinician advice, individual, group, or telephone counseling, and use of FDA-approved medications. These treatments are clinically effective and extremely cost-effective relative to other commonly used disease prevention interventions and medical treatments. Hospitalization (both because hospitals are a tobacco-free environment and because patients may be more motivated to quit as a result of their illness) offers an ideal opportunity to provide cessation assistance that may promote the patient's medical recovery. Patients who receive even brief advice and intervention from their care providers are more likely to quit than those who receive no intervention. Studies indicate that the combination of counseling and medications is more effective for tobacco cessation than either medication or counseling alone, except in specific populations for which there is insufficient evidence of the effectiveness of the FDA-approved cessation medications. These populations include pregnant women, smokeless tobacco users, light smokers, and adolescents. Tobacco dependence should be viewed as a

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		chronic disease. The treatment of this chronic disease is most effective when the initial interventions provided in the hospital setting are continued upon discharge to other care settings.
S2634	IRF Functional Outcome Measure: Change in Mobility Score for Medical Rehabilitation Patients	<p>Given that the primary goal of rehabilitation is improvement in function, IRF clinicians have traditionally assessed and documented patients' functional status at admission and discharge to evaluate the effectiveness of the rehabilitation care provided to individual patients, as well as the effectiveness of the rehabilitation unit or hospital overall.</p> <p>Studies have shown differences in IRF patients' functional outcomes by geographic region, insurance type, and race/ethnicity after adjusting for key patient demographic characteristics and admission clinical status, which supports the need to monitor IRF patients' functional outcomes.</p>
S2636	IRF Functional Outcome Measure: Discharge Mobility Score for Medical Rehabilitation Patients	<p>Given that the primary goal of rehabilitation is improvement in function, IRF clinicians have traditionally assessed and documented patients' functional status at admission and at discharge to evaluate the effectiveness of the rehabilitation care provided to individual patients, as well as the effectiveness of the rehabilitation unit or hospital overall.</p> <p>Studies have shown differences in IRF patients' functional outcomes by geographic region, insurance type, and race/ethnicity after adjusting for key patient demographic characteristics and admission clinical status, which supports the need to monitor IRF patients' functional outcomes.</p>
S2635	IRF Functional Outcome Measure: Discharge Self-Care Score for Medical Rehabilitation Patients	<p>Given that the primary goal of rehabilitation is improvement in functional status, IRF clinicians have traditionally assessed and documented patients' functional status at admission and at discharge to evaluate the effectiveness of the rehabilitation care provided to individual patients, as well as the effectiveness of the rehabilitation unit or hospital overall.</p> <p>Studies have shown differences in IRF patients' functional outcomes by geographic region, insurance type, and race/ethnicity after adjusting for key patient demographic characteristics and admission clinical status, which supports the need to monitor IRF patients' functional outcomes.</p>
S2633	IRF Functional Outcome Measure: Change in Self-	<p>Given that the primary goal of rehabilitation is improvement in functional status, IRF clinicians have traditionally assessed and documented patients' functional status at admission and at discharge to evaluate the effectiveness of the rehabilitation care provided to individual patients, as well as the effectiveness of the rehabilitation unit or hospital overall.</p>

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	Care Score for Medical Rehabilitation Patients	Studies have shown differences in IRF patients' functional outcomes by geographic region, insurance type, and race/ethnicity after adjusting for key patient demographic characteristics and admission clinical status, which supports the need to monitor IRF patients' functional outcomes.
E0371	Venous Thromboembolism Prophylaxis	<p>The estimated annual incidence of deep-vein thrombosis (DVT) and pulmonary embolism (PE), known collectively as venous thromboembolism (VTE), is approximately 900,000 cases. Of these, approximately one third of the cases (300,000) are fatal PE, and the remaining two-thirds are non-fatal episodes of DVT or PE. The majority of fatal events occur as sudden or abrupt death, underscoring the importance of prevention as the most critical action step for reducing death from PE. Of the estimated 600,000 cases of non-fatal venous thromboembolism each year, about 60% are cases of DVT, and 40% are episodes PE. Among patients who present with symptomatic DVT as the chief presenting complaint, 50% or more have evidence of pulmonary embolism (mostly asymptomatic) by diagnostic imaging procedures such as radionuclide lung scanning or CT imaging .The incidence of venous thromboembolism increases markedly in patients of age 60 years or more. Approximately two-thirds of cases of DVT or PE are associated with recent hospitalization. This is consistent with the 2001 report by The Agency for Healthcare Research and Quality (AHRQ). AHRQ indicates that "the appropriate application of effective preventive measures in hospitals has major potential for improving patient safety by reducing the incidence of venous thromboembolism." Although the majority of cases of DVT and PE are associated with recent hospitalization, many of the patients present clinically after hospital discharge, because the length of stay for most surgeries and medical conditions has been markedly reduced in recent years. The aging of the United States population, the more extensive use of surgical procedures in older patients, and multiple hospital admissions of patients for the care of chronic conditions such as heart failure or diabetes, are strong factors fostering the potential for an increase in the incidence of DVT and PE in future years. Almost all hospitalized patients have at least one risk factor for VTE, and approximately 40% have three or more risk factors. Without thromboprophylaxis, the incidence of objectively confirmed, hospital-acquired DVT is approximately 10% to 40% among medical or general surgical patients and 40% to 60% following major orthopedic surgery.</p>
X3705	Compliance with Ventilator Process Elements during LTCH stay	<ol style="list-style-type: none"> <li>1. There is evidence for interventions developed to decrease incidence of ventilator-associated pneumonia and improve ventilator care</li> <li>2. VAP and VAE is associated with substantial morbidity, mortality, and excess healthcare costs.</li> <li>3. Patients who develop VAP incur an extra \$10K (2005) in hospital costs (Sadfar 2005).</li> <li>4. Based on an analysis of CY 2004 MedPAR data for Medicare beneficiaries, 25% of ventilated patients in LTCHs acquired VAP (Buczko 2009).</li> </ol>

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X3706	Ventilator Weaning (Liberation) Rate	<ol style="list-style-type: none"> <li>1. MedPAC analysis of the Medicare Provider Analysis and Review data found that 16 percent of LTCH patients used at least one ventilator-related service in 2012.</li> <li>2. In 2012, Respiratory diagnosis with ventilator support for 96 or more hours (MS-LTC-DRG-207) represented the most frequently occurring diagnosis among LTCH patients (11.3% of all discharges).</li> <li>3. Tracheostomy with ventilator support for 96 or more hours or primary diagnosis except face, mouth, and neck without major OR procedure (MS-LTC-DRG-4) represented an additional 1.3% of all LTCH discharges.</li> <li>4. These two diagnosis-related groups account for a total of nearly 18,000 LTCH discharges. <a href="http://www.medpac.gov/chapters/Mar14_Ch11.pdf">http://www.medpac.gov/chapters/Mar14_Ch11.pdf</a></li> <li>5. Weaning comprises 40 percent of the duration of mechanical ventilation. (Cite)</li> <li>6. Undue delay leads to excess stay, iatrogenic lung injury, unnecessary sedation, and even higher mortality. (McIntyre 2012)</li> <li>7. Complications of mechanical ventilation include respiratory muscle weakness, ventilator-associated pneumonia, upper airway pathology (Burns 2014)</li> <li>8. Prolonged mechanical ventilation is associated with even higher rates of mortality and LOS (Zilberberg 2009).</li> </ol>
X4208	Substance use disorders: percentage of patients aged 18 years and older with a diagnosis of current opioid addiction who were counseled regarding psychosocial AND pharmacologic treatment options for opioid addiction	<p>Methadone and buprenorphine, in combination with psychosocial treatment, are effective in reducing drug use and supporting treatment retention. Until recently, their use had been limited due to regulatory requirements with capacity at approved facilities only able to meet the treatment needs of 15% of opioid dependent individuals. While the increased access to opioid agonist treatments has resulted in an increase in their use, a large number of clinicians have yet to gain eligibility to prescribe the appropriate medications. Moreover, among physicians with waivers to prescribe buprenorphine, 33% were not actively prescribing. Pharmacotherapy and psychosocial treatment should be routinely considered for all patients with opioid addiction, and patients should be informed of this option.</p> <p>The following clinical recommendation statements are quoted verbatim from the referenced clinical guidelines and represent the evidence base for the measure:</p> <p>Empirically validated psychosocial treatment interventions should be initiated for all patients with substance use illnesses. (National Quality Forum [NQF])</p> <p>Pharmacotherapy should be recommended and available to all adult patients diagnosed with opioid dependence and without medical contraindications. Pharmacotherapy, if prescribed, should be provided in addition to and directly linked with psychosocial treatment/support. (NQF)</p> <ul style="list-style-type: none"> <li>• Maintenance treatment with methadone or buprenorphine is appropriate for patients with a prolonged history (greater than 1 year) of opioid dependence. (American Psychiatric Association [APA])</li> </ul>

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	within the 12 month reporting period	<ul style="list-style-type: none"> <li>• Maintenance treatment with naltrexone is an alternative strategy, although the utility of this strategy is often limited by lack of patient adherence and low treatment retention. (APA)</li> </ul> <p>Psychosocial treatments are effective components of a comprehensive treatment plan for patients with an opioid use disorder. Behavioral therapies (e.g., contingency management), cognitive behavioral therapies (CBTs), psychodynamic psychotherapy, and group and family therapies have been found to be effective for some patients with an opioid use disorder. (APA)</p> <p>Note: Federal and state regulations govern the use of methadone, levo-alpha-acetylmethadol (LAAM), and buprenorphine, the three opioids approved by the FDA for the treatment of opioid dependence. (APA) [Note: since the publication of the APA practice guideline, LAAM is no longer available in the United States for agonist maintenance treatment.]</p> <p>The American Academy of Pain Medicine, the American Pain Society, and the American Society of Addiction Medicine issued a consensus statement to recognize and recommend definitions related to the use of opioids for the treatment of pain. They are as follows:</p> <ul style="list-style-type: none"> <li>• <b>Addiction:</b> Addiction is a primary, chronic, neurobiologic disease, with genetic, psychosocial, and environmental factors influencing its development and manifestations. It is characterized by behaviors that include one or more of the following: impaired control over drug use, compulsive use, continued use despite harm, and craving.</li> <li>• <b>Physical Dependence:</b> Physical dependence is a state of adaptation that is manifested by a drug class specific withdrawal syndrome that can be produced by abrupt cessation, rapid dose reduction, decreasing blood level of the drug, and/or administration of an antagonist.</li> <li>• <b>Tolerance:</b> Tolerance is a state of adaptation in which exposure to a drug induces changes that result in a diminution of one or more of the drug's effects over time.</li> </ul> <p>Addiction in the context of pain treatment with opioids is characterized by a persistent pattern of opioid misuse that may involve any or all of the following:</p> <ul style="list-style-type: none"> <li>• Use of prescription opioids in an unapproved or inappropriate manner (such as cutting time-release preparations, injecting oral formulations, and applying fentanyl topical patches to oral or rectal mucosa)</li> <li>• Obtaining opioids outside of medical settings</li> <li>• Concurrent abuse of alcohol or illicit drugs</li> <li>• Repeated requests for dose increases or early refills, despite the presence of adequate analgesia</li> <li>• Multiple episodes of prescription "loss"</li> <li>• Repeatedly seeking prescriptions from other clinicians or from emergency rooms without informing prescriber, or after warnings to desist</li> <li>• Evidence of deterioration in the ability to function at work, in the family, or socially, which appears to be related to</li> </ul>

MUC ID	Measure Title	Rationale
		<p>drug use</p> <ul style="list-style-type: none"> <li>• Repeated resistance to changes in therapy despite clear evidence of adverse physical or psychological effects from the drug</li> <li>• Positive urine drug screen—other substance use (cocaine, opioids, amphetamines or alcohol)</li> <li>• Meets DSM IV criteria for dependence on opioids (VA/DoD)</li> </ul> <p>EVIDENCE FOR RATIONALE:</p> <p>American Academy of Pain Medicine, American Pain Society, American Society of Addiction Medicine. Definitions related to the use of opioids for the treatment of pain. American Academy of Pain Medicine, American Pain Society, American Society of Addiction Medicine; 2006.</p> <p>American Psychiatric Association (APA), Physician Consortium for Performance Improvement® (PCPI), National Committee for Quality Assurance (NCQA). Substance use disorders physician performance measurement set. Chicago (IL): American Medical Association (AMA); 2008 Jul. 22 p. [11 references]</p> <p>American Psychiatric Association (APA). Practice guideline for the treatment of patients with substance use disorders. 2nd ed. Washington (DC): American Psychiatric Association (APA); 2006 Aug. 275 p. [1789 references]</p> <p>Merrill JO. Policy progress for physician treatment of opiate addiction. J Gen Intern Med. 2002 May;17(5):361-8. PubMed</p> <p>National Quality Forum. National voluntary consensus standards for the treatment of substance use conditions: evidence-based treatment practices; a consensus report. Washington (DC): National Quality Forum; 2007.</p> <p>Substance Abuse and Mental Health Services Administration. The determinations report: a report on the Physician Waiver Program established by the Drug Addiction Treatment Act of 2000 (DATA). Rockville (MD): Substance Abuse and Mental Health Services Administration; 2006 Mar 30. 8 p. [4 references]</p> <p>U.S. Preventive Services Task Force. Screening for depression: recommendations and rationale. Rockville (MD): U.S. Preventive Services Task Force (USPSTF); 2002. 13 p. [13 references]</p> <p>Veterans Health Administration, Department of Defense. VA/DoD clinical practice guideline for the management of opioid therapy for chronic pain. Washington (DC): Veterans Health Administration, Department of Defense; 2003</p>

MUC ID	Measure Title	Rationale
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X4007	Substance use disorders: percentage of patients aged 18 years and older with a diagnosis of current alcohol dependence who were counseled regarding psychosocial AND pharmacologic treatment options for alcohol dependence within the 12 month reporting	<p>Research has shown that among patients diagnosed with alcohol dependence, only 4.64% were referred for psychosocial treatment in the form of substance abuse counseling, inpatient rehabilitation programs, outpatient rehabilitation programs, or mutual help groups. While pharmacologic therapy has established efficacy, often in combination with psychosocial therapy, in promoting abstinence and preventing relapse in alcohol-dependent patients, physician rates of prescribing pharmacologic therapy for alcohol dependence are also considerably low. A recent study found that these low rates prevail even among addiction medicine physicians who prescribed naltrexone to only 13% of their alcohol dependent patients. Pharmacotherapy and psychosocial treatment should be routinely considered for all patients with alcohol dependence, and patients should be informed of this option. The following clinical recommendation statements are quoted verbatim from the referenced clinical guidelines (from the American Psychiatric Association [APA]) and represent the evidence base for the measure:</p> <p>Psychosocial treatments found effective for some patients with an alcohol use disorder include motivational enhancement therapy (MET), cognitive-behavioral therapy (CBT), behavioral therapies, 12-step facilitation (TSF), marital and family therapies, group therapies, and psychodynamic therapy/interpersonal therapy (IPT). (APA, 2006)</p> <p>Specific pharmacotherapies for alcohol-dependent patients have well-established efficacy and moderate effectiveness:</p> <ul style="list-style-type: none"> <li>• Naltrexone may attenuate some of the reinforcing effects of alcohol, although data on its long-term efficacy are limited. The use of long-acting, injectable naltrexone may promote adherence, but published research is limited and FDA approval is pending. [Note: Extended-release naltrexone for injection has since received FDA approval]</li> <li>• Acamprosate, a gamma-aminobutyric acid (GABA) analog that may decrease alcohol craving in abstinent individuals, may also be an effective adjunctive medication in motivated patients who are concomitantly receiving psychosocial treatment.</li> <li>• Disulfiram is an effective adjunct to a comprehensive treatment program for reliable, motivated patients whose drinking may be triggered by events that suddenly increase alcohol craving. (APA, 2006)</li> </ul> <p>Empirically validated psychosocial treatment interventions should be initiated for all patients with substance use illnesses. Pharmacotherapy should be offered and available to all adult patients diagnosed with alcohol dependence and without medical contraindications. Pharmacotherapy, if prescribed, should be provided in addition to and directly linked with psychosocial treatment/support. (National Quality Forum [NQF], 2007)</p> <p>EVIDENCE FOR RATIONALE:</p>

MUC ID	Measure Title	Rationale
		<p>American Psychiatric Association (APA), Physician Consortium for Performance Improvement® (PCPI), National Committee for Quality Assurance (NCQA). Substance use disorders physician performance measurement set. Chicago (IL): American Medical Association (AMA); 2008 Jul. 22 p. [11 references]</p> <p>American Psychiatric Association (APA). Practice guideline for the treatment of patients with substance use disorders. 2nd ed. Washington (DC): American Psychiatric Association (APA); 2006 Aug. 275 p. [1789 references]</p> <p>Asch SM, Kerr EA, Keeseey J, Adams JL, Setodji CM, Malik S, McGlynn EA. Who is at greatest risk for receiving poor-quality health care. N Engl J Med. 2006 Mar 16;354(11):1147-56. [32 references] PubMed</p> <p>Mark TL, Kranzler HR, Song X. Understanding US addiction physicians' low rate of naltrexone prescription. Drug Alcohol Depend. 2003 Sep 10;71(3):219-28. PubMed</p> <p>National Quality Forum. National voluntary consensus standards for the treatment of substance use conditions: evidence-based treatment practices; a consensus report. Washington (DC): National Quality Forum; 2007.</p>
E1507	Risky Behavior Assessment or Counseling by Age 18 Years	<p>NQF measures 1406 and 1507 assess the percentage of children with documentation of a risk assessment or counseling for risky behaviors by the age of 13 or 18 years (respectively). Four rates are reported: Risk Assessment or Counseling for Alcohol Use, for Tobacco Use, for Other Substance Use, and for Sexual Activity.</p> <p>Early alcohol and drug use (pre-adolescent/early adolescent) is a predictor of later dependence. In the 2003 National Survey on Drug Use and Health (NSDUH), individuals who stated that they began drinking prior to age 15 were over 5 times more likely to report alcohol dependence or abuse at some point in their lives. Approximately 58% of Americans begin drinking alcohol before age 18 and heavy alcohol use spikes in the late teens and early 20's.</p> <p>Because there is strong evidence for the utility of preventive counseling at both ages, the Behavioral Health Coordinating Committee (BHCC) at HHS recommends combining these measures into one measure that reports separate rates for counseling provided at age 13 and 18. If this is not possible in the time frame for MU Stage 3 the BHCC prioritizes NQF 1507 (age 18). Age 18 is an important transitional year and by this age the patient is more likely to see their doctor without their parent, which promotes more honest conversations.</p> <p>References:</p>



MUC ID	Measure Title	Rationale
		<p>2010-2011 National Survey on Drug Use and Health.  <a href="http://www.samhsa.gov/data/nsduh/2k10nsduh/2k10results.htm">http://www.samhsa.gov/data/nsduh/2k10nsduh/2k10results.htm</a></p>
E1406	Risky Behavior Assessment or Counseling by Age 13 Years	<p>NQF measures 1406 and 1507 assess the percentage of children with documentation of a risk assessment or counseling for risky behaviors by the age of 13 or 18 years (respectively). Four rates are reported: Risk Assessment or Counseling for Alcohol Use, for Tobacco Use, for Other Substance Use, and for Sexual Activity.</p> <p>Early alcohol and drug use (pre-adolescent/early adolescent) is a predictor of later dependence. In the 2003 National Survey on Drug Use and Health (NSDUH), individuals who stated that they began drinking prior to age 15 were over 5 times more likely to report alcohol dependence or abuse at some point in their lives. Approximately 58% of Americans begin drinking alcohol before age 18 and heavy alcohol use spikes in the late teens and early 20's.</p> <p>Because there is strong evidence for the utility of preventive counseling at both ages, the Behavioral Health Coordinating Committee (BHCC) at HHS recommends combining these measures into one measure that reports separate rates for counseling provided at age13 and 18. If this is not possible in the time frame for MU Stage 3 the BHCC prioritizes NQF 1507 (age 18). Age 18 is an important transitional year and by this age the patient is more likely to see their doctor without their parent, which promotes more honest conversations.</p> <p>References:                  2010-2011 National Survey on Drug Use and Health.  <a href="http://www.samhsa.gov/data/nsduh/2k10nsduh/2k10results.htm">http://www.samhsa.gov/data/nsduh/2k10nsduh/2k10results.htm</a></p>
X3446	Intimate Partner (Domestic) Violence Screening	<p>This screening helps to determine, evaluate, and lower the occurrence of family violence, abuse, and neglect in American Indian and Alaska Native communities. In the United States, 30% of women experience domestic violence at some time in their lives. AI/AN women experience domestic violence at the same rate or higher than the national average. A survey of Navajo women getting routine care at an IHS facility reported that 14% had experienced physical abuse in the past year. In this same group of Navajo women, 42% reported having experienced physical abuse from a male partner at least once in their lives. The consequences of intimate partner violence to the health of a woman are numerous. In January 2013, the US Preventive Services Task Force updated its recommendations on intimate partner violence (IPV) to recommend that clinicians screen women of childbearing age and provide or refer women who screen positive to intervention services. IPV is common in the United States but often remains undetected. Nearly 31% of women report experiencing some form of IPV and approximately 25% experiencing the most severe types of in their lifetime (1-3). These estimates likely underrepresent actual rates because of</p>

MUC ID	Measure Title	Rationale
		<p>underreporting. In addition to the immediate effects of IPV, such as injury and death (4, 5), IPV is also associated with increased sexually transmitted, unintended pregnancies, chronic pain, neurological disorders, gastrointestinal disorders, migraine headaches, and other. Intimate partner violence is also associated with preterm birth, low birth weight, and decreased gestational age (12-14). Individuals experiencing IPV often develop chronic mental health conditions, such as depression, posttraumatic stress disorder, anxiety disorders, substance abuse, and suicidal behavior (15-19). For adolescent and young adults, the effects of physical and sexual assault are associated with poor self-esteem, alcohol and drug abuse, eating disorders, obesity, risky sexual behaviors, teen pregnancy, depression, anxiety, suicidality, and other conditions (20, 21). The USPSTF concluded that there is sufficient evidence that effective interventions can reduce violence, abuse, and physical or mental harms for women of reproductive age.</p> <p>Basile KC, Saltzman LE. (2002), Sexual violence surveillance: Uniform definitions and recommended data elements. Version 1.0. Atlanta, GA: Centers for Disease Control and Prevention, National Center for Injury Prevention and Control. Chamberlain L. (2005). The USPSTF recommendation on intimate partner violence: What we can learn from it and what can we do about it. Family Violence Prevention and Health Practice, 1, 1-24. Ghiselli EE, Campbell JP, Zedeck S. (1981). Measurement theory for the behavioral sciences. New York: W.H. Freeman and Company. National Center for Injury Prevention and Control (2002). CDC Injury Research Agenda. Atlanta (GA): Centers for Disease Control and Prevention. Rathus JH, Feindler EL. (2004). Assessment of partner violence: A handbook for researchers and practitioners. Washington DC: American Psychological Association. Robinson JP, Shaver PR, Wrightsman LS. (1991). Measures of personality and social psychological attitudes. San Diego, CA: Academic Press, Inc. Saltzman LE, Fanslow JL, McMahon PM, Shelley GA. (1999). Intimate partner violence surveillance: Uniform definitions and recommended data elements. Version 1.0 Atlanta, GA: CDC, National Center for Injury Prevention and Control. Teutsch SM, Churchill RE. (Eds.). (2000). Principles and practice of public health surveillance (2nd ed.). New York, NY: Oxford University Press, Inc. US Preventive Services Task Force. (2004). See website: <a href="http://www.ahrq.gov/clinic/uspstf/ uspsfamv.htm">http://www.ahrq.gov/clinic/uspstf/ uspsfamv.htm</a></p>
X3445	Alcohol Screening and Brief Intervention (ASBI) in the ER	<p>The IHS Office of Clinical and Preventive Services has developed an active injury and alcohol control program called ASBI. It targets young, non-dependent alcohol/drugs users who present to IHS –Tribal Hospitals and Clinics with an injury related to alcohol and drug misuse. Via ASBI, reductions in repeat injury (recidivism) and lower alcohol consumption may reach up to 50%. Up to half of the people treated in hospital emergency departments and trauma centers are under the influence of alcohol. Between 24 and 31% of these patients have an alcohol use disorder . Excessive alcohol consumption contributes to more than 80,000 deaths each year in the United States . Nearly half of alcohol-related deaths result from motor-vehicle crashes, falls, fires, drowning, homicides, and suicides.</p>

MUC ID	Measure Title	Rationale
		<p>Providing brief intervention to patients screened in the ED leads to improved outcomes including alcohol intake, risky drinking practices, alcohol-related negative consequences, and injury frequency.</p> <ol style="list-style-type: none"> <li>1. <a href="http://www.ihs.gov/NonMedicalPrograms/DirInitiatives/index.cfm">http://www.ihs.gov/NonMedicalPrograms/DirInitiatives/index.cfm</a></li> <li>2. Grim, Charles. "Alcohol Screening and Brief Intervention." Lecture. Train the Trainer Telemedicine Conference, PIMC, Phoenix, AZ. 20 April, 2007.</li> <li>3. National Highway Traffic Safety Administration. Race and Ethnicity in Fatal Motor Vehicle Traffic Crashes 1999-2004. National Center for Statistics and Analysis. Washington, D.C. May 2006.</li> <li>4. National Highway Traffic Safety Administration. [internet] Traffic Safety Facts: 2005 Data, Alcohol. National Center for Statistics and Analysis. Washington, D.C. [Internet] Accessed 12/5/2007. <a href="http://www-nrd.nhtsa.dot.gov/Pubs/810616.PDF">http://www-nrd.nhtsa.dot.gov/Pubs/810616.PDF</a></li> <li>5. Maier RV. "Controlling Alcohol Problems Among Hospitalized Trauma Patients." The Journal of Trauma. 2005; 59S(3): S1-S2.</li> <li>6. Rivara FB, Koepsell TD, Jurkovich GH, et al. "The Effects of Alcohol Abuse on Readmission for Trauma." JAMA. 1993; 270: 1962-1964.</li> <li>7. Dischinger PC, Mitchell KA, Kufera JA, Soderstrom CA and Lowenfels AB. "A Longitudinal Study of Former Trauma Center Patients: The Association Between Toxicology Status and Subsequent Injury Mortality." Journal of Trauma. 2001. 51(5):877-886.</li> <li>8. Sanddal TL, Upchurch J, Sanddal ND, Esposito TJ. "Analysis of Prior Health System Contacts as a Harbinger of Subsequent Fatal Injury in American Indians." Injury Prevention. Winter 2005. Pp 65-69.</li> <li>9. Soderstrom, Carl. Professor of Surgery, University of Maryland, Shock Trauma Center. Personal Communication, 31 January 2007</li> <li>10. Boyd, David. National Trauma Systems Coordinator. Indian Health Service Emergency Health Services; Office of Clinical and Preventive Services. Personal Communication. 12 December 2007.</li> <li>11. Monti PM, Colby SM, Barnett NP, Spirito A, Myers M, et al. "Brief Intervention for Harm Reduction With Alcohol-Positive Older Adolescents in a Hospital Emergency Department." Journal of Consulting and Clinical Psychology. 1999. 67(6): 989-994.</li> <li>12. Gentilello LM, Rivara FP, Donovan DM, Jurkovich GJ, et al. "Alcohol Interventions in a Trauma Center as a Means of Reducing the Risk of Injury Recurrence." Annals of Surgery. 1999; 230(4): 473-483.</li> <li>13. Schermer CR, Moyers TB, Miller WR, and Bloomfield LA. "Trauma Center Brief Interventions for Alcohol Disorders Decrease Subsequent Driving Under the Influence Arrests." Journal of Trauma Injury Infection and Critical Care. 2006; 60(1): 29-34.</li> <li>14. Wilk AI, Jensen NM, and Havighurst TC. "Meta-analysis of Randomized Control Trials Addressing Brief</li> </ol>

MUC ID	Measure Title	Rationale
		<p>Interventions in Heavy Drinkers.” Journal of General Internal Medicine. May 1997. 12:274-283.</p> <p>15. World Health Organization. “A Cross-National Trial of Brief Interventions with Heavy Drinkers.” American Journal of Public Health. July 1996. 86(7): 948-955</p> <p>16. Fleming MF, Mundt MP, French MT, Mandwell LB, et al. “Brief Physician Advice for Problem Drinkers: Long-Term Efficacy and Brief-Cost Analysis.” Alcoholism: Clinical and Experimental Research. Jan 2002. 26(1): 36-43.</p> <p>17. Spirito A, Monti PM, Barnett NP, Colby SM, et al. “A Randomized Clinical Trial of a Brief Motivational Intervention for Alcohol Positive Adolescents Treated in an Emergency Department.” Pediatrics. 2004. 145:396-404.</p> <p>18. Bien TH, Miller WR, and Tonigan JS. “Brief Interventions for Alcohol Problems: A Review.” Addiction. 1993; 88:315-336.</p> <p>19. Academic ED SBIRT Research Collaborative. “The Impact of Screening, Brief Intervention, and Referral for Treatment on Emergency Department Patients’ Alcohol Use.” Annals of Emergency Medicine. 2007; 50: 699-710.</p> <p>20. Moyer A, Finney JW, Swearingen EC and Vergun P. “Brief Interventions for Alcohol Problems: A Meta-Analytic Review of Controlled Investigations in Treatment-Seeking and Non-Treatment-Seeking Populations.” Addiction. 2002; 97: 279-292.</p> <p>21. Grossberg PM, Brown DD, Fleming MF. “Brief Physician Advice for High-Risk Drinking Among Young Adults.” Annals of Family Medicine. Sept/Oct 2004. 2(5): 474-480.</p> <p>22. Dinh-Zarr T, Goss C, Roberts I, DiGiuseppi C. “Interventions for Preventing Injuries in Problem Drinkers.” Cochrane Database of Systematic Reviews; 2004, Issue 3. Art. No: CD001857. DOI: 10.1002/14651858.CD001857.pub.2. <a href="http://www.thecochranelibrary.com">www.thecochranelibrary.com</a></p> <p>23. World Health Organization. Alcohol and Injury in Emergency Departments. Summary of the Report from the WHO Collaborative Study on Alcohol and Injuries. France, 2007. France. .</p> <p>24. D’Onofrio G, Degutis LC. “Preventive Care in the Emergency Department: Screening and Brief Intervention for Alcohol Problems in the Emergency Department: A Systematic Review.” Academic Emergency Medicine. June 2002; 9(6): 627-638.</p> <p>25. Irvin CB, Wyer PC, Gerson LW, et al. for the SAEM Public Health and Education Task Force Preventive Services Work Group. “Preventive Care in the Emergency Department Part II: Clinical Preventive Services—An Emergency Medicine Evidence-based Review.” Academic Emergency Medicine. Sept 2000; 7(9): 1042-1054.</p> <p>26. Whitlock EP, Polen MR, Green CA, Orleans CT, and Klein J. “Behavioral Counseling Interventions in Primary Care to Reduce Risky/Harmful Alcohol Use by Adults: A Summary of the Evidence for the U.S. Preventive Services Task Force.” Annals of Internal Medicine. 2004; 140(7): 557-568.</p>

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		<p>27. United States Preventive Services Task. National Guideline Clearinghouse. Screening and Behavioral Counseling Interventions in Primary Care to Reduce Alcohol Misuse: Recommendation Statement. [Internet] Accessed 12 December 2007.  <a href="http://www.guidelines.gov/summary/summary.aspx?ss=15&amp;doc_id=4618&amp;nbr=003399">http://www.guidelines.gov/summary/summary.aspx?ss=15&amp;doc_id=4618&amp;nbr=003399</a> string=alcohol</p> <p>28. Substance Abuse and Mental Health Administration; Center for Substance Abuse Treatment. Screening, Brief Intervention, Referral, and Treatment. [Internet] Accessed 7 December 2007. <a href="http://sbirt.samhsa.gov/about/htm">http://sbirt.samhsa.gov/about/htm</a></p> <p>29. National Institute on Alcohol Abuse and Alcoholism. Helping Patients Who Drink Too Much: A Clinician’s Guide. 2005 Edition. National Institutes of Health Publication No 07-3769. Rockville, Maryland.</p> <p>30. D’Onofrio G, Pantalon MV, Degutis LC, Fiellin D, and O’Connor PG. Alcohol Screening and Brief Intervention Project: BNI Training Manual. New Haven, Connecticut: Yale University School of Medicine, 2002.</p> <p>31. Institute of Medicine. Broadening the Base of Treatment for Alcohol Problems. National Academy Press, Washington D.C. 1990.</p> <p>32. Substance Abuse and Mental Health Administration: Office of Applied. 2006 National Survey on Drug Use and Health: National Results. 2006 Accessed 12/4/2007,  <a href="http://www.oas.samhsa.gov/NSDUH/2k6NSDUH/2k6results.cfm#Ch3">http://www.oas.samhsa.gov/NSDUH/2k6NSDUH/2k6results.cfm#Ch3</a></p> <p>33. Hungerford, Daniel. Center for Disease Control and Prevention, National Center for Injury Prevention and Control. Atlanta, Georgia. Personal Communication. 28 November 2007.</p> <p>34. Rose G. “Sick Individuals and Sick Population.” International Journal of Epidemiology. 1985. 14(1):32-38.</p> <p>35. Spurling MC and Vinson DC. “Alcohol-Related Injuries: Evidence for the Prevention Paradox.” Annals of Family Medicine. Jan/Feb 2005. 3(1): 47-52.</p> <p>36. Hungerford DW. “Interventions in Trauma Centers for Substance Use Disorders: New Insights on an Old Malady.” Journal of Trauma. Sept 2005. 59(3s): s10-s16.</p> <p>37. McBride CM, Emmons KM, and Lipkus IM. Understanding the Potential of the Teachable Moment: The Case of Smoking Cessation.” Health Education Research. 2003; 18(2): 156-170.</p> <p>38. Prochasaka JO, DiClemente CC, and Norcross JC. “In Search of How People Change: Applications to Addictive Behaviors.” American Psychologist. Sept 1992; 47(9): 1102-1114.</p> <p>39. Longabaugh R, Minugh PA, Nirenberg TD, et al. “Injury as a Motivator to Reduce Drinking.” Academic Emergency Medicine. 1995; 2: 817-825.</p> <p>40. Barnett NP, Lebearu-Craven R, O’Learly TA, Colby SM, Woolard R, Rohsenow DJ, Spirito A, and Monti PM. “Predictors of Motivation to Change After Medical Treatment for Drinking-Related Events in Adolescents.” Psychology of Addictive Behaviors. 2002; 16(2): 106-112.</p> <p>50. Schermer CR, Bloomfield LA, Lu SW and Demarest GB. “Trauma Patient Willingness to Participate in Alcohol</p>

MUC ID	Measure Title	Rationale
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X3792	Controlling High Blood Pressure	<p>Hypertension is a very significant health issue in the United States. Nearly 78 million adults have high blood pressure. Yet, only fifty three percent of adults with hypertension have their blood pressure under control. The United States spends over \$46 billion annually in direct and indirect costs due to high blood pressure. (Go AS, Mozaffarian D, Roger VL et al. 2014) Uncontrolled hypertension can lead to serious complications such as coronary heart disease, congestive heart failure, stroke, ruptured aortic aneurysm, renal disease and retinopathy. Among adults with diagnosed diabetes, 71 percent also have hypertension (CDC 2014). Uncontrolled hypertension places adults with diabetes at a higher risk of developing serious complications. Controlling blood pressure has been shown to reduce the probability of undesirable and costly outcomes. The relationship between the measure (control of hypertension) and the long-term clinical outcomes is well established. In clinical trials, antihypertensive therapy has been associated with reductions in stroke, heart failure, coronary heart disease, diabetes complications and overall mortality (Eighth Joint National Committee).</p>
X3797	Breast Cancer Screening	<p>Breast cancer is the second most commonly diagnosed cancer among women (after skin cancer). After lung cancer, it causes more deaths in women than any other kind of cancer—there were nearly 40,000 estimated deaths from breast cancer in 2010. Deaths from breast cancer have decreased over the years, in part due to early detection using mammography. On average, mammography will detect about 80-90 percent of breast cancers in women without</p>

MUC ID	Measure Title	Rationale
		<p>symptoms (American Cancer Society 2011). Based on evidence, screening mammography in women aged 40 to 70 years decreases breast cancer mortality with higher benefit in older women (National Cancer Institute 2010). There is a demonstrated reduction in breast cancer mortality due to mammogram screening (National Business Group on Health 2011).</p>
E0032	Cervical Cancer Screening	<p>Cervical cancer has a high survival rate when detected early, yet it is the second most common cancer among women worldwide (Myers et al. 2008). In the United States, about 12,000 women are diagnosed with cervical cancer each year. In 2010, more than 4,000 women died from cervical cancer (American Cancer Society 2010). For women in whom pre-cancerous lesions have been detected through Pap tests, the likelihood of survival is nearly 100 percent with appropriate evaluation, treatment and follow-up (American Cancer Society 2011). For women under 50 years old, cervical cancer is diagnosed in the early stage 61 percent of the time (American Cancer Society 2010). In 2008, the prevalence of recent Pap test use was lowest among older women, women with no health insurance and recent immigrants (American Cancer Society 2011).</p>
E2152	Preventive Care and Screening: Unhealthy Alcohol Use: Screening & Brief Counseling	<p>This measure is intended to promote unhealthy alcohol use screening and brief counseling which have been shown to be effective in reducing alcohol consumption. About 30% of the U.S. population misuse alcohol, with most engaging in what is considered risky drinking. (SAMHSA, 2012) A recent analysis of data from the National Alcohol Survey shows that approximately one-third of at-risk drinkers (32.4%) and persons with a current alcohol use disorder (31.5%) in the United States had at least 1 primary care visit during the prior year, demonstrating the potential reach of screening and brief counseling for unhealthy alcohol use in the primary care setting. (Mulia et al., 2011) A number of studies, including patient and provider surveys, have documented low rates of alcohol misuse screening and counseling in primary care settings. In the national Healthcare for Communities Survey, only 8.7% of problem drinkers reported having been asked and counseled about their alcohol use in the last 12 months. (D'Amico et al., 2005) A nationally representative sample of 648 primary care physicians were surveyed to determine how such physicians identify--or fail to identify--substance abuse in their patients, what efforts they make to help these patients and what are the barriers to effective diagnosis and treatment. Of physicians who conducted annual health histories, less than half ask about the quantity and frequency of alcohol use (45.3 percent). Only 31.8 percent say they ever administer standard alcohol or drug use screening instruments to patients. (CASA, 2000)</p> <p>The USPSTF recommends that providers screen for alcohol misuse and provide persons engaged in risky or hazardous drinking with brief behavioral counseling interventions to reduce alcohol misuse. About 3 in 10 U.S. adults drink at levels that elevate their risk for physical, mental health, and social problems. About 1 in 4 of these heavy drinkers has alcohol abuse or dependence. Excessive alcohol use is the third-leading cause of preventable deaths in the United States, and is responsible for 80,000 deaths and \$224 billion or \$1.90 per drink in economic</p>



MUC ID	Measure Title	Rationale
		<p>costs per year. Binge drinking is responsible for over half of these deaths and three-quarters of the economic costs due to excessive drinking, and yet it often goes undetected. Furthermore, only about 10% of patients with alcohol dependence receive the recommended quality of care, including assessment and referral to treatment.</p> <p>This measure is intended to promote unhealthy alcohol use screening and brief counseling which has been shown to be effective in reducing alcohol consumption, particularly in primary care settings. Research data suggests that unhealthy alcohol use contributes to hypertension, cirrhosis, gastritis, gastric ulcers, pancreatitis, breast cancer, neuropathy, cardiomyopathy, anemia, osteoporosis, cognitive impairment, depression, insomnia, anxiety, suicide, injury, and violence.</p>
X3475	Substance Use Screening and Intervention Composite	<p>Substance use problems and illnesses have substantial impact on health and societal costs, and often are linked to catastrophic personal consequences. In 2010, an estimated 19.3% (45.3 million) of U.S. adults were current cigarette smokers; of these, 78.2% smoked every day, and 21.8% smoked some days. 30% of the U.S. population misuse alcohol, with most engaging in what is considered risky drinking. In 2010, an estimated 22.6 million Americans aged 12 or older (~8.9 percent of the population) were current illicit drug users, which means they had used an illicit drug during the month prior to the survey. About 1 in 5 Americans aged 18–25 used illicit drugs in the past. Because many patients will not self-identify or have not yet developed detectable problems associated with substance use, screening can identify patients for whom intervention may be indicated. Brief motivational counseling for these various substances has been shown to be an effective treatment for reducing problem use, particularly in primary care settings. The 2011 National Survey on Drug Use and Health found that 1 in 20 persons in the U.S. aged 12 or older reported nonmedical use of prescription pain killers in the past year. Prescription drug overdose is now the leading cause of accidental death in the United States - surpassing motor vehicle accidents. Many scientific studies have also shown there are dire health consequences from untreated substance use disorders on medical complications of diabetes mellitus and other co-occurring chronic conditions. Substance use disorders (SUD) is one of the 10 categories of essential health benefits which the ACA requires most private insurers to cover. Insurers also must ensure these benefits comply with the Mental Health Parity and Addiction Equity Act of 2008. Consequently, it is necessary that health care providers in general medical settings be equipped with an appropriate training and resources as well as CMS 'meaningful use' reimbursement incentives, to support and guide science-based screening and counseling for substance use disorders in primary care, utilizing relevant electronic-health-record-based performance measures and accompanying evidence-based clinical decision support tools.</p>
X3512	Hepatitis C: One-Time Screening for	<p>In addition to testing adults of all ages at risk for HCV infection, CDC7 recommends that: • Adults born during 1945–1965 should receive one-time testing for HCV without prior ascertainment of HCV risk (Strong Recommendation, Moderate Quality of Evidence), and • All persons identified with HCV infection should receive a brief alcohol</p>



MUC ID	Measure Title	Rationale
	Hepatitis C Virus (HCV) for Patients at Risk	<p>screening and intervention as clinically indicated, followed by referral to appropriate care and treatment services for HCV infection and related conditions (Strong Recommendation, Moderate Quality of Evidence). Providers and patients can discuss HCV testing as part of an individual’s preventive health care. For persons identified with HCV infection, CDC recommends that they receive appropriate care, including HCV-directed clinical preventive services (e.g., screening for alcohol use, hepatitis A and hepatitis B vaccination as appropriate, and medical monitoring of disease). Recommendations are available to guide treatment decisions. Treatment decisions should be made by the patient and provider after several factors are considered, including stage of disease, hepatitis C genotype, comorbidities, therapy-related adverse events, and benefits of treatment. (CDC, 2012). The U.S. Preventive Services Task Force (USPSTF) recommends screening for hepatitis C virus (HCV) infection in adults at high risk, including those with any history of intravenous drug use or blood transfusions prior to 1992. Grade B recommendation.</p> <p>Assessment of Risk:            Established high-risk factors for HCV infection include blood transfusion prior to 1992 and past or current intravenous drug use. Because of screening programs for donated blood, blood transfusions are no longer an important source of HCV infection. In contrast, 60% of new HCV infections occur in individuals who report injecting drugs within the last 6 months. Other risk factors include chronic hemodialysis, being born to an HCV-infected mother, incarceration, intranasal drug use, getting an unregulated tattoo, and other percutaneous exposures (e.g., in health care workers, having surgery prior to the implementation of universal precautions). Evidence on tattoos and other percutaneous exposures as risk factors for HCV infection is limited.</p> <p>The USPSTF recommends that clinicians consider offering screening for HCV infection in adults born between 1945 and 1965. Grade B recommendation. The USPSTF concludes with moderate certainty that screening for HCV infection in the 1945–1965 birth cohort has at least a moderate net benefit. The USPSTF concluded that screening is of moderate benefit for populations at high risk. The USPSTF concluded that the benefit of screening all adults in the birth cohort born between 1945 and 1965 is moderate. The benefit is smaller given the lower. Birth-cohort screening is probably less efficient than risk-based screening, meaning more persons will need to be screened to identify 1 patient with HCV infection. Nevertheless, the overall number of Americans who will probably benefit from birth-cohort screening is greater than the number who will benefit from risk-based screening. A risk-based approach may miss detection of a substantial proportion of HCV-infected individuals in the birth cohort, due to either lack of patient disclosure or knowledge about prior risk status. As a result, clinicians should consider a birth cohort–based screening approach for patients born between 1945 and 1965 who have no other known HCV risk factors. Screening in the birth cohort for HCV infection will identify infected patients at earlier stages of disease, before they develop complications from liver damage.</p> <p>In the United States, an estimated 2.7–3.9 million persons (1.0%–1.5%) are living with hepatitis C virus (HCV)</p>

MUC ID	Measure Title	Rationale
		<p>infection, and an estimated 17,000 persons were newly infected in 2010, the most recent year that data are available. With an HCV antibody prevalence of 3.25%, persons born during 1945–1965 account for approximately three fourths of all chronic HCV infections among adults in the United States. Although effective treatments are available to clear HCV infection from the body, most persons with HCV do not know they are infected, do not receive needed care (e.g., education, counseling, and medical monitoring), and are not evaluated for treatment. HCV causes acute infection, which can be characterized by mild to severe illness but is usually asymptomatic. In approximately 75%–85% of persons, HCV persists as a chronic infection, placing infected persons at risk for liver cirrhosis, hepatocellular carcinoma (HCC), and extrahepatic complications that develop over the decades following onset of infection.<sup>29</sup> HCV testing is the first step toward improving health outcomes for persons infected with HCV. In a recent analysis of data from a national health survey, 55% of persons ever infected with HCV reported an exposure risk (e.g., injection-drug use or blood transfusion before July 1992), and the remaining 45% reported no known exposure risk (CDC, unpublished data, 2012). Current risk-based testing strategies have had limited success, as evidenced by the substantial number of HCV-infected persons who remain unaware of their infection. Of the estimated 2.7–3.9 million persons living with HCV infection in the United States, 45%–85% are unaware of their infection; this proportion varies by setting, risk level in the population, and site-specific testing practices. Studies indicate that even among high-risk populations for whom routine HCV testing is recommended, prevalence of testing for HCV seromarkers varies from 17%–87%; according to one study, 72% of persons with a history of injection-drug use who are infected with HCV remain unaware of their infection status. Barriers to testing include inadequate health insurance coverage and limited access to regular health care<sup>47</sup>; however, risk-based testing practices have not been successful in identifying most HCV-infected persons, even those covered by health insurance.</p>
X3816	<p>Hepatitis C: Appropriate Screening Follow-Up for Patients Identified with Hepatitis C Virus (HCV) Infection</p>	<p>In addition to testing adults of all ages at risk for HCV infection, CDC<sup>7</sup> recommends that:</p> <ul style="list-style-type: none"> <li>• Adults born during 1945–1965 should receive one-time testing for HCV without prior ascertainment of HCV risk (Strong Recommendation, Moderate Quality of Evidence), and</li> <li>• All persons identified with HCV infection should receive a brief alcohol screening and intervention as clinically indicated, followed by referral to appropriate care and treatment services for HCV infection and related conditions (Strong Recommendation, Moderate Quality of Evidence).</li> </ul> <p>Providers and patients can discuss HCV testing as part of an individual’s preventive health care. For persons identified with HCV infection, CDC recommends that they receive appropriate care, including HCV-directed clinical preventive services (e.g., screening for alcohol use, hepatitis A and hepatitis B vaccination as appropriate, and medical monitoring of disease). Recommendations are available to guide treatment decisions. Treatment decisions</p>

MUC ID	Measure Title	Rationale
		<p>should be made by the patient and provider after several factors are considered, including stage of disease, hepatitis C genotype, comorbidities, therapy-related adverse events, and benefits of treatment. (CDC, 2012)</p> <p>Clinical preventive services, regular medical monitoring, and behavioral changes can improve health outcomes for persons with HCV infection. HCV care and treatment recommendations have been issued by AASLD and endorsed by the Infectious Disease Society of America and the American Gastroenterological Association. Routine testing of persons born during 1945–1965 is expected to lead to more HCV-infected persons being identified earlier in the course of disease. To improve health outcomes, persons testing positive for HCV must be provided with appropriate treatment. Linking patients to care and treatment is a critical component of the strategy to reduce the burden of disease.</p> <p>Attaining treatment-related SVR among persons with HCV is associated with a reduction in the relative risk for hepatocellular carcinoma (HCC). A systematic review published in 2013 summarized the evidence from 30 observational studies examining the risk for HCC among HCV-infected persons who have been treated and either achieved an SVR or did not respond to therapy. Findings showed a protective effect of treatment-related SVR on the development of HCC among HCV-infected persons at all stages of fibrosis and among those with advanced liver disease. With the availability of newer and more effective therapies, SVR rates can be increased and HCC incidence rates can be reduced in HCV-infected persons.<sup>38</sup> The association between SVR and HCC should be considered when weighing the benefits and harms of identifying and treating HCV-infected persons. Many persons identified as HCV-infected do not receive recommended medical evaluation and care after the diagnosis of HCV infection; this gap in linkage to care can be attributed to several factors, including being uninsured or underinsured, failure of providers to provide a referral, failure of patients to follow up on a referral, drug or alcohol use, and other barriers.<sup>7</sup> The lack of such care, or substantial delays before care is received, negatively impacts the health outcomes of infected persons.</p>
X3482	Functional Status Outcomes for Patients Receiving Primary Total Knee Replacements	Measuring functional status for patient undergoing total knee replacement permits longitudinal assessment - from the patient’s perspective - of the impact of surgical intervention on pain, physical function, as well as health-related quality of life.
X3483	Functional	Measuring functional status for patient undergoing total hip replacement permits longitudinal assessment - from

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	Status Outcomes for Patients Receiving Primary Total Hip Replacements	the patient's perspective - of the impact of surgical intervention on pain, physical function, as well as health-related quality of life.
X3476	Diabetes: Hemoglobin A1c Overtreatment in the Elderly	There is no evidence that using medications to achieve tight glycemic control in older adults with type 2 diabetes is beneficial. Among non-older adults, except for long-term reductions in myocardial infarction and mortality with metformin, using medications to achieve glycated hemoglobin levels less than 7% is associated with harms, including higher mortality rates. Tight control has been consistently shown to produce higher rates of hypoglycemia in older adults. Given the long timeframe to achieve theorized microvascular benefits of tight control, glycemic targets should reflect patient goals, health status, and life expectancy. Reasonable glycemic targets would be 7.0 – 7.5% in healthy older adults with long life expectancy, 7.5 – 8.0% in those with moderate comorbidity and a life expectancy < 10 years, and 8.0 – 9.0% in those with multiple morbidities and shorter life expectancy
X3283	Closing the Referral Loop - Critical Information Communicated with Request for Referral	There is evidence that the communication between primary care physicians and specialists is inadequate. This measure intends to improve the communication between primary and specialty care and enhance care continuity.
X3485	Adverse Drug Events - Minimum INR Monitoring for Patients with Atrial Fibrillation on Warfarin	Millions of patients in the United States use warfarin to prevent strokes or to prevent or treat venous thromboembolism. Warfarin is highly effective, and has been in clinical use for over 50 years (Rose 2009a). However, warfarin is difficult to manage because it has many possible interactions with diet, variability in metabolism, other drugs, and comorbid conditions that may destabilize anticoagulation control (Rose 2009b). The possible consequences of insufficient or excessive anticoagulation are extremely serious and often fatal, making it imperative to pursue good control (White 2007). The international normalized ratio (INR) test is the laboratory test used to determine the degree to which the patient's coagulation has been successfully suppressed by the vitamin K antagonist (VKA). For most patients, the goal is to keep the INR between 2 and 3, which roughly corresponds to the

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		<p>blood taking 2 to 3 times as long to clot as would a normal person's blood. This level of anticoagulation has been shown to maximize benefit (i.e., protect patients from blood clots) while minimizing risk (i.e., risk of hemorrhage attributable to excessive anticoagulation) (Holbrook 2012). Time in therapeutic INR range (TTR) is a way of summarizing INR control over time (Phillips 2008). The 2012 ACCP anticoagulation clinical practice guidelines recommend a routine INR testing frequency of up to 12 weeks for patients on stable warfarin dosing (Holbrook 2012). Therefore, all patients who are on chronic warfarin should have at least 4 INR tests during a 12-month period or at least 1 INR test during each 12-week period of a measurement year. Any patient that does not have at least one INR test result in each 12-week period while on chronic warfarin therapy is not undergoing minimum appropriate monitoring. Antithrombotic therapy for atrial fibrillation (AF) is evolving rapidly because of the development of new oral anticoagulants that do not require INR monitoring. Included in this new group of drugs are direct thrombin inhibitors (e.g., dabigatran) and direct factor Xa inhibitors (apixaban, rivaroxaban, edoxaban).” (You 2012) The 2012 ACCP anticoagulation clinical practice guidelines state that patients on the newer oral anticoagulant dabigatran do not require routine INR monitoring. Dabigatran and medications such as rivaroxaban and apixaban may be used in place of warfarin for some patients requiring chronic anticoagulation.</p>
X3300	HIV Screening of STI patients	<p>Persons with STIs are a subgroup of the population at increased risk for HIV. CDC recommends HIV testing of persons seeking evaluation for STI during each visit for a new STI complaint. The USPSTF includes persons with STIs among those high risk persons who require more frequent testing than the one time testing recommended for the general population (rated “A”). The evidence is summarized in: Virginia A. Moyer, MD, MPH, on behalf of the U.S. Preventive Services Task Force Screening for HIV: U.S. Preventive Services Task Force Recommendation Statement. Annals Internal Medicine 2013. Published at <a href="http://www.annals.org">www.annals.org</a> (accessed July 1, 2013) This recommendation extends the earlier recommendation for testing of persons at increased risk for HIV, including persons being treated for STDs (U.S. Preventive Services Task Force. Screening for HIV: Recommendation Statement. American Family Physician 2005; 72:2287-2292.), and reiterates the need for more frequent testing of persons at increased risk, including persons who have acquired STIs or request testing for STI.</p>
X3299	HIV: Ever screened for HIV	<p>Increasing the number of HIV-infected persons who are aware of their serostatus is an important component of the National HIV/AIDS Strategy. Once diagnosed, persons with HIV can receive treatment that reduces risk for progression to AIDS or death, and that substantially decreases risk for transmission to uninfected partners. The USPSTF recommends that clinicians screen for HIV infection in adolescents and adults aged 15 to 65 years (Rated A). The evidence is summarized in: Virginia A. Moyer, MD, MPH, on behalf of the U.S. Preventive Services Task Force Screening for HIV: U.S. Preventive Services Task Force Recommendation Statement. Annals Internal Medicine 2013. Published at <a href="http://www.annals.org">www.annals.org</a> (accessed July 1, 2013)</p>

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X3773	Optimal Asthma Care 2014	<p>Evidence: In 2009, current asthma prevalence was 8.2% of the U.S. population (24.6 million people); within population subgroups it was higher among females, children, persons of non-Hispanic black and Puerto Rican race or ethnicity, persons with family income below the poverty level, and those residing in the Northeast and Midwest regions. In 2008, persons with asthma missed 10.5 million school days and 14.2 million work days due to their asthma. In 2007, there were 1.75 million asthma-related emergency department visits and 456,000 asthma hospitalizations. Asthma emergency visit and hospitalization rates were higher among females than males, among children than adults, and among black than white persons. Despite the high burden from adverse impacts, use of some asthma management strategies based on clinical guidelines for the treatment of asthma remained below the targets set by the Healthy People 2010 initiative. It is up to providers to assess patients, prescribe medications, educate about self-management, help patients identify and mitigate triggers so patients can prevent their exacerbations.</p>
X3768	Primary C-Section Rate 2014	<p>The growing support for the claim that provider-dependent indications are contributing to the overall increase among cesareans can be seen from the results of two recent studies examining the drivers for the increase in cesarean deliveries. Barber et al. (2011) at Yale analyzed primary and repeat cesareans from 2003 to 2009. Among primary cesarean deliveries, more subjective indications (non-reassuring fetal status and arrest of dilation) contributed larger proportions than more objective indications (malpresentation, maternal-fetal, and obstetric conditions). Similarly, Getahun et al. (2009) examined the causes for the rise in cesarean deliveries among different racial and ethnic groups in Kaiser Permanente Southern California over the last 17 years. Their findings were similar to those from Yale. In a retrospective cohort study conducted by Ehrental et al. (2010), labor induction was associated with a twofold increase in the odds of a cesarean delivery after adjustment for confounders. This was more pronounced among a low-risk group of women without major complications. Beyond the medical burden to mothers and babies, the financial burden on payers is large: facility charges for cesarean are nearly twice that for vaginal delivery (\$24,700 vs. \$14,500). In California alone, the additional health care costs to the system are conservatively estimated to be over \$300 million annually (Main et al., 2011) The most frequent causes of severe maternal morbidity are obstetric hemorrhage (bleeding) and uterine infection. These are significantly more common with cesarean surgery and also represent the two leading causes of hospital readmission in the first 30 days post-delivery. A recent CDC analysis showed that the rate of severe obstetric hemorrhage has significantly increased (by 50%) over the last 15 years in the U.S. There has also been a 270% increase in blood transfusions, with both hemorrhage and transfusions correlated to the rise in cesarean deliveries. Infection is the most common serious complication of cesarean delivery with typical rates of 3 to 9% (Kuklina et al., 2009). The American College of Obstetrics and Gynecology (ACOG) report, "Evaluation of Cesarean Delivery," recognizes the importance of the</p>

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		Nulliparous, Term Singleton Vertex (NTSV) population as the optimal focus for measurement and quality improvement action. Furthermore, the report identified a target of 15.5% for NTSV births, one recommended by the National Center for Health Statistics. Although the ACOG target rate was directed at the NTSV cesarean delivery rate, the recommendation has been widely misread as recommending a 15.5% total cesarean delivery rate (ACOG, 2000).
E0076	Optimal Vascular Care	According to the MN Department of Health, vascular disease is a high impact clinical condition in Minnesota. More than 20% of all deaths in Minnesota are due to heart disease and more than 6% are due to stroke, making them the second and third leading causes of death, respectively, in the state behind cancer. Inpatient hospitalization charges alone in Minnesota were more than \$1.85 billion for heart disease patients and \$362 million for stroke patients in 2008. Risk factors reported by Minnesotans include 34% high blood cholesterol, 22% high blood pressure, 16.7% cigarette smoke, 6.7% diabetes, 62% overweight, and 16% physical inactivity. 1a.4 Citations for Evidence of High Impact: Minnesota Department of Health 2010 Fact Sheets on Heart Disease and Stroke in Minnesota; <a href="http://www.health.state.mn.us/divs/hpcd/chp/cvh/Data.htm">http://www.health.state.mn.us/divs/hpcd/chp/cvh/Data.htm</a>
X3469	Cognitive Impairment Assessment Among At-Risk Older Adults	Alzheimer's disease is a leading cause of death for those over age 65. Age is the strongest and best documented correlate of cognitive impairment. The financial burden of cognitive impairment is sizable, conservatively costing an estimated \$157 to \$215 billion annually in institutional and home-based long-term care, health care expenses, and unfunded caregiver time. Clinical guidelines emphasize that adequate patient assessment is the critical first step for appropriate identification of cognitive impairment. Adequate patient assessment and diagnosis of cognitive impairment enables effective management of the condition, including interventions to maximize patient safety and plan for future care.
X3053	Functional Status Assessments and Goal Setting for Chronic Pain Due to Osteoarthritis	Chronic pain affects approximately 116 million adults and costs between \$560-\$635 billion in healthcare expenses, lost productivity, and other costs. Functional status assessments and goal setting could improve patient engagement and aid providers in managing pain. Goal-setting addresses patient engagement, one of the primary objectives of CMS and the National Quality Strategy. Only 4 of the 64 (6.25%) measures in the 2014 EHR Incentive Programs for Eligible Professionals (encompassing both Meaningful Use 1 and Meaningful Use 2 measures) address patient engagement.
X3466	Coordinating Care - Emergency	There is evidence that the communication between EDs and primary care physicians surrounding patients' ED use is inadequate. Studies suggest that among adults who have had an ED visit, 46 to 71% miss recommended follow-up (Barlas et al. 1999; Ritchie et al. 2000, Baren et al. 2001) while another study found 43% of patients who sought



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	Department Referrals	emergency care had no record or acknowledgement of the ED visit in their primary care medical record (Vinker et al. 2004). Poor care coordination is associated with patient readmissions, medication errors, and adverse drug events.
X3465	Coordinating Care - Follow-Up with Eligible Provider	There is evidence that the communication between EDs and primary care physicians surrounding patients' ED use is inadequate. Studies suggest that among adults who have had an ED visit, 46 to 71% miss recommended follow-up (Barlas et al. 1999; Ritchie et al. 2000, Baren et al. 2001) while another study found 43% of patients who sought emergency care had no record or acknowledgement of the ED visit in their primary care medical record (Vinker et al. 2004). Poor care coordination is associated with patient readmissions, medication errors, and adverse drug events.
X3468	Documentation of a Health Care Proxy for Patients with Cognitive Impairment	Establishment of a health care proxy helps to ensure that the patient's health care preferences are communicated, protects the patient from making decisions that they may not understand and provides the practitioner a responsible party with whom to discuss the risks and benefits of care management or planning options. Given that cognitive impairment has significant downstream implications for patient safety and quality of life, measures that encourage patients to take steps that facilitate management and planning of care—including designation of a health care proxy—could accrue significant benefits to patients. This measure specifically evaluates whether persons with cognitive impairment, including mild cognitive impairment, have documentation of a health care proxy to ensure the provision of future care that is consistent with the wishes of the patient. Studies have found a decline in the ability to consent to medical treatment or decision making as cognitive impairment progresses, suggesting potential constraints to patient preferences if they are unable to communicate decisions relevant to their care. Therefore, naming a health care proxy can maximize agreement between patient wishes and actual care, and lead to improved autonomy over health care decisions made in the advanced stages of cognitive impairment (including—but not limited to—decisions regarding specific care and navigation of the health system overall) and facilitate decision making that reduces aggressive treatments the patient may not want.
X3729	Statin Therapy for the Prevention and Treatment of Cardiovascular Disease	Treatment of blood cholesterol to reduce atherosclerotic cardiovascular disease (ASCVD) risk for all adults aged $\geq 21$ years is essential to not only prevent ASCVD but also to reduce ASCVD events for those individuals with a current diagnosis. The new guidelines: "2013 ACC/AHA Guideline on the Treatment of Blood Cholesterol to Reduce Atherosclerotic Cardiovascular Risk in Adults: A Report of the American College of Cardiology/American Heart Association Task Force on Practice Guidelines" published in Circulation in November, 2013, focuses on those most likely to benefit from evidence-based statin medication therapy to reduce ASCVD risk. LDL-C treatment goals or targets are not the focus of treatment as in the past.
S2521	Gout: Serum Urate	The 2012 American College of Rheumatology Guidelines for Management of Gout. Part 1: Systematic Nonpharmacologic and Pharmacologic Therapeutic Approaches to Hyperuricemia recommend that all gout patients



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	Monitoring	with indications for ULT should have their serum urate lowered to 6 mg/dl. Serum urate is the hemoglobin A1C of gout. Lower levels of serum urate are associated with less frequent gout attacks and reduction of tophaceous deposits. Based on feedback from public comment and expert panel, the less stringent level of 6.8 mg/dl cut-off was used to evaluate quality of care. 6.8 mg/dl is the solubility concentration of urate crystals. Serum urate responds to changes in urate lowering therapy within 14-days. The Guidelines recommends dose titration every 2-5 weeks. Twelve months was selected as sufficient time to achieve serum urate target, evidence Level C.
S2550	Gout: Urate Lowering Therapy	The 2012 American College of Rheumatology Guidelines for Management of Gout. Part 1: Systematic Nonpharmacologic and Pharmacologic Therapeutic Approaches to Hyperuricemia recommend that all gout patients with indications for ULT should have their serum urate lowered to 6 mg/dl. Serum urate is the hemoglobin A1C of gout. Lower levels of serum urate are associated with less frequent gout attacks and reduction of tophaceous deposits. Based on feedback from public comment and expert panel, the less stringent level of 6.8 mg/dl cut-off was used to evaluate quality of care. 6.8 mg/dl is the solubility concentration of urate crystals. Serum urate responds to changes in urate lowering therapy within 14-days. The Guidelines recommends dose titration every 2-5 weeks. Twelve months was selected as sufficient time to achieve serum urate target, evidence Level C.
E0555	INR Monitoring for Individuals on Warfarin (e-specified version of NQF #0555)	The measure focuses on International Normalized Ratio (INR) monitoring for individuals on warfarin. Warfarin is a vitamin K antagonist and inhibits the production of clotting factors. It is prescribed to prevent “further thromboembolism in patients with atrial fibrillation, after mechanical heart valve replacement, and following deep vein thrombosis or pulmonary embolism” (Dharmarajan, Gupta, Baig, & Norkus, 2011). Warfarin has a narrow therapeutic range and therefore, requires regular monitoring with the INR test and dose adjustment for the patient to stay within the therapeutic range and avoid thromboembolism or bleeding complications. Since its approval by the Food and Drug Administration in 1954, warfarin has been used as an oral anticoagulant in clinical practice (Food and Drug Administration, 2011). It continues to be widely prescribed, with about 33 million prescriptions issued in the United States during 2011 (Pierson, 2012). Several important benefits related to quality improvement are envisioned with the implementation of this measure. Specifically, the measure will help providers identify individuals on warfarin who do not have regular INR tests and will encourage providers to conduct appropriate INR testing for those patients. More regular INR monitoring should increase time in the therapeutic range (TTR) and therefore, would be expected to result in fewer thromboembolic and bleeding events and lower mortality. Recently published evidence from a large (n=56,490) well-designed study suggests that patients with two or more gaps of at least 56 days are associated with an average Time in Therapeutic Range (TTR) that is 10% lower (p<0.001) than patients without gaps (Rose et al., 2013). Clinical practice guidelines suggest a range of 4 weeks (Anderson et al., 2013) up to a maximum of 12 weeks (Guyatt et al, 2012) for INR monitoring depending on the indication,

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		<p>stability of patient dosing, and the guideline used. Eight weeks (i.e., 56 days) is the mid-point between these guidelines. The measure is supported by recommendations in the following clinical practice guidelines:</p> <ul style="list-style-type: none"> <li>• Holbrook et al. (2012). Evidence-based management of anticoagulant therapy: Antithrombotic therapy and prevention of thrombosis, 9th ed.: American College of Chest Physicians Evidence-Based Clinical Practice Guidelines (page e153S):               <ul style="list-style-type: none"> <li>3.1 Monitoring Frequency for Vitamin K Antagonists (VKAs)</li> <li>3.1. For patients taking VKA therapy with consistently stable INRs, we suggest an INR testing frequency of up to 12 weeks rather than every 4 weeks (Grade 2B).</li> </ul> </li> <li>• Anderson et al. (2013). Management of patients with atrial fibrillation (Compilation of 2006 ACCF/AHA/ESC and 2011 ACCF/AHA/HRS recommendations): A report of the American College of Cardiology/American Heart Association Task Force on Practice Guidelines (page 1918):               <ul style="list-style-type: none"> <li>1. Management                   <ul style="list-style-type: none"> <li>1.1. Pharmacological and Nonpharmacological Therapeutic Options                       <ul style="list-style-type: none"> <li>1.1.2. Preventing Thromboembolism</li> </ul> </li> </ul> </li> <li>5. INR should be determined at least weekly during initiation of therapy and monthly when anticoagulation is stable. (Class I; Level of Evidence: A)</li> </ul> </li> </ul>
X3472	Use of Multiple Concurrent Antipsychotics in Children and Adolescents	<p>Although there is little empirical evidence to support its use, the use of multiple concurrent antipsychotics is becoming an increasingly frequent practice in the mental health treatment of youth. One study of a large state Medicaid fee-for-service program found that 7 percent of children age 6-17 on any antipsychotic were prescribed two or more antipsychotics for longer than 60 days (Constantine et al., 2010). As of September 1, 2011, 4.1 percent of youth under age 18 in the New York State Medicaid behavioral health population on any antipsychotic were on two or more antipsychotics for longer than 90 days. Risks of multiple concurrent antipsychotics in comparison to monotherapy have not been systematically investigated; existing evidence appears largely in case reports, and includes increased risk of serious drug interactions, delirium, serious behavioral changes, cardiac arrhythmias, and death (Safer, Zito, &amp; DosReis, 2003). None of the 10 AACAP practice parameters recommended concurrent use of multiple antipsychotic medications. The AACAP Practice Parameters for the Use of Atypical Antipsychotic Medications in Children and Adolescents states, “the use of multiple AAAs [atypical antipsychotics] has not been studied rigorously and generally should be avoided.” The Texas Psychotropic Medication Utilization Parameters for Foster Children includes “two or more concomitant antipsychotic medications” as a situation that “suggests the need for additional review of a patient’s clinical status.”</p> <p>Constantine RJ, Boaz T, Tandon R. (2010). Antipsychotic polypharmacy in the treatment of children and adolescents</p>

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		<p>in the fee-for-service component of a large state Medicaid program. Clinical therapeutics, 32, 949-959.                      Safer, D.J., J.M. Zito, and S. DosReis, Concomitant psychotropic medication for youths. Am J Psychiatry, 2003. 160(3): p. 438-49.                      AACAP Practice Parameters for the Use of Atypical Antipsychotic Medications in Children and Adolescents                      2010 Texas Psychotropic Medication Utilization Parameters for Foster Children.</p>
E1553	Blood Pressure Screening by age 18	<p>High blood pressure (hypertension) is a growing concern for children and adolescents in the U.S. due mostly in part to a rapid increase in childhood obesity (Luma, 2006). A recent study of National Health and Nutrition Examination Survey data showed that, during 2003-2006, 2.6 percent of boys and 3.4 percent of girls age eight to 17 years had high blood pressure. Moreover, 13.6 percent of boys and 5.7 percent of girls in this age group had pre-high blood pressure. Overweight boys and obese boys and girls were significantly more likely to have these classifications (Ostchega Y, 2009). Autopsy reports of children and adolescents who have died unexpectedly have shown a positive and significant association with systolic and diastolic blood pressure and body mass index (BMI) (Hayman, 2003). Autopsy reports of adults with high levels of cholesterol and coronary heart disease showed that precursors to these diseases began in childhood (National Cholesterol Education Program). High blood pressure represents a significant financial burden, in 2006, the direct and indirect costs of high blood pressure were estimated at \$63.5 billion overall (CDC, 2007). In addition to costs, resource utilization is also significantly higher among hypertensive people. Prescription medicines, inpatient visits, and outpatient visits constitute more than 90 percent of the overall incremental cost of treating hypertension (Balu, 2005). These costs can be expected to rise with increasing prevalence among children.</p>
X3817	Amblyopia Screening in Children	<p>Vision problems are commonplace among children and adolescents, affecting 25 percent of children five to 17 years of age. Problems specific to children include strabismus, color vision defects, refractive error, reduced visual acuity and amblyopia. Amblyopia, also known as lazy eye, affects nearly 500,000 preschoolers and is the primary cause of permanent vision loss among children of any age. Early detection, treatment and follow-up are critical in preventing and managing vision disorders. Undetected vision problems affect up to 10 percent of preschool-aged children. Fewer than 15 percent of all preschool children receive an eye examination and less than 22 percent of preschool children receive some type of vision screening. Early screening can lead to the detection of amblyopia (2-5%), strabismus (3-4%), and significant refractive error (15-20%), the most prevalent and significant vision disorders of preschool children. The USPSTF recommends vision screening for all children at least once between the ages of 3 and 5 years, to detect the presence of amblyopia or its risk factors. The AAP recommends that all children who are found to have an ocular abnormality or who fail vision screening should be referred to a pediatric ophthalmologist or an eye care specialist appropriately trained to treat pediatric patients.</p>

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X3280	ADHD: Symptom Reduction in Follow-up Period	<p>According to the CDC, approximately 9% of children age 4-17 have ADHD and the rate of ADHD diagnosis has increased an average of 5% per year from 2003 to 2007. Evidence exists that shows there is a lack of a standard approach to ADHD diagnosis and adherence to treatment guidelines. One likely cause of the poor provision of ADHD care is the logistical issue surrounding collection of ADHD rating scales from parents and teachers. Collection of rating scales requires knowledge of appropriate ratings scales to use, time to explain the purpose of collecting rating scales to parents, distribution of rating scales to and from home, coordination of distributing and collecting rating scales from school, scoring of completed ratings, and, finally, interpretation of results. This comprises a complex data management process that typically goes un- or under-reimbursed in pediatric settings. Without the collection of these results, the quality of ADHD care suffers. ADHD Clinical Practice Guideline for the Diagnosis, Evaluation, and Treatment of Attention-Deficit/Hyperactivity Disorder in Children and Adolescents. AAP 2011. Primary Care Clinicians should evaluate children 4 -18 years of age for ADHD who present with academic or behavioral problems and symptoms of inattention, hyperactivity or impulsivity. Evidence continues to be fairly clear with regard to the legitimacy of the diagnosis of ADHD and the appropriate diagnostic criteria and procedures required to establish a diagnosis, identify co-occurring conditions, and treat effectively with both behavioral and pharmacologic interventions. For pharmacologic treatment, the primary care clinician should titrate doses of medication for ADHD to achieve maximum benefit with minimum adverse effects (quality of evidence B/strong recommendation) ADHD Process-of-Care Algorithm, Caring for Children With ADHD: A Resource Toolkit for Clinicians, 2nd Edition. AAP 2011. Continued systematic monitoring (to include reconsideration of the diagnosis if improvements in symptoms are not apparent) is an on-going process, to be addressed throughout the child's/adolescent's care within the practice. Clinicians should regularly monitor all aspects of ADHD treatment, to include:</p> <ul style="list-style-type: none"> <li>- Systematic reassessment of core symptoms and function;</li> <li>- Regular reassessment of target goals;</li> <li>- Assurance that the family is satisfied with the care they are receiving from other clinicians and therapists, if applicable;</li> <li>- Provision of anticipatory guidance, further child/adolescent and family education, and transition planning as needed and appropriate;</li> <li>- Assurance that care coordination is occurring and meeting the needs of the child/adolescent and family;</li> <li>- Confirmation of adherence to any prescribed medication regimen, with adjustments made as needed;</li> <li>- Heart rate, blood pressure, height, and weight monitoring; and</li> <li>- Continuing to form a therapeutic relationship with the child/adolescent and empower families and children/adolescents to be strong, informed advocates.</li> </ul>

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X3513	Annual Hepatitis C Virus (HCV) Screening for Patients who are Active Injection Drug Users	<p>The U.S. Preventive Services Task Force (USPSTF)<sup>40</sup> recommends screening for hepatitis C virus (HCV) infection in adults at high risk, including those with any history of intravenous drug use or blood transfusions prior to 1992. Grade B recommendation. Assessment of Risk: Established high-risk factors for HCV infection include blood transfusion prior to 1992 and past or current intravenous drug use. The most important risk factor for HCV infection is past or current injection drug use. Because of screening programs for donated blood, blood transfusions are no longer an important source of HCV infection. In contrast, 60% of new HCV infections occur in individuals who report injecting drugs within the last 6 months. Other risk factors include chronic hemodialysis, being born to an HCV-infected mother, incarceration, intranasal drug use, getting an unregulated tattoo, and other percutaneous exposures (e.g., in health care workers, having surgery prior to the implementation of universal precautions). Evidence on tattoos and other percutaneous exposures as risk factors for HCV infection is limited. In the United States, an estimated 2.7–3.9 million persons (1.0%–1.5%) are living with hepatitis C virus (HCV) infection, and an estimated 17,000 persons were newly infected in 2010, the most recent year that data are available. With an HCV antibody prevalence of 3.25%, persons born during 1945–1965 account for approximately three fourths of all chronic HCV infections among adults in the United States. Although effective treatments are available to clear HCV infection from the body, most persons with HCV do not know they are infected do not receive needed care (e.g., education, counseling, and medical monitoring), and are not evaluated for treatment. Since 1998, routine HCV testing has been recommended by CDC for persons most likely to be infected with HCV. These recommendations were made on the basis of a known epidemiologic association between a risk factor and acquiring HCV infection. HCV testing is the first step toward improving health outcomes for persons infected with HCV. In a recent analysis of data from a national health survey, 55% of persons ever infected with HCV reported an exposure risk (e.g., injection-drug use or blood transfusion before July 1992), and the remaining 45% reported no known exposure risk (CDC, unpublished data, 2012). Current risk-based testing strategies have had limited success, as evidenced by the substantial number of HCV-infected persons who remain unaware of their infection. Of the estimated 2.7–3.9 million persons living with HCV infection in the United States, 45%–85% are unaware of their infection status<sup>44,45,46,47</sup>; this proportion varies by setting, risk level in the population, and site-specific testing practices. Studies indicate that even among high-risk populations for whom routine HCV testing is recommended, prevalence of testing for HCV seromarkers varies from 17%–87%; according to one study, 72% of persons with a history of injection-drug use who are infected with HCV remain unaware of their infection status.</p>
E0711	Depression Remission at Six Months	<p>The Centers for Disease Control and Prevention states that nationally 15.7% of people report being told by a health care professional that they had depression at some point in their lifetime. Persons with a current diagnosis of depression and a lifetime diagnosis of depression or anxiety were significantly more likely than persons without</p>

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		these conditions to have cardiovascular disease, diabetes, asthma and obesity and to be a current smoker, to be physically inactive and to drink heavily. According to National Institute of Mental Health (NIMH), 6.7 percent of the U.S. population ages 18 and older (14.8 million people) in any given year have a diagnosis of a major depressive disorder. Major depression is the leading cause of disability in the U.S. for ages 15 - 44. Additionally, dysthymia accounts for an additional 3.3 million Americans.
X3810	Post-Anesthetic Transfer of Care Measure: Procedure Room to a Post Anesthesia Care Unit (PACU)	Peri-procedure transitions of care place patients at risk for incomplete sharing of important information between practitioners. Effective communication between providers at the time of admission to PACU promotes safe care and enhances coordination of care.
X3808	Preoperative Use of Aspirin for Patients with Drug-Eluting Coronary Stents	Late stent thrombosis is a relatively rare but serious complication of stent placement, with an estimated case fatality rate of up to 45%. Multiple studies have shown that premature discontinuation of dual antiplatelet therapy is associated with increased risk of stent thrombosis in patients with drug-eluting stents. Late stent thrombosis, or thrombosis >1 year after stent placement, is of particular concern for drug-eluting stents. This concern indicates a need for a longer course of dual antiplatelet therapy for patients with drug-eluting stents compared to those with bare metal stents.
X3811	Anesthesiology Smoking Abstinence	Each year, millions of cigarette smokers require surgery and anesthesia in the US. Smoking is a significant independent risk factor for perioperative heart, lung, and wound-related complications. There now is good evidence that perioperative abstinence from smoking reduces the risk of heart, lung, and wound-related perioperative complications, and that the perioperative period represents a “teachable moment” for smoking cessation that improves long-term abstinence rates; over 100,000 smokers quit in the US each year as a result of having a surgical procedure. Although evidence suggests that the longer the duration of abstinence the better, there is also evidence that even brief abstinence (e.g., abstaining from smoking on the morning of surgery) can dramatically reduce both nicotine and carbon monoxide levels and reduce risks for complications such as intraoperative myocardial ischemia. Evidence shows that tobacco interventions can 1) increase perioperative abstinence rates in surgical patients who smoke and 2) decrease the rate of perioperative complications. Thus, this measure, which incents the provision of tobacco interventions by clinicians as a part of routine clinical practice, will significantly improve the health of smokers who require surgery. In its Clinical Practice Guideline for Treating Tobacco Use and Dependence, the US

MUC ID	Measure Title	Rationale
		Public Health Services recognizes the important role that clinicians play in delivering tobacco use intervention services, strongly recommending that clinicians screen all adults for tobacco use and provide tobacco cessation interventions for those who use tobacco products.
X3809	Perioperative Temperature Management	A drop in core temperature during surgery, known as perioperative hypothermia, can result in numerous adverse effects, which can include adverse myocardial outcomes, subcutaneous vasoconstriction, increased incidence of surgical site infection, and impaired healing of wounds. The desired outcome, reduction in adverse surgical effects due to perioperative hypothermia, is affected by maintenance of normothermia during surgery.
X3806	Prevention of Post-Operative Nausea and Vomiting (PONV) – Combination	Postoperative nausea and vomiting (PONV) is an important patient-centered outcome of anesthesia care. PONV is highly dis-satisfying to patients, although rarely life-threatening. A large body of scientific literature has defined risk factors for PONV, demonstrated effective prophylactic regimes based on these risk factors, and demonstrated high variability in this outcome across individual centers and providers. Further, a number of papers have shown that performance can be assessed at the level of individual providers -- the outcome is common enough that sufficient power exists to assess variability and improvement at this level.
X3807	Post-Anesthetic Transfer of Care: Use of Checklist or Protocol for Direct Transfer of Care from Procedure Room to Intensive Care Unit (ICU)	A uniform transfer of care protocol or handoff tool/checklist that is utilized for all patients directly admitted to the ICU after undergoing a procedure under the care of an anesthesia practitioner will facilitate effective communications between the medical practitioner who provided anesthesia during the procedure and the care practitioner in the ICU who is responsible for post-procedural care. This should minimize errors and oversights in medical care of ICU patients after procedures. Hand-offs of care are a vulnerable moment for patient safety, but required in any 24/7 healthcare system. Anesthesia providers routinely transfer critically ill patients from the OR to the ICU, and are responsible for transmitting knowledge about patient history, a summary of intraoperative events, and future plans for hemodynamic and pain management to the ICU team. Evidence demonstrates that this process can be facilitated by use of a checklist that motivates completion of all key components of the transfer. This is an emerging best practice in anesthesia care.
X3789	Patient Counseled About Health Care Decision-Making	An important aspect of ongoing management includes proactively preparing patients with MD and their families for the long-term consequences of muscular dystrophies and engaging in discussions regarding end-of-life care. This helps patients come to terms with their condition and prepare for the expected complications of their form of MD and avoids the need for hasty decisions made in the throes of a medical crisis. Palliative care is useful to alleviate the suffering of these patients.



MUC ID	Measure Title	Rationale
X3800	Patient Queried about Pain and Pain Interference with Function	Between 68-82% of patients with muscular dystrophies live in pain. Pain is a common feature of some MDs, notably myotonic dystrophy and FSHD, but also many of the limb girdle muscular dystrophies (LGMDs). Pain interferes with physical and psychological functioning in these patients. Lower extremity pain intuitively affects ambulation. Pain and fatigue are independent predictors of lower physical functioning and greater depression. Thus identification and treatment of pain is important to improve the care of patients with MD.
X3801	Nutritional Status or Growth Trajectories Monitored	Delayed growth, short stature, muscle wasting and increased fat mass are characteristics of DMD and impact on nutritional status and energy requirements. The early introduction of steroids has altered the natural history of the disease, but can exacerbate weight gain in a population already susceptible to obesity. Prior to commencing steroids, anticipatory guidance for weight management should be provided. Malnutrition is a feature of end stage disease requiring a multidisciplinary approach, such as texture modification and supplemental feeding. As a result of corticosteroid treatment, vitamin D and calcium should be supplemented. Patients with MD may have difficulty receiving adequate oral intake due to dysphagia and/or inability to feed themselves due to excessive arm weakness. Maintaining adequate nutrition and body weight is important for optimizing strength, function, and quality of life. When oral intake is inadequate, other means of maintaining intake, such as gastrostomy or jejunostomy feeding tubes, may be needed to maintain optimal nutrition. There is evidence from related conditions (amyotrophic lateral sclerosis [ALS]) that maintenance of nutrition and body weight prolongs survival.
X3798	Scoliosis Evaluation Ordered	There is a risk of evolving musculoskeletal spine deformities, such as scoliosis, kyphosis, or rigid spine syndrome, in various dystrophies. These musculoskeletal deformities can result in discomfort and functional impairment, interfering with gait, activities of daily living, and pulmonary function. The proper management of musculoskeletal spine deformities is important in order to reduce discomfort, preserve mobility or ability to sit in a wheelchair, and reduce pulmonary complications.
X3791	MD Multidisciplinary Care Plan Developed or Updated	A systematic review of muscular dystrophies has highlighted the medical complexity of caring for patients with MD. Such patients may develop cardiac, pulmonary, nutritional, and musculoskeletal complications that require the assistance of cardiologists, pulmonologists, orthopedists, physiatrists, physical therapists, occupational therapists, nutritionists, orthotists, and speech pathologists, in addition to neurologists. Additionally, myopathies with a limb-girdle, humeroperoneal, or distal pattern of weakness may be challenging to diagnose. A specific diagnosis provides patients with “closure,” assists genetic counseling, and directs monitoring for complications and optimal management.
X3787	Patients with	DMD is a recessive X- linked genetic disorder characterized by progressive muscle weakness and reduced muscle



MUC ID	Measure Title	Rationale
	DMD Prescribed Appropriate Disease Modifying Pharmaceutical Therapy	tone. Affecting only boys, it limits life expectancy to approximately 20 years. Care for patients with DMD is poorly standardized. This leads to inequality in access to treatment. Although there is no cure, a Cochrane Review and AAN practice parameter concluded that prednisone may provide short term effective treatment that prolongs the ability to walk, reduces the complications such as scoliosis, respiratory insufficiency and cardiac impairment. Despite the well documented beneficial effects of corticosteroids in DMD, a population based study of corticosteroid use between 1991 and 2005 reported that only 50.9% of individuals had ever been on corticosteroids. The annual mean percent corticosteroid use varied widely from 8.4% to 80.2% across clinics. Another survey showed that nearly 10% of neuromuscular disease clinics do not offer such therapy. Glucocorticoids are currently the only medication available that slows the decline in muscle strength and function in DMD, which in turn reduces the risk of scoliosis and stabilizes pulmonary function. Approximately 16% of Muscular Dystrophy Association clinic directors report not using corticosteroids.
X3794	Plan Of Care For Migraine Or Cervicogenic Headache Developed Or Reviewed	Optimizing headache management requires a systematic assessment of symptoms, including the development of an individualized plan of care. Clinicians are advised to base their treatment choice on degree of disability along with attack frequency and duration, non-headache symptoms, patient preference, and prior history of treatment response, using a stratified approach to care. This information should be included in the patient's plan of care. HRQoL and disability are positively impacted by treatment interventions and a continuity of care.
X3796	Migraine Or Cervicogenic Headache Related Disability Functional Status	The goal of this measure is to understand headache related disability (risk adjusted/risk stratified) on the system level to indicate where improvements in the management and treatment of patients with headache should be made.
X3786	Quality Of Life Assessment For Patients With Primary Headache Disorders	This measure establishes an initial or baseline QoL score from which the patient should use the same QoL tool/questionnaire at least one additional time during the measurement period. The two assessments must be separated by at least 90 days for MIDAS and at least 4 weeks for any other tool. It is expected that the QoL score or ranking will stay the same or improve in order for this measure to be successfully completed.

MUC ID	Measure Title	Rationale
X3785	Overuse Of Neuroimaging For Patients With Primary Headache And A Normal Neurological Examination	Imaging headache patients absent specific risk factors for structural disease is not likely to change management or improve outcome. Those patients with a significant likelihood of structural disease requiring immediate attention are detected by clinical screens that have been validated in many settings. Many studies and clinical practice guidelines concur. Also, incidental findings lead to additional medical procedures and expense that do not improve patient well-being.
X3784	Plan Of Care Or Referral For Possible Medication Overuse Headache	MOH is caused by chronic and excessive use of medication to treat headache. MOH is the most common secondary headaches. It may affect up to 5% of some populations, women more than men. MOH is oppressive, persistent and often at its worst on awakening. This is a paired, or a two-part measure, that is scored separately for part A and part B. The measure 6A focuses on assessing for MOH using the July 2013 ICHD-III medication overuse headache criteria. In measure 6B, if the patient is found have MOH from measure 6A and is diagnosed with MOH, then he/she she should have a plan of care created by the clinician or the clinician should refer the patient for this purpose.
X3783	Assessment Of Medication Overuse In The Treatment Of Primary Headache Disorders	MOH is caused by chronic and excessive use of medication to treat headache. MOH is the most common secondary headaches. It may affect up to 5% of some populations, women more than men. MOH is oppressive, persistent and often at its worst on awakening. This is a paired (or two part measure) that is scored separately for part A and part B. The measure 6A focuses on assessing for MOH using the July 2013 ICHD-III MOH criteria. In measure 6B, if the patient is found have MOH from measure 6A and is diagnosed with MOH, then he/she she should have a plan of care created by the clinician or the clinician should refer the patient for this purpose during the measurement period.
X3770	Overuse Of Opioid Containing Medications For Primary Headache Disorders	Triptans and ergots are considered first line acute treatments for migraine, not opioids or barbiturates by the US Headache Consortium Guideline. The use of barbiturates or opioids increases the risk of chronic daily headache and drug induced hyperalgesia. In one study, any use of barbiturates and opiates was associated with increased risk of transformed migraine after adjusting for covariates, while triptans were not. In a sample of 5,796 people with headache, 4,076 (70.3%) were opioid nonusers, 798 (13.8%) were previous users, and 922 (15.9%) were current opioid users.
X3769	Unnecessary	"Colorectal cancer is the third most common malignancy and the second leading cause of cancer-related deaths in

MUC ID	Measure Title	Rationale
	Screening Colonoscopy in Older Adults	<p>the United States. The lifetime risk of being diagnosed with cancer in the colon or rectum is about 5 percent. The percentage of new cases is higher in people from 65-84 years of age; the median age of diagnosis is 69 (NCI, 2013). The overall incidence by age for both men and women are as follows:</p> <ul style="list-style-type: none"> <li>• 4 percent between 35 and 44 years</li> <li>• 13.8 percent between 45 and 54 years</li> <li>• 20.8 percent between 55 and 64 years</li> <li>• 24 percent between 65 and 74 years</li> <li>• 24.1 percent between 75 and 84 years</li> <li>• 12 percent in 85 years and older</li> </ul> <p>The incidence of mortality rates for colorectal cancer are about 35 percent – 40 percent higher in men than in women,; however, both rates have decreased significantly since 1975 (ACS, 2013). The incidence rate declined from 60 cases to 45 cases per 100,000 people, and the mortality rate declined from 28 deaths to 17 deaths per 100,000 people (NCI, 2013). Declines in the incidence and mortality rates are due, in part, to the routine performance of preventive screening: improved screening is responsible for half of the observed reduction in both rates, while the remaining half derives from changes in the population prevalence of contributing risk factors (NCI, 2013). Colonoscopy is considered to be the most effective screening option for colorectal cancer. Colonoscopy permits immediate polypectomy and removal of macroscopically abnormal tissue in contrast to tests based on radiographic imaging or detection of occult blood or exfoliated DNA in stool. Following removal, the polyp is sent to pathology for histologic confirmation of cancer. Colonoscopy directly visualizes the entire extent of the colon and rectum, including segments of the colon that are beyond the reach of flexible sigmoidoscopy. Colonoscopy therefore has become either the primary screening method or a follow-up modality for all colorectal cancer screening methods and is one of the most widely performed procedures in the United States. Given that, appropriate use of colonoscopy is crucial. The U.S. Preventive Services Task Force (USPSTF) recommends screening for colorectal cancer in adults using fecal occult blood test (FOBT), sigmoidoscopy, or colonoscopy, beginning at 50 years of age and continuing until 75 years of age. The risks and benefits of these screening methods vary. A recommendation. However, the USPSTF recommends against screening for colorectal cancer in adults older than 85 years. D recommendation (<a href="http://www.uspreventiveservicestaskforce.org/uspstf08/colocancer/colors.htm">http://www.uspreventiveservicestaskforce.org/uspstf08/colocancer/colors.htm</a>).</p> <p>In a cohort study of Medicare enrollees from 2000-2008, the authors concluded that one-third of patients 80 years or older at their initial negative screening examination result underwent a repeated screening examination within 7 years. In addition the authors also stated that use of colonoscopy outside the scope of the recommendations, can not only cause overuse that exposes patients to unnecessary procedures but also increases costs. Identifying and decreasing overuse of screening colonoscopy is important to free up resources to increase appropriate colonoscopy</p>

MUC ID	Measure Title	Rationale
		<p>in inadequately screened populations.(Goodwin JS, Singh A, Reddy N, Riall TS, Kuo Y. Overuse of Screening Colonoscopy in the Medicare Population. Arch Intern Med. 2011;171(15):1335-1343. doi:10.1001/archinternmed.2011.212). This is of special concern, given the increased potential for complications, decreased completion rate and decreased benefit of this examination in the very elderly. In addition, even though the prevalence of colonic neoplasia increases with age, screening colonoscopy in very elderly patients results in smaller gains in life expectancy compared with younger patients, even when adjusted for life expectancy (Lin OS, Kozarek RA, Schembre DB, et al. Screening colonoscopy in very elderly patients: prevalence of neoplasia and estimated impact on life expectancy. JAMA. 2006;295(20):2357-2365).</p> <p>The charge for a colonoscopy can range from \$1,000-\$3,000; Medicare reimbursement covers 75 percent – 80 percent of charges. Based on the 2011 U.S. Census, there are currently 8.1 million individuals 85 and older in the U.S. Given this count, regular performance of colonoscopies among this population could result in significant health care spending (not including downstream costs due to subsequent clinical complications)(Goodwin, 2011). The population of individuals 85 years and older is projected to double by 2050; hence, the financial burden related to potentially inappropriate performance of colorectal screening can be expected to increase (Goodwin, 2011).</p> <p><b>CLINICAL RECOMMENDATION STATEMENTS :</b></p> <p>The USPTF (2008) recommends three screening regimens for individuals 50-75 years of age with average risk:</p> <ul style="list-style-type: none"> <li>• Annual high-sensitivity FOBT.</li> <li>• Sigmoidoscopy every 5 years, combined with high-sensitivity fecal occult blood testing every 3 years.</li> <li>• Optical colonoscopy every 10 years.</li> </ul> <p>For individuals from 76-85 years of age, the Task Force recommends against routine performance of screening unless individuals have not been previously screened, in which case it should be considered in the context of health status and competing risks for each individual (USPTF, 2008).</p> <p>For individuals older than 85 years, the Task Force recommends against screening when comparing overall benefits to harms (D Recommendation)(USPTF, 2008). The Task Force based these recommendations on a systematic review of the literature, supplemented with modeling data (USPTF, 2008; NCI 2013; USCR, 2011).</p> <p>For this subgroup, the Task Force concluded that the utility of screening is limited, given the time it takes for a polyp to develop into a clinically observable malignancy (10-26 years)(USPTF, 2008; NCI 2013; UCSR 2011). Moreover, individuals older than 85 are likely to have multiple comorbidities that influence any potential life-year gain (USPTF, 2008; NCI 2013; UCSR, 2011). They are also at increased risk of suffering from adverse events related to performance of a colonoscopy, with the rate of adverse events being 2.8 per 1,000 procedures and increased by seven-fold if a polypectomy is performed (USPTF, 2008; CDC 2012, NCI, 2013).</p>

MUC ID	Measure Title	Rationale
X3765	Overuse of Barbiturate Containing Medications for Primary Headache Disorders	Triptans and ergots are considered first line acute treatments for migraine, not opioids or barbiturates by the US Headache Consortium Guideline. However, barbiturates or butalbital containing agents are prescribed frequently. The use of barbiturates increases the risk of chronic daily headache and drug induced hyperalgesia. One study noted that barbiturate or opioid class of medicine is more likely to be overused among those patients presenting to a tertiary headache center (overused substances: Butalbital containing combination products, 48%; Acetaminophen, 46.2%; Opioids, 33.3%; ASA, 32.0%; Ergotamine tartrate, 11.8%; Sumatriptan, 10.7%; Nonsteroidal anti-inflammatory medications other than ASA, 9.8%; Zolmitriptan, 4.6%; Rizatriptan, 1.9%; Naratriptan, 0.6%. Total of all triptans, 17.8%).
X3772	Preventive Migraine Medication Prescribed	This measure is designed to address the strong gap in care in the use of prophylactic medication for migraine headache. Migraine is suboptimally treated in the majority of patients. Note: this measure does not specifically address chronic migraine or MRM.
X3766	ACUTE MEDICATION PRESCRIBED FOR CLUSTER HEADACHE	CH is under diagnosed and undertreated. Although CH has a much lower prevalence than many other types of headache, it is often considered the most severe headache pain. Suicidality ideations in one study were as high as 55% of the study population.
X3771	MEDICATION PRESCRIBED FOR ACUTE MIGRAINE ATTACK	Migraine is under diagnosed and suboptimally treated in the majority of patients. The Work Group noted although there are no guidelines available, almotriptan is approved for ages 12-17 and rizatriptan was recently approved by the FDA for ages 6-17. The Work Group also noted that although the triptans in individuals less than 12 years old may be prescribed off label, there is limited or no evidence to support this.
X3775	Chronic Opioid Therapy Follow-up Evaluation	Clinicians should reassess patients on COT periodically and as warranted by changing circumstances. Monitoring should include documentation of pain intensity and level of functioning, assessments of progress toward achieving therapeutic goals, presence of adverse events, and adherence to prescribed therapies (strong recommendation, low-quality evidence). In patients on COT who are at high risk or who have engaged in aberrant drug-related behaviors, clinicians should periodically obtain urine drug screens or other information to confirm adherence to the COT plan of care (strong recommendation, low-quality evidence). In patients on COT not at high risk and not known to have engaged in aberrant drug-related behaviors, clinicians should consider periodically obtaining urine drug

MUC ID	Measure Title	Rationale
		screens or other information to confirm adherence to the COT plan of care (weak recommendation, low-quality evidence)
X3776	Consideration of Non-Pharmacologic Interventions	As CNCP is often a complex biopsychosocial condition, clinicians who prescribe COT should routinely integrate psychotherapeutic interventions, functional restoration, interdisciplinary therapy, and other adjunctive non opioid therapies (strong recommendation, moderate-quality evidence)
X3777	Documentation of Signed Opioid Treatment Agreement	When starting COT, informed consent should be obtained. A continuing discussion with the patient regarding COT should include goals, expectations, potential risks, and alternatives to COT (strong recommendation, low-quality evidence). Clinicians may consider using a written COT management plan to document patient and clinician responsibilities and expectations and assist in patient education (weak recommendation, low-quality evidence)
X3774	Evaluation or Interview for Risk of Opioid Misuse	Before initiating COT, clinicians should conduct a history, physical examination and appropriate testing, including an assessment of risk of substance abuse, misuse, or addiction (strong recommendation, low-quality evidence). Clinicians may consider a trial of COT as an option if chronic noncancer pain (CNCP) is moderate or severe, pain is having an adverse impact on function or quality of life, and potential therapeutic benefits outweigh or are likely to outweigh potential harms (strong recommendation, low-quality evidence). A benefit-to-harm evaluation including a history, physical examination, and appropriate diagnostic testing, should be performed and documented before and on an ongoing basis during COT (strong recommendation, low-quality evidence)
X3802	Appropriate follow-up imaging for non-traumatic knee pain	<p>Knee pain is common, affecting approximately 13.3% of the U.S. population (1). Radiographs are indicated as part of the initial work-up for knee pain. Advanced imaging studies should only be utilized when the diagnosis remains unclear. In recent years, there has been growing concern regarding the overuse of imaging services (2). One report estimates that 20%-50% of diagnostic imaging studies fail to provide information that improves the diagnosis or treatment of the patient (3).</p> <p>1. Cunningham LS, Kelsey JL. Epidemiology of musculoskeletal impairments and associated disability. <i>Am J Public Health.</i> 1984;74:574-579.</p> <p>2. American College of Radiology for ABIM Choosing Wisely Campaign. Five things physicians and patients should question. <a href="http://www.choosingwisely.org/doctor-patient-lists/american-college-of-radiology/">http://www.choosingwisely.org/doctor-patient-lists/american-college-of-radiology/</a>. Accessed March 24, 2014.</p> <p>3. America's Health Insurance Plans. Ensuring quality through appropriate use of diagnostic imaging. <a href="http://www.medsolutions.com/clinical_quality/facts/AHIP%202008%20Imaging%20Stats.pdf">http://www.medsolutions.com/clinical_quality/facts/AHIP%202008%20Imaging%20Stats.pdf</a>. Published July 2008. Accessed March 24, 2014.</p>

MUC ID	Measure Title	Rationale
		<p>Data analysis was conducted to determine the percentage of MRI examinations for knee and shoulder pain or tendonitis performed without prior radiography. This was estimated among patients in the Medicare 5% Carrier Claims Limited Data Set and among commercially insured patients in the Truven MarketScan® Treatment Pathways database in 2010. About 28% of all knee MRIs and 35-37% of all shoulder MRIs were performed without recent prior radiographs. The extrapolated expense of these potentially unwarranted MRIs in the entire fee-for-service Medicare population was between \$20-35 million. Between 20 and 23% of patients undergoing knee MRI and 27-32% patient undergoing shoulder MRI did not have radiographic examination at any point before the MRI in the calendar year. Patients for whom MRI is performed without prior radiography represent an area of potential gap in care and should be considered for establishment of performance measures. Greater than one-quarter of all knee and shoulder MRIs are performed without recent prior radiographs and hence represent an area of potential inappropriate imaging utilization and gap in care. (1)</p> <p>1. Article in press: Journal of American College of Radiology</p>
X3803	Appropriate use of imaging for non-traumatic shoulder pain	<p>Shoulder pain is common, affecting approximately 6.7% of the U.S. population (1). Radiographs are indicated as part of the initial work-up for shoulder pain. Advanced imaging studies should only be utilized when the diagnosis remains unclear. In recent years, there has been growing concern regarding the overuse of imaging services (2). One report estimates that 20%-50% of diagnostic imaging studies fail to provide information that improves the diagnosis or treatment of the patient (3).</p> <p>1. Cunningham LS, Kelsey JL. Epidemiology of musculoskeletal impairments and associated disability. Am J Public Health. 1984;74:574-579.</p> <p>2. American College of Radiology for ABIM Choosing Wisely Campaign. Five things physicians and patients should question. <a href="http://www.choosingwisely.org/doctor-patient-lists/american-college-of-radiology/">http://www.choosingwisely.org/doctor-patient-lists/american-college-of-radiology/</a>. Accessed March 24, 2014.</p> <p>3. America’s Health Insurance Plans. Ensuring quality through appropriate use of diagnostic imaging. <a href="http://www.medsolutions.com/clinical_quality/facts/AHIP%202008%20Imaging%20Stats.pdf">http://www.medsolutions.com/clinical_quality/facts/AHIP%202008%20Imaging%20Stats.pdf</a>. Published July 2008. Accessed March 24, 2014.</p> <p>Data analysis was conducted to determine the percentage of MRI examinations for knee and shoulder pain or tendonitis performed without prior radiography. This was estimated among patients in the Medicare 5% Carrier Claims Limited Data Set and among commercially insured patients in the Truven MarketScan® Treatment Pathways database in 2010. About 28% of all knee MRIs and 35-37% of all shoulder MRIs were performed without recent prior radiographs. The extrapolated expense of these potentially unwarranted MRIs in the entire fee-for-service Medicare population was between \$20-35 million. Between 20 and 23% of patients undergoing knee MRI and 27-32% patient</p>

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		<p>undergoing shoulder MRI did not have radiographic examination at any point before the MRI in the calendar year. Patients for whom MRI is performed without prior radiography represent an area of potential gap in care and should be considered for establishment of performance measures. Greater than one-quarter of all knee and shoulder MRIs are performed without recent prior radiographs and hence represent an area of potential inappropriate imaging utilization and gap in care. (1)</p> <p>1. Article in press: Journal of American College of Radiology</p>
X3523	Extravasation of contrast following contrast-enhanced computed tomography (CT)	<p>Extravasation of contrast leads to a local inflammatory response that can, in turn, cause acute tissue injury. Patients experiencing extravasation can have symptoms ranging from swelling and burning pain to skin ulceration, tissue necrosis, and compartment syndrome in extreme cases.</p> <p>Extravasation is a relatively common occurrence that affects 1 out of 147 patients who are given intravenous contrast. Elderly patients and small children, as well as patients with limited communication abilities, severe illness or debilitation, or abnormal circulation, are at increased risk for extravasation.</p> <p>1. American College of Radiology Committee on Drugs and Contrast Media. ACR manual on contrast media- Version 9.</p> <p>2. Wang CL, Cohan RH, Ellis JH, Adusumilli S, Dunnick NR. Frequency, management, and outcome of extravasation of nonionic iodinated contrast medium in 69657 intravenous injections. <i>Radiology</i>. 2007;243(1):80-87. doi:10.1148/radiol.2431060554.</p>
X3781	Use of premedication before contrast-enhanced imaging studies in patients with documented contrast allergy	<p>Reactions to contrast media are common, occurring in as many as 13% of patients (1) . Most reactions are mild, with severe reactions occurring in &lt;1% of cases (1). Premedication with corticosteroids has been shown to reduce the rate of contrast reactions by as much as 35% among “high risk” patients who have had a previous reaction to contrast media (2) .</p> <p>1. Bush WH, Swanson DP. Acute reactions to intravascular contrast media: types, risk factors, recognition, and specific treatment. <i>Am J Roentgenol</i>. 1991;157:1153-1161.</p> <p>2. Lasser EC, Berry CC, Mishkin MM, Williamson B, Zheutlin N, Silverman JM. Pretreatment with corticosteroids to prevent adverse reactions to nonionic contrast media. <i>Am J Roentgenol</i>. 1994;162:523-525.</p> <p>In a 2011 survey (1) of urologists, 86% of respondents reported having a standardized premedication regimen. Additionally, the survey found significant variability in the use of premedication for specific clinical scenarios such as an urgent or emergent situation.</p> <p>1. O’Malley RB, Cohan RH, Ellis JH, et al. A survey on the use of premedication prior to iodinated and gadolinium-based contrast material administration. <i>J Am Coll Radiol</i>. 2011;8:345-354. doi:10.1016/j.jacr.2010.09.001.</p>



MUC ID	Measure Title	Rationale
X3764	Imaging in adult ED patients with minor head injury	This measure is needed to close the gap in provider performance as patients with mild closed head injuries without guideline indications for CT or MRI imaging are receiving such studies. The results of this are increased healthcare expenditures, unnecessary patient radiation exposure, and possibly prolonged evaluation times.
X3813	Proportion of patients sustaining a ureter injury at the time of any pelvic organ prolapse repair	Ureteral injury is an uncommon but potentially serious complication of surgery for pelvic organ prolapse. It is critically important for surgeons who are performing these procedures to recognize and repair any ureteral injuries intraoperatively, in order to minimize postoperative morbidity, including the need for subsequent surgical intervention to address these complications. Surgeons who have a higher than expected rate of ureteric injury during pelvic organ prolapse repair would potentially benefit from interventions to improve the quality of their surgical care.
X3788	PC-02 Cesarean Section (Provider Level)	This AMA – PCPI measure is harmonized with the Joint Commission’s measure (PC-02 Cesarean Section) in language and intent. The Joint Commission measure is a facility-level measures whereas this measure includes attribution at the individual provider level measure Cesarean deliveries are performed for many reasons. Some, such as those for breech presentation, are supported by strong clinical consensus. However, many cesareans, especially those done in the course of labor, are the result of labor management practices that vary widely and suggest clinician discretion (CMQCC) There is growing evidence to support the claim that provider-dependent indications (i.e., those that rely on provider judgment) combined with provider discretion contribute significantly to the overall increase in both primary and repeat cesareans. The fact that cesarean delivery rates and practices vary widely among states, regions, hospitals, and providers for both primary and repeat cesareans demonstrates that hospitals and clinicians can differ in their responses to the same conditions. This fact suggests the need for more precise clinical practice guidelines and/or greater accountability and incentives for following them. (California Maternal Quality Care Collaborative) California Maternal Quality Care Collaborative clinician interviews (funded by California HealthCare Foundation) reveal that many nurses talked about the timing of cesareans done during labor, citing the competing demands on physicians for clinic appointments and their desire for balance between work and the rest of life. Institutional pressures and the pace of high-volume facilities was another factor mentioned, along with physicians’ impatience with labor progress—a response that can be exacerbated in clinicians and mothers alike by the use of inductions, which can set up an expectation for a quick birth experience
X3274	Assessment for Psoriatic	The prevalence of psoriatic arthritis (PsA) in the general population of the United States has been estimated to be between 0.1% to 0.25%. Among those with psoriasis, the prevalence of PsA is approximately 10%.

MUC ID	Measure Title	Rationale
	Arthritis	This measure encourages dermatologists to actively seek signs and symptoms of PsA at each visit. Quick diagnosis of PsA leads to early treatment which alleviates signs and symptoms of PsA, prevents structural damage, and maximizes quality of life (QOL). As a result regular assessment of PsA which is the goal of this measure has a lot of potential for preventing negative outcomes, for reducing healthcare expenditure and improving outcomes.
X3726	Clinical Response to Oral Systemic or Biologic Medications	A significant proportion of psoriasis patients who are receiving treatment remain unsatisfied with their therapies due to various reasons including lack of or loss of efficacy, side effects, and inconvenience, among others. Treatment dissatisfaction also contributes to patients discontinuing therapy. This measure evaluates the proportion of psoriasis patients receiving systemic or biologic therapy who meet minimal physician- or patient-reported disease activity levels. It is implied that establishment and maintenance of an established minimum level of disease control as measured by physician- and/or patient-reported outcomes will increase patient satisfaction with and adherence to treatment.
X3763	Appropriate follow-up imaging for incidental thyroid nodules in patients	<p>Thyroid nodules are common, with estimates of prevalence as high as 50% 2. Desser and Kamaya<sup>3</sup> found that the majority of incidentally noted thyroid nodules were benign with approximately 5% being malignant. Due to the common nature of small thyroid nodules combined with the low malignancy rate, additional follow-up is not recommended (ATA, 2009) 1.</p> <p>1. Cooper DS, Doherty GM, Haugen BR, et al; American Thyroid Association (ATA) Guidelines Taskforce on Thyroid Nodules and Differentiated Thyroid Cancer. Revised American Thyroid Association management guidelines for patients with thyroid nodules and differentiated thyroid cancer. <i>Thyroid</i>. 2009;19(11):1-48. doi:10.1089/thy.2009.0110.</p> <p>2. Mortensen JD, Woolner LB, Bennet WA. Gross and microscopic findings in clinically normal thyroid glands. <i>J Clin Endocrinol Metab</i>. 1955;15(10):1270-1280. doi:10.1210/jcem-15-10-1270.</p> <p>3. Desser TS, Kamaya A. Ultrasound of thyroid nodules. <i>Neuroimaging Clin N Am</i>. 2008;18(3):463-478. doi:10.1016/j.nic.2008.03.005.</p> <p>4. Ahmed S, Horton KM, Jeffrey RB Jr., Sheth S, Fishman EK. Incidental thyroid nodules on chest CT: review of the literature and management suggestions. <i>Am J Roentgenol</i>. 2010;195:1066-1071. doi:10.2214/AJR.10.4506.</p> <p>In their 2010 review<sup>4</sup> of the literature, Ahmed et al concluded that there is significant inconsistency in how incidental thyroid nodules are reported and followed up by radiologists. Given the common nature of thyroid nodules, unnecessary follow-up of these nodules can result in excessive testing and costs for patients.</p>
X3759	Appropriate follow-up	Incidental kidney, liver, and adrenal lesions are commonly found during abdominal imaging studies, with most of the findings being benign 1,2,3,4, 5. Given the low rate of malignancy, unnecessary follow-up procedures are costly and

MUC ID	Measure Title	Rationale
	imaging for incidental abdominal lesions	<p>present a significant burden to patients<sup>1,6</sup>. To avoid excessive testing and costs, follow-up is not recommended for these small lesions.</p> <ol style="list-style-type: none"> <li>Pickhardt PJ, Hanson ME, Vanness DJ, et al. Unexpected extracolonic findings at screening CT colonography: clinical and economic impact. <i>Radiology</i>. 2008;249(1):151-159. doi:10.1148/radiol.2491072148.</li> <li>Yee J, Kumar NN, Godara S, et al. Extracolonic abnormalities discovered incidentally at CT colonography in a male population. <i>Radiology</i>. 2005;236:519-526. doi:10.1148/radiol.2362040166.</li> <li>Song JH, Chaudhry FS, Mayo-Smith WW. The incidental adrenal mass on CT: prevalence of adrenal disease in 1,049 consecutive adrenal masses in patients with no known malignancy. <i>Am J Roentgenol</i>. 2009;190:1163-1168. doi:10.2214/AJR.07.2799.</li> <li>Silverman SG, Israel GM, Herts BR, Richie JP. Management of the incidental renal mass. <i>Radiology</i>. 2008;249:16-31. doi:10.1148/radiol.2491070783.</li> <li>Berland LL, Silverman SG, Gore RM, et al. Managing incidental findings on abdominal CT: white paper of the ACR Incidental Findings Committee. <i>J Am Coll Radiol</i>. 2010;7:754-773. doi:10.1016/j.jacr.2010.06.013.</li> <li>Casarella WJ. A patient's viewpoint on a current controversy. <i>Radiology</i>. 2002;224(3):927.</li> <li>Johnson PT, Horton KM, Megibow AJ, Jeffrey RB, Fishman EK. Common incidental findings on MDCT: survey of radiologist recommendations for patient management. <i>J Am Coll Radiol</i>. 2011;8:762-767. doi:10.1016/j.jacr.2011.05.012.</li> </ol> <p>There is considerable variability among radiologists in the management of incidental findings. A 2011 survey<sup>7</sup> conducted by Johnson et al found significant variability in how radiologists report and manage incidental findings. In a more recent survey<sup>2</sup> of members of the American College of Radiology, 38% of respondents were aware of the guidance around incidental findings. Among respondents who were aware of the guidance, 89% replied that they were applying the recommendations in their practice.</p> <ol style="list-style-type: none"> <li>Johnson PT, Horton KM, Megibow AJ, Jeffrey RB, Fishman EK. Common incidental findings on MDCT: survey of radiologist recommendations for patient management. <i>J Am Coll Radiol</i>. 2011;8:762-767. doi:10.1016/j.jacr.2011.05.012.</li> <li>Berland LL, Silverman SG, Megibow AJ, Mayo-Smith WW. ACR members' response to JACR white paper on management of incidental abdominal CT findings. <i>J Am Coll Radiol</i>. 2014;11:30-35. doi:10.1016/j.jacr.2013.06.002.</li> </ol>
X3758	Appropriate age for colorectal cancer screening	<p>Colonoscopy is considered to be the most effective screening option for colorectal cancer. Colonoscopy permits immediate polypectomy and removal of macroscopically abnormal tissue in contrast to tests based on radiographic imaging or detection of occult blood or exfoliated DNA in stool. Following removal, the polyp is sent to pathology for histologic confirmation of cancer. Colonoscopy directly visualizes the entire extent of the colon and rectum,</p>

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		<p>including segments of the colon that are beyond the reach of flexible sigmoidoscopy. Colonoscopy therefore has become either the primary screening method or a follow-up modality for all colorectal cancer screening methods and is one of the most widely performed procedures in the United States. Given that, appropriate use of colonoscopy is crucial. The U.S. Preventive Services Task Force (USPSTF) recommends screening for colorectal cancer in adults using fecal occult blood test (FOBT), sigmoidoscopy, or colonoscopy, beginning at 50 years of age and continuing until 75 years of age. The risks and benefits of these screening methods vary. A recommendation. The USPSTF recommends against routine screening for colorectal cancer in adults 76 to 85 years of age. There may be considerations that support colorectal cancer screening in an individual patient. C recommendation. However, the USPSTF recommends against screening for colorectal cancer in adults older than 85 years. D recommendation (<a href="http://www.uspreventiveservicestaskforce.org/uspstf08/colocancer/colors.htm">http://www.uspreventiveservicestaskforce.org/uspstf08/colocancer/colors.htm</a>).</p> <p>In a cohort study of Medicare enrollees from 2000-2008, the authors concluded that one-third of patients 80 years or older at their initial negative screening examination result underwent a repeated screening examination within 7 years. In addition the authors also stated that use of colonoscopy outside the scope of the recommendations, can not only cause overuse that exposes patients to unnecessary procedures but also increases costs. Identifying and decreasing overuse of screening colonoscopy is important to free up resources to increase appropriate colonoscopy in inadequately screened populations.(Goodwin JS, Singh A, Reddy N, Riall TS, Kuo Y. Overuse of Screening Colonoscopy in the Medicare Population. Arch Intern Med. 2011;171(15):1335-1343. doi:10.1001/archinternmed.2011.212). Overuse of screening colonoscopy in patients age 86 or older is of special concern, given the increased potential for complications, decreased completion rate and decreased benefit of this examination in the very elderly. In addition, even though the prevalence of colonic neoplasia increases with age, screening colonoscopy in very elderly patients results in smaller gains in life expectancy compared with younger patients, even when adjusted for life expectancy (Lin OS, Kozarek RA, Schembre DB, et al. Screening colonoscopy in very elderly patients: prevalence of neoplasia and estimated impact on life expectancy. JAMA. 2006;295(20):2357-2365).</p>
X3760	Frequency of inadequate bowel preparation	<p>Poor bowel preparation is a major impediment to the effectiveness of colonoscopy, affecting the ability to detect polyps and influencing the timing of repeat examinations. Given the increased premalignant potential of advanced adenomas, suboptimal bowel preparation may cause an unacceptably high failure rate at identifying these important lesions, thereby compromising the effectiveness of the colonoscopy. Adenoma miss rates in the context of suboptimal bowel preparation are as high as 42%. Poor bowel preparation influences the timing of repeat examination with practitioners recommending follow-up examinations earlier than standard intervals due to inadequate bowel preparation. The economic burden of repeating examinations because of inadequate bowel</p>

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		preparation is substantial. This leads our societies to recommend this measure so individual practitioners can monitor their percentages of examinations requiring repeat because of preparation and compare their percentages to others. We believe that adherence to this measure will result in a reduction of duplicative or unnecessary tests and, therefore, savings to the Medicare program.
X3761	Photodocumentation of cecal intubation	Patients who undergo complete colon examination have a lower risk of colorectal cancer than patients with incomplete colonoscopy. Effective colonoscopists should be able to intubate the cecum in > 90% of cases, and in > 95% of cases when the indication is screening in a healthy adult. Studies have shown that physicians do not routinely document the depth of insertion in the colonoscopy report. Quality evaluation of the colon consists of intubation of the entire colon – from the rectum to the cecum. Knowing the depth of insertion can inform physicians of whether a radiographic procedure or repeat colonoscopy is necessary. However, the lack of comprehensive documentation can lead to unnecessary or repeat tests.
E1523	In-hospital mortality following elective open repair of AAAs	Elective repair of a small or moderate sized AAA is a prophylactic procedure and the mortality/morbidity of the procedure must be contrasted with the risk of rupture over time. Surgeons should select patients for intervention who have a reasonable life expectancy and who do not have a high surgical risk.
E0465	Perioperative Anti-platelet Therapy for Patients undergoing Carotid Endarterectomy	The Vascular Study Group of Northern New England (VSGNNE) has published validated registry data from 48 surgeons in 9 hospitals concerning more than 3000 patients undergoing CEA (Cronenwett, 2007). This demonstrated initially that only 82% of patients were taking ASA or clopidogrel preoperatively before CEA in 2004. Through quality improvement efforts, this percentage has increased to 91% during the first 6 months of 2007. Further, a recent study from Austria found that 37% of 206 patients undergoing CEA were not on preoperative antiplatelet therapy, and concluded that this practice does not meet current guidelines and provides substantial opportunity for improvement (Assadian, 2006).
X3740	Performing an intraoperative rectal examination at the time of prolapse repair	Rectal injuries occur with surgery for pelvic organ prolapse involving the posterior and apical vaginal compartments. Correcting such injuries at the time they occur is preferable over delayed recognition due to an increase in morbidity and the need for additional surgery. Therefore, performing and documenting a rectal examination during the surgery would help identify such rectal injury in a timely manner and would potentially increase the safety in performing such surgeries.

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X3741	Preoperative exclusion of uterine malignancy prior to any pelvic organ prolapse repair	This measure will help ensure that patients who do have a uterine malignancy are diagnosed prior to hysterectomy and can be referred to a gynecologic oncologist for appropriate staging and treatment for the malignancy. The incidence of endometrial cancer found unsuspectingly in patients with POP ranges from 0.3- 3.2%. In a review of all surgical pathology reports for patients undergoing a hysterectomy for pelvic organ prolapse, 644 women were evaluated and 2 were diagnosed with endometrial cancer (0.3%). In a recent review of 63 robotic-assisted supracervical hysterectomies with sacrocervicopexies for pelvic organ prolapse, 2 patients (3.2%) were found on final pathology to have endometrial carcinoma.. Ensuring that providers ask about possible symptoms that may hint at the need for further evaluation would increase the quality of care provided to these patients.
X3742	Preoperative assessment of sexual function prior to any pelvic organ prolapse repair	Since surgeries to correct urinary incontinence and pelvic organ prolapse in women aim to improve quality of life, it is also important to assess sexual function, which affects quality of life and often improves after these types of surgeries. By assessing preoperative sexual function, we will be able to assess if sexual function is regained, improves, or worsens after these types of surgeries. Because urinary incontinence and pelvic organ prolapse tend to occur in middle age, these are modifiable conditions that can be successfully treated and contribute to healthy aging and improved quality of life.
X3746	Preoperative assessment of occult stress urinary incontinence prior to any pelvic organ prolapse repair	When a woman with pelvic organ prolapse experiences urinary leakage only when the prolapse is reduced, her condition is called an occult stress urinary incontinence. The underlying cause may be urethral compression or urethral kinking. The percentage of patients in whom evidence of occult stress urinary incontinence is discovered prior to prolapse surgery varies from 23 to 69%. According to the guidelines of the German society of obstetrics and gynecology, a stress test with and without reduction of the prolapse should be conducted prior to prolapse surgery . Guidelines of the International Continence Society go even further, stating urodynamic investigations with and without stress test should be included in the diagnostic workup of patients prior to prolapse surgery. While several studies have shown improved urinary incontinence rates following prolapse surgery that included an anti-incontinence component, the potential risks of adding another procedure must be considered as well. A systematic review and meta-analysis of randomized trials concluded that in the group of women with occult stress urinary incontinence there is a lower incidence of objective stress urinary incontinence after combined (prolapse+sling) surgery 22% versus 52% with no difference in bladder storage symptoms, urgency incontinence, and long-term obstructive voiding symptoms. However, to benefit from this data and to support good decision-making, the surgeon must determine whether there is or isn't occult stress incontinence preoperatively. In a recent study we found that 78.6% of patients had a pre-operative stress test and that 93.5% of high volume surgeons evaluated their patients for occult prior to surgery for pelvic organ prolapse while 63% of low volume

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		surgeons and 72% of intermediate volume surgeons did.
X3744	Proportion of patients sustaining a major viscus injury at the time of any pelvic organ prolapse repair	There are numerous approaches to surgical correction of pelvic organ prolapse- vaginal, open, laparoscopic and robotic. The incidence of visceral injury ranges from 0.1-4% ( SGS Systemic Review Obstet Gynecol 2008: 112: 1131-1142) depending on the approach with high potential for morbidity. Unrecognized injury to the intestine increases the risk of mortality from 2 to 23 % (Chapron et al. J Am Coll Surg. 1991;185:461-465, Baggish, MS J Gynecol Surg. 2003;19:63-73). It is critically important for surgeons who are performing these procedures to recognize and repair any visceral injuries intraoperatively, in order to minimize postoperative morbidity, including the need for subsequent surgical intervention to address these complications. Surgeons who have a higher than expected rate of visceral injury during pelvic organ prolapse repair would potentially benefit from interventions to improve the quality of their surgical care.
X3743	Proportion of patients sustaining a bladder injury at the time of any pelvic organ prolapse repair	Bladder injury is a common and potentially debilitating complication of pelvic surgery but more common in surgery for pelvic organ prolapse. It is critically important for surgeons who are performing these procedures to recognize and repair any bladder injury intraoperatively, in order to minimize postoperative morbidity, including the need for subsequent surgical intervention to address these complications. Surgeons who have a higher than expected rate of bladder injury during pelvic organ prolapse repair would potentially benefit from interventions to improve the quality of their surgical care.
X3745	Preoperative pessary for pelvic organ prolapse attempted	Pelvic organ prolapse is a common condition with >50% of women presenting for routine gynecologic affected (Obstet and Gynecol 2004; 104: 489-96). The mainstay of conservative care for pelvic organ prolapse is utilization of a vaginal pessary. Pessaries provide offer low risk improvement in patient symptomology. In a study of AUGS members, 77% reported offering a pessary prior to surgery (Obstet Gynecol. 2000; 95(6 Pt 1): 931-5. Experts note that it is appropriate to offer nonsurgical management to most people with POP (Obstet Gynecol 2012;119(4): 852-60). Yet in a study of approx 35,000 Medicare beneficiaries with pelvic organ prolapse only 12% were treated with this low risk, minimally invasive option (Female Pelvic Med Reconstr Surg. 2013; 19(3): 147-147). As a woman's lifetime risk of surgery for incontinence or POP has now doubled to 20% by age 80 (Obstet Gynecol 2014; 123(6): 1201-6), it important that patients are offered pessaries for management prior to pursuing surgical interventions. In a recent study we found that 38% (219/575) of patients actually tried a pessary with their surgeon before being operated on for pelvic organ prolapse.
X3750	Preoperative pessary for	Pelvic organ prolapse is a common condition with >50% of women presenting for routine gynecologic affected (Obstet and Gynecol 2004; 104: 489-96). The mainstay of conservative care for pelvic organ prolapse is utilization of



MUC ID	Measure Title	Rationale
	pelvic organ prolapse offered	<p>a vaginal pessary. Pessaries provide offer low risk improvement in patient symptomology. In a study of AUGS members, 77% reported offering a pessary prior to surgery (Obstet Gynecol. 2000; 95(6 Pt 1): 931-5. Experts note that it is appropriate to offer nonsurgical management to most people with POP (Obstet Gynecol 2012;119(4): 852-60). Yet in a study of approx 35,000 Medicare beneficiaries with pelvic organ prolapse only 12% were treated with this low risk, minimally invasive option (Female Pelvic Med Reconstr Surg. 2013; 19(3): 147-147). As a woman's lifetime risk of surgery for incontinence or POP has now doubled to 20% by age 80 (Obstet Gynecol 2014; 123(6): 1201-6), it important that patients are offered pessaries for management prior to pursuing surgical interventions. In a recent study we found that 77% (443/575) of surgeons offered their patients a pessary prior to surgery for pelvic organ prolapse.</p>
X3751	Complete assessment and evaluation of patient's pelvic organ prolapse prior to surgical repair	<p>Implementing this quality measure will lead to a more complete pre-operative evaluation of pelvic organ prolapse (POP) which will result in: 1) more appropriate surgery performed with better surgical outcomes, lower recurrence rates, and fewer re-operations for POP, 2) prevention of unnecessary surgery and 3) improved ability to assess surgical outcomes over time.</p> <p>Reoperation rates for recurrent POP have been shown to be as high as 30%. It is self-evident that if one does not identify a defect in a specific compartment, one is unlikely to correct it. Failure to identify the full extent of POP at the time of initial surgery has been implicated as a significant cause of repeat surgery for POP, as recurrence following the initial surgery commonly occurs early in the post-operative period and often involves a different compartment than that addressed during the initial surgery.</p> <p>ACOG guidelines recommend that when POP surgery is performed defects in all compartments should be addressed using a standardized reproducible exam. Anger et al proposed a series of quality indicators (QI's) for the purpose of measuring and comparing the care provided to women with prolapse in different clinical settings. The QI's were based on the Assessing the Care of Vulnerable Elders (ACOVE) project and evaluated using the "RAND Appropriateness Method". One of the QI's identified and validated by the panel was: a standardized exam for POP using the Pelvic Organ Prolapse Quantification scale (POP-Q) should be conducted and the prolapse stage of each compartment documented prior to undertaking surgical intervention to correct pelvic organ prolapse. The authors affirmed that objective standardized assessment of vaginal prolapse pre-operatively ensures that the selected procedure is the most appropriate. In addition the POP-Q provides a means of assessing surgical outcomes. Finally, the panel concluded that woman with asymptomatic POP of stage 1 or less should not be offered surgical intervention. The final QI was determined to prevent physicians from offering surgical therapy to women with no indication for surgery. The assignment of Stage 1 prolapse is predicated on conducting an objective standardized exam for vaginal prolapse. (POPQ). In a recent study we found that 67.6% (431/638) of women had a Baden Walker</p>



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		or POP-Q prior to the exam and that 91% of high volume surgeons vs 41% of low volume surgeons completed either a POP-Q or a Baden-Walker formal evaluation of pelvic organ prolapse prior to surgery.
X3752	Performing cystoscopy at the time of hysterectomy for pelvic organ prolapse to detect lower urinary tract injury	Lower urinary tract (bladder and/or ureter(s)) injury is a common complication of prolapse repair surgery, occurring in up to 5% of patients. Delay in detection of lower urinary tract injury has an estimated cost of \$54, 000 per injury (Visco et al), with significant morbidity for patients who experience them. Universal cystoscopy may detect up to 97% of all injuries at the time of surgery (Ibeanu et al, 2009), resulting in the prevention of significant morbidity and providing significant cost savings (over \$108 million per year) In a recent study we found that 84.5% (539/638) performed cystoscopy 97% of high volume surgeons performed a cystoscopy at the time of hysterectomy for pelvic organ prolapse while low volume surgeons performed this procedure only 75 % of the time (p<.001).
X3747	Door to puncture time for endovascular stroke treatment	<p>Acknowledgment of the critical importance of time to reperfusion for obtaining favorable outcomes in myocardial reperfusion treatments has led to the formation of initiatives such as Door to Balloon. The impressive results in shortening the time to myocardial reperfusion for acute MI obtained by such initiatives provided an impetus for launching similar initiatives related to IV tPA for stroke.</p> <p>This measures is supported by the multispecialty guidelines published in 2013 (1).</p> <p>1. Sacks, D., C. M. Black, et al. (2013). ""Multisociety Consensus Quality Improvement Guidelines for Intraarterial Catheter-directed Treatment of Acute Ischemic Stroke, from the American Society of Neuroradiology, Canadian Interventional Radiology Association, Cardiovascular and Interventional Radiological Society of Europe, Society for Cardiovascular Angiography and Interventions, Society of Interventional Radiology, Society of NeuroInterventional Surgery, European Society of Minimally Invasive Neurological Therapy, and Society of Vascular and Interventional Neurology."Journal of vascular and interventional radiology : JVIR 24(2): 151-163.</p>
X3756	Clinical Outcome post Endovascular Stroke Treatment	<p>The standard definition of a good clinical outcome from IA therapy is an mRS score of 0-2 at 90 days as assessed by a certified examiner independent of the interventional physician.</p> <p>This measures is supported by the multispecialty guidelines published in 2013 (1).</p> <p>1. Sacks, D., C. M. Black, et al. (2013). ""Multisociety Consensus Quality Improvement Guidelines for Intraarterial Catheter-directed Treatment of Acute Ischemic Stroke, from the American Society of Neuroradiology, Canadian Interventional Radiology Association, Cardiovascular and Interventional Radiological Society of Europe, Society for Cardiovascular Angiography and Interventions, Society of Interventional Radiology, Society of NeuroInterventional Surgery, European Society of Minimally Invasive Neurological Therapy, and Society of Vascular and Interventional</p>

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		Neurology." Journal of vascular and interventional radiology : JVIR 24(2): 151-163.
X3754	Rate of surgical conversion from lower extremity endovascular revascularization procedure	<p>Conversions from a planned lower extremity endovascular revascularization procedure to a surgical procedure indicates either poor patient assessment/procedural assignment, or procedural failure. This represents a patient care quality measure. Patients who undergo unplanned surgical conversion have a higher cost of care and higher morbidity and mortality. There is a higher expense for dual procedures, with use of endovascular tools and surgical procedural time and equipment, as well as longer length of stay and rehabilitation. Studies show higher rates of limb salvage in patients with foot ulcers after surgical or catheter based restoration of arterial blood flow than with medical therapy alone, but there is insufficient robust data to indicate better outcomes with endovascular or open bypass treatment of arterial insufficiency in this patient group. (1) Both amputation-free survival and quality of life outcomes have been shown to be comparable for patients with critical limb ischemia treated with either open bypass or endovascular repair, but the bypass-first strategy has been shown to be more costly. (2) There are many studies suggesting benefit of an endovascular-first approach to limb salvage because of the proposed patient benefits, including ability to avoid general anesthesia for these procedures, avoidance of a surgical incision and attendant healing time, shorter length of hospital stay with endovascular revascularization when compared to bypass, strong patient preference for endovascular approaches, and decreased cost of a successful endovascular approach. Although long term limb salvage outcomes are equivalent regardless of the initial strategy adopted, some data indicate a high rate of early technical failure of endovascular treatment of critical limb ischemia, but high secondary patency rates and high limb conservation rates in spite of initial technical failures, indicating that repeat procedures, both endovascular and open, tend to be successful in this patient group. A meta-analysis of 30 studies of below knee angioplasty showed a higher technical failure rate of endovascular treatment than that seen with open (bypass) repair. (3) This same meta-analysis reports that repeat procedures in patients with endovascular-first failures were more likely to be bypass procedures than repeated endovascular procedures. Another study of 1023 patients undergoing either endovascular or open surgical treatment for critical limb ischemia demonstrated a higher rate of secondary surgical procedures in the endovascular group compared with the surgical group, but again showed comparable 5 year limb salvage rates in the two groups. (4) Notably, it has been demonstrated that the difference in patency rates and differences in rates of conversion to bypass appear to be partly related to the specialty of the operator, based on studies of procedural failure and open conversion rates in different physician groups. Two large studies of extracted data, one of Medicare claims data assessing mortality, transfusion rates, intensive care unit use, length of stay, and subsequent repeat revascularization procedures or amputation (5), and one of National Inpatient Sample (NIS) data reviewing in-hospital mortality and iatrogenic arterial injuries (6), showed statistically significant differences in outcomes across physician groups. One of these studies (Zafar, et al)</p>

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		<p>suggested that there may be a higher use of repeat intervention, including adjunctive, unplanned surgical bypass, and a higher rate of amputation following a primary endovascular procedure in some physician cohorts. The reasons for this discrepancy are unclear, and may represent patient selection, operator bias towards endovascular revascularization in all comers, technical ability, or other factors. The newly-approved NHLBI trial, Best Endovascular vs. Best Surgical Therapy in Patients with Critical Limb Ischemia, proposes to look at outcomes, including open conversions and amputations, in a cohort of patients randomized to open vs endovascular therapy. This trial will be multidisciplinary, evaluating all specialists involved in procedural care of this group of patients, and will ultimately provide guidance for physicians in terms of patient assignment to open vs endovascular care, and will establish solid data to support thresholds for conversion and amputation. However, data will not be available for years to come. This measure proposes, based on the data available in the existing literature, to track use of repeat or unplanned adjunctive surgical (bypass or amputation) procedures in patients undergoing revascularization procedures for lower extremity arterial insufficiency. It is expected that this rate should be equivalent across all physician groups performing endovascular procedures when adjusted for specific patient risk factors. With establishment of a baseline benchmark rate for conversion to surgical therapy based on existing data from the Medicare sample, rates of conversion may be tracked to encourage appropriate patient selection or referral to expert operators to improve patient outcomes and reduce excessive resource use by selection of the most appropriate procedure and procedural operator.</p> <ol style="list-style-type: none"> <li>1. Hinchliffe RJ et al. A systematic review of the effectiveness of revascularization of the ulcerated foot in patients with diabetes and peripheral arterial disease. <i>Diabetes Metabolism Research and Reviews</i> 2012; 28(Suppl. 1):179-217.</li> <li>2. Adam DJ et al. Bypass versus angioplasty in severe ischemia of the leg (BASIL): multicentre, randomized controlled trial. <i>Lancet</i> 2005;366:1925-34.</li> <li>3. Romiti M, et al. Meta-analysis of infrapopliteal angioplasty for chronic critical limb ischemia. <i>J Vasc Surg</i> 2008;47:975-81.</li> <li>4. Söderström MI et al. Infrapopliteal Percutaneous Transluminal Angioplasty Versus Bypass Surgery as First-Line Strategies in Critical Leg Ischemia: A Propensity Score Analysis. <i>Annals of Surgery</i> 2010;252:765-773.</li> <li>5. Zafar AM et al. Lower-Extremity Endovascular Interventions for Medicare Beneficiaries: Comparative Effectiveness as a Function of Provider Specialty, <i>J Vasc Interv Radiol</i> 2012; 23:3–9.</li> <li>6. Eslami MH et al. Peripheral arterial interventions: Trends in market share and outcomes by specialty, 1998-2005; <i>J Vasc Surg</i> 2009;50:1071-8.</li> </ol>
X3755	Percentage of	Retrievable filter complications have been increasingly noted in the FDA MAUDE database and in the literature.

MUC ID	Measure Title	Rationale
	<p>patients with a retrievable inferior vena cava filter who are appropriately assessed for continued filtration or device removal</p>	<p>Retrievable filters were designed differently than permanent filters and the incidence of device related complications with long term insertions are higher than in comparison to permanent filters. The FDA has recommended that physicians that place these filters, carefully monitor these patients and remove these filters at the earliest possible time. The proposed quality measure will encourage physicians who place filters to follow-up with their patients at 3 months and document that a decision has been made to either a) remove the filter, b) document that re-assessment has established the appropriateness of continued filter use or c) documentation of at least two attempts to reach the patient, proxy or primary care provider to arrange a clinical re-assessment for the appropriateness of filter removal. Dedicated follow-up for IVC filters has led to an increase in retrieval rate (1). FDA recommends that all physicians placing IVC Filters and those responsible for ongoing care of these patients, remove the filter as soon as protection from PE is no longer needed. The FDA encourages follow-up on patients to consider risks and benefits of filter removal (2,3,4). Data on IVC Filters will be collected through the PRESERVE trial which is sponsored by teh IVC Filter Study Group Foundation. This trial will look at commercially available IVC Filters (retrievable) from participating manufacturers. The study objective is to evaluate the safety and effectiveness of participating IVC Filters in subjects with clinical need for mechanical prophylaxis of PE.</p> <p>1. Improving Inferior Vena Cava Filter Retrieval Rates: Impact of a Dedicated Inferior Vena Cava Filter Clinic Jeet Minocha, Ibrahim Idakoji, Ahsun Riaz, Jennifer Karp, Ramona Gupta, Howard B. Chrisman, Riad Salem, Robert K. Ryu, Robert J. Lewandowski Journal of Vascular and Interventional Radiology - December 2010 (Vol. 21, Issue 12, Pages 1847-1851, DOI: 10.1016/j.jvir.2010.09.003)</p> <p>2. "Inferior Vena Cava (IVC) Filters: Initial Communication: Risk of Adverse Events with Long Term Uses." August, 9, 2010. <a href="http://www.fda.gov/safety/medwatch/safetyinformation/safetyalertsforhumanmedicalproducts/ucm221707.htm">http://www.fda.gov/safety/medwatch/safetyinformation/safetyalertsforhumanmedicalproducts/ucm221707.htm</a></p> <p>3. "Removing Retrievable Inferior Vena Cava Filters: Initial Communication." August 9, 2010. <a href="http://www.fda.gov/medicaldevices/safety/alertsandnotices/ucm221676.htm">http://www.fda.gov/medicaldevices/safety/alertsandnotices/ucm221676.htm</a></p> <p>Improving Inferior Vena Cava Filter Retrieval Rates: Impact of a Dedicated Inferior Vena Cava Filter Clinic Jeet Minocha, Ibrahim Idakoji, Ahsun Riaz, Jennifer Karp, Ramona Gupta, Howard B. Chrisman, Riad Salem, Robert K. Ryu, Robert J. Lewandowski Journal of Vascular and Interventional Radiology - December 2010 (Vol. 21, Issue 12, Pages 1847-1851, DOI: 10.1016/j.jvir.2010.09.003)</p> <p>4. "Removing Retrievable Inferior Vena Cava Filters: FDA Safety Communication." Amy 6, 2014. <a href="http://www.fda.gov/MedicalDevices/Safety/AlertsandNotices/ucm396377.htm">http://www.fda.gov/MedicalDevices/Safety/AlertsandNotices/ucm396377.htm</a></p>

MUC ID	Measure Title	Rationale
X3739	Percentage of patients treated for varicose veins who are treated with saphenous ablation and receive an outcomes survey before and after treatment	<p>Surrogate measures for success of saphenous ablation have numerous flaws. The ultimate measure of success of saphenous ablation in patients with varicose veins is improved quality of life. This quality measure motivates physicians to assess quality of life after an ablation as compared with before an ablation to understand the improvement in quality of life that they offer their patients. Eventually, some threshold for improvement based on disease state may serve as a benchmark for quality care. The Intersocietal Accreditation Commission-Vein Center Division strongly recommends the use of the disease specific patient reported outcome (PRO) instrument before and after ablation and to use the data collected for an analysis of the quality of care being delivered by the center (1). These guidelines have been created by the IAC and are being implemented by several groups including SVS.</p> <p>1. "Vein Center Accreditation A Process to Demonstrate a Commitment to Quality Vein Care." March 11, 2014. <a href="http://www.veindirectory.org/magazine/article/vein_center_accreditation_a_process_to_demonstrate_a_commitment_to_quality_vein_care">http://www.veindirectory.org/magazine/article/vein_center_accreditation_a_process_to_demonstrate_a_commitment_to_quality_vein_care</a></p> <p>The American Venous Forum recommends the use of PRO before and after vein treatment for all patients (2).</p> <p>2. "The care of patients with varicose veins and associated chronic venous diseases: Clinical practice guidelines of the Society for Vascular Surgery and the American Venous Forum." May 2011. <a href="http://www.bendvein.com/downloads/Journal-Vascular-Surgery.pdf">http://www.bendvein.com/downloads/Journal-Vascular-Surgery.pdf</a></p>
X3735	Communication and shared decision-making with patients and families for interventional oncology procedures	<p>As with any cancer therapy, patients and family members may misunderstand or not know the intent of an interventional oncologic procedure. This measure aims to enhance the patient experience with health care by increasing patient and family understanding of their care and to promote an environment of shared decision-making. The American Society of Clinical Oncology has a similar practice guideline for medical oncologists providing chemotherapy.</p>
X3732	Adult Kidney Disease: Referral to Hospice	<p>Palliative care services are appropriate for people who chose to undergo or remain on dialysis and for those who choose not to start or to discontinue dialysis. With the patient's consent, a multi-professional team with expertise in renal palliative care, including nephrology professionals, family or community-based professionals, and specialist hospice or palliative care providers, should be involved in managing the physical, psychological, social, and spiritual aspects of treatment for these patients, including end-of-life care. Physical and psychological symptoms should be routinely and regularly assessed and actively managed. The professionals providing treatment should be trained in assessing and managing symptoms and in advanced communication skills. Patients should be offered the option of</p>

MUC ID	Measure Title	Rationale
		dying where they prefer, including at home with hospice care, provided there is sufficient and appropriate support to enable this option.
X3780	Coagulation studies in adult patients presenting with chest pain with no coagulopathy or bleeding	Coagulation studies are often ordered out of habit as part of a blood panel with little value added to the patient. Ensuring that clinicians are purposefully ordering these studies may lead to significant reduction in resource utilization without any decrease in value of healthcare provided to the patient.
X3778	Imaging in pediatric ED patients aged 2 through 17 years with minor head injury	This measure is needed to close the gap in provider performance as patients with mild closed head injuries without guideline indications for CT or MRI imaging are receiving such studies. The results of this are increased healthcare expenditures, unnecessary patient radiation exposure, and possibly prolonged evaluation times. A new study in JAMA demonstrated to a growing trend in ED visits for TBI, with adults older than 60 years accounting for the largest increase in rates.
X3733	Pediatric Kidney Disease: Discussion of Care Planning	Institute family-centered care planning for children and adolescents with CKD and ESRD. The plan should establish treatment goals based on a child's medical condition and prognosis. (RPA, 2010) Care planning should be an ongoing process in which treatment goals are determined and revised based on observed benefits and burdens of dialysis and the values of the pediatric patient and the family. The renal care team should designate a person to be primarily responsible for ensuring that care planning is offered to each patient. Patients with decision-making capacity should be strongly encouraged to talk to their parents to ensure that they know the patient's wishes and agrees to make decisions according to these wishes. Ongoing discussions that include reestablishing goals of care based on the child's response to medical treatment and optimal quality of life is the mechanism by which care planning occurs. Discussions should include pros and cons of dialysis as well as potential morbidity associated with dialysis. Kidney transplantation should also be discussed if appropriate. (RPA, 2010)
X2809	ALS Multidisciplinary Care Plan Developed or	In specialized multidisciplinary clinics, patients with ALS receive comprehensive care from a neurologist, pulmonologist, gastroenterologist, physiatrist, social worker, occupational therapist, speech language pathologist, respiratory therapist, specialized nurse case manager, physical therapist, dietitian, psychologist, dentist, and/or palliative care expert. <sup>1,2</sup> Moreover, the level of satisfaction with the rendering of the diagnosis and overall

MUC ID	Measure Title	Rationale
	Updated	<p>satisfaction with care is significantly higher for patients attending a multidisciplinary clinic.<sup>2</sup> Specialized clinics coordinate care and interface with a primary care physician, local neurologist and community-based services. Patients who attend specialized ALS clinics are younger and have longer symptom duration than neurology clinic patients, indicating possible referral bias.<sup>3</sup> Patient care and survival were examined for 97 patients attending specialized ALS clinics in Italy compared with 124 patients in neurology clinics.<sup>4</sup> There was increased utilization of riluzole, percutaneous endoscopic gastrostomy (PEG), and noninvasive ventilation (NIV) in the ALS clinics, and fewer hospital admissions. Mean survival was longer in specialized ALS clinics (1,080 days vs. 775 days, <math>p=0.008</math>). Using COX multivariate analysis, attending an ALS specialized clinic independently predicted longer survival for patients. Prolonged survival (7.5 months, <math>p&lt;0.0001</math>) was found for patients in Ireland attending multidisciplinary ALS clinics.<sup>5</sup> Patients at ALS clinics were younger and more likely to receive riluzole (99% vs. 61%). Multidisciplinary care was an independent predictor of survival (<math>p=0.02</math>) and reduced the risk of death by 47% in a 5-year study.<sup>5</sup> Dutch patients in multidisciplinary ALS clinics (<math>n=133</math>) were compared with 75 patients receiving general care<sup>6</sup> (6). Patients were well-matched and data were collected by a blinded nurse. Patients in multidisciplinary clinic received more aids and appliances (93% vs. 81%, <math>p=0.008</math>) and had higher quality of life (SF-36® Health Survey, <math>p&lt;0.01</math>). Beneficial effects derived from a single visit to a multidisciplinary clinic, suggesting better coordination of care. Importantly, patients attending multidisciplinary clinics had fewer hospital admissions and shorter inpatient stays than those cared for in the community.</p>
E2082	HIV Viral Load Suppression	<p>Viral load suppression is a critical component of the HIV care continuum and the ultimate outcome of HIV care/treatment.</p> <ol style="list-style-type: none"> <li>1. HIV Trialists' Collaborative Group. Zidovudine, didanosine, and zalcitabine in the treatment of HIV infection: meta-analyses of the randomized evidence. <i>Lancet</i>. Jun 12 1999; 353(9169):2014-2025.</li> <li>2. Hammer SM, Squires KE, Hughes MD, et al. A controlled trial of two nucleoside analogues plus indinavir in persons with human immunodeficiency virus infection and CD4 cell counts of 200 per cubic millimeter or less. AIDS Clinical Trials Group 320 Study Team. <i>N Engl J Med</i>. Sep 11 1997; 337(11):725-733.</li> <li>3. Zolopa A, Andersen J, Powderly W, et al. Early antiretroviral therapy reduces AIDS progression/death in individuals with acute opportunistic infections: a multicenter randomized strategy trial. <i>PLoS One</i>. 2009; 4(5):e5575.</li> <li>4. Mocroft A, Vella S, Benfield TL, et al. Changing patterns of mortality across Europe in patients infected with HIV-1. EuroS IDA Study Group. <i>Lancet</i>. Nov 28 1998; 352(9142):1725-1730.</li> <li>5. Hogg RS, Yip B, Chan KJ, et al. Rates of disease progression by baseline CD4 cell count and viral load after initiating triple-drug therapy. <i>JAMA</i>. Nov 28 2001; 286(20):2568-2577.</li> </ol>



MUC ID	Measure Title	Rationale
		<p>6. Sterne JA, May M, Costagliola D, et al. Timing of initiation of antiretroviral therapy in AIDS-free HIV-1-infected patients: a collaborative analysis of 18 HIV cohort studies. <i>Lancet</i>. Apr 18 2009; 373(9672):1352-1363.</p> <p>7. Baker JV, Peng G, Rapkin J, et al. CD4+ count and risk of non-AIDS diseases following initial treatment for HIV infection. <i>AIDS</i>. Apr 23 2008; 22(7):841-848.</p> <p>8. Palella FJ, Jr., Deloria-Knoll M, Chmiel JS, et al. Survival benefit of initiating antiretroviral therapy in HIV-infected persons in different CD4+ cell strata. <i>Ann Intern Med</i>. Apr 15 2003; 138(8):620-626.</p> <p>9. Cain LE, Logan R, Robins JM, et al. When to initiate combined antiretroviral therapy to reduce mortality and AIDS-defining illness in HIV-infected persons in developed countries: an observational study. <i>Ann Intern Med</i>. Apr 19 2011; 154(8):509-515.</p> <p>10. Severe P, Juste MA, Ambroise A, et al. Early versus standard antiretroviral therapy for HIV-infected adults in Haiti. <i>N Engl J Med</i>. Jul 15 2010; 363(3):257-265.</p> <p>11. Kitahata MM, Gange SJ, Abraham AG, et al. Effect of early versus deferred antiretroviral therapy for HIV on survival. <i>N Engl J Med</i>. Apr 30 2009; 360(18):1815-1826.</p> <p>12. Writing Committee of the CASCADE Collaboration. Timing of HAART initiation and clinical outcomes in human immunodeficiency virus type 1 seroconverters. <i>Arch Intern Med</i>. Sep 26 2011; 171(17):1560-1569.</p> <p>13. Atta MG, Gallant JE, Rahman MH, et al. Antiretroviral therapy in the treatment of HIV-associated nephropathy. <i>Nephrol Dial Transplant</i>. Oct 2006; 21(10):2809-2813.</p> <p>14. Schwartz EJ, Szczech LA, Ross MJ, Klotman ME, Winston JA, Klotman PE. Highly active antiretroviral therapy and the epidemic of HIV+ end-stage renal disease. <i>J Am Soc Nephrol</i>. Aug 2005; 16(8):2412-2420.</p> <p>15. Kalayjian RC, Franceschini N, Gupta SK, et al. Suppression of HIV-1 replication by antiretroviral therapy improves renal function in persons with low CD4 cell counts and chronic kidney disease. <i>AIDS</i>. Feb 19 2008; 22(4):481-487.</p> <p>16. Calmy A, Gayet-Ageron A, Montecucco F, et al. HIV increases markers of cardiovascular risk: results from a randomized, treatment interruption trial. <i>AIDS</i>. May 15 2009; 23(8):929-939.</p> <p>17. Kuller LH, Tracy R, Belloso W, et al. Inflammatory and coagulation biomarkers and mortality in patients with HIV infection. <i>PLoS Med</i>. Oct 21 2008; 5(10):e203.</p> <p>18. Torriani FJ, Komarow L, Parker RA, et al. Endothelial function in human immunodeficiency virus-infected antiretroviral naive subjects before and after starting potent antiretroviral therapy: The ACTG (AIDS Clinical Trials Group) Study 5152s. <i>J Am Coll Cardiol</i>. Aug 12 2008; 52(7):569-576.</p> <p>19. Mellors JW, Rinaldo CR, Jr., Gupta P, White RM, Todd JA, Kingsley LA. Prognosis in HIV-1 infection predicted by the quantity of virus in plasma. <i>Science</i>. May 24 1996; 272(5265):1167-1170.</p> <p>20. Vlahov D, Graham N, Hoover D, et al. Prognostic indicators for AIDS and infectious disease death in HIV-infected</p>



MUC ID	Measure Title	Rationale
		<p>injection drug users: plasma viral load and CD4+ cell count. JAMA. Jan 7 1998; 279(1):35-40.</p> <p>21. Anastos K, Kalish LA, Hessel N, et al. The relative value of CD4 cell count and quantitative HIV-1 RNA in predicting survival in HIV-1-infected women: results of the women's interagency HIV study. AIDS. Sep 10 1999; 13(13):1717-1726.</p> <p>22. O'Brien TR, Blattner WA, Waters D, et al. Serum HIV-1 RNA levels and time to development of AIDS in the Multicenter Hemophilia Cohort Study. JAMA. Jul 10 1996; 276(2):105-110.</p> <p>23. Egger M, May M, Chene G, et al. Prognosis of HIV-1-infected patients starting highly active antiretroviral therapy: a collaborative analysis of prospective studies. Lancet. Jul 13 2002; 360(9327):119-129.</p> <p>24. Anastos K, Barron Y, Cohen MH, et al. The prognostic importance of changes in CD4+ cell count and HIV-1 RNA level in women after initiating highly active antiretroviral therapy. Ann Intern Med. Feb 17 2004; 140(4):256-264.</p> <p>25. O'Brien WA, Hartigan PM, Martin D, et al. Changes in plasma HIV-1 RNA and CD4+ lymphocyte counts and the risk of progression to AIDS. Veterans Affairs Cooperative Study Group on AIDS. N Engl J Med. Feb 15 1996; 334(7):426-431.</p> <p>26. Hughes MD, Johnson VA, Hirsch MS, et al. Monitoring plasma HIV-1 RNA levels in addition to CD4+ lymphocyte count improves assessment of antiretroviral therapeutic response. ACTG 241 Protocol Virology Substudy Team. Ann Intern Med. Jun 15 1997; 126(12):929-938.</p> <p>27. Chene G, Sterne JA, May M, et al. Prognostic importance of initial response in HIV-1 infected patients starting potent antiretroviral therapy: analysis of prospective studies. Lancet. Aug 30 2003; 362(9385):679-686.</p> <p>28. Deeks SG, Gange SJ, Kitahata MM, et al. Trends in multidrug treatment failure and subsequent mortality among antiretroviral therapy-experienced patients with HIV infection in North America. Clin Infect Dis. Nov 15 2009; 49(10):1582-1590.</p> <p>29. Quinn TC, Wawer MJ, Sewankambo N, et al. for the Rakai Project Study Group. Viral Load and heterosexual transmission of human immunodeficiency virus type-1. NEJM 2000;342:921-929.</p> <p>30. Chakraborty H., Sen, PK, Helms, RW, et al. Viral burden in genital secretions determines male-to-female sexual transmission of HIV-1: a probabilistic empiric model. AIDS, 2001 Mar 30;15(5):621-7.</p> <p>31. Baeten JM, Kahle E, Lingappa JR, et al, Partners in Prevention HSV/HIV Transmission Study Team. Genital HIV-1 RNA predicts risk of heterosexual HIV-1 transmission. Sci Transl Med. 2011 Apr 6;3(77):77ra29.</p> <p>32. Gulick RM, Mellors JW, Havlir D, et al. Treatment with indinavir, zidovudine, and lamivudine in adults with human immunodeficiency virus infection and prior antiretroviral therapy. N Engl J Med. 1997 Sep 11;337(11):734-9.</p> <p>33. Zhang H, Dornadula G, Beumont M, et al. Human immunodeficiency virus type 1 on the semen of men receiving highly active antiretroviral therapy. N Engl J Med 1998;339:1803-1809.</p> <p>34. Vernazza PL, Troiani L, Flepp MJ, et al, The Swiss HIV Cohort Study. Potent antiretroviral treatment of HIV-</p>

MUC ID	Measure Title	Rationale
		<p>infection results in suppression of the seminal shedding of HIV. AIDS. 2000 Jan 28;14(2):117-21.</p> <p>35. Cu-Uvin S, Caliendo AM, Reinert S, et al. Effect of highly active antiretroviral therapy on cervicovaginal HIV-1 RNA. AIDS. 2000 Mar 10;14(4):415-21.</p> <p>36. Kotler DP, Shimada T, Snow G, et al. Effect of combination antiretroviral therapy upon rectal mucosal HIV RNA burden and mononuclear cell apoptosis. AIDS. 1998 Apr 16;12(6):597-604.</p> <p>37. Cohen MS, Chen YQ, McCauley M, et al. Prevention of HIV-1 infection with early antiretroviral therapy. N Engl J Med. Aug 11 2011;365(6):493-505.</p> <p>38. Hughes JP, Baeten JM, Lingappa JR, et al. Determinants of Per-Coital-Act HIV-1 Infectivity Among African HIV-1-Serodiscordant Couples. J Infect Dis. Feb 2012;205(3):358-365.</p> <p>transmission of HIV-1: a probabilistic empiric model. AIDS, 2001 Mar 30;15(5):621-7.</p>
E2079	HIV medical visit frequency	Retention is a critical component of the HIV care continuum. Although HIV viral suppression is the ultimate outcome of HIV care/treatment, retention is a strongly associated with viral suppression and is the outcome for the wrap-around supportive services within HIV care.
X3481	Functional Status Assessment and Goal Achievement for Patients with Congestive Heart Failure	Goal-setting addresses patient engagement, a high priority of the National Quality Strategy and CMS. Only 4 of 64 measures in the 2014 measure set address this domain. Evidence suggests that physicians rarely conduct functional status assessments for patients with congestive heart failure.
X3302	Closing the Referral Loop - Specialist Report Sent to Primary Care Physician	There is evidence that the communication between primary care physicians and specialists is inadequate. This measure intends to improve the communication between primary and specialty care and enhance care continuity.
E0712	Depression Utilization of the PHQ-9 Tool	Process measure, administration of the PHQ-9 tool, that is paired with and supports the outcome measures of remission and response

MUC ID	Measure Title	Rationale
X2147	TOTAL PER CAPITA COST MEASURE FOR MEDICARE FEE-FOR-SERVICE BENEFICIARIES	Addresses gap in cost/resource use and aligns with VM
X3715	Prevention Quality Indicators #90 (PQI #90)	Addresses prevention and is a composite with PQIs already in program.
E2111	Antipsychotic Use in Persons with Dementia	Recommended by MAP for dual eligible beneficiaries.
E0055	Comprehensive Diabetes Care: Eye Exam	Clinically important area for at risk population and aligns with PQRS and MU
E0056	Diabetes: Foot exam	Clinically important area for at risk population and aligns with PQRS and MU
E0070	Coronary Artery Disease (CAD): Beta-Blocker Therapy – Prior Myocardial Infarction (MI) or Left Ventricular Systolic Dysfunction (LVEF < 40%)	Clinically important area for at risk populations.

MUC ID	Measure Title	Rationale
E0067	Coronary Artery Disease (CAD): Antiplatelet Therapy	Clinically important area and aligns with PQRS
X1033	Coronary Artery Disease (CAD): Symptom Management:	Clinically important topic and aligns with PQRS
E0171	Acute Care Hospitalization (Claims-Based)	Addresses a gap of post-acute outcome measures and supports alignment with Home Health quality reporting.
E0052	Use of Imaging Studies for Low Back Pain	Aligns with PQRS
E0514	MRI Lumbar Spine for Low Back Pain	Addresses imaging efficiency/utilization gap and supports program alignment.
E0513	Thorax CT: Use of Contrast Material	Addresses gaps in imaging efficiency, utilization, and patient safety while supporting alignment with other quality reporting programs.
E2158	Payment-Standardized Medicare Spending Per Beneficiary (MSPB)	Addresses gap of cost/resource use and aligns with other quality reporting programs.
E2083	Prescription of HIV	Prescription of HIV antiretroviral therapy is a critical component of the HIV care continuum. Although HIV viral suppression is the ultimate outcome of HIV care/treatment, retention is a strongly associated with viral suppression

MUC ID	Measure Title	Rationale
	Antiretroviral Therapy	and is the outcome for the wrap-around supportive services within HIV care.
S2510	Skilled Nursing Facility All-Cause 30 Day Post Discharge Readmission Measure	The Skilled Nursing Facility All-Cause 30 Day Post Discharge Readmission Measure is a SNF VBP measure.
X3629	30 Day Unplanned Readmissions for Cancer Patients	<p>Readmission rates can be used as a source of both quality improvement and cost containment, contributing to the triple aim of the Patient Protection and Affordable Care Act; better health, better care, and lower healthcare costs for patients.</p> <p>The many facets and subsequent variation of readmissions across facilities demonstrate the need for a standardized methodology of data collection. Moreover, differentiation between organic disease and complications (potentially requiring reoperation) is necessary to accurately determine quality of care (Brown et al.).</p> <p>The proposed measure addresses a cancer-specific patient population, specified for PPS-Exempt Cancer Centers operating within the United States. The reduction in variability for patient diagnoses as well as care setting promotes the development of an optimized measure to yield the greatest benefit to patients (i.e., one that has been specified for their unique conditions/diagnoses). For the purpose of this measure, “costs” should be understood to comprehensively include</p> <ol style="list-style-type: none"> <li>1. The physiologic, psychologic, and monetary detriment to the patient</li> <li>2. Financial cost to the institution, and</li> <li>3. Potential cost to the practicing surgeon (when higher readmission rates are used as surrogates for substandard care in quality improvement circles) (Brown et al).</li> </ol> <p>The outcome measured counts the number of all unplanned readmissions for patients who meet the specified denominator criteria. Unplanned readmissions are captured from acute clinical events requiring urgent re-hospitalization within 30 days of discharge (from an index admission). This standardized time frame is necessary so that patients may be uniformly compared, and the 30-day time frame is chosen for its proven clinical significance in readmission rates (see attached references). Note that a readmission is also eligible as an index admission if it meets all other eligibility criteria. If the first admission after discharge is planned, then no readmission is considered in the outcome, regardless of whether a subsequent unplanned readmission takes place because it would be unfair to attribute the unplanned readmission back to the care received during the index admission (consistent with NQF-</p>

MUC ID	Measure Title	Rationale
		endorsed measure #1789; 30-Day Hospital-Wide All-Cause Unplanned Readmission, which excludes patients admitted to a PPS-Exempt Cancer Center and patients receiving medical treatment for cancer).
E1641	Hospice and Palliative Care – Treatment Preferences	<p>The National Priorities Partnership has identified palliative and end-of-life care as one of its national priorities. A goal of this priority is to ensure that all patients with life-limiting illness have the right to express preferences that guide use of invasive or life-sustaining forms of treatment.(1) The affected populations are large; in 2009, 1.56 million people with life-limiting illness received hospice care.(2) In 2008, 58.5% of US hospitals with 50 or more beds had some form of palliative care service, and national trends show steady expansion of these services.(3) Patients and family caregivers rate control over treatment decisions as a high priority when living with serious and life-limiting illnesses. (4) From a recent systematic review of clinical trials, moderate evidence supports "care planning through engaging values, involving skilled facilitators, and focusing on key decision makers." These studies found improved outcomes of patient-physician communication, improved satisfaction with care, and increased hospice enrollment.(5) The more recently published Coping with Cancer Study, a prospective observational study of over 300 patients with advanced cancer, found that communication of patient treatment preferences was associated with use of treatments honoring those preferences and wish lesser use of aggressive, high-cost treatments.(6,7) This measure will enhance patient autonomy, facilitate patient-centered decision-making, and communicate patient preferences via documentation to other treating providers.</p> <p>1. <a href="http://www.nationalprioritiespartnership.org/PriorityDetails.aspx?id=608">http://www.nationalprioritiespartnership.org/PriorityDetails.aspx?id=608</a>                  2. NHPCO Facts and figures: hospice care in America 2010 edition  <a href="http://www.nhpco.org/files/public/Statistics_Research/Hospice_Facts_Figures_Oct-2010.pdf">http://www.nhpco.org/files/public/Statistics_Research/Hospice_Facts_Figures_Oct-2010.pdf</a>                  3. Center to Advance Palliative Care <a href="http://www.capc.org/news-and-events/releases/04-05-10">http://www.capc.org/news-and-events/releases/04-05-10</a>                  4. Singer PA, Martin DK, Kelner M. Quality end-of-life care: patients’ perspective. JAMA 1999; 281: 163-168.                  5. Lorenz KA, Lynn J, Dy SM et al. Evidence for improving palliative care at the end of life: a systematic review. Ann Intern Med 2008; 148:147-159.                  6. Wright AA, Mack JW, Kritek PA, Balboni TA, Massaro AF, Matulonis UA, Block SD, Prigerson HG. Influence of patients’ preferences and treatment site on cancer patients’ end of life care. Cancer. 2010 Oct 1;;116(19):4656-63.                  7. Wright AA, Zhang B, Ray A et al. Associations between end-of-life discussions, patient mental health, medical care near death, and caregiver bereavement adjustment. JAMA 2008; 300:1665-1673.</p>
E0221	Needle biopsy to establish	Improve the utilization of needle biopsy prior to surgery for breast cancer with resultant decreased morbidity and increased cost effectiveness, and patient satisfaction Williams RT, Yao KT, Stewart AK et al. Needle versus excisional

MUC ID	Measure Title	Rationale
	diagnosis of cancer precedes surgical excision/resection	biopsy for noninvasive and invasive breast cancer, report from the National Cancer Data Base 2003-2008. Ann Surg Oncol 2011;18(13):3802-10. 2. Friese CR, Neville BA, Edge SB et al. Breast biopsy patterns and outcomes in Surveillance, Epidemiology, and End Results-Medicare data. Cancer 2009;115(4):716-24. 3. Holloway CM, Saskin R, Paszat L. Geographic variation and physician specialization in the use of percutaneous biopsy for breast cancer diagnosis. Can J Surg 2008;51(6):453-63. 4. Clarke-Pearson EM, Jacobson AF, Boolbol SK et al. Quality assurance initiative at one institution for minimally invasive breast biopsy as the initial diagnostic technique. J Am Coll Surg 2009;208(1):75-8.
E0219	Post breast conservation surgery irradiation	CoC-accredited (Commission on Cancer) facilities have the ability to submit this data. Measure is already NQF-endorsed. There is an extensive literature demonstrating variations in the use of radiation with breast conservation surgery based on factors including age, race/ethnicity, socioeconomic status, location of treatment, provider, tumor characteristics, and other factors. Daroui P, Gabel M, Khan AJ, Haffty BG, Goyal S. Utilization of breast conserving therapy in Stage 0, I, and II breast cancer patients in New Jersey: An American College of Surgeons National Cancer Data Base (NCDB) Analysis. Am J Clin Oncol 2011; Feb 15(epub ahead of print). 2. Smith GI, Shih YC, Xu Y, et al. Racial disparities in the use of radiotherapy after breast conserving surgery: a national Medicare study. Cancer 2010;11:734-741. 3. Bickell NA, Wang JJ, Oluwole S, et al. Missed opportunities: racial disparities in adjuvant breast cancer treatment. J Clin Oncol 2006;24:1357-1362.
E0225	At least 12 regional lymph nodes are removed and pathologically examined for resected colon cancer	CoC-accredited (Commission on Cancer) facilities are eligible to submit data for this measure. This is a Quality Improvement measure and has already been endorsed by the CoC. Improved survival for patients with a greater number of lymph nodes resected ;greater accuracy of staging for patients, and consequently appropriate post-surgical care Chang GJ, Rodriguez-Bigas MA Skibber JM et al. Lymph node evaluation and survival after curative resection of colon cancer: systematic review. JNCI 2007; 99(6)L433-441. 2. Le Voyer TE, Sigurdson ER, Hamlin AL et al. Colon cancer survival is associated with increasing number of lymph nodes analyzed: a secondary survey of intergroup trial INT-0089. J Clin Oncol 2003; 21:2912-2919. 3. Sarli L, Bader G, Lusco D, et al. Number of lymph nodes examined and prognosis of TNM stage II colorectal cancer. European Journal of Cancer 2005; 41:272-279. 4. Swanson RS, Compton CC, Stewart AK, Bland KI. The prognosis of T3N0 clon cancer is dependent on the number of lymph nodes examined. Ann Surg Oncol 2003; 10(1):65-71
E0431	Influenza vaccination coverage among healthcare	Fill gap in program and for measure alignment across programs Use of this measure to monitor influenza vaccination among HCP is envisioned to result in increased influenza vaccination uptake among HCP, because improvements in tracking and reporting HCP influenza vaccination status will allow healthcare institutions to better identify and target unvaccinated HCP. Increased influenza vaccination coverage among HCP is expected to result in

MUC ID	Measure Title	Rationale
	personnel (HCP)	<p>reduced morbidity and mortality related to influenza virus infection among patients.</p> <ol style="list-style-type: none"> <li>1. Hayward AC, Harling R, Wetten S, et al. Effectiveness of an influenza vaccine programme for care home staff to prevent death, morbidity, and health service use among residents: cluster randomized controlled trial. <i>BMJ</i> 2006; 333: 1241-1246.</li> <li>2. Potter J, Stott DJ, Roberts MA, et al. Influenza vaccination of healthcare workers in long-term-care hospitals reduces the mortality of elderly patients. <i>J Infect Dis.</i> 1997; 175:1-6.</li> <li>3. Lemaitre M, Meret T, Rothan-Tondeur M, et al. Effect of influenza vaccination of nursing home staff on mortality of residents: a cluster-randomized trial. <i>J Am Geriatr Soc.</i> 2009; 57:1580-1586.</li> <li>4. Carman WF, Elder AG, Wallace LA, et al. Effects of influenza vaccination of health-care workers on mortality of elderly people in long-term care: a randomized controlled trial. <i>Lancet</i> 2000; 355:93–97.</li> <li>5. Talbot TR, Babcock H, Caplan AL, et al. Revised SHEA position paper: influenza vaccination of healthcare personnel. <i>Infection Control and Hospital Epidemiology</i> 2010; 31:987-995.</li> </ol>
E1716	National Healthcare Safety Network (NHSN) Facility-wide Inpatient Hospital-onset Methicillin-resistant Staphylococcus aureus (MRSA) Bacteremia Outcome Measure	<p>Cover gap in program and for measure alignment The SIR compares a healthcare facility’s performance compared to a national baseline. Facilities are able to see whether the number of LabID events that they have reported compares to the number that would be expected, given national data. The measure can then be used to drive prevention practices that will lead to improved outcomes, including the reduction of patient morbidity and mortality. Siegel, JD, et al., <i>Guideline for Management of Multidrug-Resistant Organisms In Healthcare Settings</i>, 2006. Available at <a href="http://www.cdc.gov/hicpac/pdf/guidelines/MDROGuideline2006.pdf">http://www.cdc.gov/hicpac/pdf/guidelines/MDROGuideline2006.pdf</a>.</p>
E1717	National Healthcare Safety Network (NHSN) Facility-wide Inpatient Hospital-onset	<p>Addresses a gap in the program</p> <p>Clinical guidelines for the management of C. difficile have been published. Adherence to the recommendations in the guidelines can result in decreased rates of C. difficile transmission and infection. Decreasing rates of infection will result in a lower SIR, which indicates improving performance.</p> <p>Cohen SH, Gerding DN, et al. <i>Clinical Practice Guidelines for Clostridium difficile Infection in Adults: 2010 Update by the Society for Healthcare Epidemiology of America (SHEA) and the Infectious Diseases Society of America (IDSA).</i></p>



MUC ID	Measure Title	Rationale
	Clostridium difficile Infection (CDI) Outcome Measure	<p>Infect Control Hosp Epidemiol, 2010. 31(5):431-455.                      Rutala WA, Weber DJ, and the Healthcare Infection Control Practices Advisory Committee. Guideline for Disinfection and Sterilization in Healthcare Facilities, 2008. Available at <a href="http://www.cdc.gov/hicpac/pdf/guidelines/Disinfection_Nov_2008.pdf">http://www.cdc.gov/hicpac/pdf/guidelines/Disinfection_Nov_2008.pdf</a>.                      Siegel JD, Rhinehart E, Jackson M, Chiarello L, and the Healthcare Infection Control Practices Advisory Committee. 2007 Guideline for Isolation Precautions: Preventing Transmission of Infectious Agents in Healthcare Settings. Available at <a href="http://www.cdc.gov/hicpac/pdf/isolation/Isolation2007.pdf">http://www.cdc.gov/hicpac/pdf/isolation/Isolation2007.pdf</a>.                      Boyce JM, Pittet D, et al. Guideline for Hand Hygiene in Health-Care Settings: Recommendations of the Healthcare Infection Control Practices Advisory Committee and the HICPAC/SHEA/APIC/IDSA Hand Hygiene Task Force. MMWR, 2002. 51(RR-16).</p>
E1659	Influenza Immunization	<p>Fill a measure gap in program and alignment of measures.                      Up to 1 in 5 people in the United States get influenza every season (CDC, Key Facts). Each year an average of approximately 226,000 people in the US are hospitalized with complications from influenza and between 3,000 and 49,000 die from the disease and its complications (Thompson WW, JAMA). Combined with pneumonia, influenza is the nation's 8th leading cause of death (Minino, 2004 National Center for Health Statistics). Up to two-thirds of all deaths attributable to pneumonia and influenza occur in the population of patients that have been hospitalized during flu season regardless of age (Fedson). The Advisory Committee on Immunization Practices (ACIP) recommends seasonal influenza vaccination for all persons 6 months of age and older to highlight the importance of preventing influenza. Vaccination is associated with reductions in influenza among all age groups (CDC Press Release February 24, 2010). The influenza vaccination is the most effective method for preventing influenza virus infection and its potentially severe complications. Screening and vaccination of inpatients is recommended, but hospitalization is an underutilized opportunity to provide vaccination to persons 6 months of age or older.</p>



**List of Measures under Consideration for December 1, 2014**

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## Ambulatory Surgical Center Quality Reporting

<u>MUC ID</u>	<u>CMS Program</u>	<u>Measure Title</u>	<u>NQS Priority</u>
X3720	Ambulatory Surgical Center Quality Reporting	Unplanned Anterior Vitrectomy	Making Care Safer
X3719	Ambulatory Surgical Center Quality Reporting	Normothermia Outcome	Effective Prevention and Treatment
E0515	Ambulatory Surgical Center Quality Reporting	Ambulatory surgery patients with appropriate method of hair removal	Effective Prevention and Treatment
E0326	Ambulatory Surgical Center Quality Reporting	Care Plan	Patient and Family Engagement
X3702	Ambulatory Surgical Center Quality Reporting	O/ASPECS Overall Facility Rating	Patient and Family Engagement
X3703	Ambulatory Surgical Center Quality Reporting	O/ASPECS Recommend	Patient and Family Engagement
X3698	Ambulatory Surgical Center Quality Reporting	O/ASPECS About Facility and Staff	Patient and Family Engagement
X3699	Ambulatory Surgical Center Quality Reporting	O/ASPECS Communication	Patient and Family Engagement
X3697	Ambulatory Surgical Center Quality Reporting	O/ASPECS Discharge and Recovery	Patient and Family Engagement

## Hospital Outpatient Quality Reporting

<b>MUC ID</b>	<b>CMS Program</b>	<b>Measure Title</b>	<b>NQS Priority</b>
E0291	Hospital Outpatient Quality Reporting	Administrative Communication	Communication and Care Coordination
E0293	Hospital Outpatient Quality Reporting	Medication Information	Communication and Care Coordination
E1822	Hospital Outpatient Quality Reporting	External Beam Radiotherapy for Bone Metastases	Effective Prevention and Treatment
E1898	Hospital Outpatient Quality Reporting	Health Literacy Measure derived from the health literacy domain of the C-CAT	Patient and Family Engagement
E0292	Hospital Outpatient Quality Reporting	Vital Signs	Communication and Care Coordination
E0296	Hospital Outpatient Quality Reporting	Nursing Information	Communication and Care Coordination
E0297	Hospital Outpatient Quality Reporting	Procedures and Tests	Communication and Care Coordination
E0295	Hospital Outpatient Quality Reporting	Physician Information	Communication and Care Coordination
X607	Hospital Outpatient Quality Reporting	Use of Brain Computed Tomography (CT) in the Emergency Department for Atraumatic Headache	Making Care Affordable
E0294	Hospital Outpatient Quality Reporting	Patient Information	Communication and Care Coordination
E0326	Hospital Outpatient Quality Reporting	Care Plan	Patient and Family Engagement
X3702	Hospital Outpatient Quality Reporting	O/ASPECS Overall Facility Rating	Patient and Family Engagement
X3703	Hospital Outpatient Quality Reporting	O/ASPECS Recommend	Patient and Family Engagement
X3698	Hospital Outpatient Quality Reporting	O/ASPECS About Facility and Staff	Patient and Family Engagement
X3699	Hospital Outpatient Quality Reporting	O/ASPECS Communication	Patient and Family Engagement
X3697	Hospital Outpatient Quality Reporting	O/ASPECS Discharge and Recovery	Patient and Family Engagement

## Medicare and Medicaid Electronic Health Record (EHR) Incentive Programs for Eligible Hospitals or Critical Access Hospitals

MUC ID	CMS Program	Measure Title	NQS Priority
X1970	Medicare and Medicaid EHR Incentive Programs for Eligible Hospitals or Critical Access Hospitals	Perinatal Care Cesarean section (PC O2) Nulliparous women with a term, singleton baby in vertex position delivered by cesarean section	Effective Prevention and Treatment
X3323	Medicare and Medicaid EHR Incentive Programs for Eligible Hospitals or Critical Access Hospitals	Adverse Drug Events: - Inappropriate Renal Dosing of Anticoagulants	Making Care Safer
X1234	Medicare and Medicaid EHR Incentive Programs for Eligible Hospitals or Critical Access Hospitals	Timely Evaluation of High-Risk Individuals in the Emergency Department	Making Care Safer
X3701	Medicare and Medicaid EHR Incentive Programs for Eligible Hospitals or Critical Access Hospitals	Hospital-Wide All-Cause Unplanned Readmission Hybrid eMeasure	Communication and Care Coordination

## Hospital Inpatient Quality Reporting

<u>MUC ID</u>	<u>CMS Program</u>	<u>Measure Title</u>	<u>NQS Priority</u>
E0204	Hospital Inpatient Quality Reporting	Skill mix (Registered Nurse [RN], Licensed Vocational/Practical Nurse [LVN/LPN], unlicensed assistive personnel [UAP], and contract)	Effective Prevention and Treatment
X3728	Hospital Inpatient Quality Reporting	Hospital 30-day, all-cause, unplanned risk-standardized days in acute care following acute myocardial infarction (AMI) hospitalization	Communication and Care Coordination
X3722	Hospital Inpatient Quality Reporting	Hospital 30-day, all-cause, unplanned risk-standardized days in acute care following heart failure hospitalization	Communication and Care Coordination
X3727	Hospital Inpatient Quality Reporting	Hospital 30-day, all-cause, unplanned risk-standardized days in acute care following pneumonia hospitalization	Communication and Care Coordination
E0349	Hospital Inpatient Quality Reporting	Transfusion Reaction (PSI 16)	Making Care Safer
E2104	Hospital Inpatient Quality Reporting	Paired Measures 0702 and 0703; Intensive Care Unit (ICU) Length-of-Stay (LOS) and Intensive Care: In-hospital mortality rate	Making Care Safer
E0202	Hospital Inpatient Quality Reporting	Falls with injury	Making Care Safer
E0141	Hospital Inpatient Quality Reporting	Patient fall rate	Making Care Safer
E0642	Hospital Inpatient Quality Reporting	Cardiac Rehabilitation Patient Referral From an Inpatient Setting	Effective Prevention and Treatment
E0704	Hospital Inpatient Quality Reporting	Proportion of Patients Hospitalized with AMI that have a Potentially Avoidable Complication (during the Index Stay or in the 30-day Post-Discharge Period)	Making Care Safer
E0708	Hospital Inpatient Quality Reporting	Proportion of Patients Hospitalized with Pneumonia that have a Potentially Avoidable Complication (during the Index Stay or in the 30-day Post-Discharge Period)	Making Care Safer
E0705	Hospital Inpatient Quality Reporting	Proportion of Patients Hospitalized with Stroke that have a Potentially Avoidable Complication (during the Index Stay or in the 30-day Post-Discharge Period)	Making Care Safer
S0139	Hospital Inpatient Quality Reporting	National Healthcare Safety Network (NHSN) Central line-associated Bloodstream Infection (CLABSI) Outcome	Making Care Safer
X3689	Hospital Inpatient Quality Reporting	Participation in a Patient Safety Culture Survey	Making Care Safer
X1970	Hospital Inpatient Quality Reporting	Perinatal Care Cesarean section (PC O2) Nulliparous women with a term, singleton baby in vertex position delivered by cesarean section	Effective Prevention and Treatment
X3323	Hospital Inpatient Quality Reporting	Adverse Drug Events: - Inappropriate Renal Dosing of Anticoagulants	Making Care Safer
X1234	Hospital Inpatient Quality Reporting	Timely Evaluation of High-Risk Individuals in the Emergency Department	Making Care Safer

<u>MUC ID</u>	<u>CMS Program</u>	<u>Measure Title</u>	<u>NQS Priority</u>
X3620	Hospital Inpatient Quality Reporting	Hospital-level, risk-standardized payment associated with an episode of care for primary elective total hip and/or total knee arthroplasty (THA/TKA)	Making Care Affordable
X3701	Hospital Inpatient Quality Reporting	Hospital-Wide All-Cause Unplanned Readmission Hybrid eMeasure	Communication and Care Coordination
E0205	Hospital Inpatient Quality Reporting	Nursing Hours per Patient Day	Effective Prevention and Treatment
S0138	Hospital Inpatient Quality Reporting	National Healthcare Safety Network (NHSN) Catheter-associated Urinary Tract Infection (CAUTI) Outcome	Making Care Safer
E0506	Hospital Inpatient Quality Reporting	Hospital 30-day, all-cause, risk-standardized readmission rate (RSRR) following pneumonia hospitalization	Communication and Care Coordination
E0468	Hospital Inpatient Quality Reporting	Hospital 30-day, all-cause, risk-standardized mortality rate (RSMR) following pneumonia hospitalization	Communication and Care Coordination
X0351	Hospital Inpatient Quality Reporting	Kidney/Urinary Tract Infection Clinical Episode-Based Payment Measure	Making Care Affordable
X0352	Hospital Inpatient Quality Reporting	Knee Replacement/ Revision Clinical Episode-Based Payment Measure	Making Care Affordable
X0353	Hospital Inpatient Quality Reporting	Spine Fusion/ Refusion Clinical Episode-Based Payment Measure	Making Care Affordable
X0354	Hospital Inpatient Quality Reporting	Cellulitis Clinical Episode-Based Payment Measure	Making Care Affordable
X0355	Hospital Inpatient Quality Reporting	Gastrointestinal Hemorrhage Clinical Episode-Based Payment Measure	Making Care Affordable
X0356	Hospital Inpatient Quality Reporting	Hip Replacement/ Revision Clinical Episode-Based Payment Measure	Making Care Affordable



## Hospital Acquired Condition Reduction Program

<u>MUC ID</u>	<u>CMS Program</u>	<u>Measure Title</u>	<u>NQS Priority</u>
S0139	Hospital Acquired Condition Reduction Program	National Healthcare Safety Network (NHSN) Central line-associated Bloodstream Infection (CLABSI) Outcome	Making Care Safer
S0138	Hospital Acquired Condition Reduction Program	National Healthcare Safety Network (NHSN) Catheter-associated Urinary Tract Infection (CAUTI) Outcome	Making Care Safer

## Hospital Readmission Reduction Program

<u>MUC ID</u>	<u>CMS Program</u>	<u>Measure Title</u>	<u>NQS Priority</u>
E0506	Hospital Readmission Reduction Program	Hospital 30-day, all-cause, risk-standardized readmission rate (RSRR) following pneumonia hospitalization	Communication and Care Coordination

## Hospital Value-Based Purchasing

<u>MUC ID</u>	<u>CMS Program</u>	<u>Measure Title</u>	<u>NQS Priority</u>
E1893	Hospital Value-Based Purchasing	Hospital 30-Day, All-Cause, Risk-Standardized Mortality Rate (RSMR) following Chronic Obstructive Pulmonary Disease (COPD) Hospitalization	Effective Prevention and Treatment
E0351	Hospital Value-Based Purchasing	Death among surgical inpatients with serious, treatable complications (PSI 4)	Making Care Safer
X2698	Hospital Value-Based Purchasing	AMI episode of care (hospitalization + 30 days post-discharge)	Making Care Affordable
S0139	Hospital Value-Based Purchasing	National Healthcare Safety Network (NHSN) Central line-associated Bloodstream Infection (CLABSI) Outcome	Making Care Safer
S0138	Hospital Value-Based Purchasing	National Healthcare Safety Network (NHSN) Catheter-associated Urinary Tract Infection (CAUTI) Outcome	Making Care Safer
E0468	Hospital Value-Based Purchasing	Hospital 30-day, all-cause, risk-standardized mortality rate (RSMR) following pneumonia hospitalization	Communication and Care Coordination
X0351	Hospital Value-Based Purchasing	Kidney/Urinary Tract Infection Clinical Episode-Based Payment Measure	Making Care Affordable
X0352	Hospital Value-Based Purchasing	Knee Replacement/ Revision Clinical Episode-Based Payment Measure	Making Care Affordable
X0353	Hospital Value-Based Purchasing	Spine Fusion/ Refusion Clinical Episode-Based Payment Measure	Making Care Affordable
X0354	Hospital Value-Based Purchasing	Cellulitis Clinical Episode-Based Payment Measure	Making Care Affordable
X0355	Hospital Value-Based Purchasing	Gastrointestinal Hemorrhage Clinical Episode-Based Payment Measure	Making Care Affordable
X0356	Hospital Value-Based Purchasing	Hip Replacement/ Revision Clinical Episode-Based Payment Measure	Making Care Affordable

## Prospective Payment System-Exempt Cancer Hospital Quality Reporting

<u>MUC ID</u>	<u>CMS Program</u>	<u>Measure Title</u>	<u>NQS Priority</u>
E0225	Prospective Payment System-Exempt Cancer Hospital Quality Reporting	At least 12 regional lymph nodes are removed and pathologically examined for resected colon cancer	Effective Prevention and Treatment
E0219	Prospective Payment System-Exempt Cancer Hospital Quality Reporting	Post breast conservation surgery irradiation	Effective Prevention and Treatment
E0221	Prospective Payment System-Exempt Cancer Hospital Quality Reporting	Needle biopsy to establish diagnosis of cancer precedes surgical excision/resection	Effective Prevention and Treatment
E1717	Prospective Payment System-Exempt Cancer Hospital Quality Reporting	National Healthcare Safety Network (NHSN) Facility-wide Inpatient Hospital-onset Clostridium difficile Infection (CDI) Outcome Measure	Making Care Safer
E1716	Prospective Payment System-Exempt Cancer Hospital Quality Reporting	National Healthcare Safety Network (NHSN) Facility-wide Inpatient Hospital-onset Methicillin-resistant Staphylococcus aureus (MRSA) Bacteremia Outcome Measure	Making Care Safer
E0431	Prospective Payment System-Exempt Cancer Hospital Quality Reporting	Influenza vaccination coverage among healthcare personnel (HCP)	Making Care Safer
E1659	Prospective Payment System-Exempt Cancer Hospital Quality Reporting	Influenza Immunization	Best Practice of Healthy Living
E1641	Prospective Payment System-Exempt Cancer Hospital Quality Reporting	Hospice and Palliative Care – Treatment Preferences	Patient and Family Engagement
X3629	Prospective Payment System-Exempt Cancer Hospital Quality Reporting	30 Day Unplanned Readmissions for Cancer Patients	Communication and Care Coordination

## Medicare and Medicaid EHR Incentive Programs for Eligible Professionals

<u>MUC ID</u>	<u>CMS Program</u>	<u>Measure Title</u>	<u>NQS Priority</u>
X3729	Medicare and Medicaid EHR Incentive Programs for Eligible Professionals	Statin Therapy for the Prevention and Treatment of Cardiovascular Disease	Effective Prevention and Treatment
X3468	Medicare and Medicaid EHR Incentive Programs for Eligible Professionals	Documentation of a Health Care Proxy for Patients with Cognitive Impairment	Effective Prevention and Treatment
X3465	Medicare and Medicaid EHR Incentive Programs for Eligible Professionals	Coordinating Care - Follow-Up with Eligible Provider	Communication and Care Coordination
X3466	Medicare and Medicaid EHR Incentive Programs for Eligible Professionals	Coordinating Care - Emergency Department Referrals	Communication and Care Coordination
X3053	Medicare and Medicaid EHR Incentive Programs for Eligible Professionals	Functional Status Assessments and Goal Setting for Chronic Pain Due to Osteoarthritis	Effective Prevention and Treatment
X3469	Medicare and Medicaid EHR Incentive Programs for Eligible Professionals	Cognitive Impairment Assessment Among At-Risk Older Adults	Best Practice of Healthy Living
X3485	Medicare and Medicaid EHR Incentive Programs for Eligible Professionals	Adverse Drug Events - Minimum INR Monitoring for Patients with Atrial Fibrillation on Warfarin	Making Care Safer
X3283	Medicare and Medicaid EHR Incentive Programs for Eligible Professionals	Closing the Referral Loop - Critical Information Communicated with Request for Referral	Communication and Care Coordination
X3476	Medicare and Medicaid EHR Incentive Programs for Eligible Professionals	Diabetes: Hemoglobin A1c Overtreatment in the Elderly	Effective Prevention and Treatment
X3483	Medicare and Medicaid EHR Incentive Programs for Eligible Professionals	Functional Status Outcomes for Patients Receiving Primary Total Hip Replacements	Patient and Family Engagement
X3482	Medicare and Medicaid EHR Incentive Programs for Eligible Professionals	Functional Status Outcomes for Patients Receiving Primary Total Knee Replacements	Patient and Family Engagement
X3816	Medicare and Medicaid EHR Incentive Programs for Eligible Professionals	Hepatitis C: Appropriate Screening Follow-Up for Patients Identified with Hepatitis C Virus (HCV) Infection	Communication and Care Coordination
X3512	Medicare and Medicaid EHR Incentive Programs for Eligible Professionals	Hepatitis C: One-Time Screening for Hepatitis C Virus (HCV) for Patients at Risk	Best Practice of Healthy Living
X3475	Medicare and Medicaid EHR Incentive Programs for Eligible Professionals	Substance Use Screening and Intervention Composite	Best Practice of Healthy Living
E2152	Medicare and Medicaid EHR Incentive Programs for Eligible Professionals	Preventive Care and Screening: Unhealthy Alcohol Use: Screening & Brief Counseling	Best Practice of Healthy Living

<u>MUC ID</u>	<u>CMS Program</u>	<u>Measure Title</u>	<u>NQS Priority</u>
X3445	Medicare and Medicaid EHR Incentive Programs for Eligible Professionals	Alcohol Screening and Brief Intervention (ASBI) in the ER	Best Practice of Healthy Living
X3446	Medicare and Medicaid EHR Incentive Programs for Eligible Professionals	Intimate Partner (Domestic) Violence Screening	Best Practice of Healthy Living
X3299	Medicare and Medicaid EHR Incentive Programs for Eligible Professionals	HIV: Ever screened for HIV	Effective Prevention and Treatment
X3300	Medicare and Medicaid EHR Incentive Programs for Eligible Professionals	HIV Screening of STI patients	Effective Prevention and Treatment
E0555	Medicare and Medicaid EHR Incentive Programs for Eligible Professionals	INR Monitoring for Individuals on Warfarin (e-specified version of NQF #0555)	Making Care Safer
S2550	Medicare and Medicaid EHR Incentive Programs for Eligible Professionals	Gout: Urate Lowering Therapy	Effective Prevention and Treatment
S2521	Medicare and Medicaid EHR Incentive Programs for Eligible Professionals	Gout: Serum Urate Monitoring	Effective Prevention and Treatment
X3280	Medicare and Medicaid EHR Incentive Programs for Eligible Professionals	ADHD: Symptom Reduction in Follow-up Period	Patient and Family Engagement
X3817	Medicare and Medicaid EHR Incentive Programs for Eligible Professionals	Amblyopia Screening in Children	Communication and Care Coordination
E1553	Medicare and Medicaid EHR Incentive Programs for Eligible Professionals	Blood Pressure Screening by age 18	Effective Prevention and Treatment
X3472	Medicare and Medicaid EHR Incentive Programs for Eligible Professionals	Use of Multiple Concurrent Antipsychotics in Children and Adolescents	Making Care Safer
X3513	Medicare and Medicaid EHR Incentive Programs for Eligible Professionals	Annual Hepatitis C Virus (HCV) Screening for Patients who are Active Injection Drug Users	Patient and Family Engagement
X4208	Medicare and Medicaid EHR Incentive Programs for Eligible Professionals	Substance use disorders: percentage of patients aged 18 years and older with a diagnosis of current opioid addiction who were counseled regarding psychosocial AND pharmacologic treatment options for opioid addiction within the 12 month reporting period	Effective Prevention and Treatment

<u>MUC ID</u>	<u>CMS Program</u>	<u>Measure Title</u>	<u>NQS Priority</u>
X4007	Medicare and Medicaid EHR Incentive Programs for Eligible Professionals	Substance use disorders: percentage of patients aged 18 years and older with a diagnosis of current alcohol dependence who were counseled regarding psychosocial AND pharmacologic treatment options for alcohol dependence within the 12 month reporting	Effective Prevention and Treatment
E1507	Medicare and Medicaid EHR Incentive Programs for Eligible Professionals	Risky Behavior Assessment or Counseling by Age 18 Years	Best Practice of Healthy Living
E1406	Medicare and Medicaid EHR Incentive Programs for Eligible Professionals	Risky Behavior Assessment or Counseling by Age 13 Years	Best Practice of Healthy Living

## Medicare Physician Quality Reporting System

MUC ID	CMS Program	Measure Title	NQS Priority
X3280	Medicare Physician Quality Reporting System	ADHD: Symptom Reduction in Follow-up Period	Patient and Family Engagement
X3817	Medicare Physician Quality Reporting System	Amblyopia Screening in Children	Communication and Care Coordination
E1553	Medicare Physician Quality Reporting System	Blood Pressure Screening by age 18	Effective Prevention and Treatment
X3472	Medicare Physician Quality Reporting System	Use of Multiple Concurrent Antipsychotics in Children and Adolescents	Making Care Safer
X3729	Medicare Physician Quality Reporting System	Statin Therapy for the Prevention and Treatment of Cardiovascular Disease	Effective Prevention and Treatment
X3468	Medicare Physician Quality Reporting System	Documentation of a Health Care Proxy for Patients with Cognitive Impairment	Effective Prevention and Treatment
X3465	Medicare Physician Quality Reporting System	Coordinating Care - Follow-Up with Eligible Provider	Communication and Care Coordination
X3466	Medicare Physician Quality Reporting System	Coordinating Care - Emergency Department Referrals	Communication and Care Coordination
X3053	Medicare Physician Quality Reporting System	Functional Status Assessments and Goal Setting for Chronic Pain Due to Osteoarthritis	Effective Prevention and Treatment
X3469	Medicare Physician Quality Reporting System	Cognitive Impairment Assessment Among At-Risk Older Adults	Best Practice of Healthy Living
E0076	Medicare Physician Quality Reporting System	Optimal Vascular Care	Effective Prevention and Treatment
X3768	Medicare Physician Quality Reporting System	Primary C-Section Rate 2014	Making Care Affordable
X3773	Medicare Physician Quality Reporting System	Optimal Asthma Care 2014	Effective Prevention and Treatment
E0032	Medicare Physician Quality Reporting System	Cervical Cancer Screening	Effective Prevention and Treatment
X3797	Medicare Physician Quality Reporting System	Breast Cancer Screening	Effective Prevention and Treatment
X3792	Medicare Physician Quality Reporting System	Controlling High Blood Pressure	Effective Prevention and Treatment
X3485	Medicare Physician Quality Reporting System	Adverse Drug Events - Minimum INR Monitoring for Patients with Atrial Fibrillation on Warfarin	Making Care Safer
X3283	Medicare Physician Quality Reporting System	Closing the Referral Loop - Critical Information Communicated with Request for Referral	Communication and Care Coordination
X3476	Medicare Physician Quality Reporting System	Diabetes: Hemoglobin A1c Overtreatment in the Elderly	Effective Prevention and Treatment
X3483	Medicare Physician Quality Reporting System	Functional Status Outcomes for Patients Receiving Primary Total Hip Replacements	Patient and Family Engagement
X3482	Medicare Physician Quality Reporting System	Functional Status Outcomes for Patients Receiving Primary Total Knee Replacements	Patient and Family Engagement
X3816	Medicare Physician Quality Reporting System	Hepatitis C: Appropriate Screening Follow-Up for Patients Identified with Hepatitis C Virus (HCV)	Communication and Care Coordination



<u>MUC ID</u>	<u>CMS Program</u>	<u>Measure Title</u>	<u>NQS Priority</u>
		Infection	
X3512	Medicare Physician Quality Reporting System	Hepatitis C: One-Time Screening for Hepatitis C Virus (HCV) for Patients at Risk	Best Practice of Healthy Living
X3475	Medicare Physician Quality Reporting System	Substance Use Screening and Intervention Composite	Best Practice of Healthy Living
E2152	Medicare Physician Quality Reporting System	Preventive Care and Screening: Unhealthy Alcohol Use: Screening & Brief Counseling	Best Practice of Healthy Living
X3445	Medicare Physician Quality Reporting System	Alcohol Screening and Brief Intervention (ASBI) in the ER	Best Practice of Healthy Living
X3446	Medicare Physician Quality Reporting System	Intimate Partner (Domestic) Violence Screening	Best Practice of Healthy Living
X3299	Medicare Physician Quality Reporting System	HIV: Ever screened for HIV	Effective Prevention and Treatment
X3300	Medicare Physician Quality Reporting System	HIV Screening of STI patients	Effective Prevention and Treatment
E0555	Medicare Physician Quality Reporting System	INR Monitoring for Individuals on Warfarin (e-specified version of NQF #0555)	Making Care Safer
S2550	Medicare Physician Quality Reporting System	Gout: Urate Lowering Therapy	Effective Prevention and Treatment
S2521	Medicare Physician Quality Reporting System	Gout: Serum Urate Monitoring	Effective Prevention and Treatment
X3726	Medicare Physician Quality Reporting System	Clinical Response to Oral Systemic or Biologic Medications	Patient and Family Engagement
X3274	Medicare Physician Quality Reporting System	Assessment for Psoriatic Arthritis	Patient and Family Engagement
X3788	Medicare Physician Quality Reporting System	PC-02 Cesarean Section (Provider Level)	Making Care Affordable
X3732	Medicare Physician Quality Reporting System	Adult Kidney Disease: Referral to Hospice	Patient and Family Engagement
X3735	Medicare Physician Quality Reporting System	Communication and shared decision-making with patients and families for interventional oncology procedures	Patient and Family Engagement
X3739	Medicare Physician Quality Reporting System	Percentage of patients treated for varicose veins who are treated with saphenous ablation and receive an outcomes survey before and after treatment	Effective Prevention and Treatment
X3755	Medicare Physician Quality Reporting System	Percentage of patients with a retrievable inferior vena cava filter who are appropriately assessed for continued filtration or device removal	Effective Prevention and Treatment
X3754	Medicare Physician Quality Reporting System	Rate of surgical conversion from lower extremity endovascular revascularization procedure	Effective Prevention and Treatment
X3756	Medicare Physician Quality Reporting System	Clinical Outcome post Endovascular Stroke Treatment	Effective Prevention and Treatment
X3747	Medicare Physician Quality Reporting System	Door to puncture time for endovascular stroke treatment	Effective Prevention and Treatment

<u>MUC ID</u>	<u>CMS Program</u>	<u>Measure Title</u>	<u>NQS Priority</u>
X3752	Medicare Physician Quality Reporting System	Performing cystoscopy at the time of hysterectomy for pelvic organ prolapse to detect lower urinary tract injury	Making Care Safer
X3751	Medicare Physician Quality Reporting System	Complete assessment and evaluation of patient's pelvic organ prolapse prior to surgical repair	Communication and Care Coordination
X3750	Medicare Physician Quality Reporting System	Preoperative pessary for pelvic organ prolapse offered	Communication and Care Coordination
X3745	Medicare Physician Quality Reporting System	Preoperative pessary for pelvic organ prolapse attempted	Communication and Care Coordination
X3743	Medicare Physician Quality Reporting System	Proportion of patients sustaining a bladder injury at the time of any pelvic organ prolapse repair	Making Care Safer
X3744	Medicare Physician Quality Reporting System	Proportion of patients sustaining a major viscus injury at the time of any pelvic organ prolapse repair	Making Care Safer
X3746	Medicare Physician Quality Reporting System	Preoperative assessment of occult stress urinary incontinence prior to any pelvic organ prolapse repair	Effective Prevention and Treatment
X3742	Medicare Physician Quality Reporting System	Preoperative assessment of sexual function prior to any pelvic organ prolapse repair	Effective Prevention and Treatment
X3741	Medicare Physician Quality Reporting System	Preoperative exclusion of uterine malignancy prior to any pelvic organ prolapse repair	Making Care Safer
X3740	Medicare Physician Quality Reporting System	Performing an intraoperative rectal examination at the time of prolapse repair	Making Care Safer
E0465	Medicare Physician Quality Reporting System	Perioperative Anti-platelet Therapy for Patients undergoing Carotid Endarterectomy	Effective Prevention and Treatment
E1523	Medicare Physician Quality Reporting System	In-hospital mortality following elective open repair of AAAs	Making Care Safer
X3761	Medicare Physician Quality Reporting System	Photodocumentation of cecal intubation	Effective Prevention and Treatment
X3760	Medicare Physician Quality Reporting System	Frequency of inadequate bowel preparation	Making Care Affordable
X3758	Medicare Physician Quality Reporting System	Appropriate age for colorectal cancer screening	Making Care Affordable
X3759	Medicare Physician Quality Reporting System	Appropriate follow-up imaging for incidental abdominal lesions	Effective Prevention and Treatment
X3763	Medicare Physician Quality Reporting System	Appropriate follow-up imaging for incidental thyroid nodules in patients	Effective Prevention and Treatment
X3764	Medicare Physician Quality Reporting System	Imaging in adult ED patients with minor head injury	Making Care Affordable
X3781	Medicare Physician Quality Reporting System	Use of premedication before contrast-enhanced imaging studies in patients with documented contrast allergy	Making Care Safer
X3523	Medicare Physician	Extravasation of contrast following contrast-	Making Care Safer

<b>MUC ID</b>	<b>CMS Program</b>	<b>Measure Title</b>	<b>NQS Priority</b>
	Quality Reporting System	enhanced computed tomography (CT)	
X3780	Medicare Physician Quality Reporting System	Coagulation studies in adult patients presenting with chest pain with no coagulopathy or bleeding	Making Care Affordable
X3803	Medicare Physician Quality Reporting System	Appropriate use of imaging for non-traumatic shoulder pain	Making Care Affordable
X3802	Medicare Physician Quality Reporting System	Appropriate follow-up imaging for non-traumatic knee pain	Making Care Affordable
X3774	Medicare Physician Quality Reporting System	Evaluation or Interview for Risk of Opioid Misuse	Effective Prevention and Treatment
X3777	Medicare Physician Quality Reporting System	Documentation of Signed Opioid Treatment Agreement	Effective Prevention and Treatment
X3776	Medicare Physician Quality Reporting System	Consideration of Non-Pharmacologic Interventions	Effective Prevention and Treatment
X3775	Medicare Physician Quality Reporting System	Chronic Opioid Therapy Follow-up Evaluation	Effective Prevention and Treatment
X3771	Medicare Physician Quality Reporting System	Medication Prescribed For Acute Migraine Attack	Effective Prevention and Treatment
X3766	Medicare Physician Quality Reporting System	Acute Medication Prescribed For Cluster Headache	Effective Prevention and Treatment
X3772	Medicare Physician Quality Reporting System	Preventive Migraine Medication Prescribed	Effective Prevention and Treatment
X3765	Medicare Physician Quality Reporting System	Overuse of Barbiturate Containing Medications for Primary Headache Disorders	Effective Prevention and Treatment
X3769	Medicare Physician Quality Reporting System	Unnecessary Screening Colonoscopy in Older Adults	Making Care Affordable
X3770	Medicare Physician Quality Reporting System	Overuse Of Opioid Containing Medications For Primary Headache Disorders	Effective Prevention and Treatment
X3783	Medicare Physician Quality Reporting System	Assessment Of Medication Overuse In The Treatment Of Primary Headache Disorders	Effective Prevention and Treatment
X3784	Medicare Physician Quality Reporting System	Plan Of Care Or Referral For Possible Medication Overuse Headache	Making Care Affordable
X3785	Medicare Physician Quality Reporting System	Overuse Of Neuroimaging For Patients With Primary Headache And A Normal Neurological Examination	Making Care Affordable
X3786	Medicare Physician Quality Reporting System	Quality Of Life Assessment For Patients With Primary Headache Disorders	Effective Prevention and Treatment
X3796	Medicare Physician Quality Reporting System	Migraine Or Cervicogenic Headache Related Disability Functional Status	Effective Prevention and Treatment
X3794	Medicare Physician Quality Reporting System	Plan Of Care For Migraine Or Cervicogenic Headache Developed Or Reviewed	Effective Prevention and Treatment
X3787	Medicare Physician Quality Reporting System	Patients with DMD Prescribed Appropriate Disease Modifying Pharmaceutical Therapy	Effective Prevention and Treatment
X3791	Medicare Physician Quality Reporting System	MD Multidisciplinary Care Plan Developed or Updated	Effective Prevention and Treatment

<u>MUC ID</u>	<u>CMS Program</u>	<u>Measure Title</u>	<u>NQS Priority</u>
X3798	Medicare Physician Quality Reporting System	Scoliosis Evaluation Ordered	Effective Prevention and Treatment
X3801	Medicare Physician Quality Reporting System	Nutritional Status or Growth Trajectories Monitored	Effective Prevention and Treatment
X3800	Medicare Physician Quality Reporting System	Patient Queried about Pain and Pain Interference with Function	Effective Prevention and Treatment
X3789	Medicare Physician Quality Reporting System	Patient Counseled About Health Care Decision-Making	Effective Prevention and Treatment
X3807	Medicare Physician Quality Reporting System	Post-Anesthetic Transfer of Care: Use of Checklist or Protocol for Direct Transfer of Care from Procedure Room to Intensive Care Unit (ICU)	Communication and Care Coordination
X3806	Medicare Physician Quality Reporting System	Prevention of Post-Operative Nausea and Vomiting (PONV) – Combination	Patient and Family Engagement
X3809	Medicare Physician Quality Reporting System	Perioperative Temperature Management	Making Care Safer
X3811	Medicare Physician Quality Reporting System	Anesthesiology Smoking Abstinence	Effective Prevention and Treatment
X3808	Medicare Physician Quality Reporting System	Preoperative Use of Aspirin for Patients with Drug-Eluting Coronary Stents	Effective Prevention and Treatment
X3810	Medicare Physician Quality Reporting System	Post-Anesthetic Transfer of Care Measure: Procedure Room to a Post Anesthesia Care Unit (PACU)	Communication and Care Coordination
X3813	Medicare Physician Quality Reporting System	Proportion of patients sustaining a ureter injury at the time of any pelvic organ prolapse repair	Making Care Safer
X3733	Medicare Physician Quality Reporting System	Pediatric Kidney Disease: Discussion of Care Planning	Patient and Family Engagement
X3778	Medicare Physician Quality Reporting System	Imaging in pediatric ED patients aged 2 through 17 years with minor head injury	Making Care Affordable

## Physician Feedback/Quality Resource and Utilization Reports

<u>MUC ID</u>	<u>CMS Program</u>	<u>Measure Title</u>	<u>NQS Priority</u>
X3280	Physician Feedback/Quality and Resource Utilization Reports	ADHD: Symptom Reduction in Follow-up Period	Patient and Family Engagement
X3817	Physician Feedback/Quality and Resource Utilization Reports	Amblyopia Screening in Children	Communication and Care Coordination
E1553	Physician Feedback/Quality and Resource Utilization Reports	Blood Pressure Screening by age 18	Effective Prevention and Treatment
X3472	Physician Feedback/Quality and Resource Utilization Reports	Use of Multiple Concurrent Antipsychotics in Children and Adolescents	Making Care Safer
X3726	Physician Feedback/Quality and Resource Utilization Reports	Clinical Response to Oral Systemic or Biologic Medications	Patient and Family Engagement
X3274	Physician Feedback/Quality and Resource Utilization Reports	Assessment for Psoriatic Arthritis	Patient and Family Engagement
X3788	Physician Feedback/Quality and Resource Utilization Reports	PC-02 Cesarean Section (Provider Level)	Making Care Affordable
X3732	Physician Feedback/Quality and Resource Utilization Reports	Adult Kidney Disease: Referral to Hospice	Patient and Family Engagement
X3735	Physician Feedback/Quality and Resource Utilization Reports	Communication and shared decision-making with patients and families for interventional oncology procedures	Patient and Family Engagement
X3739	Physician Feedback/Quality and Resource Utilization Reports	Percentage of patients treated for varicose veins who are treated with saphenous ablation and receive an outcomes survey before and after treatment	Effective Prevention and Treatment
X3755	Physician Feedback/Quality and Resource Utilization Reports	Percentage of patients with a retrievable inferior vena cava filter who are appropriately assessed for continued filtration or device removal	Effective Prevention and Treatment
X3754	Physician Feedback/Quality and Resource Utilization Reports	Rate of surgical conversion from lower extremity endovascular revascularization procedure	Effective Prevention and Treatment
X3756	Physician Feedback/Quality and Resource Utilization Reports	Clinical Outcome post Endovascular Stroke Treatment	Effective Prevention and Treatment
X3747	Physician Feedback/Quality and Resource Utilization Reports	Door to puncture time for endovascular stroke treatment	Effective Prevention and Treatment
X3752	Physician Feedback/Quality and Resource Utilization Reports	Performing cystoscopy at the time of hysterectomy for pelvic organ prolapse to detect lower urinary tract injury	Making Care Safer
X3751	Physician Feedback/Quality and Resource Utilization Reports	Complete assessment and evaluation of patient's pelvic organ prolapse prior to surgical repair	Communication and Care Coordination
X3750	Physician Feedback/Quality and Resource Utilization Reports	Preoperative pessary for pelvic organ prolapse offered	Communication and Care Coordination

<u>MUC ID</u>	<u>CMS Program</u>	<u>Measure Title</u>	<u>NQS Priority</u>
X3745	Physician Feedback/Quality and Resource Utilization Reports	Preoperative pessary for pelvic organ prolapse attempted	Communication and Care Coordination
X3743	Physician Feedback/Quality and Resource Utilization Reports	Proportion of patients sustaining a bladder injury at the time of any pelvic organ prolapse repair	Making Care Safer
X3744	Physician Feedback/Quality and Resource Utilization Reports	Proportion of patients sustaining a major viscus injury at the time of any pelvic organ prolapse repair	Making Care Safer
X3746	Physician Feedback/Quality and Resource Utilization Reports	Preoperative assessment of occult stress urinary incontinence prior to any pelvic organ prolapse repair	Effective Prevention and Treatment
X3742	Physician Feedback/Quality and Resource Utilization Reports	Preoperative assessment of sexual function prior to any pelvic organ prolapse repair	Effective Prevention and Treatment
X3741	Physician Feedback/Quality and Resource Utilization Reports	Preoperative exclusion of uterine malignancy prior to any pelvic organ prolapse repair	Making Care Safer
X3740	Physician Feedback/Quality and Resource Utilization Reports	Performing an intraoperative rectal examination at the time of prolapse repair	Making Care Safer
E0465	Physician Feedback/Quality and Resource Utilization Reports	Perioperative Anti-platelet Therapy for Patients undergoing Carotid Endarterectomy	Effective Prevention and Treatment
E1523	Physician Feedback/Quality and Resource Utilization Reports	In-hospital mortality following elective open repair of AAAs	Making Care Safer
X3761	Physician Feedback/Quality and Resource Utilization Reports	Photodocumentation of cecal intubation	Effective Prevention and Treatment
X3760	Physician Feedback/Quality and Resource Utilization Reports	Frequency of inadequate bowel preparation	Making Care Affordable
X3758	Physician Feedback/Quality and Resource Utilization Reports	Appropriate age for colorectal cancer screening	Making Care Affordable
X3759	Physician Feedback/Quality and Resource Utilization Reports	Appropriate follow-up imaging for incidental abdominal lesions	Effective Prevention and Treatment
X3763	Physician Feedback/Quality and Resource Utilization Reports	Appropriate follow-up imaging for incidental thyroid nodules in patients	Effective Prevention and Treatment
X3764	Physician Feedback/Quality and Resource Utilization Reports	Imaging in adult ED patients with minor head injury	Making Care Affordable
X3781	Physician Feedback/Quality and Resource Utilization Reports	Use of premedication before contrast-enhanced imaging studies in patients with documented contrast allergy	Making Care Safer
X3523	Physician Feedback/Quality and Resource Utilization Reports	Extravasation of contrast following contrast-enhanced computed tomography (CT)	Making Care Safer
X3780	Physician Feedback/Quality and Resource Utilization Reports	Coagulation studies in adult patients presenting with chest pain with no	Making Care Affordable



<u>MUC ID</u>	<u>CMS Program</u>	<u>Measure Title</u>	<u>NQS Priority</u>
		coagulopathy or bleeding	
X3803	Physician Feedback/Quality and Resource Utilization Reports	Appropriate use of imaging for non-traumatic shoulder pain	Making Care Affordable
X3802	Physician Feedback/Quality and Resource Utilization Reports	Appropriate follow-up imaging for non-traumatic knee pain	Making Care Affordable
X3774	Physician Feedback/Quality and Resource Utilization Reports	Evaluation or Interview for Risk of Opioid Misuse	Effective Prevention and Treatment
X3777	Physician Feedback/Quality and Resource Utilization Reports	Documentation of Signed Opioid Treatment Agreement	Effective Prevention and Treatment
X3776	Physician Feedback/Quality and Resource Utilization Reports	Consideration of Non-Pharmacologic Interventions	Effective Prevention and Treatment
X3775	Physician Feedback/Quality and Resource Utilization Reports	Chronic Opioid Therapy Follow-up Evaluation	Effective Prevention and Treatment
X3771	Physician Feedback/Quality and Resource Utilization Reports	Medication Prescribed For Acute Migraine Attack	Effective Prevention and Treatment
X3766	Physician Feedback/Quality and Resource Utilization Reports	Acute Medication Prescribed For Cluster Headache	Effective Prevention and Treatment
X3772	Physician Feedback/Quality and Resource Utilization Reports	Preventive Migraine Medication Prescribed	Effective Prevention and Treatment
X3765	Physician Feedback/Quality and Resource Utilization Reports	Overuse of Barbiturate Containing Medications for Primary Headache Disorders	Effective Prevention and Treatment
X3769	Physician Feedback/Quality and Resource Utilization Reports	Unnecessary Screening Colonoscopy in Older Adults	Making Care Affordable
X3770	Physician Feedback/Quality and Resource Utilization Reports	Overuse Of Opioid Containing Medications For Primary Headache Disorders	Effective Prevention and Treatment
X3783	Physician Feedback/Quality and Resource Utilization Reports	Assessment Of Medication Overuse In The Treatment Of Primary Headache Disorders	Effective Prevention and Treatment
X3784	Physician Feedback/Quality and Resource Utilization Reports	Plan Of Care Or Referral For Possible Medication Overuse Headache	Making Care Affordable
X3785	Physician Feedback/Quality and Resource Utilization Reports	Overuse Of Neuroimaging For Patients With Primary Headache And A Normal Neurological Examination	Making Care Affordable
X3786	Physician Feedback/Quality and Resource Utilization Reports	Quality Of Life Assessment For Patients With Primary Headache Disorders	Effective Prevention and Treatment
X3796	Physician Feedback/Quality and Resource Utilization Reports	Migraine Or Cervicogenic Headache Related Disability Functional Status	Effective Prevention and Treatment
X3794	Physician Feedback/Quality and Resource Utilization Reports	Plan Of Care For Migraine Or Cervicogenic Headache Developed Or Reviewed	Effective Prevention and Treatment
X3787	Physician Feedback/Quality and Resource Utilization Reports	Patients with DMD Prescribed Appropriate Disease Modifying	Effective Prevention and Treatment

<u>MUC ID</u>	<u>CMS Program</u>	<u>Measure Title</u>	<u>NQS Priority</u>
		Pharmaceutical Therapy	
X3791	Physician Feedback/Quality and Resource Utilization Reports	MD Multidisciplinary Care Plan Developed or Updated	Effective Prevention and Treatment
X3798	Physician Feedback/Quality and Resource Utilization Reports	Scoliosis Evaluation Ordered	Effective Prevention and Treatment
X3801	Physician Feedback/Quality and Resource Utilization Reports	Nutritional Status or Growth Trajectories Monitored	Effective Prevention and Treatment
X3800	Physician Feedback/Quality and Resource Utilization Reports	Patient Queried about Pain and Pain Interference with Function	Effective Prevention and Treatment
X3789	Physician Feedback/Quality and Resource Utilization Reports	Patient Counseled About Health Care Decision-Making	Effective Prevention and Treatment
X3807	Physician Feedback/Quality and Resource Utilization Reports	Post-Anesthetic Transfer of Care: Use of Checklist or Protocol for Direct Transfer of Care from Procedure Room to Intensive Care Unit (ICU)	Communication and Care Coordination
X3806	Physician Feedback/Quality and Resource Utilization Reports	Prevention of Post-Operative Nausea and Vomiting (PONV) – Combination	Patient and Family Engagement
X3809	Physician Feedback/Quality and Resource Utilization Reports	Perioperative Temperature Management	Making Care Safer
X3811	Physician Feedback/Quality and Resource Utilization Reports	Anesthesiology Smoking Abstinence	Effective Prevention and Treatment
X3808	Physician Feedback/Quality and Resource Utilization Reports	Preoperative Use of Aspirin for Patients with Drug-Eluting Coronary Stents	Effective Prevention and Treatment
X3810	Physician Feedback/Quality and Resource Utilization Reports	Post-Anesthetic Transfer of Care Measure: Procedure Room to a Post Anesthesia Care Unit (PACU)	Communication and Care Coordination
X3813	Physician Feedback/Quality and Resource Utilization Reports	Proportion of patients sustaining a ureter injury at the time of any pelvic organ prolapse repair	Making Care Safer
X3733	Physician Feedback/Quality and Resource Utilization Reports	Pediatric Kidney Disease: Discussion of Care Planning	Patient and Family Engagement
X3778	Physician Feedback/Quality and Resource Utilization Reports	Imaging in pediatric ED patients aged 2 through 17 years with minor head injury	Making Care Affordable
X3729	Physician Feedback/Quality and Resource Utilization Reports	Statin Therapy for the Prevention and Treatment of Cardiovascular Disease	Effective Prevention and Treatment
X3468	Physician Feedback/Quality and Resource Utilization Reports	Documentation of a Health Care Proxy for Patients with Cognitive Impairment	Effective Prevention and Treatment
X3465	Physician Feedback/Quality and Resource Utilization Reports	Coordinating Care - Follow-Up with Eligible Provider	Communication and Care Coordination
X3466	Physician Feedback/Quality and Resource Utilization Reports	Coordinating Care - Emergency Department Referrals	Communication and Care Coordination
X3053	Physician Feedback/Quality and Resource Utilization Reports	Functional Status Assessments and Goal Setting for Chronic Pain Due to	Effective Prevention and Treatment



<u>MUC ID</u>	<u>CMS Program</u>	<u>Measure Title</u>	<u>NQS Priority</u>
		Osteoarthritis	
X3469	Physician Feedback/Quality and Resource Utilization Reports	Cognitive Impairment Assessment Among At-Risk Older Adults	Best Practice of Healthy Living
E0076	Physician Feedback/Quality and Resource Utilization Reports	Optimal Vascular Care	Effective Prevention and Treatment
X3768	Physician Feedback/Quality and Resource Utilization Reports	Primary C-Section Rate 2014	Making Care Affordable
X3773	Physician Feedback/Quality and Resource Utilization Reports	Optimal Asthma Care 2014	Effective Prevention and Treatment
E0032	Physician Feedback/Quality and Resource Utilization Reports	Cervical Cancer Screening	Effective Prevention and Treatment
X3797	Physician Feedback/Quality and Resource Utilization Reports	Breast Cancer Screening	Effective Prevention and Treatment
X3792	Physician Feedback/Quality and Resource Utilization Reports	Controlling High Blood Pressure	Effective Prevention and Treatment
X3485	Physician Feedback/Quality and Resource Utilization Reports	Adverse Drug Events - Minimum INR Monitoring for Patients with Atrial Fibrillation on Warfarin	Making Care Safer
X3283	Physician Feedback/Quality and Resource Utilization Reports	Closing the Referral Loop - Critical Information Communicated with Request for Referral	Communication and Care Coordination
X3476	Physician Feedback/Quality and Resource Utilization Reports	Diabetes: Hemoglobin A1c Overtreatment in the Elderly	Effective Prevention and Treatment
X3483	Physician Feedback/Quality and Resource Utilization Reports	Functional Status Outcomes for Patients Receiving Primary Total Hip Replacements	Patient and Family Engagement
X3482	Physician Feedback/Quality and Resource Utilization Reports	Functional Status Outcomes for Patients Receiving Primary Total Knee Replacements	Patient and Family Engagement
X3816	Physician Feedback/Quality and Resource Utilization Reports	Hepatitis C: Appropriate Screening Follow-Up for Patients Identified with Hepatitis C Virus (HCV) Infection	Communication and Care Coordination
X3512	Physician Feedback/Quality and Resource Utilization Reports	Hepatitis C: One-Time Screening for Hepatitis C Virus (HCV) for Patients at Risk	Best Practice of Healthy Living
X3475	Physician Feedback/Quality and Resource Utilization Reports	Substance Use Screening and Intervention Composite	Best Practice of Healthy Living
E2152	Physician Feedback/Quality and Resource Utilization Reports	Preventive Care and Screening: Unhealthy Alcohol Use: Screening & Brief Counseling	Best Practice of Healthy Living
X3445	Physician Feedback/Quality and Resource Utilization Reports	Alcohol Screening and Brief Intervention (ASBI) in the ER	Best Practice of Healthy Living
X3446	Physician Feedback/Quality and Resource Utilization Reports	Intimate Partner (Domestic) Violence Screening	Best Practice of Healthy Living

<u>MUC ID</u>	<u>CMS Program</u>	<u>Measure Title</u>	<u>NQS Priority</u>
X3299	Physician Feedback/Quality and Resource Utilization Reports	HIV: Ever screened for HIV	Effective Prevention and Treatment
X3300	Physician Feedback/Quality and Resource Utilization Reports	HIV Screening of STI patients	Effective Prevention and Treatment
E0555	Physician Feedback/Quality and Resource Utilization Reports	INR Monitoring for Individuals on Warfarin (e-specified version of NQF #0555)	Making Care Safer
S2550	Physician Feedback/Quality and Resource Utilization Reports	Gout: Urate Lowering Therapy	Effective Prevention and Treatment
S2521	Physician Feedback/Quality and Resource Utilization Reports	Gout: Serum Urate Monitoring	Effective Prevention and Treatment
X0351	Physician Feedback/Quality and Resource Utilization Reports	Kidney/Urinary Tract Infection Clinical Episode-Based Payment Measure	Making Care Affordable
X0352	Physician Feedback/Quality and Resource Utilization Reports	Knee Replacement/ Revision Clinical Episode-Based Payment Measure	Making Care Affordable
X0353	Physician Feedback/Quality and Resource Utilization Reports	Spine Fusion/ Refusion Clinical Episode-Based Payment Measure	Making Care Affordable
X0354	Physician Feedback/Quality and Resource Utilization Reports	Cellulitis Clinical Episode-Based Payment Measure	Making Care Affordable
X0355	Physician Feedback/Quality and Resource Utilization Reports	Gastrointestinal Hemorrhage Clinical Episode-Based Payment Measure	Making Care Affordable
X0356	Physician Feedback/Quality and Resource Utilization Reports	Hip Replacement/ Revision Clinical Episode-Based Payment Measure	Making Care Affordable

### Physician Value-Based Payment Modifier

<u>MUC ID</u>	<u>CMS Program</u>	<u>Measure Title</u>	<u>NQS Priority</u>
X3280	Physician Value-Based Payment Modifier	ADHD: Symptom Reduction in Follow-up Period	Patient and Family Engagement
X3817	Physician Value-Based Payment Modifier	Amblyopia Screening in Children	Communication and Care Coordination
E1553	Physician Value-Based Payment Modifier	Blood Pressure Screening by age 18	Effective Prevention and Treatment
X3472	Physician Value-Based Payment Modifier	Use of Multiple Concurrent Antipsychotics in Children and Adolescents	Making Care Safer
X3726	Physician Value-Based Payment Modifier	Clinical Response to Oral Systemic or Biologic Medications	Patient and Family Engagement
X3274	Physician Value-Based Payment Modifier	Assessment for Psoriatic Arthritis	Patient and Family Engagement
X3788	Physician Value-Based Payment Modifier	PC-02 Cesarean Section (Provider Level)	Making Care Affordable
X3732	Physician Value-Based Payment Modifier	Adult Kidney Disease: Referral to Hospice	Patient and Family Engagement

<b>MUC ID</b>	<b>CMS Program</b>	<b>Measure Title</b>	<b>NQS Priority</b>
X3735	Physician Value-Based Payment Modifier	Communication and shared decision-making with patients and families for interventional oncology procedures	Patient and Family Engagement
X3739	Physician Value-Based Payment Modifier	Percentage of patients treated for varicose veins who are treated with saphenous ablation and receive an outcomes survey before and after treatment	Effective Prevention and Treatment
X3755	Physician Value-Based Payment Modifier	Percentage of patients with a retrievable inferior vena cava filter who are appropriately assessed for continued filtration or device removal	Effective Prevention and Treatment
X3754	Physician Value-Based Payment Modifier	Rate of surgical conversion from lower extremity endovascular revascularization procedure	Effective Prevention and Treatment
X3756	Physician Value-Based Payment Modifier	Clinical Outcome post Endovascular Stroke Treatment	Effective Prevention and Treatment
X3747	Physician Value-Based Payment Modifier	Door to puncture time for endovascular stroke treatment	Effective Prevention and Treatment
X3752	Physician Value-Based Payment Modifier	Performing cystoscopy at the time of hysterectomy for pelvic organ prolapse to detect lower urinary tract injury	Making Care Safer
X3751	Physician Value-Based Payment Modifier	Complete assessment and evaluation of patient's pelvic organ prolapse prior to surgical repair	Communication and Care Coordination
X3750	Physician Value-Based Payment Modifier	Preoperative pessary for pelvic organ prolapse offered	Communication and Care Coordination
X3745	Physician Value-Based Payment Modifier	Preoperative pessary for pelvic organ prolapse attempted	Communication and Care Coordination
X3743	Physician Value-Based Payment Modifier	Proportion of patients sustaining a bladder injury at the time of any pelvic organ prolapse repair	Making Care Safer
X3744	Physician Value-Based Payment Modifier	Proportion of patients sustaining a major viscus injury at the time of any pelvic organ prolapse repair	Making Care Safer
X3746	Physician Value-Based Payment Modifier	Preoperative assessment of occult stress urinary incontinence prior to any pelvic organ prolapse repair	Effective Prevention and Treatment
X3742	Physician Value-Based Payment Modifier	Preoperative assessment of sexual function prior to any pelvic organ prolapse repair	Effective Prevention and Treatment
X3741	Physician Value-Based Payment Modifier	Preoperative exclusion of uterine malignancy prior to any pelvic organ prolapse repair	Making Care Safer
X3740	Physician Value-Based Payment Modifier	Performing an intraoperative rectal examination at the time of prolapse repair	Making Care Safer
E0465	Physician Value-Based Payment Modifier	Perioperative Anti-platelet Therapy for Patients undergoing Carotid Endarterectomy	Effective Prevention and Treatment
E1523	Physician Value-Based Payment Modifier	In-hospital mortality following elective open repair of AAAs	Making Care Safer

<u>MUC ID</u>	<u>CMS Program</u>	<u>Measure Title</u>	<u>NQS Priority</u>
X3761	Physician Value-Based Payment Modifier	Photodocumentation of cecal intubation	Effective Prevention and Treatment
X3760	Physician Value-Based Payment Modifier	Frequency of inadequate bowel preparation	Making Care Affordable
X3758	Physician Value-Based Payment Modifier	Appropriate age for colorectal cancer screening	Making Care Affordable
X3759	Physician Value-Based Payment Modifier	Appropriate follow-up imaging for incidental abdominal lesions	Effective Prevention and Treatment
X3763	Physician Value-Based Payment Modifier	Appropriate follow-up imaging for incidental thyroid nodules in patients	Effective Prevention and Treatment
X3764	Physician Value-Based Payment Modifier	Imaging in adult ED patients with minor head injury	Making Care Affordable
X3781	Physician Value-Based Payment Modifier	Use of premedication before contrast-enhanced imaging studies in patients with documented contrast allergy	Making Care Safer
X3523	Physician Value-Based Payment Modifier	Extravasation of contrast following contrast-enhanced computed tomography (CT)	Making Care Safer
X3780	Physician Value-Based Payment Modifier	Coagulation studies in adult patients presenting with chest pain with no coagulopathy or bleeding	Making Care Affordable
X3803	Physician Value-Based Payment Modifier	Appropriate use of imaging for non-traumatic shoulder pain	Making Care Affordable
X3802	Physician Value-Based Payment Modifier	Appropriate follow-up imaging for non-traumatic knee pain	Making Care Affordable
X3774	Physician Value-Based Payment Modifier	Evaluation or Interview for Risk of Opioid Misuse	Effective Prevention and Treatment
X3777	Physician Value-Based Payment Modifier	Documentation of Signed Opioid Treatment Agreement	Effective Prevention and Treatment
X3776	Physician Value-Based Payment Modifier	Consideration of Non-Pharmacologic Interventions	Effective Prevention and Treatment
X3775	Physician Value-Based Payment Modifier	Chronic Opioid Therapy Follow-up Evaluation	Effective Prevention and Treatment
X3771	Physician Value-Based Payment Modifier	Medication Prescribed For Acute Migraine Attack	Effective Prevention and Treatment
X3766	Physician Value-Based Payment Modifier	Acute Medication Prescribed For Cluster Headache	Effective Prevention and Treatment
X3772	Physician Value-Based Payment Modifier	Preventive Migraine Medication Prescribed	Effective Prevention and Treatment
X3765	Physician Value-Based Payment Modifier	Overuse of Barbiturate Containing Medications for Primary Headache Disorders	Effective Prevention and Treatment
X3769	Physician Value-Based Payment Modifier	Unnecessary Screening Colonoscopy in Older Adults	Making Care Affordable
X3770	Physician Value-Based Payment Modifier	Overuse Of Opioid Containing Medications For Primary Headache Disorders	Effective Prevention and Treatment

<u>MUC ID</u>	<u>CMS Program</u>	<u>Measure Title</u>	<u>NQS Priority</u>
X3783	Physician Value-Based Payment Modifier	Assessment Of Medication Overuse In The Treatment Of Primary Headache Disorders	Effective Prevention and Treatment
X3784	Physician Value-Based Payment Modifier	Plan Of Care Or Referral For Possible Medication Overuse Headache	Making Care Affordable
X3785	Physician Value-Based Payment Modifier	Overuse Of Neuroimaging For Patients With Primary Headache And A Normal Neurological Examination	Making Care Affordable
X3786	Physician Value-Based Payment Modifier	Quality Of Life Assessment For Patients With Primary Headache Disorders	Effective Prevention and Treatment
X3796	Physician Value-Based Payment Modifier	Migraine Or Cervicogenic Headache Related Disability Functional Status	Effective Prevention and Treatment
X3794	Physician Value-Based Payment Modifier	Plan Of Care For Migraine Or Cervicogenic Headache Developed Or Reviewed	Effective Prevention and Treatment
X3787	Physician Value-Based Payment Modifier	Patients with DMD Prescribed Appropriate Disease Modifying Pharmaceutical Therapy	Effective Prevention and Treatment
X3791	Physician Value-Based Payment Modifier	MD Multidisciplinary Care Plan Developed or Updated	Effective Prevention and Treatment
X3798	Physician Value-Based Payment Modifier	Scoliosis Evaluation Ordered	Effective Prevention and Treatment
X3801	Physician Value-Based Payment Modifier	Nutritional Status or Growth Trajectories Monitored	Effective Prevention and Treatment
X3800	Physician Value-Based Payment Modifier	Patient Queried about Pain and Pain Interference with Function	Effective Prevention and Treatment
X3789	Physician Value-Based Payment Modifier	Patient Counseled About Health Care Decision-Making	Effective Prevention and Treatment
X3807	Physician Value-Based Payment Modifier	Post-Anesthetic Transfer of Care: Use of Checklist or Protocol for Direct Transfer of Care from Procedure Room to Intensive Care Unit (ICU)	Communication and Care Coordination
X3806	Physician Value-Based Payment Modifier	Prevention of Post-Operative Nausea and Vomiting (PONV) – Combination	Patient and Family Engagement
X3809	Physician Value-Based Payment Modifier	Perioperative Temperature Management	Making Care Safer
X3811	Physician Value-Based Payment Modifier	Anesthesiology Smoking Abstinence	Effective Prevention and Treatment
X3808	Physician Value-Based Payment Modifier	Preoperative Use of Aspirin for Patients with Drug-Eluting Coronary Stents	Effective Prevention and Treatment
X3810	Physician Value-Based Payment Modifier	Post-Anesthetic Transfer of Care Measure: Procedure Room to a Post Anesthesia Care Unit (PACU)	Communication and Care Coordination
X3813	Physician Value-Based Payment Modifier	Proportion of patients sustaining a ureter injury at the time of any pelvic organ prolapse repair	Making Care Safer
X3733	Physician Value-Based Payment Modifier	Pediatric Kidney Disease: Discussion of Care Planning	Patient and Family Engagement

<u>MUC ID</u>	<u>CMS Program</u>	<u>Measure Title</u>	<u>NQS Priority</u>
X3778	Physician Value-Based Payment Modifier	Imaging in pediatric ED patients aged 2 through 17 years with minor head injury	Making Care Affordable
X3729	Physician Value-Based Payment Modifier	Statin Therapy for the Prevention and Treatment of Cardiovascular Disease	Effective Prevention and Treatment
X3468	Physician Value-Based Payment Modifier	Documentation of a Health Care Proxy for Patients with Cognitive Impairment	Effective Prevention and Treatment
X3465	Physician Value-Based Payment Modifier	Coordinating Care - Follow-Up with Eligible Provider	Communication and Care Coordination
X3466	Physician Value-Based Payment Modifier	Coordinating Care - Emergency Department Referrals	Communication and Care Coordination
X3053	Physician Value-Based Payment Modifier	Functional Status Assessments and Goal Setting for Chronic Pain Due to Osteoarthritis	Effective Prevention and Treatment
X3469	Physician Value-Based Payment Modifier	Cognitive Impairment Assessment Among At-Risk Older Adults	Best Practice of Healthy Living
E0076	Physician Value-Based Payment Modifier	Optimal Vascular Care	Effective Prevention and Treatment
X3768	Physician Value-Based Payment Modifier	Primary C-Section Rate 2014	Making Care Affordable
X3773	Physician Value-Based Payment Modifier	Optimal Asthma Care 2014	Effective Prevention and Treatment
E0032	Physician Value-Based Payment Modifier	Cervical Cancer Screening	Effective Prevention and Treatment
X3797	Physician Value-Based Payment Modifier	Breast Cancer Screening	Effective Prevention and Treatment
X3792	Physician Value-Based Payment Modifier	Controlling High Blood Pressure	Effective Prevention and Treatment
X3485	Physician Value-Based Payment Modifier	Adverse Drug Events - Minimum INR Monitoring for Patients with Atrial Fibrillation on Warfarin	Making Care Safer
X3283	Physician Value-Based Payment Modifier	Closing the Referral Loop - Critical Information Communicated with Request for Referral	Communication and Care Coordination
X3476	Physician Value-Based Payment Modifier	Diabetes: Hemoglobin A1c Overtreatment in the Elderly	Effective Prevention and Treatment
X3483	Physician Value-Based Payment Modifier	Functional Status Outcomes for Patients Receiving Primary Total Hip Replacements	Patient and Family Engagement
X3482	Physician Value-Based Payment Modifier	Functional Status Outcomes for Patients Receiving Primary Total Knee Replacements	Patient and Family Engagement
X3816	Physician Value-Based Payment Modifier	Hepatitis C: Appropriate Screening Follow-Up for Patients Identified with Hepatitis C Virus (HCV) Infection	Communication and Care Coordination
X3512	Physician Value-Based Payment Modifier	Hepatitis C: One-Time Screening for Hepatitis C Virus (HCV) for Patients at Risk	Best Practice of Healthy Living
X3475	Physician Value-Based Payment Modifier	Substance Use Screening and Intervention Composite	Best Practice of Healthy Living
E2152	Physician Value-Based Payment Modifier	Preventive Care and Screening: Unhealthy Alcohol Use: Screening & Brief Counseling	Best Practice of Healthy Living

<u>MUC ID</u>	<u>CMS Program</u>	<u>Measure Title</u>	<u>NQS Priority</u>
X3445	Physician Value-Based Payment Modifier	Alcohol Screening and Brief Intervention (ASBI) in the ER	Best Practice of Healthy Living
X3446	Physician Value-Based Payment Modifier	Intimate Partner (Domestic) Violence Screening	Best Practice of Healthy Living
X3299	Physician Value-Based Payment Modifier	HIV: Ever screened for HIV	Effective Prevention and Treatment
X3300	Physician Value-Based Payment Modifier	HIV Screening of STI patients	Effective Prevention and Treatment
E0555	Physician Value-Based Payment Modifier	INR Monitoring for Individuals on Warfarin (e-specified version of NQF #0555)	Making Care Safer
S2550	Physician Value-Based Payment Modifier	Gout: Urate Lowering Therapy	Effective Prevention and Treatment
S2521	Physician Value-Based Payment Modifier	Gout: Serum Urate Monitoring	Effective Prevention and Treatment
X0351	Physician Value-Based Payment Modifier	Kidney/Urinary Tract Infection Clinical Episode-Based Payment Measure	Making Care Affordable
X0352	Physician Value-Based Payment Modifier	Knee Replacement/ Revision Clinical Episode-Based Payment Measure	Making Care Affordable
X0353	Physician Value-Based Payment Modifier	Spine Fusion/ Refusion Clinical Episode-Based Payment Measure	Making Care Affordable
X0354	Physician Value-Based Payment Modifier	Cellulitis Clinical Episode-Based Payment Measure	Making Care Affordable
X0355	Physician Value-Based Payment Modifier	Gastrointestinal Hemorrhage Clinical Episode-Based Payment Measure	Making Care Affordable
X0356	Physician Value-Based Payment Modifier	Hip Replacement/ Revision Clinical Episode-Based Payment Measure	Making Care Affordable



## Physician Compare

<u>MUC ID</u>	<u>CMS Program</u>	<u>Measure Title</u>	<u>NQS Priority</u>
X3280	Physician Compare	ADHD: Symptom Reduction in Follow-up Period	Patient and Family Engagement
X3817	Physician Compare	Amblyopia Screening in Children	Communication and Care Coordination
E1553	Physician Compare	Blood Pressure Screening by age 18	Effective Prevention and Treatment
X3472	Physician Compare	Use of Multiple Concurrent Antipsychotics in Children and Adolescents	Making Care Safer
X3726	Physician Compare	Clinical Response to Oral Systemic or Biologic Medications	Patient and Family Engagement
X3274	Physician Compare	Assessment for Psoriatic Arthritis	Patient and Family Engagement
X3788	Physician Compare	PC-02 Cesarean Section (Provider Level)	Making Care Affordable
X3732	Physician Compare	Adult Kidney Disease: Referral to Hospice	Patient and Family Engagement
X3735	Physician Compare	Communication and shared decision-making with patients and families for interventional oncology procedures	Patient and Family Engagement
X3739	Physician Compare	Percentage of patients treated for varicose veins who are treated with saphenous ablation and receive an outcomes survey before and after treatment	Effective Prevention and Treatment
X3755	Physician Compare	Percentage of patients with a retrievable inferior vena cava filter who are appropriately assessed for continued filtration or device removal	Effective Prevention and Treatment
X3754	Physician Compare	Rate of surgical conversion from lower extremity endovascular revascularization procedure	Effective Prevention and Treatment
X3756	Physician Compare	Clinical Outcome post Endovascular Stroke Treatment	Effective Prevention and Treatment
X3747	Physician Compare	Door to puncture time for endovascular stroke treatment	Effective Prevention and Treatment
X3752	Physician Compare	Performing cystoscopy at the time of hysterectomy for pelvic organ prolapse to detect lower urinary tract injury	Making Care Safer
X3751	Physician Compare	Complete assessment and evaluation of patient's pelvic organ prolapse prior to surgical repair	Communication and Care Coordination
X3750	Physician Compare	Preoperative pessary for pelvic organ prolapse offered	Communication and Care Coordination
X3745	Physician Compare	Preoperative pessary for pelvic organ prolapse attempted	Communication and Care Coordination
X3743	Physician Compare	Proportion of patients sustaining a bladder injury at the time of any pelvic organ prolapse repair	Making Care Safer
X3744	Physician Compare	Proportion of patients sustaining a major viscus injury at the time of any pelvic organ prolapse repair	Making Care Safer



<u>MUC ID</u>	<u>CMS Program</u>	<u>Measure Title</u>	<u>NQS Priority</u>
X3746	Physician Compare	Preoperative assessment of occult stress urinary incontinence prior to any pelvic organ prolapse repair	Effective Prevention and Treatment
X3742	Physician Compare	Preoperative assessment of sexual function prior to any pelvic organ prolapse repair	Effective Prevention and Treatment
X3741	Physician Compare	Preoperative exclusion of uterine malignancy prior to any pelvic organ prolapse repair	Making Care Safer
X3740	Physician Compare	Performing an intraoperative rectal examination at the time of prolapse repair	Making Care Safer
E0465	Physician Compare	Perioperative Anti-platelet Therapy for Patients undergoing Carotid Endarterectomy	Effective Prevention and Treatment
E1523	Physician Compare	In-hospital mortality following elective open repair of AAAs	Making Care Safer
X3761	Physician Compare	Photodocumentation of cecal intubation	Effective Prevention and Treatment
X3760	Physician Compare	Frequency of inadequate bowel preparation	Making Care Affordable
X3758	Physician Compare	Appropriate age for colorectal cancer screening	Making Care Affordable
X3759	Physician Compare	Appropriate follow-up imaging for incidental abdominal lesions	Effective Prevention and Treatment
X3763	Physician Compare	Appropriate follow-up imaging for incidental thyroid nodules in patients	Effective Prevention and Treatment
X3764	Physician Compare	Imaging in adult ED patients with minor head injury	Making Care Affordable
X3781	Physician Compare	Use of premedication before contrast-enhanced imaging studies in patients with documented contrast allergy	Making Care Safer
X3523	Physician Compare	Extravasation of contrast following contrast-enhanced computed tomography (CT)	Making Care Safer
X3780	Physician Compare	Coagulation studies in adult patients presenting with chest pain with no coagulopathy or bleeding	Making Care Affordable
X3803	Physician Compare	Appropriate use of imaging for non-traumatic shoulder pain	Making Care Affordable
X3802	Physician Compare	Appropriate follow-up imaging for non-traumatic knee pain	Making Care Affordable
X3774	Physician Compare	Evaluation or Interview for Risk of Opioid Misuse	Effective Prevention and Treatment
X3777	Physician Compare	Documentation of Signed Opioid Treatment Agreement	Effective Prevention and Treatment
X3776	Physician Compare	Consideration of Non-Pharmacologic Interventions	Effective Prevention and Treatment
X3775	Physician Compare	Chronic Opioid Therapy Follow-up Evaluation	Effective Prevention and Treatment
X3771	Physician Compare	MEDICATION PRESCRIBED FOR ACUTE MIGRAINE ATTACK	Effective Prevention and Treatment

<b>MUC ID</b>	<b>CMS Program</b>	<b>Measure Title</b>	<b>NQS Priority</b>
X3766	Physician Compare	ACUTE MEDICATION PRESCRIBED FOR CLUSTER HEADACHE	Effective Prevention and Treatment
X3772	Physician Compare	Preventive Migraine Medication Prescribed	Effective Prevention and Treatment
X3765	Physician Compare	Overuse of Barbiturate Containing Medications for Primary Headache Disorders	Effective Prevention and Treatment
X3769	Physician Compare	Unnecessary Screening Colonoscopy in Older Adults	Making Care Affordable
X3770	Physician Compare	Overuse Of Opioid Containing Medications For Primary Headache Disorders	Effective Prevention and Treatment
X3783	Physician Compare	Assessment Of Medication Overuse In The Treatment Of Primary Headache Disorders	Effective Prevention and Treatment
X3784	Physician Compare	Plan Of Care Or Referral For Possible Medication Overuse Headache	Making Care Affordable
X3785	Physician Compare	Overuse Of Neuroimaging For Patients With Primary Headache And A Normal Neurological Examination	Making Care Affordable
X3786	Physician Compare	Quality Of Life Assessment For Patients With Primary Headache Disorders	Effective Prevention and Treatment
X3796	Physician Compare	Migraine Or Cervicogenic Headache Related Disability Functional Status	Effective Prevention and Treatment
X3794	Physician Compare	Plan Of Care For Migraine Or Cervicogenic Headache Developed Or Reviewed	Effective Prevention and Treatment
X3787	Physician Compare	Patients with DMD Prescribed Appropriate Disease Modifying Pharmaceutical Therapy	Effective Prevention and Treatment
X3791	Physician Compare	MD Multidisciplinary Care Plan Developed or Updated	Effective Prevention and Treatment
X3798	Physician Compare	Scoliosis Evaluation Ordered	Effective Prevention and Treatment
X3801	Physician Compare	Nutritional Status or Growth Trajectories Monitored	Effective Prevention and Treatment
X3800	Physician Compare	Patient Queried about Pain and Pain Interference with Function	Effective Prevention and Treatment
X3789	Physician Compare	Patient Counseled About Health Care Decision-Making	Effective Prevention and Treatment
X3807	Physician Compare	Post-Anesthetic Transfer of Care: Use of Checklist or Protocol for Direct Transfer of Care from Procedure Room to Intensive Care Unit (ICU)	Communication and Care Coordination
X3806	Physician Compare	Prevention of Post-Operative Nausea and Vomiting (PONV) – Combination	Patient and Family Engagement
X3809	Physician Compare	Perioperative Temperature Management	Making Care Safer
X3811	Physician Compare	Anesthesiology Smoking Abstinence	Effective Prevention and Treatment
X3808	Physician Compare	Preoperative Use of Aspirin for Patients with Drug-Eluting Coronary Stents	Effective Prevention and Treatment

<u>MUC ID</u>	<u>CMS Program</u>	<u>Measure Title</u>	<u>NQS Priority</u>
X3810	Physician Compare	Post-Anesthetic Transfer of Care Measure: Procedure Room to a Post Anesthesia Care Unit (PACU)	Communication and Care Coordination
X3813	Physician Compare	Proportion of patients sustaining a ureter injury at the time of any pelvic organ prolapse repair	Making Care Safer
X3733	Physician Compare	Pediatric Kidney Disease: Discussion of Care Planning	Patient and Family Engagement
X3778	Physician Compare	Imaging in pediatric ED patients aged 2 through 17 years with minor head injury	Making Care Affordable
X3729	Physician Compare	Statin Therapy for the Prevention and Treatment of Cardiovascular Disease	Effective Prevention and Treatment
X3468	Physician Compare	Documentation of a Health Care Proxy for Patients with Cognitive Impairment	Effective Prevention and Treatment
X3465	Physician Compare	Coordinating Care - Follow-Up with Eligible Provider	Communication and Care Coordination
X3466	Physician Compare	Coordinating Care - Emergency Department Referrals	Communication and Care Coordination
X3053	Physician Compare	Functional Status Assessments and Goal Setting for Chronic Pain Due to Osteoarthritis	Effective Prevention and Treatment
X3469	Physician Compare	Cognitive Impairment Assessment Among At-Risk Older Adults	Best Practice of Healthy Living
E0076	Physician Compare	Optimal Vascular Care	Effective Prevention and Treatment
X3768	Physician Compare	Primary C-Section Rate 2014	Making Care Affordable
X3773	Physician Compare	Optimal Asthma Care 2014	Effective Prevention and Treatment
E0032	Physician Compare	Cervical Cancer Screening	Effective Prevention and Treatment
X3797	Physician Compare	Breast Cancer Screening	Effective Prevention and Treatment
X3792	Physician Compare	Controlling High Blood Pressure	Effective Prevention and Treatment
X3485	Physician Compare	Adverse Drug Events - Minimum INR Monitoring for Patients with Atrial Fibrillation on Warfarin	Making Care Safer
X3283	Physician Compare	Closing the Referral Loop - Critical Information Communicated with Request for Referral	Communication and Care Coordination
X3476	Physician Compare	Diabetes: Hemoglobin A1c Overtreatment in the Elderly	Effective Prevention and Treatment
X3483	Physician Compare	Functional Status Outcomes for Patients Receiving Primary Total Hip Replacements	Patient and Family Engagement
X3482	Physician Compare	Functional Status Outcomes for Patients Receiving Primary Total Knee Replacements	Patient and Family Engagement
X3816	Physician Compare	Hepatitis C: Appropriate Screening Follow-Up for Patients Identified with Hepatitis C Virus (HCV) Infection	Communication and Care Coordination

<u>MUC ID</u>	<u>CMS Program</u>	<u>Measure Title</u>	<u>NQS Priority</u>
X3512	Physician Compare	Hepatitis C: One-Time Screening for Hepatitis C Virus (HCV) for Patients at Risk	Best Practice of Healthy Living
X3475	Physician Compare	Substance Use Screening and Intervention Composite	Best Practice of Healthy Living
E2152	Physician Compare	Preventive Care and Screening: Unhealthy Alcohol Use: Screening & Brief Counseling	Best Practice of Healthy Living
X3445	Physician Compare	Alcohol Screening and Brief Intervention (ASBI) in the ER	Best Practice of Healthy Living
X3446	Physician Compare	Intimate Partner (Domestic) Violence Screening	Best Practice of Healthy Living
X3299	Physician Compare	HIV: Ever screened for HIV	Effective Prevention and Treatment
X3300	Physician Compare	HIV Screening of STI patients	Effective Prevention and Treatment
E0555	Physician Compare	INR Monitoring for Individuals on Warfarin (e-specified version of NQF #0555)	Making Care Safer
S2550	Physician Compare	Gout: Urate Lowering Therapy	Effective Prevention and Treatment
S2521	Physician Compare	Gout: Serum Urate Monitoring	Effective Prevention and Treatment

## Medicare Shared Savings

<u>MUC ID</u>	<u>CMS Program</u>	<u>Measure Title</u>	<u>NQS Priority</u>
E0711	Medicare Shared Savings	Depression Remission at Six Months	Patient and Family Engagement
X3513	Medicare Shared Savings	Annual Hepatitis C Virus (HCV) Screening for Patients who are Active Injection Drug Users	Patient and Family Engagement
X3726	Medicare Shared Savings	Clinical Response to Oral Systemic or Biologic Medications	Patient and Family Engagement
X3274	Medicare Shared Savings	Assessment for Psoriatic Arthritis	Patient and Family Engagement
X3788	Medicare Shared Savings	PC-02 Cesarean Section (Provider Level)	Making Care Affordable
X3732	Medicare Shared Savings	Adult Kidney Disease: Referral to Hospice	Patient and Family Engagement
X3735	Medicare Shared Savings	Communication and shared decision-making with patients and families for interventional oncology procedures	Patient and Family Engagement
X3739	Medicare Shared Savings	Percentage of patients treated for varicose veins who are treated with saphenous ablation and receive an outcomes survey before and after treatment	Effective Prevention and Treatment
X3755	Medicare Shared Savings	Percentage of patients with a retrievable inferior vena cava filter who are appropriately assessed for continued filtration or device removal	Effective Prevention and Treatment
X3754	Medicare Shared Savings	Rate of surgical conversion from lower extremity endovascular revascularization procedure	Effective Prevention and Treatment
X3756	Medicare Shared Savings	Clinical Outcome post Endovascular Stroke Treatment	Effective Prevention and Treatment
X3747	Medicare Shared Savings	Door to puncture time for endovascular stroke treatment	Effective Prevention and Treatment
X3752	Medicare Shared Savings	Performing cystoscopy at the time of hysterectomy for pelvic organ prolapse to detect lower urinary tract injury	Making Care Safer
X3751	Medicare Shared Savings	Complete assessment and evaluation of patient's pelvic organ prolapse prior to surgical repair	Communication and Care Coordination
X3750	Medicare Shared Savings	Preoperative pessary for pelvic organ prolapse offered	Communication and Care Coordination
X3745	Medicare Shared Savings	Preoperative pessary for pelvic organ prolapse attempted	Communication and Care Coordination
X3743	Medicare Shared Savings	Proportion of patients sustaining a bladder injury at the time of any pelvic organ prolapse repair	Making Care Safer

<u>MUC ID</u>	<u>CMS Program</u>	<u>Measure Title</u>	<u>NQS Priority</u>
X3744	Medicare Shared Savings	Proportion of patients sustaining a major viscus injury at the time of any pelvic organ prolapse repair	Making Care Safer
X3746	Medicare Shared Savings	Preoperative assessment of occult stress urinary incontinence prior to any pelvic organ prolapse repair	Effective Prevention and Treatment
X3742	Medicare Shared Savings	Preoperative assessment of sexual function prior to any pelvic organ prolapse repair	Effective Prevention and Treatment
X3741	Medicare Shared Savings	Preoperative exclusion of uterine malignancy prior to any pelvic organ prolapse repair	Making Care Safer
X3740	Medicare Shared Savings	Performing an intraoperative rectal examination at the time of prolapse repair	Making Care Safer
E0465	Medicare Shared Savings	Perioperative Anti-platelet Therapy for Patients undergoing Carotid Endarterectomy	Effective Prevention and Treatment
E1523	Medicare Shared Savings	In-hospital mortality following elective open repair of AAAs	Making Care Safer
X3761	Medicare Shared Savings	Photodocumentation of cecal intubation	Effective Prevention and Treatment
X3760	Medicare Shared Savings	Frequency of inadequate bowel preparation	Making Care Affordable
X3758	Medicare Shared Savings	Appropriate age for colorectal cancer screening	Making Care Affordable
X3759	Medicare Shared Savings	Appropriate follow-up imaging for incidental abdominal lesions	Effective Prevention and Treatment
X3763	Medicare Shared Savings	Appropriate follow-up imaging for incidental thyroid nodules in patients	Effective Prevention and Treatment
X3764	Medicare Shared Savings	Imaging in adult ED patients with minor head injury	Making Care Affordable
X3781	Medicare Shared Savings	Use of premedication before contrast-enhanced imaging studies in patients with documented contrast allergy	Making Care Safer
X3523	Medicare Shared Savings	Extravasation of contrast following contrast-enhanced computed tomography (CT)	Making Care Safer
X3780	Medicare Shared Savings	Coagulation studies in adult patients presenting with chest pain with no coagulopathy or bleeding	Making Care Affordable
X3803	Medicare Shared Savings	Appropriate use of imaging for non-traumatic shoulder pain	Making Care Affordable
X3802	Medicare Shared Savings	Appropriate follow-up imaging for non-traumatic knee pain	Making Care Affordable
X3774	Medicare Shared Savings	Evaluation or Interview for Risk of Opioid Misuse	Effective Prevention and Treatment

<u>MUC ID</u>	<u>CMS Program</u>	<u>Measure Title</u>	<u>NQS Priority</u>
X3777	Medicare Shared Savings	Documentation of Signed Opioid Treatment Agreement	Effective Prevention and Treatment
X3776	Medicare Shared Savings	Consideration of Non-Pharmacologic Interventions	Effective Prevention and Treatment
X3775	Medicare Shared Savings	Chronic Opioid Therapy Follow-up Evaluation	Effective Prevention and Treatment
X3771	Medicare Shared Savings	Medication Prescribed For Acute Migraine Attack	Effective Prevention and Treatment
X3766	Medicare Shared Savings	Acute Medication Prescribed For Cluster Headache	Effective Prevention and Treatment
X3772	Medicare Shared Savings	Preventive Migraine Medication Prescribed	Effective Prevention and Treatment
X3765	Medicare Shared Savings	Overuse of Barbiturate Containing Medications for Primary Headache Disorders	Effective Prevention and Treatment
X3769	Medicare Shared Savings	Unnecessary Screening Colonoscopy in Older Adults	Making Care Affordable
X3770	Medicare Shared Savings	Overuse Of Opioid Containing Medications For Primary Headache Disorders	Effective Prevention and Treatment
X3783	Medicare Shared Savings	Assessment Of Medication Overuse In The Treatment Of Primary Headache Disorders	Effective Prevention and Treatment
X3784	Medicare Shared Savings	Plan Of Care Or Referral For Possible Medication Overuse Headache	Making Care Affordable
X3785	Medicare Shared Savings	Overuse Of Neuroimaging For Patients With Primary Headache And A Normal Neurological Examination	Making Care Affordable
X3786	Medicare Shared Savings	Quality Of Life Assessment For Patients With Primary Headache Disorders	Effective Prevention and Treatment
X3796	Medicare Shared Savings	Migraine Or Cervicogenic Headache Related Disability Functional Status	Effective Prevention and Treatment
X3794	Medicare Shared Savings	Plan Of Care For Migraine Or Cervicogenic Headache Developed Or Reviewed	Effective Prevention and Treatment
X3787	Medicare Shared Savings	Patients with DMD Prescribed Appropriate Disease Modifying Pharmaceutical Therapy	Effective Prevention and Treatment
X3791	Medicare Shared Savings	MD Multidisciplinary Care Plan Developed or Updated	Effective Prevention and Treatment
X3798	Medicare Shared Savings	Scoliosis Evaluation Ordered	Effective Prevention and Treatment
X3801	Medicare Shared Savings	Nutritional Status or Growth Trajectories Monitored	Effective Prevention and Treatment
X3800	Medicare Shared Savings	Patient Queried about Pain and Pain Interference with Function	Effective Prevention and Treatment
X3789	Medicare Shared Savings	Patient Counseled About Health Care Decision-Making	Effective Prevention and Treatment
X3807	Medicare Shared Savings	Post-Anesthetic Transfer of Care: Use of	Communication and Care

<u>MUC ID</u>	<u>CMS Program</u>	<u>Measure Title</u>	<u>NQS Priority</u>
		Checklist or Protocol for Direct Transfer of Care from Procedure Room to Intensive Care Unit (ICU)	Coordination
X3806	Medicare Shared Savings	Prevention of Post-Operative Nausea and Vomiting (PONV) – Combination	Patient and Family Engagement
X3809	Medicare Shared Savings	Perioperative Temperature Management	Making Care Safer
X3811	Medicare Shared Savings	Anesthesiology Smoking Abstinence	Effective Prevention and Treatment
X3808	Medicare Shared Savings	Preoperative Use of Aspirin for Patients with Drug-Eluting Coronary Stents	Effective Prevention and Treatment
X3810	Medicare Shared Savings	Post-Anesthetic Transfer of Care Measure: Procedure Room to a Post Anesthesia Care Unit (PACU)	Communication and Care Coordination
X3813	Medicare Shared Savings	Proportion of patients sustaining a ureter injury at the time of any pelvic organ prolapse repair	Making Care Safer
E0171	Medicare Shared Savings	Acute Care Hospitalization (Claims-Based)	Communication and Care Coordination
E0419	Medicare Shared Savings	Documentation of Current Medications in the Medical Record	Communication and Care Coordination
X1033	Medicare Shared Savings	Coronary Artery Disease (CAD): Symptom Management:	Effective Prevention and Treatment
E0067	Medicare Shared Savings	Coronary Artery Disease (CAD): Antiplatelet Therapy	Effective Prevention and Treatment
E0070	Medicare Shared Savings	Coronary Artery Disease (CAD): Beta-Blocker Therapy – Prior Myocardial Infarction (MI) or Left Ventricular Systolic Dysfunction (LVEF < 40%)	Effective Prevention and Treatment
E0056	Medicare Shared Savings	Diabetes: Foot exam	Effective Prevention and Treatment
E0055	Medicare Shared Savings	Comprehensive Diabetes Care: Eye Exam	Effective Prevention and Treatment
E2111	Medicare Shared Savings	Antipsychotic Use in Persons with Dementia	Making Care Safer
X3715	Medicare Shared Savings	Prevention Quality Indicators #90 (PQI #90)	Effective Prevention and Treatment
X2147	Medicare Shared Savings	Total Per Capita Cost Measure For Medicare Fee-For-Service Service Beneficiaries	Making Care Affordable
E0712	Medicare Shared Savings	Depression Utilization of the PHQ-9 Tool	Patient and Family Engagement
X3729	Medicare Shared Savings	Statin Therapy for the Prevention and Treatment of Cardiovascular Disease	Effective Prevention and Treatment
X3468	Medicare Shared Savings	Documentation of a Health Care Proxy for Patients with Cognitive Impairment	Effective Prevention and Treatment



<u>MUC ID</u>	<u>CMS Program</u>	<u>Measure Title</u>	<u>NQS Priority</u>
X3465	Medicare Shared Savings	Coordinating Care - Follow-Up with Eligible Provider	Communication and Care Coordination
X3466	Medicare Shared Savings	Coordinating Care - Emergency Department Referrals	Communication and Care Coordination
X3053	Medicare Shared Savings	Functional Status Assessments and Goal Setting for Chronic Pain Due to Osteoarthritis	Effective Prevention and Treatment
X3469	Medicare Shared Savings	Cognitive Impairment Assessment Among At-Risk Older Adults	Best Practice of Healthy Living
E0076	Medicare Shared Savings	Optimal Vascular Care	Effective Prevention and Treatment
X3768	Medicare Shared Savings	Primary C-Section Rate 2014	Making Care Affordable
X2809	Medicare Shared Savings	ALS Multidisciplinary Care Plan Developed or Updated	Effective Prevention and Treatment
X3773	Medicare Shared Savings	Optimal Asthma Care 2014	Effective Prevention and Treatment
E0032	Medicare Shared Savings	Cervical Cancer Screening	Effective Prevention and Treatment
X3797	Medicare Shared Savings	Breast Cancer Screening	Effective Prevention and Treatment
X3792	Medicare Shared Savings	Controlling High Blood Pressure	Effective Prevention and Treatment
X3485	Medicare Shared Savings	Adverse Drug Events - Minimum INR Monitoring for Patients with Atrial Fibrillation on Warfarin	Making Care Safer
X3302	Medicare Shared Savings	Closing the Referral Loop - Specialist Report Sent to Primary Care Physician	Communication and Care Coordination
X3283	Medicare Shared Savings	Closing the Referral Loop - Critical Information Communicated with Request for Referral	Communication and Care Coordination
X3481	Medicare Shared Savings	Functional Status Assessment and Goal Achievement for Patients with Congestive Heart Failure	Effective Prevention and Treatment
X3476	Medicare Shared Savings	Diabetes: Hemoglobin A1c Overtreatment in the Elderly	Effective Prevention and Treatment
X3483	Medicare Shared Savings	Functional Status Outcomes for Patients Receiving Primary Total Hip Replacements	Patient and Family Engagement
X3482	Medicare Shared Savings	Functional Status Outcomes for Patients Receiving Primary Total Knee Replacements	Patient and Family Engagement
X3816	Medicare Shared Savings	Hepatitis C: Appropriate Screening Follow-Up for Patients Identified with Hepatitis C Virus (HCV) Infection	Communication and Care Coordination
X3512	Medicare Shared Savings	Hepatitis C: One-Time Screening for Hepatitis C Virus (HCV) for Patients at Risk	Best Practice of Healthy Living

<u>MUC ID</u>	<u>CMS Program</u>	<u>Measure Title</u>	<u>NQS Priority</u>
E2079	Medicare Shared Savings	HIV medical visit frequency	Effective Prevention and Treatment
E2082	Medicare Shared Savings	HIV Viral Load Suppression	Effective Prevention and Treatment
E2083	Medicare Shared Savings	Prescription of HIV Antiretroviral Therapy	Effective Prevention and Treatment
X3475	Medicare Shared Savings	Substance Use Screening and Intervention Composite	Best Practice of Healthy Living
E2152	Medicare Shared Savings	Preventive Care and Screening: Unhealthy Alcohol Use: Screening & Brief Counseling	Best Practice of Healthy Living
X3445	Medicare Shared Savings	Alcohol Screening and Brief Intervention (ASBI) in the ER	Best Practice of Healthy Living
X3446	Medicare Shared Savings	Intimate Partner (Domestic) Violence Screening	Best Practice of Healthy Living
X3299	Medicare Shared Savings	HIV: Ever screened for HIV	Effective Prevention and Treatment
X3300	Medicare Shared Savings	HIV Screening of STI patients	Effective Prevention and Treatment
S0139	Medicare Shared Savings	National Healthcare Safety Network (NHSN) Central line-associated Bloodstream Infection (CLABSI) Outcome	Making Care Safer
E0555	Medicare Shared Savings	INR Monitoring for Individuals on Warfarin (e-specified version of NQF #0555)	Making Care Safer
S2550	Medicare Shared Savings	Gout: Urate Lowering Therapy	Effective Prevention and Treatment
E2158	Medicare Shared Savings	Payment-Standardized Medicare Spending Per Beneficiary (MSPB)	Making Care Affordable
E0513	Medicare Shared Savings	Thorax CT: Use of Contrast Material	Making Care Affordable
E0514	Medicare Shared Savings	MRI Lumbar Spine for Low Back Pain	Making Care Affordable
E0052	Medicare Shared Savings	Use of Imaging Studies for Low Back Pain	Making Care Affordable
S0138	Medicare Shared Savings	National Healthcare Safety Network (NHSN) Catheter-associated Urinary Tract Infection (CAUTI) Outcome	Making Care Safer
S2521	Medicare Shared Savings	Gout: Serum Urate Monitoring	Effective Prevention and Treatment
S2510	Medicare Shared Savings	Skilled Nursing Facility All-Cause 30 Day Post Discharge Readmission Measure	Communication and Care Coordination

## Home Health Quality Reporting

<u>MUC ID</u>	<u>CMS Program</u>	<u>Measure Title</u>	<u>NQS Priority</u>
X3704	Home Health Quality Reporting	Percent of Patients with Pressure Ulcers That Are New or Worsened	Effective Prevention and Treatment

## Inpatient Psychiatric Facility Quality Reporting

<u>MUC ID</u>	<u>CMS Program</u>	<u>Measure Title</u>	<u>NQS Priority</u>
E0648	Inpatient Psychiatric Facility Quality Reporting	Timely Transmission of Transition Record (Discharges from an Inpatient Facility to Home/Self Care or Any Other Site of Care)	Communication and Care Coordination
E0647	Inpatient Psychiatric Facility Quality Reporting	Transition Record with Specified Elements Received by Discharged Patients (Discharges from an Inpatient Facility to Home/Self Care or Any Other Site of Care)	Communication and Care Coordination
E1656	Inpatient Psychiatric Facility Quality Reporting	TOB-3 Tobacco Use Treatment Provided or Offered at Discharge AND TOB-3a Tobacco Use Treatment at Discharge	Effective Prevention and Treatment
E1663	Inpatient Psychiatric Facility Quality Reporting	SUB-2 Alcohol Use Brief Intervention Provided or Offered. SUB-2a Alcohol Use Brief Intervention Received.	Effective Prevention and Treatment

## Inpatient Rehabilitation Facility Quality Reporting

<u>MUC ID</u>	<u>CMS Program</u>	<u>Measure Title</u>	<u>NQS Priority</u>
E0141	Inpatient Rehabilitation Facility Quality Reporting	Patient fall rate	Making Care Safer
E0371	Inpatient Rehabilitation Facility Quality Reporting	Venous Thromboembolism Prophylaxis	Making Care Safer
S2634	Inpatient Rehabilitation Facility Quality Reporting	IRF Functional Outcome Measure: Change in Mobility Score for Medical Rehabilitation Patients	Patient and Family Engagement, Communication and Care Coordination
S2636	Inpatient Rehabilitation Facility Quality Reporting	IRF Functional Outcome Measure: Discharge Mobility Score for Medical Rehabilitation Patients	Patient and Family Engagement
S2635	Inpatient Rehabilitation Facility Quality Reporting	IRF Functional Outcome Measure: Discharge Self-Care Score for Medical Rehabilitation Patients	Patient and Family Engagement, Communication and Care Coordination
S2633	Inpatient Rehabilitation Facility Quality Reporting	IRF Functional Outcome Measure: Change in Self-Care Score for Medical Rehabilitation Patients	Patient and Family Engagement

## End-Stage Renal Disease Quality Incentive Program

<u>MUC ID</u>	<u>CMS Program</u>	<u>Measure Title</u>	<u>NQS Priority</u>
E1919	End-Stage Renal Disease Quality Incentive Program	Cultural Competency Implementation Measure	Patient and Family Engagement
X3716	End-Stage Renal Disease Quality Incentive Program	Cultural Competency Reporting Measure	Patient and Family Engagement
X3721	End-Stage Renal Disease Quality Incentive Program	Medications Documentation Reporting	Communication and Care Coordination
X2051	End-Stage Renal Disease Quality Incentive Program	Delivered Dose of Dialysis Above Minimum - Composite Score	Effective Prevention and Treatment
X3718	End-Stage Renal Disease Quality Incentive Program	Delivered Dose in Peritoneal Dialysis Above Minimum	Effective Prevention and Treatment
X3717	End-Stage Renal Disease Quality Incentive Program	Delivered Dose of Hemodialysis Above Minimum	Effective Prevention and Treatment
E0419	End-Stage Renal Disease Quality Incentive Program	Documentation of Current Medications in the Medical Record	Communication and Care Coordination

## Long-Term Care Hospital Quality Reporting

<u>MUC ID</u>	<u>CMS Program</u>	<u>Measure Title</u>	<u>NQS Priority</u>
E0141	Long-Term Care Hospital Quality Reporting	Patient fall rate	Making Care Safer
E0371	Long-Term Care Hospital Quality Reporting	Venous Thromboembolism Prophylaxis	Making Care Safer
X3706	Long-Term Care Hospital Quality Reporting	Ventilator Weaning (Liberation) Rate	Making Care Safer
X3705	Long-Term Care Hospital Quality Reporting	Compliance with Ventilator Process Elements during LTCH stay	Making Care Safer

## Skilled Nursing Facility Value-Based Purchasing Program

<u>MUC ID</u>	<u>CMS Program</u>	<u>Measure Title</u>	<u>NQS Priority</u>
S2510	Skilled Nursing Facility Value-Based Purchasing Program	Skilled Nursing Facility All-Cause 30 Day Post Discharge Readmission Measure	Communication and Care Coordination