List of Measures under Consideration for December 1, 2015

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OVERVIEW

Background

The Centers for Medicare & Medicaid Services (CMS) is issuing this List of Measures under Consideration (MUC) 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 it is considering for adoption through rulemaking for the Medicare program. Because the list contains measures we are considering that were suggested to us by the public, this list is larger than what will ultimately be adopted by CMS for optional or mandatory reporting programs in Medicare. When organizations, such as physician specialty societies, request that CMS consider measures, CMS attempts 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 Patient Protection and Affordable Care Act (ACA) (P.L. 111-148, enacted on March 23, 2010) 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 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 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)[1]; and

[1] The rationale for adopting measures not endorsed by the consensus-based entity will be published in 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 2012 and 2015 editions of that report and related documents are available at the website of the CMS National Impact Assessment.)

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 website. 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, the CMS website will indicate that the MUC list is being posted on the NQF website.

Included Measures

This MUC List identifies the quality and efficiency measures under consideration by the Secretary of DHHS for use in 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 the MUC List. These measures can be selected for those previously considered purposes and programs/uses in future rulemaking cycles. This MUC List as well as prior year MUC Lists and Measures

Application Partnership (MAP) Reports can be found at: https://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/QualityMeasures/Pre-Rule-Making.html .

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 (ASCQR)
2. End-Stage Renal Disease Quality Incentive Program (ESRD QIP)
3. Home Health Quality Reporting Program (HH QRP)
4. Hospice Quality Reporting Program (HQRP)
5. Hospital-Acquired Condition Reduction Program (HACRP)
6. Hospital Inpatient Quality Reporting Program (HIQR)
7. Medicare and Medicaid EHR Incentive Program for Eligible Hospitals (EHs) and Critical Access Hospitals (CAHs)
8. Hospital Outpatient Quality Reporting Program (HOQR)
9. Hospital Readmissions Reduction Program (HRRP)

10. Hospital Value-Based Purchasing Program (HVBP)
11. Inpatient Psychiatric Facility Quality Reporting Program (IPFQR)
12. Inpatient Rehabilitation Facility Quality Reporting Program (IRF QRP)
13. Long-Term Care Hospital Quality Reporting Program (LTCH QRP)
14. Merit-based Incentive Payment System (MIPS)
15. Medicare Shared Savings Program (MSSP)
16. Prospective Payment System (PPS)-Exempt Cancer Hospital Quality Reporting Program (PCHQR)
17. Skilled Nursing Facility Quality Reporting Program (SNF QRP)
18. Skilled Nursing Facility Value-Based Purchasing Program (SNF VBP)

Measures List Highlights

Through publication of this List, CMS will make publicly available and seek the multi-stakeholder groups' input on 131 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 Hospital Readmissions Reduction Program. All Hospital Readmissions Reduction Program measures that CMS is considering for possible future adoption have previously appeared on the MUC 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 without publishing again as part of the MUC list.
- 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 the MUC List. For example, three meetings were convened to obtain input and consensus on the MUC List from across the Department of Health and Human Services.
- 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.
- The MUC 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 among CMS programs when applicable.
- In an effort to provide a more meaningful List of Measures under Consideration, CMS included only measures that contain adequate specifications.
- The following components of the Department of Health and Human Services contributed to and supported CMS in a majority of measures on this List:

1. Office of the Assistant Secretary for Health
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

Legislative Effects on CMS Programs

The Improving Medicare Post-Acute Care Transformation Act of 2014 (IMPACT Act), signed into law by President Obama in October 2014, requires long-term care hospitals (LTCHs), Inpatient Rehabilitation Facilities (IRFs), Skilled Nursing Facilities (SNFs), and Home Health Agencies (HHAs) to report standardized patient assessment data, at a minimum with respect to certain statutorily-mandated categories, using the post-acute care (PAC) assessment instruments that these providers currently use to submit data to CMS for other purposes. The IMPACT Act further requires: the Secretary to specify quality, resource use and other measures that cover, at a minimum, certain statutorily-mandated domains; and that these providers report data on those measures. The IMPACT Act requires that the assessment data reported by these providers be standardized and interoperable to allow for the exchange of such data among PAC providers and other providers, inform person-centered discharge planning, and facilitate coordinated care and improved patient outcomes.

In order to comply with the IMPACT Act requirements, CMS has included four quality measure concepts on the 2015 MUC list with respect to the IRF, LTCH, SNF, and HHA settings for the IRF Quality Reporting Program (IRF QRP), LTCH Quality Reporting Program (QRP), SNF Quality Reporting Program (QRP), and HH Quality Reporting Program (QRP), respectively. Measure concepts added to the 2015 MUC list are: (1) the Potentially Preventable 30-Day Post-Discharge Readmission quality measure for LTCHs, IRFs, SNFs, and HHAs (one measure per each setting); (2) the Discharge to Community quality measure for LTCHs, IRFs, SNFs, and HHAs (one

measure per each setting); (3) the Medicare Spending per Beneficiary-Post Acute Care (PAC) quality measure for LTCHs, IRFs, SNFs, and HHAs (one measure per each setting); and (4) the Drug Regimen Review Conducted with Follow-Up for Identified Issues quality measure for LTCHs, IRFs, SNFs, and HHAs (one measure per each setting). Additional measures required by the IMPACT Act will be made publicly available and transmitted to the MAP in the future.

The measure concepts that CMS has included in the 2015 MUC List are intended to address the domains for which the Secretary is required to specify measures in FY/CY 2017 rulemaking. Therefore, to meet the immediate, statutorily required FY/CY 2017 timelines, our review and consideration was given to measures that:

- Address a current area for improvement that is tied to a stated domain within the Act;
- Minimize added burden to the providers;
- Where possible, avoid any impact on current assessment items that are already collected;
- Where possible, avoid duplication of existing assessment concepts.

Section 101 of the Medicare Access and CHIP Reauthorization Act of 2015 (MACRA) repeals the Medicare sustainable growth rate (SGR) methodology for updates to the physician fee schedule (PFS) and replaces it with a series of specified annual update percentages. It also establishes a new Merit-based Incentive Payment System (MIPS) for MIPS eligible professionals (EPs) under the PFS starting with calendar year 2019. Section 101 of MACRA also sunsets payments and payment adjustments under the current

programs of the Physician Quality Reporting System (PQRS), the Physician Value-Based Payment Modifier (VM), and the Medicare Electronic Health Records (EHR) Incentive Program for Eligible Professionals starting with calendar year 2019 and consolidates aspects of these programs into the new MIPS. While CMS has not yet issued rulemaking regarding MIPS implementation, and although the pre-rulemaking process is not required to apply to the selection of MIPS quality measures, including timing of the performance period applicable for MIPS payment adjustments in 2019, CMS is including MIPS as one of the programs to be included in this List of Measures Under Consideration for potential rulemaking next year. Additionally, we note that measures currently active in PQRS and VM will also be available for MIPS implementation.

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 15)
    - 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 54)
    - This table details the numerator, denominator, and exclusions for each measure.

- Appendix B: Measure Rationales (page 144)
    - This table describes the rationale for the measure, the peer-reviewed evidence justifying the measure, and/or the impact the measure is anticipated to achieve.
- Appendix C: Measures Listed by Program (page 216)
    - This table lists the individual programs accepting each measure for consideration, and the National Quality Strategy (NQS) priorities (or domains) associated with each measure as submitted. The same measure may be under consideration for more than one CMS program, and may have more than one NQS priority (or domain).

Each table is preceded by a legend defining the contents of the columns. For more information, please contact Michelle Geppi at Michelle.Geppi@cms.hhs.gov.

NUMBER OF MEASURES UNDER CONSIDERATION BY PROGRAM[2]

CMS Program	Number of Measures Under Consideration
Ambulatory Surgical Center Quality Reporting	1
End-Stage Renal Disease Quality Incentive Program	7
Home Health Quality Reporting Program	6
Hospice Quality Reporting Program	2
Hospital-Acquired Condition Reduction Program	2
Hospital Inpatient Quality Reporting	15
Hospital Outpatient Quality Reporting	2
Hospital Readmissions Reduction Program	0
Hospital Value-Based Purchasing	10
Inpatient Psychiatric Facility Quality Reporting	2
Inpatient Rehabilitation Facility Quality Reporting Program	5
Long-Term Care Hospital Quality Reporting Program	7
Medicare & Medicaid EHR Incentive Program for Eligible Hospitals and Critical Access Hospitals	0
Medicare Shared Savings Program	5
Merit-based Incentive Payment System (MIPS)	60
Prospective Payment System-Exempt Cancer Hospital Quality Reporting	5
Skilled Nursing Facility Quality Reporting Program	11
Skilled Nursing Facility Value-Based Purchasing Program	1

[2] A single measure may be under consideration for more than one program.

LIST OF MEASURES UNDER CONSIDERATION

Legend for List of Measures under Consideration

MUC ID: Gives users an identifier to refer to a unique measure. The "MUC15-" prefix is intended to aid future researchers in distinguishing among measures considered in different years.

Measure Title: 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:

- 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.
- 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.

- Efficiency: Refers to a measure concerning the cost of care associated with a specified level of health outcome.
- Intermediate Outcome: Refers to a measure that aims to meet specific thresholds of health outcomes.
- Outcome: Refers to a measure that assesses the results that are experienced by patients who have received health care.
- Patient Reported Outcome: Refers to a measure that focuses on a patient's report concerning observations of and participation in health care.
- 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.
- 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).

Measure Steward: Refers to the 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

MUC ID	Measure Title	Description	Measure Type	Measure Steward	CMS Program(s)
MUC15-177	Use Of Preventive Screening Protocol For Transplant Patients	This measure evaluates the number of organ transplant recipients (OTRs) that receive sun protection education and a full skin exam annually by their provider. Preventative screenings and education for OTRs is critical in order to lower incidence and/or severity of skin cancers in these increased risk individuals.	Process	American Academy of Dermatology	MIPS
MUC15-178	Use Of Mohs Surgery For Superficial Basal Cell Carcinomas On The Trunk	This measure evaluates the number of inappropriately utilized Mohs surgeries to treat primary superficial basal cell carcinomas (BCCs) on the trunk in immune-competent patients. The assessment of inappropriate use of Mohs surgery will help to improve compliance with appropriate use criteria (AUC) and should result in healthcare savings.	Process	American Academy of Dermatology	MIPS
MUC15-179	Use of Mohs Surgery For Squamous Cell Carcinoma In Situ And Keratoacanthoma Type - Squamous Cell Carcinoma on The Trunk that are 1 cm or smaller	This measure evaluates the number of inappropriately utilized Mohs surgeries to treat primary squamous cell carcinomas in situ (SCCis) and keratoacanthoma (SCC-KA) on the trunk that are 1 cm or smaller in immunocompetent patients. The assessment of inappropriate use of Mohs surgery will help to improve compliance with AUC and should result in healthcare savings.	Process	American Academy of Dermatology	MIPS
MUC15-207	Falls risk composite process measure	Percentage of patients who were assessed for falls risk and whose care plan reflects the	Composite	Centers for Medicare & Medicaid Services	HH QRP

MUC ID	Measure Title	Description	Measure Type	Measure Steward	CMS Program(s)
		assessment and was implemented as appropriate.			
MUC15-208	Surveillance endoscopy for dysplasia in Barrett's Esophagus	Percentage of patients with diagnosis of Barrett's Esophagus that have documented endoscopy in the measurement period	Process	Eugene Gastroenterology Consultants, PC Oregon Endoscopy Center, LLC	MIPS
MUC15-209	Non-selective beta blocker use in patients with esophageal varices	Percentage of patients with diagnosis of esophageal varices that have documented use of non-selective beta blocker in the measurement period	Process	Eugene Gastroenterology Consultants, PC Oregon Endoscopy Center, LLC	MIPS
MUC15-210	Hepatitis A vaccination for patients with cirrhosis	Percentage of patients with diagnosis of cirrhosis that have documented hepatitis A vaccination	Process	Eugene Gastroenterology Consultants, PC Oregon Endoscopy Center, LLC	MIPS
MUC15-211	Hepatitis B vaccination for patients with cirrhosis	Percentage of patients with diagnosis of cirrhosis that have documented hepatitis B vaccination	Process	Eugene Gastroenterology Consultants, PC Oregon Endoscopy Center, LLC	MIPS
MUC15-212	Surveillance colonoscopy for dysplasia in colonic Crohns Disease	Percentage of patients with diagnosis of colonic Crohn's Disease for 10 years or more that have documented colonoscopy in the measurement period or 1 year prior to measurement period.	Process	Eugene Gastroenterology Consultants, PC Oregon Endoscopy Center, LLC	MIPS
MUC15-215	Non-Melanoma Skin Cancer	Length of time taken from when a biopsy is performed to when a patient is notified by the	Process	American Academy of Dermatology	MIPS

MUC ID	Measure Title	Description	Measure Type	Measure Steward	CMS Program(s)
	(NMSC): Biopsy Reporting Time - Clinician	biopsying physician that he or she has cutaneous basal or squamous cell carcinoma (including in situ disease). This measure evaluates the reporting time between the biopsying clinician and patient.			
MUC15-216	NMSC: Biopsy Reporting Time - Pathologist	Length of time taken from when the pathologist completes the final biopsy report to when s/he sends the final report to the biopsying physician. This measure evaluates the reporting time between pathologist and biopsying clinician.	Process	American Academy of Dermatology	MIPS
MUC15-217	Screening for Hepatoma in patients with Chronic Hepatitis B	Percentage of patients with a diagnosis of Chronic Hepatitis B that have had a documented abdominal US, CT Scan, or MRI in the measurement period	Process	Eugene Gastroenterology Consultants, PC Oregon Endoscopy Center, LLC	MIPS
MUC15-220	Hepatitis B vaccination for patients with chronic Hepatitis C	Percentage of patients with diagnosis of chronic Hepatitis C that have documented hepatitis B vaccination	Process	Eugene Gastroenterology Consultants, PC Oregon Endoscopy Center, LLC	MIPS
MUC15-221	Surveillance colonoscopy for dysplasia in Ulcerative Colitis	Percentage of patients with diagnosis of Ulcerative Colitis for 10 years or more that have documented colonoscopy in the measurement period or 1 year prior to measurement period.	Process	Eugene Gastroenterology Consultants, PC Oregon Endoscopy Center, LLC	MIPS
MUC15-227	Hospice Visits When Death Is Imminent	This measure will assess hospice staff visits to patients and caregivers in the last week of life.	Process	Centers for Medicare & Medicaid Services	HQRP

MUC ID	Measure Title	Description	Measure Type	Measure Steward	CMS Program(s)
MUC15-229	Hepatitis C Virus (HCV)- Sustained Virological Response (SVR)	Percentage of Patients aged 18 years and older with a diagnosis of hepatitis C who have completed a full course of antiviral treatment with undetectable hepatitis C virus (HCV) ribonucleic acid (RNA) 11 weeks after cessation of treatment.	Outcome	American Gastroenterological Association	MIPS
MUC15-230	HIV Screening for Patients with Sexually Transmitted Disease (STD)	Percentage of patients diagnosed with an acute STD indicative of elevated risk for HIV exposure who were tested for HIV	Process	Centers for Disease Control and Prevention	MIPS
MUC15-231	Hospice and Palliative Care Composite Process Measure	This measure will assess percentage of hospice patients who received care processes consistent with guidelines at admission. This is a composite measure based on select measures from 7 NQF-endorsed measures: NQF #1641, NQF #1647, NQF #1634, NQF #1637, NQF #1639, NQF #1638, NQF #1617.	Composite	Centers for Medicare & Medicaid Services	HQRP
MUC15-234	Potentially Preventable 30-Day Post-Discharge Readmission Measure for Home Health Quality Reporting Program (Required under the IMPACT Act)	All-condition risk-adjusted potentially preventable hospital readmission rates.	Outcome	Centers for Medicare & Medicaid Services	HH QRP

MUC ID	Measure Title	Description	Measure Type	Measure Steward	CMS Program(s)
MUC15-235	Improvement in Dyspnea in Patients with a Primary Diagnosis of Congestive Heart Failure, Chronic Obstructive Pulmonary Disease and/or Asthma	Percentage of home health episodes of care during which a patient with a primary diagnosis of CHF, asthma and/or COPD became less short of breath or dyspneic.	Outcome	Centers for Medicare & Medicaid Services	HH QRP
MUC15-236	Application of IRF Functional Outcome Measure: Change in Self-Care Score for Medical Rehabilitation Patients (NQF #2633)	This quality measure estimates the risk-adjusted mean change in self-care score between admission and discharge among SNF residents.	Outcome	Centers for Medicare & Medicaid Services	SNF QRP
MUC15-251	Screening endoscopy for varices in patients with cirrhosis	Percentage of patients with diagnosis of cirrhosis that have documented endoscopy	Process	Eugene Gastroenterology Consultants, PC Oregon Endoscopy Center, LLC	MIPS
MUC15-275	Ischemic Vascular Disease All or None Outcome Measure (Optimal Control)	The IVD All-or-None Measure is one outcome measure (optimal control). The measure contains four goals. All four goals within a measure must be reached in order to meet that measure. The numerator for the all-or-none measure should be collected from the organization's total IVD denominator. All-or-	Composite	Wisconsin Collaborative for Healthcare Quality (WCHQ)	MIPS; MSSP

MUC ID	Measure Title	Description	Measure Type	Measure Steward	CMS Program(s)
		None Outcome Measure (Optimal Control) - Using the IVD denominator optimal results include: Most recent blood pressure measurement is less than 140/90 mm Hg -- And Most recent tobacco status is Tobacco Free -- And Daily Aspirin or Other Antiplatelet Unless Contraindicated -- And Statin Use			
MUC15-287	Medicare Spending per Beneficiary-Post Acute Care (PAC) Inpatient Rehabilitation Facility Quality Reporting Program (Required under the IMPACT Act)	The MSPB-PAC Measure for IRFs evaluates providers' efficiency relative to the efficiency of the national median IRF provider. Specifically, the MSPB-PAC Measure assesses the cost to Medicare for services during an episode of care, which consists of a treatment period and an associated services period. The episode is triggered by an admission to an IRF stay. The treatment period begins at the trigger and ends at discharge. The associated services period begins at the trigger and ends 30 days after the end of the treatment period (i.e., discharge). These periods constitute the episode window during which beneficiaries' Medicare services are counted toward the episode. The MSPB-PAC episode includes all services during the episode window that are attributable to the IRF provider and those rendered by other providers, except those services during the associated services period that are clinically unrelated to IRF responsibilities (e.g., planned care and routine screening).	Cost/Resource Use	Centers for Medicare & Medicaid Services	IRF QRP

MUC ID	Measure Title	Description	Measure Type	Measure Steward	CMS Program(s)
MUC15-289	Medicare Spending per Beneficiary-Post Acute Care (PAC) Long-Term Care Hospital Quality Reporting Program (Required under the IMPACT Act)	The MSPB-PAC Measure for LTCHs evaluates providers' efficiency relative to the efficiency of the national median LTCH provider. Specifically, the MSPB-PAC Measure assesses the cost to Medicare for services during an episode of care, which consists of a treatment period and an associated services period. The episode is triggered by an admission to an LTCH stay. The treatment period begins at the trigger and ends at discharge. The Measure is constructed differently for cases in which the LTCH stay is paid according to the standard MS-LTC-DRG versus cases in which the LTCH stay is paid a site neutral rate comparable to the IPPS payment rates. The associated services period for standard payment rate cases begins at the trigger and ends 30 days after the end of the treatment period (i.e., discharge). The associated services period for site neutral payment rate cases begins at the close of the treatment period and ends 30 days after, to parallel the MSPB-Hospital measure. For the standard and site neutral cases, these periods constitute the episode window during which beneficiaries' Medicare services are counted toward the episode. For the standard cases, the MSPB-PAC episode includes all services during the episode window that are attributable to the LTCH provider and those rendered by other providers, except those services during the associated services period that are clinically	Cost/Resource Use	Centers for Medicare & Medicaid Services	LTCH QRP

MUC ID	Measure Title	Description	Measure Type	Measure Steward	CMS Program(s)
		unrelated to LTCH responsibilities (e.g., planned care and routine screening). For the site neutral cases, the MSPB-PAC episode includes all services during the episode window that are attributable to the LTCH provider and those rendered by other providers, except those services during the associated services period that are clinically unrelated to LTCH responsibilities (e.g., planned care and routine screening). As discussed above, there is a difference in the construction of the associated services period for these cases, in that it only begins at discharge and ends 30 days after.			
MUC15-291	Medicare Spending per Beneficiary-Post Acute Care (PAC) Skilled Nursing Facility Quality Reporting Program (Required under the IMPACT Act)	The MSPB-PAC Measure for SNFs evaluates providers' efficiency relative to the efficiency of the national median SNF provider. Specifically, the MSPB-PAC Measure assesses the cost to Medicare for services during an episode of care, which consists of a treatment period and an associated services period. The episode is triggered by an admission to a SNF stay. The treatment period begins at the trigger and ends at discharge. The associated services period begins at the trigger and ends 30 days after the end of the treatment period (i.e., discharge). These periods constitute the episode window during which beneficiaries' Medicare services are counted toward the episode. The MSPB-PAC episode includes all services during the episode window that are attributable to the SNF provider and those rendered by other providers,	Cost/Resource Use	Centers for Medicare & Medicaid Services	SNF QRP

MUC ID	Measure Title	Description	Measure Type	Measure Steward	CMS Program(s)
		except those services during the associated services period that are clinically unrelated to SNF responsibilities (e.g., planned care and routine screening).			
MUC15-294	Hospital 30-Day Mortality Following Acute Ischemic Stroke Hospitalization Measure	This stroke mortality measure will estimate the hospital-level, risk-standardized mortality rate (RSMR) for patients discharged from the hospital with a principal discharge diagnosis of acute ischemic stroke. The outcome is all-cause 30-day mortality, defined as death from any cause within 30 days of the index admission date, including in-hospital death, for stroke patients. The measure uses Medicare fee-for-service (FFS) administrative claims to derive the cohort and outcome, and for risk adjustment. The major revision is to include NIH Stroke Scale as a measure of stroke severity in the risk-adjustment.	Outcome	Centers for Medicare & Medicaid Services	HIQR
MUC15-295	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.	Cost/Resource Use	Centers for Medicare & Medicaid Services	HVBP

MUC ID	Measure Title	Description	Measure Type	Measure Steward	CMS Program(s)
MUC15-296	New Corneal Injury Not Diagnosed in the Post-Anesthesia Care Unit/Recovery Area	The percentage of patients aged 18 years and older who undergo anesthesia care and who did not have a new diagnosis of corneal injury in the post-anesthesia care unit/recovery area. Anesthesia care for surgery of the face will be reported separately from anesthesia care for other procedures.	Outcome	American Society of Anesthesiologists	MIPS
MUC15-307	Performance of objective measure of functional hearing status	Percentage of patients 5 years and older with documentation of a standardized, objective measure of functional hearing status using open-set speech recognition	Process	Audiology Quality Consortium/American Speech Language Hearing Association	MIPS
MUC15-313	Patient-Reported Functional Communication	Percentage of patients 18 years and older with documentation of a standardized patient-reported functional communication assessment	Process	AQC/ASHA	MIPS
MUC15-322	Hospital-level, risk-standardized payment associated with a 30-day episode-of-care for heart failure (HF)	This measure estimates a hospital-level, risk-standardized payment for a heart failure episode-of-care starting with inpatient admission to a short term acute-care facility and extending 30 days post-admission for Medicare fee-for-service (FFS) patients who are 65 years of age or older with a principal discharge diagnosis of heart failure.	Cost/Resource Use	Centers for Medicare & Medicaid Services	HVBP
MUC15-369	Hospital-level, risk-standardized payment associated with a 30-day episode-of-care for Acute	This measure estimates hospital-level, risk-standardized payment for an AMI episode-of-care starting with inpatient admission to a short term acute-care facility and extending 30 days post-admission for Medicare fee-for-service	Cost/Resource Use	Centers for Medicare & Medicaid Services	HVBP

MUC ID	Measure Title	Description	Measure Type	Measure Steward	CMS Program(s)
	Myocardial Infarction (AMI)	(FFS) patients who are 65 years of age or older with a principal discharge diagnosis of AMI.			
MUC15-370	Corneal Graft Surgery - Postoperative improvement in visual acuity to 20/40 or better	Percentage of corneal graft surgery patients with a visual acuity of 20/40 or better within 90 days following surgery	Outcome	American Academy of Ophthalmology	MIPS
MUC15-372	Glaucoma - Intraocular Pressure (IOP) Reduction	Percentage of glaucoma patients where their intraocular pressure (IOP) was below a threshold level based on the severity of their condition	Outcome	American Academy of Ophthalmology	MIPS
MUC15-374	Glaucoma - Intraocular Pressure (IOP) Reduction Following Laser Trabeculosplasty	Percentage of who underwent laser trabeculoplasty who had IOP reduced by 20% from their pretreatment level.	Outcome	American Academy of Ophthalmology	MIPS
MUC15-375	Surgery for Acquired Involutional Ptosis: Patients with an improvement of marginal reflex distance (MRD)	Percentage of surgical ptosis patients with an improvement of MRD postoperatively	Outcome	American Academy of Ophthalmology	MIPS
MUC15-377	Acquired Involutional Entropion: Normalized lid	Percentage of surgical entropion patients with a postoperative normalized lid position	Outcome	American Academy of Ophthalmology	MIPS

MUC ID	Measure Title	Description	Measure Type	Measure Steward	CMS Program(s)
	position after surgical repair				
MUC15-378	Hospital-level, risk-standardized 30-day episode-of-care payment measure for pneumonia	This measure estimates hospital-level, risk-standardized payment for a pneumonia episode of care starting with inpatient admission to a short term acute-care facility and extending 30 days post-admission for Medicare fee-for-service (FFS) patients who are 65 years of age or older with a principal discharge diagnosis of pneumonia, aspiration pneumonia, and sepsis in cases where sepsis is accompanied by secondary diagnosis of pneumonia present on admission.	Cost/Resource Use	Centers for Medicare & Medicaid Services	HVBP; HIQR
MUC15-379	Exudative Age-Related Macular Degeneration: Loss of Visual Acuity	Percentage of patients with a diagnosis of exudative age-related macular degeneration, being treated with anti-VEGF agents, with a loss of less than 0.3 logMar of visual acuity within the past 12 months	Outcome	American Academy of Ophthalmology	MIPS
MUC15-391	Excess Days in Acute Care after Hospitalization for Pneumonia	This measure assesses the difference (“excess”) between the average number of risk-adjusted days a hospital’s patients spend in an ED, observation, or readmission in the 30 days following a hospitalization for pneumonia (“predicted”) and the number of days in acute care that they would have been expected to spend if discharged from an average hospital.	Outcome	Centers for Medicare & Medicaid Services	HIQR
MUC15-392	Nonexudative Age-Related Macular Degeneration: Loss of Visual Acuity	Percentage of patients with a diagnosis of nonexudative age-related macular degeneration and taking AREDS supplements with a visual acuity loss of less than 0.3 logMar within the past 12 months	Outcome	American Academy of Ophthalmology	MIPS

MUC ID	Measure Title	Description	Measure Type	Measure Steward	CMS Program(s)
MUC15-393	Diabetic Macular Edema: Loss of Visual Acuity	Percentage of patients with a diagnosis of diabetic macular edema with a loss of less than 0.3 logMar of visual acuity within the past 12 months	Outcome	American Academy of Ophthalmology	MIPS
MUC15-394	Acute Anterior Uveitis: Post-treatment visual acuity	Percentage of acute anterior uveitis patients with a post-treatment best corrected visual acuity of 20/40 or greater OR patients whose visual acuity had returned to their baseline value prior to onset of uveitis	Outcome	American Academy of Ophthalmology	MIPS
MUC15-395	Hospital 30-Day, All-Cause, Risk-Standardized Mortality Rate (RSMR) Following Coronary Artery Bypass Graft (CABG) Surgery	This measure estimates hospital-level, risk-standardized mortality rates for Medicare fee-for-service (FFS) patients who are 65 years of age or older and discharged from the hospital following a qualifying isolated CABG surgery.	Outcome	Centers for Medicare & Medicaid Services	HVBP
MUC15-396	Acute Anterior Uveitis: Post-treatment Grade 0 anterior chamber cells	Percentage of patients with acute anterior uveitis who post-treatment had Grade 0 anterior chamber cells.	Outcome	American Academy of Ophthalmology	MIPS
MUC15-397	Chronic Anterior Uveitis: Post-treatment visual acuity	Percentage of chronic anterior uveitis patients with a post-treatment best corrected visual acuity of 20/40 or greater OR patients whose visual acuity had returned to their baseline value prior to onset of uveitis	Outcome	American Academy of Ophthalmology	MIPS

MUC ID	Measure Title	Description	Measure Type	Measure Steward	CMS Program(s)
MUC15-398	Ventilator Weaning (Liberation) Rate	For patients admitted to an LTCH on invasive mechanical ventilation support and for whom weaning attempts were expected or anticipated at admission, this measure reports: (1) percentage of patients fully weaned at discharge (alive) (Ventilator Weaning/Liberation Rate), and (2) percentage of patients not fully weaned at discharge (alive).	Outcome	Centers for Medicare & Medicaid Services	LTCH QRP
MUC15-399	Chronic Anterior Uveitis: Post-treatment Grade 0 anterior chamber cells	Percentage of patients with chronic anterior uveitis who post-treatment had Grade 0 anterior chamber cells.	Outcome	American Academy of Ophthalmology	MIPS
MUC15-400	Compliance with Spontaneous Breathing Trial (SBT) (including Tracheostomy Collar Trial (TCT) or Continuous Positive Airway Pressure (CPAP) Breathing Trial)) by Day 2 of the LTCH Stay	This measure assesses facility-level compliance with Spontaneous Breathing Trial (SBT), including Tracheostomy Collar Trial (TCT) or Continuous Positive Airway Pressure (CPAP) breathing trial, by Day 2 of the LTCH stay for patients on invasive mechanical ventilation (IMV) support upon admission, *and* for whom at admission weaning attempts were expected or anticipated. Compliance is calculated and reported separately for the following two components: 1. the percentage of patients who were assessed for readiness for SBT (including TCT or CPAP breathing trial) by Day 2 of the	Process	Centers for Medicare & Medicaid Services	LTCH QRP

MUC ID	Measure Title	Description	Measure Type	Measure Steward	CMS Program(s)
		LTCH stay, 2. the percentage of patients found ready for SBT (including TCT or CPAP breathing trial) for whom an SBT (including TCT or CPAP breathing trial) was performed by Day 2 of LTCH stay			
MUC15-402	30 Day Stroke and Death Rate for Symptomatic Patients undergoing carotid stent placement	Percent of patients with prior neurological symptoms experiencing Stroke or Death within 30 days of Carotid Artery Stenting	Outcome	Society of Interventional Radiology	MIPS
MUC15-408	Discharge to Community-Post Acute Care (PAC) Inpatient Rehabilitation Facility Quality Reporting Program (Required under the IMPACT Act)	This measure describes the risk-standardized rate of Medicare fee-for-service (FFS) patients/residents/persons who are discharged to the community following a post-acute stay/episode, and do not have an unplanned (re)admission to an acute care hospital or LTCH in the 31 days following discharge to community, and remain alive during the 31 days following discharge to community.	Outcome	Centers for Medicare & Medicaid Services	IRF QRP
MUC15-411	Patient reported outcomes following ilio-femoral venous stenting	Percentage of patients who demonstrate improvement in a disease specific patient reported quality of life score after ilio-femoral venous stenting	Patient Reported Outcome	Society of Interventional Radiology	MIPS
MUC15-412	Assessment of post-thrombotic syndrome	Percentage of patients who demonstrate improvement signs and symptoms of post-thrombotic syndrome as assessed using the	Composite	Society of Interventional Radiology	MIPS

MUC ID	Measure Title	Description	Measure Type	Measure Steward	CMS Program(s)
	following ilio-femoral venous stenting	Villalta Score following ilio-femoral venous stenting			
MUC15-413	Improvement in the Venous Clinical Severity Score after ilio-femoral venous stenting	Percentage of patients who demonstrate improvement in the Venous Clinical Severity Score after ilio-femoral venous stenting	Intermediate Outcome	Society of Interventional Radiology	MIPS
MUC15-414	Discharge to Community-Post Acute Care (PAC) Long-Term Care Hospital Quality Reporting Program (Required under the IMPACT Act)	This measure describes the risk-standardized rate of Medicare fee-for-service (FFS) patients/residents/persons who are discharged to the community following a post-acute stay/episode, and do not have an unplanned (re)admission to an acute care hospital or LTCH in the 31 days following discharge to community, and remain alive during the 31 days following discharge to community.	Outcome	Centers for Medicare & Medicaid Services	LTCH QRP
MUC15-415	Proportion admitted to hospice for less than 3 days	Percentage of patients who died from cancer, and admitted to hospice and spent less than 3 days there	Process	American Society of Clinical Oncology	MIPS
MUC15-420	Rate of adequate percutaneous image-guided biopsy	The percentage of percutaneous image-guided (US, CT, fluoro) biopsy procedures performed in which sampling was adequate for diagnosis on the final pathology report.	Composite	Society of Interventional Radiology	MIPS
MUC15-423	Efficacy of uterine artery embolization for	The percentage of patients who demonstrate an improvement in their symptoms following uterine fibroids embolization as assessed using	Patient Reported Outcome	Society of Interventional Radiology	MIPS

MUC ID	Measure Title	Description	Measure Type	Measure Steward	CMS Program(s)
	symptomatic uterine fibroids	a disease-specific survey administered before and 6 months after the procedure			
MUC15-424	Common femoral arterial access site complication	The percentage of groin arterial access procedures with a vascular complication other than a modest hematoma with an access system of 8Fr or less. Access site complications tracked with this measure include pseudoaneurysms, arteriovenous fistulae, large hematomas, arterial dissection requiring intervention, arterial thromboembolism, and infectious	Outcome	Society of Interventional Radiology	MIPS
MUC15-434	Verification of Intrinsic Sphincter Deficiency prior to transurethral bulking injection.	Documentation of ISD prior to procedure	Outcome	American Urogynecologic Society	MIPS
MUC15-436	Over-utilization of mesh in the posterior compartment	Percentage of patients undergoing vaginal surgery for pelvic organ prolapse involving the posterior compartment where a synthetic mesh augment is utilized.	Outcome	American Urogynecologic Society	MIPS
MUC15-437	Route of hysterectomy	Percentage of patients who underwent vaginal hysterectomy	Intermediate Outcome	American Urogynecologic Society	MIPS
MUC15-439	Testing for uterine disease prior to obliterative procedures	Percentage of patients having documented assessment of abnormal uterine or postmenopausal bleeding prior to surgery for pelvic organ prolapse (similar to CMS proposed measure named Preoperative exclusion of uterine malignancy prior to any pelvic organ prolapse repair, see 80 FR 41852).	Process	American Urogynecologic Society	MIPS

MUC ID	Measure Title	Description	Measure Type	Measure Steward	CMS Program(s)
MUC15-440	Documentation of offering a trial of conservative management prior to fecal incontinence surgery	The percentage of patients who have been offered non-surgical treatment of fecal incontinence prior to surgical intervention	Process	American Urogynecologic Society	MIPS
MUC15-441	Documentation of offering a trial of conservative management prior to urgency incontinence surgery	The percentage of patients who have been offered non-surgical treatment of urgency urinary incontinence prior to surgical intervention	Process	American Urogynecologic Society	MIPS
MUC15-450	Intraperitoneal chemotherapy administered within 42 days of optimal cytoreduction to women with invasive stage III ovarian, fallopian tube, or peritoneal cancer	Measuring the percentage of patient who received Intra Peritoneal (IP) chemotherapy after the debulking of advanced epithelial ovarian cancer	Process	Society of Gynecologic Oncology	MIPS
MUC15-452	Minimally invasive surgery performed for patients with endometrial cancer	Proportion of patients who underwent minimally invasive hysterectomy for endometrial cancer	Process	Society of Gynecologic Oncology	MIPS

MUC ID	Measure Title	Description	Measure Type	Measure Steward	CMS Program(s)
MUC15-454	Platin or taxane administered within 42 days following cytoreduction to women with invasive stage I (grade 3), IC-IV ovarian, fallopian tube, or peritoneal cancer	Measuring the percentage of patient who received Intra Venous (IV) chemotherapy after the debulking of advanced epithelial ovarian cancer	Process	Society of Gynecologic Oncology	MIPS
MUC15-459	Surgical staging with lymph node removal for any grade 3 and/or myometrial invasion >50% with endometrial cancer	Uterine cancer patients with adequate surgical staging performed with a grade 3 tumor and deep uterine wall invasion.	Process	Society of Gynecologic Oncology	MIPS
MUC15-460	Use of brachytherapy for cervical cancer patients treated with primary radiation with curative intent.	The percentage of cervical cancer patients who undergoing curative intent radiation who receive brachytherapy in addition to external beam therapy	Process	Society of Gynecologic Oncology	MIPS
MUC15-461	Completion of external beam radiation within 60 days for women	Percentage of patients with locally advanced cervical cancer who complete their chemoradiation in 60 days or less	Process	Society of Gynecologic Oncology	MIPS

MUC ID	Measure Title	Description	Measure Type	Measure Steward	CMS Program(s)
	receiving primary radiotherapy as treatment for locally advanced cervical cancer (LACC)				
MUC15-462	Discharge to Community-Post Acute Care (PAC) Skilled Nursing Facility Quality Reporting Program (Required under the IMPACT Act)	This measure describes the risk-standardized rate of Medicare fee-for-service (FFS) patients/residents/persons who are discharged to the community following a post-acute stay/episode, and do not have an unplanned (re)admission to an acute care hospital or LTCH in the 31 days following discharge to community, and remain alive during the 31 days following discharge to community.	Outcome	Centers for Medicare & Medicaid Services	SNF QRP
MUC15-463	Use of concurrent platinum-based chemotherapy for patients with stage IIB-IV cervical cancer receiving primary radiation therapy.	Percentage of patients who receive concurrent platinum-based chemotherapy for patients with stage IIB-IV cervical cancer receiving primary radiation therapy.	Process	Society of Gynecologic Oncology	MIPS
MUC15-465	Performance of radical hysterectomy in patients with IB1-IIA cervical cancer who undergo hysterectomy.	Performance of appropriate type of hysterectomy in women with early stage cervical cancer undergoing hysterectomy.	Process	Society of Gynecologic Oncology	MIPS

MUC ID	Measure Title	Description	Measure Type	Measure Steward	CMS Program(s)
MUC15-466	Postoperative pelvic radiation with concurrent cisplatin-containing chemotherapy with (or without) brachytherapy for patients with positive pelvic nodes, positive surgical margin, and/or positive parametrium.	Proportion of patients with pelvic lymph node metastases, positive surgical margins, or positive parametrium who received postoperative pelvic radiation with concurrent cisplatin-containing chemotherapy (with or without brachytherapy)	Process	Society of Gynecologic Oncology	MIPS
MUC15-495	Potentially Preventable 30-Day Post-Discharge Readmission Measure for Skilled Nursing Facility Quality Reporting Program (Required under the IMPACT Act)	All-condition risk-adjusted potentially preventable hospital readmission rates	Outcome	Centers for Medicare & Medicaid Services	SNF QRP
MUC15-496	Potentially Preventable 30-Day Post-Discharge Readmission Measure for Inpatient	All-condition risk-adjusted potentially preventable hospital readmission rates	Outcome	Centers for Medicare & Medicaid Services	IRF QRP

MUC ID	Measure Title	Description	Measure Type	Measure Steward	CMS Program(s)
	Rehabilitation Facility Quality Reporting Program (Required under the IMPACT Act)				
MUC15-497	Potentially Preventable Within Stay Readmission Measure for Inpatient Rehabilitation Facilities	All-condition risk-adjusted potentially preventable hospital readmission rates occurring during an IRF stay	Outcome	Centers for Medicare & Medicaid Services	IRF QRP
MUC15-498	Potentially Preventable 30-Day Post-Discharge Readmission Measure for Long-Term Care Hospital Quality Reporting Program (Required under the IMPACT Act)	All-condition risk-adjusted potentially preventable hospital readmission rates	Outcome	Centers for Medicare & Medicaid Services	LTCH QRP
MUC15-523	Discharge to Community-Post Acute Care (PAC) Home Health Quality Reporting Program (Required under the IMPACT Act)	This measure describes the risk-standardized rate of Medicare fee-for-service (FFS) patients/residents/persons who are discharged to the community, and do not have an unplanned (re)admission to an acute care hospital or LTCH in the 31 days following discharge to community, and remain alive	Outcome	Centers for Medicare & Medicaid Services	HH QRP

MUC ID	Measure Title	Description	Measure Type	Measure Steward	CMS Program(s)
		during the 31 days following discharge to community.			
MUC15-527	Application of IRF Functional Outcome Measure: Change in Mobility Score for Medical Rehabilitation Patients (NQF #2634)	This quality measure estimates the risk-adjusted mean change in mobility score between admission and discharge among Skilled Nursing Facility residents.	Outcome	Centers for Medicare & Medicaid Services	SNF QRP
MUC15-528	Application of IRF Functional Outcome Measure: Discharge Self-Care Score for Medical Rehabilitation Patients (NQF #2635)	This quality measure estimates the percentage of Skilled Nursing Facility residents who meet or exceed an expected discharge self-care score.	Outcome	Centers for Medicare & Medicaid Services	SNF QRP
MUC15-529	Application of IRF Functional Outcome Measure: Discharge Mobility Score for Medical Rehabilitation Patients (NQF #2636)	This quality measure estimates the percentage of Skilled Nursing Facility residents who meet or exceed an expected discharge mobility score.	Outcome	Centers for Medicare & Medicaid Services	SNF QRP
MUC15-530	Percent of Patients Who Received an Antipsychotic (AP) Medication	This measure reports the percentage of patients in a Long Term Care Hospital who receive antipsychotic medications during the target period.	Process	Centers for Medicare & Medicaid Services	LTCH QRP

MUC ID	Measure Title	Description	Measure Type	Measure Steward	CMS Program(s)
MUC15-531	National Healthcare Safety Network (NHSN) Antimicrobial Use Measure	Assesses antimicrobial use (AU) in hospitals based on medication administration data hospitals collect electronically at the point of care and report via electronic file submissions to NHSN. AU data included in the measure are antibacterial agents administered to adult and pediatric patients in a specified set of hospital ward and intensive care unit locations.	Process	Centers for Disease Control and Prevention	HIQR
MUC15-532	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	PCHQR
MUC15-533	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) Additional metric added- Adjusted Ranking Metric also known as the “reliability-adjusted SIR”	Outcome	Centers for Disease Control and Prevention	PCHQR

MUC ID	Measure Title	Description	Measure Type	Measure Steward	CMS Program(s)
MUC15-534	American College of Surgeons-Centers for Disease Control and Prevention (ACS-CDC) Harmonized Procedure Specific Surgical Site Infection (SSI) Outcome Measure	Organ/space Surgical Site Infections (SSI) at the primary incision site among adult patients at least 18 years of age undergoing inpatient colon procedures and/or abdominal hysterectomies as reported through the ACS-NSQIP or CDC NHSN. The measure yields separate SIRs for each procedure.	Outcome	Centers for Disease Control and Prevention	PCHQR; HVBP; HIQR; HACRP
MUC15-575	Standardized Mortality Ratio - Modified	Standardized ratio for death among ESRD dialysis patients.	Outcome	Centers for Medicare & Medicaid Services	ESRD-QIP
MUC15-576	Prevention Quality Indicators 92 Prevention Quality Chronic Composite	PQI composite of chronic conditions 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, or angina without a cardiac procedure. (Includes PQIs 1, 3, 5, 7, 8, 13, 14, 15, and 16)	Composite	Agency for Healthcare Research & Quality	MSSP; MIPS
MUC15-577	PQI 91 Prevention Quality Acute Composite	PQI composite of acute conditions per 100,000 population, ages 18 years and older. Includes admissions with a principal diagnosis of one of the following conditions: dehydration, bacterial pneumonia, or urinary tract infection. (Includes PQIs 10, 11, and 12)	Composite	Agency for Healthcare Research & Quality	MSSP; MIPS

MUC ID	Measure Title	Description	Measure Type	Measure Steward	CMS Program(s)
MUC15-578	Advance Care Plan	Percentage of patients aged 65 years and older who have an advance care plan or surrogate decision maker documented in the medical record or documentation in the medical record that an advance care plan was discussed but the patient did not wish or was not able to name a surrogate decision maker or provide an advance care plan	Process	National Committee for Quality Assurance	MSSP
MUC15-579	Falls: Screening, Risk-Assessment, and Plan of Care to Prevent Future Falls	This is a clinical process measure that assesses falls prevention in older adults. The measure has three rates: A) Screening for Future Fall Risk: Percentage of patients aged 65 years of age and older who were screened for future fall risk at least once within 12 months B) Falls: Risk Assessment: Percentage of patients aged 65 years of age and older with a history of falls who had a risk assessment for falls completed within 12 months C) Plan of Care for Falls: Percentage of patients aged 65 years of age and older with a history of falls who had a plan of care for falls documented within 12 months.	Process	National Committee for Quality Assurance	MSSP
MUC15-604	Patient Safety and Adverse Events Composite	Patient Safety and Adverse Events Composite (Patient Safety Indicator, or PSI90) is a composite measure of 10 individual PSIs, each measuring a different aspect of harm associated with patient safety. Each PSI is reliability-adjusted (smoothed) and indirectly standardized	Composite	Agency for Healthcare Research & Quality	HVBP; HIQR; HACRP

MUC ID	Measure Title	Description	Measure Type	Measure Steward	CMS Program(s)
		(risk adjusted). The composite is the weighted average of the reliability-adjusted, indirectly standardized, observed-to-expected ratios for component indicators. The final weight for each component is the product of harm weights and volume weights (numerator weights). Harm weights are calculated by multiplying empirical estimates of excess harms associated with the patient safety event by utility weights linked to each of the harms. Excess harms are estimated using statistical models comparing patients with a safety-related event to those without that safety-related event in a CMS Medicare fee-for-service sample that allowed up to one year of follow-up from the discharge date of the hospital stay associated with the index event. Volume weights, the second part of the final weight, are calculated on the basis of the number of safety-related events for the component indicators in the all-payer reference population. The observed to expected ratios (indirect standardization) of the reliability adjusted (smoothed) rates are multiplied by a component weight and the weighted scores are summed to determine the final PSI 90 score. A score of 1 means that the hospital performs as expected, scores greater than one indicate worse performance than expected.			
MUC15-693	Standardized Hospitalization Ratio - Modified	Standardized hospitalization ratio for admissions among ESRD dialysis patients.	Outcome	Centers for Medicare & Medicaid Services	ESRD-QIP

MUC ID	Measure Title	Description	Measure Type	Measure Steward	CMS Program(s)
MUC15-758	Avoidance of Utilization of High Ultrafiltration Rate (≥ 13 ml/kg/hour)	Percentage of adult in-center hemodialysis patients in the facility whose average ultrafiltration rate (UFR) is ≥ 13 ml/kg/hour.	Intermediate Outcome	Centers for Medicare & Medicaid Services, KCQA- Kidney Care Quality Alliance	ESRD-QIP
MUC15-761	ESRD Vaccination: Full-Season Influenza Vaccination	Percentage of ESRD patients ≥ 6 months of age on October 1 and on chronic dialysis ≥ 30 days in a facility at any point between October 1 and March 31 who either received an influenza vaccination, were offered and declined the vaccination, or were determined to have a medical contraindication.	Process	Centers for Medicare & Medicaid Services	ESRD-QIP
MUC15-835	Aortic Aneurysm Procedure Clinical Episode-Based Payment Measure	The measure constructs a clinically coherent group of services to inform providers about resource use and effectiveness. It sums Parts A and B payments related to an aortic aneurysm procedure inpatient (IP) stay and attributes them to the hospital where the index IP stay occurred. It includes abdominal aortic aneurysm and thoracic aortic aneurysm subtypes.	Efficiency	Centers for Medicare & Medicaid Services	HIQR
MUC15-836	Cholecystectomy and Common Duct Exploration Clinical Episode-Based Payment Measure	The measure constructs a clinically coherent group of services to inform providers about resource use and effectiveness. It sums Parts A and B payments related to a Cholecystectomy and Common Duct Exploration IP stay and attributes them to the hospital where the index IP stay occurred.	Efficiency	Centers for Medicare & Medicaid Services	HIQR

MUC ID	Measure Title	Description	Measure Type	Measure Steward	CMS Program(s)
MUC15-837	Spinal Fusion Clinical Episode-Based Payment Measure	The measure constructs a clinically coherent group of services to inform providers about resource use and effectiveness. It sums Parts A and B payments related to a Spinal Fusion IP stay and attributes them to the hospital where the index IP stay occurred.	Efficiency	Centers for Medicare & Medicaid Services	HIQR
MUC15-838	Transurethral Resection of the Prostate (TURP) for Benign Prostatic Hyperplasia Clinical Episode-Based Payment Measure	The measure constructs a clinically coherent group of services to inform providers about resource use and effectiveness. It sums Parts A and B payments related to a TURP IP stay and attributes them to the hospital where the index IP stay occurred.	Efficiency	Centers for Medicare & Medicaid Services	HIQR
MUC15-928	Paired Measure: Depression Utilization of the PHQ-9 Tool; Depression Remission at Six Months; Depression Remission at Twelve Months	This three-component paired measure assesses whether the PHQ-9 screening tool was used among patients with a diagnosis of major depression or dysthymia, and using patient reports, whether patients with an initial PHQ score >9 demonstrate remission (i.e., PHQ score >5) at six or 12 months.	Outcome	MN Community Measurement	MIPS
MUC15-946	Oncology: Radiation Dose Limits to Normal Tissues	Percentage of patients, regardless of age, with a diagnosis of breast, rectal, pancreatic or lung cancer receiving 3D conformal radiation therapy who had documentation in medical record that radiation dose limits to normal tissues were established prior to the initiation of a course of	Process	American Medical Association - Physician Consortium for Performance Improvement	PCHQR

MUC ID	Measure Title	Description	Measure Type	Measure Steward	CMS Program(s)
		3D conformal radiation for a minimum of two tissues			
MUC15-951	Admissions and Emergency Department Visits for Patients Receiving Outpatient Chemotherapy	Measure estimates risk-adjusted rates of inpatient admissions or emergency department (ED) visits for cancer patients >18 years of age with at least one of the following diagnoses—anemia, dehydration, diarrhea, emesis, fever, nausea, neutropenia, pain, pneumonia, or sepsis—within 30 days of hospital outpatient chemotherapy treatment. Two rates are reported.	Outcome	Centers for Medicare & Medicaid Services	PCHQR; HOQR
MUC15-982	Risk-standardized hospital visits within 7 days after hospital outpatient surgery	The measure score is a hospital-level, post-surgical risk-standardized hospital visit (RSHV) ratio, which is a ratio of the predicted to expected number of all-cause, unplanned hospital visits within 7 days of a same-day surgery at a hospital outpatient department (HOPD) among Medicare fee-for-service (FFS) patients aged 65 years and older.	Outcome	Centers for Medicare & Medicaid Services	HOQR
MUC15-1013	Adult Local Current Smoking Prevalence	Percentage of adult (age 18 and older) U.S. population that currently smoke, defined as adults who reported having smoked at least 100 cigarettes in their lifetime and currently smoke.	Structure	Centers for Disease Control and Prevention, Centers for Medicare & Medicaid Services	HIQR
MUC15-1015	INR Monitoring for Individuals on Warfarin after Hospital Discharge	Percentage of adult inpatient hospital discharges to home for which the individual was on warfarin and discharged with a non-therapeutic International Normalized Ratio	Process	Centers for Medicare & Medicaid Services	HIQR

MUC ID	Measure Title	Description	Measure Type	Measure Steward	CMS Program(s)
		(INR) who had an INR test within 14 days of hospital discharge			
MUC15-1019	Non-Recommended PSA-Based Screening	Percentage of men who were screened unnecessarily for prostate cancer using a prostate-specific antigen (PSA)-based screening.	Process	Centers for Medicare & Medicaid Services	MIPS
MUC15-1033	Hybrid 30-Day Risk-Standardized Acute Ischemic Stroke Mortality Measure with Electronic Health Record (EHR)-Extracted Risk Adjustment Variables	This hybrid stroke mortality measure will estimate the hospital-level, risk-standardized mortality rate (RSMR) for patients discharged from the hospital with a principal discharge diagnosis of acute ischemic stroke. The outcome is all-cause 30-day mortality, defined as death from any cause within 30 days of the index admission date, including in-hospital death, for stroke patients. The measure is referred to as a hybrid because it will use Medicare fee-for-service (FFS) administrative claims to derive the cohort and outcome, and clinical data (EHR extracted) for risk adjustment.	Outcome	Centers for Medicare & Medicaid Services	HIQR
MUC15-1047	Toxic Anterior Segment Syndrome (TASS) Outcome	This measure is used to assess the number of ophthalmic anterior segment surgery patients diagnosed with TASS within 2 days of surgery.	Outcome	Ambulatory Surgical Center (ASC) Quality Collaboration	ASCQR
MUC15-1048	Skilled Nursing Facility 30-Day Potentially Preventable Readmission Measure (SNFPPR)	All-condition risk-adjusted potentially preventable hospital readmission rates (required under PAMA)	Outcome	Centers for Medicare & Medicaid Services	SVF-VBP

MUC ID	Measure Title	Description	Measure Type	Measure Steward	CMS Program(s)
	(required by PAMA)				
MUC15-1065	Substance Use Core Measure Set (SUB)-3 Alcohol & Other Drug Use Disorder Treatment Provided or Offered at Discharge and SUB-3a Alcohol & Other Drug Use Disorder Treatment at Discharge	Overall rate which includes all hospitalized patients 18 years of age and older to whom alcohol or drug use disorder treatment was provided, or offered and refused, at the time of hospital discharge, and a second rate, a subset of the first, which includes only those patients who received alcohol or drug use disorder treatment at discharge.	Process	The Joint Commission	IPFQR
MUC15-1082	Thirty-day all-cause unplanned readmission following psychiatric hospitalization in an Inpatient Psychiatric Facility (IPF)	The measure estimates a facility-level risk-standardized readmission rate for unplanned, all-cause readmission within 30 days of discharge from an Inpatient Psychiatric Facility of adult Medicare fee-for-service (FFS) patients with a principal diagnosis of a psychiatric disorder. The performance period for the measure is 24 months.	Outcome	Centers for Medicare & Medicaid Services	IPFQR
MUC15-1083	IQI-22: Vaginal Birth After Cesarean (VBAC) Delivery Rate, Uncomplicated	Vaginal births per 1,000 deliveries by patients with previous Cesarean deliveries. Excludes deliveries with complications (abnormal presentation, preterm delivery, fetal death,	Outcome	Agency for Healthcare Research & Quality	HIQR

MUC ID	Measure Title	Description	Measure Type	Measure Steward	CMS Program(s)
		multiple gestation diagnoses, or breech procedure).			
MUC15-1127	Drug Regimen Review Conducted with Follow-Up for Identified Issues-Post Acute Care (PAC) Home Health Quality Reporting Program (Required under the IMPACT Act)	Percentage of stays Inpatient Rehabilitation Facility (IRF), Long Term Care Facility (LTCH), and Skilled Nursing Facility (SNF) or care episodes Home Health (HH) in which a drug regimen review was conducted at the Admission (IRF, LTCH or SNF)/ Start of Care (SOC)/ Resumption of Care (ROC) (HH) and timely follow-up with a physician occurred each time potential clinically significant medication issues were identified throughout the stay (IRF, LTCH, or SNF) or care episode (HH).	Process	Centers for Medicare & Medicaid Services	HH QRP
MUC15-1128	Drug Regimen Review Conducted with Follow-Up for Identified Issues-Post Acute Care (PAC) Inpatient Rehabilitation Facility Quality Reporting Program (Required under the IMPACT Act)	Percentage of stays Inpatient Rehabilitation Facility (IRF), Long Term Care Facility (LTCH), and Skilled Nursing Facility (SNF) or care episodes Home Health (HH) in which a drug regimen review was conducted at the Admission (IRF, LTCH or SNF)/ Start of Care (SOC)/ Resumption of Care (ROC) (HH) and timely follow-up with a physician occurred each time potential clinically significant medication issues were identified throughout the stay (IRF, LTCH, or SNF) or care episode (HH).	Process	Centers for Medicare & Medicaid Services	IRF QRP
MUC15-1129	Drug Regimen Review Conducted with Follow-Up for Identified Issues-Post Acute Care (PAC) Long-Term	Percentage of stays Inpatient Rehabilitation Facility (IRF), Long Term Care Facility (LTCH), and Skilled Nursing Facility (SNF) or care episodes Home Health (HH) in which a drug regimen review was conducted at the Admission (IRF, LTCH or SNF)/ Start of Care (SOC)/	Process	Centers for Medicare & Medicaid Services	LTCH QRP

MUC ID	Measure Title	Description	Measure Type	Measure Steward	CMS Program(s)
	Care Hospital Quality Reporting Program (Required under the IMPACT Act)	Resumption of Care (ROC) (HH) and timely follow-up with a physician occurred each time potential clinically significant medication issues were identified throughout the stay (IRF, LTCH, or SNF) or care episode (HH).			
MUC15-1130	Drug Regimen Review Conducted with Follow-Up for Identified Issues-Post Acute Care (PAC) Skilled Nursing Facility Quality Reporting Program (Required under the IMPACT Act)	Percentage of stays Inpatient Rehabilitation Facility (IRF), Long Term Care Facility (LTCH), and Skilled Nursing Facility (SNF) or care episodes Home Health (HH) in which a drug regimen review was conducted at the Admission (IRF, LTCH or SNF)/ Start of Care (SOC)/ Resumption of Care (ROC) (HH) and timely follow-up with a physician occurred each time potential clinically significant medication issues were identified throughout the stay (IRF, LTCH, or SNF) or care episode (HH).	Process	Centers for Medicare & Medicaid Services	SNF QRP
MUC15-1131	Percent of Skilled Nursing Facility Residents Who Self-Report Moderate to Severe Pain	This measure reports the percentage of skilled nursing facility residents who have reported daily pain with at least one episode of moderate to severe pain, or severe or horrible pain of any frequency in the 5 days prior to the assessment.	Outcome	Centers for Medicare & Medicaid Services	SNF QRP
MUC15-1132	Percent of Skilled Nursing Facility Residents Who Were Assessed and Appropriately Given the Influenza Vaccine	The measure reports the percentage of skilled nursing facility residents who are assessed and appropriately given the seasonal influenza vaccine.	Process	Centers for Medicare & Medicaid Services	SNF QRP

MUC ID	Measure Title	Description	Measure Type	Measure Steward	CMS Program(s)
MUC15-1133	Percent of Skilled Nursing Facility Residents Who Newly Received an Antipsychotic Medication	This measure reports the percentage of skilled nursing facility residents who are receiving an antipsychotic medication during a quarter but who were not receiving an antipsychotic medication at admission.	Process	Centers for Medicare & Medicaid Services	SNF QRP
MUC15-1134	Medicare Spending Per Beneficiary-Post Acute Care (PAC) Home Health Quality Reporting Program (Required under the IMPACT Act)	The MSPB-PAC Measure for HHAs evaluates providers' efficiency relative to the efficiency of the national median HHA provider. Specifically, the MSPB-PAC Measure assesses the cost to Medicare for services during an episode of care, which consists of a treatment period and an associated services period. The episode is triggered by the initiation of a 60 day HHA service period. The treatment period begins at the trigger and ends on the last day of the service period. The associated services period begins at the trigger and ends 30 days after the end of the treatment period. These periods constitute the episode window during which beneficiaries' Medicare services are counted toward the episode. The MSPB-PAC episode includes all services during the episode window that are attributable to the HHA provider and those rendered by other providers, except those services during the associated services period that are clinically unrelated to HHA responsibilities (e.g., planned care and routine screening).	Cost/Resource Use	Centers for Medicare & Medicaid Services	HH QRP

MUC ID	Measure Title	Description	Measure Type	Measure Steward	CMS Program(s)
MUC15-1135	Hybrid 30-Day Risk-Standardized Acute Ischemic Stroke Mortality Measure with Claims and Clinical Electronic Health Record (EHR) Risk Adjustment Variables	This hybrid stroke mortality measure will estimate the hospital-level, risk-standardized mortality rate (RSMR) for patients discharged from the hospital with a principal discharge diagnosis of acute ischemic stroke. The outcome is all-cause 30-day mortality, defined as death from any cause within 30 days of the index admission date, including in-hospital death, for stroke patients. The measure is referred to as a hybrid because it will use Medicare fee-for-service (FFS) administrative claims to derive the cohort and outcome, and claims and clinical EHR data for risk adjustment.	Outcome	Centers for Medicare & Medicaid Services	HIQR
MUC15-1136	Measurement of Phosphorus Concentration	Percentage of all peritoneal dialysis and hemodialysis patient months with serum or plasma phosphorus measured at least once within the month.	Process	Centers for Medicare & Medicaid Services	ESRD-QIP
MUC15-1143	Cellulitis Clinical Episode-Based Payment Measure	The measure constructs a clinically coherent group of services to inform providers about resource use and effectiveness. It sums Parts A and B payments related to a cellulitis IP stay and attributes them to the hospital where the index IP stay occurred. It includes subtypes for diabetics, decubitus pressure ulcers, and other cellulitis patients.	Efficiency	Centers for Medicare & Medicaid Services	HVBP
MUC15-1144	Gastrointestinal Intestinal (GI) Hemorrhage Clinical Episode-	The measure constructs a clinically coherent group of services to inform providers about resource use and effectiveness. It sums Parts A and B payments related to a GI hemorrhage IP stay and attributes them to the hospital where	Efficiency	Centers for Medicare & Medicaid Services	HVBP

MUC ID	Measure Title	Description	Measure Type	Measure Steward	CMS Program(s)
	Based Payment Measure	the index IP stay occurred. It includes subtypes for 1) upper, 2) lower, 3) upper and lower, and 4) undefined bleeds.			
MUC15-1145	Kidney/Urinary Tract Infection Clinical Episode-Based Payment Measure	The measure constructs a clinically coherent group of services to inform providers about resource use and effectiveness. It sums Parts A and B payments related to a kidney/urinary tract infection IP stay and attributes them to the hospital where the index IP stay occurred.	Efficiency	Centers for Medicare & Medicaid Services	HVBP
MUC15-1165	Proportion of Patients with Hypercalcemia (NQF #1454)	Percentage of adult dialysis patients with a 3-month rolling average of total uncorrected calcium (serum or plasma) greater than 10.2 mg/dL (hypercalcemia)	Outcome	Centers for Medicare & Medicaid Services	ESRD-QIP
MUC15-1167	Standardized Readmission Ratio (SRR) for dialysis facilities	The Standardized Readmission Ratio is the ratio of a dialysis facility's (DF) total Medicare-paid index discharges for its dialysis patients from acute care hospitals (ACHs) that result in an unplanned Medicare-paid ACH readmission within 30 days to the total readmissions expected for the DF, given the discharging ACH, the DF, patient/index hospitalization characteristics, and the US median for DFs.	Outcome	Centers for Medicare & Medicaid Services	ESRD-QIP
MUC15-1169	Potential Opioid Overuse	Percentage of patients aged 18 years or older who receive opioid therapy for 90 days or longer and are prescribed at least 90 milligrams morphine equivalent daily dosage.	Process	Centers for Medicare & Medicaid Services	MIPS

APPENDIX A: MEASURE SPECIFICATIONS

Table Legend for Measure Specifications.

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

Measure Title: 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 whom 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

MUC ID	Measure Title	Numerator	Denominator	Exclusions
MUC15-177	Use Of Preventive Screening Protocol For Transplant Patients	Number of patients receiving sun protection education and a full skin exam once within the reporting period (1 year) by the provider or documentation of either a referral to or completion of these preventative activities by a dermatologist.	All organ transplant recipients seen by provider in an outpatient setting within the reporting period.	Exclusions: Documented refusal by patient to schedule follow-up annual screens after documented appropriate counseling on risk for skin cancer.
MUC15-178	Use Of Mohs Surgery For Superficial Basal Cell Carcinomas On The Trunk	Number of pathologically-proven primary superficial BCC's treated by the provider utilizing Mohs surgery.	All pathologically-proven primary superficial basal cell carcinoma (BCC) lesions on the trunk (chest, back, abdomen) on immune-competent patients treated by the provider within the reporting period.	Exclusions: • Tumors that have a pathologically documented mixed histology including a more aggressive histologic subtype, or a more aggressive tumor is found on any stage if Mohs surgery is performed. • Pathology report states that it cannot exclude a deeper or more aggressive tumor histology for any reason other than because it is a partial biopsy sample. • Pathology report states that there is a collision tumor with another tumor that has a more aggressive histology.
MUC15-179	Use of Mohs Surgery For Squamous Cell Carcinoma In Situ And Keratoacantho	Number of pathologically-proven primary SCCis or SCC-KA lesions on the trunk (chest, back, abdomen) that are 1 cm or smaller in immunocompetent	All pathologically-proven primary SCCis or SCC-KA lesions on the trunk (chest, back, abdomen) that are 1 cm or smaller in immunocompetent patients	Exclusions: • Patients with a genetic syndrome that increases their risk for skin cancer. • Tumors in areas of previous radiation therapy. • Tumors that have pathologically

MUC ID	Measure Title	Numerator	Denominator	Exclusions
	ma Type - Squamous Cell Carcinoma on The Trunk that are 1 cm or smaller	patients treated by the provider utilizing Mohs surgery.	treated by the provider within the reporting period.	documented areas of dermal invasion, or dermal invasion is found on any stage if Mohs surgery is performed. • Pathology report states that it cannot exclude a deeper or more aggressive tumor histology for any reason other than because it is a partial biopsy sample. • Pathology report states that there is a collision tumor with another tumor that has a more aggressive histology.
MUC15-207	Falls risk composite process measure	Number of patients who were assessed for falls risk and whose risk was incorporated in the care plan based on assessment results and whose care plan was implemented (must meet all 3 conditions)	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.
MUC15-208	Surveillance endoscopy for dysplasia in Barrett's Esophagus	Patients with diagnosis of Barrett's Esophagus who have had an upper endoscopy during the measurement period or the four years prior to the measurement period	All patients with diagnosis of Barrett’s Esophagus	Exclusions: None Exceptions: Denominator: Life expectancy of < 1 year, patient declines
MUC15-209	Non-selective beta blocker use in patients with esophageal varices	Patients with diagnosis of esophageal varices on non-selective beta blocker in the measurement period	All patients with diagnosis of esophageal varices	Exclusions: none Exceptions: Intolerance to non-selective beta blocker, pulse < 60, systolic BP < 90, diastolic BP < 50

MUC ID	Measure Title	Numerator	Denominator	Exclusions
MUC15-210	Hepatitis A vaccination for patients with cirrhosis	Patients with diagnosis of cirrhosis who have had a hepatitis A vaccination during or prior to the measurement period	All patients with diagnosis of cirrhosis	Exclusions: none Exceptions: Patient declined Hepatitis A vaccine or contraindicated
MUC15-211	Hepatitis B vaccination for patients with cirrhosis	Patients with diagnosis of cirrhosis who have had a hepatitis B vaccination during or prior to the measurement period	All patients with diagnosis of cirrhosis	Exclusions: none Exceptions: Patient declined Hepatitis B vaccine or contraindicated
MUC15-212	Surveillance colonoscopy for dysplasia in colonic Crohns Disease	Patients with diagnosis of Crohn's disease who have had a colonoscopy in the measurement period or 1 year prior to measurement year	All patients with diagnosis of colonic Crohn's Disease	Exclusions: none Exceptions: Diagnosis of colonic Crohn's Disease for < 10 years, isolated small bowel Crohn's disease, life expectancy of < 1 year, patient declines
MUC15-215	NMSC: Biopsy Reporting Time - Clinician	Number of cutaneous biopsies by the clinician consistent with basal cell carcinoma or squamous cell carcinoma (to include in situ disease) for which the patient was notified of their final biopsy pathology findings within 15 business days from the time when the biopsy was performed. Distinct dates of service resulting in an eligible patient procedure should be reported separately.	All cutaneous biopsies by the clinician consistent with cutaneous basal or squamous cell carcinoma (including in situ disease).	Pathology reports for tissue specimens produced from excision.
MUC15-216	NMSC: Biopsy Reporting Time - Pathologist	Number of final pathology reports diagnosing cutaneous basal cell carcinoma or	All pathology reports generated by the Pathologist/Dermatopathologist	Pathologists/Dermatopathologists providing a second opinion on a biopsy.

MUC ID	Measure Title	Numerator	Denominator	Exclusions
		squamous cell carcinoma (to include in situ disease) sent from the Pathologist/Dermatopathologist to the biopsying clinician for review within 5 business days from the time when the tissue specimen was received by the pathologist.	consistent with cutaneous basal cell carcinoma or squamous cell carcinoma (to include in situ disease).	
MUC15-217	Screening for Hepatoma in patients with Chronic Hepatitis B	Patients with a diagnosis of Chronic Hepatitis B that have had a documented abdominal US, CT Scan, or MRI in the measurement period	All patients with diagnosis of Chronic Hepatitis B	Exclusions: none Exceptions: All patients with known diagnosis of hepatoma, life expectancy less than 1 year, or patient declined screening during the measurement.
MUC15-220	Hepatitis B vaccination for patients with chronic Hepatitis C	Patients with diagnosis of chronic Hepatitis C who have had a hepatitis B vaccination during or prior to the measurement period	All patients with diagnosis of chronic Hepatitis C	Exclusions: none Exceptions: Patient declined Hepatitis B vaccine or contraindicated
MUC15-221	Surveillance colonoscopy for dysplasia in Ulcerative Colitis	Patients with diagnosis of Ulcerative Colitis who have had a colonoscopy in the measurement period or 1 year prior to measurement year	All patients with diagnosis of Ulcerative Colitis	Exclusions: none Exceptions: Diagnosis of colonic Ulcerative Colitis for < 10 years, life expectancy of < 1 year, patient declines
MUC15-227	Hospice Visits When Death Is Imminent	The numerator of this measure will be the number of patients in the denominator who receive hospice staff visits in the last week of life. Members of the hospice staff whose visits are	The denominator is the number of hospice patients who are discharged as expired within a defined target period.	Patients who received continuous home care or general inpatient care only in the last week of life.

MUC ID	Measure Title	Numerator	Denominator	Exclusions
		considered for the measure include: nurses (registered nurse, licensed professional nurse or nurse practitioner if acting in the role of a nurse), hospice aides, physicians (or nurse practitioner or physician assistant if acting as the attending physician), chaplains or spiritual counselors, therapists (physical therapist, occupational therapist or speech language therapist), medical social workers, and volunteers.		
MUC15-229	HCV- Sustained Virological Response (SVR)	Patients with undetectable HCV RNA 11 weeks after cessation of treatment	All patients aged 18 years and older with a diagnosis of hepatitis C who are initiating or receiving antiviral treatment during the measurement period	Measure only needs to be reported if initiation of antiviral treatment took place before October of the measurement year (11 weeks before the end of the measurement period)
MUC15-230	HIV Screening for Patients with Sexually Transmitted Disease (STD)	Patients with an HIV test during period extending from 30 days before STD diagnosis to 30 days after STD diagnosis	Patients diagnosed with an acute STD during the one year period ending 30 days prior to the end of the measurement year. STDs include: syphilis and gonorrhea	Denominator Exclusions: Patients who have HIV infection.
MUC15-231	Hospice and Palliative Care Composite Process Measure	The numerator is patients who meet the numerator criteria for all of the select measures of the 7 NQF-endorsed measures: 1641, 1647 (modified), 1634, 1637, 1639, 1638, and 1617.	All hospice patients	Patients under 18 years of age

MUC ID	Measure Title	Numerator	Denominator	Exclusions
		Specifically, these measures are: NQF #1641 Hospice and Palliative Care – Treatment Preferences NQF #1647 (modified) Beliefs/Values Addressed (if desired by the patient) NQF #1634 Hospice and Palliative Care – Pain Screening NQF #1637 Hospice and Palliative Care – Pain Assessment NQF #1639 Hospice and Palliative Care – Dyspnea Screening NQF #1638 Hospice and Palliative Care – Dyspnea Treatment NQF #1617 Patients Treated with an Opioid Who Are Given a Bowel Regimen		
MUC15-234	Potentially Preventable 30-Day Post-Discharge Readmission Measure for Home Health Quality Reporting Program (Required under	This measure does not have a simple form for the numerator and denominator. The numerator is defined as the risk-adjusted estimate of the number of unplanned, potentially preventable readmissions that occurred within 30 days from discharge from the prior proximal acute hospitalization. The numerator, as defined,	The denominator is computed with the same model used for the numerator. It is the model developed using all non-excluded episodes in the national data. The measure includes all episodes in the measurement period that are observed in national Medicare FFS data and do not fall into an excluded category. For a particular agency, the model is	(i) Patients who are under 18 years old; (ii) Patients not continuously enrolled in Part A FFS Medicare for the 12 months prior to the HH episode admission date, and at least 30 days after discharge date; (iii) Patients who died during the HH episode; (iv) Patients with a missing risk adjustment authorization code; (v) Patients who leave HH against medical advice; (vi) Patients transfer at the end of a stay to another setting; (vii) Patients

MUC ID	Measure Title	Numerator	Denominator	Exclusions
	the IMPACT Act)	includes risk adjustment for patient characteristics and a statistical estimate of the facility effect beyond patient mix.	applied to the patient population, but the agency effect term is 0. In essence, it is the number of unplanned potentially preventable readmissions that would be expected for that patient population at the average agency.	who did not have a short-term acute care stay within 30 days prior to the HH episode admission date; (viii) Patient who had the following principal diagnoses in the prior proximal hospitalization: medical (nonsurgical) treatment of cancer; primary psychiatric diseases; rehabilitation care/fitting of prostheses and for the adjustment of devices.
MUC15-235	Improvement in Dyspnea in Patients with a Primary Diagnosis of CHF, COPD and/or Asthma	Number of home health episodes of care where a patient with a primary diagnosis of CHF and/or COPD has less dyspnea at discharge than at start (or resumption) of care.	Number of home health episodes of care ending with a primary diagnosis of CHF and/or COPD 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.
MUC15-236	Application of IRF Functional Outcome Measure: Change in Self-Care Score for Medical Rehabilitation Patients (NQF #2633)	The measure does not have a simple form for the numerator and denominator. This measure estimates the risk-adjusted change in self-care score between admission and discharge among SNF residents age 21 and older. The change in self-care score is calculated as the difference between the discharge self-care score and the admission self-care score.	SNF residents included in this measure are at least 21 years of age, Medicare Fee-for-Service beneficiaries, are not independent with all of the self-care activities at the time of admission, and have complete stays.	This quality measure has 8 exclusion criteria: 1. Residents with incomplete stays 2. Residents who are independent with all self-care activities at the time of admission 3. Residents with the following medical conditions: coma; persistent vegetative state; complete tetraplegia; locked-in syndrome; severe anoxic brain damage, cerebral edema, or compression of brain 4. Residents younger than 21 years 5. Residents discharged to hospice

MUC ID	Measure Title	Numerator	Denominator	Exclusions
				6. Residents who are not Medicare Fee-for-Service beneficiaries 7. Residents in swing beds in critical access hospitals 8. Residents who do not receive rehabilitation therapy services
MUC15-251	Screening endoscopy for varices in patients with cirrhosis	Patients with diagnosis of cirrhosis that have documented endoscopy in the measurement period	All patients with diagnosis of cirrhosis	Exclusions: none Exceptions: Currently taking non-selective beta – blocker, life expectancy of < 1 year, patient declines
MUC15-275	Ischemic Vascular Disease All or None Outcome Measure (Optimal Control)	Most recent BP is less than 140/90 mm Hg And Most recent tobacco status is Tobacco Free (NOTE: If there is No Documentation of Tobacco Status the patient is not compliant for this measure) And Daily Aspirin or Other Antiplatelet Unless Contraindicated And Statin Use	Patients with CAD or a CAD Risk-Equivalent Condition 18-75 years of age and alive as of the last day of the Measurement Period. A minimum of two CAD or CAD Risk-Equivalent Condition coded office visits OR one Acute Coronary Event (AMI, PCI, CABG) from a hospital visit and must be seen by a PCP / Cardiologist for two office visits in 24 months and one office visit in 12 months.	History of Gastrointestinal Bleed or Intra-cranial Bleed or documentation of active anticoagulant use during the MP for the Aspirin/Other Anticoagulant component (numerator) of the measure. Inpatient Stays, Emergency Room Visits, Urgent Care Visits, and Patient Self-Reported BP's (Home and Health Fair BP results) for the Blood Pressure Control component (numerator) of the composite measure.
MUC15-287	Medicare Spending per Beneficiary-Post Acute Care (PAC) Inpatient Rehabilitation Facility Quality	The numerator is the attributed provider's average MSPB-PAC Amount. The MSPB-PAC Amount for each IRF provider depends on two factors:	The denominator for an IRF's MSPB-PAC Measure is the weighted median MSPB-PAC Amount across all episodes for IRFs nationally.	The measure excludes the following episodes: • Any episode that is triggered by an IRF stay that happens outside the 50 states or DC.

MUC ID	Measure Title	Numerator	Denominator	Exclusions
	Reporting Program (Required under the IMPACT Act)	i) the average of the ratio of standardized episode spending level and expected episode spending for each IRF provider; and ii) the average standardized episode spending across all IRF providers. To calculate the MSPB-PAC Amount for each IRF, one finds the average of the ratio of the standardized episode spending over the expected episode spending, and then multiplies this quantity by the average episode spending level across all IRFs.		• Any episode that is triggered by an IRF stay for which we see Part C crossover claims. • Any episode for which standard allowed amount of the IRF stay could not be calculated or is equal to 0. • Any episode in which a beneficiary is not enrolled in Medicare Fee-for-Service for the entirety of the lookback period plus the episode window or is enrolled in Part C for any part of the lookback plus episode window. • Any episode in which a beneficiary has a primary payer other than Medicare for any part of the lookback plus episode window. • Any episode for which the lookback period extends beyond our observation period.
MUC15-289	Medicare Spending per Beneficiary-Post Acute Care (PAC) Long-Term Care Hospital Quality Reporting Program	The numerator is the attributed provider's average MSPB-PAC Amount. The MSPB-PAC Amount for each LTCH provider depends on two factors: i) the average of the ratio of standardized episode spending level and expected	The denominator for an LTCH's MSPB-PAC Measure is the weighted median MSPB-PAC Amount across all episodes for LTCHs nationally.	The measure excludes the following episodes: • Any episode that is triggered by a LTCH stay that happens outside the 50 states or DC. • Any episode that is triggered by a LTCH stay for which we see Part C crossover claims.

MUC ID	Measure Title	Numerator	Denominator	Exclusions
	(Required under the IMPACT Act)	episode spending for each LTCH provider; and ii) the average standardized episode spending across all LTCH providers. To calculate the MSPB-PAC Amount for each LTCH, one finds the average of the ratio of the standardized episode spending over the expected episode spending, and then multiplies this quantity by the average episode spending level across all LTCHs.		• Any episode for which standard allowed amount of the LTCH stay could not be calculated or is equal to 0. • Any episode in which a beneficiary is not enrolled in Medicare Fee-for-Service for the entirety of the lookback period plus the episode window or is enrolled in Part C for any part of the lookback plus episode window. • Any episode in which a beneficiary has a primary payer other than Medicare for any part of the lookback plus episode window. • Any episode for which the lookback period extends beyond our observation period.
MUC15-291	Medicare Spending per Beneficiary-Post Acute Care (PAC) Skilled Nursing Facility Quality Reporting Program (Required under the IMPACT Act)	The numerator is the attributed provider's average MSPB-PAC Amount. The MSPB-PAC Amount for each SNF provider depends on two factors: i) the average of the ratio of standardized episode spending level and expected episode spending for each SNF provider; and	The denominator for a SNF's MSPB-PAC Measure is the weighted median MSPB-PAC Amount across all episodes for SNFs nationally.	The measure excludes the following episodes: • Any episode that is triggered by an SNF stay that happens outside the 50 states or DC. • Any episode that is triggered by an SNF stay for which we see Part C crossover claims. • Any episode for which standard allowed amount of the SNF stay could not be calculated or is equal to 0.

MUC ID	Measure Title	Numerator	Denominator	Exclusions
		ii) the average standardized episode spending across all SNF providers. To calculate the MSPB-PAC Amount for each SNF, one finds the average of the ratio of the standardized episode spending over the expected episode spending, and then multiplies this quantity by the average episode spending level across all SNFs.		• Any episode in which a beneficiary is not enrolled in Medicare Fee-for-Service for the entirety of the lookback period plus the episode window or is enrolled in Part C for any part of the lookback plus episode window. • Any episode in which a beneficiary has a primary payer other than Medicare for any part of the lookback plus episode window. • Any episode for which the lookback period extends beyond our observation period.
MUC15-294	Hospital 30-Day Mortality Following Acute Ischemic Stroke Hospitalization Measure	This outcome measure does not have a traditional numerator and denominator. We use this field to define the measure outcome. The measure outcome is death from any cause within 30 days of the admission date of the index admission for patients with a principal discharge diagnosis of acute ischemic stroke.	The cohort includes inpatient admissions for patients aged 65 years and older who were discharged from short-term acute care hospitals with a principal discharge diagnosis of acute ischemic stroke.	The measure excludes admissions for patients: -with inconsistent or unknown vital status or other unreliable data (unreliable or missing data limit the validity of the risk-adjustment model); -enrolled in the Medicare hospice program at any time in the 12 months prior to the index admission, including the first day of the index admission (because these patients are likely continuing to seek comfort measures only and mortality is not necessarily an adverse outcome or signal of poor quality care for these patients); and -discharged against medical advice

MUC ID	Measure Title	Numerator	Denominator	Exclusions
				(because providers did not have the opportunity to deliver full care and prepare the patient for discharge).
MUC15-295	Hospital-level, risk-standardized payment associated with an episode of care for primary elective total hip and/or total knee arthroplasty (THA/TKA)	This outcome measure does not have a traditional numerator and denominator. We are using this field to define the outcome. The outcome for this measure is a hospital-level, risk-standardized payment for Medicare patients for a primary elective total THA/TKA episode of care. The payment timeframe starts from the admission date of an index hospitalization through 90 days post-admission. We include payments for the index admission, as well as payments for subsequent inpatient, outpatient, skilled nursing facility, home health, hospice, physician/clinical laboratory/ambulance services, supplier Part B items, and durable medical equipment, prosthetics/orthotics, and supplies. In order to compare payments for Medicare patients related to clinical care, we remove geography and policy adjustment from our payment	This outcome measure does not have a traditional numerator and denominator. We use this field to define the measure cohort. The measure cohort includes admissions to non-federal, short-stay, acute-care hospitals for Medicare FFS patients aged 65 years and older with a qualifying THA/TKA procedure, not transferred in from another facility. Patients must also have continuous enrollment in Medicare Part A and Part B benefits for the 12 months prior to the index admission and 90 days post-admission.	1) Patients without complete administrative data in the 90 days following the index admission, if alive 2) Patients with no payment information during the index admission 3) Patients discharged against medical advice (AMA) 4) Patients transferred to federal hospitals 5) Patients with more than two THA/TKA procedure codes during the admission 6) Patients transferred into the hospital

MUC ID	Measure Title	Numerator	Denominator	Exclusions
		calculation whenever possible. If the data for a specific care setting do not allow for the removal of these adjustments, we calculate an average payment for each item across all geographic areas and replace the claim payment amount in the data with the average payment amount for that item		
MUC15-296	New Corneal Injury Not Diagnosed in the Post-Anesthesia Care Unit/Recovery Area	All patients who undergo anesthesia care and who do not have a new diagnosis of corneal injury in the post-anesthesia care unit/recovery area Definition: Corneal Injury: Includes both exposure keratitis and corneal abrasion. For the purposes of this measure, the distinction does not need to be made with fluorescein examination of the cornea under ultraviolet light; however, it can be diagnosed in this manner. Corneal injury also includes any new symptom of eye pain treated with topical antibiotic (e.g., erythromycin) while in the post-anesthesia care unit/recovery area. Other causes of eye pain (e.g. acute angle-	All patients who undergo anesthesia care, except those with pre-existing eye trauma or those patients undergoing ophthalmologic surgery.	Exclusions: none Exceptions: Patients who undergo ophthalmologic surgery or patients with a diagnosis of either eye trauma or corneal injury before anesthesia care.

MUC ID	Measure Title	Numerator	Denominator	Exclusions
		closure glaucoma) can be excluded by instilling one drop of local anesthetic (e.g., proparacaine) into the eye. If the pain is immediately and completely relieved, corneal injury is confirmed and acute angle-closure glaucoma is excluded.		
MUC15-307	Performance of objective measure of functional hearing status	An objective measure of functional hearing status using a standardized open-set speech recognition test (words, short phrases, or sentences) is documented.	Patients age 5 years and older on the date of the encounter diagnosed with a permanent, bilateral sensorineural hearing loss (ICD-10: H90.3, H91.03, H91.3) and seen for audiologic testing (CPT 92552, 92553, 92557, 92579, 92582, 92591, 92626)	1) Patient has a hearing loss that requires medical or surgical intervention 2) Patient refuses to participate 3) Patient is unable to perform functional hearing assessment due to other complicated health factors, language delay or developmental delay. Exceptions: None
MUC15-313	Patient-Reported Functional Communication	A standardized, patient-reported functional communication assessment is documented in the record	Patients age 18 years and older on the date of the encounter with a diagnosis of a permanent, bilateral sensorineural hearing loss (ICD-10 H90.3, H91.03, H91.3) and are seen for audiologic testing (CPT 92552, 92553, 92557, 92591, 92626)	1) Patient has a hearing loss that requires medical or surgical intervention 2) Patient refuses to participate/complete patient-reported functional hearing assessment 3) Patient is unable to perform functional hearing assessment due to other complicated health factors, language delay, or developmental delay Exceptions: None
MUC15-322	Hospital-level, risk-standardized	Note: This outcome measure does not have a traditional numerator and denominator.	This outcome measure does not have a traditional numerator and denominator. We use this field to	1. Incomplete administrative data in the 30 days following the index admission if discharged alive

MUC ID	Measure Title	Numerator	Denominator	Exclusions
	payment associated with a 30-day episode-of-care for heart failure (HF)	We are using this field to define the outcome. The outcome for this measure is a hospital-level, risk-standardized payment for Medicare patients for a heart failure episode of care. The payment timeframe starts from the admission date of an index hospitalization through 30 days post-admission. We include payments for the index admission, as well as payments for subsequent inpatient, outpatient, skilled nursing facility, home health, hospice, physician/clinical laboratory/ambulance services, supplier Part B items, and durable medical equipment, prosthetics/orthotics, and supplies. In order to compare payments for Medicare patients related to clinical care, we remove geography and policy adjustment from our payment calculation whenever possible. If the data for a specific care setting do not allow for the removal of these adjustments, we calculate an average	define the measure cohort. The measure cohort includes admissions to non-federal, short-stay, acute-care hospitals for Medicare FFS patients aged 65 years and older with a principal discharge diagnosis of HF. Patients must also have continuous enrollment in Medicare Part A and Part B benefits for the 12 months prior to the index admission and 30 days post- admission.	2. Discharged alive on the day of admission or the following day who were not transferred 3. Inconsistent or unknown patient vital status, or other unreliable demographic data (age and gender) 4. Admissions where patients are discharged against medical advice (AMA) 5. 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 6. Transferred to federal hospitals 7. Missing index diagnosis-related group (DRG) weight and provider received no payment 8. Hospitalizations for patients who receive a heart transplant during the episode of care 10. Hospitalizations for patients who receive a Left Ventricular Assist Device (LVAD) during the episode of care

MUC ID	Measure Title	Numerator	Denominator	Exclusions
		payment for each item across all geographic areas and replace the claim payment amount in the data with the average payment amount for that item.		
MUC15-369	Hospital-level, risk-standardized payment associated with a 30-day episode-of-care for Acute Myocardial Infarction (AMI)	This outcome measure does not have a traditional numerator and denominator. We are using this field to define the outcome. The outcome for this measure is a hospital-level, risk-standardized payment for Medicare patients for an AMI episode of care. The payment timeframe starts from the admission date of an index hospitalization through 30 days post-admission. We include payments for the index admission, as well as payments for subsequent inpatient, outpatient, skilled nursing facility, home health, hospice, physician/clinical laboratory/ambulance services, supplier Part B items, and durable medical equipment, prosthetics/orthotics, and supplies. In order to compare payments for Medicare patients related to	This outcome measure does not have a traditional numerator and denominator. We use this field to define the measure cohort. The measure cohort includes admissions to non-federal, short-stay, acute-care hospitals for Medicare FFS patients aged 65 years and older with a principal discharge diagnosis of AMI. Patients must also have continuous enrollment in Medicare Part A and Part B benefits for the 12 months prior to the index admission and 30 days post- admission.	1. Incomplete administrative data in the 30 days following the index admission if discharged alive 2. Discharged alive on the day of admission or the following day who were not transferred 3. Inconsistent or unknown patient vital status, or other unreliable demographic data (age and gender) 4. Admissions where patients are discharged against medical advice (AMA) 5. 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 6. Transferred to federal hospitals 7. Transferred into the hospital 8. Missing index DRG weight and provider received no payment

MUC ID	Measure Title	Numerator	Denominator	Exclusions
		clinical care, we remove geography and policy adjustment from our payment calculation whenever possible. If the data for a specific care setting do not allow for the removal of these adjustments, we calculate an average payment for each item across all geographic areas and replace the claim payment amount in the data with the average payment amount for that item.		
MUC15-370	Corneal Graft Surgery - Postoperative improvement in visual acuity to 20/40 or better	Visual acuity of 20/40 of better achieved within 90 days following corneal graft surgery	Patients aged 18 years or older who underwent a corneal graft procedure with one of the following indications for surgery: endothelial dystrophy, post cataract surgery edema, failed corneal graft, ectatic disease, anterior/stromal dystrophy, or corneal opacity	None
MUC15-372	Glaucoma - Intraocular Pressure (IOP) Reduction	Patient visits where the eye(s) intraocular pressure (IOP) was below a specified threshold based on the severity of their glaucoma. - Mild stage glaucoma: IOP </= 22mm HG - Moderate stage glaucoma: IOP </= 18 mm HG	Patients aged between 40 and 85 years, with a minimum of 4 office visits during the prior 24 months, with a diagnosis of glaucoma and with documentation of the severity of their condition.	Denominator Exclusions: Patients with a diagnosis of low tension glaucoma OR Eyes with a documented severity of indeterminate stage OR Eyes with absolute glaucoma blindness OR Patients who had glaucoma incisional

MUC ID	Measure Title	Numerator	Denominator	Exclusions
		- Severe stage: IOP </= 15 mm HG		surgery performed within the last 90 days OR Patients with visual acuity findings of count fingers, hand motion, light perception or no light perception Exclusions: None
MUC15-374	Glaucoma - Intraocular Pressure (IOP) Reduction Following Laser Trabeculosplasty	Patients eyes with a reduction in intraocular pressure ≥ 20% from their pretreatment level	Patients aged between 40 and 85 years who underwent laser trabeculoplasty	Denominator Exclusions: Eyes with absolute glaucoma blindness OR Patients with visual acuity findings of count fingers, hand motion, light perception or no light perception Exceptions: None
MUC15-375	Surgery for Acquired Involutional Ptosis: Patients with an improvement of marginal reflex distance (MRD)	Patients who achieved an improvement in MRD postoperatively compared to their preoperative level	Patients aged 18 years or older with a diagnosis of acquired involutional ptosis who underwent a surgical procedure for the condition	None
MUC15-377	Acquired Involutional Entropion: Normalized lid position after surgical repair	Patients who achieved normalized lid position postoperatively within 90 days of surgery	Patients aged 18 years or older with a diagnosis of involutional entropion who underwent a surgical procedure for the condition	None
MUC15-378	Hospital-level, risk-standardized 30-day episode-	This outcome measure does not have a traditional numerator and denominator. We are using this field to define the outcome.	This outcome measure does not have a traditional numerator and denominator. We use this field to define the measure cohort.	The measure excludes patients with: 1. Incomplete administrative data in the 30 days following the index admission (if alive)

MUC ID	Measure Title	Numerator	Denominator	Exclusions
	of-care payment measure for pneumonia	The outcome for this measure is a hospital-level, risk-standardized payment for Medicare patients for a pneumonia episode-of-care. The payment timeframe starts from the admission date of an index hospitalization through 30 days post-admission. We include payments for the index admission, as well as payments for subsequent inpatient, outpatient, skilled nursing facility, home health, hospice, physician/clinical laboratory/ambulance services, supplier Part B items, and durable medical equipment, prosthetics/orthotics, and supplies. In order to compare payments for Medicare patients related to clinical care, we remove geography and policy adjustment from our payment calculation whenever possible. If the data for a specific care setting do not allow for the removal of these adjustments, we calculate an average payment for each item across all geographic areas and replace the	The measure cohort includes admissions to non-federal, short-stay, acute-care hospitals for Medicare FFS patients age 65 years and older with a principal discharge diagnosis of pneumonia, or aspiration pneumonia, or sepsis in cases where sepsis is accompanied by secondary diagnosis of pneumonia present on admission. Patients must also have continuous enrollment in Medicare Part A and Part B benefits for the 12 months prior to the index admission and 30 days post- admission.	2. Same or next day discharge and patient did not die or get transferred 3. Transfers into the hospital 4. Inconsistent or unknown mortality status 5. Unreliable data 6. Patients who leave hospital against medical advice (AMA) 7. Patients enrolled in hospice in year prior to admission or day of admission 8. Transfers to Federal hospitals 9. Patients without an index admission DRG or DRG weight 10. Admissions within 30 days of a previous index admission

MUC ID	Measure Title	Numerator	Denominator	Exclusions
		claim payment amount in the data with the average payment amount for that item.		
MUC15-379	Exudative Age-Related Macular Degeneration: Loss of Visual Acuity	Patients who achieved a lost in visual acuity of ≤ 0.3 logMar	Patients aged 18 years or older with a diagnosis of exudative age-related macular degeneration being treated with anti-vegf agents	None
MUC15-391	Excess Days in Acute Care after Hospitalization for Pneumonia	This outcome measure does not have a traditional numerator and denominator. We use this field to describe the outcome. The outcome of the measure is the average number of days the patient spends in acute care (ED treat-and-release visits, observation stays, and readmissions) during the first 30 days after discharge from the hospital. An ED visit is defined as a visit with revenue center codes '0450', '0451', '0452', '0459', or '0981'. Each ED visit is counted as one half-day (0.5 days). An observation stay is defined as a visit with revenue center code '0762' or Healthcare Common Procedure Coding System (HCPCS) code 'G0378' (in the	This outcome measure does not have a traditional numerator and denominator. We use this field to define the measure cohort. The denominator includes Medicare FFS beneficiaries aged 65 years and older hospitalized at non-Federal hospitals with a principle discharge diagnosis of pneumonia, aspiration pneumonia, and sepsis in cases where sepsis is accompanied by secondary diagnosis of pneumonia present on admission. To be included in the cohort the patients must have been continuously enrolled in Medicare FFS Parts A and B for the 12 months prior to the index hospitalization.	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.

MUC ID	Measure Title	Numerator	Denominator	Exclusions
		outpatient data files) or Current Procedural Terminology (CPT) codes '99217' to '99220' or '99234' to '99236' (in the Physician Carrier data files). Observation stays are recorded in terms of hours and converted for the measure into half-days (rounded up). A readmission is defined as any unplanned acute care hospital inpatient hospitalization within 30 days of the discharge date for the index hospitalization. "Planned" readmissions are those planned by providers for anticipated medical treatment or procedures that must be provided in the inpatient setting. To exclude planned readmissions, we use the planned readmission algorithm previously developed for the CMS 30-day pneumonia readmission measure. Each rehospitalization is counted according to the length of stay, calculated as the discharge date minus the admission date. Admissions that extend beyond the 30-day follow-up period are truncated on day 30.		

MUC ID	Measure Title	Numerator	Denominator	Exclusions
		When an ED visit, observation stay, or readmission overlaps with another event, we count only the most severe of the overlapping events		
MUC15-392	Nonexudative Age-Related Macular Degeneration: Loss of Visual Acuity	Patients who achieved a loss a loss in visual acuity of ≤ 0.3 logMar	Patients aged 18 years or older with a diagnosis of nonexudative AMD and taking AREDS supplements	None
MUC15-393	Diabetic Macular Edema: Loss of Visual Acuity	Patients who achieved a loss a loss in visual acuity of ≤ 0.3 logMar	Patients aged 18 years or older with a diagnosis of diabetic macular edema who received anti-VEGF injections, intravitreal injections, or laser photocoagulation therapy	Denominator Exclusions: Patients with ophthalmic complications of diabetic retinopathy including neovascular glaucoma, traction retinal detachment, vitreous hemorrhage, history of vitreous surgery, history of retinal surgery, development of retinopathy in the fellow eye Exceptions: None
MUC15-394	Acute Anterior Uveitis: Post-treatment visual acuity	Best corrected visual acuity of 20/40 or better achieved within 90 days following treatment initiation OR Patient's visual acuity returned to baseline value within 90 days of treatment initiation	Patients aged 18 years of older who underwent treatment for acute anterior uveitis	None
MUC15-395	Hospital 30-Day, All-Cause, Risk-	The outcome for this measure is 30-day all-cause mortality. Mortality is defined as death for	This claims-based measure can be used in either of two patient cohorts: (1) patients aged 65	For all cohorts: 1) Patients who leave hospital against medical advice (AMA)

MUC ID	Measure Title	Numerator	Denominator	Exclusions
	Standardized Mortality Rate (RSMR) Following Coronary Artery Bypass Graft (CABG) Surgery	any reason within 30 days of the procedure date from the index admission for patients 65 and older discharged from the hospital after undergoing isolated CABG .	years or older or (2) patients aged 18 years or older. We have tested the measure in both age groups. The cohort includes admissions for patients who receive a qualifying isolated CABG procedure and with a complete claims history for the 12 months prior to admission. If a patient has more than one qualifying isolated CABG admission in a year, one hospitalization is randomly selected for inclusion in the measure.	2) Patients with inconsistent or unknown vital status or other unreliable data 3) Subsequent qualifying CABG procedures during the measurement period are identified by the ICD-9 codes defining CABG listed in denominator details. 4) Non-isolated CABG procedures (CABG Surgeries that occur concomitantly with excluded procedures and procedure groups).
MUC15-396	Acute Anterior Uveitis: Post-treatment Grade 0 anterior chamber cells	Patients achieved Grade 0 anterior chamber cells at 30 days after onset of treatment	Patients aged 18 years of older who underwent treatment for acute anterior uveitis	None
MUC15-397	Chronic Anterior Uveitis: Post-treatment visual acuity	Best corrected visual acuity of 20/40 or better achieved within 90 days following treatment initiation OR Patient's visual acuity returned to baseline value within 90 days of treatment initiation	Patients aged 18 years of older who underwent treatment for chronic anterior uveitis	None
MUC15-398	Ventilator Weaning	The numerator represents the number of patients within each category of weaning status at	The target population (denominator) for this measure is the total number of patients who	This measure excludes patients with missing data and invasively mechanically ventilated patients identified as non-

MUC ID	Measure Title	Numerator	Denominator	Exclusions
	(Liberation) Rate	discharge. The numerator will be calculated separately according to each of the measure component groups below. Each numerator component is the number of patients in the following categories: (1) the number of patients reported as fully weaned on planned or unplanned discharge assessment (2) the number of patients reported as not fully weaned on planned or unplanned discharge assessment. A patient is considered fully weaned if s/he does not require any invasive mechanical ventilation support for at least 2 consecutive calendar days immediately prior to the date of discharge (alive or dead) from an LTCH.	were discharged (alive or dead) from an LTCH during the reporting period and who were on invasive mechanical ventilation support upon admission to the LTCH, for whom weaning attempts were expected or anticipated at admission.	weaning at the time of admission to an LTCH. Patients who may be considered non-weaning include patients who are considered chronically ventilated as defined by evidence-based guidelines for ventilator liberation or patients with an acute or chronic condition that negates at admission any expectation or anticipation of weaning attempts (e.g. progressive neuromuscular disease such amyotrophic lateral sclerosis, or irreversible neurological injury or disease or dysfunction such as high (C2) spinal cord injury). Consideration of a patient as non-weaning must be based on documentation found in the patient's medical record by Day 2 of LTCH Stay.
MUC15-399	Chronic Anterior Uveitis: Post-treatment Grade 0 anterior chamber cells	Patients achieved Grade 0 anterior chamber cells at 30 days after onset of treatment AND Patients managed at 60 days with dose of topical corticosteroids or prednisolone	Patients aged 18 years of older who underwent treatment for chronic anterior uveitis	None

MUC ID	Measure Title	Numerator	Denominator	Exclusions
		acetate (or equivalent) 1% 3X/days or less		
MUC15-400	Compliance with Spontaneous Breathing Trial (SBT) (including Tracheostomy Collar Trial (TCT) or Continuous Positive Airway Pressure (CPAP) Breathing Trial)) by Day 2 of the LTCH Stay	This measure assesses facility-level compliance with Spontaneous Breathing Trial (SBT), including Tracheostomy Collar Trial (TCT) or Continuous Positive Airway Pressure (CPAP) breathing trial, by Day 2 of the LTCH stay for patients on invasive mechanical ventilation (IMV) support upon admission, *and* for whom at admission weaning attempts were expected or anticipated. The numerators for the two (2) components are: 1. the number of patients who were assessed for readiness for SBT (including TCT or CPAP breathing trial) by Day 2 of the LTCH stay, 2. the number of patients found ready for SBT (including TCT or CPAP breathing trial) for whom an SBT (including TCT or CPAP	The target population (denominator) for this measure is the total number of patients admitted to the Long Term Care Hospital (LTCH) during the reporting period who were on invasive mechanical ventilation support upon upon admission to the LTCH,for whom weaning attempts were expected or anticipated at admission.	This measure excludes patients with missing data and invasively mechanically ventilated patients identified as non-weaning at the time of admission to an LTCH. Patients who may be considered non-weaning include patients who are considered chronically ventilated as defined by evidence-based guidelines for ventilator liberation or patients with an acute or chronic condition that negates at admission any expectation or anticipation of weaning attempts (e.g. progressive neuromuscular disease such amyotrophic lateral sclerosis, or irreversible neurological injury or disease or dysfunction such as high (C2) spinal cord injury). Consideration of a patient as non-weaning must be based on documentation found in the patient's medical record by Day 2 of LTCH Stay.

MUC ID	Measure Title	Numerator	Denominator	Exclusions
		breathing trial) was performed by Day 2 of LTCH stay.		
MUC15-402	30 Day Stroke and Death Rate for Symptomatic Patients undergoing carotid stent placement	All symptomatic patients with stroke or death within 30 days of Carotid Artery Stenting	All symptomatic patients undergoing Carotid Artery Stenting	Patients being treated with emergent Carotid Artery Stenting (Acute ischemic stroke or Trauma) Exceptions: None
MUC15-408	Discharge to Community-Post Acute Care (PAC) Inpatient Rehabilitation Facility Quality Reporting Program (Required under the IMPACT Act)	This measure does not have a simple form for the numerator and denominator. The numerator is defined as the risk-adjusted estimate of the number of patients/residents/persons included in the measure who are discharged to the community, and do not have an unplanned (re)admission to an acute care hospital or LTCH on the day of discharge or in the 31 days following discharge to community, and remain alive during the 31 days following discharge to community. The numerator estimate includes risk adjustment for patient/resident/person characteristics, and a statistical	The denominator is computed with the same model used for the numerator. It is the model developed using all non-excluded facility/agency stays/episodes in the national data. The measure includes all facility/agency stays/episodes in the measurement period that are observed in national Medicare FFS data and do not fall into an excluded category. For a particular facility/agency, the model is applied to the patient/resident/person population, but the facility/agency effect term is 0. In essence, it is the number of discharges to community that would be expected for that patient/resident/person	(i) Age under 18 years; (ii) No short-term acute care stay within 30 days prior to IRF admission ; (iii) Discharges to psychiatric hospital; (iv) Discharges against medical advice; (v) Discharges to federal hospitals or disaster alternative care sites; (vi) Patients not continuously enrolled in Part A FFS Medicare for the 12 months prior to IRF admission date, and at least 31 days after IRF discharge date; (vii) Patients whose prior short-term acute-care stay was for non-surgical treatment of cancer; (viii) Discharges to hospice; (ix) IRF stays that end in transfer to another IRF; (x) IRF stays with claims data that are problematic (e.g., anomalous records for stays that overlap wholly or in part, or are otherwise erroneous or contradictory); (xi) Patients who received care from a provider located

MUC ID	Measure Title	Numerator	Denominator	Exclusions
		estimate of the facility/agency effect beyond case mix.	population at the average facility/agency.	outside of the US, Puerto Rico, or a US territory..
MUC15-411	Patient reported outcomes following ilio-femoral venous stenting	The number of patients who demonstrate improvement on a disease-specific patient reported quality of life score at 3-6 months following ilio-femoral venous stenting	The total number of patients undergoing ilio-femoral venous stenting who received a baseline and follow-up disease specific patient reported quality of life score at 3-6 months	Patients with a history of lower extremity or pelvic vein surgery. Exceptions: Patients with a history of pelvic or lower extremity orthopedic surgery. Patients with debilitating osteoarthritis involving the hips, knees, or ankles.
MUC15-412	Assessment of post-thrombotic syndrome following ilio-femoral venous stenting	The number of patients who demonstrate an improvement in the Villalta score following ilio-femoral venous stenting as assessed between 3-6 months post procedure	The total number of patients who underwent ilio-femoral venous stenting with clinical assessment using the Villalta score at baseline and between 3-6 months post-procedure	Patients with a history of lower extremity or pelvic vein surgery. Exceptions: Patients with a history of pelvic or lower extremity orthopedic surgery. Patients with debilitating osteoarthritis involving the hips, knees, or ankles.
MUC15-413	Improvement in the Venous Clinical Severity Score after ilio-femoral venous stenting	The number of patients who demonstrate improvement in the venous clinical severity score following ilio-femoral venous stenting as assessed 3-6 months post-procedure	The total number of patients who underwent ilio-femoral venous stenting with application of the venous clinical severity both at baseline and at 3-6 months post-procedure.	Patients with history of lower extremity or pelvic vein surgery. Exceptions: Patients with a history of pelvic or lower extremity orthopedic surgery. Patients with debilitating osteoarthritis involving the hips, knees, or ankles.
MUC15-414	Discharge to Community-Post Acute Care (PAC) Long-Term Care Hospital Quality Reporting	This measure does not have a simple form for the numerator and denominator. The numerator is defined as the risk-adjusted estimate of the number of patients/residents/persons included in the measure who are	The denominator is computed with the same model used for the numerator. It is the model developed using all non-excluded facility/agency stays/episodes in the national data. The measure includes all facility/agency	(i) Age under 18 years; (ii) No short-term acute care stay within 30 days prior to LTCH admission ; (iii) Discharges to psychiatric hospital; (iv) Discharges against medical advice; (v) Discharges to federal hospitals or disaster alternative care sites; (vi) Patients not continuously

MUC ID	Measure Title	Numerator	Denominator	Exclusions
	Program (Required under the IMPACT Act)	discharged to the community, and do not have an unplanned (re)admission to an acute care hospital or LTCH on the day of discharge or in the 31 days following discharge to community, and remain alive during the 31 days following discharge to community. The numerator estimate includes risk adjustment for patient/resident/person characteristics, and a statistical estimate of the facility/agency effect beyond case mix.	stays/episodes in the measurement period that are observed in national Medicare FFS data and do not fall into an excluded category. For a particular facility/agency, the model is applied to the patient/resident/person population, but the facility/agency effect term is 0. In essence, it is the number of discharges to community that would be expected for that patient/resident/person population at the average facility/agency.	enrolled in Part A FFS Medicare for the 12 months prior to the LTCH stay admission date, and at least 31 days after PAC discharge date; (vii) Patients whose prior short-term acute-care stay was for non-surgical treatment of cancer; (viii) Discharges to hospice; (ix) LTCH stays that end in transfer to another LTCH; (x) LTCH stays with claims data that are problematic (e.g., anomalous records for stays that overlap wholly or in part, or are otherwise erroneous or contradictory); (xi) Patients who received care from a provider located outside of the US, Puerto Rico, or a US territory.
MUC15-415	Proportion admitted to hospice for less than 3 days	Patients who died from cancer and spent fewer than three days in hospice	Patients who died from cancer who were admitted to hospice	None
MUC15-420	Rate of adequate percutaneous image-guided biopsy	Number of percutaneous image-guided biopsy procedures performed associated with a specimen sample considered adequate for pathological analysis.	Number of percutaneous image-guided biopsies performed	Repeat biopsy procedures performed at the same site following an initial inadequate sample
MUC15-423	Efficacy of uterine artery embolization for	Number of patients who report symptomatic improvement following uterine artery embolization performed for	All patients referred for uterine artery embolization who completed a disease specific survey instrument at baseline and	Exclusions: Patients with incomplete survey data Exceptions: Patients with suspected adenomyosis

MUC ID	Measure Title	Numerator	Denominator	Exclusions
	symptomatic uterine fibroids	treatment of fibroids using a disease-specific survey instrument	6 months following the procedure.	
MUC15-424	Common femoral arterial access site complication	Number of percutaneous arterial access procedures with a vascular complication from common femoral arterial access using a system of 8Fr or less in size including pseudoaneurysms, arteriovenous fistulae, large hematomas, arterial dissection requiring intervention, arterial thromboembolism, and infectious arteritis.	All percutaneous groin arterial access procedures using access sheath sizes of 8Fr or less. For patients undergoing bilateral arterial access each access site should be considered a separate event.	Exclusions: Patients with a history of surgical lower extremity bypass. Exceptions: Patients with recent groin arterial access with uncertain vascular access status (i.e. outside arterial procedure, uncertain if complication occurred); Recent arterial vascular access procedure with complication referred for subsequent treatment
MUC15-434	Verification of ISD prior to transurethral bulking injection.	Percentage of patients who have documented ISD prior to procedure	All patients who underwent the procedure CPT code 51715 and ICD-9 code 599.82	None
MUC15-436	Over-utilization of mesh in the posterior compartment	Number of patients undergoing surgery for pelvic organ prolapse in the posterior compartment with a synthetic mesh augment is placed in the posterior compartment.	Number of patients undergoing surgery for pelvic organ prolapse which includes the posterior compartment. The prolapse codes for ICD9 -> ICD-10 include: 618.04 -> N81.6, Rectocele	None
MUC15-437	Route of hysterectomy	Total number of patients undergoing vaginal hysterectomy (CPT codes 58270, 58275, 58280, 58290, 58291, 58292, 58293, 58294, 58260,	Total number of patients undergoing hysterectomy of any type. (CPT codes 58270, 58275, 58280, 58290, 58291, 58292, 58293, 58294, 58260, 58262,	Patients with a preoperative diagnosis of cancer (applies to both numerator and denominator, ICD-10 codes) Exceptions: None

MUC ID	Measure Title	Numerator	Denominator	Exclusions
		58262, 58263, 58267, 58553, 58550, 58552, 58554)	58263, 58267, 58553, 58550, 58552, 58554, 58544, 58570, 58571, 58572, 58573, 58541, 58542, 58543, 58150, 58152, 58180)	
MUC15-439	Testing for uterine disease prior to obliterative procedures	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 PFD Registry.	CPT code 57120- colpocleisis	Prior hysterectomy Exceptions: None
MUC15-440	Documentation of offering a trial of conservative management prior to fecal incontinence surgery	Number of patients who have been offered conservative management for fecal incontinence prior to surgical intervention. These would be identified by chart review or entry into the PFD Registry. Therapies meeting the criteria for conservative management would include high fiber diet, bulking agents, anti-diarrheal medications for patients with diarrhea, scheduled toileting, Kegel exercises, biofeedback, pelvic floor physical therapy, and fecal disimpaction in patients who are constipated.	The number of patients undergoing surgery for the indication of fecal incontinence will be included. Fecal incontinence surgeries will include the following CPT codes: ICD9 0377T anal bulking injection; 46750 for overlapping anal sphincteroplasty, 46761 (anal sphincteroplasty with levator plication), 46762 (ICD10 0DHQ0LZ-0DHQ4LZ) for implantation of artificial anal sphincter, and 64561, 64581, 64590, 77002 for sacral neuromodulation and fecal incontinence will be defined by the following ICD-9/ICD-10 codes:	None

MUC ID	Measure Title	Numerator	Denominator	Exclusions
			ICD9: 787.60 (full incontinence of feces), 787.62 (fecal smearing), 787.63 (fecal urgency); ICD10: R15.9 (anal sphincter, fecal incontinence); R15.1 (fecal smearing); R15.2 (fecal urgency)	
MUC15-441	Documentation of offering a trial of conservative management prior to urgency incontinence surgery	Number of patients that who have been offered conservative management for urgency urinary incontinence prior to surgical intervention. These would be identified by chart review or entry into the PFD Registry. Therapies meeting the criteria for conservative management include would include: behavioral modifications (avoiding bladder irritants, excessive fluid intake), Kegel exercises, pelvic floor physical therapy; pharmacologic management.	The number of patients undergoing surgery for the indication of urgency urinary incontinence will be included. Urgency incontinence surgeries will include the following CPT codes: ICD9 64566 for posterior tibial nerve stimulation; 64561, 64581, 64590, 77002 for sacral neuromodulation; 52287 chemodenervation-intradetrusor botulinum injections. Urgency incontinence will be defined by the following ICD-9/ICD-10 codes: ICD9: 788.31 (urge incontinence), 788.63 (urinary urgency), 788.41 (urinary frequency), 788.43 (nocturia), 788.33 (mixed urinary incontinence) 788.34 (incontinence without sensory awareness), 788.36 (nocturnal enuresis), 788.37 (continuous leakage), 788.38 (overflow incontinence), 788.39 (other incontinence), 596.59 (detrusor	None

MUC ID	Measure Title	Numerator	Denominator	Exclusions
			overactivity), 596.54 (neurogenic bladder), 596.51 (overactive bladder). ICD10: N32.81 (overactive bladder), N32.89 (other specified disorders of bladder), N32.9 (other unspecified disorder of bladder), N39.41 (urge incontinence), N39.42 (incontinence w/o sensory awareness), N39.45 (continuous leakage), N39.44 (nocturnal enuresis), N39.46 (mixed incontinence), N39.490(other specified urinary incontinence - reflex or total), N39.498 (total incontinence), R32 (enuresis NOS), R39.81 (urinary incontinence associated with cognitive impairment), R39.81 (functional urinary incontinence)	
MUC15-450	Intraperitoneal chemotherapy administered within 42 days of optimal cytoreduction to women with invasive stage III ovarian, fallopian tube,	Patients who have Ovarian cancer / fallopian tube cancer (ICD-9= 183.0 (Ovarian cancer) 183.2 (Fallopian tube cancer) AND received IP chemo within 42 days from surgery	All patients who underwent debulking surgery for ovarian cancer. CPT coding may vary but possibilities are: 58950 – Resection (initial) of ovarian, tubal or primary peritoneal malignancy with bilateral salpingo-oophorectomy and omentectomy 58951 - Resection (initial) of ovarian, tubal or primary	Patients who received Neoadjuvant Chemotherapy Patients with non-epithelial cancer Patients who had the IP chemotherapy not offered (and or to be offered IP chemotherapy after the first cycle of IV chemotherapy) by the surgeons for any of the listed reasons: a- Those who had bowel resection as part of their debulking surgery. b- Had multiple abdominal surgeries that

MUC ID	Measure Title	Numerator	Denominator	Exclusions
	or peritoneal cancer		peritoneal malignancy with bilateral salpingo-oophorectomy and omentectomy; with total abdominal hysterectomy, pelvic and limited para-aortic lymphandenectomy 58952 - Resection (initial) of ovarian, tubal or primary peritoneal malignancy with bilateral salpingo-oophorectomy and omentectomy; with radical dissection for debulking (i.e., radical excision or destruction, intra-abdominal or retroperitoneal tumors) 58953 – Bilateral salpingo-oophorectomy with omentectomy, total abdominal hysterectomy and radical dissection for debulking 58954 - Bilateral salpingo-oophorectomy with omentectomy, total abdominal hysterectomy and radical dissection for debulking; with pelvic lymphandenectomy and limited para-aortic lymphadenectomy 58956 – Bilateral salpingo-oophorectomy with total omentectomy, total abdominal hysterectomy for malignancy	impede the futility of IP chemotherapy. c- Patients' who have had a sub optimal debulking d- Any other medical reason(s) that contraindicated IP chemotherapy (e.g.: peritonitis, inflammatory bowel disease, liver failure, renal failure. etc.) Exceptions: Patients who are pregnant at the time of diagnosis (ICD-9= 640.0 – 669.9 and V22.0 – V23.9)

MUC ID	Measure Title	Numerator	Denominator	Exclusions
			58957 – Resection (tumor debulking) of recurrent ovarian, tubal, primary peritoneal, uterine malignancy (intra-abdominal, retroperitoneal tumors, with omentectomy, if performed 58958 - Resection (tumor debulking) of recurrent ovarian, tubal, primary peritoneal, uterine malignancy (intra-abdominal, retroperitoneal tumors, with omentectomy, if performed; with pelvic lymphadenectomy and limited para-aortic lymphadenectomy	
MUC15-452	Minimally invasive surgery performed for patients with endometrial cancer	Number of patients with endometrial cancer (ICD-9 codes: 182 malignant neoplasm of body of uterus; 182.0 Corpus uteri, except isthmus; 182.1 Isthmus; 182.8 Other specified sites of body of uterus) who underwent minimally invasive hysterectomy. Minimally invasive is defined as laparoscopic or robotic approaches (CPT codes: 58541-44, 58550, 58552-54, 58570-73) with or without vaginal assistance (58260, 58262, 58263,	Number of patients with endometrial cancer (ICD-9 codes: 182 malignant neoplasm of body of uterus; 182.0 Corpus uteri, except isthmus; 182.1 Isthmus; 182.8 Other specified sites of body of uterus) who underwent hysterectomy. This includes hysterectomy via laparotomy (58150, 58152, 58180, 58200, 58210), laparoscopy, robotic, or vaginal (see CPT codes in numerator).	Patients with endometrial cancer who did not undergo hysterectomy Exceptions: None

MUC ID	Measure Title	Numerator	Denominator	Exclusions
		58267, 58270, 58275, 58280, 58285, 58290-94).		
MUC15-454	Platin or taxane administered within 42 days following cytoreduction to women with invasive stage I (grade 3), IC-IV ovarian, fallopian tube, or peritoneal cancer	Patients who have Ovarian cancer / fallopian tube cancer (ICD-9= 183.0 (Ovarian cancer) 183.2 (Fallopian tube cancer) AND received IV chemo within 42 days from surgery	All patient who underwent debulking surgery for ovarian cancer. CPT coding may varies but those are the possibilites.58950 – Resection (initial) of ovarian, tubal or primary peritoneal malignancy with bilateral salpingo-oophorectomy and omentectomy 58951 - Resection (initial) of ovarian, tubal or primary peritoneal malignancy with bilateral salpingo-oophorectomy and omentectomy; with total abdominal hysterectomy, pelvic and limited para-aortic lymphandenectomy 58952 - Resection (initial) of ovarian, tubal or primary peritoneal malignancy with bilateral salpingo-oophorectomy and omentectomy; with radical dissection for debulking (i.e., radical excision or destruction, intra-abdominal or retroperitoneal tumors) 58953 – Bilateral salpingo-oophorectomy with omentectomy, total abdominal	Patients who received Neoadjuvant Chemotherapy Patients with non-epithelial cancer Exceptions: Patients who are pregnant at the time of diagnosis (ICD-9= 640.0 – 669.9 and V22.0 – V23.9)

MUC ID	Measure Title	Numerator	Denominator	Exclusions
			hysterectomy and radical dissection for debulking 58954 - Bilateral salpingo-oophorectomy with omentectomy, total abdominal hysterectomy and radical dissection for debulking; with pelvic lymphandenectomy and limited para-aortic lymphadenectomy 58956 – Bilateral salpingo-oophorectomy with total omentectomy, total abdominal hysterectomy for malignancy 58957 – Resection (tumor debulking) of recurrent ovarian, tubal, primary peritoneal, uterine malignancy (intra-abdominal, retroperitoneal tumors, with omentectomy, if performed 58958 - Resection (tumor debulking) of recurrent ovarian, tubal, primary peritoneal, uterine malignancy (intra-abdominal, retroperitoneal tumors, with omentectomy, if performed; with pelvic lymphadenectomy and limited para-aortic lymphadenectomy	
MUC15-459	Surgical staging with lymph	Number of women with a grade 3 endometrial cancer identified	Total number of women with a grade 3 endometrial cancer (ICD-	Women with poor performance status or medical co-morbidities in which

MUC ID	Measure Title	Numerator	Denominator	Exclusions
	node removal for any grade 3 and/or myometrial invasion >50% with endometrial cancer	with greater than 50% myometrial invasion who have a surgical staging procedure with lymph node removals	9 codes: 182 malignant neoplasm of body of uterus; 182.0 Corpus uteri, except isthmus; 182.1 Isthmus; 182.8) undergoing surgery who are found to have greater than 50% myometrial invasion	increased surgical time or staging procedures place patient at significant risk or women identified preoperatively with advanced stage disease or treated with preoperative chemotherapy and/or radiation if not a surgical candidate Exceptions: Women with poor performance status or medical co-morbidities in which increased surgical time or staging procedures place patient at significant risk or women identified preoperatively with advanced stage disease or treated with preoperative chemotherapy and/or radiation if not a surgical candidate
MUC15-460	Use of brachytherapy for cervical cancer patients treated with primary radiation with curative intent.	Number of patients who receive brachytherapy as part of their treatment for cervical cancer (Cervical cancer ICD-10 dx code C53.9) CPT 77785, 77786, 77787, 77761, 77762, 77763	All patients undergoing primary radiation for cervical cancer (cervical cancer diagnosis code C53.9) with curative intent: 77385, 77386, 77402, 77407, 77412	Patients receiving palliative radiation, patients with stage IVB Exceptions: Patients on clinical trial
MUC15-461	Completion of external beam radiation within 60 days for women receiving primary radiotherapy as	Numerator is the number of patients who completed external beam radiation within 60 days from initiation for locally advanced cervical cancer with curative intent	Denominator is the number of women being treated with chemoradiation for locally advanced cervical cancer (ICD-9 180.9; ICD-10 C53.9) Radiation therapy CPT codes 77301, 77338, 77300, 77386, 77295, 77300, 77334, 77412	Women who not being treated with curative intent Exceptions: None

MUC ID	Measure Title	Numerator	Denominator	Exclusions
	treatment for locally advanced cervical cancer (LACC)			
MUC15-462	Discharge to Community-Post Acute Care (PAC) Skilled Nursing Facility Quality Reporting Program (Required under the IMPACT Act)	This measure does not have a simple form for the numerator and denominator. The numerator is defined as the risk-adjusted estimate of the number of patients/residents/persons included in the measure who are discharged to the community, and do not have an unplanned (re)admission to an acute care hospital or LTCH on the day of discharge or in the 31 days following discharge to community, and remain alive during the 31 days following discharge to community. The numerator estimate includes risk adjustment for patient/resident/person characteristics, and a statistical estimate of the facility/agency effect beyond case mix.	The denominator is computed with the same model used for the numerator. It is the model developed using all non-excluded facility/agency stays/episodes in the national data. The measure includes all facility/agency stays/episodes in the measurement period that are observed in national Medicare FFS data and do not fall into an excluded category. For a particular facility/agency, the model is applied to the patient/resident/person population, but the facility/agency effect term is 0. In essence, it is the number of discharges to community that would be expected for that patient/resident/person population at the average facility/agency.	(i) Age under 18 years; (ii) No short-term acute care stay within 30 days prior to SNF admission; (iii) Discharges to psychiatric hospital; (iv) Discharges against medical advice; (v) Discharges to federal hospitals or disaster alternative care sites;; (vi) Patients not continuously enrolled in Part A FFS Medicare for the 12 months prior to the SNF admission date, and at least 31 days after SNF discharge date; (vii) Patients whose prior short-term acute-care stay was for non-surgical treatment of cancer; (viii) Discharges to hospice; (ix) SNF stays that end in transfer to another SNF; (x) SNF stays with claims data that are problematic (e.g., anomalous records for stays that overlap wholly or in part, or are otherwise erroneous or contradictory); (xi) Patients who received care from a provider located outside of the US, Puerto Rico, or a US territory..
MUC15-463	Use of concurrent platinum-based	Numerator is the number of patients who receive concurrent platinum-based chemotherapy	Number of patients with stage IIB-IV cervical cancer who receive primary radiation therapy. ICD9	Patients who have a medical contraindication to receipt of platinum-based chemotherapy should receive an

MUC ID	Measure Title	Numerator	Denominator	Exclusions
	chemotherapy for patients with stage IIB-IV cervical cancer receiving primary radiation therapy.	for patients with stage IIB-IV cervical cancer receiving primary radiation therapy. ICD9 codes 180.0-180.9, CPT codes 96409, 96411, 96417.	codes 180.0-180.9, CPT codes 57155, 57156, 77261-77299, 77300-77399, 77401-77421, 77785, 77786, 77787, 77799.	alternative chemotherapy agent that has been demonstrated to have clinical benefit in patients with cervical cancer. Exceptions: None
MUC15-465	Performance of radical hysterectomy in patients with IB1-IIA cervical cancer who undergo hysterectomy.	Women whose hysterectomy is classified as a radical hysterectomy and includes removal of parametrial tissue, vaginal tissue and a portion of the uterosacral ligaments. CPT 58210, 58285, or ICD9 codes 68.6, 68.61, 68.69, 68.7, 68.71, 68.79	Women with histologically confirmed stage IB1-IIA cervical cancer who undergo hysterectomy. CPT codes 58210, 58285, 58150, 58152, 58180, 58200, 58956, 58541, 58542, 58543, 58544, 58548, 58550, 58552, 58553, 58554, 58570, 58572, 58571, 58573, 58260, 58262, 58263, 58267, 58270, 58275, 58280, 58290, 58291, 58292, 58293, 58294 or ICD9 codes 68.6, 68.61, 68.69, 68.7, 68.71, 68.79, 68.3, 68.31, 68.39, 68.4, 68.41, 68.49, 68.5, 68.51, 68.59, 68.6, 68.61, 68.69, 68.9	Women who undergo primary surgery that is not a hysterectomy. Women who undergo secondary surgery after primary radiotherapy or chemoradiation. Exceptions: None
MUC15-466	Postoperative pelvic radiation with concurrent cisplatin-containing chemotherapy with (or	Cervical cancer: 180.0, 180.1, 180.9, parametrium 183.4, vagina 184.0, Positive lymph nodes draining the cervical basin secondary : ICD9 codes 196.2, 196.6, 197.6, radiation therapy	Cervical cancer: 180.0, 180.1, 180.9 , parametrium 183.4, vagina 184.0, Positive lymph nodes draining the cervical basin secondary : ICD9 codes 196.2, 196.6, 197.6	Small cell, melanoma and other cervical histologies that might be treated with primary chemotherapy. Secondary cervical cancers Exceptions: None

MUC ID	Measure Title	Numerator	Denominator	Exclusions
	without) brachytherapy for patients with positive pelvic nodes, positive surgical margin, and/or positive parametrium.	CPT codes: IMRT 77418, 0073T, HDR brachy 77785-77787,		
MUC15-495	Potentially Preventable 30-Day Post-Discharge Readmission Measure for Skilled Nursing Facility Quality Reporting Program (Required under the IMPACT Act)	This measure does not have a simple form for the numerator and denominator. The numerator is defined as the risk-adjusted estimate of the number of unplanned, potentially preventable readmissions that occurred within 30 days post discharge from SNF services. The numerator, as defined, includes risk adjustment for patient characteristics and a statistical estimate of the facility effect beyond patient mix.	The denominator is computed with the same model used for the numerator. It is the model developed using all non-excluded stays in the national data. The measure includes all stays in the measurement period that are observed in national Medicare FFS data and do not fall into an excluded category. For a particular facility, the model is applied to the patient population, but the facility effect term is 0. In essence, it is the number of unplanned potentially preventable readmissions that would be expected for that patient population at the average facility.	1. Patients who died during the SNF stay. 2. Patients less than 18 years old. 3. Patients who were transferred to the same level of care or the hospital at the end of their SNF stay. 4. Patients who were not continuously enrolled in Part A FFS Medicare for the 12 months prior to the SNF admissions, and at least 30 days after SNF discharge. 5. Patients who did not have a short-term acute-care stay within 30 days prior to the SNF admission date. 6. Patients who leave the SNF against medical advice; 7. Patients for whom the prior short-term acute-care stay was for the nonsurgical treatment of cancer.

MUC ID	Measure Title	Numerator	Denominator	Exclusions
				8. Patients who were transferred to a federal hospital from the SNF. 9. Patients who received care from a provider located outside of the US, Puerto Rico, or a US territory. 10. SNF stays with data that are problematic (e.g., anomalous records for hospital stays that overlap wholly or in part or are otherwise erroneous or contradictory).
MUC15-496	Potentially Preventable 30-Day Post-Discharge Readmission Measure for Inpatient Rehabilitation Facility Quality Reporting Program (Required under the IMPACT Act)	This measure does not have a simple form for the numerator and denominator. The numerator is defined as the risk-adjusted estimate of the number of unplanned potentially preventable readmissions that occurred within 30 days from IRF discharge. The numerator, as defined, includes risk adjustment for patient characteristics and a statistical estimate of the facility effect beyond patient mix.	The denominator is computed with the same model used for the numerator. It is the model developed using all non-excluded stays in the national data. The measure includes all stays in the measurement period that are observed in national Medicare FFS data and do not fall into an excluded category. For a particular facility, the model is applied to the patient population, but the facility effect term is 0. In essence, it is the number of unplanned potentially preventable readmissions that would be expected for that patient population at the average facility	1. Patients who died during the IRF stay 2. Patients less than 18 years old. 3. Patients who were transferred to the same level of care or a hospital at the end of their IRF stay. 4. Patients who were not continuously enrolled in Part A FFS Medicare for the 12 months prior to the IRF admissions, and at least 30 days after IRF discharge. 5. Patients who did not have a short-term acute-care stay within 30 days prior to the IRF admission date. 6. Patients who leave the IRF against medical advice 7. Patients for whom the prior short-term acute-care stay was for the nonsurgical treatment of cancer. 8. Patients who were transferred to a federal hospital from the IRF. 9. Patients who received care from a

MUC ID	Measure Title	Numerator	Denominator	Exclusions
				provider located outside of the US, Puerto Rico, or a US territory. 10. IRF stays with data that are problematic (e.g., anomalous records for hospital stays that overlap wholly or in part or are otherwise erroneous or contradictory).
MUC15-497	Potentially Preventable Within Stay Readmission Measure for Inpatient Rehabilitation Facilities	This measure does not have a simple form for the numerator and denominator. The numerator is defined as the risk-adjusted estimate of the number of unplanned potentially preventable readmissions that occurred during an IRF stay. The numerator, as defined, includes risk adjustment for patient characteristics and a statistical estimate of the facility effect beyond patient mix.	The denominator is computed with the same model used for the numerator. It is the model developed using all non-excluded stays in the national data. The measure includes all stays in the measurement period that are observed in national Medicare FFS data and do not fall into an excluded category. For a particular facility, the model is applied to the patient population, but the facility effect term is 0. In essence, it is the number of unplanned potentially preventable readmissions that would be expected for that patient population at the average facility	1. Patients who died during the IRF stay. 2. Patients less than 18 years old. 3. Patients who were not continuously enrolled in Part A FFS Medicare for the 12 months prior to the IRF admissions, and at least 30 days after IRF discharge. 4. Patients who did not have a short-term acute-care stay within 30 days prior to the IRF admission date. 5. Patients who leave the IRF against medical advice 6. Patients for whom the prior short-term acute-care stay was for the nonsurgical treatment of cancer. 7. Patients who were transferred to a federal hospital from the IRF. 8. Patients who received care from a provider located outside of the US, Puerto Rico, or a US territory. 9. IRF stays with data that are problematic (e.g., anomalous records for

MUC ID	Measure Title	Numerator	Denominator	Exclusions
				hospital stays that overlap wholly or in part or are otherwise erroneous or contradictory).
MUC15-498	Potentially Preventable 30-Day Post-Discharge Readmission Measure for Long-Term Care Hospital Quality Reporting Program (Required under the IMPACT Act)	This measure does not have a simple form for the numerator and denominator. The numerator is defined as the risk-adjusted estimate of the number of unplanned, potentially preventable readmissions that occurred within 30 days from LTCH discharge. The numerator, as defined, includes risk adjustment for patient characteristics and a statistical estimate of the facility effect beyond patient mix.	The denominator is computed with the same model used for the numerator. It is the model developed using all non-excluded stays in the national data. The measure includes all stays in the measurement period that are observed in national Medicare FFS data and do not fall into an excluded category. For a particular facility, the model is applied to the patient population, but the facility effect term is 0. In essence, it is the number of unplanned potentially preventable readmissions that would be expected for that patient population at the average facility	1. Patients who died during the LTCH stay. 2. Patients less than 18 years old. 3. Patients who were transferred to the same level of care or a hospital at the end of their LTCH stay 4. Patients who were not continuously enrolled in Part A FFS Medicare for the 12 months prior to the LTCH admissions, and at least 30 days after LTCH discharge. 5. Patients who did not have a short-term acute-care stay within 30 days prior to the LTCH admission date. 6. Patients who leave the LTCH against medical advice 7. Patients for whom the prior short-term acute-care stay was for the nonsurgical treatment of cancer. 8. Patients who were transferred to a federal hospital from the LTCH. 9. Patients who received care from a provider located outside of the US, Puerto Rico, or a US territory. 10. LTCH stays with data that are problematic (e.g., anomalous records for hospital stays that overlap wholly or in

MUC ID	Measure Title	Numerator	Denominator	Exclusions
				part or are otherwise erroneous or contradictory).
MUC15-523	Discharge to Community-Post Acute Care (PAC) Home Health Quality Reporting Program (Required under the IMPACT Act)	This measure does not have a simple form for the numerator and denominator. The numerator is defined as the risk-adjusted estimate of the number of patients/residents/persons included in the measure who are discharged to the community, and do not have an unplanned (re)admission to an acute care hospital or LTCH on the day of discharge or in the 31 days following discharge to community, and remain alive during the 31 days following discharge to community. The numerator estimate includes risk adjustment for patient/resident/person characteristics, and a statistical estimate of the facility/agency effect beyond case mix.	The denominator is computed with the same model used for the numerator. It is the model developed using all non-excluded facility/agency stays/episodes in the national data. The measure includes all facility/agency stays/episodes in the measurement period that are observed in national Medicare FFS data and do not fall into an excluded category. For a particular facility/agency, the model is applied to the patient/resident/person population, but the facility/agency effect term is 0. In essence, it is the number of discharges to community that would be expected for that patient/resident/person population at the average facility/agency.	(i) Age under 18 years; (ii) Discharges to psychiatric hospital; (iii) Discharges against medical advice; (iv) Discharges to federal hospitals or disaster alternative care sites; (v) Patients not continuously enrolled in Part A FFS Medicare for the 12 months prior to the HHA admission date, and at least 31 days after HHA discharge date; (vi) Patients whose prior short-term acute-care stay was for non-surgical treatment of cancer (only applies to those patients whose HHA episode was preceded by an acute care discharge in the past 30 days); (vii) Discharges to hospice; (viii) HHA episodes stays that end in transfer to another HHA; (ix) HHA episodes with a missing risk adjustment authorization code.
MUC15-527	Application of IRF Functional Outcome Measure: Change in Mobility Score	The measure does not have a simple form for the numerator and denominator. This measure estimates the risk-adjusted change in mobility score between admission and	Skilled Nursing Facility residents included in this measure are at least 21 years of age, Medicare Fee-for-Service beneficiaries, are not independent with all of the mobility activities at the time of	This quality measure has 8 exclusion criteria: 1. Residents with incomplete stays 2. Residents who are independent with all mobility activities at the time of admission

MUC ID	Measure Title	Numerator	Denominator	Exclusions
	for Medical Rehabilitation Patients (NQF #2634)	discharge among Skilled Nursing Facility residents age 21 and older. The change in mobility score is calculated as the difference between the discharge mobility score and the admission mobility score.	admission, and have complete stays.	3. Residents with the following medical conditions: coma; persistent vegetative state; complete tetraplegia; locked-in syndrome; severe anoxic brain damage, cerebral edema, or compression of brain 4. Residents younger than 21 years 5. Residents discharged to hospice 6. residents who are not Medicare Fee-for-Service beneficiaries 7. Residents in swing beds in critical access hospitals 8. Residents who do not receive rehabilitation therapy services
MUC15-528	Application of IRF Functional Outcome Measure: Discharge Self-Care Score for Medical Rehabilitation Patients (NQF #2635)	The numerator is the number of residents in a Skilled Nursing Facility with a discharge self-care score that is equal to or higher than a calculated expected self-care mobility score.	Skilled Nursing Facility residents included in this measure are at least 21 years of age, Medicare Fee-for-Service beneficiaries, and have complete stays.	This quality measure has 7 exclusion criteria: 1. Residents with incomplete stays. 2. Residents with the following medical conditions: coma; persistent vegetative state; complete tetraplegia; locked-in syndrome; or severe anoxic brain damage, cerebral edema, or compression of the brain. 3. Residents younger than age 21 4. Residents discharged to hospice. 5. Residents not covered by the Medicare Fee-for-Service program. 6. Residents in swing beds in critical access hospitals 7. Residents who do not receive rehabilitation therapy services

MUC ID	Measure Title	Numerator	Denominator	Exclusions
MUC15-529	Application of IRF Functional Outcome Measure: Discharge Mobility Score for Medical Rehabilitation Patients (NQF #2636)	The numerator is the number of residents in a Skilled Nursing Facility with a discharge mobility score that is equal to or higher than a calculated expected discharge mobility score.	Skilled Nursing Facility residents included in this measure are at least 21 years of age, Medicare Fee-for-Service beneficiaries, and have complete stays.	This quality measure has 7 exclusion criteria: 1. Residents with incomplete stays 2. Residents with the following medical conditions: coma; persistent vegetative state; complete tetraplegia; locked-in syndrome; or severe anoxic brain damage, cerebral edema, or compression of the brain 3. Residents younger than age 21 4. Residents discharged to hospice 5. Residents not covered by the Medicare Fee-for-Service program 6. Residents in swing beds in critical access hospitals 7. Residents who do not receive rehabilitation therapy services
MUC15-530	Percent of Patients Who Received an Antipsychotic (AP) Medication	The numerator is the number of Long Term Care Hospital patients receiving antipsychotic medications.	The denominator is the total of all patients in a Long Term Care Hospital during the target period except for those who meet exclusion criteria.	Patients will be excluded from the denominator if they are diagnosed with any of the following conditions: schizophrenia, Tourette's syndrome, and Huntington's Disease.
MUC15-531	National Healthcare Safety Network (NHSN) Antimicrobial Use Measure	Days of antimicrobial therapy for antibacterial agents administered to adult and pediatric patients in medical, medical/surgical, and surgical wards and medical, medical/surgical, and surgical intensive care units.	Days present for each patient care location—adult and pediatric medical, medical/surgical, and surgical wards and adult and pediatric medical, medical/surgical, and surgical intensive care units—is defined as the number of patients who were	Hospital patient care locations other than adult and pediatric medical, medical/surgical, and surgical wards and adult and pediatric medical, medical/surgical, and surgical intensive care units are excluded from this measure.

MUC ID	Measure Title	Numerator	Denominator	Exclusions
			present for any portion of each day of a calendar month for each location. The day of admission, discharge, and transfer to and from locations are included in days present. All days present are summed for each location and month, and the aggregate sums for each location-month combination comprise the denominator data for the measure	
MUC15-532	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, bed size, 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.
MUC15-533	National Healthcare Safety Network (NHSN) Facility-wide Inpatient Hospital-onset	Total number of observed hospital-onset CDI LabID events among all inpatients in the facility, excluding well baby-nurseries and NICUs	Total number of expected hospital-onset CDI LabID events, calculated using the facility´s number of inpatient days, bed size, affiliation with medical school, microbiological test used	Data from patients who are not assigned to an inpatient bed are excluded from the denominator counts, including outpatient clinic and emergency department visits. Additionally, data

MUC ID	Measure Title	Numerator	Denominator	Exclusions
	Clostridium difficile Infection (CDI) Outcome Measure		to identify C. difficile, and community-onset CDI admission prevalence rate	from well-baby nurseries and NICUs are excluded from the denominator count
MUC15-534	American College of Surgeons-Centers for Disease Control and Prevention (ACS-CDC) Harmonized Procedure Specific Surgical Site Infection (SSI) Outcome Measure	Deep incisional primary (DIP) and organ/space SSIs during the 30-day postoperative period among patients at least 18 years of age undergoing inpatient colon surgeries or abdominal hysterectomies. SSIs will be identified before discharge from the hospital, upon readmission to the same hospital, or during outpatient care or admission to another hospital (post-discharge surveillance). Case accrual will be guided by sampling algorithms as described below.	Using multivariable logistic regression models for colon surgeries and abdominal hysterectomies, the expected number of SSIs is obtained. These expected numbers are summed by facility and surgical procedure and used as the denominator of this measure	Persons under the age of 18, those having a procedure performed on an outpatient basis, those with ASA Class VI (6) are excluded.
MUC15-575	Standardized Mortality Ratio - Modified	Number of deaths among eligible patients at the facility during the time period.	Number of deaths that would be expected among eligible dialysis patients at the facility during the time period, given the mortality rate is at the national average and the patient mix at the facility.	UM-KECC's treatment history file provides a complete history of the status, location, and dialysis treatment modality of an ESRD patient from the date of the first ESRD service until the patient dies or the data collection cutoff date is reached. For each patient, a new record is created each time he/she changes facility or treatment modality. Each record represents a time period associated with a specific modality and

MUC ID	Measure Title	Numerator	Denominator	Exclusions
				dialysis facility. SIMS/CROWNWeb is the primary basis for placing patients at dialysis facilities and dialysis claims are used as an additional source. Information regarding first ESRD service date, death and transplant is obtained from additional sources including the CMS Medical Evidence Form (Form CMS-2728), transplant data from the Organ Procurement and Transplant Network (OPTN), the Death Notification Form (Form CMS-2746) and the Social Security Death Master File. The denominator for SMR for a facility is the total number of expected deaths during all patient-records at the facility. The number of days at risk in each of these patient-records is used to calculate the expected number of deaths for that patient-record. The denominator is based on expected mortality calculated from a Cox model (Cox, 1972; SAS Institute Inc., 2004; Kalbfleisch and Prentice, 2002; Collett, 1994). The model used is fit in two stages. The stage 1 model is a Cox model stratified by facility and adjusted for patient age, race, ethnicity, sex, diabetes, duration of ESRD, nursing home status, patient comorbidities at incidence, calendar year and body mass index (BMI) at incidence. This model

MUC ID	Measure Title	Numerator	Denominator	Exclusions
				allows the baseline survival probabilities to vary between strata (facilities), and assumes that the regression coefficients are the same across all strata. Stratification by facility at this stage avoids biases in estimating regression coefficients that can occur if the covariate distributions vary substantially across centers. The results of this analysis are estimates of the regression coefficients in the Cox model and these provide an estimate of the relative risk for each patient. This is based on a linear predictor that arises from the Cox model, and is then used as an offset in the stage 2 model, which is unstratified and includes an adjustment for the race-specific age-adjusted state population death rates. Assignment of Patients to Facilities We detail patient inclusion criteria, facility assignment and how to count days at risk, all of which are required for the risk adjustment model. As patients can receive dialysis treatment at more than one facility in a given year, we assign each patient day to a facility (or no facility, in some cases) based on a set of conventions below. Since a patient's follow-up in the database can be incomplete during the first 90 days of ESRD therapy, we only include a

MUC ID	Measure Title	Numerator	Denominator	Exclusions
				patient's follow-up into the tabulations after that patient has received chronic renal replacement therapy for at least 90 days. Thus, hospitalizations, mortality and survival during the first 90 days of ESRD do not enter into the calculations. This minimum 90-day period also assures that most patients are eligible for Medicare, either as their primary or secondary insurer. It also excludes from analysis patients who die or recover during the first 90 days of ESRD. In order to exclude patients who only received temporary dialysis therapy, we assigned patients to a facility only after they had been on dialysis there for the past 60 days. This 60 day period is used both for patients who started ESRD for the first time and for those who returned to dialysis after a transplant. That is, deaths and survival during the first 60 days of dialysis at a facility do not affect the SMR of that facility. Identifying Facility Treatment Histories for Each Patient For each patient, we identify the dialysis provider at each point in time. Starting with day 91 after onset of ESRD, we attribute patients to facilities according to the following rules. A patient is attributed to a facility once the patient has been treated there for the past 60

MUC ID	Measure Title	Numerator	Denominator	Exclusions
				days. When a patient transfers from one facility to another, the patient continues to be attributed to the original facility for 60 days and then is attributed to the destination facility from day 61. In particular, a patient is attributed to their current facility on day 91 of ESRD if that facility had treated him or her for the past 60 days. If on day 91, the facility had not treated a patient for the past 60 days, we wait until the patient reaches day 60 of continuous treatment at that facility before attributing the patient to that facility. When a patient is not treated in a single facility for a span of 60 days (for instance, if there were two switches within 60 days of each other), we do not attribute that patient to any facility. Patients were removed from a facility's analysis upon receiving a transplant. Patients who withdrew from dialysis or recovered renal function remain assigned to their treatment facility for 60 days after withdrawal or recovery. If a period of one year passes with neither paid dialysis claims nor SIMS information to indicate that a patient was receiving dialysis treatment, we consider the patient lost to follow-up and do not include that patient in the analysis. If dialysis claims or other

MUC ID	Measure Title	Numerator	Denominator	Exclusions
				evidence of dialysis reappears, the patient is entered into analysis after 60 days of continuous therapy at a single facility. Days at Risk for Each Patient-Record After patient treatment histories are defined as described above, periods of follow-up time (or patient-records) are created for each patient. A patient-record begins each time the patient is determined to be at a different facility or at the start of each calendar year. The number of days at risk starts over at zero for each patient record so that the number of days at risk for any patient-record is always a number between 0 and 365 (or 366 for leap years). Therefore, a patient who is in one facility for all four years gives rise to four patient-records and is analyzed the same way as would be four separate patients in that facility for one year each. When patients are treated at the same facility for two or more separate time periods during a year, the days at risk at the facility is the sum of all time spent at the facility for the year so that a given patient can generate only one patient-record per year at a given facility. For example, consider a who patient spends two periods of 100 days assigned to a facility, but is assigned to a different

MUC ID	Measure Title	Numerator	Denominator	Exclusions
				facility for the 165 days between these two 100-day periods. This patient will give rise to one patient-record of 200 days at risk at the first facility, and a separate patient-record of 165 days at risk at the second facility. Then we use the number of days at risk in each of these patient-records to calculate the expected number of deaths for that patient-record, and sum the total number of expected deaths during all patient-records at the facility as the expected number of death for that facility. Detailed methodology is described in Statistical Risk Model and Variables S.14.
MUC15-576	PQI 92 Prevention Quality Chronic Composite	Discharges, for patients ages 18 years and older, that meet the inclusion and exclusion rules for the numerator in any of the following PQIs: • PQI #1 Diabetes Short-Term Complications Admission Rate • PQI #3 Diabetes Long-Term Complications Admission Rate • PQI #5 Chronic Obstructive Pulmonary Disease (COPD) or Asthma in Older Adults Admission Rate • PQI #7 Hypertension Admission Rate	Population ages 18 years and older in metropolitan area† 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.	See each component measure for exclusions. http://www.qualityindicators.ahrq.gov/modules/PQI_TechSpec.aspx

MUC ID	Measure Title	Numerator	Denominator	Exclusions
		• PQI #8 Heart Failure 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.		
MUC15-577	PQI 91 Prevention Quality Acute Composite	Discharges, for patients ages 18 years and older, that meet the inclusion and exclusion rules for the numerator in any of the following PQIs: • PQI #10 Dehydration Admission Rate • PQI #11 Bacterial Pneumonia Admission Rate • PQI #12 Urinary Tract Infection Admission Rate Discharges that meet the inclusion and exclusion rules for the numerator in more than one	Population ages 18 years and older in metropolitan area 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.	See each component measure for exclusions. http://www.qualityindicators.ahrq.gov/modules/PQI_TechSpec.aspx

MUC ID	Measure Title	Numerator	Denominator	Exclusions
		of the above PQIs are counted only once in the composite numerator.		
MUC15-578	Advance Care Plan	Patients who have an advance care plan or surrogate decision maker documented in the medical record or documentation in the medical record that an advance care plan was discussed but patient did not wish or was not able to name a surrogate decision maker or provide an advance care plan.	All patients aged 65 years and older.	N/A
MUC15-579	Falls: Screening, Risk-Assessment, and Plan of Care to Prevent Future Falls	This measure has three rates. The numerators for the three rates are as follows: A) Screening for Future Fall Risk: Patients who were screened for future fall* risk** at last once within 12 months B) Falls: Risk Assessment: Patients who had a risk assessment*** for falls completed within 12 months C) Plan of Care for Falls: Patients with a plan of care**** for falls documented within 12 months. *A fall is defined as a sudden, unintentional change in position causing an individual to land at a	A) Screening for Future Fall Risk: All patients aged 65 years and older. B & C) Risk Assessment for Falls & Plan of Care for Falls: All patients aged 65 years and older with a history of falls (history of falls is defined as 2 or more falls in the past year or any fall with injury in the past year).	Patients who have documentation of medical reason(s) for not screening for future fall risk, undergoing a risk-assessment or having a plan of care (e.g., patient is not ambulatory) are considered exclusions to this measure.

MUC ID	Measure Title	Numerator	Denominator	Exclusions
		lower level, on an object, the floor, or the ground, other than as a consequence of a sudden onset of paralysis, epileptic seizure, or overwhelming external force. **Risk of future falls is defined as having had had 2 or more falls in the past year or any fall with injury in the past year. ***Risk assessment is comprised of balance/gait assessment AND one or more of the following assessments: postural blood pressure, vision, home fall hazards, and documentation on whether medications are a contributing factor or not to falls within the past 12 months. ****Plan of care must include consideration of vitamin D supplementation AND balance, strength and gait training.		
MUC15-604	Patient Safety and Adverse Events Composite	Below we list the numerator values for the composite components. The composite score is calculated as a ratio of the weighted observed to expected ratios for each of the components.	Below we list the denominator values for the composite components. The composite score is calculated as a ratio of the weighted observed to expected ratios for each of the components.	Below we list the exclusions for the composite components. There are no additional exclusions for the composite measure as a whole. PSI03 – Pressure Ulcer Rate-Excludes cases with length of stay less than 5 days, with a principal diagnosis of

MUC ID	Measure Title	Numerator	Denominator	Exclusions
		PSI03-Pressure Ulcer Rate- Discharges, among cases meeting the inclusion and exclusion rules for the denominator, with any secondary ICD-9-CM diagnosis codes for pressure ulcer and any secondary ICD-9-CM diagnosis codes for pressure ulcer stage III or IV (or unstageable). PSI06-Iatrogenic Pneumothorax Rate- Discharges, among cases meeting the inclusion and exclusion rules for the denominator, with any secondary ICD-9-CM diagnosis codes for iatrogenic pneumothorax. PSI08-Postoperative Hip Fracture Rate- Discharges, among cases meeting the inclusion and exclusion rules for the denominator, with any secondary ICD-9-CM diagnosis codes for hip fracture.	PSI03-Pressure Ulcer Rate- Surgical and medical discharges, for patients ages 18 years and older. Surgical and medical discharges are defined by specific DRG or MS-DRG codes. PSI06-Iatrogenic Pneumothorax Rate- Surgical and medical discharges, for patients ages 18 years and older. Surgical and medical discharges are defined by specific DRG or MS-DRG codes. PSI08-Postoperative Hip Fracture Rate- Surgical discharges, ages 18 years and older, with any-listed ICD-9-CM procedure codes for an operating room procedure. Surgical discharges are defined by specific DRG or MS-DRG codes. PSI09-Perioperative Hemorrhage and Hematoma Rate- Surgical discharges, for patients ages 18 years and older, with any-listed ICD-9-CM procedure codes	pressure ulcer or secondary diagnosis of pressure ulcer present on admission, cases with evidence of hemiplegia, paraplegia or quadriplegia, spina bifida, anoxic brain damage, debridement or pedicle graft on the same day as the major operating room surgery or as the only major operating room procedure, and cases that were transferred from a different hospital or skilled nursing facility, and cases with MDC (major diagnostic classification) of 9 (skin, subcutaneous and breast) or 14 (pregnancy, childbirth and puerperium). PSI06 – Iatrogenic Pneumothorax Rate - Excludes cases with a principal diagnosis for iatrogenic pneumothorax or secondary diagnosis of iatrogenic pneumothorax on admission, cases with evidence of chest trauma, pleural effusion, thoracic surgery, lung or pleural biopsy, diaphragmatic repair, cardiac procedure, and cases with MDC (major diagnostic classification) of 14 (pregnancy, childbirth and puerperium). PSI08 – Postoperative Hip Fracture Rate- Excludes cases with principal diagnosis of hip fracture or a secondary diagnosis

MUC ID	Measure Title	Numerator	Denominator	Exclusions
		PSI09-Perioperative Hemorrhage and Hematoma Rate- Discharges, among cases meeting the inclusion and exclusion rules for the denominator, with either: • any secondary ICD-9-CM diagnosis codes for perioperative hemorrhage or hematoma and any-listed ICD-9-CM procedure codes for control of perioperative hemorrhage or evacuation of hematoma. PSI10-Postoperative Acute Kidney Injury Rate- Discharges, among cases meeting the inclusion and exclusion rules for the denominator, with either: • any secondary ICD-9-CM diagnosis codes for acute renal failure and any-listed ICD-9- CM procedure codes for dialysis. PSI11-Postoperative Respiratory Failure Rate- Discharges, among cases meeting the inclusion and	for an operating room procedure. Surgical discharges are defined by specific DRG or MS-DRG codes. PSI10-Postoperative Acute Kidney Injury Rate- Elective surgical discharges, for patients ages 18 years and older, with any-listed ICD-9-CM procedure codes for an operating room procedure. Elective surgical discharges are defined by specific DRG or MS-DRG codes with admission type recorded as elective (SID ATYPE=3). PSI11-Postoperative Respiratory Failure Rate- Elective surgical discharges, for patients ages 18 years and older, with any-listed ICD-9-CM procedure codes for an operating room procedure. Elective surgical discharges are defined by specific DRG or MS-DRG codes with admission type recorded as elective (SID ATYPE=3). PSI12-Perioperative Pulmonary Embolism and Deep Vein	of hip fracture on admission, cases where the only operating room procedure is hip fracture, where the procedure for hip fracture occurs before or on the same day as the first operating room procedure, and cases with a principal diagnosis of seizure, syncope, stroke and occlusion of arteries, coma, cardiac arrest, poisoning, trauma, delirium and other psychoses, anoxic brain injury, metastatic cancer, lymphoid malignancy, bone malignancy, self-inflicted injury, and cases with MDC (major diagnostic classification) of 8 (musculoskeletal system and connective tissue) or 14 (pregnancy, childbirth and puerperium). PSI09 – Perioperative Hemorrhage and Hematoma Rate - Excludes cases with principal diagnosis of perioperative hemorrhage or postoperative hematoma or secondary diagnosis present of perioperative hemorrhage on admission, cases where the only operating room procedure is control of postoperative hemorrhage, drainage of hematoma or miscellaneous hemorrhage- or hematoma-related procedure, any secondary diagnosis of perioperative hemorrhage or postoperative hematoma

MUC ID	Measure Title	Numerator	Denominator	Exclusions
		exclusion rules for the denominator, with either: • any secondary ICD-9-CM diagnosis code for acute respiratory failure; or • any-listed ICD-9-CM procedure codes for a mechanical ventilation for 96 consecutive hours or more that occurs zero or more days after the first major operating room procedure code (based on days from admission to procedure); or • any-listed ICD-9-CM procedure codes for a mechanical ventilation for less than 96 consecutive hours (or undetermined) that occurs two or more days after the first major operating room procedure code (based on days from admission to procedure); or • any-listed ICD-9-CM procedure codes for a reintubation that occurs one or more days after the first major operating room procedure code (based on days from admission to procedure). PSI12-Perioperative Pulmonary Embolism and Deep Vein	Thrombosis Rate- Surgical discharges, for patients ages 18 years and older, with any-listed ICD-9-CM procedure codes for an operating room procedure. Surgical discharges are defined by specific DRG or MS-DRG codes. PSI13-Postoperative Sepsis Rate- Elective surgical discharges, for patients ages 18 years and older, with any-listed ICD-9-CM procedure codes for an operating room procedure. Elective surgical discharges are defined by specific DRG or MS-DRG codes with admission type recorded as elective (SID ATYPE=3). PSI14-Postoperative Wound Dehiscence Rate- Discharges, for patients ages 18 years and older, with any-listed ICD-9-CM procedure codes for abdominopelvic surgery. PSI15-Unrecognized Abdominopelvic Accidental Puncture or Laceration Rate- Patients ages 18 years and older	and any-listed procedure codes for control of perioperative hemorrhage or evacuation of hematoma or miscellaneous hemorrhage- or hematoma- related procedure occurring before the first operating room procedure, cases with diagnosis of coagulation disorder and cases with MDC (major diagnostic classification) of 14 (pregnancy, childbirth and puerperium). PSI10 – Postoperative Acute Kidney Injury-Excludes cases with a principal diagnosis or secondary diagnosis on admission of acute renal failure, acute myocardial infarction, cardiac arrhythmia, cardiac arrest, shock, hemorrhage, gastrointestinal hemorrhage, or chronic renal failure, cases with dialysis procedure before on the same day as the first operating procedure and cases with MDC (major diagnostic classification) of 14 (pregnancy, childbirth and puerperium). PSI11 – Postoperative Respiratory Failure Rate - Excludes cases with principal diagnosis or secondary diagnosis on admission of acute

MUC ID	Measure Title	Numerator	Denominator	Exclusions
		Thrombosis Rate-Discharges, among cases meeting the inclusion and exclusion rules for the denominator, with a secondary ICD-9-CM diagnosis code for deep vein thrombosis or a secondary ICD-9-CM diagnosis code for pulmonary embolism (omitting cases from the numerator with isolated calf vein DVT). PSI13-Postoperative Sepsis Rate-Discharges, among cases meeting the inclusion and exclusion rules for the denominator, with any secondary ICD-9-CM diagnosis codes for sepsis. PSI14-Postoperative Wound Dehiscence Rate-Discharges, among cases meeting the inclusion and exclusion rules for the denominator, with any-listed ICD-9-CM procedure codes for reclosure of postoperative disruption of the abdominal wall.	with any procedure code for an abdominopelvic procedure.	respiratory failure, cases where the only operating procedure is tracheostomy or a tracheostomy occurs before the first operating procedure, cases with any listed diagnosis of neuromuscular disorder, craniofacial anomalies or degenerative neurological disorder, cases with any listed procedure of laryngeal or pharyngeal, nose, mouth, or pharynx surgery, procedures involving the face, esophageal resection, procedures for lung cancer, and cases with MDC (major diagnostic classification) of 4 (disease of respiratory system), 5 (diseases of the circulatory system), or 14 (pregnancy, childbirth and puerperium). PSI12 – Perioperative Pulmonary Embolism and Deep Vein Thrombosis Rate - Excludes cases with principal diagnosis or secondary diagnosis on admission of DVT, pulmonary embolism, cases where a procedure for interruption of vena cava occurs before or on the same day as the first operating room procedure, cases with any procedure for extracorporeal membrane oxygenation, and cases with MDC (major diagnostic classification) of 14 (pregnancy, childbirth and puerperium).

MUC ID	Measure Title	Numerator	Denominator	Exclusions
		PSI15-Unrecognized Abdominopelvic Accidental Puncture or Laceration Rate - Discharges, among cases meeting the inclusion and exclusion rules for the denominator, with any secondary ICD-9-CM diagnosis codes for accidental puncture or laceration during a procedure and second abdominopelvic operation 1 day or more after the index procedure.		PSI13 – Postoperative Sepsis Rate – Excludes cases with principal diagnosis or secondary diagnosis on admission of sepsis, infection, cases with evidence of immunocompromised state or cancer, cases with a length of stay less than 4 days, and cases with MDC (major diagnostic classification) of 14 (pregnancy, childbirth and puerperium). PSI14 – Postoperative Wound Dehiscence Rate – Excludes cases with any listed evidence of immunocompromised state, cases where the procedure for abdominal wall reclosure occurs on or before the day of the first abdominopelvic surgery procedure, cases with a length of stay less than 2 days, and cases with MDC(major diagnostic classification) of 14 (pregnancy, childbirth and puerperium). PSI15 – Unrecognized Abdominopelvic Accidental Puncture or Laceration Rate- Excludes cases with a principal diagnosis or secondary diagnosis at admission of accidental puncture or laceration during

MUC ID	Measure Title	Numerator	Denominator	Exclusions
				a procedure and cases with MDC (major diagnostic classification) of 14 (pregnancy, childbirth and puerperium).
MUC15-693	Standardized Hospitalization Ratio - Modified	Number of inpatient hospital admissions among eligible patients at the facility during the reporting period.	Number of hospital admissions that would be expected among eligible patients at the facility during the reporting period, given the patient mix at the facility.	UM-KECC's treatment history file provides a complete history of the status, location, and dialysis treatment modality of an ESRD patient from the date of the first ESRD service until the patient dies or the data collection cutoff date is reached. For each patient, a new record is created each time he/she changes facility or treatment modality. Each record represents a time period associated with a specific modality and dialysis facility. SIMS/CROWNWeb is the primary basis for placing patients at dialysis facilities and dialysis claims are used as an additional source. Information regarding first ESRD service date, death and transplant is obtained from additional sources including the CMS Medical Evidence Form (Form CMS-2728), transplant data from the Organ Procurement and Transplant Network (OPTN), the Death Notification Form (Form CMS-2746) and the Social Security Death Master File. As patients can receive dialysis treatment at more than one facility in a given year, we assign each patient day to a facility (or no facility, in some cases)

MUC ID	Measure Title	Numerator	Denominator	Exclusions
				based on a set of conventions below, which largely align with those for the Standardized Mortality Ratio (SMR). We detail patient inclusion criteria, facility assignment and how to count days at risk, all of which are required for the risk adjustment model. General Inclusion Criteria for Dialysis Patients Though a patient's follow-up in the database can be incomplete during the first 90 days of ESRD therapy, we only include a patient's follow-up into the tabulations after that patient has received chronic renal replacement therapy for at least 90 days. Thus, hospitalizations, mortality and survival during the first 90 days of ESRD do not enter into the calculations. This minimum 90-day period also assures that most patients are eligible for Medicare, either as their primary or secondary insurer. It also excludes from analysis patients who die or recover during the first 90 days of ESRD. In order to exclude patients who only received temporary dialysis therapy, we assigned patients to a facility only after they had been on dialysis there for the past 60 days. This 60 day period is used both for patients who started ESRD for the first time and for those who

MUC ID	Measure Title	Numerator	Denominator	Exclusions
				returned to dialysis after a transplant. That is, hospitalizations during the first 60 days of dialysis at a facility do not affect the SHR of that facility. Identifying Facility Treatment Histories for Each Patient For each patient, we identify the dialysis provider at each point in time. Starting with day 91 after onset of ESRD, we attribute patients to facilities according to the following rules. A patient is attributed to a facility once the patient has been treated there for the past 60 days. When a patient transfers from one facility to another, the patient continues to be attributed to the original facility for 60 days and then is attributed to the destination facility. In particular, a patient is attributed to their current facility on day 91 of ESRD if that facility had treated him or her for the past 60 days. If on day 91, the facility had not treated a patient for the past 60 days, we wait until the patient reaches day 60 of continuous treatment at that facility before attributing the patient to that facility. When a patient is not treated in a single facility for a span of 60 days (for instance, if there were two switches within 60 days of each other), we do not attribute that patient to any facility. Patients are removed from facilities

MUC ID	Measure Title	Numerator	Denominator	Exclusions
				three days prior to transplant in order to exclude the transplant hospitalization. Patients who withdrew from dialysis or recovered renal function remain assigned to their treatment facility for 60 days after withdrawal or recovery. If a period of one year passes with neither paid dialysis claims nor SIMS information to indicate that a patient was receiving dialysis treatment, we consider the patient lost to follow-up and do not include that patient in the analysis. If dialysis claims or other evidence of dialysis reappears, the patient is entered into analysis after 60 days of continuous therapy at a single facility. Days at Risk for Medicare Dialysis Patients After patient treatment histories are defined as described above, periods of follow-up in time since ESRD onset are created for each patient. In order to adjust for duration of ESRD appropriately, we define 6 time intervals with cut points at 6 months, 1 year, 2 years, 3 years and 5 years. A new time period begins each time the patient is determined to be at a different facility, or at the start of each calendar year or when crossing any of the above cut points.

MUC ID	Measure Title	Numerator	Denominator	Exclusions
				Since hospitalization data tend not to be as complete as mortality data, we include only patients whose Medicare billing records should include all hospitalizations. To achieve this goal, we require that patients reach a certain level of Medicare-paid dialysis bills to be included in the hospitalization statistics, or that patients have Medicare-paid inpatient claims during the period. Specifically, months within a given dialysis patient-period are used for SHR calculation when they meet the criterion of being within two months after a month with either: (a) $900+ of Medicare-paid dialysis claims OR (b) at least one Medicare-paid inpatient claim. The intention of this criterion is to assure completeness of information on hospitalizations for all patients included in the analysis. The number of days at risk in each of these patient-ESRD-facility-year time periods is used to calculate the expected number of hospital admissions for the patient during that period. The SHR for a facility is the ratio of the total number of observed hospitalizations to the total number of expected hospitalizations during all time periods at the facility. Based on a risk adjustment model for the overall national hospitalization rates,

MUC ID	Measure Title	Numerator	Denominator	Exclusions
				we compute the expected number of hospitalizations that would occur for each month that each patient is attributed to a given facility. The sum of all such expectations over patients and months yields the overall number of hospital admissions that would be expected given the specific patient mix and this forms the denominator of the measure. The denominator of the SHR stems from a proportional rates model (Lawless and Nadeau, 1995; Lin et al., 2000; Kalbfleisch and Prentice, 2002). This is the recurrent event analog of the well-known proportional hazards or Cox model (Cox, 1972; Kalbfleisch and Prentice, 2002). To accommodate large-scale data, we adopt a model with piecewise constant baseline rates (e.g. Cook and Lawless, 2007) and the computational methodology developed in Liu, Schaubel and Kalbfleisch (2012).
MUC15-758	Avoidance of Utilization of High Ultrafiltration Rate (≥ 13 ml/kg/hour)	Number of patients* from the denominator whose average UFR >13 ml/kg/hour who receive an average of <240 minutes per treatment during the calculation period.** *To address the fact that patients may contribute varying amounts of time to the	Number of adult in-center hemodialysis patients in an outpatient dialysis facility undergoing chronic maintenance hemodialysis during the calculation period.	1. Patients <18 years of age (implicit in denominator definition). 2. Home dialysis patients (implicit in denominator definition). 3. Patients in a facility <30 days. 4. Patients with >4 hemodialysis treatments during the calculation period. 5. Patients with <7 hemodialysis treatments in the facility during the

MUC ID	Measure Title	Numerator	Denominator	Exclusions
		annual denominator population, results will be reported using a "patient-month" construction. ** The calculation period is defined as the same week that the monthly Kt/V is drawn.		reporting month. 6. Patients without a completed CMS Medical Evidence Form (Form CMS-2728) in the reporting month. 7. Kidney transplant recipients with a functioning graft.
MUC15-761	ESRD Vaccination: Full-Season Influenza Vaccination	Number of patients from the denominator who during the time from August 1 through March 31 (to be calculated and reported separately): 1) Received an influenza vaccination (documented by the dialysis provider, documented off-site vaccination, or patient self-report) 2) Were offered an influenza vaccination and declined 3) Were determined to have a medical contraindication	All patients alive and aged >/= 6 months on October 1 and on chronic dialysis >/= 30 days in a facility at any point between October 1 and March 31 (in-center or home dialysis)	Patients younger than 6 months old Patients on chronic dialysis (as defined by a completed 2728 form or a REMIS/CROWNWeb record) for less than 30 days
MUC15-835	Aortic Aneurysm Procedure Clinical Episode-Based Payment Measure	The numerator of the Aortic Aneurysm Procedure Clinical Episode-Based Payment Measure is the risk-adjusted sum of a provider's spending and the preadmission and post-discharge medical services that are clinically related to the aortic aneurysm procedures across a hospital's eligible aortic aneurysm procedure episodes	A count of the provider's condition-specific episodes during the period of performance.	Episode Exclusions: 1. Beneficiaries who do not have continuous enrollment in Medicare Parts A and B from 90 days prior to IP admission through the end of the episode with Medicare as the primary payer. 2. Beneficiaries who enroll in Medicare Advantage during the period that starts 90 days prior to IP admission through the end of the episode.

MUC ID	Measure Title	Numerator	Denominator	Exclusions
		during the period of performance. A clinical episode begins 3 days prior to the initial (i.e., index) admission and extends 30 days following the index hospital stay discharge date.		
MUC15-836	Cholecystectomy and Common Duct Exploration Clinical Episode-Based Payment Measure	The numerator of the Cholecystectomy and Common Duct Exploration Clinical Episode-Based Payment Measure is the risk-adjusted sum of a provider's spending and the preadmission and post-discharge medical services that are clinically related to cholecystectomy and common duct exploration across a hospital's eligible Cholecystectomy and Common Duct Exploration episodes during the period of performance. A clinical episode begins 3 days prior to the initial (i.e., index) admission and extends 30 days following the index hospital stay discharge date.	A count of the provider's condition-specific episodes during the period of performance.	Episode Exclusions: 1. Beneficiaries who do not have continuous enrollment in Medicare Parts A and B from 90 days prior to IP admission through the end of the episode with Medicare as the primary payer. 2. Beneficiaries who enroll in Medicare Advantage during the period that starts 90 days prior to IP admission through the end of the episode.
MUC15-837	Spinal Fusion Clinical Episode-Based Payment Measure	The numerator of the Spinal Fusion Clinical Episode-Based Payment Measure is the risk-adjusted sum of a provider's	A count of the provider's condition-specific episodes during the period of performance.	Episode Exclusions: 1. Beneficiaries who do not have continuous enrollment in Medicare Parts A and B from 90 days prior to IP

MUC ID	Measure Title	Numerator	Denominator	Exclusions
		spending and the preadmission and post-discharge medical services that are clinically related to spinal fusions across a hospital's eligible Spinal Fusion episodes during the period of performance. A clinical episode begins 3 days prior to the initial (i.e., index) admission and extends 30 days following the index hospital stay discharge date.		admission through the end of the episode with Medicare as the primary payer. 2. Beneficiaries who enroll in Medicare Advantage during the period that starts 90 days prior to IP admission through the end of the episode.
MUC15-838	Transurethral Resection of the Prostate (TURP) for Benign Prostatic Hyperplasia Clinical Episode-Based Payment Measure	The numerator of the TURP Clinical Episode-Based Payment Measure is the risk-adjusted sum of a provider's spending and the preadmission and post-discharge medical services that are clinically related to the TURPs across a hospital's eligible TURP episodes during the period of performance. A clinical episode begins 3 days prior to the initial (i.e., index) admission and extends 30 days following the index hospital stay discharge date.	A count of the provider's condition-specific episodes during the period of performance.	Episode Exclusions: 1. Beneficiaries who do not have continuous enrollment in Medicare Parts A and B from 90 days prior to IP admission through the end of the episode with Medicare as the primary payer. 2. Beneficiaries who enroll in Medicare Advantage during the period that starts 90 days prior to IP admission through the end of the episode.
MUC15-928	Paired Measure: Depression Utilization of	#712: Adult patients age 18 and older with the diagnosis of major depression or dysthymia who have a PHQ-9 tool administered	#712: Adult patients age 18 and older with the diagnosis of major depression or dysthymia. #711: Adults age 18 and older	Patients who die, are a permanent resident of a nursing home or are enrolled in hospice are excluded from this measure. Additionally, patients who

MUC ID	Measure Title	Numerator	Denominator	Exclusions
	the PHQ-9 Tool; Depression Remission at Six Months; Depression Remission at Twelve Months	at least once during the four month measurement period. #711: 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. #710: 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 twelve months as demonstrated by a twelve month (+/- 30 days) PHQ-9 score of less than five.	with a diagnosis of major depression or dysthymia and an initial (index) PHQ-9 score greater than nine. #710: Adults age 18 and older with a diagnosis of major depression or dysthymia and an initial (index) PHQ-9 score greater than nine.	have a diagnosis (in any position) of bipolar or personality disorder are excluded.
MUC15-946	Oncology: Radiation Dose Limits to Normal Tissues	Patients who had documentation in medical record that radiation dose limits to normal tissues were established prior to the initiation of a course of 3D conformal radiation for a minimum of two tissues	All patients, regardless of age, with a diagnosis of breast, rectal, pancreatic or lung cancer receiving conformal radiation therapy	None
MUC15-951	Admissions and Emergency Department Visits for Patients	The outcomes for this measure are one or more inpatient admissions or one or more emergency department (ED) visits for one of the following	The measure cohort includes Medicare Fee-for-Service (FFS) patients aged 18 years and older as of the start of the measurement period with a	1) Patients with a diagnosis of leukemia at any time during the measurement period. 2) Patients who were not enrolled in Medicare FFS Parts A and B in the year

MUC ID	Measure Title	Numerator	Denominator	Exclusions
	Receiving Outpatient Chemotherapy	diagnoses—anemia, dehydration, diarrhea, emesis, fever, nausea, neutropenia, pain, pneumonia, or sepsis—within 30 days among cancer patients receiving a hospital outpatient chemotherapy treatment. Qualifying diagnosis on the admission or ED visit claim must be listed as (1) the primary diagnosis or (2) a secondary diagnosis accompanied by a primary diagnosis of cancer. Outcomes are identified separately for the inpatient and ED categories. A patient can only qualify for an outcome once. Patients who experience both an inpatient admission and an ED visit during the measurement period are counted towards the inpatient admission outcome. Among those with no qualifying inpatient admissions, qualifying ED visits will be counted. Outcome Attribution: The outcome is attributed to the hospital outpatient facility	diagnosis of any cancer (except leukemia) who received at least one hospital outpatient chemotherapy treatment at the reporting facility during the measurement period.	prior to the first outpatient chemotherapy treatment during the measurement period. 3) Patients who received chemotherapy treatments for whom Medicare FFS Parts A and B enrollment is not maintained for the 30-days following treatment for at least one chemotherapy treatment during the measurement period.

MUC ID	Measure Title	Numerator	Denominator	Exclusions
		where the patient received chemotherapy treatment during the 30 days prior to the outcome.		
MUC15-982	Risk-standardized hospital visits within 7 days after hospital outpatient surgery	This is a risk-standardized outcome measure, so we use this field to describe the outcome (not the numerator of the measure score). The outcome is all-cause, unplanned hospital visits, defined as 1) an inpatient admission directly after the surgery or 2) an unplanned hospital visit post discharge (emergency department [ED] visit, observation stay, or unplanned inpatient admission) occurring after discharge and within 7 days of the surgical procedure. If more than one unplanned hospital visit occurs, only the first hospital visit within the outcome timeframe is counted in the outcome.	Outpatient same-day surgeries performed at HOPDs for Medicare FFS patients aged 65 years and older.	The measure excludes: • Surgeries for patients without continuous enrollment in Medicare FFS Parts A and B in the 1 month after the surgery, to ensure all patients have full data for outcome assessment.
MUC15-1013	Adult Local Current Smoking Prevalence	The numerator is current adult smokers (age 18 and older) in a geographically defined area who live in households.	The adult (age 18 and older) population in a geographically defined area who live in households. One adult per household is interviewed.	Adults 18 years or older are asked to take part in the survey and only one adult is interviewed per household. Adults living in vacation homes not occupied by household members for more than 30 days per year, group

MUC ID	Measure Title	Numerator	Denominator	Exclusions
				homes, institutions, prisons, hospitals and college dorms are excluded.
MUC15-1015	INR Monitoring for Individuals on Warfarin after Hospital Discharge	Individuals in the denominator who had an INR test within 14 days of discharge	Adult inpatient discharges to home for which the individual had active warfarin therapy within 1 day prior to discharge and the last monitored INR within 7 days of discharge was <=1.5 or >= 4	1) Inpatient discharges for which the individuals received dabigatran, rivaroxaban, or apixaban within one day prior to discharge 2) Inpatient discharges for which the individuals are monitoring INR at home 3) Inpatient discharges for which the individuals expired within 14 days post-discharge 4) Inpatient discharges for which the individuals received hospice care within 14 days post-discharge 5) Inpatient discharges for which the individuals had a hospital inpatient admission within 14 days post-discharge 6) Inpatient discharges for which the individuals were admitted to a skilled nursing facility (SNF) within 14 days post-discharge 7) Inpatient discharges for which the end date of the 14-day follow-up period occurs after the end of the measurement period 8) Inpatient discharges for which the individual is not enrolled in Medicare Part A and Part B at the time of discharge and during the 14-day follow-up period post discharge.

MUC ID	Measure Title	Numerator	Denominator	Exclusions
MUC15-1019	Non-Recommended PSA-Based Screening	Patients who receive a PSA-based screening test during the measurement period.	Men of any age with an encounter during the measurement period.	Denominator exclusions: Men who had an active diagnosis or history of prostate cancer diagnosis, an active diagnosis of dysplasia of the prostate, or an elevated PSA test result in the year prior to the measurement period (>4.0 nanograms/milliliter [ng/mL]).
MUC15-1033	Hybrid 30-Day Risk-Standardized Acute Ischemic Stroke Mortality Measure with Electronic Health Record (EHR)-Extracted Risk Adjustment Variables	This outcome measure does not have a traditional numerator and denominator. We use this field to define the measure outcome. The measure outcome is death from any cause within 30 days of the admission date of the index admission for patients with a principal discharge diagnosis of acute ischemic stroke.	The cohort includes inpatient admissions for patients aged 65 years and older who were discharged from short-term acute care hospitals with a principal discharge diagnosis of acute ischemic stroke.	The measure excludes admissions for patients: -with inconsistent or unknown vital status or other unreliable data); -enrolled in the Medicare hospice program at any time in the 12 months prior to the index admission, including the first day of the index admission and -discharged against medical advice
MUC15-1047	Toxic Anterior Segment Syndrome (TASS) Outcome	All anterior segment surgery patients diagnosed with TASS within 2 days of surgery	All anterior segment surgery patients	None
MUC15-1048	Skilled Nursing Facility 30-Day Potentially Preventable Readmission Measure (SNFPPR)	This measure does not have a simple form for the numerator and denominator. The numerator is defined as the risk-adjusted estimate of the number of unplanned, potentially preventable readmissions that	The denominator is computed with the same model used for the numerator. It is the model developed using all non-excluded stays in the national data. The measure includes all stays in the measurement period that are	The following are the sample exclusions: 1. SNF stays where the patient had one or more intervening post-acute care (PAC) admissions which occurred either between the prior proximal hospital discharge and SNF admission or after the SNF discharge, within the 30-day risk

MUC ID	Measure Title	Numerator	Denominator	Exclusions
		occurred within 30 days from discharge from the prior proximal acute hospitalization. The numerator, as defined, includes risk adjustment for patient characteristics and a statistical estimate of the facility effect beyond patient mix.	observed in national Medicare FFS data and do not fall into an excluded category. For a particular facility, the model is applied to the patient population, but the facility effect term is 0. In essence, it is the number of unplanned potentially preventable readmissions that would be expected for that patient population at the average facility.	window. Also excluded are SNF admissions where the patient had multiple SNF admissions after the prior proximal hospitalization, within the 30-day risk window. 2. SNF stays with a gap of greater than 1 day between discharge from the prior proximal hospitalization and the SNF admission. 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 the for 11 months prior to that discharge). 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). 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.

MUC ID	Measure Title	Numerator	Denominator	Exclusions
				6. SNF stays where the patient was discharged from the SNF against medical advice. 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" 8. SNF stays in which the prior proximal hospitalization was for pregnancy.
MUC15-1065	SUB-3 Alcohol & Other Drug Use Disorder Treatment Provided or Offered at Discharge and SUB-3a Alcohol & Other Drug Use Disorder Treatment at Discharge	SUB-3: The number of patients who received or refused at discharge a prescription for medication for treatment of alcohol or drug use disorder OR received or refused a referral for addictions treatment. SUB-3a: The number of patients who received a prescription at discharge for medication for treatment of alcohol or drug use disorder OR a referral for addictions treatment.	The number of hospitalized inpatients 18 years of age and older identified with an alcohol or drug use disorder.	There are 11 exclusions to the denominator as follows: • Patients less than 18 years of age • Patient drinking at unhealthy levels who do not meet criteria for an alcohol use disorder • Patients who are cognitively impaired • Patients who expire • Patients discharged to another hospital • Patients who left against medical advice • Patients discharged to another healthcare facility • Patients discharged to home or another healthcare facility for hospice care • Patients who have a length of stay less than or equal to three days or greater than 120 days • Patients who do not reside in the United States

MUC ID	Measure Title	Numerator	Denominator	Exclusions
				• Patients receiving Comfort Measures Only documented
MUC15-1082	Thirty-day all-cause unplanned readmission following psychiatric hospitalization in an Inpatient Psychiatric Facility (IPF)	The outcome for this measure is unplanned, all-cause 30-day readmission. Readmission is defined as a subsequent inpatient admission to an IPF or short-stay acute care hospital (including critical access hospitals) for any cause, with the exception of certain planned readmissions, within 30 days from the date of discharge from an eligible index psychiatric admission in an Inpatient Psychiatric Facility.	The target population for this measure is Medicare FFS beneficiaries aged 18 years and older with a principal diagnosis of a psychiatric disorder discharged from an Inpatient Psychiatric Facility. Eligible index admissions require enrollment in Medicare Parts A & B for 12 months prior to the index admission, the month of admission, and at least 30 days post discharge; discharged alive; and not transferred to an IPF or short-stay acute care hospital. A readmission within 30-days will also be eligible as an index admission, if it meets all other eligibility criteria. The performance period for the measure is 24 months.	The measure excludes admissions for patients: - Subsequent admission on day of discharge and following 2 days (transfers/interrupted stay period) - Nonpsychiatric principal discharge diagnosis - Discharged against medical advice - With unreliable data (e.g. has a death date but also admissions afterwards)
MUC15-1083	IQI-22: Vaginal Birth After Cesarean (VBAC) Delivery Rate, Uncomplicated	Number of vaginal deliveries, identified by DRG or MS-DRG code, among cases meeting the inclusion and exclusion rules for the denominator. DRG codes: 372, 373, 374, 375 MS-DRG codes: 767, 768, 774, 775	All deliveries identified by DRG or MS-DRG code, with any-listed ICD-9-CM diagnosis codes for previous Cesarean delivery. DRG codes: 370, 371, 372, 373, 374, 375 MS-DRG codes: 765, 766, 767, 768, 774, 775	Exclude cases: • with any-listed ICD-9-CM diagnosis codes for abnormal presentation, preterm, fetal death, or multiple gestation • with any-listed ICD-9-CM procedure codes for breech • with missing gender (SEX=missing), age

MUC ID	Measure Title	Numerator	Denominator	Exclusions
				(AGE=missing), quarter (DQTR=missing), year (YEAR=missing) or principal diagnosis (DX1=missing) See Inpatient Quality Indicators Appendices: • Appendix A – Abnormal Presentation, Preterm, Fetal Death and Multiple Gestation Diagnosis Codes • Appendix B – Breech Procedure Codes (available here: http://www.qualityindicators.ahrq.gov/Downloads/Modules/IQI/V50/TechSpecs/IQI_Appendices.pdf)
MUC15-1127	Drug Regimen Review Conducted with Follow-Up for Identified Issues-Post Acute Care (PAC) Home Health Quality Reporting Program (Required under the IMPACT Act)	Number of stays or care episodes where the medical record contains documentation of a drug regimen review conducted at admission or start-of-care or resumption-of-care with all potential clinically significant medication issues identified during the course of care and followed-up with a physician or physician designee.	Care episodes or stays ending during the reporting period. Assessment timing is as follows: Beginning of care episode or stay: • HH – SOC or ROC • SNF – Admission • IRF - Admission • LTCH – Admission End of care episode or stay: • HH – Transfer, Discharge, or Death at Home • SNF – Discharge, or expired • IRF – Discharge, or expired	Denominator Exclusion: NONE Numerator Exclusion: NONE

MUC ID	Measure Title	Numerator	Denominator	Exclusions
			• LTCH – Discharge, or expired	
MUC15-1128	Drug Regimen Review Conducted with Follow-Up for Identified Issues-Post Acute Care (PAC) Inpatient Rehabilitation Facility Quality Reporting Program (Required under the IMPACT Act)	Number of stays or care episodes where the medical record contains documentation of a drug regimen review conducted at admission or start-of-care or resumption-of-care with all potential clinically significant medication issues identified during the course of care and followed-up with a physician or physician designee.	Care episodes or stays ending during the reporting period. Assessment timing is as follows: Beginning of care episode or stay: • HH – SOC or ROC • SNF – Admission • IRF - Admission • LTCH – Admission End of care episode or stay: • HH – Transfer, Discharge, or Death at Home • SNF – Discharge, or expired • IRF – Discharge, or expired • LTCH – Discharge, or expired	Denominator Exclusion: NONE Numerator Exclusion: NONE
MUC15-1129	Drug Regimen Review Conducted with Follow-Up for Identified Issues-Post Acute Care (PAC) Long-Term Care Hospital Quality	Number of stays or care episodes where the medical record contains documentation of a drug regimen review conducted at admission or start-of-care or resumption-of-care with all potential clinically significant medication issues identified during the course of	Care episodes or stays ending during the reporting period. Assessment timing is as follows: Beginning of care episode or stay: • HH – SOC or ROC • SNF – Admission • IRF - Admission • LTCH – Admission	Denominator Exclusion: NONE Numerator Exclusion: NONE

MUC ID	Measure Title	Numerator	Denominator	Exclusions
	Reporting Program (Required under the IMPACT Act)	care and followed-up with a physician or physician designee.	End of care episode or stay: • HH – Transfer, Discharge, or Death at Home • SNF – Discharge, or expired • IRF – Discharge, or expired • LTCH – Discharge, or expired	
MUC15-1130	Drug Regimen Review Conducted with Follow-Up for Identified Issues-Post Acute Care (PAC) Skilled Nursing Facility Quality Reporting Program (Required under the IMPACT Act)	Number of stays or care episodes where the medical record contains documentation of a drug regimen review conducted at admission or start-of-care or resumption-of-care with all potential clinically significant medication issues identified during the course of care and followed-up with a physician or physician designee.	Care episodes or stays ending during the reporting period. Assessment timing is as follows: Beginning of care episode or stay: • HH – SOC or ROC • SNF – Admission • IRF - Admission • LTCH – Admission End of care episode or stay: • HH – Transfer, Discharge, or Death at Home • SNF – Discharge, or expired • IRF – Discharge, or expired • LTCH – Discharge, or expired	Denominator Exclusion: NONE Numerator Exclusion: NONE

MUC ID	Measure Title	Numerator	Denominator	Exclusions
MUC15-1131	Percent of Skilled Nursing Facility Residents Who Self-Report Moderate to Severe Pain	The numerator is the number of skilled nursing facility residents who are able to self-report with a selected Minimum Data Set (MDS) assessment during the selected quarter and who report almost constant or frequent pain AND at least one episode of moderate to severe pain in the 5 days prior to the assessment OR who report very severe/horrible pain of any frequency in the 5 days prior to the assessment.	Skilled nursing facility residents, except those who meet the exclusion criteria.	A resident is excluded if they did not meet the pain symptom conditions for the numerator AND any of the following conditions are true: 1) The pain assessment interview was not completed (J0200 = 0, -, ^) OR 2) The pain presence item was not completed (J0300 = 09, ^) OR 3) For residents with pain or hurting at any time in the last 5 days (J0300 = 1), any of the following are true: 3.1) The pain frequency item was not completed (J0400 = [9, -, ^]); 3.2) Neither of the pain intensity items were completed (J0600A = [99, -, ^] and J0600B = [99, -, ^]); 3.3) The numeric pain intensity item indicates no pain (J06000A = [00]).
MUC15-1132	Percent of Skilled Nursing Facility Residents Who Were Assessed and Appropriately Given the Influenza Vaccine	The numerator is the number of skilled nursing facility residents, during the numerator time window, who meet any of the following criteria: (1) received the seasonal influenza vaccine during the most recently-completed influenza vaccination season; (2) were offered but declined the seasonal influenza vaccine; or (3) were ineligible due to contraindication(s). The numerator time window	The denominator consists of skilled nursing facility residents aged 180 days and older on target date of the assessment during the denominator time window. The denominator time window is defined as the most recently-completed influenza vaccination season, which begins on October 1 or when the vaccine first becomes available, and ends on March 31 of the following year.	Residents whose age is 179 days or younger on target date of the selected assessment are excluded.

MUC ID	Measure Title	Numerator	Denominator	Exclusions
		coincides with the most recently-completed seasonal influenza vaccination season (which begins on October 1, or when the vaccine first becomes available, and ends on March 31 of the following year).		
MUC15-1133	Percent of Skilled Nursing Facility Residents Who Newly Received an Antipsychotic Medication	Skilled nursing facility residents who are receiving an antipsychotic medication during a quarter but who were not receiving an antipsychotic medication on their first assessment after admission.	Skilled nursing facility residents, except for those who meet the exclusion criteria.	Residents are excluded from the denominator if they are diagnosed with any of the following conditions: Schizophrenia, Tourette's Syndrome and Huntington's Disease.
MUC15-1134	Medicare Spending Per Beneficiary-Post Acute Care (PAC) Home Health Quality Reporting Program (Required under the IMPACT Act)	The numerator is the attributed provider's average MSPB-PAC Amount. The MSPB-PAC Amount for each HHA provider depends on two factors: i) the average of the ratio of standardized episode spending level and expected episode spending for each HHA provider; and ii) the average standardized episode spending across all HHA providers.	The denominator for a HHA's MSPB-PAC Measure is the weighted median MSPB-PAC Amount across all episodes for HHAs nationally.	The measure excludes the following episodes: • Any episode that is triggered by HHA Request for Anticipated Payment (RAP) claims. • Any episode that is triggered by an HHA claim that happens outside the 50 states or DC. • Any episode that is triggered by an HHA claim for which we see Part C crossover claims. • Any episode for which standard allowed amount of the HHA claim could not be calculated or is equal to 0.

MUC ID	Measure Title	Numerator	Denominator	Exclusions
		To calculate the MSPB-PAC Amount for each HHA, one finds the average of the ratio of the standardized episode spending over the expected episode spending, and then multiplies this quantity by the average episode spending level across all HHAs.		• Any episode in which a beneficiary is not enrolled in Medicare Fee-for-Service for the entirety of the lookback period plus the episode window or is enrolled in Part C for any part of the lookback plus episode window. • Any episode in which a beneficiary has a primary payer other than Medicare for any part of the lookback plus episode window. • Any episode for which the lookback period extends beyond our observation period.
MUC15-1135	Hybrid 30-Day Risk-Standardized Acute Ischemic Stroke Mortality Measure with Claims and Clinical Electronic Health Record (EHR) Risk Adjustment Variables	This outcome measure does not have a traditional numerator and denominator. We use this field to define the measure outcome. The measure outcome is death from any cause within 30 days of the admission date of the index admission for patients with a principal discharge diagnosis of acute ischemic stroke.	The cohort includes inpatient admissions for patients aged 65 years and older who were discharged from short-term acute care hospitals with a principal discharge diagnosis of acute ischemic stroke.	The measure excludes admissions for patients: -with inconsistent or unknown vital status or other unreliable data); -enrolled in the Medicare hospice program at any time in the 12 months prior to the index admission, including the first day of the index admission and -discharged against medical advice

MUC ID	Measure Title	Numerator	Denominator	Exclusions
MUC15-1136	Measurement of Phosphorus Concentration	Number of dialysis patient months in the denominator with serum or plasma phosphorus measured at least once within the reporting month.	Number of patient-months among in-center hemodialysis, home hemodialysis, or peritoneal dialysis patients under the care of the dialysis facility for the entire reporting month	Exclusions that are implicit in the denominator definition include all patients who have not been in the facility the entire reporting month. There are no additional exclusions for this measure.
MUC15-1143	Cellulitis Clinical Episode-Based Payment Measure	The numerator of the Cellulitis Clinical Episode-Based Payment Measure is the risk-adjusted sum of a provider's spending and the preadmission and post-discharge medical services that are clinically related to cellulitis across a hospital's eligible cellulitis episodes during the period of performance. A clinical episode begins 3 days prior to the initial (i.e., index) admission and extends 30 days following the index hospital stay discharge date.	A count of the provider's condition-specific episodes during the period of performance.	Episode Exclusions: 1. Beneficiaries who do not have continuous enrollment in Medicare Parts A and B from 90 days prior to IP admission through the end of the episode with Medicare as the primary payer. 2. Beneficiaries who enroll in Medicare Advantage during the period that starts 90 days prior to IP admission through the end of the episode.
MUC15-1144	GI Hemorrhage Clinical Episode-Based Payment Measure	The numerator of the GI Hemorrhage Clinical Episode-Based Payment Measure is the risk-adjusted sum of a provider's spending and the preadmission and post-discharge medical services that are clinically related to GI hemorrhage across a hospital's eligible GI Hemorrhage	A count of the provider's condition-specific episodes during the period of performance.	Episode Exclusions: 1. Beneficiaries who do not have continuous enrollment in Medicare Parts A and B from 90 days prior to IP admission through the end of the episode with Medicare as the primary payer. 2. Beneficiaries who enroll in Medicare Advantage during the period that starts

MUC ID	Measure Title	Numerator	Denominator	Exclusions
		episodes during the period of performance. A clinical episode begins 3 days prior to the initial (i.e., index) admission and extends 30 days following the index hospital stay discharge date.		90 days prior to IP admission through the end of the episode.
MUC15-1145	Kidney/Urinary Tract Infection Clinical Episode-Based Payment Measure	The numerator of the Kidney/Urinary Tract Infection Clinical Episode-Based Payment Measure is the risk-adjusted sum of a provider's spending and the preadmission and post-discharge medical services that are clinically related to kidney/urinary tract infection across a hospital's eligible Kidney/Urinary Tract Infection episodes during the period of performance. A clinical episode begins 3 days prior to the initial (i.e., index) admission and extends 30 days following the index hospital stay discharge date.	A count of the provider's condition-specific episodes during the period of performance.	Episode Exclusions: 1. Beneficiaries who do not have continuous enrollment in Medicare Parts A and B from 90 days prior to IP admission through the end of the episode with Medicare as the primary payer. 2. Beneficiaries who enroll in Medicare Advantage during the period that starts 90 days prior to IP admission through the end of the episode.
MUC15-1165	Proportion of Patients with Hypercalcemia (NQF #1454)	Number of patient-months in the denominator with 3-month rolling average of total uncorrected serum (or plasma) calcium greater than 10.2 mg/dL	Number of patient-months among adult (greater than or equal to 18 years old) in-center hemodialysis, home hemodialysis, or peritoneal dialysis patients under the care of the dialysis	Exclusions that are implicit in the denominator definition include all patients who have not been in the facility the entire reporting month (transient patients), and patients who have had ESRD for <91 days. There are

MUC ID	Measure Title	Numerator	Denominator	Exclusions
			facility for the entire reporting month who have had ESRD for greater than 90 days.	no additional exclusions for this measure.
MUC15-1167	Standardized Readmission Ratio (SRR) for dialysis facilities	Each facility's observed number of hospital discharges that are followed by an unplanned hospital readmission within 4–30 days of discharge	The expected number of unplanned readmissions in each facility, which is derived from a model that accounts for patient characteristics and discharging acute care hospitals.	Hospital discharges that: Are not live discharges; Result in a patient dying within 30 days with no readmission; Are against medical advice; Include a primary diagnosis for cancer, mental health or rehabilitation; Occur after a patient's 12th admission in the calendar year; Are from a PPS-exempt cancer hospital; Result in a transfer to another hospital on the same day; Are followed by a readmission within 3 days (inclusive).
MUC15-1169	Potential Opioid Overuse	Patients of the Medicare prescribing provider whose daily morphine equivalent dose (MED) is greater than 90 mg for at least 90 consecutive days.	Patients of the Medicare prescribing provider that are enrolled in a Part D Plan and who had two or more prescription claims totaling > 15 days supply for an opioid, on two separate occasions during the measurement year.	Denominator exclusions: • Patients receiving palliative or hospice treatment during the measurement period • Patients with cancer during the measurement period • Patients with critical limb ischemic pain during the measurement period • Patients with idiopathic pulmonary fibrosis during the measurement period • Patients with refractory angina during the measurement period

MUC ID	Measure Title	Numerator	Denominator	Exclusions
				• Patients with sickle cell disease during the measurement period

APPENDIX B: MEASURE RATIONALES

Legend for Measure Rationales

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

Measure Title: Refers to the title of the measure.

Rationale: Refers to the rationale for the measure, the peer-reviewed evidence justifying the measure, and/or the impact the measure is anticipated to achieve.

Measure Rationale

MUC ID	Measure Title	Rationale
MUC15-177	Use Of Preventive Screening Protocol For Transplant Patients	It is well-established in the literature that organ transplant recipients (OTRs) have increased incidences of NMSC overtime. It is essential to provide a protocol to ensure that OTRs receive appropriate levels of health promotion from their provider. This measure seeks to ensure health promotion using three tiers to increase knowledge, screenings, and protective methods to limit the morbidity and mortality that can result from non-melanoma skin cancer (NMSC).
MUC15-178	Use Of Mohs Surgery For Superficial Basal Cell Carcinomas On The Trunk	The use of Mohs surgery has increased substantially over the past decade. To prevent its over-utilization on low-risk tumors, appropriate use criteria (AUC) have been developed which indicate that treatment of superficial basal cell carcinoma (BCC) on the trunk in immune-competent patients is an inappropriate use of this treatment modality. This measure evaluates the utilization of Mohs and promotes the routine use of less expensive treatment modalities such as traditional surgical excision or destructive methods like curettage and electrodessication destruction for low-risk SCCis or SSC-KA on the trunk which should result in savings for the healthcare system.
MUC15-179	Use of Mohs Surgery For Squamous Cell Carcinoma In Situ And Keratoacanthoma Type - Squamous Cell Carcinoma on The Trunk that are 1 cm or smaller	The use of Mohs surgery has increased substantially over the past decade. To prevent its over-utilization on low-risk tumors, appropriate use criteria (AUC) have been developed which indicate that treatment of truncal squamous cell carcinoma in situ (SCCis) and keratoacanthoma type squamous cell carcinoma (SCC-KA) that are 1 cm or smaller in immunocompetent patients is an inappropriate use of this treatment modality. This measure evaluates the utilization of Mohs and promotes the routine use of less expensive treatment modalities such as traditional surgical excision or destructive methods like curettage and electrodessication destruction for low-risk SCCis or SSC-KA on the trunk which should result in savings for the healthcare system.
MUC15-207	Falls risk composite process measure	See literature review for NQF #0537 about the importance of assessing falls among home health patients and developing interventions.
MUC15-208	Surveillance endoscopy for dysplasia in	Esophageal dyslasia and esophageal cancer occur at increased rates in patients with Barrett's Esophagus. Patients with esophageal dyslasia and esophageal cancer are often asymptomatic until later stages. Earlier detection can improve outcomes. American College of Gastroenterology Guidelines 2008

MUC ID	Measure Title	Rationale
	Barrett's Esophagus	
MUC15-209	Non-selective beta blocker use in patients with esophageal varices	Use on non-selective beta blockers in the setting of esophageal varices can reduce portal pressure and improve long term clinical outcomes. American Association for the Study of Liver Diseases Guidelines 2009
MUC15-210	Hepatitis A vaccination for patients with cirrhosis	Vaccination against viral hepatitis for patients with cirrhosis can improve long term clinical outcomes. (Advisory Committee on Immunization Practices 2014)
MUC15-211	Hepatitis B vaccination for patients with cirrhosis	Vaccination against viral hepatitis for patients with cirrhosis can improve long term clinical outcomes. (Advisory Committee on Immunization Practices 2014)
MUC15-212	Surveillance colonoscopy for dysplasia in colonic Crohns Disease	Early detection of dysplasia or cancer in colonic Crohn's Disease patients can improve long term survival. All patients with diagnosis colonic Crohn's Disease for > 10 years should have a surveillance colonoscopy every 1-2 years (American Society of Gastrointestinal Endoscopy Guidelines 2006)
MUC15-215	NMSC: Biopsy Reporting Time - Clinician	Effective and timely communication between the physician and patient about biopsy results is essential; as delay may directly affect patient care. Furthermore, lack of timely delivery can negatively affect patient experience and satisfaction by increasing the anxiety the patient experiences while waiting for results. This measure seeks to standardize the amount of time it takes for the clinician to notify patients of the final biopsy results, to ensure timely communication and effective treatment for the patient.
MUC15-216	NMSC: Biopsy Reporting Time - Pathologist	The communication between pathologists and physicians about patient outcomes is fragmented. Effective and timely communication through the biopsy report between the two practitioners is essential; as delay may directly affect patient care. Furthermore, lack of timely delivery can increase the cost of medical care and error. This measure seeks to standardize the amount of time it takes for the pathologist to send the final biopsy report to the biopsying physician to ensure timely communication and effective treatment for the patient.

MUC ID	Measure Title	Rationale
MUC15-217	Screening for Hepatoma in patients with Chronic Hepatitis B	Early detection of hepatomas in patients with Chronic Hepatitis B can improve long term survival.
MUC15-220	Hepatitis B vaccination for patients with chronic Hepatitis C	Vaccination against viral hepatitis for patients with chronic hepatitis C can improve long term clinical outcomes
MUC15-221	Surveillance colonoscopy for dysplasia in Ulcerative Colitis	Early detection of dysplasia or cancer in ulcerative colitis patients can improve long term survival ACG guideline 2010
MUC15-227	Hospice Visits When Death Is Imminent	The literature supports hospice visits when death is imminent as a high priority in end-of-life care by showing the last week of life as the point in the terminal illness trajectory with the highest symptom burden. Particularly during the last few days before death, patients experience myriad physical and emotional symptoms, necessitating close care and attention from the integrated hospice team. Physical symptoms with high prevalence in the last week of life include fatigue, pain, dyspnea, respiratory secretions/death rattle, anorexia, dry mouth, nausea and/or vomiting, affecting a quarter to more than 80 percent of imminently dying patients. The specific prevalence of each symptom varies across studies, reflecting the heterogeneity of the samples and the range of assessment techniques used.(Lynn, Teno et al. 1997, Klinkenberg, Willems et al. 2004, Kehl and Kowalkowski 2012) Psychosocial symptoms with high prevalence in the last week of life include confusion, anxiety, depression and delirium, affecting a third to more than half of imminently dying patients.(Klinkenberg, Willems et al. 2004) A study of after-death interviews with close relatives of terminal patients found that 75 percent of patients experienced at least two symptoms requiring management in the last week of life.(Klinkenberg, Willems et al. 2004) The symptom burden typically increases significantly in the last few days of life compared to the previous stage,(Currow, Smith et al. 2010) further supporting care of the imminently dying patient as a high priority aspect of healthcare. Studies focusing on the expectations of patients and families also demonstrate the importance of care and attention from the hospice team in the days leading up to death. Caregivers of dying patients agree overwhelmingly with the importance of preparation at the end of life. Hospice assistance, ranging from legal to logistical to emotional, is paramount in preparing hospice patients and their families for imminent death.

MUC ID	Measure Title	Rationale
		(Steinhauser, Christakis et al. 2000) Bereaved family members and friends from a variety of settings identified the provision of physical comfort and emotional support to dying patients and their families as fundamental aspects of high-quality care.(Steinhauser, Christakis et al. 2000) References: Currow, D.C., et al., Do the Trajectories of Dyspnea Differ in Prevalence and Intensity By Diagnosis at the End of Life? A Consecutive Cohort Study. Journal of Pain and Symptom Management, 2010. 39(4): p. 680-690. Kehl, K.A. and J.A. Kowalkowski, A Systematic Review of the Prevalence of Signs of Impending Death and Symptoms in the Last 2 Weeks of Life. American Journal of Hospice & Palliative Medicine, 2012. 30(6): p. 601-616. Klinkenberg, M., et al., Symptom Burden in the Last Week of Life. J Pain Symptom Manage., 2004. 27(1): p. 5-13. Lynn, J., et al., Perceptions by Family Members of the Dying Experience of Older and Seriously Ill Patients. Annals of Internal Medicine, 1997. 126(2): p. 97-106. Steinhauser, K.E., et al., Factors Considered Important at the End of Life by Patients, Family, Physicians, and Other Care Providers. JAMA, 2000. 284(19): p. 2476-2482.
MUC15-229	HCV- Sustained Virological Response (SVR)	Achieving SVR is the first step toward reducing future HCV morbidity and mortality. Once achieved, an SVR is associated with long-term clearance of HCV infection, which is regarded as a virologic ‘‘cure,’’ as well as with improved morbidity and mortality. Patients who achieve an SVR usually have improvement in liver histology and clinical outcomes. Nineteen cohort studies (n=105 to 16,864) evaluated the association between SVR after antiviral therapy and mortality or complications of chronic HCV infection. Duration of follow-up ranged from 3 to 9 years. Ten studies were conducted in Asia (60, 67-72, 75, 77, 78). Eight (64-66, 72, 75-78) were rated as poor-quality and the remainder as fair quality. Although all studies reported adjusted risk estimates, only 8 (60, 61, 63, 67-70, 73) evaluated 5 key confounders (age, sex, genotype, viral load, and fibrosis stage). No study clearly described assessment of outcomes blinded to SVR status. The largest study (n=16,864) had the fewest methodological shortcomings (61). It adjusted for multiple potential confounders, including age, sex viral load, presence of cirrhosis, multiple comorbid conditions, aminotransferase levels, and others. It also stratified results by genotype. In a predominantly male, Veterans Affairs population, SVR after antiviral therapy was associated with lower risk for all-cause mortality than was SVR , after median of 3.8 years (adjusted hazard ration, 0.71 [CI, 0.60 to 0.861], 0.62[CI, 0.44 to 0.87], and 0.51 [CI, 0.35 to 0.75] for genotypes 1, 2, and 3 respectively). Mortality curves began to separate as soon as 3 to 6 months after SVR assessment.

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		Eighteen other cohort studies also found SVR to be associated with decreased risk for all-cause mortality (adjusted hazard rations, 0.07 to 0.39)(60, 69, 72, 73, 75-78), liver-related mortality (adjusted hazard rations, 0.12 to 0.46)(60, 62, 63, 67, 68, 71, 73-76, 78), and other complications of end-stage liver disease versus no SVR, with effects larger than in the Veterans Affairs study. The subgroup of studies that focused on patients with advanced fibrosis or cirrhosis at baseline (60, 67-72, 75, 77, 78) reported similar risk estimates. (Chou et. al., 2015) Chou R, Hartung D, Rahman B, Wasson N, Cottrell EB, Fu R. Comparative effectiveness of antiviral treatment for hepatitis C virus infection in adults: a systematic review. Ann Intern Med. 2013 Jan 15;158(2):114-23. Review. PubMed PMID: 23437439
MUC15-230	HIV Screening for Patients with Sexually Transmitted Disease (STD)	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 U.S. Preventive Services Task Force (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 underlying the USPSTF recommendation 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 www.annals.org (accessed July 1, 2013) Notably, the current USPSTF 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. CDC's newly published 2015 STD Treatment Guidelines also underscore the need for HIV testing in the context of certain STD diagnoses, noting that: “Persons at high risk for HIV infection with early syphilis, gonorrhea, or chlamydia should be screened at the time of the STD diagnosis, even if an HIV test was recently performed. Some STDs, especially rectal gonorrhea and syphilis, are a risk marker for HIV acquisition." Relevant references supporting the 2015 STD Treatment Guidelines include: • Zetola NM, Bernstein KT, Wong E, et al. Exploring the relationship between sexually transmitted diseases and HIV acquisition by using different study designs. J Acquir Immune Defic Syndr 2009;50:546–51. • Pathela P, Braunstein SL, Blank S, et al. HIV incidence among men with and those without sexually transmitted rectal infections: estimates from matching against an HIV case registry. Clin Infect Dis

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		2013;57:1203–9. • Peterman TA, Newman DR, Maddox L, Schmitt K, Shiver S. Risk for HIV following a diagnosis of syphilis, gonorrhoea or chlamydia: 328,456 women in Florida, 2000-2011. Int J STD AIDS. 2015 Feb;26(2):113-9. doi: 10.1177/0956462414531243. Epub 2014 Apr 8. • Taylor MM, Newman DR, Gonzalez J, Skinner J, Khurana R, Mickey T. HIV status and viral loads among men testing positive for rectal gonorrhoea and chlamydia, Maricopa County, Arizona, USA, 2011-2013. HIV Med. 2015 Apr;16(4):249-54. doi: 10.1111/hiv.12192. Epub 2014 Sep 17
MUC15-231	Hospice and Palliative Care Composite Process Measure	**Treatment Preferences and Spiritual Care** The Hospice and Palliative Care - Treatment Preferences measure addresses patient autonomy for patients with high severity of illness and risk of death, including seriously and incurably ill patients enrolled in hospice or hospital-based palliative care. 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. The affected populations are large; in 2009, 1.56 million people with life-limiting illness received hospice care.(NHPCO 2010) 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.(Center to Advance Palliative Care 2010) Patients and family caregivers rate control over treatment decisions as a high priority when living with serious and life-limiting illnesses. (Singer et al 1999) From a recent systematic review of clinical trials, moderate evidence supports multicomponent interventions to increase advance directives, and "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.(Lorenz et al 2008) 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.(Wright et al 2010; 2008) Spiritual care also has been shown to be a critical element of quality of life at the end of life.(Boston et al 2011; Cohen et al 1996; Puchalski et al 2009; Steinhauser et al 2000) References Boston P, Bruce A, Schrieber R. Existential suffering in the palliative care setting: an integrated literature review. J Pain Symptom Manage. 2011 Mar;41(3):604-18. Epub 2010 Dec 8. Center to Advance Palliative Care http://www.capc.org/news-and-events/releases/04-05-10 Cohen SR, Mount BM, Tomas JJN, Mount LF. Existential well-being is an important determinant of quality of

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		life. Cancer 1996; 77:576-86. 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. NHPCO Facts and figures: hospice care in America 2010 edition http://www.nhpco.org/files/public/Statistics_Research/Hospice_Facts_Figures_Oct-2010.pdf Puchalski C, Ferrell B, Virani R, Otis-Green S, Baird P, Bull J, Chochinov H, Handzo G, Nelson-Becker H, Prince-Paul M, Pugliese K, Sulmasy D. Improving the quality of spiritual care as a dimension of palliative care: the report of the Consensus Conference. J Palliat Med. 2009 Oct;12(10):885-904. Review. Singer PA, Martin DK, Kelner M. Quality end-of-life care: patients´ perspective. JAMA 1999; 281: 163-168. Steinhauser KE, Christakis NA, Clipp EC, McNeilly M, McIntyre L, Tulsky JA. Factors considered important at the end of life by patients, family, physicians, and other care providers. JAMA 2000 Nov 15;284(19):2476-82. 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. 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. **Pain** Research on care of patients with serious incurable illness and those nearing the end of life shows they experience high rates of pain (40-70% prevalence) and other physical, emotional, and spiritual causes of distress. (SUPPORT, 1995; Gade et al 2008) 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 access to effective treatment for symptoms such as pain and shortness of breath. The affected populations are large; in 2009, 1.56 million people with life-limiting illness received hospice care. (NHPCO, 2010) 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.(Center to Advance Palliative Care 2010) Patients and family caregivers rate pain management as a high priority when living with serious and life-limiting illnesses. (Singer, 1999) The consequences of inadequate screening, assessment and treatment for pain include physical suffering, functional limitation, and development of apathy and depression. (Gordon 2005) References: Center to Advance Palliative Care http://www.capc.org/news-and-events/releases/04-05-10 Gade G, Venohr I, Conner D, et al. Impact of an inpatient palliative care team: a randomized control trial. J Palliat Med. 2008;11(2):180–190.

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		Gordon DB, Dahl JL, Miaskowski C et al. American Pain Society recommendations for improving the quality of acute and cancer pain management. Arch Intern Med 2005; 165:1574-1580. NHPCO Facts and figures: hospice care in America 2010 edition http://www.nhpco.org/files/public/Statistics_Research/Hospice_Facts_Figures_Oct-2010.pdf Singer PA, Martin DK, Kelner M. Quality end-of-life care: patients´ perspective. JAMA 1999; 281: 163-168. The Writing Group for the SUPPORT Investigators. A controlled trial to improve care for seriously ill hospitalized patients. The study to understand prognosis and preferences for outcomes and risks of treatments (SUPPORT). JAMA. 1995;274:1591-1598. http://www.nationalprioritiespartnership.org/PriorityDetails.aspx?id=608 **Shortness of Breath** Dyspnea is a common symptom in serious illness, more common than pain for patients with chronic obstructive lung disease, lung cancer, cystic fibrosis, and restrictive lung diseases such as pulmonary fibrosis.(Luce et al 2001) Unlike pain, dyspnea severity is associated with the risk of death.(Olajidae et al 2007) Between 50-70% of patients with advanced lung cancer experience dyspnea near the end of life. As detailed in a recent systematic review, opioids, oxygen and non-pharmacologic nursing interventions demonstrate efficacy in randomized controlled trials of treatment for dyspnea in cancer and in other serious illness.(Ben-Aharon et al 2008; Lorenz et al 2008) Unfortunately, dyspnea is often persistent and under-treated in advanced cancer and other end-stage diseases.(Roberts et al 1993) References: Ben-Aharon I, Gafter-Gvili A, Paul M et al. Interventions for alleviating cancer-related dyspnea: a systematic review. J Clin Oncol 2008; 26:2396-2404. 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. Luce JM, Luce JA. Management of dyspnea in patients with far-advanced lung disease. JAMA 2001; 285:1331-1337. Olajidae O, Hanson LC, Usher BM et al. Validation of the Palliative Performance Score in the acute tertiary hospital setting. J Palliat Med 2007; 10:111-117 Roberts DK, Thorne SE, Pearson C. Cancer Nurs 1993; 16:310-320 **Bowel Regimen** Opioids are commonly used in the management of moderate to severe pain, and constipation is a common adverse effect. (Myotoku 2010; Tuteja 2010; Pappagallo 2001) A systematic review evaluating the extent and management of opioid-related side effects in both cancer and non-cancer patients indicated that tolerance is not developed to opioid-induced constipation and confirmed the need for prophylaxis. (McNicol 2003) Risk of

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		constipation is further aggravated by immobility and dehydration in older people with pain. The American Pain Society and American Geriatrics Society as well as expert consensus opinion recognize the frequency of constipation with opioid use and the necessity for prophylactic therapy. (APS 2005; RANO 2002; AGS 2002; APS 2002; Weiner 2001; Davis 2003; Etzioni 2007; Dy 2008) A study of 194,017 emergency department visits made by 76,759 cancer patients in the final 6 months of life revealed that 3,392 visits were made for constipation. (Barbera 2010) A Cochrane systematic review of 26 studies of patients at least 18 years old taking opioids for at least 6 months for non-cancer pain revealed gastrointestinal complaints (e.g., constipation, nausea, dyspepsia) as the most commonly reported side effect. (Noble 2010) References: AGS Panel on Persistent Pain in Older Persons. The management of persistent pain in older persons. J Am Geriatr Soc 2002;50(6 Suppl):S205-24 American Pain Society (APS). Guideline for the management of cancer pain in adults and children. 2005 American Pain Society (APS). Guideline of the management of pain in osteoarthritis, rheumatoid arthritis, and juvenile chronic arthritis. 2002. Barbera L, Taylor C, Dudgeon D. Why do patients with cancer visit the emergency department near the end of life? Can Med Assoc J 2010;182(6):563-569 Davis MP, Srivastava M. Demographics, assessment and management of pain in the elderly. Drugs Aging 2003;20(1):23-57 Dy SM, Asch SM, Naeim A, et al. Evidence-based standards for cancer pain. J Clin Oncol 2008;26(23):3879-3885 Etzioni S, Chodosh J, Ferrell BA, et al. Quality indicators for pain management in vulnerable elders. JAGS 2007;55:S403-S408 McNicol E, Horowicz-Mehler N, Fisk RA et al. Management of opioid side effects in cancer-related and chronic noncancer pain: a systematic review. J Pain 2003;4(5):231-56 Myotoku M, Nakanishi A, Kanematsu M, et al. Reduction in opioid side effects by prophylactic measures of palliative care team may result in improved quality of life. J Pall Care 2010;13(4):401-406 Noble M, Treadwell JR, Tregear SJ, et al. Long-term opioid treatment for chronic noncancer pain. Cochrane Database Sys Rev 2010;(1):CD006605 Pappagallo M. Incidence, prevalence, and management of opioid bowel dysfunction. Am J Surg 2001;182(5A Suppl):11s-8s Registered Nurses Association of Ontario (RNAO). Assessment and management of pain. 2002. (Nursing Best Practice Guideline: Shaping the Future of Nursing) Tuteja AK, Biskupiak J, Stoddard GJ, et al. Opioid-induced bowel disorders and narcotic bowel syndrome in

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		patients with chronic non-cancer pain. Neurogastroenterol Motil 2010;22:424-e96 Weiner DK, Hanlon JT. Pain in nursing home residents: management strategies. Drugs Aging 2001;18(1):13-29
MUC15-234	Potentially Preventable 30-Day Post-Discharge Readmission Measure for Home Health Quality Reporting Program (Required under the IMPACT Act)	This is the environmental scan conducted that demonstrates potentially preventable readmissions is a concern for community dwelling individuals and that home health interventions can reduce the risk of readmission.
MUC15-235	Improvement in Dyspnea in Patients with a Primary Diagnosis of CHF, COPD and/or Asthma	See literature for NQF measure #0179 about the importance of dyspnea and the potential for home health to affect outcomes.
MUC15-236	Application of IRF Functional Outcome Measure: Change in Self-Care Score for Medical Rehabilitation Patients (NQF #2633)	During a Skilled Nursing Facility (SNF) stay, the goals of treatment include fostering the patient's ability to manage his or her daily activities so that the patient can complete self-care and mobility activities as independently as possible and if feasible, return to a safe, active and productive life in a community-based setting. Previous research has found direct relationships between increased intense therapy services and improved functional outcomes in the SNF setting. Jette et. al (2005) found that higher physical and occupational therapy intensities were associated with greater odds of improving by at least 1 stage in the mobility and activities of daily living functional independence across each condition including patients with stroke, orthopedic conditions, and cardiovascular and pulmonary conditions. Similarly, a randomized control trial, of 26 SNF patients compared higher intensity rehabilitation to the standard-of-care found greater improvement for mobility activities including gait speed, longer walking distances, and a trend for improvement for self-care activities as measured by the Barthel index (Lenze et. al 2012). The mobility and self-care quality measures will standardize the collection of functional status data, which can improve communication when patients are transferred between providers. Most SNF patients receive care in an acute care hospital prior to the SNF stay, and many SNF patients receive care from another

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		provider after the SNF stay. Use of standardized clinical data to describe a patient´s status across providers can facilitate communication across providers. In describing the importance of functional status, the National Committee on Vital and Health Statistics Subcommittee on Health (2001) noted, "Information on functional status is becoming increasing essential for fostering healthy people and a healthy population. Achieving optimal health and well-being for Americans requires an understanding across the life space of the effects of people's health conditions on their ability to do basic activities and participate in life situations, in other words, their functional status." This quality measure will inform SNF providers about opportunities to improve care in the area of function and strengthen incentives for quality improvement related to patient function. Jette, D. U., R. L. Warren, & C. Wirtalla. (2005). The relation between therapy intensity and outcomes of rehabilitation in skilled nursing facilities. Archives of Physical Medicine and Rehabilitation, 86 (3), 373-9. Lenze, E. J., Host, H. H., Hildebrand M. W., Morrow-Howell, N., Carpenter, B., Freedland, K. E., … Binder, E, F. (2012). Enhanced medical rehabilitation increases therapy intensity and engagement and improves functional outcomes in postacute rehabilitation of older adults: a randomized-controlled trial. Journal of the American Medical Directors Association. 13(8):708-12. National Committee on Vital and Health Statistics Subcommittee on Health. Classifying and Reporting Functional Status. 2001. Retrieved from http://www.ncvhs.hhs.gov/010617rp.pdf
MUC15-251	Screening endoscopy for varices in patients with cirrhosis	Early detection of varices in cirrhotic patients can improve long term survival
MUC15-275	Ischemic Vascular Disease All or None Outcome Measure (Optimal Control)	There has been important evidence from clinical trials that further supports and broadens the merits of risk-reduction therapies for patients with established coronary and other atherosclerotic vascular disease, including peripheral arterial disease, atherosclerotic aortic disease, and carotid artery disease. References: Smith SC Jr, Benjamin EJ, Bonow RO, Braun LT, Creager MA, Franklin BA, Gibbons RJ, Grundy SM, Hiratzka LF, Jones DW, Lloyd-Jones DM, Minissian M, Mosca L, Peterson ED, Sacco RL, Spertus J, Stein JH, Taubert KA. AHA/ACCF secondary prevention and risk reduction therapy for patients with coronary and other atherosclerotic vascular disease: 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- http://circ.ahajournals.org/search?tocsectionid=ACC/AHA+Prevention+Guideline&sortspec=date&submit=Submit

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		AHA/ACC Guidelines for Preventing Heart Attack and Death in Patients With Atherosclerotic Cardiovascular Disease: 2001 Update http://content.onlinejacc.org/article.aspx?articleid=1127560 The All or None (Composite) method was chosen because of the benefits it provides to both the patient and the practitioner. First, this methodology more closely reflects the interests and likely desires of the patient. With the data collected in one score patients can easily look and see how their provider group is performing on these criteria rather than trying to make sense of multiple scores on individual measures. Second, this method represents a systems perspective emphasizing the importance of optimal care through a patient's entire healthcare experience. Third, this method gives a more sensitive scale for improvement. For those organizations scoring high marks on individual measures, the All-or-None measure will give room for benchmarks and additional improvements to be made.
MUC15-287	Medicare Spending per Beneficiary-Post Acute Care (PAC) Inpatient Rehabilitation Facility Quality Reporting Program (Required under the IMPACT Act)	Medicare payments to PAC have grown at a consistently higher rate than other major Medicare sectors. Between 2001 and 2013, Medicare PAC spending grew at an annual rate of 6.1 percent and doubled to $59.4 billion.
MUC15-289	Medicare Spending per Beneficiary-Post Acute Care (PAC) Long-Term Care Hospital Quality Reporting Program (Required under the IMPACT Act)	Medicare payments to PAC have grown at a consistently higher rate than other major Medicare sectors. Between 2001 and 2013, Medicare PAC spending grew at an annual rate of 6.1 percent and doubled to $59.4 billion.

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MUC15-291	Medicare Spending per Beneficiary-Post Acute Care (PAC) Skilled Nursing Facility Quality Reporting Program (Required under the IMPACT Act)	Medicare payments to PAC have grown at a consistently higher rate than other major Medicare sectors. Between 2001 and 2013, Medicare PAC spending grew at an annual rate of 6.1 percent and doubled to $59.4 billion.
MUC15-294	Hospital 30-Day Mortality Following Acute Ischemic Stroke Hospitalization Measure	Post-stroke mortality rates have been shown to be influenced by critical aspects of care at the hospital such as response to complications, speediness of delivery of care, organization of care, and appropriate imaging [Smith et al., 2006; Reeves et al., 2009; Lingsma et al., 2008; Hong et al., 2008; Fonarow et al., 2014]. This research demonstrates the relationship between hospital organizational factors and performance on the stroke mortality measure, and supports the ability of hospitals to impact these rates.
MUC15-295	Hospital-level, risk-standardized payment associated with an episode of care for primary elective total hip and/or total knee arthroplasty (THA/TKA)	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. 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. 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

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		"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. Health systems have taken notice of opportunities to improve value by encouraging collaboration of care between hospitals and post-acute providers. [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. 1. Centers for Disease Control and Prevention (CDC). Osteoarthritis. 2011; http://www.cdc.gov/arthritis/basics/osteoarthritis.htm . Accessed August 13, 2013. 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. 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. Health affairs (Project Hope). Nov 2011;30(11):2107-2115. 4. Bozic KJ, Stacey B, Berger A, Sadosky A, Oster G. Resource utilization and costs before and after total joint arthroplasty. BMC health services research. 2012;12:73. 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. Med Care. 2009;47(7):732-741. 6. Suter LG, et al., Medicare Hospital Quality Chartbook 2013: Performance Report on Outcome Measures, 2013. 7. Birkmeyer JD, Gust C, Dimick JB, Birkmeyer NJ, Skinner JS. Hospital quality and the cost of inpatient surgery in the United States. Annals of surgery. 2012;255(1):1-5. 8. Miller DC, Ye Z, Gust C, Birkmeyer JD. Anticipating the effects of accountable care organizations for inpatient surgery. JAMA surgery. Jun 2013;148(6):549-554. 9. CMS. Bundled Payments for Care Improvement (BPCI) Initiative: General Information. http://innovation.cms.gov/initiatives/bundled?payments/ [accessed Jan 7, 2014] 10. Miller DC, Ye Z, Gust C, Birkmeyer JD. Anticipating the effects of accountable care organizations for inpatient surgery. JAMA surgery. Jun 2013;148(6):549-554.
MUC15-296	New Corneal Injury Not Diagnosed in the Post-Anesthesia Care Unit/Recovery Area	Corneal abrasion/injury is the most common ophthalmologic complication that occurs during general anesthesia for non-ocular surgery. These injuries are painful for the patient, and can lead to significant microbial keratitis with possibility of permanent scarring. There is no standardized method for protecting the eyes during an anesthetic for non-ocular surgery. Adhesive tape, individual single, sterile packaged eye covers, small bio-occlusive dressings, used with or without eye ointment are some of the options used. Some practitioners may simply observe closed, non-taped eyes. The specific type of eye ointment also varies significantly. Some ointment is made with petrolatum, some is water soluble, with or without preservatives.

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		If ointment is used, preservative-free eye ointment is preferred, because preservative can cause corneal epithelial sloughing and conjunctiva hyperemia. None of the methods described in the literature are entirely effective at preventing corneal injury and some are associated with unwanted side effects. It is important to know that petrolatum is flammable and should be avoided when cautery will be used near the face. Several large studies have demonstrated that applying these techniques while measuring performance can lead to significant improvements in patient care. Measuring the incidence of corneal injury will give practices the data they need to assess performance, compare to national benchmarks, and if gaps are identified, undertake measures to improve eye protection for patients. The net result will be reduced corneal injuries and patient discomfort. All eye trauma cases and all eye surgery cases will be excluded from the measure. Reporting separately those procedures done on the face, including the ear, nose, and mandible, will serve as stratification allowing comparison of procedures which most anesthesiologists believe have a higher risk of corneal injury and which also remove the eyes from the direct control of the anesthesiologist.
MUC15-307	Performance of objective measure of functional hearing status	Functional hearing measurements are necessary to supplement the findings of the hearing thresholds and capture the patient's ability to communicate, and should be incorporated into the diagnosis and treatment of bilateral, permanent hearing loss. The data captured in objective measurement of open-set speech recognition, introduced with the presence of noise, can help audiologists objectively measure improvement and outcomes with amplification and rehabilitation and be used as a tool to educate patients on their hearing perception abilities. Additionally, functional hearing is a necessary measurement to determine cochlear implant candidacy. The AQC proposes this measure will assist audiologists adapt their practices to patient-centered, functional care.
MUC15-313	Patient-Reported Functional Communication	Patient engagement and their perceptions of their hearing abilities is necessary to determine patient-centered goals and treatment. There are several standardized, validated patient questionnaires available to capture the patient's perception of their communication abilities in their activities of daily living that can be used with objective measures of communication and hearing to offer a complete picture of the patient's functional ability. Using these tools assists the audiologist with rehabilitation goals and care planning, and engages the patient in the development of their own functional goals. The AQC proposes this measure will assist audiologists adapt their practices to patient-centered, functional care and actively engage patients in the diagnosis and treatment of their hearing loss.
MUC15-322	Hospital-level, risk-standardized payment	Medicare spending is estimated to have been $525.0 billion in 2010 with annual growth rates projected to be 6.3% for 2013 through 2020 due to both an increase in the Medicare population as well as Medicare spending on each beneficiary [1]. Further projections anticipate an exhaustion of Medicare‘s Hospital

MUC ID	Measure Title	Rationale
	associated with a 30-day episode-of-care for heart failure (HF)	Insurance Trust Fund (Part A) by 2024 [2]. The growth in spending is unsustainable and highlights the need to understand the value of care Medicare buys with every dollar spent. Given the urgency of the state of the Medicare Hospital Insurance Trust Fund and the fact that Medicare pays for 40-50% of hospitalizations nationally [3], hospital costs are a natural venue in which to deconstruct payments for Medicare patients. Yet payments to hospitals 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 to hospitals that is aligned with current quality of care measures will facilitate profiling hospital value (payments and quality). This measure will reflect differences in the management of care for patients with heart failure both during hospitalization and immediately post-discharge. Heart failure is a condition with substantial range in costs of care and for which there are well-established publicly reported quality measures and is therefore an ideal condition for assessing relative value for an episode-of-care that begins with an acute hospitalization. By focusing on one specific condition, value assessments may provide actionable feedback to hospitals and incentivize targeted improvements in care. 1. Ash AS, Byrne-Logan S. How Well Do Models Work? Predicting Health Care Costs. Proceedings of the Section on Statistics in Epidemiology. American Statistical Association. 1998. 2. Medpac. Report to the Congress: Medicare Payment Policy 9/17/12 2012. 3. National Hospital Discharge Survey. http://www.cdc.gov/nchs/nhds.htm . Accessed 08/07/2012.
MUC15-369	Hospital-level, risk-standardized payment associated with a 30-day episode-of-care for Acute Myocardial Infarction (AMI)	In 2012 total Medicare expenditures were $574.2 billion, representing 3.6% of gross domestic product (GDP). Current estimates suggest that Medicare spending will increase to 5.6% of GDP by 2035 due to both an increase in the Medicare population as well as Medicare spending on each beneficiary [1]. The growth in Medicare spending is unsustainable and highlights the need to create incentives for high value care. A critical first step in moving toward high value care is to define an approach to calculate costs that is transparent to consumers and fair to providers. 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. 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.

MUC ID	Measure Title	Rationale
		References: 1. Boards of Trustees of the Federal Hospital Insurance and Federal Supplementary Medical Insurance Trust Funds, 2013 Annual Report, May 31, 2013. 2. Andrews RM, Elixhauser, A. The National Hospital Bill: Growth Trends and 2005 Update on the Most Expensive Conditions by Payer. Agency for Healthcare Research and Quality. 2007.
MUC15-370	Corneal Graft Surgery - Postoperative improvement in visual acuity to 20/40 or better	Improved visual acuity is a desired surgical goal to improve patient's daily activities of daily living and quality of life
MUC15-372	Glaucoma - Intraocular Pressure (IOP) Reduction	Intraocular pressure is the only modifiable risk factor so control of IOP is relevant to clinical outcome
MUC15-374	Glaucoma - Intraocular Pressure (IOP) Reduction Following Laser Trabeculosplasty	Intraocular pressure is the only modifiable risk factor so control of IOP is relevant to clinical outcome
MUC15-375	Surgery for Acquired Involutional Ptosis: Patients with an improvement of marginal reflex distance (MRD)	Improved marginal reflex distance is the desired goal of surgery to improve clinical and functional outcomes

MUC ID	Measure Title	Rationale
MUC15-377	Acquired Involutional Entropion: Normalized lid position after surgical repair	Normalized lid position is the desired goal of surgery to improve clinical and functional outcomes for the patient
MUC15-378	Hospital-level, risk-standardized 30-day episode-of-care payment measure for pneumonia	Medicare spending is estimated to have been $525.0 billion in 2010 with annual growth rates projected to be 6.3% for 2013 through 2020 due to both an increase in the Medicare population as well as Medicare spending on each beneficiary[1]. Further projections anticipate an exhaustion of Medicare's Hospital Insurance Trust Fund (Part A) by 2024 [2]. The growth in spending is unsustainable and highlights the need to understand the value of care Medicare buys with every dollar spent. Given the urgency of the state of the Medicare Hospital Insurance Trust Fund and the fact that Medicare pays for 40-50% of hospitalizations nationally [3], hospital costs are a natural venue in which to deconstruct payments for Medicare patients. Yet payments to hospitals 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 to hospitals that is aligned with current quality of care measures will facilitate profiling hospital value (payments and quality). This measure will reflect differences in the management of care for patients with pneumonia both during hospitalization and immediately post-discharge. Pneumonia is a condition with substantial range in costs of care and for which there are well-established publicly reported quality measures and is therefore an ideal condition for assessing relative value for an episode-of-care that begins with an acute hospitalization. By focusing on one specific condition, value assessments may provide actionable feedback to hospitals and incentivize targeted improvements in care. 1. Ash AS, Byrne-Logan S. How Well Do Models Work? Predicting Health Care Costs. Proceedings of the Section on Statistics in Epidemiology. American Statistical Association. 1998. 2. Medpac. Report to the Congress: Medicare Payment Policy 9/17/12 2012. 3. National Hospital Discharge Survey. http://www.cdc.gov/nchs/nhds.htm . Accessed 08/07/2012.
MUC15-379	Exudative Age-Related Macular	Maintenance of visual acuity is a desired treatment goal to continue the level of the patient's daily activities of daily living and quality of life

MUC ID	Measure Title	Rationale
	Degeneration: Loss of Visual Acuity	
MUC15-391	Excess Days in Acute Care after Hospitalization for Pneumonia	Pneumonia results in approximately 1.2 million hospital admissions each year and accounts for more than $10 billion annually in hospital expenditures. 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). 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. 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). Several studies also have reported on the relationship between inpatient admissions and other types of hospital care including ED visits and observation stays. 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). 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 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). 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. References: Ashton CM, Del Junco DJ, Souchek J, Wray NP, Mansyur CL. The association between the quality of inpatient care and early readmission: a meta-analysis of the evidence. Med Care. Oct 1997;35(10):1044-1059. Benbassat J, Taragin M. Hospital readmissions as a measure of quality of health care: advantages and limitations. Archives of Internal Medicine. Apr 24 2000;160(8):1074-1081.

MUC ID	Measure Title	Rationale
		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. 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. Dean NC, Bateman KA, Donnelly SM, Silver MP, Snow GL, Hale D. Improved clinical outcomes with utilization of a community-acquired pneumonia guideline. Chest. 2006;130(3):794-799 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. Frankl SE, Breeling JL, Goldman L. Preventability of emergent hospital readmission. Am J Med. Jun 1991;90(6):667-674. Halfon P, Eggli 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. Jencks SF, Williams MV, Coleman EA. Rehospitalizations among patients in the Medicare fee-for-service program. N Engl J Med. 2009;360(14):1418-28. 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. Rising KL, White LF, Fernandez WG, Boutwell AE. Emergency Department Visits After Hospital Discharge: A Missing Part of the Equation. Annals of Emergency Medicine. 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. Wright S. Hospitals' Use of Observation Stays and Short Inpatient Stays for Medicare Beneficiaries. Washington, DC: OIG;2013
MUC15-392	Nonexudative Age-Related Macular Degeneration: Loss of Visual Acuity	Maintenance of visual acuity is a desired treatment goal to continue the level of the patient's daily activities of daily living and quality of life
MUC15-393	Diabetic Macular Edema: Loss of Visual Acuity	Maintenance of visual acuity is a desired treatment goal to continue the level of the patient's daily activities of daily living and quality of life

MUC ID	Measure Title	Rationale
MUC15-394	Acute Anterior Uveitis: Post-treatment visual acuity	Improvement of visual acuity is a desired treatment goal to continue the level of the patient's daily activities of daily living and quality of life
MUC15-395	Hospital 30-Day, All-Cause, Risk-Standardized Mortality Rate (RSMR) Following Coronary Artery Bypass Graft (CABG) Surgery	It is envisioned that this measure will provide hospitals with procedure-specific information to help improve patient safety and quality of care, thus reducing mortality rates. CABG is a priority area for outcomes measure development because it is a common procedure associated with considerable morbidity, mortality, and health care spending. In 2007, there were 114,028 hospitalizations for CABG surgery and 137,721 hospitalizations for combined surgeries for CABG and valve procedures ("CABG plus valve" surgeries) among Medicare FFS patients in the U.S. [1] CABG surgeries are costly procedures that account for the majority of major cardiac surgeries performed nationally. In fiscal year 2009, isolated CABG surgeries accounted for almost half (47.6%) of all cardiac surgery hospital admissions in Massachusetts. [2] In 2008, the average Medicare payment was $30,546 for CABG without valve and $47,669 for CABG plus valve surgeries. [3] Mortality rates following CABG surgery vary widely across hospitals. Our mean RSMR is 3.2% with a range from 1.5%-7.9%. The median risk-standardized rate is 3.0% (25th and 75th percentiles are 2.6% and 3.6%, respectively). Similarly, published data also demonstrate variation in mortality rates. 1. Drye E, Krumholz H, Vellanky S, Wang Y. Probing New Conditions and Procedures for New Measure Development: Yale New Haven Health Systems Corporation; Center for Outcomes Research and Evaluation.; 2009:1-7. 2. Massachusetts Data Analysis Center. Adult Coronary Artery Bypass Graft Surgery in the Commonwealth of Massachusetts: Hospital and Surgeons Risk-Standardized 30-Day Mortality Rates. In: Health MDoP, ed. Boston2009:77. 3. Pennsylvania Health Care Cost Containment Council. Cardiac Surgery in Pennsylvania 2008-2009. Harrisburg2011:60. 4. American New York State Department of Health. Adult Cardiac Surgery in New York State 2006-20082010:54.
MUC15-396	Acute Anterior Uveitis: Post-treatment Grade 0	Reduction of inflammation is a desired treatment goal for improved clinical and functional outcome

MUC ID	Measure Title	Rationale
	anterior chamber cells	
MUC15-397	Chronic Anterior Uveitis: Post-treatment visual acuity	Improvement of visual acuity is a desired treatment goal to continue the level of the patient's daily activities of daily living and quality of life
MUC15-398	Ventilator Weaning (Liberation) Rate	Patients on invasive mechanical ventilation comprise a substantial proportion of LTCH patient admissions, and thus present a critical focus for assessment of high quality care. In Fiscal Year 2012, the LTCH MS-DRGs for “Respiratory system diagnosis with ventilator support 96+ hours” (MS-DRG-LTCH 207) and “Respiratory system diagnosis with ventilator support < 96 hours” (MS-DRG-LTCH 208) accounted for over 16,000 discharges, or greater than 13% of discharges. (MedPAC 2014). Mechanically ventilated patients are at higher risk of mortality, ventilator-associated pneumonia (Cook et al, 1998; Papazian et al., 1996; Vincent et al., 1995), delirium (Ely et al., 2001), ventilator associated lung injury (Meade et al., 1995 and 1997; Slutsky and Trembley, 1998), and other ventilator-associated events. The cost of invasive mechanical ventilation in LTCHs is considerable, estimated at $1.3 billion in 2006 (Kahn et al., 2010). Discontinuation of invasive mechanical ventilation is associated with improved patient outcomes, including lower post-discharge mortality (Aboussouan et al. 2008; Dermot Frengley et al. 2014; Hassenpflug, Steckart, and Nelson 2011). Citations: Aboussouan, L. S., Lattin, C. D., and Kline, J. L. (2008). 'Determinants of long-term mortality after prolonged mechanical ventilation'. Lung 186 (5):299-306, doi 10.1007/s00408-008-9110-x. Cook, D. J., Walter, S. D., Cook, R. J., Griffith, L. E., Guyatt, G. H., Leasa, D., Jaeschke, R. Z., and Brun-Buisson, C. (1998). 'Incidence of and risk factors for ventilator-associated pneumonia in critically ill patients'. Ann Intern Med 129 (6):433-40. Dermot Frengley, J., Sansone, G. R., Shakya, K., and Kaner, R. J. (2014). 'Prolonged mechanical ventilation in 540 seriously ill older adults: effects of increasing age on clinical outcomes and survival'. J Am Geriatr Soc 62 (1):1-9, doi 10.1111/jgs.12597. Ely EW, Inouye SK, Bernard GR, et al. Delirium in mechanically ventilated patients: validity and reliability of the confusion assessment method for the intensive care unit (CAM-ICU). JAMA. 2001 Dec 5;286(21):2703-10. PMID: 11730446. Hassenpflug, M., Steckart, J., and Nelson, D. (2011). Post-ICU Mechanical Ventilation: Extended Care Facility Residents Transferred From Intensive Care To Long-Term Acute Care. In, American Thoracic Society 2011 International Conference. Denver, Colorado.

MUC ID	Measure Title	Rationale
		Kahn, J. M., Benson, N. M., Appleby, D., Carson, S. S., and Iwashyna, T. J. (2010). 'Long-term acute care hospital utilization after critical illness'. JAMA 303 (22):2253-9, doi 10.1001/jama.2010.761. Meade, M. O., and Cook, D. J. (1995). 'The aetiology, consequences and prevention of barotrauma: a critical review of the literature'. Clin Intensive Care 6 (4):166-73. Meade, M. O., Cook, D. J., Kernerman, P., and Bernard, G. (1997). 'How to use articles about harm: the relationship between high tidal volumes, ventilating pressures, and ventilator-induced lung injury'. Crit Care Med 25 (11):1915-22. MedPAC. (2014). Chapter 11. Long-term Care Hospital Services. In: Report to the Congress: Medicare Payment Policy. In. Medicare Payment Advisory Commission, Washington, DC. Papazian, L., Bregeon, F., Thirion, X., Gregoire, R., Saux, P., Denis, J. P., Perin, G., Charrel, J., Dumon, J. F., Affray, J. P., and Gouin, F. (1996). 'Effect of ventilator-associated pneumonia on mortality and morbidity'. Am J Respir Crit Care Med 154 (1):91-7, doi 10.1164/ajrccm.154.1.8680705. Slutsky, A. S., and Tremblay, L. N. (1998). 'Multiple system organ failure. Is mechanical ventilation a contributing factor?'. Am J Respir Crit Care Med 157 (6 Pt 1):1721-5, doi 10.1164/ajrccm.157.6.9709092. Vincent, J. L., Bihari, D. J., Suter, P. M., Bruining, H. A., White, J., Nicolas-Chanoin, M. H., Wolff, M., Spencer, R. C., and Hemmer, M. (1995). 'The prevalence of nosocomial infection in intensive care units in Europe. Results of the European Prevalence of Infection in Intensive Care (EPIC) Study. EPIC International Advisory Committee'. JAMA 274 (8):639-44.
MUC15-399	Chronic Anterior Uveitis: Post-treatment Grade 0 anterior chamber cells	Reduction of inflammation is a desired treatment goal for improved clinical and functional outcome
MUC15-400	Compliance with Spontaneous Breathing Trial (SBT) (including Tracheostomy Collar Trial (TCT) or Continuous Positive Airway Pressure (CPAP)	Patients on invasive mechanical ventilation comprise a substantial proportion of LTCH patient admissions, and thus present a critical focus for assessment of high quality care. In Fiscal Year 2012, the LTCH MS-DRGs for “Respiratory system diagnosis with ventilator support 96+ hours” (MS-DRG-LTCH 207) and “Respiratory system diagnosis with ventilator support < 96 hours” (MS-DRG-LTCH 208) accounted for over 16,000 discharges, or greater than 13% of discharges. (MedPAC 2014). Mechanically ventilated patients are at higher risk of mortality, ventilator-associated pneumonia (Cook et al, 1998; Papazian et al., 1996; Vincent et al., 1995), delirium (Ely et al., 2001), ventilator associated lung injury (Meade et al., 1995 and 1997; Slutsky and Trembley, 1998), and other ventilator-associated events. The cost of invasive mechanical ventilation in LTCHs is considerable, estimated at $1.3 billion in 2006 (Kahn et al., 2010). Discontinuation of invasive mechanical

MUC ID	Measure Title	Rationale
	Breathing Trial)) by Day 2 of the LTCH Stay	ventilation is associated with improved patient outcomes, including lower post-discharge mortality (Aboussouan et al. 2008; Dermot Frengley et al. 2014; Hassenpflug, Steckart, and Nelson 2011). Citations: Aboussouan, L. S., Lattin, C. D., and Kline, J. L. (2008). 'Determinants of long-term mortality after prolonged mechanical ventilation'. Lung 186 (5):299-306, doi 10.1007/s00408-008-9110-x. Cook, D. J., Walter, S. D., Cook, R. J., Griffith, L. E., Guyatt, G. H., Leasa, D., Jaeschke, R. Z., and Brun-Buisson, C. (1998). 'Incidence of and risk factors for ventilator-associated pneumonia in critically ill patients'. Ann Intern Med 129 (6):433-40. Dermot Frengley, J., Sansone, G. R., Shakya, K., and Kaner, R. J. (2014). 'Prolonged mechanical ventilation in 540 seriously ill older adults: effects of increasing age on clinical outcomes and survival'. J Am Geriatr Soc 62 (1):1-9, doi 10.1111/jgs.12597. Ely EW, Inouye SK, Bernard GR, et al. Delirium in mechanically ventilated patients: validity and reliability of the confusion assessment method for the intensive care unit (CAM-ICU). JAMA. 2001 Dec 5;286(21):2703-10. PMID: 11730446. Hassenpflug, M., Steckart, J., and Nelson, D. (2011). Post-ICU Mechanical Ventilation: Extended Care Facility Residents Transferred From Intensive Care To Long-Term Acute Care. In, American Thoracic Society 2011 International Conference. Denver, Colorado. Kahn, J. M., Benson, N. M., Appleby, D., Carson, S. S., and Iwashyna, T. J. (2010). 'Long-term acute care hospital utilization after critical illness'. JAMA 303 (22):2253-9, doi 10.1001/jama.2010.761. Meade, M. O., and Cook, D. J. (1995). 'The aetiology, consequences and prevention of barotrauma: a critical review of the literature'. Clin Intensive Care 6 (4):166-73. Meade, M. O., Cook, D. J., Kernerman, P., and Bernard, G. (1997). 'How to use articles about harm: the relationship between high tidal volumes, ventilating pressures, and ventilator-induced lung injury'. Crit Care Med 25 (11):1915-22. MedPAC. (2014). Chapter 11. Long-term Care Hospital Services. In: Report to the Congress: Medicare Payment Policy. In. Medicare Payment Advisory Commission, Washington, DC. Papazian, L., Bregeon, F., Thirion, X., Gregoire, R., Saux, P., Denis, J. P., Perin, G., Charrel, J., Dumon, J. F., Affray, J. P., and Gouin, F. (1996). 'Effect of ventilator-associated pneumonia on mortality and morbidity'. Am J Respir Crit Care Med 154 (1):91-7, doi 10.1164/ajrccm.154.1.8680705. Slutsky, A. S., and Tremblay, L. N. (1998). 'Multiple system organ failure. Is mechanical ventilation a contributing factor?'. Am J Respir Crit Care Med 157 (6 Pt 1):1721-5, doi 10.1164/ajrccm.157.6.9709092. Vincent, J. L., Bihari, D. J., Suter, P. M., Bruining, H. A., White, J., Nicolas-Chanoin, M. H., Wolff, M., Spencer, R. C., and Hemmer, M. (1995). 'The prevalence of nosocomial infection in intensive care units in Europe.

MUC ID	Measure Title	Rationale
		Results of the European Prevalence of Infection in Intensive Care (EPIC) Study. EPIC International Advisory Committee'. JAMA 274 (8):639-44.
MUC15-402	30 Day Stroke and Death Rate for Symptomatic Patients undergoing carotid stent placement	This measure complements the companion measure in symptomatic patients. The rationale for separating asymptomatic and symptomatic patients is that the recommended treatment criteria for each is different (stenosis grade) and a worse outcome score could be acceptable in symptomatic patients. This measure represents an unmet outcome measure for patients in multiple CMS programs.
MUC15-408	Discharge to Community-Post Acute Care (PAC) Inpatient Rehabilitation Facility Quality Reporting Program (Required under the IMPACT Act)	The ultimate goals of post-acute care are avoiding institutionalization and returning patients to their previous level of independence and functioning, with discharge to community being the primary goal for the majority of post-acute patients. For many, home is a symbol of independence, privacy, and competence. Discharge to community is considered a valuable outcome to measure because it is a multifaceted measure that captures the patient's functional status, cognitive capacity, physical ability, and availability of social support at home. There is considerable variation in discharge to community rates within and across post-acute settings. Studies show geographic variation, variation across patient socioeconomic characteristics (for example, race and ethnicity), and variation by facility characteristics (for profit vs. nonprofit, freestanding vs. hospital-based, urban vs. rural). In the IRF setting, discharge to community rates vary across providers, ranging from about 60% to 75%. The 2015 MedPAC report shows that, in FY 2013, the facility-level, mean risk-adjusted discharge to community rate for IRFs within 100 days of admission was 75.8%, and the mean observed rate was 74.7%. Discharge to community rates also vary widely in the SNF setting, ranging from as low as 31% to as high as 65%. The 2015 MedPAC report shows a mean risk-adjusted discharge to community rate of 37.5% for SNFs within 100 days of admission, and mean observed rate of 40.1%. A multicenter study of 23 LTCHs reported that only 28.8% of 1,061 patients who were ventilator-dependent on admission were discharged to home or assisted living facility. A study of 66,510 Medicare beneficiaries during pre- and post-HH episodes, revealed that 64 percent of beneficiaries discharged from HH did not use any other Medicare-reimbursed acute or post-acute services in the 30 days following HH discharge. Significant numbers of patients were admitted to inpatient facilities (29

MUC ID	Measure Title	Rationale
		percent) and lesser numbers to skilled nursing facilities (7.6 percent), inpatient rehabilitation (1.5 percent) and home health (7.2 percent) or hospice (3.3 percent) within 30 days of HH discharge (Wolff et al., 2008).
MUC15-411	Patient reported outcomes following ilio-femoral venous stenting	Ilio-venous stenting is a commonly performed procedure in patients with deep venous disease including acute, acute-on-chronic, and chronic venous thrombosis. Such interventions are also performed in patients with venous stenosis, such as patient with May-Turner syndrome. The procedural outcome of such procedures does not necessarily reflect resolution of patient symptoms, however. Standardizing the use of disease-specific surveys in this patient population is necessary to objectively assess the success of ilio-femoral venous stenting. Each survey is different; an objective outcome of any improvement would be the most appropriate assessment to encourage use of this measure by a wide variety of providers. This measure compliments a measure being considered for the 2016 PQRS program, focused on the PRO in patients undergoing saphenous vein ablation.
MUC15-412	Assessment of post-thrombotic syndrome following ilio-femoral venous stenting	The Villalta score is a well-recognized composite score that integrates patient reported symptoms with signs of the severity of post-thrombotic syndrome in patients with ilio-femoral venous disease (hence represents both PRO and an intermediate outcome measures). It is simple to administer clinically and is a reliable measure to ascertain both the clinical severity as well as morbidity associated with post-thrombotic syndrome. There is a measure gap in the area of venous disease and this measure will help to address this. The Villalta score can be integrated into structured reporting that is being piloted by the SIR, potentially enabling QCDR level reporting of the measure. An advantage over surveys is that this scoring system can be use uniformly by many sites. A disadvantage over surveys is that patients must be seen to have the follow-up score documented.
MUC15-413	Improvement in the Venous Clinical Severity Score after ilio-femoral venous stenting	The venous clinical severity score replace the older CEAP (clinical grade, etiology, anatomy, pathophysiology) grading system to assess the severity of chronic venous disease. Unlike the CEAP system, the venous clinical severity score is more useful in the assessment of changes in venous disease and thus is most appropriate to apply to patients undergoing treatment to assess outcomes from therapy, such as ilio-femoral venous stenting. This measure addresses a measurement gap across multiple programs. By encouraging the routine use of the venous clinical severity score centers will be able to objectively assess the intermediate outcome of venous stenting on the symptoms and signs of chronic venous disease. This score focuses more on the clinical signs, rather than patient symptoms, which was demonstrated to be a more useful marker for subtle changes in the severity of venous disease.
MUC15-414	Discharge to Community-Post	The ultimate goals of post-acute care are avoiding institutionalization and returning patients to their previous level of independence and functioning, with discharge to community being the primary goal for the majority

MUC ID	Measure Title	Rationale
	Acute Care (PAC) Long-Term Care Hospital Quality Reporting Program (Required under the IMPACT Act)	of post-acute patients. For many, home is a symbol of independence, privacy, and competence. Discharge to community is considered a valuable outcome to measure because it is a multifaceted measure that captures the patient's functional status, cognitive capacity, physical ability, and availability of social support at home. There is considerable variation in discharge to community rates within and across post-acute settings. Studies show geographic variation, variation across patient socioeconomic characteristics (for example, race and ethnicity), and variation by facility characteristics (for profit vs. nonprofit, freestanding vs. hospital-based, urban vs. rural). In the IRF setting, discharge to community rates vary across providers, ranging from about 60% to 75%. The 2015 MedPAC report shows that, in FY 2013, the facility-level, mean risk-adjusted discharge to community rate for IRFs within 100 days of admission was 75.8%, and the mean observed rate was 74.7%. Discharge to community rates also vary widely in the SNF setting, ranging from as low as 31% to as high as 65%. The 2015 MedPAC report shows a mean risk-adjusted discharge to community rate of 37.5% for SNFs within 100 days of admission, and mean observed rate of 40.1%. A multicenter study of 23 LTCHs reported that only 28.8% of 1,061 patients who were ventilator-dependent on admission were discharged to home or assisted living facility. A study of 66,510 Medicare beneficiaries during pre- and post-HH episodes, revealed that 64 percent of beneficiaries discharged from HH did not use any other Medicare-reimbursed acute or post-acute services in the 30 days following HH discharge. Significant numbers of patients were admitted to inpatient facilities (29 percent) and lesser numbers to skilled nursing facilities (7.6 percent), inpatient rehabilitation (1.5 percent) and home health (7.2 percent) or hospice (3.3 percent) within 30 days of HH discharge (Wolff et al., 2008).
MUC15-415	Proportion admitted to hospice for less than 3 days	Earlier referral and admission to hospice allows patients to derive the maximal benefit from it
MUC15-420	Rate of adequate percutaneous image-guided biopsy	The success rate of percutaneous biopsy is determined by the suitability of the sample for pathological analysis. Patients in whom a biopsy procedure yields inadequate specimens for analysis may be referred for repeat percutaneous biopsy, open biopsy, or undergo imaging to assess for alternative sites for biopsy increasing costs to the system, necessitating a second procedure or imaging test, and resulting in a delay in diagnosis. This measure provides an overall assessment of effective biopsy sampling, which directly

MUC ID	Measure Title	Rationale
		influences the patient experience and is an important component of efficient patient care. Evidence to support this measure comes from several published studies which were reviewed in a SIR Standards of Practice Document published in 2010 (Gupta S, Wallace MJ, Cardella JF et al. Quality Improvement Guidelines for Percutaneous Needle Biopsy. JVIR 2010; 21:969=975). The mean pooled success rates ranged from 70-96% for adequacy of sampling across a range of biopsy locations in 23 studies. The consensus panel suggested a threshold of 70-75% adequate sampling rate for internal quality improvement purposes. It is important to note that when a biopsy sample is considered inadequate for analysis, the patient will likely require a second biopsy procedure, either by the same operator or via a second approach with a different operator increasing costs to payers. The proposed metric is intended not to penalize operators for attempting difficult percutaneous biopsies, but rather to place a priority on working with pathology to ensure adequacy of sampling in a single procedure. This measure is a modified measure as submitted for consideration last year, focusing on a different strategy for data capture.
MUC15-423	Efficacy of uterine artery embolization for symptomatic uterine fibroids	Uterine artery embolization is a well-established procedure for the treatment of symptomatic uterine fibroids, with reported success rates of 85% in patients with isolated uterine fibroids as the etiology of their symptoms. Although there are a variety of techniques that are used clinically, such variance has little impact on the overall patient outcome. The development of uterine fibroid disease specific surveys, such as the Uterine Fibroid Symptom Health-related Quality of Life Questionnaire (UFS-QOL) has enabled robust reporting of patient-reported outcomes for this disease (http://www.sirfoundation.org/registries/). Importantly, this survey enables assessment both of the patient's subjective symptoms as well as their experience. The routine use of this survey instrument would objectively assess the procedural efficacy at the patient level.
MUC15-424	Common femoral arterial access site complication	"Arterial access is a critical step for any arterial vascular intervention and is performed commonly across a wide range of interventional radiology, interventional cardiology, and vascular surgery procedures. Arterial access site complications are a significant contributor to patient discomfort and morbidity in the perioperative period, and are a fortunately rare cause for mortality. Common femoral arterial access is by far the most common site of access for a variety of endovascular procedures. The size of the arterial access and the presence of underlying vascular disease are predisposing factors to arterial access site complications. This measure is intended to focus on access site complications using 8Fr or small sheath sizes, and can be reported in any center performing arterial procedures as a measure of quality patient care. The rationale to limit the upper size of the access to 8Fr is to limit the measure to procedures with exclusively percutaneous access. Physicians using this measure are free to utilize Ultrasound for arterial access and can

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		report the measure regardless if they use closure devices or rely on manual pressure as a strategy for achieving hemostasis. There is significant morbidity that may result from procedures performed downstream on patients with access site complications, including open repair of the injured artery site. The SIR Clinical Practice Guidelines (JVIR 2003, Vol 14, Issue 9, Part 2, S283-288) have noted that modest hematomas from femoral arterial access occur in up to 10% of patients, whereas major hematomas are rare (0.5%). The frequency of other arterial access site complications is more variable. As proposed this measure compliments a measure being considered for the 2016 PQRS program entitled ""Rate of surgical conversion from lower extremity endovascular revascularization procedure"" by detailing access site complications specifically. Access site complications are a modifiable risk factor for surgical conversion in lower extremity arterial procedures specifically."
MUC15-434	Verification of ISD prior to transurethral bulking injection.	Given the increasing number of women undergoing ambulatory surgical procedures for UI from 34,968 in 1996 to 105,656 in 2006, the need and demand for treatment of UI will rise significantly due to current changes in demographics (Erekson EA, 2010, Ambulatory procedures for female pelvic disorders in the United States). The procedures include the slings if the urethra hypermobile or bulking agents for fixed (ISD) urethra. The effectiveness of a sling decreases from 90% to 50% in someone with ISD. ISD criteria usually: not mobile urethra, VLPP less than 60mm H2O or MUCP less than 20mm H2O. Patients with ISD. Bulking agents are effective 70-80% in patients with ISD. Use of bulking agents should be utilized in appropriate patients with ISD.
MUC15-436	Over-utilization of mesh in the posterior compartment	Pelvic organ prolapse is a common condition with >50% of women presenting for routine gynecologic affected (Obstet and Gynecol 2004; 104: 489-96), with the lifetime risk for undergoing surgery for pelvic organ prolapse recently estimated to have doubled to 20% (Obstet and Gynecol 2014;123:1201-6). Repairs of the posterior compartment can include a midline fascial plication, site-specific repair, or a graft-augmented repair. Studies have failed to demonstrate any significant benefit to the utilization of synthetic mesh augments in the posterior compartment (Am J Obstet Gynecol 2006;195:1762-71) and recent concerns have come to light regarding the use of synthetic mesh augments (FDA Urogynecologic Surgical Mesh : Update on the Safety and Effectiveness of Transvaginal Placement for Pelvic Organ Prolapse; July 2011). Implementation of this measure will determine if best care practices are being followed when treating women with disorder.
MUC15-437	Route of hysterectomy	The purpose of this measure is to ensure that vaginal hysterectomy, the safest mode of hysterectomy, is optimized as a treatment option for patients requiring hysterectomy for benign indications. A Cochrane review evaluating route of hysterectomy asserts that vaginal hysterectomy is the safest mode of

MUC ID	Measure Title	Rationale
		hysterectomy and is associated with fewer complications and better outcomes (Cochrane Database of Systematic Reviews 2009, Issue 3), and the American College of Obstetrics and Gynecology Committee Opinion (Number 444 Nov 2009) asserts that vaginal hysterectomy is the approach of choice whenever feasible.
MUC15-439	Testing for uterine disease prior to obliterative procedures	This measure will help ensure that patients who do have a uterine malignancy are diagnosed prior to colpocleisis. Thus avoiding the lack of access to the uterus for proper work up and allowing proper referral 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%). 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.
MUC15-440	Documentation of offering a trial of conservative management prior to fecal incontinence surgery	This measure is intended to ensure that patients are offered the opportunity to pursue conservative management prior to surgery. The pathophysiological mechanisms responsible for FI include diarrhea, anal and pelvic floor weakness, reduced rectal compliance, and reduced or increased rectal sensation. Conservative medical management consisting of patient education, fiber supplements or antidiarrheals, behavioral techniques such as scheduled toileting, and pelvic floor exercises restores continence in up to 25% of patients. Biofeedback is associated with satisfaction rates of up to 76%, and continence in 55%. Patient education on all the treatment options can help with patient satisfaction and better outcomes as they still can be used as adjunct therapies to surgery. Treatment of fecal incontinence: state of the science summary for the National Institute of Diabetes and Digestive and Kidney Diseases workshop. Whitehead WE, Rao SS, Lowry A, Nagle D, Varma M, Bitar KN, Bharucha AE, Hamilton FA. Am J Gastroenterol. 2015 Jan;110(1):138-46; quiz 147. doi: 10.1038/ajg.2014.303. Epub 2014 Oct 21. Epidemiology, pathophysiology, and classification of fecal incontinence: state of the science summary for the National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK) workshop. Bharucha AE, Dunivan G, Goode PS, Lukacz ES, Markland AD, Matthews CA, Mott L, Rogers RG, Zinsmeister AR, Whitehead WE, Rao SS, Hamilton FA. Am J Gastroenterol. 2015 Jan;110(1):127-36. doi: 10.1038/ajg.2014.396. Epub 2014 Dec 23.
MUC15-441	Documentation of offering a trial of conservative	Urge urinary incontinence negatively impacts patients' quality of life, as patients may limit activities outside the home, socializing, and sexual activity due to the fear of leaking. Current guidelines issued by the American Urologic Association state that behavioral therapies (e.g., bladder training, bladder control

MUC ID	Measure Title	Rationale
	management prior to urgency incontinence surgery	strategies, pelvic floor muscle training, fluid management) should be first line therapy. Clinicians should offer oral anti-muscarinics or oral beta 3-adrenoceptor agonists as second-line therapy. Third line therapies include intradetrusor Botox injections, peripheral tibial nerve stimulation, or sacral neuromodulation. Website reference: https://www.auanet.org/education/guidelines/overactive-bladder.cfm
MUC15-450	Intraperitoneal chemotherapy administered within 42 days of optimal cytoreduction to women with invasive stage III ovarian, fallopian tube, or peritoneal cancer	Starting the chemotherapy within 42 days (6 weeks) from surgery is consistent with the previous GOG (Gynecologic Oncology Group) randomized trials that utilized this timeline as a standard. The most important of those trials is GOG-158 (Ozols RF, Bundy BN, Greer BE, Fowler JM, Clarke-Pearson D, Burger RA, et al. Phase III trial of carboplatin and paclitaxel compared with cisplatin and paclitaxel in patients with optimally resected stage III ovarian cancer: a Gynecologic Oncology Group study. Journal of clinical oncology : official journal of the American Society of Clinical Oncology. 2003;21:3194-200. PMID= 12860964) Although there is no randomized trial to accurately quantify the importance of initiating chemotherapy within 42 days from the debulking surgery, but analysis of patient data from the prospective OVCAR study suggested that delaying chemotherapy is associated with poorer survival, albeit it is only for overall survival in a subooptimally debulked ovarian cancer (Hofstetter G, Concin N, Braicu I, Chekerov R, Sehouli J, Cadron I, et al. The time interval from surgery to start of chemotherapy significantly impacts prognosis in patients with advanced serous ovarian carcinoma - analysis of patient data in the prospective OVCAD study. Gynecologic oncology. 2013;131:15-20. PMID= 23877013). A second study presented at the SGO 2013 by Eskander, R et al was a Gynecologic Oncology Group ancillary data study. This study showed a negative survival impact associated with >25 day interval from surgical cytoreduction to initiation of systemic therapy in advanced ovarian carcinoma. The largest study come some from Colorectal literature when a metaanalysis of more than 15,000 patients, showed that a delay of initiation of chemotherapy past 4 weeks after surgery is positively correlated to a worse survival (Biagi JJ, Raphael MJ, Mackillop WJ, Kong W, King WD, Booth CM. Association between time to initiation of adjuvant chemotherapy and survival in colorectal cancer: a systematic review and meta-analysis. JAMA. 2011;305:2335-42. PMID=21642686). IP chemotherapy provides a superior OS in patients after optimal cytoreductive surgery (Walker JL, Armstrong DK, Huang HQ, Fowler J, Webster K, Burger RA, et al. Intraperitoneal catheter outcomes in a phase III trial of intravenous versus intraperitoneal chemotherapy in optimal stage III ovarian and primary peritoneal cancer: a Gynecologic Oncology Group Study. Gynecologic oncology. 2006;100:27-32. PMID=16368440)
MUC15-452	Minimally invasive surgery performed	A total of 8 randomized clinical trials investigating minimally invasive surgery compared to laparotomy in over 3500 patients showed no difference in overall or disease free survival (Cochrane

MUC ID	Measure Title	Rationale
	for patients with endometrial cancer	Database Syst Rev. 2012 Sep 12;9; J Clin Oncol. 2012 Mar 1;30(7):695-700; J Clin Oncol. 2009 Nov 10;27(32):5331-6). However, patients undergoing minimally invasive surgery (laparoscopic or robotic-assisted hysterectomy) had reduced length of hospital stay, lower blood loss, and improved quality of life at 6 weeks (Lancet Oncol. 2010 Aug;11(8):772-80.; J Clin Oncol. 2009 Nov 10;27(32):5337-42). Furthermore, the rate of severe postoperative adverse events was lower in patients undergoing minimally invasive surgery (Cochrane Database Syst Rev. 2012 Sep 12;9). Despite these known benefits, utilization rates of minimally invasive surgery vary from 50-90% between surgeons and institutions (unpublished data from Nationwide inpatient sample - delete this sentence if reference required). References: 1: Galaal K, Bryant A, Fisher AD, Al-Khaduri M, Kew F, Lopes AD. Laparoscopy versus laparotomy for the management of early stage endometrial cancer. Cochrane Database Syst Rev. 2012 Sep 12;9:CD006655. doi: 10.1002/14651858.CD006655.pub2. Review. PubMed PMID: 22972096. 2: Walker JL, Piedmonte MR, Spirtos NM, Eisenkop SM, Schlaerth JB, Mannel RS, Barakat R, Pearl ML, Sharma SK. Recurrence and survival after random assignment to laparoscopy versus laparotomy for comprehensive surgical staging of uterine cancer: Gynecologic Oncology Group LAP2 Study. J Clin Oncol. 2012 Mar 1;30(7):695-700. doi: 10.1200/JCO.2011.38.8645. Epub 2012 Jan 30. Erratum in: J Clin Oncol. 2012 May 1;30(13):1570. PubMed PMID: 22291074; PubMed Central PMCID: PMC3295548. 3: Janda M, Gebski V, Brand A, Hogg R, Jobling TW, Land R, Manolitsas T, McCartney A, Nascimento M, Neesham D, Nicklin JL, Oehler MK, Otton G, Perrin L, Salfinger S, Hammond I, Leung Y, Walsh T, Sykes P, Ngan H, Garrett A, Laney M, Ng TY, Tam K, Chan K, Wrede CD, Pather S, Simcock B, Farrell R, Obermair A. Quality of life after total laparoscopic hysterectomy versus total abdominal hysterectomy for stage I endometrial cancer (LACE): a randomised trial. Lancet Oncol. 2010 Aug;11(8):772-80. doi: 10.1016/S1470-2045(10)70145-5. Epub 2010 Jul 16. PubMed PMID: 20638899. 4: Walker JL, Piedmonte MR, Spirtos NM, Eisenkop SM, Schlaerth JB, Mannel RS, Spiegel G, Barakat R, Pearl ML, Sharma SK. Laparoscopy compared with laparotomy for comprehensive surgical staging of uterine cancer: Gynecologic Oncology Group Study LAP2. J Clin Oncol. 2009 Nov 10;27(32):5331-6. doi: 10.1200/JCO.2009.22.3248. Epub 2009 Oct 5. PubMed PMID: 19805679; PubMed Central

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		PMCID: PMC2773219. 5: Kornblith AB, Huang HQ, Walker JL, Spirtos NM, Rotmensch J, Cella D. Quality of life of patients with endometrial cancer undergoing laparoscopic international federation of gynecology and obstetrics staging compared with laparotomy: a Gynecologic Oncology Group study. J Clin Oncol. 2009 Nov 10;27(32):5337-42. doi: 10.1200/JCO.2009.22.3529. Epub 2009 Oct 5. Erratum in: J Clin Oncol. 2010 Jun 1;28(16):2805. PubMed PMID: 19805678; PubMed Central PMCID: PMC2773220.
MUC15-454	Platin or taxane administered within 42 days following cytoreduction to women with invasive stage I (grade 3), IC-IV ovarian, fallopian tube, or peritoneal cancer	Starting the chemotherapy within 42 days (6 weeks) from surgery is consistent with the previous GOG (Gynecologic Oncology Group) randomized trials that utilized this timeline as a standard. The most important of those trials is GOG-158 (Ozols RF, Bundy BN, Greer BE, Fowler JM, Clarke-Pearson D, Burger RA, et al. Phase III trial of carboplatin and paclitaxel compared with cisplatin and paclitaxel in patients with optimally resected stage III ovarian cancer: a Gynecologic Oncology Group study. Journal of clinical oncology : official journal of the American Society of Clinical Oncology. 2003;21:3194-200. PMID= 12860964) Although there is no randomized trial to accurately quantify the importance of initiating chemotherapy within 42 days from the debulking surgery, but analysis of patient data from the prospective OVCAR study suggested that delaying chemotherapy is associated with poorer survival, albeit it is only for overall survival in a suboptimally debulked ovarian cancer (Hofstetter G, Concin N, Braicu I, Chekerov R, Sehouli J, Cadron I, et al. The time interval from surgery to start of chemotherapy significantly impacts prognosis in patients with advanced serous ovarian carcinoma - analysis of patient data in the prospective OVCAD study. Gynecologic oncology. 2013;131:15-20. PMID= 23877013). A second study presented at the SGO 2013 by Eskander, R et al was a Gynecologic Oncology Group ancillary data study. This study showed a negative survival impact associated with >25 day interval from surgical cytoreduction to initiation of systemic therapy in advanced ovarian carcinoma. The largest study come some from Colorectal literature when a metaanalysis of more than 15,000 patients, showed that a delay of initiation of chemotherapy past 4 weeks after surgery is positively correlated to a worse survival (Biagi JJ, Raphael MJ, Mackillop WJ, Kong W, King WD, Booth CM. Association between time to initiation of adjuvant chemotherapy and survival in colorectal cancer: a systematic review and meta-analysis. JAMA. 2011;305:2335-42. PMID=21642686). Starting the chemotherapy within 42 days (6 weeks) from surgery is consistent with the previous GOG (Gynecologic Oncology Group) randomized trials that utilized this timeline as a standard. The most important of those trials is GOG-158 (Ozols RF, Bundy BN, Greer BE, Fowler JM, Clarke-Pearson D, Burger RA, et al.

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		Phase III trial of carboplatin and paclitaxel compared with cisplatin and paclitaxel in patients with optimally resected stage III ovarian cancer: a Gynecologic Oncology Group study. Journal of clinical oncology : official journal of the American Society of Clinical Oncology. 2003;21:3194-200. PMID= 12860964) Although there is no randomized trial to accurately quantify the importance of initiating chemotherapy within 42 days from the debulking surgery, but analysis of patient data from the prospective OVCAR study suggested that delaying chemotherapy is associated with poorer survival, albeit it is only for overall survival in a subooptimally debulked ovarian cancer (Hofstetter G, Concin N, Braicu I, Chekerov R, Sehouli J, Cadron I, et al. The time interval from surgery to start of chemotherapy significantly impacts prognosis in patients with advanced serous ovarian carcinoma - analysis of patient data in the prospective OVCAD study. Gynecologic oncology. 2013;131:15-20. PMID= 23877013). A second study presented at the SGO 2013 by Eskander, R et al was a Gynecologic Oncology Group ancillary data study. This study showed a negative survival impact associated with >25 day interval from surgical cytoreduction to initiation of systemic therapy in advanced ovarian carcinoma. The largest study come some from Colorectal literature when a metaanalysis of more than 15,000 patients, showed that a delay of initiation of chemotherapy past 4 weeks after surgery is positively correlated to a worse survival (Biagi JJ, Raphael MJ, Mackillop WJ, Kong W, King WD, Booth CM. Association between time to initiation of adjuvant chemotherapy and survival in colorectal cancer: a systematic review and meta-analysis. JAMA. 2011;305:2335-42. PMID=21642686).
MUC15-459	Surgical staging with lymph node removal for any grade 3 and/or myometrial invasion >50% with endometrial cancer	Grade 3 tumors with greater than 50% myometrial invasion are at a higher risk of distant/metastatic spread. The decision to recommend adjuvant chemotherapy and/or radiation has advantages to patient outcomes in advanced stage diseases and if a lymph node dissection is not performed, patient stage status is known and women maybe undertreated or overtreated. The absence of an appropriate measure of this nature has the risk of women having surgery performed by General Gynecologists without the surgical expertise to perform a lymph node dissection. (1)National Cancer Center Network Clinical Practice Guidelines in Oncology. Uterine Neoplasms. 2014
MUC15-460	Use of brachytherapy for cervical cancer patients treated with primary	Women with early stage cervical cancer who are not operative candidates and those with stage 1B2 or higher stage cancers are typically recommended to undergo radiation therapy with external beam radiation and brachytherapy. Brachytherapy is considered a critical component of treatment by the National Comprehensive Cancer Network. Four year causes specific survival improved with the use of brachytherapy (64.3% with brachytherapy v. 51.1% without) as did overall survival (58.2% with brachytherapy v. 46.2% without) based on SEER data (Han K et al. Int J Rad Onc, Biol, Phys. 2013;87:111-119). Similar results were

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	radiation with curative intent.	seen in a recent study from the National Cancer Database with a median overall survival of 63.3 months in patients who did receive brachytherapy and 27.2 months among patients who did not (Lin JF et al. Gynecol Oncol. 2014;132:416-422). These studies also showed that only 47.5-58% of women are treated with brachytherapy in addition to their external beam therapy and that rates of use of brachytherapy have declined over time. The declination in use is attributed to inadequate training and unavailability of appropriate technology in small hospitals.
MUC15-461	Completion of external beam radiation within 60 days for women receiving primary radiotherapy as treatment for locally advanced cervical cancer (LACC)	The primary treatment for locally advanced cervical cancer consists of external beam radiation to the pelvis +/-para-aortic region with concurrent chemotherapy. In this patient population, total radiation therapy treatment time beyond 7 to 9 weeks has been shown to result in increased pelvic failure rates and decreased cancer specific and overall survival. Pelvic failure rates were reported at 26% for women who required greater than 56 days compared to 9% (hazard ratio 3.8; p=0.02). In an ancillary analysis of a Gynecologic Oncology Group study (protocol 165), women who had prolongation of radiation for any cause had a poorer progression free survival (HR 1.98; CI 1.16-3.38) and overall survival (HR 1.88; CI 1.08-3.26) compared to those who completed therapy within 8 weeks. Further studies have shown that prolongation of radiation is associated with a decreased survival of 0.6% and pelvic control rates of 0.7% for each additional day beyond 55 days for all stages of disease. More recent studies have shown that this effect remains even in the setting of chemoradiation. References: 1. Song S, Rudra S, Hasselle MD, et al. The effect of treatment time in locally advanced cervical cancer in the era of concurrent chemoradiotherapy. Cancer 2013;119(2):325-331. 2. Fyles A, Keane TJ, Barton M, Simm J. The effect of treatment duration in the local control of cervix cancer. Radiother Oncol 1992;25(4): 273-9. 3. Nugent EK, Case AS, Hoff JT, et al. Chemoradiation in locally advanced cervical carcinoma: an analysis of cisplatin dosing and other clinical prognostic factors. Gynecol Oncol 2010;116(3):438-41. 4. Monk BJ, Tian C, Rose PG, Lanciano R. Which clinical/pathologic factors matter in the era of chemoradiation as treatment for locally advanced cervical carcinoma? Analysis of two Gynecologic Oncology Group (GOG) trials. Gynecol Oncol 2007;427-433. 5. Petereit DG, Sarkaria JN, Chappell R, Fowler JF, Harmann TJ, Kinsella TJ et al . The adverse effect of treatment prolongation in cervical carcinoma. Int J Radiation Oncology Biol Phys 1995;32(5):1301-1307. 6. Perez CA, Grigsby PW, Castro-Vita H, Lockett MA. Carcinoma of the uterine cervix. Impact of prolongation of overall treatment time and timing of brachytherapy on outcome of radiation therapy. Int J Radiation Oncology Biol Phys 1995;32(5): 1275-1288.
MUC15-462	Discharge to Community-Post	The ultimate goals of post-acute care are avoiding institutionalization and returning patients to their previous level of independence and functioning, with discharge to community being the primary goal for the majority

MUC ID	Measure Title	Rationale
	Acute Care (PAC) Skilled Nursing Facility Quality Reporting Program (Required under the IMPACT Act)	of post-acute patients. For many, home is a symbol of independence, privacy, and competence. Discharge to community is considered a valuable outcome to measure because it is a multifaceted measure that captures the patient's functional status, cognitive capacity, physical ability, and availability of social support at home. There is considerable variation in discharge to community rates within and across post-acute settings. Studies show geographic variation, variation across patient socioeconomic characteristics (for example, race and ethnicity), and variation by facility characteristics (for profit vs. nonprofit, freestanding vs. hospital-based, urban vs. rural). In the IRF setting, discharge to community rates vary across providers, ranging from about 60% to 75%. The 2015 MedPAC report shows that, in FY 2013, the facility-level, mean risk-adjusted discharge to community rate for IRFs within 100 days of admission was 75.8%, and the mean observed rate was 74.7%. Discharge to community rates also vary widely in the SNF setting, ranging from as low as 31% to as high as 65%. The 2015 MedPAC report shows a mean risk-adjusted discharge to community rate of 37.5% for SNFs within 100 days of admission, and mean observed rate of 40.1%. A multicenter study of 23 LTCHs reported that only 28.8% of 1,061 patients who were ventilator-dependent on admission were discharged to home or assisted living facility. A study of 66,510 Medicare beneficiaries during pre- and post-HH episodes, revealed that 64 percent of beneficiaries discharged from HH did not use any other Medicare-reimbursed acute or post-acute services in the 30 days following HH discharge. Significant numbers of patients were admitted to inpatient facilities (29 percent) and lesser numbers to skilled nursing facilities (7.6 percent), inpatient rehabilitation (1.5 percent) and home health (7.2 percent) or hospice (3.3 percent) within 30 days of HH discharge (Wolff et al., 2008).
MUC15-463	Use of concurrent platinum-based chemotherapy for patients with stage IIB-IV cervical cancer receiving primary radiation therapy.	The addition of platinum-based chemotherapy to primary radiation therapy in the treatment of patients with stage IIB-IV cervical cancer is associated with a significant progression-free and overall survival benefit. This finding was demonstrated in five landmark randomized clinical trials, which led to the National Cancer Institute (NCI) clinical alert in 1999 that established the addition of chemotherapy to radiation therapy as standard of care for cervical cancer patients. Subsequently, the Chemoradiotherapy for Cervical Cancer Meta-analysis Collaboration published a Cochrane Database systemic review and meta-analysis, confirming the findings of the initial trials. The review and meta-analysis demonstrated that the addition of platinum-based chemotherapy was associated with a 17% improvement in overall survival (HR = 0.83, 95% CI 0.71-0.97, P = 0.017). The addition of chemotherapy to radiation therapy also improved disease-free survival by 22% (HR 0.78, 95% CI 0.70 - 0.87, P < 0.001). The benefit of platinum-based chemotherapy to primary radiation therapy in the treatment of stage IIB-IV cervical cancer patients has been clearly demonstrated. However, there is a paucity of data on how often healthcare providers and institutions are meeting this

MUC ID	Measure Title	Rationale
		standard of care. REFERENCES Chemoradiotherapy for Cervical Cancer Meta-analysis Collaboration (CCCMAC). Reducing uncertainties about the effects of chemoradiotherapy for cervical cancer: individual patient data meta-analysis. Cochrane Database Syst Rev. 2010 Jan 20;(1):CD008285. doi: 10.1002/14651858.CD008285.
MUC15-465	Performance of radical hysterectomy in patients with IB1-IIA cervical cancer who undergo hysterectomy.	The primary treatment of stage IB1-IIA is radical hysterectomy. Unlike simple hysterectomy, radical hysterectomy includes removal of the paracervical tissue including the parametrium, uterosacral ligament, and uper vagina. Radical hysterectomy has long been considered the most appropriate type of hysterectomy for invasive cervical cancer. The procedure requires expertise and technical skill to perform. Radical hysterectomy can be performed via laparotomy, through minimally invasive technology (robotic or laparoscopic) or vaginally.
MUC15-466	Postoperative pelvic radiation with concurrent cisplatin-containing chemotherapy with (or without) brachytherapy for patients with positive pelvic nodes, positive surgical margin, and/or positive parametrium.	There have been multiple prospective randomized trials demonstrating the disease free and overall survival for cervical cancer patients with post-operative involvement of surgical margins, and/or regional lymph nodes. These collective studies have resulted in the recommendation by the National Cancer Institute that platinum containing chemotherapy be added to post-operative radiation therapy for patients with positive surgical margins including the parametrium and vagina, as well as positive lymph nodes. The following articles are referenced in the NCI alert: Morris et al NEJM 1999;340:1137-1143, Peters et al JCO 2000;18:1606-1613, Rose, P. et al NEJM 1999;340:1144-1153
MUC15-495	Potentially Preventable 30-Day Post-Discharge Readmission Measure for Skilled Nursing Facility	Hospital readmissions of Medicare beneficiaries discharged from a hospital to a skilled nursing facility (SNF) are prevalent and expensive, and prior studies suggest that a large proportion of readmissions are preventable (Mor et al., 2010). According to Mor et al., based an analysis of SNF data from 2006 Medicare claims merged with the Minimum Data Set (MDS), 23.5 percent of SNF stays resulted in a rehospitalization within 30 days of the initial hospital discharge. The average Medicare payment for each readmission was $10,352 per hospitalization, for a total of $4.34 billion. Of these rehospitalizations, 78 percent were deemed

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	Quality Reporting Program (Required under the IMPACT Act)	potentially avoidable, and applying this figure to the aggregate cost indicates that avoidable hospitalizations resulted in an excess cost of $3.39 billion (78 percent of $4.34 billion) to Medicare (Mor, Intrator, Feng, et al., 2010). Several analyses of hospital readmissions of SNF patients suggest there is opportunity for reducing hospital readmissions among SNF patients (Li et al., 2012; Mor et al., 2010), and multiple studies suggest SNF structural and process characteristics that impact readmission rates (Coleman et al., 2004; MedPAC 2011).
MUC15-496	Potentially Preventable 30-Day Post-Discharge Readmission Measure for Inpatient Rehabilitation Facility Quality Reporting Program (Required under the IMPACT Act)	The peer-reviewed literature specific to potentially preventable readmissions following IRF discharge is limited. However, MedPAC has estimated that 76 percent of 30-day readmissions for Medicare beneficiaries overall were due to five potentially preventable conditions (heart failure, electrolyte imbalance, respiratory infection, sepsis, and urinary tract infection (MedPAC 2007).
MUC15-497	Potentially Preventable Within Stay Readmission Measure for Inpatient Rehabilitation Facilities	The peer-reviewed literature specific to potentially preventable readmissions during an IRF stay is limited. However, MedPAC has estimated that 76 percent of 30-day readmissions for Medicare beneficiaries overall were due to five potentially preventable conditions (heart failure, electrolyte imbalance, respiratory infection, sepsis, and urinary tract infection (MedPAC 2007).
MUC15-498	Potentially Preventable 30-Day Post-Discharge Readmission Measure for Long-Term Care Hospital Quality Reporting	The peer-reviewed literature specific to potentially preventable readmissions following LTCH discharge is limited. However, MedPAC has estimated that 76 percent of 30-day readmissions for Medicare beneficiaries overall were due to five potentially preventable conditions (heart failure, electrolyte imbalance, respiratory infection, sepsis, and urinary tract infection (MedPAC 2007).

MUC ID	Measure Title	Rationale
	Program (Required under the IMPACT Act)	
MUC15-523	Discharge to Community-Post Acute Care (PAC) Home Health Quality Reporting Program (Required under the IMPACT Act)	The ultimate goals of post-acute care are avoiding institutionalization and returning patients to their previous level of independence and functioning, with discharge to community being the primary goal for the majority of post-acute patients. For many, home is a symbol of independence, privacy, and competence. Discharge to community is considered a valuable outcome to measure because it is a multifaceted measure that captures the patient's functional status, cognitive capacity, physical ability, and availability of social support at home. There is considerable variation in discharge to community rates within and across post-acute settings. Studies show geographic variation, variation across patient socioeconomic characteristics (for example, race and ethnicity), and variation by facility characteristics (for profit vs. nonprofit, freestanding vs. hospital-based, urban vs. rural). In the IRF setting, discharge to community rates vary across providers, ranging from about 60% to 75%. The 2015 MedPAC report shows that, in FY 2013, the facility-level, mean risk-adjusted discharge to community rate for IRFs within 100 days of admission was 75.8%, and the mean observed rate was 74.7%. Discharge to community rates also vary widely in the SNF setting, ranging from as low as 31% to as high as 65%. The 2015 MedPAC report shows a mean risk-adjusted discharge to community rate of 37.5% for SNFs within 100 days of admission, and mean observed rate of 40.1%. A multicenter study of 23 LTCHs reported that only 28.8% of 1,061 patients who were ventilator-dependent on admission were discharged to home or assisted living facility. A study of 66,510 Medicare beneficiaries during pre- and post-HH episodes, revealed that 64 percent of beneficiaries discharged from HH did not use any other Medicare-reimbursed acute or post-acute services in the 30 days following HH discharge. Significant numbers of patients were admitted to inpatient facilities (29 percent) and lesser numbers to skilled nursing facilities (7.6 percent), inpatient rehabilitation (1.5 percent) and home health (7.2 percent) or hospice (3.3 percent) within 30 days of HH discharge (Wolff et al., 2008).
MUC15-527	Application of IRF Functional Outcome Measure: Change in Mobility Score for Medical Rehabilitation	During a Skilled Nursing Facility (SNF) stay, the goals of treatment include fostering the patient's ability to manage his or her daily activities so that the patient can complete self-care and mobility activities as independently as possible and if feasible, return to a safe, active and productive life in a community-based setting. Previous research has found direct relationships between increased intense therapy services and improved functional outcomes in the SNF setting. Jette et. al (2005) found that higher physical and occupational therapy intensities were associated with greater odds of improving by at least 1 stage in the mobility and activities of daily living functional independence across each condition including patients with

MUC ID	Measure Title	Rationale
	Patients (NQF #2634)	stroke, orthopedic conditions, and cardiovascular and pulmonary conditions. Similarly, a randomized control trial, of 26 SNF patients compared higher intensity rehabilitation to the standard-of-care found greater improvement for mobility activities including gait speed, longer walking distances, and a trend for improvement for self-care activities as measured by the Barthel index (Lenze et. al 2012). The mobility and self-care quality measures will standardize the collection of functional status data, which can improve communication when patients are transferred between providers. Most SNF patients receive care in an acute care hospital prior to the SNF stay, and many SNF patients receive care from another provider after the SNF stay. Use of standardized clinical data to describe a patient´s status across providers can facilitate communication across providers. In describing the importance of functional status, the National Committee on Vital and Health Statistics Subcommittee on Health (2001) noted, "Information on functional status is becoming increasing essential for fostering healthy people and a healthy population. Achieving optimal health and well-being for Americans requires an understanding across the life space of the effects of people's health conditions on their ability to do basic activities and participate in life situations, in other words, their functional status." This quality measure will inform SNF providers about opportunities to improve care in the area of function and strengthen incentives for quality improvement related to patient function. Jette, D. U., R. L. Warren, & C. Wirtalla. (2005). The relation between therapy intensity and outcomes of rehabilitation in skilled nursing facilities. Archives of Physical Medicine and Rehabilitation, 86 (3), 373-9. Lenze, E. J., Host, H. H., Hildebrand M. W., Morrow-Howell, N., Carpenter, B., Freedland, K. E., … Binder, E, F. (2012). Enhanced medical rehabilitation increases therapy intensity and engagement and improves functional outcomes in postacute rehabilitation of older adults: a randomized-controlled trial. Journal of the American Medical Directors Association. 13(8):708-12. National Committee on Vital and Health Statistics Subcommittee on Health. Classifying and Reporting Functional Status. 2001. Retrieved from http://www.ncvhs.hhs.gov/010617rp.pdf
MUC15-528	Application of IRF Functional Outcome Measure: Discharge Self-Care Score for Medical Rehabilitation	During a Skilled Nursing Facility (SNF) stay, the goals of treatment include fostering the patient's ability to manage his or her daily activities so that the patient can complete self-care and mobility activities as independently as possible and if feasible, return to a safe, active and productive life in a community-based setting. Previous research has found direct relationships between increased intense therapy services and improved functional outcomes in the SNF setting. Jette et. al (2005) found that higher physical and occupational therapy intensities were associated with greater odds of improving by at least 1 stage in the mobility and activities of daily living functional independence across each condition including patients with stroke, orthopedic conditions, and cardiovascular and pulmonary conditions. Similarly, a randomized control

MUC ID	Measure Title	Rationale
	Patients (NQF #2635)	trial, of 26 SNF patients compared higher intensity rehabilitation to the standard-of-care found greater improvement for mobility activities including gait speed, longer walking distances, and a trend for improvement for self-care activities as measured by the Barthel index (Lenze et. al 2012). The mobility and self-care quality measures will standardize the collection of functional status data, which can improve communication when patients are transferred between providers. Most SNF patients receive care in an acute care hospital prior to the SNF stay, and many SNF patients receive care from another provider after the SNF stay. Use of standardized clinical data to describe a patient´s status across providers can facilitate communication across providers. In describing the importance of functional status, the National Committee on Vital and Health Statistics Subcommittee on Health (2001) noted, "Information on functional status is becoming increasing essential for fostering healthy people and a healthy population. Achieving optimal health and well-being for Americans requires an understanding across the life space of the effects of people's health conditions on their ability to do basic activities and participate in life situations, in other words, their functional status." This quality measure will inform SNF providers about opportunities to improve care in the area of function and strengthen incentives for quality improvement related to patient function. Jette, D. U., R. L. Warren, & C. Wirtalla. (2005). The relation between therapy intensity and outcomes of rehabilitation in skilled nursing facilities. Archives of Physical Medicine and Rehabilitation, 86 (3), 373-9. Lenze, E. J., Host, H. H., Hildebrand M. W., Morrow-Howell, N., Carpenter, B., Freedland, K. E., … Binder, E, F. (2012). Enhanced medical rehabilitation increases therapy intensity and engagement and improves functional outcomes in postacute rehabilitation of older adults: a randomized-controlled trial. Journal of the American Medical Directors Association. 13(8):708-12. National Committee on Vital and Health Statistics Subcommittee on Health. Classifying and Reporting Functional Status. 2001. Retrieved from http://www.ncvhs.hhs.gov/010617rp.pdf
MUC15-529	Application of IRF Functional Outcome Measure: Discharge Mobility Score for Medical Rehabilitation Patients (NQF #2636)	During a Skilled Nursing Facility (SNF) stay, the goals of treatment include fostering the patient's ability to manage his or her daily activities so that the patient can complete self-care and mobility activities as independently as possible and if feasible, return to a safe, active and productive life in a community-based setting. Previous research has found direct relationships between increased intense therapy services and improved functional outcomes in the SNF setting. Jette et. al (2005) found that higher physical and occupational therapy intensities were associated with greater odds of improving by at least 1 stage in the mobility and activities of daily living functional independence across each condition including patients with stroke, orthopedic conditions, and cardiovascular and pulmonary conditions. Similarly, a randomized control trial, of 26 SNF patients compared higher intensity rehabilitation to the standard-of-care found greater

MUC ID	Measure Title	Rationale
		improvement for mobility activities including gait speed, longer walking distances, and a trend for improvement for self-care activities as measured by the Barthel index (Lenze et. al 2012). The mobility and self-care quality measures will standardize the collection of functional status data, which can improve communication when patients are transferred between providers. Most SNF patients receive care in an acute care hospital prior to the SNF stay, and many SNF patients receive care from another provider after the SNF stay. Use of standardized clinical data to describe a patient´s status across providers can facilitate communication across providers. In describing the importance of functional status, the National Committee on Vital and Health Statistics Subcommittee on Health (2001) noted, "Information on functional status is becoming increasing essential for fostering healthy people and a healthy population. Achieving optimal health and well-being for Americans requires an understanding across the life space of the effects of people's health conditions on their ability to do basic activities and participate in life situations, in other words, their functional status." This quality measure will inform SNF providers about opportunities to improve care in the area of function and strengthen incentives for quality improvement related to patient function. Jette, D. U., R. L. Warren, & C. Wirtalla. (2005). The relation between therapy intensity and outcomes of rehabilitation in skilled nursing facilities. Archives of Physical Medicine and Rehabilitation, 86 (3), 373-9. Lenze, E. J., Host, H. H., Hildebrand M. W., Morrow-Howell, N., Carpenter, B., Freedland, K. E., … Binder, E, F. (2012). Enhanced medical rehabilitation increases therapy intensity and engagement and improves functional outcomes in postacute rehabilitation of older adults: a randomized-controlled trial. Journal of the American Medical Directors Association. 13(8):708-12. National Committee on Vital and Health Statistics Subcommittee on Health. Classifying and Reporting Functional Status. 2001. Retrieved from http://www.ncvhs.hhs.gov/010617rp.pdf
MUC15-530	Percent of Patients Who Received an Antipsychotic (AP) Medication	Antipsychotic medication use is common among older adults in all post acute care settings. Antipsychotic medications can be potentially dangerous for the elderly, especially for those whom the medications are clinically indicated. Of particular concern is the off-label use of these drugs for older adults with dementia or dementia-related psychoses or agitation (Jeste et al., 2008). The FDA issued a black box warning against prescribing atypical antipsychotic medications for older adults with dementia in 2005 (Rosack, 2005). The evidence on which the warning is based on a meta-analysis of 17 randomized trials with a total of 5,106 patients that identified an "approximately 1.6- to 1.7-fold increase in mortality in the combined studies" (Rosack, 2005). Three years later, the FDA (June 2008) extended the warning to all categories of antipsychotic drugs (conventional & atypical). In addition to elevated mortality risk, elevated risk for serious adverse events such as falls, somnolence, and abnormal gait are results from clinical trials of atypical antipsychotic (AP)

MUC ID	Measure Title	Rationale
		medications (Rosack, 2005; FDA, 2008; Ballard & Margallo-Lana, 2004; Martin et al., 2003; Neil, Curran, and Wattis, 2003; Doody et al., 2001; Jackson-Siegal, 2004). Also, there is evidence of increased risk for cerebrovascular adverse events associated with certain atypical antipsychotic medications (e.g., risperidone, olanzapine, and aripiprazole) (Jeste et al., 2008). Regardless of the warnings and potential adverse events, the administration of antipsychotic therapy is common and frequent among mechanically ventilated patients or among patients with delirium (Al-Qadheeb et al., 2013).
MUC15-531	National Healthcare Safety Network (NHSN) Antimicrobial Use Measure	Numerous individual studies and systematic reviews provide strong evidence that measurement of antimicrobial use and data-driven interventions by antimicrobial stewardship programs (ASPs) lead to more judicious use of antibiotics, reduced antimicrobial resistance, and other favorable healthcare outcomes (Feazel 2014; Davey 2006; Davey 2013; Kaki 2011). Antimicrobial use measurement enables ASPs to understand prescribing practices, focus efforts on improvement, and determine the impact of their activities (Pollack, 2014). Although standardized metrics have been developed to measure antibiotic use, differences in measurement, limited uptake, and variation among facilities has impeded the ability to compare antibiotic use among hospitals. The measure will serve as a quantitative guide for hospital and health system ASPs, enabling them to benchmark antibiotic use in their facilities and patient care locations against nationally aggregated data. The measure focuses on antibiotic agents that have been shown to be high value targets for antimicrobial stewardship programs activities such as protocols for use or post-prescription reviews to determine need for de-escalation, dose-optimization or oral conversion. Knowledge about antibiotic use patterns of these agents is a primary means to prioritize and evaluate antimicrobial stewardship efforts.
MUC15-532	National Healthcare Safety Network (NHSN) Facility-wide Inpatient Hospital-onset Methicillin-resistant Staphylococcus aureus (MRSA) Bacteremia Outcome Measure	Clinical guidelines for the management of multidrug resistant organisms (MDROs), including MRSA, have been published. Adherence to the recommendations in the guidelines can result in decreased rates of MDRO transmission and infection. Decreasing rates of infection will result in a lower SIR, which indicates improving performance.

MUC ID	Measure Title	Rationale
MUC15-533	National Healthcare Safety Network (NHSN) Facility-wide Inpatient Hospital-onset Clostridium difficile Infection (CDI) Outcome Measure	Clostridium difficile is responsible for a spectrum of C. difficile infections (CDI), including uncomplicated diarrhea, pseudomembranous colitis, and toxic megacolon, which can, in some instances lead to sepsis and even death. In recent years, a previously unrecognized strain of C. difficile, with increased virulence and high levels of antimicrobial resistance, has resulted in outbreaks in healthcare facilities in the United States. Additionally, CDI has become more common in the community setting, with increased risk in those with history of recent inpatient stay in a healthcare facility. Significant increases in cost of inpatient care have been seen in cases of CDI.
MUC15-534	American College of Surgeons-Centers for Disease Control and Prevention (ACS-CDC) Harmonized Procedure Specific Surgical Site Infection (SSI) Outcome Measure	Affects large numbers, Frequently performed procedures, A leading cause of morbidity/mortality, High resource use, Severity of illness, Patient/societal consequences of poor quality. SSIs estimated to account for 20% of all HAIs[1] 290,485 estimated SSIs/yr[2] Estimated 8,205 deaths associated with SSIs each year[1] Estimated 11% of all deaths occurring in intensive care units are associated with SSIs[1] $34,670 medical cost/SSI[2] Total >$10 billion attributable to SSI in U.S. each year[2] Estimated additional 7-10 days of hospitalization for each SSI per patient[1] [1] Klevens RM, Edwards JR, et al. Estimating healthcare-associated infection and deaths in U.S. hospitals, 2002. Public Health Reports 2007; 122:160-166. [2] Scott, RD. The Direct Medical Costs of Healthcare-Associated Infections in U.S. Hospitals and the Benefits of Prevention. http://www.cdc.gov/HAI/pdfs/hai/Scott_CostPaper.pdf accessed April 12, 2010.
MUC15-575	Standardized Mortality Ratio - Modified	There is evidence indicating that mortality among black ESRD patients is lower than mortality for white ESRD patients, mortality for Hispanic ESRD patients is lower than mortality for non-Hispanic ESRD patients, and mortality for female ESRD patients is lower than mortality for male ESRD patients (see references below). Without a race adjustment, identical SMRs for one facility with predominantly white patients and one facility with predominantly black patients, for example, would give the false impression that quality of care at the two facilities was equivalent, when in fact adjusted mortality at the facility with more black patients would be lower if performance was identical. The SMR is adjusted for all three of these patient characteristics to avoid masking disparities in care across groups. To examine sociodemographic disparities we included quintiles of socioeconomic status (defined for each

MUC ID	Measure Title	Rationale
		patient as the median zipcode code household income). This had little effect on the resulting expected deaths counts from the model. See the section on risk adjustment for further details. References: J Kalbfleisch, R Wolfe, S Bell, R Sun, J Messana, T Shearon, V Ashby, R Padilla, M Zhang, M Turenne, J Pearson, C Dahlerus, Y Li, 2015, “Risk Adjustment and the Assessment of Disparities in Dialysis Mortality Outcomes” accepted for publication by JASN; Powe, NR. Reverse race and ethnic disparities in survival increase with severity of chronic kidney disease: What does this mean? Clin J Am Soc Nephrol 1: 905–906, 2006; Cowie CC, Port FK, Rust KF, Harris MI: Differences in survival between black and white patients with diabetic end-stage renal disease. Diabetes Care 17: 681–687, 1994).
MUC15-576	PQI 92 Prevention Quality Chronic Composite	2 component measures already in the program.
MUC15-577	PQI 91 Prevention Quality Acute Composite	The Prevention Quality Indicators (PQIs) are a set of measures that can be used with hospital inpatient discharge data to identify quality of care for "ambulatory care sensitive conditions." These are conditions for which good outpatient care can potentially prevent the need for hospitalization or for which early intervention can prevent complications or more severe disease. The PQIs are population based.
MUC15-578	Advance Care Plan	Addresses a gap in patient and family centered care, aligns with PQRS, and aligns with recent CMS payment policy supporting advance care planning between providers and patients/caregivers.
MUC15-579	Falls: Screening, Risk-Assessment, and Plan of Care to Prevent Future Falls	Complications associated with falls affect many patients.
MUC15-604	Patient Safety and Adverse Events Composite	Each measure used within the PSI 90 composite is an outcome measure that has been shown to be largely preventable through improved structures and processes of care. Each measure has an evidence review form as part of the NQF endorsement process. The literature to support each measure is updated on a schedule basis.

MUC ID	Measure Title	Rationale
MUC15-693	Standardized Hospitalization Ratio - Modified	1b.1. Rationale Hospitalization rates are an important indicator of patient morbidity and quality of life. On average, dialysis patients are admitted to the hospital twice a year and spend an average of 11 days in the hospital per year (USRDS, 2014). Hospitalizations account for approximately 37 percent of total Medicare expenditures for ESRD patients. Measures of the frequency of hospitalization have the potential to help efforts to control escalating medical costs, and to play an important role in identifying potential problems and helping facilities provide cost-effective health care. 1c.4. Citations 1) U S Renal Data System, USRDS 2014 Annual Data Report: Atlas of Chronic Kidney Disease and End-Stage Renal Disease in the United States, National Institutes of Health, National Institute of Diabetes and Digestive and Kidney Diseases, Bethesda, MD, 2014. 2) Wheeler J, Hirth R, Meyer K, Messana JM. Exploring preventable hospitalizations of dialysis patients. J Am Soc Nephrol 22, 2011. [3] Erickson KF, Winkelmayer WC, Chertow GM, Bhattacharya J. Physician visits and 30-day hospital readmissions in patients receiving hemodialysis. J Am Soc Nephrol 25, 2014 (published online before print). [4] Arora P, Kausz AT, Obrador GT, Ruthazer R, Khan S, Jenuleson CS, Meyer KB, Pereira BJ. Hospital utilization among chronic dialysis patients. J Am Soc Nephrol 11: 740 –746, 2000. [5] Piraino B. Staphylococcus aureus infections in dialysis patients: focus on prevention. ASAIO J 46(6): S13-S17, 2000. [6] Dalrymple LS, Johansen KL, Romano PS, Chertow GM, Mu Y, Ishida JH, Grimes B, Kaysen GA, Nguyen DV. Comparison of hospitalization rates among for-profit and nonprofit dialysis facilities. Clin J Am Soc Nephrol 9, 2014 (published online before print).
MUC15-758	Avoidance of Utilization of High Ultrafiltration Rate (≥ 13 ml/kg/hour)	The measure focus is evidence-based, demonstrated as follows: • Health outcome: a rationale supports the relationship of the health outcome to processes or structures of care. Applies to patient-reported outcomes (PRO), including health-related quality of life/functional status, symptom/symptom burden, experience with care, health-related behavior. • Intermediate clinical outcome: a systematic assessment and grading of the quantity, quality, and consistency of the body of evidence that the measured intermediate clinical outcome leads to a desired health outcome. • Process: a systematic assessment and grading of the quantity, quality, and consistency of the body of evidence 4 that the measured process leads to a desired health outcome. • Structure: a systematic assessment and grading of the quantity, quality, and consistency of the body of

MUC ID	Measure Title	Rationale
		evidence that the measured structure leads to a desired health outcome. • Efficiency: evidence not required for the resource use component.
MUC15-761	ESRD Vaccination: Full-Season Influenza Vaccination	Influenza vaccination is universally recommended for all people aged 6 months and older. According to the CDC, seasonal influenza, which occurs between October and March/April of the following year, is associated with approximately 36,000 deaths and 226,000 hospitalizations annually. While overall rates of influenza infection are highest among children, rates of serious illness and mortality are highest among adults aged 65 years or older and children aged two years or younger as well as among immunocompromised patients, which include ESRD patients. The proposed influenza vaccination measure is a facility-level measure that applies to all dialysis patients. At the end of 2012 there were 413,725 patients being dialyzed, of whom 114,083 were new (incident) to dialysis.
MUC15-835	Aortic Aneurysm Procedure Clinical Episode-Based Payment Measure	Episode-based performance measurement allows meaningful comparisons between providers based on resource use for certain clinical conditions or procedures, as noted in the NQF report for the "Episode Grouper Evaluation Criteria" project (available at http://www.qualityforum.org/Publications/2014/09/Evaluating_Episode_Groupers__A_Report_from_the_National_Quality_Forum.aspx) and in various peer-reviewed articles (e.g., Hussey, P. S., Sorbero, M. E., Mehrotra, A., Liu, H., & Damberg, S. L. (2009). Episode-Based Performance Measurement and Payment: Making It a Reality. Health Affairs, 28(5), 1406-1417. doi:10.1377/hlthaff.28.5.1406). While reliability analyses have been conducted on similar performance measures, we plan to conduct our own reliability analysis for this specific measure and propose a minimum number of cases for reporting. The analysis will likely mirror the 2012 MSPB reliability analysis: https://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/hospital-value-based-purchasing/Downloads/MSPBReliabilityAnalysis-Jul-18-12.pdf
MUC15-836	Cholecystectomy and Common Duct Exploration Clinical Episode-Based Payment Measure	Episode-based performance measurement allows meaningful comparisons between providers based on resource use for certain clinical conditions or procedures, as noted in the NQF report for the "Episode Grouper Evaluation Criteria" project (available at http://www.qualityforum.org/Publications/2014/09/Evaluating_Episode_Groupers__A_Report_from_the_National_Quality_Forum.aspx) and in various peer-reviewed articles (e.g., Hussey, P. S., Sorbero, M. E., Mehrotra, A., Liu, H., & Damberg, S. L. (2009). Episode-Based Performance Measurement and Payment: Making It a Reality. Health Affairs, 28(5), 1406-1417. doi:10.1377/hlthaff.28.5.1406). While reliability analyses have been conducted on similar performance measures, we plan to conduct our own reliability analysis for this specific measure and propose a minimum number of cases for reporting. The

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		analysis will likely mirror the 2012 MSPB reliability analysis: https://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/hospital-value-based-purchasing/Downloads/MSPBReliabilityAnalysis-Jul-18-12.pdf
MUC15-837	Spinal Fusion Clinical Episode-Based Payment Measure	Episode-based performance measurement allows meaningful comparisons between providers based on resource use for certain clinical conditions or procedures, as noted in the NQF report for the "Episode Grouper Evaluation Criteria" project (available at http://www.qualityforum.org/Publications/2014/09/Evaluating_Episode_Groupers__A_Report_from_the_National_Quality_Forum.aspx) and in various peer-reviewed articles (e.g., Hussey, P. S., Sorbero, M. E., Mehrotra, A., Liu, H., & Damberg, S. L. (2009). Episode-Based Performance Measurement and Payment: Making It a Reality. Health Affairs, 28(5), 1406-1417. doi:10.1377/hlthaff.28.5.1406). While reliability analyses have been conducted on similar performance measures, we plan to conduct our own reliability analysis for this specific measure and propose a minimum number of cases for reporting. The analysis will likely mirror the 2012 MSPB reliability analysis: https://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/hospital-value-based-purchasing/Downloads/MSPBReliabilityAnalysis-Jul-18-12.pdf
MUC15-838	Transurethral Resection of the Prostate (TURP) for Benign Prostatic Hyperplasia Clinical Episode-Based Payment Measure	Episode-based performance measurement allows meaningful comparisons between providers based on resource use for certain clinical conditions or procedures, as noted in the NQF report for the "Episode Grouper Evaluation Criteria" project (available at http://www.qualityforum.org/Publications/2014/09/Evaluating_Episode_Groupers__A_Report_from_the_National_Quality_Forum.aspx) and in various peer-reviewed articles (e.g., .Hussey, P. S., Sorbero, M. E., Mehrotra, A., Liu, H., & Damberg, S. L. (2009). Episode-Based Performance Measurement and Payment: Making It a Reality. Health Affairs, 28(5), 1406-1417. doi:10.1377/hlthaff.28.5.1406). While reliability analyses have been conducted on similar performance measures, we plan to conduct our own reliability analysis for this specific measure and propose a minimum number of cases for reporting. The analysis will likely mirror the 2012 MSPB reliability analysis: https://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/hospital-value-based-purchasing/Downloads/MSPBReliabilityAnalysis-Jul-18-12.pdf
MUC15-928	Paired Measure: Depression Utilization of the PHQ-9 Tool;	Depression is a common and treatable mental disorder. The Centers for Disease Control and Prevention states that an estimated 6.6% of the U.S. adult population (14.8 million people) experiences a major depressive disorder during any given 12-month period. Additionally, dysthymia accounts for an additional 3.3 million Americans. In 2006 and 2008, an estimated 9.1% of U.S. adults reported symptoms for current

MUC ID	Measure Title	Rationale
	Depression Remission at Six Months; Depression Remission at Twelve Months	depression.[1] Persons with a current diagnosis of depression and a lifetime diagnosis of depression or anxiety were significantly more likely than persons without these conditions to have cardiovascular disease, diabetes, asthma and obesity and to be a current smoker, to be physically inactive and to drink heavily.[2] Depression is associated with higher mortality rates in all age groups. People who are depressed are 30 times more likely to take their own lives than people who are not depressed and five times more likely to abuse drugs.[3] Depression is the leading cause of medical disability for people aged 14 – 44.[4] Depressed people lose 5.6 hours of productive work every week when they are depressed, fifty percent of which is due to absenteeism and short-term disability. People who suffer from depression have lower incomes, lower educational attainment and fewer days working days each year, leading to seven fewer weeks of work per year, a loss of 20% in potential income and a lifetime loss for each family who has a depressed family member of $300,000.[5] The cost of depression (lost productivity and increased medical expense) in the United States is $83 billion each year.[6] 1. CDC. Current Depression Among Adults --- United States, 2006 and 2008. MMWR 2010;59(38);1229-1235. 2. Strine TW, Mokdad AH, Balluz LS, et al. Depression and anxiety in the United States: findings from the 2006 Behavioral Risk Factor Surveillance System. Psychiatr Serv 2008;59:1383--90. 3. Joiner, Thomas Myths about suicide. Cambridge, MA, US: Harvard University Press. (2010). 288 pp. 4. Stewart, W. F., Ricci, J. A., Chee, E., Hahn, S. R., & Morganstein, D. (2003). Cost of lost productive work time among US workers with depression. Journal of the American Medical Association, 289, 3135-3144. 5. Smith, J. P., & Smith, G. C. (2010). Long-term economic costs of psychological problems during childhood. Social Science & Medicine, 71, 110-115. 6. Greenberg, P. E., Kessler, R. C., Birnbaum, H. G., Leong, S. A., Lowe, S. W., Berglund, P. A., et al. (2003). The economic burden of depression in the United States: How did it change between 1990 and 2000? Journal of Clinical Psychiatry, 64, 1465-1475. More detailed information about the rationale and history of this measure and its components are available in the MNCM measure submission forms for the most recent NQF Behavioral Health measure endorsement project. Links are in the final committee report available here: http://www.qualityforum.org/Publications/2015/05/Behavioral_Health_Endorsement_Maintenance_2014_Final_Report_-_Phase_3.aspx .

MUC ID	Measure Title	Rationale
MUC15-946	Oncology: Radiation Dose Limits to Normal Tissues	This measure is rated as moderate by the measure developer. The quality of the body of evidence supporting the guideline recommendation is summarized according to the National Comprehensive Cancer Network (NCCN) categories of evidence and consensus as being based on "lower-level evidence". Lower-level evidence is later described as evidence that may include non-randomized trials; case series; or when other data are lacking, the clinical experience of expert physicians. Although there is no explicit statement regarding the overall consistency of results across studies in the guidelines supporting the measure, the recommendation received uniform NCCN consensus that the intervention is appropriate. The description of the evidence review in the guideline did not address the overall quantity of studies in the body of evidence. However, 330 articles are cited in NCCN´s pancreatic adenocarcinoma guideline. 408 and 172 articles are cited in NCCN´S non small cell lung cancer and small cell lung cancer guidelines, respectively. A panel of experts with members from each of the NCCN Member Institutions develops the NCCN Guidelines. Specialties that must be included on a particular panel are identified before that panel is convened but also evolve as the standard of care changes over time. This multidisciplinary representation varies from panel to panel. The NCCN Guidelines Panel Chairs are charged with ensuring that representatives of all treatment strategies are included. Many of the panels also include a patient representative, especially when issues of long-term care and patient preference are paramount in the panel´s considerations.
MUC15-951	Admissions and Emergency Department Visits for Patients Receiving Outpatient Chemotherapy	Cancer patients receiving chemotherapy have much higher rates of admissions and ED use than other patients. A study of 2007 commercial claims data for more than 14 million patients found that cancer patients average one admission per year; 40 percent of those admissions were chemotherapy related (Kolodziej et al. 2011). The authors also found that cancer patients average approximately two ED visits per year, about half of which were chemotherapy related. Common complications of chemotherapy treatment include nausea, emesis, anemia, neutropenic fever, diarrhea, dehydration, and pain (Burton et al. 2007; Crawford et al. 2004; Groopman and Itri 2000; Osoba et al. 1997; Richardson and Dobish 2007; Stein et al. 2010). Chemotherapy-related admissions and ED visits may be due to outpatient chemotherapy patients having unmet needs and gaps in care, which, if addressed, could reduce admissions and ED visits and increase patients' quality of life (Hassett et al. 2006; Mayer et al. 2011; McKenzie et al. 2011). Although it is extremely unlikely that all admissions and ED visits related to chemotherapy can be avoided by prevention and treatment of side effects and complications, there is evidence and consensus among providers on ways to prevent and treat each of the symptoms included in the numerator of this measure. Measurement of admissions and ED visits for patients receiving outpatient chemotherapy should encourage

MUC ID	Measure Title	Rationale
		reporting facilities to take steps to prevent and improve management of side effects and complications from treatment. Poor performance on the measure would reflect high resource use and significant consequences for patient/society due to poor quality; admissions and ED visits are costly to payers and reduce quality of life for patients. Burton, A.W., G.J. Fanciullo, R.D. Beasley, and M.J. Fisch. "Chronic Pain in the Cancer Survivor: A New Frontier". Pain Medicine, vol. 8, 2007, pp. 189–198. Crawford, J.C., D.C. Dale, and G.H. Lyman. "Chemotherapy-Induced Neutropenia." Cancer, vol. 15, 2004, pp. 228–237. Groopman, J.E., and L.M. Itri. "Chemotherapy-Induced Anemia in Adults: Incidence and Treatment." Journal of the National Cancer Institute, vol. 91, 2000, pp. 1616–1634. Hassett, M.J., J. O'Malley, J.R. Pakes, J.P. Newhouse, and C.C. Earle. "Frequency and Cost of Chemotherapy-Related Serious Adverse Effects in a Population Sample of Women with Breast Cancer." Journal of the National Cancer Institute, vol. 98, no. 16, 2006, pp. 1108–1117. Kolodziej, M., J.R. Hoverman, J.S. Garey, J. Espirito, S. Sheth, A. Ginsburg, M.A. Neubauer, D. Patt, B. Brooks, C. White, M. Sitarik, R. Anderson, and R. Beveridge. "Benchmarks for Value in Cancer Care: An Analysis of a Large Commercial Population." Journal of Oncology Practice, vol. 7, 2011, pp. 301–306. Mayer, D.K., D. Travers, A. Wyss, A. Leak, A. Waller. "Why Do Patients with Cancer Visit Emergency Departments? Results of a 2008 Population Study in North Carolina." Journal of Clinical Oncology, vol. 26, no. 19, 2011, pp. 2683–2688. McKenzie, H., L. Hayes, K. White, K. Cox, J. Fethney, M. Boughton, and J. Dunn. "Chemotherapy Outpatients' Unplanned Presentations to Hospital: A Retrospective Study." Support Care Cancer, vol. 19, 2011, pp. 963–969. Osoba, D., B. Zee, D. Warr, J. Latreilee, L. Kaizer, and J. Pater. "Effect of Postchemotherapy Nausea and Vomiting on Health-Related Quality of Life." Support Care Cancer, vol. 5, 1997, pp. 307–313. Richardson, G., and R. Dobish. "Chemotherapy Induced Diarrhea." Journal of Oncology Pharmacy Practice, vol. 13, no.4, 2007, pp. 181–98. Stein, A., W. Voigt, and K. Jordan. "Chemotherapy-Induced Diarrhea: Pathophysiology, Frequency, and Guideline-Based Management." Therapeutic Advances Medical Oncology, vol. 2, 2010, pp. 51–63.
MUC15-982	Risk-standardized hospital visits within 7 days after	Nearly 70% of all surgeries in the US are now performed in the outpatient setting with most performed as same-day surgeries at HOPDs.[1] While most outpatient surgery is safe, there are well-described and potentially preventable adverse events that occur after outpatient surgery, such as uncontrolled pain, urinary retention, infection, bleeding, and venous thromboembolism, which can result in unanticipated hospital

MUC ID	Measure Title	Rationale
	hospital outpatient surgery	visits. Similarly, direct admissions after surgery that are primarily caused by non-clinical patient considerations, such as lack of transport home upon discharge, or hospital logical issues, such as delayed start of surgery, are common causes of unanticipated yet preventable hospital admissions following same-day surgery. Hospital utilization following same-day surgery is an important and accepted patient-centered outcome reported in the literature. National estimates of hospital visit rates following surgery vary from 0.5-9.0% based on the type of surgery, outcome measured (admissions alone or admissions and emergency department [ED] visits), and timeframe for measurement after surgery.[2-9] Furthermore, hospital visit rates vary among HOPDs,[7] suggesting variation in surgical and discharge care quality. However, providers (HOPDs and surgeons) are often unaware of their patients' hospital visits after surgery since patients often present to the ED or to different hospitals.[10] Therefore, a quality measure of hospital visits following outpatient same-day surgery can improve transparency, inform patients and providers, and foster quality improvement. The literature suggests 1.3-13.6% of outpatient surgeries at HOPDs result in an inpatient admission with the admission rate varying by type of surgery and HOPD case mix.[3,7-9,11-21] Of these admissions, 40-60% are reported to be due to adverse effects of the surgery, anesthesia, or due to other suspected medical problems such as chest pain.[3,7-9,11-21] A smaller proportion of admissions are due to non-clinical reasons such as lack of transport home or logistical issues such as delayed start of surgery.[3,7-9,11-19] When specifically assessed, up to 40% of direct admissions after outpatient surgery have been found to be preventable.[19] Major and minor adverse events, such as uncontrolled pain, urinary retention, infection, bleeding, and venous thromboembolism, are well documented to occur post-discharge and result in unanticipated hospital visits.[12,13,22] Some hospital visits post-discharge are for scheduled follow-up care provided after surgery (e.g., visits for rehabilitation). We remove these 'planned' hospital visits from the outcome. We limit the outcome of hospital visits to 7 days since existing literature suggests the vast majority of adverse events after surgery occur within the first 7 days following the surgery.[4,12] We observed in our own data the highest rates of hospital visits occurring within 7 days of surgery. References: 1. Cullen KA, Hall MJ, Golosinskiy A. Ambulatory surgery in the United States, 2006. National health statistics reports. Jan 28 2009(11):1-25. 2. Majholm B, Engbaek J, Bartholdy J, et al. Is day surgery safe? A Danish multicentre study of morbidity after 57,709 day surgery procedures. Acta anaesthesiologica Scandinavica. Mar 2012;56(3):323-331. 3. Linares-Gil MJ, Pelegri-Isanta MD, Pi-Siqués F, Amat-Rafols S, Esteva-Ollé MT, Gomar C. Unanticipated admissions following ambulatory surgery. Ambulatory Surgery. 12// 1997;5(4):183-188. 4. Fleisher LA, Pasternak LR, Herbert R, Anderson GF. Inpatient hospital admission and death after outpatient

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MUC ID	Measure Title	Rationale
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MUC15-1013	Adult Local Current Smoking Prevalence	Tobacco use and exposure to secondhand smoke caused more than 400,000 in the U.S. in each year between 2000 and 2004, according to the CDC. These deaths represent more than 5 million years of potential life lost (YPLL).1 At the state level, the median annual number of lives lost per state was 5,534, though there was a great deal of variation by state.2 National Cost of Tobacco Use The Centers for Disease Control and Prevention (CDC) estimates that, in the U.S. in each year from 2001 through 2004, an average of $96 billion was spent on health care due to smoking.1 A 2007 study calculates the cost of smoking to the U.S. Medicaid system, concluding that the projected lifetime costs of smoking to Medicaid, for a single cohort—current 24-year-old smokers—is nearly $1 billion. 1. Centers for Disease Control and Prevention (CDC). Smoking attributable mortality, years of potential life lost, and productivity losses--United States, 2000-2004. MMWR Morb Mortal Wkly Rep. 2008 Nov 14;57(45):1226-8. 2. Centers for Disease Control and Prevention (CDC). State-specific smoking-attributable mortality and years of potential life lost--United States, 2000-2004. MMWR Morb Mortal Wkly Rep. 2009 Jan 23;58(2):29-33. Erratum in: MMWR Morb Mortal Wkly Rep. 2009 Feb 6;58(4):91. 3. Trogdon J, Pais J. Saving Lives, Saving Money II: Tobacco-Free States Spend Less on Medicaid. A Policy Report of the American Legacy Foundation. 2007. 4. Centers for Disease Control and
MUC15-1015	INR Monitoring for Individuals on	An analysis of the Food and Drug Administration's (FDA) Adverse Drug Event Reporting System found that warfarin ranked seventh overall in drugs identified to cause death, disability, or other serious adverse

MUC ID	Measure Title	Rationale
	Warfarin after Hospital Discharge	outcomes (Moore, Cohen, & Furberg, 2007). Evidence suggests that low INR (INR < 2) is associated with an increased risk of stroke and high INR (INR > 3) is associated with increased risk of bleeding (Reynolds, 2004). A study by White et al. (2007) found that patients with poor INR control suffered higher rates of mortality and major bleeding when compared to those with good or moderate INR control. Patients in the transition period from hospital to home are at particular risk for adverse events from medication errors in general, and for warfarin in particular, as they move from a tightly controlled environment to one with limited supervision and support (Forster et al., 2005). A timely INR test shortly after hospital discharge is expected to lead to the stabilization of the patient's warfarin regimen and avoidance of non-therapeutic INR levels and, therefore, result in fewer warfarin-related bleeding, thromboembolic events, and lower mortality. The 2012 American College of Chest Physicians guidelines for antithrombotic therapy and prevention of thrombosis recommend INR monitoring within 1-2 weeks for patients with a sub-therapeutic or supra-therapeutic INR (Holbrook et al., 2012). Three recent studies have been published on INR monitoring after hospital discharge and/or INR monitoring after an out-of-range value. In a population-based sample of Canadian patients on warfarin (Van Walraven et al., 2007), hospitalization was associated with less time in the therapeutic range, more time with INR <1.5, and more time with INR >=5.0. Qualls et al. (2013) compared patients with heart failure with and without at least one INR test within 45 days of discharge and found that those who had been tested had lower risks of mortality and myocardial infarction one year after discharge. Finally, in a study of patients in VA anticoagulation clinics (Rose et al., 2011), longer follow-up intervals for repeat tests after both INR values above and below the therapeutic range were found to be associated with worse control of anticoagulation among ambulatory patients at the clinic level. Food and Drug Administration. (2011). Warfarin (Coumadin) product labeling. Reference ID 3022954. Retrieved Oct. 16, 2013, from http://www.accessdata.fda.gov/drugsatfda_docs/label/2011/009218s107lbl.pdf Forster, A. J., Murff, H. J., Peterson, J. F., Gandhi, T. K., & Bates, D. W. (2005). Adverse drug events occurring following hospital discharge. Journal of General Internal Medicine, 20(4), 317–323. Holbrook, A., Schulman, S., Witt, D. M., Vandvik, P. O., Fish, J., Kovacs, M. J., ... & Guyatt, G. H. (2012). Evidence-based management of anticoagulant therapy: antithrombotic therapy and prevention of thrombosis: American College of Chest Physicians evidence-based clinical practice guidelines. CHEST Journal, 141(2_suppl), e152S-e184S. Moore, T. J., Cohen, M. R., & Furberg, C. D. (2007). Serious adverse drug events reported to the Food and Drug Administration, 1998-2005. Archives of Internal Medicine, 167(16), 1752-1759. Qualls, L. G., Greiner, M. A., Eapen, Z. J., Fonarow, G. C., Mills, R. M., Klaskala, W., . . . Curtis, L. H. (2013).

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MUC15-1019	Non-Recommended PSA-Based Screening	"The USPSTF recommends against PSA-based screening for prostate cancer (grade D recommendation). This recommendation applies to men in the general U.S. population, regardless of age." The Agency for Healthcare Research and Quality (AHRQ) looked at five randomized controlled trials (RCTs) and two meta-analyses and found inconsistency regarding the efficacy of PSA-based screening, although the high-quality surveyed studies are limited to interim results and do not consider potential psychological harms.
MUC15-1033	Hybrid 30-Day Risk-Standardized Acute Ischemic Stroke Mortality Measure with Electronic Health Record (EHR)-Extracted Risk Adjustment Variables	Post-stroke mortality rates have been shown to be influenced by critical aspects of care at the hospital such as response to complications, speediness of delivery of care, organization of care, and appropriate imaging [Smith et al., 2006; Reeves et al., 2009; Lingsma et al., 2008; Hong et al., 2008; Fonarow et al., 2014]. This research demonstrates the relationship between hospital organizational factors and performance on the stroke mortality measure, and supports the ability of hospitals to impact these rates. The hybrid measure addresses a limitation of the claims-only measure by incorporating clinical data collected at the time of admission to assess the condition of the patient before care has been administered.

MUC ID	Measure Title	Rationale
MUC15-1047	Toxic Anterior Segment Syndrome (TASS) Outcome	Toxic anterior segment syndrome (TASS), an acute, noninfectious inflammation of the anterior segment of the eye, is a complication of anterior segment eye surgery that typically develops within 24 hours after surgery. Various contaminants, including those from surgical equipment or supplies, have been implicated as causes of TASS. Although most cases of TASS can be treated, the inflammatory response associated with TASS can cause serious damage to intraocular tissues, resulting in vision loss. Prevention requires careful attention to solutions, medications, and ophthalmic devices and to cleaning and sterilization of surgical equipment because of the numerous potential etiologies. Despite a recent focus on prevention, cases of TASS continue to occur, sometimes in clusters. The incidence of TASS is unknown, but frequencies of 1454 cases in approximately 69,000 surgeries (Bodnar et al, J Cataract Refract Surg. 2012 Nov;38(11):1902-10.) and 909 cases in 50,114 surgeries (Cutler et al, J Cataract Refract Surg. 2010 Jul;36(7):1073-80.) have been reported in cross-sectional studies in the literature. With millions of anterior segment surgeries being performed in the United States each year, measurement and public reporting have the potential to serve as an additional tool to drive further preventive efforts.
MUC15-1048	Skilled Nursing Facility 30-Day Potentially Preventable Readmission Measure (SNFPPR) (required by PAMA)	Hospital readmissions of Medicare beneficiaries discharged from a hospital to a SNF are prevalent and expensive, and prior studies suggest that a large proportion of readmissions are preventable (Mor et al., 2010). According to Mor et al., based an analysis of SNF data from 2006 Medicare claims merged with the Minimum Data Set (MDS), 23.5 percent of SNF stays resulted in a rehospitalization within 30 days of the initial hospital discharge. The average Medicare payment for each readmission was $10,352 per hospitalization, for a total of $4.34 billion. Of these rehospitalizations, 78 percent were deemed potentially avoidable, and applying this figure to the aggregate cost indicates that avoidable hospitalizations resulted in an excess cost of $3.39 billion (78 percent of $4.34 billion) to Medicare (Mor, Intrator, Feng, et al., 2010). Several analyses of hospital readmissions of SNF patients suggest there is opportunity for reducing hospital readmissions among SNF patients (Li et al., 2012; Mor et al., 2010), and multiple studies suggest SNF structural and process characteristics that impact readmission rates (Coleman et al., 2004; MedPAC 2011).
MUC15-1065	SUB-3 Alcohol & Other Drug Use Disorder Treatment Provided or Offered at Discharge and	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 (McGlynn 2003, Gentilello 2005). Currently, less than one in twenty patients with an addiction is referred for treatment (Gentilello 1999). Unfortunately, many physicians mistakenly believe that substance use problems are largely confined to the young. They are significantly less likely to recognize an alcohol problem in an older patient than in a younger

MUC ID	Measure Title	Rationale
	SUB-3a Alcohol & Other Drug Use Disorder Treatment at Discharge	one. (Curtis 1989) As a result, these problems usually go undetected, resulting in harmful, expensive, and sometimes even catastrophic consequences. This is demonstrated by the fact that few older adults who need substance use treatment actually receive it. In 2005, persons 65 years and older made up only 11,344 out of 1.8 million substance use treatment episodes recorded.(SAMHSA 2007) Citations: • Gentilello LM, Ebel BE, Wickizer TM, Salkever DS Rivera FP. Alcohol interventions for trauma patients treated in emergency departments and hospitals: A cost benefit analysis. Ann Surg. 2005 Apr;241(4):541-50. • Gentilello LM, Villaveces A, Ries RR, Nason KS, Daranciang E, Donovan DM Copass M, Jurkovich GJ Rivara FP. Detection of acute alcohol intoxication and chronic alcohol dependence by trauma center staff. J Trauma. 1999 Dec;47(6):1131-5; discussion 1135-9. • McGlynn, EA, Asch SM, Adams J, Keesey J, et al. The New England Journal of Medicine. Boston: Jun 26, 2003. Vol. 348, Iss.26; pg. 2635, 11pgs. • Curtis, J.R.; Geller, G.; Stokes, E.J. ; et al. Characteristics, diagnosis, and treatment of alcoholism in elderly patients. J Am Geriatr Soc 37:310-316, 1989. • SAMHSA. Office of Applied Studies. Older adults in substance abuse treatment: 2005. The DASIS Report. Rockville MD, November 8, 2007.
MUC15-1082	Thirty-day all-cause unplanned readmission following psychiatric hospitalization in an Inpatient Psychiatric Facility (IPF)	Patient Volume Analysis of calendar year 2013 IPF claims data showed that 308,915 Medicare beneficiaries had 471,349 IPF stays. This group of patients is particularly vulnerable. Sixty-six percent of discharges are for patients under 65 indicating Medicare eligibility due to disability; 56% of discharges also have dual eligibility with Medicaid indicating they have limited financial resources. Twenty-nine percent of Medicare beneficiaries who used IPF services in 2013 had more than one stay. For CY 2012 and CY 2013, approximately one-third of all admissions for a principal psychiatric disorder (ICD-9 codes 290-319) were to short-stay acute care hospitals (including critical access hospitals). However, of the 1669 short-stay acute care hospitals with psychiatric admissions, only 39% had 25 or more psychiatric admissions. Forty percent of the psychiatric admissions to short-stay acute care hospitals were to hospitals that also had IPF units. The HWR measure for short-stay acute care hospitals includes some of these diagnoses (i.e., dementia, substance use, and screening/history of mental health and substance use). Consequences of Readmissions

MUC ID	Measure Title	Rationale
		Readmission is considered an adverse event because it indicates deterioration in health status after discharge from the IPF that requires an acute level of care. In addition to patient burden, readmissions impacts cost. A MedPAC report indicated that Medicare payments to IPFs averaged nearly $10,000 per discharge (MedPAC, 2014) MedPAC analyses also showed that spending for Medicare beneficiaries who use IPF services is substantially higher than for all fee-for-service beneficiaries, due in part to the IPF stays (MedPAC, 2010). Performance Variation There is variation in 30-day all-cause readmission rates across IPFs, which is noted in Item 44: Evidence of performance gap. Evidence of Effective Interventions to Reduce Readmissions Some individual studies and systematic reviews have supported the positive effect of the following interventions in reducing psychiatric readmissions: • Follow-up within 7 days of discharge (Mark, 2013) • Stabilizing condition prior to discharge (Durbin, 2007) • Transition/discharge practices (Vigod, 2013; Steffen, 2009) • Intensive case management (Dieterich, 2010) Citations: *Dieterich M, Irving CB, Park B, Marshall M. Intensive case management for severe mental illness. The Cochrane database of systematic reviews. 2010(10):Cd007906. *Durbin J, Lin E, Layne C, Teed M. Is readmission a valid indicator of the quality of inpatient psychiatric care? J. Behav. Health Serv. Res. 2007;34(2):137-150. *Mark T, Tomic KS, Kowlessar N, Chu BC, Vandivort-Warren R, Smith S. Hospital readmission among medicaid patients with an index hospitalization for mental and/or substance use disorder. J. Behav. Health Serv. Res. 2013;40(2):207-221. *MedPAC. Chapter 6: Inpatient Psychiatric Care in Medicare: Trends and Issues. June 2010 Report to Congress: Aligning Incentives in Medicare. Washington, DC: MedPAC; 2010:161-187. * MedPAC. Inpatient Psychiatric Facility Services Payment System. Washington, DC: MedPAC; October 2014. *Steffen S, Kosters M, Becker T, Puschner B. Discharge planning in mental health care: a systematic review of the recent literature. Acta Psychiatr. Scand. 2009;120(1):1-9. *Vigod SN, Kurdyak PA, Dennis CL, et al. Transitional interventions to reduce early psychiatric readmissions in adults: systematic review. Br. J. Psychiatry. 2013;202(3):187-194.

MUC ID	Measure Title	Rationale
MUC15-1083	IQI-22: Vaginal Birth After Cesarean (VBAC) Delivery Rate, Uncomplicated	The evidence supporting VBAC is robust and well-summarized in the ACOG and AAFP guidelines.
MUC15-1127	Drug Regimen Review Conducted with Follow-Up for Identified Issues-Post Acute Care (PAC) Home Health Quality Reporting Program (Required under the IMPACT Act)	Medication review in post-acute care is generally considered to include medication reconciliation for all medications and medication review for what poses as potential clinically significant medication issues for the patient/resident. As a process measure, medication reconciliation and medication review for potential clinically significant medication issues are expected to reduce re-hospitalizations, reduce adverse events related to medications and improve health outcomes.
MUC15-1128	Drug Regimen Review Conducted with Follow-Up for Identified Issues-Post Acute Care (PAC) Inpatient Rehabilitation Facility Quality Reporting Program (Required under the IMPACT Act)	Medication review in post-acute care is generally considered to include medication reconciliation for all medications and medication review for what poses as potential clinically significant medication issues for the patient/resident. As a process measure, medication reconciliation and medication review for potential clinically significant medication issues are expected to reduce re-hospitalizations, reduce adverse events related to medications and improve health outcomes.
MUC15-1129	Drug Regimen Review Conducted with Follow-Up for Identified Issues-Post Acute Care	Medication review in post-acute care is generally considered to include medication reconciliation for all medications and medication review for what poses as potential clinically significant medication issues for the patient/resident. As a process measure, medication reconciliation and medication review for potential clinically significant medication issues are expected to reduce re-hospitalizations, reduce adverse events related to medications and improve health outcomes.

MUC ID	Measure Title	Rationale
	(PAC) Long-Term Care Hospital Quality Reporting Program (Required under the IMPACT Act)	
MUC15-1130	Drug Regimen Review Conducted with Follow-Up for Identified Issues-Post Acute Care (PAC) Skilled Nursing Facility Quality Reporting Program (Required under the IMPACT Act)	Medication review in post-acute care is generally considered to include medication reconciliation for all medications and medication review for what poses as potential clinically significant medication issues for the patient/resident. As a process measure, medication reconciliation and medication review for potential clinically significant medication issues are expected to reduce re-hospitalizations, reduce adverse events related to medications and improve health outcomes.
MUC15-1131	Percent of Skilled Nursing Facility Residents Who Self-Report Moderate to Severe Pain	The opportunity for improving unrelieved pain in nursing home residents continues to be demonstrated by reports of less-than-optimal pain management, considerable variation in pain management, and data from interventions aimed at improving pain management in nursing homes. In 2011, a report from the Institute of Medicine stated, “evidence indicates that nursing homes undertreat pain, especially in cognitively impaired and minority residents” (Institute of Medicine, 2011). Recent reports indicate that pain management in nursing home can be improved by improving pain assessment, including use of structured assessment tools. Investigations of pain management strategies have increasingly broadened to include comprehensive approaches that are evidence based, multidisciplinary, and use behavioral approaches to educate and train staff (Cervo, et al., 2012; Savvas et al., 2014). Comprehensive interventions attempt to improve both pain assessment and pain treatment by adopting pain-assessment tools and pain-management clinical guidelines. Pain management may also be improved by nonpharmacological approaches to pain management, such as cognitive behavioral therapy, mindfulness meditation, relaxation techniques, assistive devices, physical activity and exercise, and complementary therapies. (Abdulla et al., 2013). References:

MUC ID	Measure Title	Rationale
		1. Abdulla, A., Adams, N., Bone, M., Elliott, A. M., Gaffin, J., Jones, D., et al. (2013). Guidance on the management of pain in older people. Age and Ageing, 42 Suppl 1, i1-57. 2. Cervo, F. A., Bruckenthal, P., Fields, S., Bright-Long, L. E., Chen, J. J., Zhang, G., et al. (2012). The role of the CNA Pain Assessment Tool (CPAT) in the pain management of nursing home residents with dementia. Geriatric Nursing (New York, NY), 33(6), 430-438. 3. Institute of Medicine. (2011). Relieving Pain in America: A Blueprint for Transforming Prevention, Care, Education, and Research. Washington DC: National Academics Press. 4. Savvas, S. M., Toye, C. M., Beattie, E. R., & Gibson, S. J. (2014). An evidence-based program to improve analgesic practice and pain outcomes in residential aged care facilities. Journal of the American Geriatrics Society, 62(8), 1583-1589.
MUC15-1132	Percent of Skilled Nursing Facility Residents Who Were Assessed and Appropriately Given the Influenza Vaccine	Influenza and pneumonia are now reported as the fifth-leading cause of death among people aged 65 or older in the United States (CMS, 2011). As of 2011, there are over 200,000 hospitalizations from influenza, on average, every year (CMS, 2011). An average of 36,000 Americans die annually due to influenza and its complications and most are people 65 years old and over (CMS, 2011). Vaccination can be cost-effective and successful in preventing influenza. A study conducted in 2002 by Nichol and Goodman found that vaccination of healthy elderly was associated with a 36% reduction in hospitalization for pneumonia or influenza, an 18% reduction in hospitalization for all respiratory conditions, and a 40% reduction in mortality. (Nichol and Goodman, 2002) Influenza vaccination was also associated with cost savings. (Nichol and Goodman, 2002). Influenza vaccination is recommended for those over 65 years old and those with medical conditions, which describes the population of post-acute care facilities, making it an appropriate quality measure for skilled nursing facilities. By focusing on skilled nursing facility residents during the influenza season, publicly reporting this measure will increase vaccination during that time period and prevent influenza outbreaks in skilled nursing facilities. References: 1. Centers for Medicare & Medicaid Services (2011, May). Adult immunization: overview. Retrieved from https://www.cms.gov/adultImmunizations/ 2. Nichol KL, Goodman M., Cost effectiveness of influenza vaccination for healthy persons between ages 65 and 74 years. Vaccine. 2002 May 15;20(Suppl 2):S21-4.
MUC15-1133	Percent of Skilled Nursing Facility Residents Who	"Antipsychotic medications can be potentially dangerous for the elderly, especially for those who do not have the clinical indication. Of particular concern is the off-label use of these drugs for elders with dementia or dementia-related psychoses or agitation (Jeste et al., 2008). In April 2005, the FDA issued a black box warning

MUC ID	Measure Title	Rationale
	Newly Received an Antipsychotic Medication	against prescribing atypical antipsychotic medications for elderly with dementia (Rosack, 2005). The evidence on which the black box warning was based came from a meta-analysis of data from 17 randomized trials with a total of 5,106 patients which identified an “approximately 1.6- to 1.7-fold increase in mortality in the combined studies” (Rosack, 2005). In June 2008, the FDA extended the warning to all categories of antipsychotic drugs, conventional as well as atypical (Rosack, 2005). In this warning, the FDA advised health care professionals, "Antipsychotics are not indicated for the treatment of dementia-related psychosis." Besides elevated mortality risk, clinical trials of atypical antipsychotic medications also show elevated risk for serious adverse events including falls, somnolence and abnormal gait (Rosack, 2005; FDA, 2008; Ballard & Margallo-Lana, 2004; Martin et al., 2003; Neil, Curran, and Wattis, 2003; Doody et al., 2001; Jackson-Siegal, 2004). Additionally, there is evidence of increased risk for cerebrovascular adverse events associated with certain atypical antipsychotic medications (e.g., risperidone, olanzapine, and aripiprazole) (Jeste et al., 2008). While the black box warnings applied to all antipsychotic medications, a recent study identified some differences in mortality risk by medication and dose among a large population based cohort of dually-eligible nursing home residents prescribed antipsychotic medications (Huybrechts et al., 2012). In addition to being a threat to patient safety, antipsychotic medications are also expensive to consumers and Medicare. Atypical antipsychotic drugs cost more than $13 billion in 2007, "nearly 5 percent of all U.S. drug expenditures" (Alexander et al., 2011). They are also responsible for a significant portion of expenditures for Medicare Part D (Doody et al., 2001). Furthermore, the OIG report found that 51% of Medicare atypical antipsychotic drug claims for elderly nursing home residents were erroneous, amounting to $116 million. (OIG, 2011). Use of this measure should prompt nursing facilities to re-examine their prescribing patterns which may result in practice consistent with clinical recommendations and guidelines. Reference: Alexander, G., Gallagher, S., Mascola, A., et al.: Increasing off-label use of antipsychotic medications in the United States, 1995-2008. Pharmacoepidemiol Drug Saf 20(2):177-184, 2011. Ballard, C.G., and Margallo-Lana, M.L.: The relationship between antipsychotic treatment and quality of life for patients with dementia living in residential and nursing home care facilities. J Clin Psychiatry 65 Suppl 11:23-28, 2004. Doody, R.S., Stevens, J.C., Beck, C., et al.: Practice parameter: management of dementia (an evidence-based review). Report of the Quality Standards Subcommittee of the American Academy of Neurology. Neurology 56(9):1154-1166, 2001. FDA: Information for Healthcare Professionals: Conventional Antipsychotics. FDA Alert (June 16, 2008). http://www.fda.gov/drugs/drugsafety/postmarketdrugsafetyinformationforpatientsandproviders/ucm12483

MUC ID	Measure Title	Rationale
		0.htm Huybrechts, K.F., Gerhard, T., Crystal, S., et al.: Differential risk of death in older residents in nursing homes prescribed specific antipsychotic drugs: population based cohort study. BMJ 344:e977, 2012. Jackson-Siegal, J.M., Schneider, L.S., Baskys, A., et al.: Recognizing and responding to atypical antipsychotic side effects. J Am Med Dir Assoc 5(4 Suppl):H7-10, 2004. Jeste, D.V., Blazer, D., Casey, D., et al.: ACNP White Paper: update on use of antipsychotic drugs in elderly persons with dementia. Neuropsychopharmacology 33(5):957-970, 2008. Martin, H., Slyk, M.P., Deymann, S., et al.: Safety profile assessment of risperidone and olanzapine in long-term care patients with dementia. J Am Med Dir Assoc 4(4):183-188, 2003. Neil, W., Curran, S., and Wattis, J.: Antipsychotic prescribing in older people. Age Ageing 32(5):475-483, 2003. Office of Inspector General (OIG): Medicare Atypical Antipsychotic Drug Claims For Elderly Nursing Home Residents, 2011. Rosack, J.: FDA orders new warning on atypical antipsychotics. Psychiatr News 40(9):1-50, 2005."
MUC15-1134	Medicare Spending Per Beneficiary-Post Acute Care (PAC) Home Health Quality Reporting Program (Required under the IMPACT Act)	Medicare payments to PAC have grown at a consistently higher rate than other major Medicare sectors. Between 2001 and 2013, Medicare PAC spending grew at an annual rate of 6.1 percent and doubled to $59.4 billion.
MUC15-1135	Hybrid 30-Day Risk-Standardized Acute Ischemic Stroke Mortality Measure with Claims and Clinical Electronic Health Record (EHR) Risk Adjustment Variables	Post-stroke mortality rates have been shown to be influenced by critical aspects of care at the hospital such as response to complications, speediness of delivery of care, organization of care, and appropriate imaging [Smith et al., 2006; Reeves et al., 2009; Lingsma et al., 2008; Hong et al., 2008; Fonarow et al., 2014]. This research demonstrates the relationship between hospital organizational factors and performance on the stroke mortality measure, and supports the ability of hospitals to impact these rates. The hybrid measure addresses a limitation of the claims-only measure by incorporating clinical data collected at the time of admission to assess the condition of the patient before care has been administered.

MUC ID	Measure Title	Rationale
MUC15-1136	Measurement of Phosphorus Concentration	Consistent monitoring of phosphorus levels helps ensure regulation of patient morbidity and mortality, including stabilization of bone density, decreased bone pain, fracture prevention and decreased rates of arteriosclerosis and related conditions (e.g., stroke, heart attack). Routine blood tests will also aid in detection of and monitoring for abnormal states phosphorus balance in this especially vulnerable population. Among the 6,073 facilities that have at least one eligible patient, we generated the following statistics of their performance scores (based on the patient month) using the January – December 2013 CROWNWeb clinical data: mean (SD)=87% (18%); min=0%; max=100%; 25th percentile=86%; 50th percentile=92%; 75th percentile=96%. A description of the data is included in questions 1.1-1.7 under "Scientific Acceptability". Disparity analyses were performed among the entire eligible adult population (n=518,127) to examine the difference in performance scores by sex, race, ethnicity, and age. In particular, for each facility, the percent of patient-months by demographic group (sex, race, ethnicity, age) was calculated. Then, the facilities were divided into quintiles (Q1-Q5) based on the percentage of patient-months in the particular demographic category (i.e., a facility with percentage of females similar to the national median will be included in quintile 3). The top 20% of facilities in terms of rank, based on the percentages of females, were classified as Q5, while the bottom 20% of facilities were classified as Q1. Average (mean) performance for the measure was calculated for each quintile, and the means were examined for trend across quintiles (Q1-Q5). The Cochran-Armitage test for trend was performed to assess disparities in performance scores. All the results for each group across quintiles were statistically significant ($p<0.0001$), which imply that there are statistically significant changes in performance scores depending on sex, race, ethnicity, and age. While these differences are statistically significant, we did not determine them to be clinically meaningful differences. The mean performance scores for percent of patient-months with a phosphorus measurement in each quintile, by demographic group, are presented below. Facility Level Quintiles by Population Group (Quintile 1-5): Female(Q1=85.6%; Q2=88.0%; Q3=87.6%; Q4=88.3%; Q5=84.5%; P<0.0001) White (Q1=86.4%; Q2=85.5%; Q3=87.2%; Q4=87.3%; Q5=87.6%; P<0.0001) Black (Q1=86.9%; Q2=87.4%; Q3=87.1%; Q4=86.0%; Q5=86.7%; P<0.0001) Hispanic (Q1=85.2%; Q2=89.1%; Q3=87.6%; Q4=86.1%; Q5=86.8%; P<0.0001) Age>=65 (Q1=83.2%; Q2=88.0%; Q3=87.6%; Q4=87.4%; Q5=87.9%; P<0.0001) (note: age <18 was too small to calculate quintiles). In healthy individuals, the kidney occupies an integral, multi-faceted role in the maintenance of calcium-phosphorus homeostasis. It follows that abnormalities of calcium-phosphorus regulation are exceedingly

MUC ID	Measure Title	Rationale
		common in patients with advanced chronic kidney disease, which, indeed, most data indicate that only 25-35% of dialysis patients are able to maintain calcium in the suggested target range of 8.4-9.5 mg/dL (KDOQI 2003). Numerous studies have demonstrated the impact of prolonged calcium-phosphorus dysregulation on patient morbidity and mortality (KDOQI 2003), which can lead to progressive bone weakness, bone pain and increased susceptibility to fractures, and severe arteriosclerosis that can precipitate strokes, heart attacks, and other adverse cardiac events. Unfortunately, overt symptoms can often remain unmanifested in many but the most extreme disordered states of calcium-phosphorus dysregulation, which is why routine blood tests are necessary to detect and monitor abnormal states of calcium and phosphorus balance in this especially vulnerable population. National Kidney Foundation. 2003. "K/DOQI Clinical Practice Guidelines for Bone Metabolism and Disease in Chronic Kidney Disease," American Journal of Kidney Disease, 42 (Suppl 3): S17. Found at: http://www.kidney.org/professionals/kdoqi/guidelines_bone/index.htm
MUC15-1143	Cellulitis Clinical Episode-Based Payment Measure	Episode-based performance measurement allows meaningful comparisons between providers based on resource use for certain clinical conditions or procedures, as noted in the NQF report for the "Episode Grouper Evaluation Criteria" project (available at http://www.qualityforum.org/Publications/2014/09/Evaluating_Episode_Groupers__A_Report_from_the_National_Quality_Forum.aspx) and in various peer-reviewed articles (e.g., Hussey, P. S., Sorbero, M. E., Mehrotra, A., Liu, H., & Damberg, S. L. (2009). Episode-Based Performance Measurement and Payment: Making It a Reality. Health Affairs, 28(5), 1406-1417. doi:10.1377/hlthaff.28.5.1406). While reliability analyses have been conducted on similar performance measures, we plan to conduct our own reliability analysis for this specific measure and propose a minimum number of cases for reporting. The analysis will likely mirror the 2012 MSPB reliability analysis: https://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/hospital-value-based-purchasing/Downloads/MSPBReliabilityAnalysis-Jul-18-12.pdf
MUC15-1144	GI Hemorrhage Clinical Episode-Based Payment Measure	Episode-based performance measurement allows meaningful comparisons between providers based on resource use for certain clinical conditions or procedures, as noted in the NQF report for the "Episode Grouper Evaluation Criteria" project (available at http://www.qualityforum.org/Publications/2014/09/Evaluating_Episode_Groupers__A_Report_from_the_National_Quality_Forum.aspx) and in various peer-reviewed articles (e.g., Hussey, P. S., Sorbero, M. E., Mehrotra, A., Liu, H., & Damberg, S. L. (2009). Episode-Based Performance Measurement and Payment: Making It a Reality. Health Affairs, 28(5), 1406-1417. doi:10.1377/hlthaff.28.5.1406). While reliability analyses have been conducted on similar performance measures, we plan to conduct our

MUC ID	Measure Title	Rationale
		own reliability analysis for this specific measure and propose a minimum number of cases for reporting. The analysis will likely mirror the 2012 MSPB reliability analysis: https://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/hospital-value-based-purchasing/Downloads/MSPBReliabilityAnalysis-Jul-18-12.pdf
MUC15-1145	Kidney/Urinary Tract Infection Clinical Episode-Based Payment Measure	Episode-based performance measurement allows meaningful comparisons between providers based on resource use for certain clinical conditions or procedures, as noted in the NQF report for the "Episode Grouper Evaluation Criteria" project (available at http://www.qualityforum.org/Publications/2014/09/Evaluating_Episode_Groupers__A_Report_from_the_National_Quality_Forum.aspx) and in various peer-reviewed articles (e.g., Hussey, P. S., Sorbero, M. E., Mehrotra, A., Liu, H., & Damberg, S. L. (2009). Episode-Based Performance Measurement and Payment: Making It a Reality. Health Affairs, 28(5), 1406-1417. doi:10.1377/hlthaff.28.5.1406). While reliability analyses have been conducted on similar performance measures, we plan to conduct our own reliability analysis for this specific measure and propose a minimum number of cases for reporting. The analysis will likely mirror the 2012 MSPB reliability analysis: https://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/hospital-value-based-purchasing/Downloads/MSPBReliabilityAnalysis-Jul-18-12.pdf
MUC15-1165	Proportion of Patients with Hypercalcemia (NQF #1454)	In 2011, total Medicare costs for the ESRD program were $34.3 billion, a 5.4% increase from 2010 [14]. Abnormalities in serum levels of calcium and phosphorus, which are markers of mineral and bone disorder, are common among ESRD patients. Numerous studies have demonstrated the association of prolonged calcium and phosphorus dysregulation on patient morbidity and mortality [2,1]. In March 2010, the C- TEP recommended that a quality measure (CPM) for the upper limit of total serum calcium be calculated as the proportion of patients (calculated as patient months) with 3-month rolling average of total serum calcium greater than 10.2 mg/dL. This recommendation is consistent with the value indicated by a TEP held in 2006 and with the 2003 KDOQI guidelines [1]. The TEP in 2013 also reviewed the measures and recommended no changes to the current threshold. Since 10.2 mg/dl is the considered the upper limit of the normal range in the majority of clinical laboratories, this measure is also consistent with the published KDIGO guidelines [2]. Review of the currently available literature and evidence indicates that observational cohort studies show a consistent adverse association of hypercalcemia with cardiovascular events and all-cause mortality [3-7]. Clinical data demonstrate the association of increased serum calcium with vascular [8,9] and valvular calcifications [10]. The basic science also supports a pathological role of high calcium in promoting soft tissue and vascular calcification [11-13]. Although there are no interventional studies demonstrating the benefit of

MUC ID	Measure Title	Rationale
		correcting hypercalcemia, there was unanimous agreement among the 2010 C-TEP members that calcium concentrations >10.2 mg/dL place the patient at increased risk of poor outcomes. Current guidelines indicate that clinical decision should be based on trends rather than single laboratory values [2]. Therefore, it was unanimously agreed to use a three-month rolling average for the reporting period. 1c.4. Citations for data demonstrating high priority provided in 1a.3 1) National Kidney Foundation: K/DOQI Clinical Practice Guidelines for Bone Metabolism and Disease in Chronic Kidney Disease. American Journal of Kidney Disease 2003 42:S1-S202 (suppl 3). 2) Kidney Disease: Improving Global Outcomes (KDIGO) CKD-MBD Work Group: KDIGO Clinical Practice Guideline for the Diagnosis, Evaluation, Prevention, and Treatment of Chronic Kidney Disease-Mineral and Bone Disorder (CKD-MBD). Kidney International 2009 76 (Suppl 113): S1-S130. 3) Block GA, Klassen PS, Lazarus JM, et al. Mineral metabolism, mortality, and morbidity in maintenance hemodialysis. Journal of the American Society of Nephrology : JASN 2004 15:2208-18. 4) Young EW, Albert JM, Satayathum S, et al. Predictors and consequences of altered mineral metabolism: the Dialysis Outcomes and Practice Patterns Study. Kidney international 2005 67:1179-87. 5) Kalantar-Zadeh K, Kuwae N, Regidor DL, et al. Survival predictability of time-varying indicators of bone disease in maintenance hemodialysis patients. Kidney international 2006 70:771-80. 6) Kimata N, Albert JM, Akiba T, et al. Association of mineral metabolism factors with all-cause and cardiovascular mortality in hemodialysis patients: the Japan dialysis outcomes and practice patterns study. Hemodialysis international. International Symposium on Home Hemodialysis 2007 11:340-8. 7) Tentori F, Blayney MJ, Albert JM, et al. Mortality risk for dialysis patients with different levels of serum calcium, phosphorus, and PTH: the Dialysis Outcomes and Practice Patterns Study (DOPPS). American journal of kidney diseases : the official journal of the National Kidney Foundation 2008 52:519-30. 8) Chertow G.M., Raggi P., Chasan-Taber S., Bommer J., Holzer H., Burke S.K. Determinants of progressive vascular calcification in haemodialysis patients. Nephrology Dialysis Transplantation 2004 19 (6), pp. 1489-1496. 9) Dhingra R, Sullivan LM, Fox CS, Wang TJ, D´Agostino RB Sr, Gaziano JM, Vasan RS: Relations of serum phosphorus and calcium levels to the incidence of cardiovascular disease in the community. Arch Intern Med 2007 167: 879–885.

MUC ID	Measure Title	Rationale
		10) Wang AY, Lam CW, Wang M, Chan IH, Lui SF, Sanderson JE. Is valvular calcification a part of the missing link between residual kidney function and cardiac hypertrophy in peritoneal dialysis patients? Clinical journal of the American Society of Nephrology 2009 4:1629-36. 11) Ketteler M, Schlieper G, Floege J. Calcification and cardiovascular health: new insights into an old phenomenon. Hypertension 2006 47:1027–1034. 12) Giachelli CM. Vascular calcification mechanisms. Journal of the American Society of Nephrology : JASN 2004 15:2959–2964. 13) Yang H, Curinga G, Giachelli CM. Elevated extracellular calcium levels induce smooth muscle cell matrix mineralization in vitro. Kidney Int. 2004;66(6):2293–2299. 14) U S Renal Data System, USRDS 2013 Annual Data Report: Atlas of Chronic Kidney Disease and End-Stage Renal Disease in the United States, National Institutes of Health, National Institute of Diabetes and Digestive and Kidney Diseases, Bethesda, MD, 2013.
MUC15-1167	Standardized Readmission Ratio (SRR) for dialysis facilities	Unplanned readmission rates are an important indicator of patient morbidity and quality of life. On average, dialysis patients are admitted to the hospital nearly twice a year and hospitalizations account for approximately 38 percent of total Medicare expenditures for dialysis patients (U.S. Renal Data System, 2012). In 2010, more than 30% of dialysis patient discharges from an all-cause hospitalization were followed by an unplanned readmission within 30 days (U.S. Renal Data System, 2012). Measures of the frequency of unplanned readmissions, such as SRR, help efforts to control escalating medical costs, play an important role in providing cost-effective health care, and support coordination of care across inpatient and outpatient settings: discharge planning, transition, and follow-up care. Studies have shown that pre- and post-discharge interventions may reduce admission and unplanned readmission rates. A variety of studies on non-ESRD populations that evaluated post-discharge interventions (Dunn 1994; Bostrom 1996; Dudas 2001; Azevedo 2002; Coleman 2004; Coleman 2006; Balaban 2008; Braun 2009) or a combination of pre- and post-discharge interventions (Naylor 1994; McDonald 2001; Creason 2001; Ahmed 2004; Anderson 2005; Jack 2009; Koehler 2009; Parry 2009) have indicated a reduction in the risk of unplanned readmissions to various degrees. In addition, a recent study in the ESRD population found that certain postdischarge assessments and changes in treatment at the dialysis facility may be associated with a reduced risk of readmission (Chan 2009). Altogether, these studies support the potential for modifying unplanned readmission rates with interventions performed prior to and immediately following patient discharge.

MUC ID	Measure Title	Rationale
		Ahmed A, Thornton P, Perry GJ, Allman RM, DeLong JF. Impact of atrial fibrillation on mortality and readmission in older adults hospitalized with heart failure. Eur J Heart Fail. 2004;6(4):421–426. Anderson MA, Clarke MM, Helms LB, Foreman MD. Hospital readmission from home health care before and after prospective payment. J Nurs Scholarsh. 2005;37(1):73–79. Azevedo A, Pimenta J, Dias P, Bettencourt P, Ferreira A, Cerqueira-Gomes M. Effect of a heart failure clinic on survival and hospital readmission in patients discharged from acute hospital care. Eur J Heart Fail. 2002 Jun;4(3):353–359. Balaban RB, Weissman JS, Samuel PA, Woolhandler S. Redefining and redesigning hospital discharge to enhance patient care: a randomized controlled study. J Gen Intern Med. 2008;23(8):1228–1233. Bostrom J, Caldwell J, McGuire K, Everson D. Telephone follow-up after discharge from the hospital: Does it make a difference? Appl Nurs Res. 1996;9:47–52. Braun E, Baidusi A, Alroy G, Azzam ZS. Telephone follow-up improves patients satisfaction following hospital discharge. Eur J Internal Med. 2009;20:221–225. Chan K, Lazarus M, Wingard R, et al. “Association between repeat hospitalization and early intervention in dialysis patients following hospital discharge.” Kidney International (2009) 76:331-41. Coleman E, Parry C, Chalmers S, et al. The care transitions intervention. Arch Internal Med. 2006;166:1822–1828. Creason H. Congestive heart failure telemanagement clinic. Lippencotts Case Management: Managing the Process of Patient Care. 2001 Jul-Aug;6(4):146-56. Dudas V, Bookwalter T, Kerr KM et al. The impact of follow-up telephone calls to patients after hospitalization. American Journal of Medicine. 2001; 111(9B):26S-30S Dunn JM, Elliot TB, Lavy JA et al. Outpatient clinic review after arterial reconstruction: is it necessary? Annals of the Royal College of Surgeons of England. 1994 Sep;76(5):304-6. Jack B, Chetty V, Anthony D, et al. “A reengineered hospital discharge program to decrease rehospitalizaton.” Annals of Internal Medicine (2009) 150:178-88.

MUC ID	Measure Title	Rationale
		Koehler BE, Richter KM, Youngblood L et al. Reduction of 30-day postdischarge hospital readmission or emergency department (ED) visit rates in high-risk elderly medical patients through delivery of a targeted care bundle. Journal of Hospital Medicine. 2009 Apr;4(4):211-8. McDonald, MD. The hospitalist movement: wise or wishful thinking? Nurse management. 2001 Mar;32(3):30-1. Naylor M, Brooten D, Jones R et al. Comprehensive discharge planning for the hospitalized elderly. A randomized clinical trial. Annals of Internal Medicine. 1994 Jun 15;120(12):999-1006. Parry C, Min SH, Chugh A et al. Further application of the care transitions intervention: results of a randomized controlled trial conducted in a fee-for-service setting. Home Health Care Services Quarterly. 2009;28(2-3):84-99.
MUC15-1169	Potential Opioid Overuse	Considerable evidence indicates that opioid overuse is an important issue. The 2014 U.S. Department of Health and Human Services (HHS) National Action Plan for Adverse Drug Event Prevention highlighted the need for safer prescribing and monitoring of opioids. Patients prescribed high-dose opioids have an approximately 10-fold increase in risk of overdose compared with those prescribed low-dose opioids (Edlund et al. 2014). Patients on high-dose opioids are less likely to receive care consistent with guidelines and appropriate monitoring (Morasco et al. 2010). High daily dose is the most common indicator of potential opioid misuse or inappropriate prescribing practices for opioids (Liu et al. 2013). The Secretary's Opioid Initiative (2015) includes improved prescribing practices as one of the Departments top three priorities on opioids: http://aspe.hhs.gov/basic-report/opioid-abuse-us-and-hhs-actions-address-opioid-drug-related-overdoses-and-deaths .

APPENDIX C: MEASURES LISTED BY PROGRAM

December 1, 2015

Appendix C Table of Contents

Chronic and Post-Acute Care Measures Programs

End-Stage Renal Disease Quality Incentive

MUC ID	CMS Program	Measure Title	NQS Priority
MUC15-575	ESRD-QIP	Standardized Mortality Ratio - Modified	Making Care Safer
MUC15-693	ESRD-QIP	Standardized Hospitalization Ratio - Modified	Effective Prevention and Treatment
MUC15-758	ESRD-QIP	Avoidance of Utilization of High Ultrafiltration Rate (≥ 13 ml/kg/hour)	Effective Prevention and Treatment
MUC15-761	ESRD-QIP	ESRD Vaccination: Full-Season Influenza Vaccination	Best Practice of Healthy Living
MUC15-1136	ESRD-QIP	Measurement of Phosphorus Concentration	Communication and Care Coordination
MUC15-1165	ESRD-QIP	Proportion of Patients with Hypercalcemia (NQF #1454)	Making Care Safer
MUC15-1167	ESRD-QIP	Standardized Readmission Ratio (SRR) for dialysis facilities	Communication and Care Coordination

Skilled Nursing Facility Value-Based Purchasing Program

MUC ID	CMS Program	Measure Title	NQS Priority
MUC15-1048	SVF-VBP	Skilled Nursing Facility 30-Day Potentially Preventable Readmission Measure (SNFPPR) (required by PAMA)	Making Care Safer

Inpatient Rehabilitation Facility Quality Reporting Program

MUC ID	CMS Program	Measure Title	NQS Priority[a]
MUC15-287	IRF QRP	Medicare Spending per Beneficiary-Post Acute Care (PAC) Inpatient Rehabilitation Facility Quality Reporting Program (Required under the IMPACT Act)	Making Care Affordable
MUC15-408	IRF QRP	Discharge to Community-Post Acute Care (PAC) Inpatient Rehabilitation Facility Quality Reporting Program (Required under the IMPACT Act)	Making Care Safer, Patient and Family Engagement, Making Care Affordable
MUC15-496	IRF QRP	Potentially Preventable 30-Day Post-Discharge Readmission Measure for Inpatient Rehabilitation Facility Quality Reporting Program (Required under the IMPACT Act)	Communication and Care Coordination
MUC15-497	IRF QRP	Potentially Preventable Within Stay Readmission Measure for Inpatient Rehabilitation Facilities	Communication and Care Coordination
MUC15-1128	IRF QRP	Drug Regimen Review Conducted with Follow-Up for Identified Issues-Post Acute Care (PAC) Inpatient Rehabilitation Facility Quality Reporting Program (Required under the IMPACT Act)	Making Care Safer, Communication and Care Coordination

Note:

a. A single unique measure can be associated with more than one CMS Program, and can have more than one NQS Priority. For the 2015 Measures under Consideration List, submitters could select as many NQS Priorities (Domains) as apply. No attempt was made to rank order or identify primary or secondary priorities. Contact the respective CMS Program Lead for more information about NQS Priorities.

Long-Term Care Hospital Quality Reporting Program

MUC ID	CMS Program	Measure Title	NQS Priority
MUC15-289	LTCH QRP	Medicare Spending per Beneficiary-Post Acute Care (PAC) Long-Term Care Hospital Quality Reporting Program (Required under the IMPACT Act)	Making Care Affordable
MUC15-398	LTCH QRP	Ventilator Weaning (Liberation) Rate	Making Care Safer
MUC15-400	LTCH QRP	Compliance with Spontaneous Breathing Trial (SBT) (including Tracheostomy Collar Trial (TCT) or Continuous Positive Airway Pressure (CPAP) Breathing Trial)) by Day 2 of the LTCH Stay	Making Care Safer
MUC15-414	LTCH QRP	Discharge to Community-Post Acute Care (PAC) Long-Term Care Hospital Quality Reporting Program (Required under the IMPACT Act)	Making Care Safer, Patient and Family Engagement, Making Care Affordable
MUC15-498	LTCH QRP	Potentially Preventable 30-Day Post-Discharge Readmission Measure for Long-Term Care Hospital Quality Reporting Program (Required under the IMPACT Act)	Communication and Care Coordination
MUC15-530	LTCH QRP	Percent of Patients Who Received an Antipsychotic (AP) Medication	Making Care Safer, Effective Prevention and Treatment
MUC15-1129	LTCH QRP	Drug Regimen Review Conducted with Follow-Up for Identified Issues-Post Acute Care (PAC) Long-Term Care Hospital Quality Reporting Program (Required under the IMPACT Act)	Making Care Safer, Communication and Care Coordination

Home Health Quality Reporting Program

MUC ID	CMS Program	Measure Title	NQS Priority
MUC15-207	HH QRP	Falls risk composite process measure	Making Care Safer
MUC15-234	HH QRP	Potentially Preventable 30-Day Post-Discharge Readmission Measure for Home Health Quality Reporting Program (Required under the IMPACT Act)	Making Care Safer
MUC15-235	HH QRP	Improvement in Dyspnea in Patients with a Primary Diagnosis of CHF, COPD and/or Asthma	Making Care Safer
MUC15-523	HH QRP	Discharge to Community-Post Acute Care (PAC) Home Health Quality Reporting Program (Required under the IMPACT Act)	Making Care Safer, Patient and Family Engagement, Communication and Care Coordination
MUC15-1127	HH QRP	Drug Regimen Review Conducted with Follow-Up for Identified Issues-Post Acute Care (PAC) Home Health Quality Reporting Program (Required under the IMPACT Act)	Making Care Safer, Communication and Care Coordination
MUC15-1134	HH QRP	Medicare Spending Per Beneficiary-Post Acute Care (PAC) Home Health Quality Reporting Program (Required under the IMPACT Act)	Making Care Affordable

Hospice Quality Reporting Program

MUC ID	CMS Program	Measure Title	NQS Priority
MUC15-227	HQRP	Hospice Visits When Death Is Imminent	Making Care Safer, Effective Prevention and Treatment, Making Care Affordable, Patient and Family Engagement, Communication and Care Coordination,
MUC15-231	HQRP	Hospice and Palliative Care Composite Process Measure	Making Care Safer, Patient and Family Engagement, Communication and Care Coordination, Effective Prevention and Treatment

Skilled Nursing Facility Quality Reporting Program

MUC ID	CMS Program	Measure Title	NQS Priority
MUC15-236	SNF QRP	Application of IRF Functional Outcome Measure: Change in Self-Care Score for Medical Rehabilitation Patients (NQF #2633)	Patient and Family Engagement, Communication and Care Coordination
MUC15-291	SNF QRP	Medicare Spending per Beneficiary-Post Acute Care (PAC) Skilled Nursing Facility Quality Reporting Program (Required under the IMPACT Act)	Making Care Affordable
MUC15-462	SNF QRP	Discharge to Community-Post Acute Care (PAC) Skilled Nursing Facility Quality Reporting Program (Required under the IMPACT Act)	Making Care Safer, Patient and Family Engagement, Making Care Affordable
MUC15-495	SNF QRP	Potentially Preventable 30-Day Post-Discharge Readmission Measure for Skilled Nursing Facility Quality Reporting Program (Required under the IMPACT Act)	Communication and Care Coordination
MUC15-527	SNF QRP	Application of IRF Functional Outcome Measure: Change in Mobility Score for Medical Rehabilitation Patients (NQF #2634)	Patient and Family Engagement, Communication and Care Coordination
MUC15-528	SNF QRP	Application of IRF Functional Outcome Measure: Discharge Self-Care Score for Medical Rehabilitation Patients (NQF #2635)	Patient and Family Engagement, Communication and Care Coordination
MUC15-529	SNF QRP	Application of IRF Functional Outcome Measure: Discharge Mobility Score for Medical Rehabilitation Patients (NQF #2636)	Patient and Family Engagement, Communication and Care Coordination
MUC15-1130	SNF QRP	Drug Regimen Review Conducted with Follow-Up for Identified Issues-Post Acute Care (PAC) Skilled Nursing Facility Quality Reporting Program (Required under the IMPACT Act)	Making Care Safer, Communication and Care Coordination
MUC15-1131	SNF QRP	Percent of Skilled Nursing Facility Residents Who Self-Report Moderate to Severe Pain	Patient and Family Engagement, Effective Prevention and Treatment
MUC15-1132	SNF QRP	Percent of Skilled Nursing Facility Residents Who Were Assessed and Appropriately Given the Influenza Vaccine	Making Care Safer, Communication and Care Coordination, Effective Prevention and Treatment
MUC15-1133	SNF QRP	Percent of Skilled Nursing Facility Residents Who Newly Received an Antipsychotic Medication	Making Care Safer, Effective Prevention and Treatment

Ambulatory Care and Meaningful Use Measures Programs

Merit-Based Incentive Payment System (MIPS)

MUC ID	CMS Program	Measure Title	NQS Priority
MUC15-177	MIPS	Use Of Preventive Screening Protocol For Transplant Patients	Best Practice of Healthy Living
MUC15-178	MIPS	Use Of Mohs Surgery For Superficial Basal Cell Carcinomas On The Trunk	Making Care Affordable
MUC15-179	MIPS	Use of Mohs Surgery For Squamous Cell Carcinoma In Situ And Keratoacanthoma Type - Squamous Cell Carcinoma on The Trunk that are 1 cm or smaller	Making Care Affordable
MUC15-208	MIPS	Surveillance endoscopy for dysplasia in Barrett's Esophagus	Effective Prevention and Treatment
MUC15-209	MIPS	Non-selective beta blocker use in patients with esophageal varices	Effective Prevention and Treatment
MUC15-210	MIPS	Hepatitis A vaccination for patients with cirrhosis	Best Practice of Healthy Living
MUC15-211	MIPS	Hepatitis B vaccination for patients with cirrhosis	Best Practice of Healthy Living
MUC15-212	MIPS	Surveillance colonoscopy for dysplasia in colonic Crohns Disease	Effective Prevention and Treatment
MUC15-215	MIPS	NMSC: Biopsy Reporting Time - Clinician	Communication and Care Coordination
MUC15-216	MIPS	NMSC: Biopsy Reporting Time - Pathologist	Communication and Care Coordination
MUC15-217	MIPS	Screening for Hepatoma in patients with Chronic Hepatitis B	Effective Prevention and Treatment
MUC15-220	MIPS	Hepatitis B vaccination for patients with chronic Hepatitis C	Best Practice of Healthy Living
MUC15-221	MIPS	Surveillance colonoscopy for dysplasia in Ulcerative Colitis	Effective Prevention and Treatment
MUC15-229	MIPS	HCV- Sustained Virological Response (SVR)	Best Practice of Healthy Living
MUC15-230	MIPS	HIV Screening for Patients with Sexually Transmitted Disease (STD)	Effective Prevention and Treatment
MUC15-251	MIPS	Screening endoscopy for varices in patients with cirrhosis	Best Practice of Healthy Living
MUC15-275	MIPS	Ischemic Vascular Disease All or None Outcome Measure (Optimal Control)	Effective Prevention and Treatment
MUC15-296	MIPS	New Corneal Injury Not Diagnosed in the Post-Anesthesia Care Unit/Recovery Area	Making Care Safer
MUC15-307	MIPS	Performance of objective measure of functional hearing status	Effective Prevention and Treatment

MUC ID	CMS Program	Measure Title	NQS Priority
MUC15-313	MIPS	Patient-Reported Functional Communication	Effective Prevention and Treatment
MUC15-370	MIPS	Corneal Graft Surgery - Postoperative improvement in visual acuity to 20/40 or better	Effective Prevention and Treatment
MUC15-372	MIPS	Glaucoma - Intraocular Pressure (IOP) Reduction	Effective Prevention and Treatment
MUC15-374	MIPS	Glaucoma - Intraocular Pressure (IOP) Reduction Following Laser Trabeculosplasty	Effective Prevention and Treatment
MUC15-375	MIPS	Surgery for Acquired Involutional Ptosis: Patients with an improvement of marginal reflex distance (MRD)	Effective Prevention and Treatment
MUC15-377	MIPS	Acquired Involutional Entropion: Normalized lid position after surgical repair	Effective Prevention and Treatment
MUC15-379	MIPS	Exudative Age-Related Macular Degeneration: Loss of Visual Acuity	Effective Prevention and Treatment
MUC15-392	MIPS	Nonexudative Age-Related Macular Degeneration: Loss of Visual Acuity	Effective Prevention and Treatment
MUC15-393	MIPS	Diabetic Macular Edema: Loss of Visual Acuity	Effective Prevention and Treatment
MUC15-394	MIPS	Acute Anterior Uveitis: Post-treatment visual acuity	Effective Prevention and Treatment
MUC15-396	MIPS	Acute Anterior Uveitis: Post-treatment Grade 0 anterior chamber cells	Effective Prevention and Treatment
MUC15-397	MIPS	Chronic Anterior Uveitis: Post-treatment visual acuity	Effective Prevention and Treatment
MUC15-399	MIPS	Chronic Anterior Uveitis: Post-treatment Grade 0 anterior chamber cells	Effective Prevention and Treatment
MUC15-402	MIPS	30 Day Stroke and Death Rate for Symptomatic Patients undergoing carotid stent placement	Effective Prevention and Treatment
MUC15-411	MIPS	Patient reported outcomes following ilio-femoral venous stenting	Patient and Family Engagement
MUC15-412	MIPS	Assessment of post-thrombotic syndrome following ilio-femoral venous stenting	Effective Prevention and Treatment
MUC15-413	MIPS	Improvement in the Venous Clinical Severity Score after ilio-femoral venous stenting	Effective Prevention and Treatment
MUC15-415	MIPS	Proportion admitted to hospice for less than 3 days	Communication and Care Coordination
MUC15-420	MIPS	Rate of adequate percutaneous image-guided biopsy	Effective Prevention and Treatment

MUC ID	CMS Program	Measure Title	NQS Priority
MUC15-423	MIPS	Efficacy of uterine artery embolization for symptomatic uterine fibroids	Effective Prevention and Treatment
MUC15-424	MIPS	Common femoral arterial access site complication	Making Care Safer
MUC15-434	MIPS	Verification of ISD prior to transurethral bulking injection.	Effective Prevention and Treatment
MUC15-436	MIPS	Over-utilization of mesh in the posterior compartment	Effective Prevention and Treatment
MUC15-437	MIPS	Route of hysterectomy	Effective Prevention and Treatment
MUC15-439	MIPS	Testing for uterine disease prior to obliterative procedures	Effective Prevention and Treatment
MUC15-440	MIPS	Documentation of offering a trial of conservative management prior to fecal incontinence surgery	Effective Prevention and Treatment
MUC15-441	MIPS	Documentation of offering a trial of conservative management prior to urgency incontinence surgery	Effective Prevention and Treatment
MUC15-450	MIPS	Intraperitoneal chemotherapy administered within 42 days of optimal cytoreduction to women with invasive stage III ovarian, fallopian tube, or peritoneal cancer	Effective Prevention and Treatment
MUC15-452	MIPS	Minimally invasive surgery performed for patients with endometrial cancer	Effective Prevention and Treatment
MUC15-454	MIPS	Platin or taxane administered within 42 days following cytoreduction to women with invasive stage I (grade 3), IC-IV ovarian, fallopian tube, or peritoneal cancer	Effective Prevention and Treatment
MUC15-459	MIPS	Surgical staging with lymph node removal for any grade 3 and/or myometrial invasion >50% with endometrial cancer	Effective Prevention and Treatment
MUC15-460	MIPS	Use of brachytherapy for cervical cancer patients treated with primary radiation with curative intent.	Effective Prevention and Treatment
MUC15-461	MIPS	Completion of external beam radiation within 60 days for women receiving primary radiotherapy as treatment for locally advanced cervical cancer (LACC)	Effective Prevention and Treatment
MUC15-463	MIPS	Use of concurrent platinum-based chemotherapy for patients with stage IIB-IV cervical cancer receiving primary radiation therapy.	Effective Prevention and Treatment

MUC ID	CMS Program	Measure Title	NQS Priority
MUC15-465	MIPS	Performance of radical hysterectomy in patients with IB1-IIA cervical cancer who undergo hysterectomy.	Effective Prevention and Treatment
MUC15-466	MIPS	Postoperative pelvic radiation with concurrent cisplatin-containing chemotherapy with (or without) brachytherapy for patients with positive pelvic nodes, positive surgical margin, and/or positive parametrium.	Effective Prevention and Treatment
MUC15-576	MIPS	PQI 92 Prevention Quality Chronic Composite	Best Practice of Healthy Living
MUC15-577	MIPS	PQI 91 Prevention Quality Acute Composite	Effective Prevention and Treatment
MUC15-928	MIPS	Paired Measure: Depression Utilization of the PHQ-9 Tool; Depression Remission at Six Months; Depression Remission at Twelve Months	Communication and Care Coordination
MUC15-1019	MIPS	Non-Recommended PSA-Based Screening	Making Care Safer
MUC15-1169	MIPS	Potential Opioid Overuse	Making Care Safer

Medicare Shared Savings

MUC ID	CMS Program	Measure Title	NQS Priority
MUC15-275	MSSP	Ischemic Vascular Disease All or None Outcome Measure (Optimal Control)	Effective Prevention and Treatment
MUC15-576	MSSP	PQI 92 Prevention Quality Chronic Composite	Best Practice of Healthy Living
MUC15-577	MSSP	PQI 91 Prevention Quality Acute Composite	Effective Prevention and Treatment
MUC15-578	MSSP	Advance Care Plan	Patient and Family Engagement
MUC15-579	MSSP	Falls: Screening, Risk-Assessment, and Plan of Care to Prevent Future Falls	Making Care Safer

Hospital Measures Programs

Hospital-Acquired Condition Reduction Program

MUC ID	CMS Program	Measure Title	NQS Priority
MUC15-534	HACRP	American College of Surgeons-Centers for Disease Control and Prevention (ACS-CDC) Harmonized Procedure Specific Surgical Site Infection (SSI) Outcome Measure	Making Care Safer
MUC15-604	HACRP	Patient Safety and Adverse Events Composite	Making Care Safer

Hospital Readmissions Reduction Program

MUC ID	CMS Program	Measure Title	NQS Priority
No candidate measures were accepted from this program in 2015.			

Hospital Inpatient Quality Reporting

MUC ID	CMS Program	Measure Title	NQS Priority
MUC15-294	HIQR	Hospital 30-Day Mortality Following Acute Ischemic Stroke Hospitalization Measure	Making Care Safer, Communication and Care Coordination, Effective Prevention and Treatment
MUC15-378	HIQR	Hospital-level, risk-standardized 30-day episode-of-care payment measure for pneumonia	Communication and Care Coordination, Making Care Affordable
MUC15-391	HIQR	Excess Days in Acute Care after Hospitalization for Pneumonia	Making Care Safer, Patient and Family Engagement, Communication and Care Coordination, Best Practice of Healthy Living
MUC15-531	HIQR	National Healthcare Safety Network (NHSN) Antimicrobial Use Measure	Making Care Safer, Effective Prevention and Treatment
MUC15-534	HIQR	American College of Surgeons-Centers for Disease Control and Prevention (ACS-CDC) Harmonized Procedure Specific Surgical Site Infection (SSI) Outcome Measure	Making Care Safer
MUC15-604	HIQR	Patient Safety and Adverse Events Composite	Making Care Safer
MUC15-835	HIQR	Aortic Aneurysm Procedure Clinical Episode-Based Payment Measure	Communication and Care Coordination
MUC15-836	HIQR	Cholecystectomy and Common Duct Exploration Clinical Episode-Based Payment Measure	Communication and Care Coordination
MUC15-837	HIQR	Spinal Fusion Clinical Episode-Based Payment Measure	Communication and Care Coordination
MUC15-838	HIQR	Transurethral Resection of the Prostate (TURP) for Benign Prostatic Hyperplasia Clinical Episode-Based Payment Measure	Communication and Care Coordination
MUC15-1013	HIQR	Adult Local Current Smoking Prevalence	Effective Prevention and Treatment, Best Practice of Healthy Living
MUC15-1015	HIQR	INR Monitoring for Individuals on Warfarin after Hospital Discharge	Making Care Safer
MUC15-1033	HIQR	Hybrid 30-Day Risk-Standardized Acute Ischemic Stroke Mortality Measure with Electronic Health	Making Care Safer, Communication and Care Coordination,

MUC ID	CMS Program	Measure Title	NQS Priority
		Record (EHR)-Extracted Risk Adjustment Variables	Effective Prevention and Treatment
MUC15-1083	HIQR	IQI-22: Vaginal Birth After Cesarean (VBAC) Delivery Rate, Uncomplicated	Making Care Safer, Patient and Family Engagement, Communication and Care Coordination
MUC15-1135	HIQR	Hybrid 30-Day Risk-Standardized Acute Ischemic Stroke Mortality Measure with Claims and Clinical Electronic Health Record (EHR) Risk Adjustment Variables	Making Care Safer, Communication and Care Coordination, Effective Prevention and Treatment

Medicare and Medicaid EHR Incentive Program for Eligible Hospitals and Critical Access Hospitals

MUC ID	CMS Program	Measure Title	NQS Priority
No candidate measures were accepted from this program in 2015.			

Hospital Value-Based Purchasing

MUC ID	CMS Program	Measure Title	NQS Priority
MUC15-295	HVBP	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
MUC15-322	HVBP	Hospital-level, risk-standardized payment associated with a 30-day episode-of-care for heart failure (HF)	Making Care Affordable
MUC15-369	HVBP	Hospital-level, risk-standardized payment associated with a 30-day episode-of-care for Acute Myocardial Infarction (AMI)	Making Care Affordable
MUC15-378	HVBP	Hospital-level, risk-standardized 30-day episode-of-care payment measure for pneumonia	Communication and Care Coordination, Making Care Affordable
MUC15-395	HVBP	Hospital 30-Day, All-Cause, Risk-Standardized Mortality Rate (RSMR) Following Coronary Artery Bypass Graft (CABG) Surgery	Making Care Safer, Communication and Care Coordination, Effective Prevention and Treatment
MUC15-534	HVBP	American College of Surgeons-Centers for Disease Control and Prevention (ACS-CDC) Harmonized Procedure Specific Surgical Site Infection (SSI) Outcome Measure	Making Care Safer
MUC15-604	HVBP	Patient Safety and Adverse Events Composite	Making Care Safer
MUC15-1143	HVBP	Cellulitis Clinical Episode-Based Payment Measure	Communication and Care Coordination
MUC15-1144	HVBP	GI Hemorrhage Clinical Episode-Based Payment Measure	Communication and Care Coordination
MUC15-1145	HVBP	Kidney/Urinary Tract Infection Clinical Episode-Based Payment Measure	Communication and Care Coordination

PPS-Exempt Cancer Hospital Quality Reporting

MUC ID	CMS Program	Measure Title	NQS Priority
MUC15-532	PCHQR	National Healthcare Safety Network (NHSN) Facility-wide Inpatient Hospital-onset Methicillin-resistant Staphylococcus aureus (MRSA) Bacteremia Outcome Measure	Making Care Safer
MUC15-533	PCHQR	National Healthcare Safety Network (NHSN) Facility-wide Inpatient Hospital-onset Clostridium difficile Infection (CDI) Outcome Measure	Making Care Safer
MUC15-534	PCHQR	American College of Surgeons-Centers for Disease Control and Prevention (ACS-CDC) Harmonized Procedure Specific Surgical Site Infection (SSI) Outcome Measure	Making Care Safer
MUC15-946	PCHQR	Oncology: Radiation Dose Limits to Normal Tissues	Communication and Care Coordination
MUC15-951	PCHQR	Admissions and Emergency Department Visits for Patients Receiving Outpatient Chemotherapy	Communication and Care Coordination, Effective Prevention and Treatment

Inpatient Psychiatric Facility Quality Reporting

MUC ID	CMS Program	Measure Title	NQS Priority
MUC15-1065	IPFQR	SUB-3 Alcohol & Other Drug Use Disorder Treatment Provided or Offered at Discharge and SUB-3a Alcohol & Other Drug Use Disorder Treatment at Discharge	Effective Prevention and Treatment
MUC15-1082	IPFQR	Thirty-day all-cause unplanned readmission following psychiatric hospitalization in an Inpatient Psychiatric Facility (IPF)	Communication and Care Coordination

Ambulatory Surgical Center Quality Reporting

MUC ID	CMS Program	Measure Title	NQS Priority
MUC15-1047	ASCQR	Toxic Anterior Segment Syndrome (TASS) Outcome	Making Care Safer

Hospital Outpatient Quality Reporting

MUC ID	CMS Program	Measure Title	NQS Priority
MUC15-951	HOQR	Admissions and Emergency Department Visits for Patients Receiving Outpatient Chemotherapy	Communication and Care Coordination, Effective Prevention and Treatment
MUC15-982	HOQR	Risk-standardized hospital visits within 7 days after hospital outpatient surgery	Making Care Safer, Communication and Care Coordination