List of Measures under Consideration for December 1, 2019

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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 statutory requirements[1], which require the Secretary of the Department of Health and Human Services (HHS) to make publicly available a list of certain quality and efficiency measures it is considering for adoption through rulemaking under Medicare. Among the measures, the list includes measures we are considering that were suggested to us by the public. When organizations, such as physician specialty societies, request that CMS consider measures, CMS evaluates the submission for inclusion on the MUC List so the Measure Applications Partnership (MAP), the statutorily required[2] multi-stakeholder groups, can provide their input on potential measures. Inclusion of a measure on this list does not require CMS to adopt the measure for the identified program. Therefore, this list is likely larger than what will ultimately be adopted by CMS for optional or mandatory reporting programs in Medicare.

CMS will continue its goal of aligning measures across programs. Measure alignment includes looking first to existing program measures for use in new programs. Further, CMS programs must balance competing goals of establishing parsimonious measure sets, while including sufficient measures to facilitate multi-specialty provider and supplier participation.

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[1] Section 1890A(a)(2) of the Social Security Act (42 U.S.C. § 1395aaa-1).
[2] Section 1890A(a) of the Social Security Act (42 U.S.C. § 1395aaa-1).

Statutory Requirement

HHS is statutorily required[3] to establish a federal pre-rulemaking process for the selection of certain quality and efficiency measures[4] for use by HHS. One of the steps in the pre-rulemaking process requires that HHS make publicly available, not later than December 1 annually, a list of quality and efficiency measures HHS is considering adopting, through the federal rulemaking process, for use in certain Medicare quality programs.

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 HHS 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)[5]; and

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, 2015, and 2018 editions of that report and related documents are available at the website of the CMS National Impact Assessment.)

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[3] Section 1890A of the Social Security Act (42 U.S.C. § 1395aaa-1).
[4] As listed in Section 1890(b)(7)(B) of the Social Security Act (42 U.S.C. § 1395aaa).
[5] The rationale for adopting measures not endorsed by the consensus-based entity will be published in rulemaking where such measures are proposed and finalized.

Fulfilling HHS's Requirement to Make Its Measures under Consideration Publicly Available

The attached MUC List, which is compiled by CMS, will be posted on the NQF website and the CMS Pre-Rulemaking site. This posting will satisfy an important requirement of the pre-rulemaking process by making public the quality and efficiency measures that HHS is considering for use under certain Medicare quality programs. Additionally, the CMS website will indicate 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 HHS for use in certain Medicare quality programs. 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 for future rulemaking cycles. They remain under consideration only for purposes of the particular program or other use for which CMS was considering them 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 Measure Applications Partnership (MAP) Reports can be found at:

https://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/QualityMeasures/Pre-RuleMaking.html.

Applicable Programs

The following programs that now use or will use quality and efficiency measures have been identified to take part in pre-rulemaking. Not all programs have measures on the current list.

♦ Ambulatory Surgical Center Quality Reporting Program (ASCQR)

♦ End-Stage Renal Disease Quality Incentive Program (ESRD QIP)

♦ Home Health Quality Reporting Program (HH QRP)

♦ Hospice Quality Reporting Program (HQRP)

♦ Hospital-Acquired Condition Reduction Program (HACRP)

♦ Hospital Inpatient Quality Reporting Program (HIQR)

♦ Hospital Outpatient Quality Reporting Program (HOQR)

♦ Hospital Readmissions Reduction Program (HRRP)

♦ Hospital Value-Based Purchasing Program (HVBP)

♦ Inpatient Psychiatric Facility Quality Reporting Program (IPFQR)

♦ Inpatient Rehabilitation Facility Quality Reporting Program (IRF QRP)

♦ Long-Term Care Hospital Quality Reporting Program (LTCH QRP)

♦ Medicare and Medicaid Promoting Interoperability Program for Eligible Hospitals (EHs) or Critical Access Hospitals (CAHs)

♦ Medicare Shared Savings Program (SSP)

♦ Merit-based Incentive Payment System (MIPS)—Cost[6]

♦ Merit-based Incentive Payment System (MIPS)—Quality

♦ Part C and D Star Rating [Medicare][7]

♦ Prospective Payment System-Exempt Cancer Hospital Quality Reporting Program (PCHQR)

♦ Skilled Nursing Facility Quality Reporting Program (SNF QRP)

♦ Skilled Nursing Facility Value-Based Purchasing Program (SNF VBP)

Measures List Highlights

By publishing this list, CMS will make publicly available and seek the multi-stakeholder

groups' input on 19 measures under consideration for use in Medicare programs. We note several

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[6] Measures submitted for MIPS, which is one program, are divided for convenience between Cost and Quality measures, so that separate reviews can be conducted at CMS.

[7] Due to recent rulemaking requirements, the Part C and Part D Star Rating programs will now participate in the CMS pre-rulemaking process. They are separate programs, but are presented as one program for pre-rulemaking purposes.

important points to consider and highlight:

♦ Of the applicable programs covered by the statutory pre-rulemaking process, all programs contributed measures to this list in 2019 *except* the Ambulatory Surgical Center Quality Reporting Program, the Hospital-Acquired Condition Reduction Program, the Hospital Outpatient Quality Reporting Program, the Hospital Readmissions Reduction Program, the Hospital Value-Based Purchasing Program, the Inpatient Rehabilitation Facility Quality Reporting Program, the Long-Term Care Hospital Quality Reporting Program, the Merit-Based Incentive Payment System—Cost, the Skilled Nursing Facility Quality Reporting Program, and the Skilled Nursing Facility Value-Based Purchasing Program.

♦ The 2019 MUC List includes measures that CMS is currently considering under Medicare. Inclusion of a measure on this list does not require CMS to adopt the measure for the identified program.

♦ If CMS chooses not to adopt a measure under this list in the current rulemaking cycle, the measure remains under consideration by the Secretary and may be proposed and adopted in subsequent rulemaking cycles without being published again as part of a future MUC list.

♦ The following components of the Department of Health and Human Services contributed to and supported CMS in publishing a majority of measures on this list:

     o Office of the Assistant Secretary for Health

     o Office of the National Coordinator for Health Information Technology

     o National Institutes of Health

     o Agency for Healthcare Research and Quality

     o Health Resources and Services Administration

- o   Centers for Disease Control and Prevention

- o   Substance Abuse and Mental Health Services Administration

- o   Office of the Assistant Secretary for Planning and Evaluation

- o   Indian Health Service

- o   Food and Drug Administration

♦   CMS will continue aligning measures across programs whenever possible with the goals of moving payment toward value, improving outcomes for patients, and reducing regulatory burden for clinicians and providers through focusing everyone's efforts on the same quality areas. In an effort to provide a more meaningful List of Measures under Consideration, CMS included only measures that contain adequate specifications. Measures contained on this list had to fill a quality and efficiency measurement need and were assessed for alignment across CMS programs when applicable. To achieve this goal of alignment across programs, measures in the 2019 MUC list were reviewed using the Meaningful Measures Framework.

Meaningful Measures

Regulatory reform and reducing regulatory burden are high priorities for CMS. To reduce the regulatory burden on the healthcare industry, lower health care costs, and enhance patient care, in October 2017, we launched the Meaningful Measures Initiative.[8] This initiative is one component of our agency-wide Patients Over Paperwork Initiative,[9] which is aimed at evaluating and streamlining regulations with a goal to reduce unnecessary burden, increase efficiencies, and improve beneficiary

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[8] https://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/QualityInitiativesGenInfo/CMS-Quality-Strategy.html
[9] https://www.cms.gov/Outreach-and-Education/Outreach/Partnerships/PatientsOverPaperwork.html

experience. The Meaningful Measures Initiative is aimed at identifying the highest priority areas for quality measurement and quality improvement in order to assess the core quality of care issues that are most vital to advancing our work to improve patient outcomes. The Meaningful Measures Initiative represents a new approach to quality measures that will reduce the collection and reporting burden while producing quality measurement that is more focused on meaningful outcomes.

Meaningful Measures will move payment toward value through focusing everyone's efforts on the same quality areas and lend specificity, with the following principles for identifying measures that:

- Address high-impact measure areas that safeguard public health;

- Are patient-centered and meaningful to patients;

- Are outcome-based where possible;

- Fulfill each program's statutory requirements;

- Minimize the level of burden for health care providers;

- Offer significant opportunity for improvement;

- Address measure needs for population based payment through alternative payment models; and

- Align across programs and/or with other payers.

In order to achieve these objectives, we have identified 19 Meaningful Measure areas and mapped them to six overarching quality priorities as shown in Table 1.

By including Meaningful Measures in our programs, we believe that we can also address the following cross-cutting measure criteria:

- Eliminating disparities;

- Tracking measurable outcomes and impact;

Table 1: Meaningful Measures Framework Domains and Measure Areas

Quality Priority	Meaningful Measure Area
Make Care Safer by Reducing Harm Caused in the Delivery of Care	Healthcare-Associated Infections
	Preventable Healthcare Harm
Strengthen Person and Family Engagement as Partners in Their Care	Care is Personalized and Aligned with Patient's Goals
	End of Life Care according to Preferences
	Patient's Experience of Care
	Functional Outcomes
Promote Effective Communication and Coordination of Care	Medication Management
	Admissions and Readmissions to Hospitals
	Transfer of Health Information and Interoperability
Promote Effective Prevention and Treatment of Chronic Disease	Preventive Care
	Management of Chronic Conditions
	Prevention, Treatment, and Management of Mental Health
	Prevention and Treatment of Opioid and Substance Use Disorders
	Risk Adjusted Mortality
Work with Communities to Promote Best Practices of Healthy Living	Equity of Care
	Community Engagement
Make Care Affordable	Appropriate Use of Healthcare
	Patient-focused Episode of Care
	Risk Adjusted Total Cost of Care

- Safeguarding public health;

- Achieving cost savings;

- Improving access for rural communities; and

- Reducing burden.

Through the Meaningful Measures Initiative, CMS will continue to improve outcomes for

patients, their families, and health care providers while reducing burden and costs for clinicians and

providers as well as promoting operational efficiencies.

How to Navigate the Document

Headings in this document have been bookmarked to facilitate navigation. The remainder of this

document consists of four sections:

♦ List of Measures under Consideration (page 13) – 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 21) – This table details the numerator,

denominator, and exclusions/exceptions for each measure.

♦ Appendix B: Measures Rationales (page 47) – 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 73) – This series of tables lists the individual

programs for which each measure is under consideration, the quality priority (or domain)

associated with each measure, and the Meaningful Measure Area as submitted. The same

measure may be under consideration for more than one CMS program.

Each table is preceded by a legend defining the contents of the columns. For more information,

please contact Kimberly Rawlings at Kimberly.Rawlings@cms.hhs.gov or Helen Dollar-Maples at

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NUMBER OF MEASURES UNDER CONSIDERATION BY PROGRAM[10]

CMS Program	Number of Measures under Consideration
Ambulatory Surgical Center Quality Reporting	0
End-Stage Renal Disease Quality Incentive Program	1
Home Health Quality Reporting Program	1
Hospice Quality Reporting Program	1
Hospital-Acquired Condition Reduction Program	0
Hospital Inpatient Quality Reporting Program	2
Hospital Outpatient Quality Reporting Program	0
Hospital Readmissions Reduction Program	0
Hospital Value-Based Purchasing Program	0
Inpatient Psychiatric Facility Quality Reporting Program	1
Inpatient Rehabilitation Facility Quality Reporting Program	0
Long-Term Care Hospital Quality Reporting Program	0
Medicare and Medicaid Promoting Interoperability Program for Eligible Hospitals (EHs) or Critical Access Hospitals (CAHs)	1
Medicare Shared Savings Program	1
Merit-based Incentive Payment System—Cost	0
Merit-based Incentive Payment System—Quality	6
Part C & D Star Rating [Medicare]	5
Prospective Payment System-Exempt Cancer Hospital Quality Reporting Program	2
Skilled Nursing Facility Quality Reporting Program	0
Skilled Nursing Facility Value-Based Purchasing Program	0

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[10] 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 "MUC19-" 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: A combination of two or more component measures, each of which individually reflects quality of care, into a single quality measure with a single score.

♦ Cost/Resource Use: A count of the frequency of units of defined health system services or resources; some may further apply a dollar amount (e.g., allowable charges, paid amounts, or standardized prices) to each unit of resource use.

♦ Efficiency: Refers to a relationship between a specific level of quality of health care provided and the resources used to provide that care.

♦ Intermediate Outcome: Refers to a change produced by a health care intervention that leads to a longer-term outcome (e.g., a reduction in blood pressure is an intermediate outcome that leads to a reduction in the risk of longer-term outcomes such as cardiac infarction or stroke).

♦ Outcome: The health status of a patient (or change in health status) resulting from healthcare, which can be desirable or adverse.

♦ Patient Reported Outcome: Refers to a measure of a patient's feelings or what they are able to do as they are dealing with diseases or conditions. These types of measures may include Patient Reported Outcome Measures (PROMs) and Patient Reported Outcome-Based Performance Measures (PRO-PMs).

♦ Process: A healthcare service provided to, or on behalf of, a patient. This may include, but is not limited to, measures that address adherence to recommendations for clinical practice based on evidence or consensus.

♦ <u>Structure</u>: Features of a healthcare organization or clinician relevant to the capacity to provide healthcare. This may include, but is not limited to, measures that address health IT infrastructure, provider capacity, systems, and other healthcare infrastructure supports.

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.

Measures under Consideration

MUC ID	Measure Title	Description	Measure Type	Measure Steward	CMS Program(s)
MUC19-14	Follow-up after Emergency Department (ED) Visit for People with Multiple High-Risk Chronic Conditions	The percent of emergency department visits for Medicare beneficiaries ages 18 and older with multiple high-risk chronic conditions (MCC) who had a follow-up service within 7 days of the ED visit. Multiple high-risk chronic conditions include 2 or more of the following: Alzheimer's disease, atrial fibrillation, chronic kidney disease, COPD, depression, heart failure, cardiovascular disease evidenced by acute myocardial infarction, and stroke or transient ischemic attack. Appropriate follow-up services include but not limited to: an outpatient visit; telephone visit; transitional or complex care management services, outpatient or telehealth behavioral health visit, or observation visit.	Process	National Committee for Quality Assurance	Part C & Part D Star Rating
MUC19-18	National Healthcare Safety Network (NHSN) Catheter-Associated Urinary Tract Infection Outcome Measure	Standardized Infection Ratio (SIR) of healthcare-associated, catheter-associated urinary tract infections (UTI) will be calculated among patients in bedded inpatient care locations, except level II or level III neonatal intensive care units (NICU). This includes acute care general hospitals, long-term acute care hospitals, rehabilitation hospitals, oncology hospitals, and behavior health hospitals.	Outcome	Centers for Disease Control and Prevention	PCHQR
MUC19-19	National Healthcare Safety Network (NHSN) Central Line Associated Bloodstream Infection Outcome Measure	Standardized Infection Ratio (SIR) and Adjusted Ranking Metric (ARM) of healthcare-associated, central line-associated bloodstream infections (CLABSI) will be calculated among patients in bedded inpatient care locations.	Outcome	Centers for Disease Control and Prevention	PCHQR

MUC ID	Measure Title	Description	Measure Type	Measure Steward	CMS Program(s)
MUC19-21	Transitions of Care between the Inpatient and Outpatient Settings including Notifications of Admissions and Discharges, Patient Engagement and Medication Reconciliation Post-Discharge	The intent of the measure is to improve the coordination of care for Medicare Advantage members as they transition between inpatient and outpatient settings. The measure assesses the percentage of discharges for members 18 years of age and older who had each of the following four indicators: notification of inpatient admission; receipt of discharge information; patient engagement after inpatient discharge; and medication reconciliation post-discharge. Plans report separate rates for individuals 18-64 years of age and those 65 years and older, as well as a total rate for each indicator in the measure.	Composite	National Committee for Quality Assurance	Part C & Part D Star Rating
MUC19-22	Follow-Up After Psychiatric Hospitalization	The Follow-Up After Psychiatric Hospitalization measure assesses the percentage of inpatient discharges with principal diagnoses of select mental illness or substance use disorders (SUD) for which the patient received a follow-up visit for treatment of mental illness or SUD. Two rates are reported: 1. Percentage of discharges for which the patient received follow-up within 7 days of discharge 2. Percentage of discharges for which the patient received follow-up within 30 days of discharge The performance period used to identify denominator cases is 12 months. Data from the performance period and 30 days after are used to identify follow-up visits in the numerator.	Process	Centers for Medicare & Medicaid Services	IPFQR
MUC19-26	Hospital Harm—Severe Hyperglycemia	This measure assesses the proportion of hospital days with a severe hyperglycemic event for hospitalized patients 18 or older who have a diagnosis of diabetes mellitus, have received at least one administration of insulin or an anti-diabetic medication during the hospital admission, or have had an elevated blood glucose level (>200 mg/dL) during their hospital admission.	Outcome	Centers for Medicare & Medicaid Services	HIQR; Promoting Interoperability (EH-CAH)

MUC ID	Measure Title	Description	Measure Type	Measure Steward	CMS Program(s)
MUC19-27	Hospital-Wide, 30-Day, All-Cause Unplanned Readmission (HWR) Rate for the Merit-Based Incentive Payment Program (MIPS) Eligible Clinician Groups	This measure is a re-specified version of the measure, "Risk-adjusted readmission rate (RARR) of unplanned readmission within 30 days of hospital discharge for any condition" (NQF 1789), which was developed for patients 65 years and older using Medicare claims. This re-specified measure attributes outcomes to MIPS participating clinician groups and assesses each group's readmission rate. The measure comprises a single summary score, derived from the results of five models, one for each of the following specialty cohorts (groups of discharge condition categories or procedure categories): medicine, surgery/gynecology, cardio-respiratory, cardiovascular, and neurology.	Outcome	Centers for Medicare & Medicaid Services	MIPS-Quality
MUC19-28	Risk-standardized complication rate (RSCR) following elective primary total hip arthroplasty (THA) and/or total knee arthroplasty (TKA) for Merit-based Incentive Payment System (MIPS) Eligible Clinicians and Eligible Clinician Groups	This measure is a re-specified version of the measure, "Hospital-level Risk-standardized Complication rate (RSCR) following Elective Primary Total Hip Arthroplasty (THA) and/or Total Knee Arthroplasty (TKA)" (National Quality Forum 1550), which was developed for patients 65 years and older using Medicare claims. This re-specified measure attributes outcomes to Merit-based Incentive Payment System participating clinicians and/or clinician groups ("provider") and assesses each provider's complication rate, defined as any one of the specified complications occurring from the date of index admission to up to 90 days post date of the index procedure.	Outcome	Centers for Medicare & Medicaid Services	MIPS-Quality
MUC19-33	Hospice Visits in the Last Days of Life	The proportion of hospice patients who have received visits from a Registered Nurse or Medical Social Worker (non-telephonically) on at least two out of the final three days of the patient's life.	Process	Centers for Medicare & Medicaid Services	HQRP

MUC ID	Measure Title	Description	Measure Type	Measure Steward	CMS Program(s)
MUC19-34	Home Health Within-Stay Potentially Preventable Hospitalization Measure	This measure reports a home health agency (HHA)-level rate of risk-adjusted potentially preventable hospitalizations or observation stays that occur within a home health (HH) stay for all eligible stays at each agency. A HH stay is a sequence of HH payment episodes separated from other HH payment episodes by at least two days.	Outcome	Centers for Medicare & Medicaid Services	HH QRP
MUC19-37	Clinician and Clinician Group Risk-standardized Hospital Admission Rates for Patients with Multiple Chronic Conditions; in the Medicare Shared Savings Program, the score would be at the ACO level.	Annual risk-standardized rate of acute, unplanned hospital admissions among Medicare Fee-for-Service (FFS) patients aged 65 years and older with multiple chronic conditions (MCCs).	Outcome	Centers for Medicare & Medicaid Services	SSP; MIPS-Quality
MUC19-57	Use of Opioids at High Dosage in Persons without Cancer (OHD)	Percent of beneficiaries receiving opioid prescriptions with an average daily morphine milligram equivalent (MME) greater than or equal to 90 mg over a period of 90 days or longer.	Process	Pharmacy Quality Alliance	Part C & Part D Star Rating
MUC19-60	Use of Opioids from Multiple Providers in Persons without Cancer (OMP)	Percent of beneficiaries receiving opioid prescriptions from 4 or more prescribers and 4 or more pharmacies within 180 days or less.	Process	Pharmacy Quality Alliance	Part C & Part D Star Rating
MUC19-61	Use of Opioids from Multiple Providers and at a High Dosage in Persons without Cancer (OHDMP)	Percent of beneficiaries receiving opioid prescriptions with an average daily morphine milligram equivalent (MME) greater than or equal to 90 mg over a period of 90 days or longer, and opioid prescriptions from 4 or more prescribers and 4 or more pharmacies within 180 days or less.	Process	Pharmacy Quality Alliance	Part C & Part D Star Rating

MUC ID	Measure Title	Description	Measure Type	Measure Steward	CMS Program(s)
MUC19-64	Standardized Transfusion Ratio for Dialysis Facilities	The risk adjusted facility level transfusion ratio "STrR" is specified for all adult dialysis patients. It is a ratio of the number of eligible red blood cell transfusion events observed in patients dialyzing at a facility, to the number of eligible transfusion events that would be expected under a national norm, after accounting for the patient characteristics within each facility. Eligible transfusions are those that do not have any claims pertaining to the comorbidities identified for exclusion, in the one year look back period prior to each observation window. This measure is calculated as a ratio, but can also be expressed as a rate.	Outcome	Centers for Medicare & Medicaid Services	ESRD QIP
MUC19-66	Hemodialysis Vascular Access: Practitioner Level Long-term Catheter Rate	Percentage of adult hemodialysis patient-months using a catheter continuously for three months or longer for vascular access attributable to an individual practitioner or group practice.	Intermediate Outcome	Centers for Medicare & Medicaid Services	MIPS-Quality
MUC19-110	Emergency Department Utilization (EDU)	Assesses emergency department (ED) utilization among Medicare (18 and older) health plan members through an observed-to-expected ratio. Plans report observed rates of ED use and a predicted rate of ED use based on the health of the member population and other factors.	Outcome	National Committee for Quality Assurance	MIPS-Quality
MUC19-112	Acute Hospital Utilization (AHU)	This measure assesses the risk-adjusted ratio of observed-to-expected inpatient admission and observation stay discharges during the measurement year reported by surgery, medicine and total among members 18 years of age and older.	Outcome	National Committee for Quality Assurance	MIPS-Quality
MUC19-114	Maternal Morbidity	Structural Measure to address severe maternal morbidity in the inpatient hospital setting.	Structure	Centers for Medicare & Medicaid Services	HIQR

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/Exceptions: Exclusions are patients included in an initial population for whom there are valid reasons a process or outcome of care has not occurred. 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. For further background, the following definitions are from the [CMS Measures Management System Blueprint (v. 14.1)](#):

>*Denominator Exception*. Those conditions that should remove a patient, procedure, or unit of measurement from the denominator of the performance rate only if the numerator criteria are not met. A denominator exception allows for adjustment of the calculated score for those providers with higher risk populations. A denominator exception also

provides for the exercise of clinical judgment and should be specifically defined where capturing the information in a structured manner fits the clinical workflow. A denominator exception is used only in proportion measures. These cases are removed from the denominator. However, the number of patients with valid exceptions may still be reported.

Denominator Exclusion. Patients who should be removed from the measure population and denominator before determining if numerator criteria are met. Denominator exclusions are used in proportion and ratio measures to help narrow the denominator. For example, patients with bilateral lower extremity amputations would be listed as a denominator exclusion for a measure requiring foot exams.

Numerator Exclusion. Defines instances that should not be included in the numerator data. Numerator exclusions are used only in ratio and proportion measures.

Measure Specifications

MUC ID	Measure Title	Numerator	Denominator	Exclusions/Exceptions
MUC19-14	Follow-up after Emergency Department (ED) Visit for People with Multiple High-Risk Chronic Conditions	A follow-up service within 7 days after the ED visit (8 total days)	ED visits for Medicare beneficiaries ages 18 and older with multiple high-risk chronic conditions	1. Medicare beneficiaries in hospice 2. ED visits followed by admission to an acute or non-acute inpatient care setting on the date of the ED visit or within 7 days after the ED visit
MUC19-18	National Healthcare Safety Network (NHSN) Catheter-Associated Urinary Tract Infection Outcome Measure	Total number of observed healthcare-associated CAUTI among patients in bedded inpatient care locations (excluding patients in Level II or III neonatal ICUs).	Total number of predicted healthcare-associated CAUTI among inpatient care locations under surveillance for CAUTI during the data period, based on the national CAUTI baseline (denominator count excludes information about Level II Nursery or NICU locations)	Denominator Exclusions: The following are not considered indwelling catheters by NHSN definitions: 1. Suprapubic catheters 2. Condom catheters 3. "In and out" catheterizations 4. Nephrostomy tubes Note, that if a patient has either a nephrostomy tube or a suprapubic catheter and also has an indwelling urinary catheter, the indwelling urinary catheter will be included in the CAUTI surveillance.

MUC ID	Measure Title	Numerator	Denominator	Exclusions/Exceptions
MUC19-19	National Healthcare Safety Network (NHSN) Central Line Associated Bloodstream Infection Outcome Measure	Total number of observed healthcare-associated CLABSIs among patients in bedded inpatient care locations.	Total number of predicted healthcare-associated CLABSI among patients in bedded inpatient care locations, calculated using the facility's number of central line days and the following significant risk factors: -Acute Care Hospitals: CDC location, facility bed size, medical school affiliation, facility type, birthweight category (NICU locations only) -Critical Access Hospitals: no significant risk factors, calculation based intercept only model -Inpatient Rehabilitation Facilities: Proportion of admissions with stroke, proportion of admissions in other non-specific diagnostic categories -Long Term Acute Care Hospitals: CDC location type , facility bed size, average length of stay, proportion of admissions on a ventilator, proportion of admissions on hemodialysis	S.8. Denominator Exclusions: The following devices are excluded as central lines: -Non-lumened pacemaker wires and other non-lumened devices inserted into central blood vessels or the heart -Arterial catheters -Arteriovenous fistula -Arteriovenous graft -Extracorporeal membrane oxygenation (ECMO) -Hemodialysis reliable outflow (HERO) dialysis catheters -Intra-aortic balloon pump (IABP) devices -Atrial catheters (also known as transthoracic intra-cardiac catheters, those catheters inserted directly into the right or left atrium via the heart wall) -Peripheral IV or Midlines -Ventricular Assist Device (VAD)

MUC ID	Measure Title	Numerator	Denominator	Exclusions/Exceptions
MUC19-21	Transitions of Care between the Inpatient and Outpatient Settings including Notifications of Admissions and Discharges, Patient Engagement and Medication Reconciliation Post-Discharge	1. Notification of inpatient admission: Documentation of receipt of notification of inpatient admission on the day of admission or the following day and 2. Receipt of discharge information: Documentation of receipt of discharge information on the day of discharge or the following day and 3. Patient engagement after inpatient discharge: Documentation of patient engagement (e.g., office visits, visits to the home, telehealth) provided within 30 days after discharge and 4. Medication reconciliation post-discharge: Documentation of medication reconciliation on the date of discharge through 30 days after discharge (31 total days).	Acute or non-acute inpatient discharges for Medicare beneficiaries 18 years and older. The denominator is based on discharges, not members. Members may appear more than once. -For Administrative Specification, the denominator is the eligible population. -For Hybrid Specification, the denominator is a systematic sample drawn from the eligible population.	Members in Hospice

MUC ID	Measure Title	Numerator	Denominator	Exclusions/Exceptions
MUC19-22	Follow-Up After Psychiatric Hospitalization	The numerator includes discharges from a psychiatric facility that are followed by an outpatient visit for treatment of mental illness or SUD within 7 and 30 days. Outpatient visits are defined as outpatient visits, intensive outpatient encounters, or partial hospitalization. For additional information, see HSAG. Draft Methodology Report: Follow-Up After Psychiatric Hospitalization, Version 1.0. Prepared for CMS by Health Services Advisory Group, Inc., Contract HHSM-500-2013-13007I, Task Order HHSM-500-T0004, 37 pages (7 January 2019).	The denominator includes discharges paid under the inpatient psychiatric facility (IPF) prospective payment system (PPS) during the performance period for Medicare fee-for-service (FFS) patients with a principal diagnosis of mental illness or substance use disorder. For additional information, see HSAG. Draft Methodology Report: Follow-Up After Psychiatric Hospitalization, Version 1.0. Prepared for CMS by Health Services Advisory Group, Inc., Contract HHSM-500-2013-13007I, Task Order HHSM-500-T0004, 37 pages (7 January 2019).	Medicare files are used to identify all exclusions. The denominator excludes inpatient psychiatric facility (IPF) discharges for patients: -Admitted or transferred to acute and non-acute inpatient facilities within the 30-day follow-up period because admission or transfer to other institutions may prevent an outpatient follow-up visit from taking place. -Who were discharged against medical advice (AMA) because the IPF may have limited opportunity to complete treatment and prepare for discharge. -Who died during the 30-day follow-up period because patients who expire may not have the opportunity for an outpatient follow-up visit. -Who use hospice services or elect to use a hospice benefit any time during the measurement year, regardless of when the services began because patients in hospice may require different follow-up services.

MUC ID	Measure Title	Numerator	Denominator	Exclusions/Exceptions
MUC19-26	Hospital Harm—Severe Hyperglycemia	Number of hospital days with a severe hyperglycemic event, defined as: (1) a day with at least one blood glucose value >300 mg/dL; or (2) a day without any measurement of blood glucose level, and not preceded by two consecutive days where blood glucose levels were measured and all values were <200 mg/dL. Hospital days are measured in 24-hour periods starting from the time of arrival at the hospital (including Emergency Department).	The initial population is patients 18 years and older (age at the start of the hospital encounter) with a discharged inpatient hospital encounter during the measurement period, and at least one of the following: (1) a diagnosis of diabetes that starts before or during the encounter; or (2) at least one administration of insulin or any anti-diabetic medication during the encounter; or (3) at least one blood glucose value >200 mg/dL at any time during the encounter. The measure includes inpatient admissions for patients who were directly admitted, or who were initially seen in the emergency department or in observation status and subsequently became an inpatient. The denominator is the total number of eligible days across all encounters which match the initial population criteria. We do not count the first 24-hour period after admission to the hospital (including the Emergency Department) or the last time period before discharge, if it was less than 24 hours.	N/A

MUC ID	Measure Title	Numerator	Denominator	Exclusions/Exceptions
MUC19-26 (cont'd)	Hospital Harm—Severe Hyperglycemia (continued)		Eligible encounters that exceed 10 days are truncated to equal 10 days.	
MUC19-27	Hospital-Wide, 30-Day, All-Cause Unplanned Readmission (HWR) Rate for the Merit-Based Incentive Payment Program (MIPS) Eligible Clinician Groups	The outcome for this measure is unplanned all-cause 30-day readmission. Readmission is defined as a subsequent inpatient admission to any acute care facility which occurs within 30 days of the discharge date of an eligible index admission. Any readmission is eligible to be counted as an outcome, except those that are considered planned. To align with data years used, the planned readmission algorithm version 4.0 was used to classify readmissions as planned or unplanned.	Patients eligible for inclusion in the measure have an index admission hospitalization to which the readmission outcome is attributed and includes admissions for patients: Enrolled in Medicare Fee-For-Service (FFS) Part A for the 12 months prior to the date of admission; Aged 65 or over; Discharged alive from a non-federal short-term acute care hospital; and, Not transferred to another acute care facility.	1. Patients discharged against medical advice (AMA) are excluded. 2. Admissions for patients to a PPS-exempt cancer hospital are excluded. 3. Admissions primarily for medical treatment of cancer are excluded. 4. Admissions primarily for psychiatric disease are excluded. 5. Admissions for "rehabilitation care; fitting of prostheses and adjustment devices" (CCS 254) are excluded. 6. Admissions where patient cannot be attributed to a clinician group.

MUC ID	Measure Title	Numerator	Denominator	Exclusions/Exceptions
MUC19-28	Risk-standardized complication rate (RSCR) following elective primary total hip arthroplasty (THA) and/or total knee arthroplasty (TKA) for Merit-based Incentive Payment System (MIPS) Eligible Clinicians and Eligible Clinician Groups	The outcome for this measure is complication defined as acute myocardial infarction (AMI), pneumonia, and sepsis/septicemia/shock complications within seven days from the index admission date; death, surgical site bleeding, and pulmonary embolism within 30 days from the index admission; mechanical complications and periprosthetic joint infection/wound infection within 90 days of the index admission. The complication outcome is a dichotomous (yes/no) outcome. If a patient experiences one or more of these complications in the applicable time period, the complication outcome for that patient is counted in the measure as a "yes".	Patients eligible for inclusion in the measure are those age 65 years and older admitted to non-federal acute care hospitals. An index admission is the hospitalization during which an elective Total Hip Arthroplasty (THA) and/or Total Knee Arthroplasty (TKA) procedure was performed and to which the complication outcome is attributed. Eligible index admissions are identified using International Classification of Diseases-Tenth Revision-Procedure Coding System (ICD-10-PCS) procedure codes in Medicare inpatient claims data. For risk adjustment and outcome assessment, patients must have continuous enrollment in Medicare fee-for-service (FFS) for 12 months prior to the procedure and 90 days after it. The measure cohort is fully harmonized with the existing hospital-level measure.	This measure excludes from the denominator admissions for patients: 1. With a femur, hip or pelvic fracture coded in the principal discharge diagnosis field for the index admission. 2. Undergoing partial hip arthroplasty (PHA) procedures (with a concurrent Total Hip Arthroplasty or Total Knee Arthroplasty [THA/TKA]). 3. Undergoing revision procedures (with a concurrent THA/TKA). 4. Undergoing resurfacing procedures (with a concurrent THA/TKA). 5. With a mechanical complication coded in the principal discharge diagnosis field for the index admission. 6. With a malignant neoplasm of the pelvis, sacrum, coccyx, lower limbs, or bone/bone marrow or a disseminated malignant neoplasm coded in the principal discharge diagnosis field for the index admission. 7. With a procedure code for removal of implanted devices/prostheses. After excluding the above admissions to identify elective primary THA/TKA procedures, the measure also excludes admissions for patients: 8. Who were transferred to the index hospital. 9. Who leave the hospital against medical advice (AMA).

MUC ID	Measure Title	Numerator	Denominator	Exclusions/Exceptions
MUC19-28 (cont'd)	Risk-standardized complication rate (RSCR) following elective primary total hip arthroplasty (THA) and/or total knee arthroplasty (TKA) for Merit-based Incentive Payment System (MIPS) Eligible Clinicians and Eligible Clinician Groups (continued)			10. With more than two THA/TKA procedure codes during the index hospitalization. Note: The measure does not count complications that occur in the outpatient setting and do not require a readmission.

MUC ID	Measure Title	Numerator	Denominator	Exclusions/Exceptions
MUC19-33	Hospice Visits in the Last Days of Life	The numerator of this measure is the number of patient stays in the denominator in which the patient and/or caregiver received at least two days with visits from registered nurses or medical social workers in the final three days of life, as captured by hospice claims records. Registered nurse visits are identified by revenue code 055x (with the presence of HCPCS code G0299); Non-telephone visits are MSWs are identified by revenue code 056x (other than 0569; HCPCP code G0155)	The denominator for the measure includes all hospice patient stays enrolled in hospice except those meeting exclusion criteria.	Patient stays are excluded from the measure if the patient did not expire in hospice care or if the patient received any continuous home care, respite care, or general inpatient care in the final three days of life. The exclusion criteria are: 1. Patient did not expire in hospice care as indicated by reason for discharge (exclude if PTNT_DSCHRG_STUS_CD does not equal [40, 41, or 42]]); OR 2. Patient received any continuous home care, respite care or general inpatient care in the final three days of life (exclude if revenue codes = [0652, 0655, or 0656]). 3. Patient was enrolled in hospice at least three days.
MUC19-34	Home Health Within-Stay Potentially Preventable Hospitalization Measure	Number of patients in the denominator with at least one potentially preventable hospitalization or observation stay during the HH stay.	All Medicare Fee-for-Service patients in the HH setting that do not meet the exclusion criteria.	-Patients younger than 18 years old at the start of the HH stay. -HH stays beginning with a Low Utilization Payment Adjustment (LUPA) claim. -Patients receiving services from multiple HHAs during the HH stay. -Patients not continuously enrolled in Part A FFS Medicare for the 12 months prior to the HH stay. -The patient is missing information needed for risk adjustment.

MUC ID	Measure Title	Numerator	Denominator	Exclusions/Exceptions
MUC19-37	Clinician and Clinician Group Risk-standardized Hospital Admission Rates for Patients with Multiple Chronic Conditions; in the Medicare Shared Savings Program, the score would be at the ACO level.	The outcome for this measure is the number of acute, unplanned hospital admissions per 100 person-years at risk for admission during the measurement period. Time Period The outcome includes inpatient admissions to an acute care hospital during the measurement year. Excluded Admissions This measure does not include the following types of admissions in the outcome because they do not reflect the quality of care provided by ambulatory care clinicians who are managing the care of MCC patients: 1. Planned hospital admissions. 2. Admissions that occur directly from a skilled nursing facility (SNF) or acute rehabilitation facility. 3. Admissions that occur within a 10-day "buffer period" of time after discharge from a hospital, SNF, or acute rehabilitation facility.	Patients included in the measure (target patient population) The cohort is comprised of patients whose combinations of chronic conditions put them at high risk of admission and whose admission rates could be lowered through better care. This definition reflects NQF's "Multiple Chronic Conditions Measurement Framework," which defines patients with MCCs as people "having two or more concurrent chronic conditions that. . .act together to significantly increase the complexity of management, and affect functional roles and health outcomes, compromise life expectancy, or hinder self-management." [1]	The cohort excludes the following patients: 1) Patients without continuous enrollment in Medicare Part A or B during the measurement period. 2) Patients who were in hospice at any time during the year prior to the measurement year or at the start of the measurement year. 3) Patients who had no Evaluation & Management (E&M) visits to a MIPS-eligible clinician.

MUC ID	Measure Title	Numerator	Denominator	Exclusions/Exceptions
MUC19-37 (cont'd)	Clinician and Clinician Group Risk-standardized Hospital Admission Rates for Patients with Multiple Chronic Conditions; in the Medicare Shared Savings Program, the score would be at the ACO level. (continued)	4. Admissions that occur after the patient has entered hospice. 5. Admissions related to complications from procedures or surgeries. 6. Admissions related to accidents or injuries. 7. Admissions that occur prior to the first visit with the assigned clinician. To identify planned admissions, the measure adopted an algorithm CORE previously developed for CMS's hospital readmission measures, CMS's Planned Readmission Algorithm Version 4.0. [1,2] In brief, the algorithm uses the procedure codes and principal discharge diagnosis code on each hospital claim to identify planned admissions. A few specific, limited types of care are always considered planned (for example, major organ transplant, rehabilitation, and maintenance chemotherapy). Otherwise, a planned admission is defined as a non-acute admission for a scheduled procedure (for example, total hip replacement or cholecystectomy). Admissions for an acute illness are never considered planned.	The specific inclusion criteria are as follows. -Patient is alive at the start of the measurement period and has two or more of nine chronic disease groups in the year prior to the measurement period. Chronic conditions, except for diabetes, are defined using CMS's Chronic Conditions Data Warehouse (CCW). For diabetes, we used the diabetes cohort definition from the Accountable Care Organization (ACO) diabetes admission measure developed by CORE (v2018a ACO-36) as opposed to the definition used in CCW; CCW includes diagnoses for secondary and drug-induced diabetic conditions that are not the focus of the MIPS MCC admission measure. 1. Acute myocardial infarction (AMI), 2. Alzheimer's disease and related disorders or senile dementia, 3. Atrial fibrillation, 4. Chronic kidney disease (CKD),	

MUC ID	Measure Title	Numerator	Denominator	Exclusions/Exceptions
MUC19-37 (cont'd)	Clinician and Clinician Group Risk-standardized Hospital Admission Rates for Patients with Multiple Chronic Conditions; in the Medicare Shared Savings Program, the score would be at the ACO level. (continued)	To identify complications of procedures or surgeries, we use the Agency for Healthcare Research and Quality's (AHRQ's) Clinical Classifications Software (CCS), which clusters diagnoses into clinically meaningful categories using International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM) or International Classification of Diseases, Tenth Revision, and Clinical Modification (ICD-10-CM) codes. We exclude the following 23 CCS categories. 1. 145: Intestinal obstruction without hernia2. 237: Complication of device; implant or graft 3. 238: Complications of surgical procedures or medical care 4. 257: Other aftercare b) Accidents or injuries 5. 2601 E Codes: Cut/pierce 6. 2602 E Codes: Drowning/submersion 7. 2604 E Codes: Fire/burn 8. 2605 E Codes: Firearm 9. 2606 E Codes: Machinery 10. 2607 E Codes: Motor vehicle traffic (MVT)	5. Chronic obstructive pulmonary disease (COPD) or asthma, 6. Depression, 7. Diabetes, 8. Heart failure, and 9. Stroke or transient ischemic attack (TIA). -Patient is aged greater than or equal to 65 years at the start of the year prior to the measurement period. -Patient is a Medicare FFS beneficiary with continuous enrollment in Medicare Parts A and B during the year prior to the measurement period. Provider types included for measurement -Primary care providers (PCPs): CMS designates PCPs as physicians who practice internal medicine, family medicine, general medicine, or geriatric medicine, and non-physician providers, including nurse practitioners, certified clinical nurse specialists, and physician assistants.	

MUC ID	Measure Title	Numerator	Denominator	Exclusions/Exceptions
MUC19-37 (cont'd)	Clinician and Clinician Group Risk-standardized Hospital Admission Rates for Patients with Multiple Chronic Conditions; in the Medicare Shared Savings Program, the score would be at the ACO level. (continued)	11. 2608 E Codes: Pedal cyclist; not MVT 12. 2609 E Codes: Pedestrian; not MVT 13. 2610 E Codes: Transport; not MVT 14. 2611 E Codes: Natural/environment 15. 2612 E Codes: Overexertion 16. 2613 E Codes: Poisoning 17. 2614 E Codes: Struck by; against 18. 2615 E Codes: Suffocation 19. 2616 E Codes: Adverse effects of medical care 20. 2618 E Codes: Other specified and classifiable 21. 2619 E Codes: Other specified; NEC 22. 2620 E Codes: Unspecified 23. 2621 E Codes: Place of occurrence Person-time at risk Persons are considered at risk for hospital admission if they are alive, enrolled in Medicare FFS, and not in the hospital during the measurement period. In addition to time spent in the hospital, we also exclude from at-risk time: 1) time spent in a SNF or acute rehabilitation facility; 2) the time within 10 days following discharge from a hospital, SNF, or acute rehabilitation facility; and 3) time after entering hospice care.	-Relevant specialists: Specialists covered by the measure are limited to those who provide overall coordination of care for patients with MCCs and who manage the chronic diseases that put the MCC patients in the measure at risk of admission. These specialists were chosen with input from our Technical Expert Panel (TEP) and include cardiologists, pulmonologists, nephrologists, neurologists, endocrinologists, and hematologists/oncologists. Outcome attribution We begin by assigning each patient to the clinician most responsible for the patient's care, based on the pattern of outpatient visits with PCPs and relevant specialists.The patient can be assigned to a PCP, a relevant specialist, or can be left unassigned. -A patient who is eligible for attribution can be assigned to a relevant specialist only if the specialist has been identified as "dominant". A specialist is considered "dominant" if they have two or more visits with the patient, as well as at least	

MUC ID	Measure Title	Numerator	Denominator	Exclusions/Exceptions
MUC19-37 (cont'd)	Clinician and Clinician Group Risk-standardized Hospital Admission Rates for Patients with Multiple Chronic Conditions; in the Medicare Shared Savings Program, the score would be at the ACO level. (continued)	Citations 1. Yale New Haven Health Services Corporation - Center for Outcomes Research & Evaluation (YNHHSC/CORE). 2018 All-Cause Hospital Wide Measure Updates and Specifications Report - Hospital-Level 30-Day Risk-Standardized Readmission Measure - Version 7.0. Centers for Medicare & Medicaid Services; March 2018. 2. Horwitz L, Grady J, Cohen D, et al. Development and validation of an algorithm to identify planned readmissions from claims data. Journal of Hospital Medicine. October 2015;10(10):670-677.	two more visits than any primary care provider or other relevant specialist.-There are two scenarios where a patient can be assigned to a PCP. First, the patient must have seen at least one PCP. The patient will then be assigned to the PCP with the highest number of visits if there are no relevant specialists who are considered "dominant". Second, if the patient has had more than one visit with a relevant specialist, no "dominant" specialist has been identified, and has two or more visits with a PCP, they will be assigned to that PCP. -Finally, the patient will be unassigned if they only saw non-relevant specialists, if the patient has not seen a PCP and no "dominant" specialist can be identified, or if the patient has not had more than one visit with any individual PCP. Patients are then assigned at the Taxpayer Identification Number (TIN) level, which includes solo clinicians and groups of clinicians who have chosen to report their quality under a common TIN.	

MUC ID	Measure Title	Numerator	Denominator	Exclusions/Exceptions
MUC19-37 (cont'd)	Clinician and Clinician Group Risk-standardized Hospital Admission Rates for Patients with Multiple Chronic Conditions; in the Medicare Shared Savings Program, the score would be at the ACO level. (continued)		-Patients "follow" their clinician to the TIN designated by the clinician (i.e. they are assigned to their clinician's TIN). Patients unassigned at the individual clinician-level, therefore, continue to be unassigned at the TIN level. Citations 1. National Quality Forum. Multiple Chronic Conditions Measurement Framework. http://www.qualityforum.org/WorkArea/linkit.aspx?LinkIdentifier=id&ItemID=71227. Accessed February 20, 2019.	
MUC19-57	Use of Opioids at High Dosage in Persons without Cancer (OHD)	Number of member-years of Medicare Part D beneficiaries 18 years and older in the denominator with an average MME greater than or equal to 90 mg.	Number of member-years of enrolled Medicare Part D beneficiaries 18 years and older with at least 2 fills of a prescription opioid on unique dates of service (DOS) and at least 15 total opioid days supply over a period of 90 days or longer during the measurement period.	Medicare beneficiaries with a cancer diagnosis or that are enrolled in hospice at any time during the measurement period are excluded from the denominator.
MUC19-60	Use of Opioids from Multiple Providers in Persons without Cancer (OMP)	Number of member-years of Medicare Part D beneficiaries 18 years and older in the denominator who received opioids from 4 or more prescribers and 4 or more pharmacies within 180 days or less during the measurement period.	Number of member-years of enrolled Medicare Part D beneficiaries 18 years and older with at least 2 fills of a prescription opioid on unique dates of service (DOS) and at least 15 total opioid days supply over a period of 90 days or longer during the measurement period.	Medicare beneficiaries with a cancer diagnosis or that are enrolled in hospice at any time during the measurement period are excluded from the denominator.

MUC ID	Measure Title	Numerator	Denominator	Exclusions/Exceptions
MUC19-61	Use of Opioids from Multiple Providers and at a High Dosage in Persons without Cancer (OHDMP)	Number of member-years of Medicare Part D beneficiaries 18 years and older in the denominator with an average MME greater than or equal to 90 mg during the measurement period and who received opioid prescriptions from 4 or more prescribers and 4 or more pharmacies within 180 days or less during the measurement period.	Number of member-years of enrolled Medicare Part D beneficiaries 18 years and older with at least 2 fills of a prescription opioid on unique dates of service (DOS) and at least 15 total opioid days supply over a period of 90 days or longer during the measurement period.	Medicare beneficiaries with a cancer diagnosis or that are enrolled in hospice at any time during the measurement period are excluded from the denominator.

MUC ID	Measure Title	Numerator	Denominator	Exclusions/Exceptions
MUC19-64	Standardized Transfusion Ratio for Dialysis Facilities	Number of eligible observed red blood cell transfusion events: An event is defined as the transfer of one or more units of blood or blood products into a recipient's blood stream (code set is provided in the numerator details) among patients dialyzing at the facility during the inclusion episodes of the reporting period. Inclusion episodes are those that do not have any claims pertaining to the comorbidities identified for exclusion, in the one year look back period prior to each observation window.	Number of eligible red blood cell transfusion events (as defined in the numerator statement) that would be expected among patients at a facility during the reporting period, given the patient mix at the facility. Inclusion episodes are those that do not have any claims pertaining to the comorbidities identified for exclusion, in the one year look back period prior to each observation window.	All transfusions associated with transplant hospitalization are excluded. Patients are also excluded if they have a Medicare claim for: hemolytic and aplastic anemia, solid organ cancer (breast, prostate, lung, digestive tract and others), lymphoma, carcinoma in situ, coagulation disorders, multiple myeloma, myelodysplastic syndrome and myelofibrosis, leukemia, head and neck cancer, other cancers (connective tissue, skin, and others), metastatic cancer, and sickle cell anemia within one year of their patient time at risk. Since these comorbidities are associated with higher risk of transfusion and require different anemia management practices that the measure is not intended to address, every patient's risk window is modified to have at least 1 year free of claims that contain these exclusion eligible diagnoses.

MUC ID	Measure Title	Numerator	Denominator	Exclusions/Exceptions
MUC19-66	Hemodialysis Vascular Access: Practitioner Level Long-term Catheter Rate	The numerator is the number of adult patient-months in the denominator who were on maintenance hemodialysis using a catheter continuously for three months or longer as of the last hemodialysis session of the reporting month.	All patients at least 18 years old as of the first day of the reporting month who are determined to be maintenance hemodialysis patients (in-center and home HD) for the complete reporting month under the care of the same practitioner or group partner.	Exclusions that are implicit in the denominator definition include: -Pediatric patients (<18 years old) -Patients on Peritoneal Dialysis for any portion of the reporting month -Patient-months where there are more than one MCP provider listed for the month. In addition, patients with a catheter that have limited life expectancy, as defined by the following criteria are excluded: -Patients under hospice care in the current reporting month -Patients with metastatic cancer in the past 12 months -Patients with end stage liver disease in the past 12 months -Patients with coma or anoxic brain injury in the past 12 months

MUC ID	Measure Title	Numerator	Denominator	Exclusions/Exceptions
MUC19-110	Emergency Department Utilization (EDU)	Reporting: Number of Members in Eligible Population The number of members in the eligible population for each age and gender group and the overall total Reporting: Number of Observed Events The number of observed ED visits within each age and gender group and total. Reporting: Number of Expected Events The number of expected ED visits within each age and gender group and total.	The number of members in the eligible population for each age and gender combination.	Exclude encounters with any of the following: A principal diagnosis of mental health or chemical dependency (Mental and Behavioral Disorders Value Set); Psychiatry (Psychiatry Value Set); Electroconvulsive Therapy (Electroconvulsive Therapy Value Set); Members in hospice
MUC19-112	Acute Hospital Utilization (AHU)	Reporting: Number of Observed Events among Non-Outlier Members The number of observed discharges within each age and gender group and the overall total for each category (Surgery, Medicine, Total). Reporting: Number of Expected Events among Non-Outlier Members The number of expected discharges within each age and gender group and the overall total for each category (Surgery, Medicine, Total). Note: Observed rate and Expected rate should be calculated per 1,000 non-outlier members.	The number of non-outlier members in the eligible population for each age and gender group and the overall total. Reporting: Number of Outlier Members The number of outlier members for each age and gender group and the overall total. Reporting: Number of Non-Outlier Members The number of non-outlier members for each age and gender group and the overall total.	Exclude discharges with: A principal diagnosis of mental health or chemical dependency (Mental and Behavioral Disorders Value Set); A principal diagnosis of live-born infant (Deliveries Infant Record Value Set); A maternity-related principal diagnosis (Maternity Diagnosis Value Set); A maternity-related stay (Maternity Value Set); Members in hospice; Outlier members (Medicare members with four or more inpatient or observation stay discharges during the measurement year); Inpatient stays with a discharge for death.

MUC ID	Measure Title	Numerator	Denominator	Exclusions/Exceptions
MUC19-114	Maternal Morbidity	Not Applicable (this is a structural measure)	Not Applicable	None

APPENDIX B: MEASURE RATIONALES

Legend for Measure Rationales

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

Measure Title: 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 Rationales

MUC ID	Measure Title	Rationale
MUC19-14	Follow-up after Emergency Department (ED) Visit for People with Multiple High-Risk Chronic Conditions	The Medicare population includes a large number of individuals and older adults with high-risk multiple chronic conditions (MCC) who often receive care from multiple providers and settings and, as a result, are more likely to experience fragmented care and adverse healthcare outcomes, including an increased likelihood of ED visits (1,2). Medicare beneficiaries with MCCs require high levels of care coordination, particularly as the transition from the ED to the community. During these transitions, they often face communication lapses between ED and outpatient providers and inadequate patient, caregiver and provider understanding of diagnoses, medication and follow-up needs (3,4,5,6). This poor care coordination results in an increased risk for medication errors, repeat ED visits, hospitalization, nursing home admission and death (7,8). Medicare beneficiaries with MCCs not only experience poorer health outcomes, but also greater health care utilization (e.g., physician use, hospital and ED use, medication use) and costs (e.g., medication, out-of-pocket, total health care) (9). Medicare beneficiaries with MCCs are some of the heaviest users of high-cost, preventable services such as those offered by the ED (10,11). An estimated 75 percent of health care spending is on people with MCCs (12,13). REFERENCES 1. AHRQ. 2010. Multiple Chronic Conditions Chartbook. "2010 Medical Expenditure Panel Survey Data." https://www.ahrq.gov/sites/default/files/wysiwyg/professionals/prevention-chronic-care/decision/mcc/mccchartbook.pdf (Accessed January 11, 2017) 2. Agency for Healthcare Quality and Research (AHRQ). 2012. "Coordinating Care for Adults with Complex Care Needs in the Patient-Centered Medical Home: Challenges and Solutions." https://pcmh.ahrq.gov/sites/default/files/attachments/coordinating-care-for-adults-with-complex-care-needs-white-paper.pdf 3. Altman, R., J.S. Shapiro, T. Moore and G.J. Kuperman. 2012. "Notifications of hospital events to outpatient clinicians using health information exchange: a post-implementation survey." Journal of Innovation in Health Informatics 20(4). 4. Coleman, E.A., R.A. Berenson. 2004. "Lost in transition: challenges and opportunities for improving the quality of transitional care." Annals of Internal Medicine 141(7). 5. Dunnion, M.E., and B. Kelly. 2005. "From the emergency department to home." Journal of Clinical Nursing 14(6), 776-85. 6. Rowland, K., A.K. Maitra, D.A. Richardson, K. Hudson and K.W. Woodhouse. 1990. "The discharge of elderly patients from an accident and emergency department: functional changes and risk of readmission." Age Ageing 19(6), 415-18. 7. Hastings, S.N., E.Z. Oddone, G. Fillenbaum, R.J. Sloane and K.E. Schmader. 2008. "Frequency and predictors of adverse health outcomes in older Medicare beneficiaries discharged from the emergency department." Medical Care 46(8), 771-7.

MUC ID	Measure Title	Rationale
MUC19-14 (cont'd)	Follow-up after Emergency Department (ED) Visit for People with Multiple High-Risk Chronic Conditions (continued)	8. Niedzwiecki, M., K. Baicker, M. Wilson, D.M. Cutler and Z. Obermeyer. 2016. "Short-term outcomes for Medicare beneficiaries after low-acuity visits to emergency departments and clinics." Medical Care 54(5), 498-503. 9. Lehnert, T., D. Heider, H. Leicht, S. Heinrich, S. Corrieri, M. Luppa, S. Riedel-Heller and H.H. Konig. 2011. "Review: health care utilization and costs of elderly persons with multiple chronic conditions." Medical Care Research & Review 68(4), 387-420. 10. CMS. 2012. Chronic Conditions among Medicare Beneficiaries, Chartbook, 2012 Edition. Baltimore, MD. https://www.cms.gov/research-statistics-data-and-systems/statistics-trends-and-reports/chronic-conditions/downloads/2012chartbook.pdf (Accessed July 19, 2016) 11. Lochner, K.A., and C.S. Cox. 2013. Prevalence of multiple chronic conditions among Medicare beneficiaries, United States, 2010. https://www.cdc.gov/pcd/issues/2013/12_0137.htm (Accessed January 11, 2017) 12. CDC. 2009. The power of prevention: Chronic disease - the public health challenge of the 21st century. http://www.cdc.gov/chronicdisease/pdf/2009-power-of-prevention.pdf (Accessed January 24, 2017) 13. Care Innovations. 2013. "Cost Control for Chronic Conditions: An Imperative for MA Plans." The Business Case for Remote Care Management (RCM). https://www.rmhpcommunity.org/sites/default/files/resource/The%20Business%20Case%20for%20RCM.pdf (Accessed January 24, 2017).
MUC19-18	National Healthcare Safety Network (NHSN) Catheter-Associated Urinary Tract Infection Outcome Measure	Evidence that this measure promotes CAUTI prevention activities that will lead to improved patient outcomes including reduction of avoidable medical costs, and patient morbidity and mortality through reduced need for antimicrobials and reduced length of stay.
MUC19-19	National Healthcare Safety Network (NHSN) Central Line Associated Bloodstream Infection Outcome Measure	A substantial body of peer-reviewed studies and reviews document that CLABSI can be minimized through proper management of the central line. Efforts to improve central line insertion and maintenance practices, with early discontinuance of lines are recommended. These efforts result in decreased morbidity and mortality and reduced healthcare costs. Use of this measure to track CLABSIs through a nationalized standard for HAI monitoring, leads to improved patient outcomes and provides a mechanism for identifying improvements and evaluating prevention efforts.

MUC ID	Measure Title	Rationale
MUC19-21	Transitions of Care between the Inpatient and Outpatient Settings including Notifications of Admissions and Discharges, Patient Engagement and Medication Reconciliation Post-Discharge	The Medicare population includes older adults and individuals with complex health needs who often receive care from multiple providers and settings, and thus experience highly fragmented care and adverse health care utilization patterns and outcomes. This population is at particular risk during transitions of care because of higher comorbidities, declining cognitive function and increased medication use (1). Transitions from the inpatient setting to home often results in poor care coordination, including communication lapses between inpatient and outpatient providers, intentional and unintentional medication changes, incomplete diagnostic work-ups and inadequate beneficiary, caregiver and provider understanding of diagnoses, medication and follow-up needs (2).

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Poor hospital transitions are not only associated with poor health outcomes, but also increased health care utilization and cost, including duplicate medical services, medication errors and increased emergency department visits and readmissions (3). In 2010, Medicare beneficiaries 65 years and older accounted for 11.9 million (approximately 34 percent) of all hospital discharges in the United States (4). One study estimated that inadequate care coordination and poor care transitions resulted in $25 billion-$45 billion in unnecessary spending in 2011 (5). Other studies have found that care coordination programs that do not incorporate timely transitional care elements are unlikely to result in reduced hospitalizations and associated Medicare spending (6), and current payment structures do not provide much incentive for the collaboration necessary to implement effective care coordination post-discharge (7).

Hospital transitions require clear communication between inpatient and outpatient providers to ensure optimal health outcomes during patient handoffs (8, 9, 10, 11, 12). Effective care coordination efforts must include notifying patients' primary care practitioners (PCP) of admission, PCP receipt of meaningful and timely discharge information (13), patient engagement through follow-up provided post-discharge and medication reconciliation post-discharge.

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| MUC19-21 (cont'd) | Transitions of Care between the Inpatient and Outpatient Settings including Notifications of Admissions and Discharges, Patient Engagement and Medication Reconciliation Post-Discharge (continued) | 6. Peikes, D., A. Chen, J. Schore and R. Brown. 2009. "Effects of care coordination on hospitalization, quality of care, and health care expenditures among Medicare beneficiaries." Journal of the American Medical Association 301(3).7. Coleman, E.A. and R.A. Berenson. 2004. "Lost in transition: Challenges and opportunities for improving the quality of transitional care." Annals of Internal Medicine 141(7), 533-6.
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MUC ID	Measure Title	Rationale
MUC19-21 (cont'd)	Transitions of Care between the Inpatient and Outpatient Settings including Notifications of Admissions and Discharges, Patient Engagement and Medication Reconciliation Post-Discharge (continued)	20. Ventura, T., D. Brown, T. Archibald, A. Goroski and J. Brock. 2010. "Improving care transitions and reducing hospital readmissions: Establishing the evidence for community-based implementation strategies through the care transitions theme." The Remington Report. http://www.communitysolutions.com/assets/2012_Institute_Presentations/caretransitioninterventions051812.pdf (Accessed July 26, 2016) 21. Bell, C.M., J.L. Schnipper, A.D. Auerbach, P.J. Kaboli, T.B. Wetterneck, D.V. Gonzales, V.M. Arora, J.X. Zhang and D.O. Meltzer. 2009. "Association of communication between hospital-based physicians and primary care providers with patient outcomes." Journal of General Internal Medicine 24(3). Receipt of discharge information 22. Alpers, A. 2001. "Key legal principles for hospitalists." American Journal of Medicine 111(9B), 5S-9S. 23. Goldman, L., S.Z. Pantilat and W.F. Whitcomb. 2001. "Passing the clinical baton: 6 principles to guide the hospitalist." American Journal of Medicine 111(9B), 36S-39S. 24. Jack, B.W., K.C. Veerappa, D. Anthony, J.L. Greenwald, G.M. Sanchez, A.E. Johnson, S.R. Forsythe, J.K., O'Donnell, M.K. Paasche-Orlow, C. Manasseh, S. Martin and L.A. Culpepper. 2009. "Reengineered hospital discharge program to decrease rehospitalization: A randomized trial." Annals of Internal Medicine 150(3). 25. RAND. 2014. "Evaluation and Development of Outcome Measures for Quality Assessment in Medicare Advantage and Special Needs Plans." Validation Study Final Report. Santa Monica, CA: RAND. Patient engagement after inpatient discharge 26. Arbaje, A.I., D.L. Kansagara, A.H. Salanitro, H.L. Englander, S. Kripalani, S.F. Jencks and L.A. Lindquist. 2014. "Regardless of age: Incorporating principles from geriatric medicine to improve care transitions for patients with complex needs." Journal of General Internal Medicine 29(6), 932-9. 27. Berkowitz, R.E., Z. Fang, B.K. Helfand, R.N. Jones, R. Schreiber and M.K. Paasche-Orlow. 2013. "Project ReEngineered Discharge (RED) lowers hospital readmissions of patients discharged from a skilled nursing facility." Journal of the American Medical Directors Association 14(10) 736-40. 28. Bisognano, M., and A. Boutwell. 2009. "Improving transitions to reduce readmissions." Frontiers of Healthcare Services Management. https://www.researchgate.net/publication/24344717_Improving_Transitions_to_Reduce_Readmissions (Accessed July 27, 2016) 29. Braun, E., A. Baidusi, G. Alroy and Z.S. Azzam. 2009. "Telephone follow-up improves patients satisfaction following hospital discharge." European Journal of Internal Medicine 20(2), 221-5. 30. Coleman, E.A., C. Parry, S. Chalmers, et al. 2006. "The Care Transitions Intervention: Results of a randomized controlled trial." Archives of Internal Medicine 166(17), 1822-8. 31. Forster, A.J., H.J. Murff, J.F. Peterson, T.K. Gandhi and D.W. Bates. 2003. "The incidence and severity of adverse events affecting patients after discharge from the hospital." Annals of Internal Medicine 138(3). 32. Hansen, L.O., J.L. Greenwald, T. Budnitz, E. Howell, L. Halasyamani, G. Maynard, ... and M.V. Williams. 2013. "Project BOOST: Effectiveness of a multihospital effort to reduce rehospitalization." Journal of Hospital Medicine 8(8), 421-7.

MUC ID	Measure Title	Rationale
MUC19-21 (cont'd)	Transitions of Care between the Inpatient and Outpatient Settings including Notifications of Admissions and Discharges, Patient Engagement and Medication Reconciliation Post-Discharge (continued)	33. Harrison, P.L., P.A. Hara, J.E. Pope, M.C. Young and E.Y. Rula. 2011. "The impact of postdischarge telephonic follow-up on hospital readmissions." Population Health Management 14(1), 27-32. 34. Hernandez, A.F., M.A. Greiner, G.C. Fonarow, B.G. Hammill, P.A. Heidenreich, C.W. Yancy, E.D. Peterson and L.H. Curtis. 2010. "Relationship between early physician follow-up and 30-day readmission among Medicare beneficiaries hospitalized for heart failure." Journal of the American Medical Association 303(17), 1716-22. 35. Lin, C.Y., A.E. Barnato and H.B. Degenholtz. 2011. "Physician follow-up visits after acute care hospitalization for elderly Medicare beneficiaries discharged to noninstitutional settings." Journal of The American Geriatrics Society 59(10), 1947-54. 36. Misky, G.J., H.L. Wald and E.A. Coleman. 2011. "Post-hospitalization transitions: Examining the effects of timing of primary care provider follow-up." Journal of Hospital Medicine 5(7), 392-7. 37. Muus, K.J., A. Knudson, M.G. Klug, J. Gokun, M. Sarrazin and P. Kaboli. 2010. "Effect of post-discharge follow-up care on re-admissions among US veterans with congestive heart failure: A rural-urban comparison." Rural Remote Health 10(2), 1447. 38. Naylor, M. D., Brooten, D. A., Campbell, R., et al. 2003. "Comprehensive discharge planning and home follow-up of hospitalized elders." Journal of the American Medical Association 281, 613-20. 39. Naylor, M.D. 2003. Transitional care of older adults. Annual Review of Nursing Research 20, 127-47. 40. The Bridge Model. 2016. The Bridge Model. http://www.transitionalcare.org/the-bridge-model/ (Accessed August 22, 2016) 41. Balaban, R.B., J.S. Weissman, P.A. Samuel and S. Woolhandler. 2008. "Redefining and redesigning hospital discharge to enhance patient care: A randomized controlled study." Journal of General Internal Medicine 23(8), 1228-33. Medication reconciliation post-discharge 42. Patterns of medications use in the United States 2006: a report from the Slone Survey. (Accessed July 17, 2014) 43. Vogeli, C., A.E. Shields, T.A. Lee, et al. 2007. "Multiple Chronic Conditions: Prevalence, Health Consequences, and Implications for Quality, Care Management, and Costs." J Gen Intern Med 22(suppl 3): 391-5.

MUC ID	Measure Title	Rationale
MUC19-22	Follow-Up After Psychiatric Hospitalization	Studies have found that readmission rates for those with psychiatric diagnoses are lower if patients receive follow-up visits within 30 days of discharge. A 2017 study found that receipt of a follow-up visit within 30 days of hospital discharge lowered the readmission risk during days 31 to 120 for patients with schizophrenia and for patients with bipolar disorder. Similarly, a 2018 study observed that among patients discharged with schizophrenia, psychiatric readmission rates on days 31-180 were lower if the patient saw a primary care physician or psychiatrist within 30 days of discharge. Inpatient psychiatric facilities can influence rates of follow-up care for patients hospitalized for mental illness or SUD. Interventions that have been shown effective in the literature include following up with letters or telephone calls, discussing barriers to attending the first outpatient post-discharge appointment with the patient, and serving as a contact for questions or concerns between discharge and the first outpatient appointment. Three studies reported that with certain interventions facilities achieved follow-up rates of 88 percent or more, compared to the national 30-day follow-up rate of approximately 54 percent observed in the current Inpatient Psychiatric Facility Quality Reporting program's Follow-Up After Hospitalization for Mental Illness measure for Medicare FFS discharges between July 1, 2015 and June 30, 2016.

MUC ID	Measure Title	Rationale
MUC19-26	Hospital Harm— Severe Hyperglycemia	Severe hyperglycemia - an extremely elevated blood glucose level - is significantly associated with a range of harms, including increased in-hospital mortality, infection rates, and hospital length of stay.5-9 Moreover, the rate of severe hyperglycemia varies across hospitals, suggesting opportunities for improvement in inpatient glycemic management.10 The rate of inpatient hyperglycemia can be considered a marker for quality of hospital care, since inpatient hyperglycemia is largely avoidable with proper glycemic management. The use of evidence-based standardized protocols and insulin management protocols have been shown to improve glycemic control and safety.11-12 References: 5. Falciglia M, Freyberg RW, Almenoff PL, D'Alessio DA, Render ML. Hyperglycemia-Related Mortality in Critically Ill Patients Varies with Admission Diagnosis. Crit Care Med. 2009;37(12):3001-3009. 6. King JT, Jr., Goulet JL, Perkal MF, Rosenthal RA. Glycemic Control and Infections in Patients with Diabetes Undergoing Noncardiac Surgery. Ann Surg. 2011;253(1):158-165. 7. Pasquel FJ, Spiegelman R, McCauley M, et al. Hyperglycemia During Total Parenteral Nutrition: An Important Marker of Poor Outcome and Mortality in Hospitalized Patients. Diabetes Care. 2010;33(4):739-741. 8. Rady MY, Johnson DJ, Patel BM, Larson JS, Helmers RA. Influence of Individual Characteristics on Outcome of Glycemic Control in Intensive Care Unit Patients With or Without Diabetes Mellitus. Mayo Clin Proc. 2005;80(12):1558-1567. 9. Umpierrez GE, Isaacs SD, Bazargan N, You X, Thaler LM, Kitabchi AE. Hyperglycemia: An Independent Marker of In-Hospital Mortality in Patients with Undiagnosed Diabetes. J Clin Endocrinol Metab. 2002;87(3):978-982. 10. Swanson CM, Potter DJ, Kongable GL, Cook CB. Update on Inpatient Glycemic Control in Hospitals in the United States. Endocr Pract. 2011;17(6):853-861. 11. Donihi AC, DiNardo MM, DeVita MA, Korytkowski MT. Use of a Standardized Protocol to Decrease Medication Errors and Adverse Events Related to Sliding Scale Insulin. Qual Saf Health Care. 2006;15(2):89-91. 12. Maynard G, Kulasa K, Ramos P, et al. Impact of a Hypoglycemia Reduction Bundle and a Systems Approach to Inpatient Glycemic Management. Endocr Pract. 2015;21(4):355-367.

MUC ID	Measure Title	Rationale
MUC19-27	Hospital-Wide, 30-Day, All-Cause Unplanned Readmission (HWR) Rate for the Merit-Based Incentive Payment Program (MIPS) Eligible Clinician Groups	Hospital 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. Readmissions are also a major source of patient and family stress and may contribute substantially to loss of functional ability, particularly in older patients. Some readmissions are unavoidable and result from inevitable progression of disease or worsening of chronic conditions. However, readmissions may also result from poor quality of care or inadequate transitional or post-discharge care. Transitional care includes effective discharge planning, transfer of information at the time of discharge, patient assessment and education, and coordination of care and monitoring in the post-discharge period. Numerous studies have found an association between quality of inpatient or transitional care and early (typically 30-day) readmission rates for a wide range of conditions.[1-8] Randomized controlled trials have shown that improvement in the following areas can directly reduce readmission rates: quality of care during the initial admission; improvement in communication with patients, their caregivers, and their clinicians; patient education; pre-discharge assessment; and coordination of care after discharge.[9-17] Successful randomized trials have reduced 30-day readmission rates by 20-40%.[18] Widespread application of these clinical trial interventions to general practice has also been encouraging. Since 2008, Medicare Quality Improvement Organizations have been funded to focus on care transitions by applying lessons learned from clinical trials. Several have been notably successful in reducing readmissions within 30 days.[19] Many of these study interventions involved enhanced clinician involvement and indicate a key role for clinicians in reducing readmissions. Further, analyses CORE performed pre-development of this measure support variation in clinician- and clinician group-level performance on 30-day readmissions for patients with acute myocardial infraction. Despite these demonstrated successful interventions, the overall national readmission rate remains high, with a 30-day readmission following over 15% of discharges. Readmission rates also vary widely across institutions.[20-22] Moreover, we show below that RARRs vary from 7%-25% for clinician groups for 2015-16. Both the high baseline rate and the variability across eligible clinician groups speak to the need for a quality measure to prompt greater care improvement. Given that studies have shown readmissions within 30 days to be related to quality of care, that interventions, including those utilizing clinicians, have been able to reduce 30-day readmission rates for a variety of specific conditions, and that high and variable clinician-level readmission rates indicate opportunity for improvement, we sought to develop eligible clinician group-level measure of all-cause, all-condition 30-day unplanned readmission. 1. Frankl SE, Breeling JL, L. G. Preventability of emergent hospital readmission American Journal of Medicine. Jun 1991;90(6):667-674. 2. Corrigan J, Martin J. Identification of factors associated with hospital readmission and development of a predictive model. Health Services Research. Apr 1992;27(1):81-101.

MUC ID	Measure Title	Rationale
MUC19-27 (cont'd)	Hospital-Wide, 30-Day, All-Cause Unplanned Readmission (HWR) Rate for the Merit-Based Incentive Payment Program (MIPS) Eligible Clinician Groups (continued)	3. Oddone E, 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. Oct 1996;11(10):597-607. 4. Ashton C, Del Junco DJ, Souchek J, Wray N, Mansyur C. 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. 5. 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. 6. Courtney EDJ, Ankrett S, McCollum PT. 28-Day emergency surgical re-admission rates as a clinical indicator of performance. Annals of the Royal College of Surgeons of England. Mar 2003;85(2):75-78. 7. 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. 8. Hernandez AF, Greiner MA, Fonarow GC, et al. Relationship between early physician follow-up and 30-day readmission among Medicare beneficiaries hospitalized for heart failure. JAMA. May 5 2010;303(17):1716-1722. 9. Naylor M, Brooten D, Jones R, Lavizzo-Mourey R, Mezey M, Pauly M. Comprehensive discharge planning for the hospitalized elderly. A randomized clinical trial. Ann Intern Med. Jun 15 1994;120(12):999-1006. 10. Naylor MD, Brooten D, Campbell R, et al. Comprehensive discharge planning and home follow-up of hospitalized elders: a randomized clinical trial. JAMA. 1999;281(7):613-620. 11.Krumholz HM, Amatruda J, Smith GL, et al. Randomized trial of an education and support intervention to prevent readmission of patients with heart failure. Journal of the American College of Cardiology. . Jan 2 2002;39(1):83-89. 12. van Walraven C, Seth R, Austin PC, Laupacis A. Effect of discharge summary availability during post-discharge visits on hospital readmission. Journal of General Internal Medicine. Mar 2002;;17(3):186-192. 13. Conley RR, Kelly DL, Love RC, McMahon RP. Rehospitalization risk with second-generation and depot antipsychotics. . Annals of Clinical Psychiatry. Mar 2003;15(1):23-31. 14. Coleman EA, Smith JD, Frank JC, Min S-J, Parry C, Kramer AM. Preparing patients and caregivers to participate in care delivered across settings: the Care Transitions Intervention. Journal of the American Geriatrics Society. Nov 2004;52(11):1817-1825. 15. Phillips CO, Wright SM, Kern DE, Singa RM, Shepperd S, Rubin HR. Comprehensive discharge planning with postdischarge support for older patients with congestive heart failure: a meta-analysis. JAMA. Mar 17 2004;291(11):1358-1367. 16. Jovicic A, Holroyd-Leduc JM, Straus SE. Effects of self-management intervention on health outcomes of patients with heart failure: a systematic review of randomized controlled trials. BMC Cardiovasc Disord. 2006;6:43.

MUC ID	Measure Title	Rationale
MUC19-27 (cont'd)	Hospital-Wide, 30-Day, All-Cause Unplanned Readmission (HWR) Rate for the Merit-Based Incentive Payment Program (MIPS) Eligible Clinician Groups (continued)	17. Garasen H, Windspoll R, Johnsen R. Intermediate care at a community hospital as an alternative to prolonged general hospital care for elderly patients: a randomised controlled trial. BMC Public Health. 2007;7:69. 18. Leppin AL, Gionfriddo MR, Kessler M, et al. Preventing 30-day hospital readmissions: a systematic review and meta-analysis of randomized trials. JAMA Intern Med. 2014;174(7):1095-1107. 19. CFMC. CFfMC. Care Transitions QIOSC. 2010. 20. Keenan PS, Normand SL, Lin Z, et al. An administrative claims measure suitable for profiling hospital performance on the basis of 30-day all-cause readmission rates among patients with heart failure. Circ Cardiovasc Qual Outcomes. 2008;1(1):29-37. 21. Krumholz HM, Lin Z, Drye EE, et al. An administrative claims measure suitable for profiling hospital performance based on 30-day all-cause readmission rates among patients with acute myocardial infarction. Circulation. Mar 1 2011;4(2):243-252. 22. Lindenauer PK, Normand SL, Drye EE, et al. Development, validation, and results of a measure of 30-day readmission following hospitalization for pneumonia. J Hosp Med. 2011;6(3):142-150.
MUC19-28	Risk-standardized complication rate (RSCR) following elective primary total hip arthroplasty (THA) and/or total knee arthroplasty (TKA) for Merit-based Incentive Payment System (MIPS) Eligible Clinicians and Eligible Clinician Groups	There is evidence that over time, hospital Total Hip Arthroplasty and/or Total Knee Arthroplasty (THA/TKA) volumes have increased, while hospital THA/TKA risk-standardized complication rates (RSCRs) have decreased. This evidence supports the fact that improving complication rates is possible and feasible. There is evidence that specific practices can reduce the chances of complications [1-2]. By attributing the outcome to clinicians who care for inpatient THA/TKA patients, the Merit Based Incentive Payment System (MIPS) THA/TKA complication measure will incentivize those clinicians to promote practices known to reduce post-operative complications and identify new interventions at the clinician level that may also do so. Studies have demonstrated that hospital-based interventions targeting critical aspects of care can reduce the risk of complications such as strategies to reduce blood loss, reduce length of stay, and routine wound care [3-4]. References: 1. Kocher MS, Frank JS, Nasreddine AY, et al. Intra-abdominal fluid extravasation during hip arthroscopy: a survey of the MAHORN group. Arthroscopy : the journal of arthroscopic & related surgery : official publication of the Arthroscopy Association of North America and the International Arthroscopy Association. 2012;28(11):1654-1660.e1652. 2. Ponzio DY, Poultsides LA, Salvatore A, Lee YY, Memtsoudis SG, Alexiades MM. In-Hospital Morbidity and Postoperative Revisions After Direct Anterior vs Posterior Total Hip Arthroplasty. J Arthroplasty. 2017. 3. Chen AF, Heyl AE, Xu PZ, Rao N, Klatt BA. Preoperative Decolonization Effective at Reducing Staphylococcal Colonization in Total Joint Arthroplasty Patients. The Journal of Arthroplasty. 2013;28(8, Supplement):18-20. 4. Rao N, Cannella BA, Crossett LS, Yates AJ, McGough RL, Hamilton CW. Preoperative Screening/Decolonization for Staphylococcus aureus to Prevent Orthopedic Surgical Site Infection: Prospective Cohort Study With 2-Year Follow-Up. The Journal of Arthroplasty. 2011;26(8):1501-1507.

MUC ID	Measure Title	Rationale
MUC19-33	Hospice Visits in the Last Days of Life	There is evidence available from clinical organizations and panels, as well as from individual studies, supporting the measure's basis that clinician visits to patients at the end of life are associated with improved outcomes for both the patients and their caregivers. The last week of life is typically the period in the terminal illness trajectory with the highest symptom burden. Particularly during the last few days before death, patients experience many physical and emotional symptoms, necessitating close care and attention from the integrated hospice team and drawing increasingly on hospice team resources (de la Cruz 2014, Dellon 2010, Kehl 2013). Highly specific physical signs associated with death were identified within 3 days of death (Hui et al., 2014). Hospice responsiveness during times of patient and caregiver need is an important aspect of care for hospice patients (Ellington 2016). Although Medicare-certified hospices do not have any mandated minimum number of required visits for patients in routine home care (RHC), the most common level of hospice care, at the end of life, hospices should be equipped to meet the higher symptom and caregiving burdens of patients and their caregivers during this critical period (Teno 2016). Clinician visits to patients at the end of life are associated with decreased risk of hospitalization and emergency room visits in the last 2 weeks of the patients' life, decreased likelihood of a hospital-related disenrollment, as well as decreased odds of dying in the hospital (Sewo 2010, Phongtankuel 2018, Almaawiy 2014). In addition, clinician visits to patients at the end of life is also associated with decreased distress for caregivers and higher satisfaction with home care (Pivodic 2016). Visits by staff who can assess symptoms and make changes to the plans of care as well as work with the patient and the primary caregiver to provide the appropriate palliation and emotional support (nurses, social workers, and physicians) are important to the quality of care hospices deliver, as noted by the NQF's preferred practices on the recognition and management of the actively dying patient (Teno 2016). During the development of the Family Evaluation of Hospice Care survey, families voiced the importance of visits by these staff in the last days of life (Teno 2016).

MUC ID	Measure Title	Rationale
MUC19-33 (cont'd)	Hospice Visits in the Last Days of Life (continued)	Citations: de la Cruz, M., et al. (2015). Delirium, agitation, and symptom distress within the final seven days of life among cancer patients receiving hospice care. Palliative & Supportive Care, 13(2): 211-216. doi: 10.1017/S1478951513001144 Dellon, E. P., et al. (2010). Family caregiver perspectives on symptoms and treatments for patients dying from complications of cystic fibrosis. Journal of Pain & Symptom Management, 40(6): 829-837. doi: 10.1016/j.jpainsymman.2010.03.024 Kehl, K. A., et al. (2013). 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 Care, 30(6): 601-616. doi: 10.1177/1049909112468222 Hui D et al. (2014). Clinical Signs of Impending Death in Cancer Patients. The Oncologist. 19(6):681-687. doi:10.1634/theoncologist.2013-0457. Ellington, L., et al. (2016). Interdisciplinary Team Care and Hospice Team Provider Visit Patterns during the Last Week of Life. Journal of Palliative Medicine, 19(5), 482-487. doi: 10.1089/jpm.2015.0198 Teno, J. M., et al. (2016). Examining Variation in Hospice Visits by Professional Staff in the Last 2 Days of Life. JAMA Internal Medicine, 176(3): 364-370. doi: 10.1001/jamainternmed.2015.7479 Seow, H., Barbera, L., Howell, D., & Dy, S. M. (2010). Using more end-of-life homecare services is associated with using fewer acute care services: A population-based cohort study. Medical Care, 48(2): 118-124. doi: 10.1097/MLR.0b013e3181c162ef Phongtankuel, V., et al. (2018). Association Between Nursing Visits and Hospital-Related Disenrollment in the Home Hospice Population. American Journal of Hospice & Palliative Medicine, 35(2): 316-323. doi: 10.1177/1049909117697933 Almaawiy, U., et al. (2014). Are family physician visits and continuity of care associated with acute care use at end-of-life? A population-based cohort study of homecare cancer patients. Palliative Medicine, 28(2), 176-183. doi: 10.1177/0269216313493125 Pivodic, L., Harding, R., Calanzani, N., McCrone, P., Hall, S., Deliens, L., & Gomes, B. (2015). Home care by general practitioners for cancer patients in the last 3 months of life: An epidemiological study of quality and associated factors. Palliative Medicine, 30(1), 64-74. doi:10.1177/0269216315589213 Pivodic, L., Harding, R., Calanzani, N., McCrone, P., Hall, S., Deliens, L., & Gomes, B. (2015). Home care by general practitioners for cancer patients in the last 3 months of life: An epidemiological study of quality and associated factors. Palliative Medicine, 30(1), 64-74. doi:10.1177/0269216315589213

MUC ID	Measure Title	Rationale
MUC19-34	Home Health Within-Stay Potentially Preventable Hospitalization Measure	Factors associated with hospitalizations from HH including functional disability, primary diagnoses of heart disease, and primary diagnosis of skin wounds (Lohman et al, 2017). Some other factors associated with hospitalization include time since most recent hospitalization (Hua et al, 2015) and chronic conditions such as chronic obstructive pulmonary disease and congestive heart failure (Dye et al, 2018). These factors, including how HHAs address chronic conditions present before the HH stay, can determine whether patients can successfully avoid hospitalizations (Lohman et al, 2017). Understanding these factors can help HHAs design strategies to address avoidable hospitalizations. References: 1. Lohman MC, Cotton, BP, Zagaria, AB, Bao, Y, Greenberg, RL, Fortuna, KL, Bruce, ML Hospitalization Risk and Potentially Inappropriate Medications among Medicare Home Health Nursing Patients,(2017) J Gen Intern Med. 32(12):1301-1308. 2. Hua M, Gong, MN, Brady J, Wunsch, H, Early and late unplanned rehospitalizations for survivors of critical illness(2015) Crit Care Med.;43(2):430-438 3. Dye C, Willoughby D, Aybar-Damali B, Grady C, Oran R, Knudson A, Improving Chronic Disease Self-Management by Older Home Health Patients through Community Health Coaching (2018) Int J Environ Res Public Health. 15(4): 660

MUC ID	Measure Title	Rationale
MUC19-37	Clinician and Clinician Group Risk-standardized Hospital Admission Rates for Patients with Multiple Chronic Conditions; in the Medicare Shared Savings Program, the score would be at the ACO level.	Hospital admission rates are an effective marker of ambulatory care quality. Hospital admissions from the outpatient setting reflect a deterioration in patients' clinical status and as such reflect an outcome that is meaningful to both patients and providers. Patients receiving optimal, coordinated high-quality care should use fewer inpatient services than patients receiving fragmented, low-quality care. Thus, high population rates of hospitalization may, at least to some extent, signal poor quality of care or inefficiency in health system performance. Patients with MCCs are at high risk for hospital admission, often for potentially preventable causes, such as exacerbation of pulmonary disease. [1] Evidence from several Medicare demonstration projects suggests that care coordination results in decreased hospital admission rates among high-risk patients. [2] In addition, studies have shown that the types of ambulatory care clinicians this measure targets (for example, primary care providers and specialists caring for patients with MCCs) can influence admission rates through primary care clinician supply, continuity of care, and patient-centered medical home interventions such as team-based and patient-oriented care. [3-5] Given evidence that ambulatory care clinicians can influence hospital admission rates through optimal care and coordination, this measure will incentivize quality improvement efforts leading to improved patient outcomes. Citations: 1. Abernathy K, Zhang J, Mauldin P, et al. Acute Care Utilization in Patients With Concurrent Mental Health and Complex Chronic Medical Conditions. Journal of primary care & community health. 2016;7(4):226-233. 2. Brown RS, Peikes D, Peterson G, Schore J, Razafindrakoto CM. Six features of Medicare coordinated care demonstration programs that cut hospital admissions of high-risk patients. Health Aff (Millwood). 2012;31(6):1156-1166. 3. van Loenen T, van den Berg MJ, Westert GP, Faber MJ. Organizational aspects of primary care related to avoidable hospitalization: a systematic review. Fam Pract. 2014;31(5):502-516. 4. Dale SB, Ghosh A, Peikes DN, et al. Two-Year Costs and Quality in the Comprehensive Primary Care Initiative. N Engl J Med. 2016;374(24):2345-2356. 5. Casalino LP, Pesko MF, Ryan AM, et al. Small primary care physician practices have low rates of preventable hospital admissions. Health Aff (Millwood). 2014;33(9):1680-1688.

MUC ID	Measure Title	Rationale
MUC19-57	Use of Opioids at High Dosage in Persons without Cancer (OHD)	CMS adapted three PQA opioid overuse measures related to opioid use, including this OHD measure, to examine the quality of use related to the dose of the medications over time, access to the medications and the combination of both of these criteria. CMS has provided each Part D sponsor monthly reports using these metrics, and will publish these as CMS display measures beginning for 2020. Pending rule-making, we will consider adding one of these into the CMS Part C & D Star Ratings.
		Claims data from commercially insured patients indicate that approximately 8% of opioid prescriptions for acute pain and 12% for chronic pain specify a daily dosage of 120 MED or more (1). The proportion of patients being treated at this dosage for more than 90 days has not been described. However, one study of veterans treated with 180 MED/day or more for 90+ days (2) found that this group was characterized by high rates of psychiatric and substance abuse disorders and frequently did not receive care consistent with clinical guidelines. Other studies have suggested the people at high opioid dosage are at greater risk of overdoses and fractures (3, 4, 5).
		The Washington State Agency Medical Directors Group has suggested 120 MED as a dosage level that should not be exceeded without special consideration (6). Prescription drug monitoring programs, which track the use of multiple providers by patients, indicate that such use is typically found among a small proportion of patients, with the proportion declining as the number of providers increases. In Massachusetts in 2006, considering only Schedule II opioids, 0.5% of patients saw 4+ prescribers and 4+ pharmacies (7). A national study found that 13% of patients had overlapping prescriptions from two or more different prescribers during an 18-month period. Of these, 0.5% used 4+ prescribers and 4+ pharmacies (8). People who see multiple prescribers or use multiple pharmacies are more likely to die of drug overdoses (4). Data from the California PDMP indicates that people with higher daily dosages are more likely to see multiple prescribers or go to multiple pharmacies (9). The data above suggest that prevention of opioid overdose deaths should focus on strategies that target (1) high-dose opioid users as well as (2) persons who seek care from multiple doctors and pharmacies. The data suggest that these criteria can be considered separately, as measures related to prescribed opioids for legitimate uses versus diverted uses. Thus, we will consider use of 3 measures, one for each criteria and one that is the intersection of both criteria. For the Part C and D Star Ratings, we would add only one of these measures.
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		1. Ying Liu, PhD; Joseph E. Logan, PhD; Leonard J. Paulozzi, MD, MPH; Kun Zhang, MS; and Christopher M. Jones, PharmD. Potential Misuse and Inappropriate Prescription Practices Involving Opioid Analgesics. Am J Manag Care. 2013;19(8):648-658.
		2. Clinical characteristics of veterans prescribed high doses of opioid medications for chronic noncancer pain. Benjamin J. Morasco, Jonathan P. Duckart, Thomas P. Carr, Richard A. Deyo, Steven K. Dobscha. PAIN. 151 (2010) 625-632.

MUC ID	Measure Title	Rationale
MUC19-57 (cont'd)	Use of Opioids at High Dosage in Persons without Cancer (OHD) (continued)	3. Kate M. Dunn, PhD; Kathleen W. Saunders, JD; Carolyn M. Rutter, PhD; Caleb J. Banta-Green, MSW, MPH, PhD; Joseph O. Merrill, MD, MPH; Mark D. Sullivan, MD, PhD; Constance M. Weisner, DrPH, MSW; Michael J. Silverberg, PhD, MPH; Cynthia I. Campbell, PhD; Bruce M. Psaty, MD, PhD; and Michael Von Korff, ScD. Opioid Prescriptions for Chronic Pain and Overdose - A Cohort Study. Ann Intern Med. 2010;152:85-92. 4. Paulozzi, et al. A History of Being Prescribed Controlled Substances and Risk of Drug Overdose Death. Pain Medicine 2011. 5. Kathleen W. Saunders, JD, Kate M. Dunn, Ph. D, Joseph O. Merrill, M.D, M.P.H., Mark Sullivan, M.D., Ph.D., Constance Weisner, DrPH, M.S.W, Jennifer Brennan Braden, M.D., M.P.H., Bruce M. Psaty, M.D., Ph.D., and Michael Von Korff, Sc.D. Relationship of Opioid Use and Dosage Levels to Fractures in Older Chronic Pain Patients. Society of General Internal Medicine. 2009. DOI: 10.1007/s11606-009-1218-z. 6. Agency Medical Directors Group (AMDG). Interagency Guideline on Opioid Dosing for Chronic Non-cancer Pain: An educational aid to improve care and safety with opioid therapy. 2010 Update. http://www.agencymeddirectors.wa.gov/Files/OpioidGdline.pdf 7. Nathaniel Katz, Lee Panas, MeeLee Kim, Adele D. Audet, Arnold Bilansky, John Eadie, Peter Kreiner, Florence C Paillard, Cindy Thomas and Grant Carrow. Usefulness of prescription monitoring programs for surveillance - analysis of Schedule II opioid prescription data in Massachusetts, 1996-2006y. Pharmacoepidemiology and drug safety 2010; 19: 115-123. 8. M. Soledad Cepeda, Daniel Fife, Wing Chow, Gregory Mastrogiovanni and Scott C. Henderson. Assessing Opioid Shopping Behaviour - A Large Cohort Study from a Medication Dispensing Database in the US. Drug Saf 2012. 9. Han H, Kass PH, Wilsey BL, Li C-S (2012) Individual and County-Level Factors Associated with Use of Multiple Prescribers and Multiple Pharmacies to Obtain Opioid Prescriptions in California. PLoS ONE 7(9): e46246. doi:10.1371/journal.pone.0046246.
MUC19-60	Use of Opioids from Multiple Providers in Persons without Cancer (OMP)	CMS adapted three PQA opioid overuse measures related to opioid use, including this OMP measure, to examine the quality of use related to the dose of the medications over time, access to the medications and the combination of both of these criteria. CMS has provided each Part D sponsor monthly reports using these metrics, and will publish these as CMS display measures beginning for 2020. Pending rule-making, we will consider adding one of these into the CMS Part C & D Star Ratings. Claims data from commercially insured patients indicate that approximately 8% of opioid prescriptions for acute pain and 12% for chronic pain specify a daily dosage of 120 MED or more (1). The proportion of patients being treated at this dosage for more than 90 days has not been described. However, one study of veterans treated with 180 MED/day or more for 90+ days (2) found that this group was characterized by high rates of psychiatric and substance abuse disorders and frequently did not receive care consistent with clinical guidelines. Other studies have suggested the people at high opioid dosage are at greater risk of overdoses and fractures (3, 4, 5). The Washington State Agency Medical Directors Group has suggested 120 MED as a dosage level that should not be exceeded without special consideration (6).

MUC ID	Measure Title	Rationale
MUC19-60 (cont'd)	Use of Opioids from Multiple Providers in Persons without Cancer (OMP) (continued)	Prescription drug monitoring programs, which track the use of multiple providers by patients, indicate that such use is typically found among a small proportion of patients, with the proportion declining as the number of providers increases. In Massachusetts in 2006, considering only Schedule II opioids, 0.5% of patients saw 4+ prescribers and 4+ pharmacies (7). A national study found that 13% of patients had overlapping prescriptions from two or more different prescribers during an 18-month period. Of these, 0.5% used 4+ prescribers and 4+ pharmacies (8). People who see multiple prescribers or use multiple pharmacies are more likely to die of drug overdoses (4). Data from the California PDMP indicates that people with higher daily dosages are more likely to see multiple prescribers or go to multiple pharmacies (9). The data above suggest that prevention of opioid overdose deaths should focus on strategies that target (1) high-dose opioid users as well as (2) persons who seek care from multiple doctors and pharmacies. The data suggest that these criteria can be considered separately, as measures related to prescribed opioids for legitimate uses versus diverted uses. Thus, we will consider use of 3 measures, one for each criteria and one that is the intersection of both criteria. For the Part C and D Star Ratings, we would add only one of these measures.
		REFERENCES
		1. Ying Liu, PhD; Joseph E. Logan, PhD; Leonard J. Paulozzi, MD, MPH; Kun Zhang, MS; and Christopher M. Jones, PharmD. Potential Misuse and Inappropriate Prescription Practices Involving Opioid Analgesics. Am J Manag Care. 2013;19(8):648-658.
		2. Clinical characteristics of veterans prescribed high doses of opioid medications for chronic noncancer pain. Benjamin J. Morasco, Jonathan P. Duckart, Thomas P. Carr, Richard A. Deyo, Steven K. Dobscha. PAIN. 151 (2010) 625-632.
		3. Kate M. Dunn, PhD; Kathleen W. Saunders, JD; Carolyn M. Rutter, PhD; Caleb J. Banta-Green, MSW, MPH, PhD; Joseph O. Merrill, MD, MPH; Mark D. Sullivan, MD, PhD; Constance M. Weisner, DrPH, MSW; Michael J. Silverberg, PhD, MPH; Cynthia I. Campbell, PhD; Bruce M. Psaty, MD, PhD; and Michael Von Korff, ScD. Opioid Prescriptions for Chronic Pain and Overdose - A Cohort Study. Ann Intern Med. 2010;152:85-92.
		4. Paulozzi, et al. A History of Being Prescribed Controlled Substances and Risk of Drug Overdose Death. Pain Medicine 2011.
		5. Kathleen W. Saunders, JD, Kate M. Dunn, Ph. D, Joseph O. Merrill, M.D, M.P.H., Mark Sullivan, M.D., Ph.D., Constance Weisner, DrPH, M.S.W, Jennifer Brennan Braden, M.D., M.P.H., Bruce M. Psaty, M.D., Ph.D., and Michael Von Korff, Sc.D. Relationship of Opioid Use and Dosage Levels to Fractures in Older Chronic Pain Patients. Society of General Internal Medicine. 2009. DOI: 10.1007/s11606-009-1218-z.
		6. Agency Medical Directors Group (AMDG). Interagency Guideline on Opioid Dosing for Chronic Non-cancer Pain: An educational aid to improve care and safety with opioid therapy. 2010 Update. http://www.agencymeddirectors.wa.gov/Files/OpioidGdline.pdf

MUC ID	Measure Title	Rationale
MUC19-60 (cont'd)	Use of Opioids from Multiple Providers in Persons without Cancer (OMP) (continued)	7. Nathaniel Katz, Lee Panas, MeeLee Kim, Adele D. Audet, Arnold Bilansky, John Eadie, Peter Kreiner, Florence C Paillard, Cindy Thomas and Grant Carrow. Usefulness of prescription monitoring programs for surveillance - analysis of Schedule II opioid prescription data in Massachusetts, 1996-2006y. Pharmacoepidemiology and drug safety 2010; 19: 115-123.8. M. Soledad Cepeda, Daniel Fife, Wing Chow, Gregory Mastrogiovanni and Scott C. Henderson. Assessing Opioid Shopping Behaviour - A Large Cohort Study from a Medication Dispensing Database in the US. Drug Saf 2012. 9. Han H, Kass PH, Wilsey BL, Li C-S (2012) Individual and County-Level Factors Associated with Use of Multiple Prescribers and Multiple Pharmacies to Obtain Opioid Prescriptions in California. PLoS ONE 7(9): e46246. doi:10.1371/journal.pone.0046246.
MUC19-61	Use of Opioids from Multiple Providers and at a High Dosage in Persons without Cancer (OHDMP)	CMS adapted three PQA opioid overuse measures related to opioid use, including this OHDMP measure, to examine the quality of use related to the dose of the medications over time, access to the medications and the combination of both of these criteria. CMS has provided each Part D sponsor monthly reports using these metrics, and will publish these as CMS display measures beginning for 2020. Pending rule-making, we will consider adding one of these into the CMS Part C & D Star Ratings. Claims data from commercially insured patients indicate that approximately 8% of opioid prescriptions for acute pain and 12% for chronic pain specify a daily dosage of 120 MED or more (1). The proportion of patients being treated at this dosage for more than 90 days has not been described. However, one study of veterans treated with 180 MED/day or more for 90+ days (2) found that this group was characterized by high rates of psychiatric and substance abuse disorders and frequently did not receive care consistent with clinical guidelines. Other studies have suggested the people at high opioid dosage are at greater risk of overdoses and fractures (3, 4, 5). The Washington State Agency Medical Directors Group has suggested 120 MED as a dosage level that should not be exceeded without special consideration (6). Prescription drug monitoring programs, which track the use of multiple providers by patients, indicate that such use is typically found among a small proportion of patients, with the proportion declining as the number of providers increases. In Massachusetts in 2006, considering only Schedule II opioids, 0.5% of patients saw 4+ prescribers and 4+ pharmacies (7). A national study found that 13% of patients had overlapping prescriptions from two or more different prescribers during an 18-month period. Of these, 0.5% used 4+ prescribers and 4+ pharmacies (8). People who see multiple prescribers or use multiple pharmacies are more likely to die of drug overdoses (4). Data from the California PDMP indicates that people with higher daily dosages are more likely to see multiple prescribers or go to multiple pharmacies (9). The data above suggest that prevention of opioid overdose deaths should focus on strategies that target (1) high-dose opioid users as well as (2) persons who seek care from multiple doctors and pharmacies. The data suggest that these criteria can be considered separately, as measures related to prescribed opioids for legitimate uses versus diverted uses. Thus, we will consider use of 3 measures, one for each criteria and one that is the intersection of both criteria. For the Part C and D Star Ratings, we would add only one of these measures.

MUC ID	Measure Title	Rationale
MUC19-61 (cont'd)	Use of Opioids from Multiple Providers and at a High Dosage in Persons without Cancer (OHDMP) (continued)	REFERENCES 1. Ying Liu, PhD; Joseph E. Logan, PhD; Leonard J. Paulozzi, MD, MPH; Kun Zhang, MS; and Christopher M. Jones, PharmD. Potential Misuse and Inappropriate Prescription Practices Involving Opioid Analgesics. Am J Manag Care. 2013;19(8):648-658. 2. Clinical characteristics of veterans prescribed high doses of opioid medications for chronic noncancer pain. Benjamin J. Morasco, Jonathan P. Duckart, Thomas P. Carr, Richard A. Deyo, Steven K. Dobscha. PAIN. 151 (2010) 625-632. 3. Kate M. Dunn, PhD; Kathleen W. Saunders, JD; Carolyn M. Rutter, PhD; Caleb J. Banta-Green, MSW, MPH, PhD; Joseph O. Merrill, MD, MPH; Mark D. Sullivan, MD, PhD; Constance M. Weisner, DrPH, MSW; Michael J. Silverberg, PhD, MPH; Cynthia I. Campbell, PhD; Bruce M. Psaty, MD, PhD; and Michael Von Korff, ScD. Opioid Prescriptions for Chronic Pain and Overdose - A Cohort Study. Ann Intern Med. 2010;152:85-92. 4. Paulozzi, et al. A History of Being Prescribed Controlled Substances and Risk of Drug Overdose Death. Pain Medicine 2011. 5. Kathleen W. Saunders, JD, Kate M. Dunn, Ph. D, Joseph O. Merrill, M.D, M.P.H., Mark Sullivan, M.D., Ph.D., Constance Weisner, DrPH, M.S.W, Jennifer Brennan Braden, M.D., M.P.H., Bruce M. Psaty, M.D., Ph.D., and Michael Von Korff, Sc.D. Relationship of Opioid Use and Dosage Levels to Fractures in Older Chronic Pain Patients. Society of General Internal Medicine. 2009. DOI: 10.1007/s11606-009-1218-z. 6. Agency Medical Directors Group (AMDG). Interagency Guideline on Opioid Dosing for Chronic Non-cancer Pain: An educational aid to improve care and safety with opioid therapy. 2010 Update. http://www.agencymeddirectors.wa.gov/Files/OpioidGdline.pdf 7. Nathaniel Katz, Lee Panas, MeeLee Kim, Adele D. Audet, Arnold Bilansky, John Eadie, Peter Kreiner, Florence C Paillard, Cindy Thomas and Grant Carrow. Usefulness of prescription monitoring programs for surveillance - analysis of Schedule II opioid prescription data in Massachusetts, 1996-2006y. Pharmacoepidemiology and drug safety 2010; 19: 115-123. 8. M. Soledad Cepeda, Daniel Fife, Wing Chow, Gregory Mastrogiovanni and Scott C. Henderson. Assessing Opioid Shopping Behaviour - A Large Cohort Study from a Medication Dispensing Database in the US. Drug Saf 2012. 9. Han H, Kass PH, Wilsey BL, Li C-S (2012) Individual and County-Level Factors Associated with Use of Multiple Prescribers and Multiple Pharmacies to Obtain Opioid Prescriptions in California. PLoS ONE 7(9): e46246. doi:10.1371/journal.pone.0046246.
MUC19-64	Standardized Transfusion Ratio for Dialysis Facilities	The Medicare ESRD Program requires Medicare certified dialysis facilities to manage the anemia of CKD as one of their responsibilities under the Conditions for Coverage (1). In addition, the Medicare ESRD Program has included payment for ESAs in dialysis facility reimbursement since 1989. It is notable that inclusion of ESAs in dialysis program payment was associated with a dramatic reduction in the use of blood transfusions in the US chronic dialysis population (2-3).

MUC ID	Measure Title	Rationale
MUC19-64 (cont'd)	Standardized Transfusion Ratio for Dialysis Facilities (continued)	Recently, reliance on achieved hemoglobin concentration as an indicator of successful anemia management in this population has been de-emphasized and use of other clinically meaningful outcomes, such as transfusion avoidance, have been recommended as alternate measures of anemia management (4-7). Best dialysis provider practice should include effective anemia management algorithms that focus on 1) prevention and treatment of iron deficiency, inflammation and other causes of ESA resistance, 2) use of the lowest dose of ESAs that achieves an appropriate target hemoglobin that is consistent with FDA guidelines and current best practices, and 3) education of patients, their families and medical providers to avoid unnecessary blood transfusion so that risk of allosensitization is minimized, eliminating or reducing one preventable barrier to successful kidney transplantation.
		The decision to transfuse blood is intended to improve or correct the pathophysiologic consequences of severe anemia, defined by achieved hemoglobin or hematocrit%, in a specific clinical context for each patient situation (8). Consensus guidelines in the U.S. and other consensus guidelines defining appropriate use of blood transfusions are based, in large part, on the severity of anemia (9-11). Given the role of hemoglobin as a clinical outcome that defines anemia as well as forms a basis for consensus recommendations regarding use of blood transfusion, it is not surprising that the presence of decreased hemoglobin concentration is a strong predictor of subsequent risk for blood transfusion in multiple settings, including chronic dialysis (12-21). For example, Gilbertson, et al found a nearly four-fold higher risk-adjusted transfusion rate in dialysis patients with achieved hemoglobin <10 gm/dl compared to those with >10 gm/dl hemoglobin. (19) In addition to achieved hemoglobin, other factors related to dialysis facility practices, including the facility's response to their patients achieved hemoglobin, may influence blood transfusion risk in the chronic dialysis population (22, 25). In an observational study recently published by Molony, et al (2016) comparing different facility level titration practices, among patients with hemoglobin <10 and those with hemoglobin>11, they found increased transfusion risk in patients with larger ESA dose reductions and smaller dose escalations, and reduced transfusion risk in patients with larger ESA dose increases and smaller dose reductions (25). The authors reported no clinically meaningful differences in all-cause or cause-specific hospitalization events across groups.
		The Food and Drug Administration position defining the primary indication of ESA use in the CKD population is for transfusion avoidance, reflecting the assessment of the relative risks and benefits of ESA use versus blood transfusion. Several historical studies, and one recent research study reviewed by Obrador and Macdougall, document the specific risks of allosensitization after blood transfusion and the potential for transfusion-associated allosensitization to interfere with timely kidney transplantation. (23) A recent analysis demonstrated increased odds ratios for allosensitization associated with transfusion, particularly for men and parous women. That study also demonstrated a 28% reduction in likelihood of transplantation in transfused individuals, based on a multivariate risk-adjusted statistical model. (24)
		REFERENCES
		1. ESRD Facility Conditions for Coverage. https://www.cms.gov/Center/Special-Topic/End-Stage-Renal-Disease-ESRD-Center.html.

MUC ID	Measure Title	Rationale
MUC19-64 (cont'd)	Standardized Transfusion Ratio for Dialysis Facilities (continued)	2. Eschbach et al. Recombinant Human Erythropoietin in Anemic Patients with End-Stage Renal Disease. Results of a Phase III Multicenter Clinical Trial. Annals of Internal Medicine. 1989;111:992-1000. 3. Powe et al. Early dosing practices and effectiveness of recombinant human erythropoietin. Kidney International, Vol. 43 (1993), pp. 1125—1133. 4. FDA Drug Safety Communication: Modified dosing recommendations to improve the safe use of Erythropoiesis-Stimulating Agents (ESAs) in chronic kidney disease. http://www.fda.gov/Drugs/DrugSafety/ucm259639.htm. 5. Kidney Disease: Improving Global Outcomes (KDIGO) Anemia Work Group. KDIGO Clinical Practice Guideline for Anemia in Chronic Kidney Disease. Kidney inter., Suppl. 2012; 2: 279–335. https://kdigo.org/guidelines/anemia-in-ckd/. 6. Kliger et al. KDOQI US Commentary on the 2012 KDIGO Clinical Practice Guideline for Anemia in CKD. Am J Kidney Dis. 62(5):849-859. 7. Berns, Jeffrey S., Moving Away From Hemoglobin-Based Anemia Performance Measures in Dialysis Patients. Am J Kidney Dis. 2014;64(4):486-488. 8. Whitman, Shreay, Gitlin, van Oijen, & Spiegel. Clinical Factors and the Decision to Transfuse Chronic Dialysis Patients. Clin J Am Soc Nephrol 8: ccc–ccc, 2013. doi: 10.2215/CJN.00160113. 9. Carson et al. Red Blood Cell Transfusion: A Clinical Practice Guideline From the AABB. Ann Intern Med. 2012;157:49-58. 10. American Society of Anesthesiologists Task Force on Perioperative Blood Transfusion and Adjuvant Therapies. Practice guidelines for perioperative blood transfusion and adjuvant therapies: an updated report by the American Society of Anesthesiologists Task Force on Perioperative Blood Transfusion and Adjuvant Therapies. Anesthesiology. 2006;105:198–208. 11. Munoz et al. "Fit to fly"; overcoming barriers to preoperative haemoglobin optimization in surgical patients. Br J Anaesth. 2015 Jul;115(1):15-24. 12. Dunne, Malone, Tracy, Gannon, and Napolitano. Perioperative Anemia: An Independent Risk Factor for Infection, Mortality, and Resource Utilization in Surgery. Journal of Surgical Research 102, 237-244 (2002). 13. Covin R, O'Brien M, Grunwald G, Brimhall B, Sethi G, Walczak S, Reiquam W, Rajagopalan C, Shroyer AL Factors affecting transfusion of fresh frozen plasma, platelets, and red blood cells during elective coronary artery bypass graft surgery. Arch Pathol Lab Med. 2003 Apr;127(4):415-23. 14. Jans et al. Role of preoperative anemia for risk of transfusion and postoperative morbidity in fast-track hip and knee arthroplasty. Transfusion. 2014 Mar;54(3):717-26. 15. Saleh et al. Allogenic Blood Transfusion Following Total Hip Arthroplasty: Results from the Nationwide Inpatient Sample, 2000 to 2009. J Bone Joint Surg Am. 2014;96:e155(1-10). 16. Ejaz, Spolverato, Kim, Frank, and Pawlik. Variations in triggers and use of perioperative blood transfusions in major gastrointestinal surgery. Br. J. Surg. 2014 Oct;101(11):1424-33.

MUC ID	Measure Title	Rationale
MUC19-64 (cont'd)	Standardized Transfusion Ratio for Dialysis Facilities (continued)	17. Foley, Curtis, & Parfrey. Hemoglobin Targets and Blood Transfusions in Hemodialysis Patients without Symptomatic Cardiac Disease Receiving Erythropoietin Therapy. Clin J Am Soc Nephrol 3: 1669–1675, 2008. doi: 10.2215/CJN.02100508. 18. Hirth, Turenne, Wilk et al. Blood transfusion practices in dialysis patients in a dynamic regulatory environment. Am J Kidney Dis. 2014 Oct;64(4):616-21. doi: 10.1053/j.ajkd.2014.01.011. Epub 2014 Feb. 19. 19. Gilbertson, Monda, Bradbury & Collins. RBC Transfusions Among Hemodialysis Patients (1999-2010): Influence of Hemoglobin Concentrations Below 10 g/dL. Am J Kidney Dis. 2013; Volume 62 , Issue 5 , 919 – 928. 20. Collins et al. Effect of Facility-Level Hemoglobin Concentration on Dialysis Patient Risk of Transfusion. Am J Kidney Dis. 2014; 63(6):997-1006. 21. Cappell et al. Red blood cell (RBC) transfusion rates among US chronic dialysis patients during changes to Medicare end-stage renal disease (ESRD) reimbursement systems and erythropoiesis stimulating agent (ESA) labels. BMC Nephrology 2014, 15:116. 22. House AA, Pham B, Pagé DE. Transfusion and recombinant human erythropoietin requirements differ between dialysis modalities. Nephrol Dial Transplant. 1998 Jul;13(7):1763-9. 23. Obrador and Macdougall. Effect of Red Cell Transfusions on Future Kidney Transplantation. Clin J Am Soc Nephrol 8: 852–860, 2013. 24. Ibrahim, et al. Blood transfusions in kidney transplant candidates are common and associated with adverse outcomes. Clin Transplant 2011: 25: 653–659. 25. Molony, et al. Effects of epoetin alfa titration practices, implemented after changes to product labeling, on hemoglobin levels, transfusion use, and hospitalization rates. Am J Kidney Dis 2016: epub before print (published online March 12, 2016).
MUC19-66	Hemodialysis Vascular Access: Practitioner Level Long-term Catheter Rate	Several observational studies have demonstrated an association between type of vascular access used for hemodialysis and patient mortality. Long term catheter use is associated with the highest mortality risk while arteriovenous fistula use has the lowest mortality risk. Arteriovenous grafts (AVG) have been found to have a risk of death that is higher than AVF but lower than catheters. The measure focus is the process of assessing long term catheter use at chronic dialysis facilities. This process leads to improvement in mortality as follows: Measure long term catheter rate -> Assess value -> Identify patients who do not have an AV Fistula or AV graft->Evaluation for an AV fistula or graft by a qualified dialysis vascular access provider -> Increase Fistula/Graft Rate -> Lower catheter rate -> Lower patient mortality.

MUC ID	Measure Title	Rationale
MUC19-110	Emergency Department Utilization (EDU)	Each year, approximately 1 out of every 5 U.S. adults utilize the emergency department (ED) for health care (Gindi 2016). ED utilization rates have trended upward since 2006, reaching a 10-year high in 2015 for all age groups (Sun 2018). Stomach or abdominal pain was the most common medical complaint for ED visits in 2015, followed by chest pain, fever and cough (Rui 2015). Common reasons for patients visiting the ED rather than urgent care or primary care facilities include: 1) perceived severity of the medical problem, 2) inconvenient doctor's office hours, and 3) lack of access to primary care providers. While the use of non-ED acute care for low-acuity conditions has increased in recent years, up to 60% of all ED visits remain non-urgent and potentially unnecessary (Hu 2018; NEHI 2010; Uscher-Pines 2013, Poon 2018). Evidence strongly suggests that interventions at the primary care and community level can help patients avoid future ED utilization (Hu 2018; NEHI 2010; Uscher-Pines 2013). In addition, ED visits can act as destabilizing events and introduce challenges to care continuity. In one study of Medicare beneficiaries, 20.8% of patients discharged from the ED experience an adverse outcome within 30 days. References Gindi RM, Black LI, & Cohen RA. 2016. Reasons for emergency room use among U.S. adults aged 18-64: National Health Interview Survey, 2013-2014. National Health Statistics Reports; No 90. Hyattsville, MD: National Center for Health Statistics. Hu T, Mortensen K, & Chen J. 2018. Medicaid managed care in Florida and racial and ethnic disparities in preventable emergency department visits. Medical Care, 56:477-483. New England Healthcare Institute (NEHI). 2010. A matter of urgency: Reducing emergency department overuse. NEHI Research Brief. Available at: https://www.nehi.net/writable/publication_files/file/nehi_ed_overuse_issue_brief_032610finaledits.pdf Poon, S. J., Schuur, J. D., & Mehrotra, A. (2018). Trends in Visits to Acute Care Venues for Treatment of Low-Acuity Conditions in the United States From 2008 to 2015. JAMA Internal Medicine, 178(10), 1342–1349. Rui P & Kang K. (2015). National Hospital Ambulatory Medical Care Survey: 2015 Emergency Department Summary Tables. Available at: https://www.cdc.gov/nchs/data/nhamcs/web_tables/2015_ed_web_tables.pdf Sun R, Karaca Z, & Wong S. 2018. Trends in hospital emergency department visits by age and payer, 2006-2015. HCUP Statistical Brief #238. Agency for Healthcare Research and Quality: Rockville, MD. Available at: https://www.hcup-us.ahrq.gov/reports/statbriefs/sb238-Emergency-Department-Age-Payer-2006-2015.pdf Uscher-Pines L, Pines J, Kellermann A, Gillen E, & Mehrotra A. 2013. Emergency department visits for nonurgent conditions: Systematic literature review. The American Journal of Managed Care, 19(1):47-59.

MUC ID	Measure Title	Rationale
MUC19-112	Acute Hospital Utilization (AHU)	Although the surgical, medical, and total number of inpatient stays declined in the United States between 2005 and 2014, the inflation-adjusted mean cost per inpatient stay increased by 12.7%, from $9,500 to $10,900 There was also disparity in trends, with patients with higher incomes experiencing larger declines in utilization that those with lower incomes (McDermott et al., 2017). In 2017, inpatient costs accounted for 21% of total Medicare benefit payments. (KFF, 2019) Inpatient hospitalizations put patients at risk for adverse events and consequently, prolonged inpatient stays (Schimmel, 2003). Older patients are particularly at increased risk for delirium, falls, and depressed psycho-physiologic functioning, which leads to increased levels of medical intervention and complications (Lang et al. 2008; Gillick et al., 1982). References Gillick MR, Serrell NA, Gillick LS. 1982. Adverse Consequences of Hospitalization in The Elderly. Social Science & Medicine 16(10): 1033-1038. Kaiser Family Foundation. An Overview of Medicare. Retrieved August 5, 2019, from The Henry J. Kaiser Family Foundation website: https://www.kff.org/medicare/issue-brief/an-overview-of-medicare/ Lang VJ, Clark NS, et al. 2008. Hazards of Hospitalization: Hospitalists and Geriatricians Educating Medical Students About Delirium and Falls in Geriatric Inpatients. Gerontology & Geriatrics Education 28(4): 94-104. McDermott KW, Elixhauser A, Sun R. Trends in Hospital Inpatient Stays in the United States, 2005-2014. HCUP Statistical Brief #225. Agency for Healthcare Research and Quality, Rockville, MD. Last modified in June 2017. Available at www.hcup-us.ahrq.gov/reports/statbriefs/sb225-Inpatient-US-Stays-Trends.pdf. Schimmel E. 2003. The Hazards of Hospitalization. Quality and Safety in Health Care 12(1): 58–63.
MUC19-114	Maternal Morbidity	The rationale for this measure to address Severe Maternal Morbidity (SMM) is that SMM is increasing at an alarming rate in the U.S. Rates have nearly doubled over the past decade. Evidence shows that there is a high rate of preventability of SMM and 60% of maternal deaths are preventable. Identification and effective treatment of SMM are very essential to prevent conditions that lead to maternal mortality. There are currently no quality measures that address maternal morbidity as a whole and the CMS Office of the Administrator (OA) is very dedicated in addressing this healthcare crisis. The structural measure will evaluate how many hospitals and health systems are working within any type of quality improvement collaborative which has proven to help prevent and manage SMM. This measure will eventually be replaced by a comprehensive outcome measure.

APPENDIX C: MEASURES LISTED BY PROGRAM

December 1, 2019

Appendix C Table of Contents

Chronic and Post-Acute Care Measures Programs

Home Health Quality Reporting Program

MUC ID	CMS Program[11]	Measure Title	Quality Priority	Meaningful Measure Area
MUC19-34	HH QRP	Home Health Within-Stay Potentially Preventable Hospitalization Measure	Promote effective communication and coordination of care	Admissions and readmissions to hospitals

Hospice Quality Reporting Program

MUC ID	CMS Program	Measure Title	Quality Priority	Meaningful Measure Area
MUC19-33	HQRP	Hospice Visits in the Last Days of Life	Strengthen person and family engagement as partners in their care	End of life care according to preferences

Inpatient Rehabilitation Facility Quality Reporting Program

MUC ID	CMS Program	Measure Title	Quality Priority	Meaningful Measure Area
No new candidate measures were approved for consideration under this program in the current year.				

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[11] A single unique measure can be associated with more than one CMS Program.

Long-Term Care Hospital Quality Reporting Program

MUC ID	CMS Program	Measure Title	Quality Priority	Meaningful Measure Area
No new candidate measures were approved for consideration under this program in the current year.				

Skilled Nursing Facility Quality Reporting Program

MUC ID	CMS Program	Measure Title	Quality Priority	Meaningful Measure Area
No new candidate measures were approved for consideration under this program in the current year.				

Skilled Nursing Facility Value-Based Purchasing Program

MUC ID	CMS Program	Measure Title	Quality Priority	Meaningful Measure Area
No new candidate measures were approved for consideration under this program in the current year.				

Ambulatory Care and Meaningful Use Measures Programs

Merit-Based Incentive Payment System-Cost (MIPS-Cost)

MUC ID	CMS Program	Measure Title	Quality Priority	Meaningful Measure Area
No new candidate measures were approved for consideration under this program in the current year.				

Merit-Based Incentive Payment System-Quality (MIPS-Quality)

MUC ID	CMS Program	Measure Title	Quality Priority	Meaningful Measure Area
MUC19-27	MIPS-Quality	Hospital-Wide, 30-Day, All-Cause Unplanned Readmission (HWR) Rate for the Merit-Based Incentive Payment Program (MIPS) Eligible Clinician Groups	Promote effective communication and coordination of care	Admissions and readmissions to hospitals
MUC19-28	MIPS-Quality	Risk-standardized complication rate (RSCR) following elective primary total hip arthroplasty (THA) and/or total knee arthroplasty (TKA) for Merit-based Incentive Payment System (MIPS) Eligible Clinicians and Eligible Clinician Groups	Make care safer by reducing harm caused in the delivery of care	Preventable healthcare harm
MUC19-37	MIPS-Quality	Clinician and Clinician Group Risk-standardized Hospital Admission Rates for Patients with Multiple Chronic Conditions; in the Medicare Shared Savings Program, the score would be at the ACO level.	Promote effective prevention and treatment of chronic disease	Management of chronic conditions

MUC ID	CMS Program	Measure Title	Quality Priority	Meaningful Measure Area
MUC19-66	MIPS-Quality	Hemodialysis Vascular Access: Practitioner Level Long-term Catheter Rate	Promote effective prevention and treatment of chronic disease	Management of chronic conditions
MUC19-110	MIPS-Quality	Emergency Department Utilization (EDU)	Make care affordable	Appropriate use of healthcare
MUC19-112	MIPS-Quality	Acute Hospital Utilization (AHU)	Make care affordable	Appropriate use of healthcare

Part C & D Star Rating

MUC ID	CMS Program	Measure Title	Quality Priority	Meaningful Measure Area
MUC19-14	Part C & Part D Star Rating	Follow-up after Emergency Department (ED) Visit for People with Multiple High-Risk Chronic Conditions	Promote effective prevention and treatment of chronic disease	Management of chronic conditions
MUC19-21	Part C & Part D Star Rating	Transitions of Care between the Inpatient and Outpatient Settings including Notifications of Admissions and Discharges, Patient Engagement and Medication Reconciliation Post-Discharge	Promote effective communication and coordination of care	Transfer of health information and interoperability
MUC19-57	Part C & Part D Star Rating	Use of Opioids at High Dosage in Persons without Cancer (OHD)	Promote effective prevention and treatment of chronic disease	Prevention and treatment of opioid and substance use disorders
MUC19-60	Part C & Part D Star Rating	Use of Opioids from Multiple Providers in Persons without Cancer (OMP)	Promote effective prevention and treatment of chronic disease	Prevention and treatment of opioid and substance use disorders
MUC19-61	Part C & Part D Star Rating	Use of Opioids from Multiple Providers and at a High Dosage in Persons without Cancer (OHDMP)	Promote effective prevention and treatment of chronic disease	Prevention and treatment of opioid and substance use disorders

Medicare Shared Savings Program

MUC ID	CMS Program	Measure Title	Quality Priority	Meaningful Measure Area
MUC19-37	SSP	Clinician and Clinician Group Risk-standardized Hospital Admission Rates for Patients with Multiple Chronic Conditions; in the Medicare Shared Savings Program, the score would be at the ACO level.	Promote effective prevention and treatment of chronic disease	Management of chronic conditions

Hospital Measures Programs

Ambulatory Surgical Center Quality Reporting Program

MUC ID	CMS Program	Measure Title	Quality Priority	Meaningful Measure Area
No new candidate measures were approved for consideration under this program in the current year.				

End-Stage Renal Disease Quality Incentive Program

MUC ID	CMS Program	Measure Title	Quality Priority	Meaningful Measure Area
MUC19-64	ESRD QIP	Standardized Transfusion Ratio for Dialysis Facilities	Promote effective prevention and treatment of chronic disease	Management of chronic conditions

Hospital-Acquired Condition Reduction Program

MUC ID	CMS Program	Measure Title	Quality Priority	Meaningful Measure Area
No new candidate measures were approved for consideration under this program in the current year.				

Hospital Inpatient Quality Reporting Program

MUC ID	CMS Program	Measure Title	Quality Priority	Meaningful Measure Area
MUC19-26	HIQR	Hospital Harm - Severe Hyperglycemia	Make care safer by reducing harm caused in the delivery of care	Preventable healthcare harm
MUC19-114	HIQR	Maternal Morbidity	Make care safer by reducing harm caused in the delivery of care	Preventable healthcare harm

Hospital Outpatient Quality Reporting Program

MUC ID	CMS Program	Measure Title	Quality Priority	Meaningful Measure Area
No new candidate measures were approved for consideration under this program in the current year.				

Hospital Readmissions Reduction Program

MUC ID	CMS Program	Measure Title	Quality Priority	Meaningful Measure Area
No new candidate measures were approved for consideration under this program in the current year.				

Hospital Value-Based Purchasing Program

MUC ID	CMS Program	Measure Title	Quality Priority	Meaningful Measure Area
No new candidate measures were approved for consideration under this program in the current year.				

Inpatient Psychiatric Facility Quality Reporting Program

MUC ID	CMS Program	Measure Title	Quality Priority	Meaningful Measure Area
MUC19-22	IPFQR	Follow-Up After Psychiatric Hospitalization	Promote effective prevention and treatment of chronic disease	Prevention, treatment, and management of mental health

Medicare and Medicaid Promoting Interoperability Program for Eligible Hospitals (EHs) or Critical Access Hospitals (CAHs)

MUC ID	CMS Program	Measure Title	Quality Priority	Meaningful Measure Area
MUC19-26	Promoting Interoperability (EH-CAH)	Hospital Harm - Severe Hyperglycemia	Make care safer by reducing harm caused in the delivery of care	Preventable healthcare harm

PPS-Exempt Cancer Hospital Quality Reporting Program

MUC ID	CMS Program	Measure Title	Quality Priority	Meaningful Measure Area
MUC19-18	PCHQR	National Healthcare Safety Network (NHSN) Catheter-Associated Urinary Tract Infection Outcome Measure	Make care safer by reducing harm caused in the delivery of care	Healthcare-associated infections
MUC19-19	PCHQR	National Healthcare Safety Network (NHSN) Central Line Associated Bloodstream Infection Outcome Measure	Make care safer by reducing harm caused in the delivery of care	Healthcare-associated infections