

Category 4 Population-focused Improvements

The Category 4 measures are:

- Aligned with the low-income, Medicaid, and uninsured population;
- Identified as high priority given the health care needs and issues of the patient population served; and
- Viewed as valid health care indicators to inform and identify areas for improvement in population health within the health care system.

Category 4 Structure:

- Required Reporting Domains: Category 4 contains five domains on which hospital performing providers must report, as specified in the Program Funding and Mechanics Protocol. The required reporting domains include:
 - Potentially preventable admissions (PPAs)
 - 30-day readmissions
 - Potentially preventable complications (PPCs)
 - Patient-centered healthcare, including patient satisfaction and medication management
 - Emergency department
- Optional Reporting Domain: At their option, hospital performing providers may report on Reporting Domain (RD) 6, which is the CMS Initial Core Set of Measures for Adults and Children in Medicaid/CHIP. While reporting on this domain is optional, participation in Domain 6 reporting is required to value Category 4 at the 15 percent maximum (see Category 4 Valuation below.)
- Hospital performing providers, with the exception of those that are exempt from Category 4 reporting in accordance with paragraph 11.f of the Program Funding and Mechanics Protocol, must report on Category 4 measures in the required reporting domains. Each hospital performing provider subject to required Category 4 reporting must report on all measures in the required reporting domains, unless for certain measures the provider does not have statistically valid data, as defined in paragraph 11.e of the Program Funding and Mechanics Protocol.
- Each performing provider subject to Category 4 required reporting will include Category 4 measures for PPCs (RD-3) during DY 4-5 and for all other required reporting domains during DY 3-5.
- The Category 4 emphasis is on the reporting of population health measures to gain information on and understanding of the health status of key populations and to build the capacity for reporting on a comprehensive set of population health metrics; therefore, hospital performing providers will not be required to achieve improvement in Category 4.

Category 4 Valuation:

- Maximum valuation: In order to value Category 4 up to the 15 percent maximum for DY 3-5, hospital performing providers must report on the optional reporting domain (RD-6) in addition to the five required reporting domains.
- 10 percent valuation: Hospital performing providers that do not report on the optional reporting domain (RD-6) only may value Category 4 at the minimum 10 percent for DY 3-5. Performing providers that only report on the required reporting domains may designate to Categories 1, 2, or 3 the 5 percent valuation they are unable to obtain in Category 4 by foregoing reporting on the optional domain.

Category 4 Reporting Measures by Domain:

RD-1. Potentially Preventable Admissions

1. **Congestive Heart Failure Admission rate** (derived from AHRQ Prevention Quality Indicator (PQI) #8)²⁸⁷
 - a. **Numerator:** All inpatient discharges from the hospitals of patients age 18 years and older with ICD-9-CM principal diagnosis code for heart failure within the demonstration year reporting period
 - b. **Denominator:** Number of residents age 18 and older living in the RHP counties

2. **Diabetes Admission Rates**
 - i. Diabetes, short term complications (derived from AHRQ PQI #1)²⁸⁸
 - a. **Numerator:** All inpatient discharges from²⁸⁹ with ICD-9-CM principal diagnosis code for short-term complications (ketoacidosis, hyperosmolarity, coma) within the demonstration year reporting period
 - b. **Denominator:** Number of patients/residents age 18 and over years with diabetes who have visited the RHP system primary care clinic(s) two or more times in the past 12 months living in the RHP counties.

 - ii. Uncontrolled Diabetes (derived from AHRQ Prevention Quality Indicator (PQI) #14)²⁹⁰
 - a. **Numerator:** All inpatient discharges from all participating hospital age 18 and older with ICD-9-CM principal diagnosis code for uncontrolled diabetes, without mention of a short-term or long-term complication within the demonstration year
 - b. **Denominator:** Number of residents age 18 and older living in the RHP counties

 - iii. Diabetes Long-term Complications Admission Rate (derived from AHRQ Prevention Quality Indicator (PQI) #3)

²⁸⁷ Derived from:

<http://www.qualityindicators.ahrq.gov/Downloads/Modules/PQI/V44/TechSpecs/PQI%2008%20Heart%20Failure%20Admission%20Rate.pdf>

²⁸⁸ Derived from:

<http://www.qualityindicators.ahrq.gov/Downloads/Modules/PQI/V44/TechSpecs/PQI%2001%20Diabetes%20Short-term%20Complications%20Admissions%20Rate.pdf>

²⁹⁰ Derived from:

<http://www.qualityindicators.ahrq.gov/Downloads/Modules/PQI/V44/TechSpecs/PQI%2014%20Uncontrolled%20Diabetes%20Admission%20Rate.pdf>

- a. **Numerator:** Discharges age 18 years and older with ICD-9-CM principal diagnosis code for long-term complications (renal, eye, neurological, circulatory, or complications not otherwise specified).
 - b. **Denominator:** Number of residents age 18 and older living in the RHP counties
3. **Behavioral Health and Substance Abuse Admission rate**
- (based on other selected PPA primary diagnoses)
 - a. **Numerator:** Number of patients with a potentially preventable admission for a select primary diagnosis that have mental health or substance abuse as a secondary diagnosis
 - b. **Denominator:** Number of patients with a potentially preventable admission for a select primary diagnosis
4. **Chronic Obstructive Pulmonary Disease or Asthma in Adults Admission rate** (derived from AHRQ PQI #5)²⁹¹
- a. **Numerator:** All discharges of age 40 years and older with ICD-9-CM principal diagnosis code for COPD or asthma
 - b. **Denominator:** Number of residents age 18 and older living in the RHP counties
5. **Hypertension Admission rate** (derived from AHRQ PQI #7)²⁹²
- a. **Numerator:** All discharges of age 18 years and older with ICD-9-CM principal diagnosis code for hypertension
 - b. **Denominator:** Number of residents age 18 and older living in the RHP counties
6. **Pediatric Asthma**
- **Pediatric Asthma**
 - a. **Numerator:** Number of asthma patients ages 5-18 who return to the emergency department for treatment of asthma within 15 days of the last visit to the ED
 - b. **Denominator:** Number of asthma patients age 5-18 who were seen in emergency department for asthma treatment (ICD-9 codes: 493.00, 493.01, 493.10, 493.11, 493.90, 493.91).
7. **Bacterial pneumonia immunization**
- Pneumococcal Immunization (PPV23) – Overall Rate (CMS IQR/Joint Commission measure IMM-1a)

²⁹¹ Derived from:

<http://www.qualityindicators.ahrq.gov/Downloads/Modules/PQI/V44/TechSpecs/PQI%2005%20COPD%20or%20Asthma%20in%20Older%20Adults%20Admission%20Rate.pdf>

²⁹² <http://www.qualityindicators.ahrq.gov/Downloads/Modules/PQI/V44/TechSpecs/PQI%2007%20Hypertension%20Admission%20Rate.pdf>

8. Influenza Immunization

- Influenza Immunization (CMS IQR/Joint Commission measure IMM-2)

RD-2. 30-day readmissions

1. Congestive Heart Failure (HF): 30-Day Readmissions²⁹³

- Numerator:** The number of readmissions (for patients 18 years and older), for any cause, within 30 days of discharge from the index HF admission (ICD-9-CM codes 402.01, 402.11, 402.91, 404.01, 404.03, 404.11, 404.13, 404.91, 404.93, and 428.xx). If an index admission has more than 1 readmission, only first is counted as a readmission.
- Denominator:** The number of admissions (for patients 18 years and older), for patients discharged from the hospital with a principal diagnosis of HF (ICD-9-CM codes 402.01, 402.11, 402.91, 404.01, 404.03, 404.11, 404.13, 404.91, 404.93, and 428.xx) and with a complete claims history for the 12 months prior to admission.

2. Diabetes: 30-Day Readmissions

- Numerator:** The number of readmissions (for patients 18 years and older), for any cause, within 30 days of discharge from the index diabetes admission. If an index admission has more than 1 readmission, only first is counted as a readmission.
- Denominator:** The number of admissions (for patients 18 years and older), for patients discharged from the hospital with a principal diagnosis of diabetes and with a complete claims history for the 12 months prior to admission.

3. Behavioral health & Substance Abuse: 30-Day Readmissions

- Numerator:** The number of readmissions (for patients 18 years and older), for any cause, within 30 days of discharge from the index behavioral health and substance abuse admission. If an index admission has more than 1 readmission, only first is counted as a readmission.
- Denominator:** The number of admissions (for patients 18 years and older), for patients discharged from the hospital with a principal diagnosis of behavioral health and substance abuse and with a complete claims history for the 12 months prior to admission.

4. Chronic Obstructive Pulmonary Disease (COPD): 30-Day Readmissions

²⁹³<http://www.qualityforum.org/QPS/QPSTool.aspx>

- a. **Numerator:** The number of readmissions (for patients 18 years and older), for any cause, within 30 days of discharge from the index COPD admission. If an index admission has more than 1 readmission, only 1 is counted as a readmission.
- b. **Denominator:** The number of admissions (for patients 18 years and older), for patients discharged from the hospital with a principal diagnosis of COPD, and with a complete claims history for the 12 months prior to admission.

5. Stroke: 30-Day Readmissions

- a. **Numerator:** The number of readmissions (for patients 18 years and older), for any cause, within 30 days of discharge from the index stroke admission (ICD-9-CM codes 434.x, 434.0x, 434.1x, 434.9x). If an index admission has more than 1 readmission, only 1 is counted as a readmission.
- b. **Denominator:** The number of admissions (for patients 18 years and older), for patients discharged from the hospital with a principal diagnosis of stroke (ICD-9-CM codes 434.x, 434.0x, 434.1x, 434.9x), and with a complete claims history for the 12 months prior to admission.

6. Pediatric Asthma: 30-Day Readmissions

- a. **Numerator:** The number of readmissions (for patients ages 5-18), for any cause, within 30 days of discharge from the index asthma admission (ICD-9-CM codes 493.00, 493.01, 493.10, 493.11, 493.90, 493.91). If an index admission has more than 1 readmission, only first is counted as a readmission.
- b. **Denominator:** The number of admissions (for patients ages 5-18), for patients discharged from the hospital with a principal diagnosis of asthma (ICD-9-CM codes 493.00, 493.01, 493.10, 493.11, 493.90, 493.91), and with a complete claims history for the 12 months prior to admission.

7. All-Cause: 30-Day Readmissions

A Hospital-Wide All-Cause Unplanned Readmission Measure²⁹⁴ will also be calculated as a way to provide hospitals with an overall measure of their 30-Day Readmissions rate.

- a. **Numerator:** The number of inpatient admissions to any acute care facility which occurs within 30 days of the discharge date of an eligible index admission.
- b. **Denominator:** The number of admissions to acute care facilities for patients aged 18 years or older.

For this measure, the following admissions are excluded:

²⁹⁴ <http://www.qualityforum.org/QPS/QPSTool.aspx>

- Admissions for patients without 30 days of post-discharge data
Rationale: This is necessary in order to identify the outcome (readmission) in the dataset.
- Admissions for patients lacking a complete enrollment history for the 12 months prior to admission
Rationale: This is necessary to capture historical data for risk adjustment.
- Admissions for patients discharged against medical advice (AMA)
Rationale: Hospital had limited opportunity to implement high quality care.
- Admissions for patients to a PPS-exempt cancer hospital
Rationale: These hospitals care for a unique population of patients that is challenging to compare to other hospitals.
- Admissions for patients with medical treatment of cancer (See Table 3 in Section 2a1.9)
Rationale: These admissions have a very different mortality and readmission profile than the rest of the Medicare population, and outcomes for these admissions do not correlate well with outcomes for other admissions.
(Patients with cancer who are admitted for other diagnoses or for surgical treatment of their cancer remain in the measure).
- Admissions for primary psychiatric disease (see Table 4 in Section 2a1.9)
Rationale: Patients admitted for psychiatric treatment are typically cared for in separate psychiatric or rehabilitation centers which are not comparable to acute care hospitals.
- Admissions for “rehabilitation care; fitting of prostheses and adjustment devices”
Rationale: These admissions are not for acute care or to acute care hospitals.
- Additionally, in the all-payer testing, we excluded obstetric admissions because the measure was developed among patients aged 65 years or older (approximately 500,000).
- Admissions for which full data are not available or for which 30-day readmission by itself cannot reasonably be considered a signal of quality of care.

RD-3. Potentially Preventable Complications (PPCs)

Hospital performing providers subject to required Category 4 reporting must report on the 64 PPC measures listed below in DY 4-5:

- Risk-adjusted PPC rates for the 64 PPCs below. (As calculated by the 3M software.²⁹⁵)

PPC #	Description
1	Stroke and Intracranial Hemorrhage
2	Extreme CNS Complications
3	Acute Pulmonary Edema and Respiratory Failure without Ventilation
4	Acute Pulmonary Edema and Respiratory Failure with Ventilation
5	Pneumonia and Other Lung Infections
6	Aspiration Pneumonia
7	Pulmonary Embolism
8	Other Pulmonary Complications

²⁹⁵For measure specifications see 3M's Users Manual.

9	Shock
10	Congestive Heart Failure
11	Acute Myocardial Infarction
12	Cardiac Arrhythmias and Conductive Disturbances
13	Other Cardiac Complications
14	Ventricular Fibrillation/Cardiac Arrest
15	Peripheral Vascular Complications except Venous Thrombosis
16	Venous Thrombosis
17	Major Gastrointestinal Complications without Transfusion or Significant Bleeding
18	Major Gastrointestinal Complications with Transfusion or Significant Bleeding
19	Major Liver Complications
20	Other Gastrointestinal Complications without Transfusion or Significant Bleeding
21	Clostridium Difficile Colitis
22	Urinary Tract Infection
23	GU Complications Except UTI
24	Renal Failure without Dialysis
25	Renal Failure with Dialysis
26	Diabetic Ketoacidosis and Coma
27	Post-Hemorrhage and Other Acute Anemia with Transfusion
28	In-Hospital Trauma and Fractures
29	Poisonings Except from Anesthesia
30	Poisonings due to Anesthesia
31	Decubitis Ulcer
32	Transfusion Incompatibility Reaction
33	Cellulitis
34	Moderate Infectious
35	Septicemia and Severe Infections
36	Acute Mental Health Changes
37	Post-Operative Infection and Deep Wound Disruption without Procedure
38	Post-Operative Infection and Deep Wound Disruption with Procedure
39	Reopening Surgical Site
40	Post-Operative Hemorrhage and Hematoma without Hemorrhage Control Procedure or I&D Procedure
41	Post-Operative Hemorrhage and Hematoma with Hemorrhage Control Procedure or I&D Procedure
42	Accidental Puncture/Laceration During Invasive Procedure
43	Accidental Cut or Hemorrhage During Other Medical Care
44	Other Surgical Complication – Mod
45	Post-procedure Foreign Bodies

46	Post-Operative Substance Reaction and Non-O.R. Procedure for Foreign Body
47	Encephalopathy
48	Other Complications of Medical Care
49	Iatrogenic Pneumothrax
50	Mechanical Complications of Device, Implant and Graft
51	Gastrointestinal Ostomy Complications
52	Inflammation and Other Complications of Devices, Implants or Grafts Except Vascular Infection
53	Infection, Inflammation and Clotting complications of Peripheral Vascular Catheters and Infusions
54	Infections Due to Central Venous Catheters
55	Obstetrical Hemorrhage without Transfusion
56	Obstetrical Hemorrhage with Transfusion
57	Obstetric Lacerations and Other Trauma Without Instrumentation
58	Obstetric Lacerations and Other Trauma With Instrumentation
59	Medical and Anesthesia Obstetric Complications
60	Major Puerperal Infection and Other Major Obstetric Complications
61	Other Complications of Obstetrical Surgical and Perineal Wounds
62	Delivery with Placental Complications
63	Post-Operative Respiratory Failure with Tracheostomy
64	Other In-Hospital Adverse Events

RD-4. Patient-centered Healthcare

1. Patient Satisfaction

The reporting of the measures must be limited to the inpatient setting only. All of the HCAHPS' questions included for the themes listed below are required to be included in RHP plans for PPs required to report for DY 2-5, or if HCAHPS not in place in DY 2, starting DY 3.

- a. Each HCAHPS theme includes a standard set of questions. The following HCAHPS' themes will be reported on:
 - Your care from doctors;
 - Your care from nurses
 - The hospital environment;
 - when you left the hospital.
- b. Data Source: HCAHPS296

2. Medication management

The reporting of the measures must be limited to the inpatient setting only. Two measures will be reported by PPs required to report Medication Reconciliation Metric (Medication reconciliation levels in discharged inpatient population derived from NQF 0646):

²⁹⁶ See: http://www.cahps.ahrq.gov/cahpskit/files/309-4_CG_Reporting_Measures_4pt.pdf and <http://www.hcahpsonline.org/home.aspx>

- a. **Numerator:** Patients or their caregiver(s) who received a reconciled medication list at the time of discharge including, at a minimum, medications in the following categories:
- Medications to be TAKEN by patient:
 - Prescribed dosage, instructions, and intended duration must be included for each continued and new medication listed
 - CONTINUED Medications prescribed before inpatient stay that patient should continue to take after discharge, including any change in dosage or directions AND
 - NEW Medications started during inpatient stay that are to be continued after discharge and newly prescribed medications that patient should begin taking after discharge
 - Medications NOT to be Taken by patient:
 - DISCONTINUED Medications taken by patient before the inpatient stay that should be discontinued or held after discharge, AND
 - ALLERGIES AND ADVERSE REACTIONS Medications administered during the inpatient stay that caused an allergic reaction or adverse event and were therefore discontinued
- b. **Denominator:** All patients, regardless of age, discharged from an inpatient facility (e.g., hospital inpatient or observation, skilled nursing facility, or rehabilitation facility) to home/self care or any other site of care. Time Window: Each time a patient is discharged from an inpatient facility
- c. Data Source: Inpatient discharge diagnoses, hospital computer system, medical records, claims, registry and/or EMR (if available)

RD-5. Emergency Department

Admit decision time to ED departure time for admitted patients (NQF 0497)

- a. Decision Time to transfer an emergency patient to another facility (not Transport Time), i.e. decision to make the first call from arrival in transferring ED until call initiated. Recommend threshold of < 1 hour for critical patient.

RD-6. Optional Domain: Initial Core Set of Health Care Quality Measures

Providers who participate in the optional domain must report on both of the below measure sets:

- Initial Core Set of Health Care Quality Measures for Children in Medicaid and CHIP: <http://www.medicaid.gov/Medicaid-CHIP-Program-Information/By-Topics/Quality-of-Care/Downloads/ChildCoreMeasures.pdf>
- Initial Core Set of Health Care Quality Measures for Medicaid-Eligible Adults: <http://www.medicaid.gov/Medicaid-CHIP-Program-Information/By-Topics/Quality-of-Care/Downloads/AdultCoreMeasures.pdf>