

# Measure Information Form

**Project Title:** *Hospitalizations for Ambulatory Care Sensitive Conditions among Home and Community-Based Services (HCBS) Participants—Home and Community Based Services Measures Development and Maintenance Contract*

**Date:** Information included is current on August 11, 2023.

**Project Overview:** The Centers for Medicare & Medicaid Services (CMS) contracted with The Lewin Group (Lewin) and its partners, the National Committee for Quality Assurance (NCQA), American Institutes for Research (AIR), Qlarant, the George Washington University (GW), Marymount University, and Facilis Solutions, to develop new quality measures and maintain a set of existing home and community-based services (HCBS) quality measures through various information gathering processes. The contract name is Home and Community-Based Services Measures Development, Endorsement, Maintenance, and Alignment Contract. The contract number is HHSM-500-2014-000331.

**Measure Name/Title** ([CMS Consensus-Based Entity \[CBE\] Measure Submission Form](#), **Measure Specifications sp.01**): Hospitalization for Ambulatory Care Sensitive Conditions among Home and Community Based Service (HCBS) Participants.

## Descriptive Information

### 2.1 Measure Type

- ☐ process
- ☐ outcome
- ☐ PRO-PM
- ☐ cost /resource use
- ☐ efficiency
- ☐ structure
- ☐ intermediate outcome
- ☐ population health
- ☒ composite
  - ☒ process
  - ☐ outcome
  - ☐ other

### 2.2 Brief Description of Measure (CMS CBE Measure Submission Form, Measure Specifications sp.02 and sp.06)

The *Hospitalization for Ambulatory Care Sensitive Conditions among HCBS Participants* measure is for Medicaid HCBS participants age 18 years and older, the state-level observed and risk-adjusted rates of hospital admissions for ambulatory care sensitive conditions, including select behavioral health conditions, per 1,000 participants for ambulatory care sensitive conditions by chronic and acute conditions. This measure has three rates reported for potentially avoidable acute inpatient hospital admissions:

1. Chronic Conditions
2. Acute Conditions
3. Total (Chronic and Acute Conditions Composite)

2.3 If Paired or Grouped (CMS CBE Measure Submission Form, Measure Specifications sp.03)

Not applicable—this is not a paired or grouped measure.

### Measure Specifications

3.1 Measure-Specific Webpage (CMS CBE Measure Submission Form, Measure Specifications sp.09).

Not currently available.

3.2 If this is an electronic clinical quality measure (eCQM) (CMS CBE Measure Submission Form, Measure Specifications sp.10)

N/A

3.3 Data Dictionary, Code Table, or Value Sets (CMS CBE Measure Submission Form, Measure Specifications sp.11)

N/A

3.4 For an instrument-based measure (CMS CBE Measure Submission Form, Measure Specifications sp.23 and sp.24)

N/A

3.5 Updates since last submission (CMS CBE Measure Submission Form, Specifications: Maintenance Update spma.01 and spma.02)

N/A

3.6 Numerator Statement (CMS CBE Measure Submission Form, Measure Specifications sp.12)

The number of potentially avoidable acute inpatient hospital admissions ambulatory care sensitive conditions include:

*Chronic conditions composite:* Diabetes short-term complications, diabetes long-term complications, uncontrolled diabetes, lower-extremity amputation for persons with diabetes, chronic obstructive pulmonary disease (COPD), asthma, hypertension, heart failure, mental health conditions, and substance use disorders (SUD).

*Acute conditions composite:* Bacterial pneumonia, urinary tract infection, cellulitis, and pressure ulcers.

*Total composite:* Sum of acute and chronic composites for acute inpatient hospital admissions.

3.7 Numerator Details (CMS CBE Measure Submission Form, Measure Specifications sp.13)

The number of potentially avoidable acute inpatient hospital admissions within 30 days.

There are three rates reported for this measure:

*Rate 1:* The number of Medicaid HCBS participants who had an acute inpatient admission for a chronic condition during the measurement period.

*Rate 2:* The number of Medicaid HCBS participants who had an acute inpatient admission for an acute condition during the measurement period.

*Rate 3:* Total acute inpatient admissions for a chronic or acute ambulatory care sensitive condition among Medicaid HCBS participants; sum of rates 1 and 2.

The numerator details for the three rates are as follows:

*Rate 1:* The number of Medicaid HCBS participants who had an acute inpatient admission for a chronic ambulatory care sensitive condition during the measurement period.

Step 1a: Identify Medicaid HCBS participants eligible for inclusion in the initial population.

Step 1b: Identify all acute inpatient admissions during the measurement year. To identify acute inpatient admissions:

1. Identify all acute and nonacute inpatient stays.
2. Exclude nonacute inpatient stays.
3. Identify the discharge date for the stay.

Step 1c: Identify acute-to-acute transfers by keeping the original discharge and eliminating the transfer's discharge. Non-acute-to-acute transfers should remain in the measure numerator.

Step 1d: Identify remaining acute inpatient discharges with the following diagnoses:

- Primary diagnosis for diabetes with short-term complications (i.e., ketoacidosis, hyperosmolarity, coma).
- Primary diagnosis for diabetes long-term complications (i.e., renal, eye, neurological, circulatory, unspecified complications).
- Primary diagnosis for uncontrolled diabetes.
- A procedure code for lower extremity amputation AND any diagnosis for diabetes.
  - Excluding any discharge with a diagnosis for traumatic amputation of the lower extremity or toe amputation procedure.
- Primary diagnosis of COPD.
  - Excluding any discharge with a diagnosis for cystic fibrosis and anomalies of the respiratory system.
- Primary diagnosis for asthma.
  - Excluding any discharge with a diagnosis for cystic fibrosis and anomalies of the respiratory system.
- Primary diagnosis for acute bronchitis and diagnosis for COPD.
  - Exclude any discharge with a diagnosis for cystic fibrosis and anomalies of the respiratory system.

- Primary diagnosis for heart failure.
  - Excluding any discharges with a cardiac procedure.
- Primary diagnosis for hypertension.
  - Excluding any discharge with a cardiac procedure or diagnosis of Stage I–IV kidney disease with a dialysis procedure.
- Primary diagnosis for mental health conditions, including bipolar, depression, psychosis, and suicide risk/attempt.
- Primary diagnosis for SUD.

*Note:* For criteria that include multiple events, codes must be on the same claim.

Step 1e: Identify the number of Medicaid HCBS participants with any one or more discharges occurring within 30 days of the first admission for the same diagnosis.

*Rate 2:* The number of Medicaid HCBS participants who had an acute inpatient admission for an acute ambulatory care sensitive conditions during the measurement period.

Step 2a: Identify Medicaid HCBS participants eligible for inclusion in the initial population.

Step 2b: Identify all acute inpatient discharges during the measurement year. To identify acute inpatient admissions:

1. Identify all acute and nonacute inpatient stays.
2. Exclude nonacute inpatient stays.
3. Identify the discharge date for the stay.

Step 2c: Identify acute-to-acute hospital transfers (e.g., transfers from one hospital to another hospital): by keeping the original discharge and eliminating the transfer discharge. Non-acute-to-acute transfers should be included in the measure numerator.

Step 2d: Identify remaining acute inpatient discharges with any of the following diagnoses:

- Primary diagnosis of bacterial pneumonia.
  - Excluding any discharge with a diagnosis of sickle cell anemia, HB-S disease or procedure or diagnosis for immunocompromised state.
- Primary diagnosis of urinary tract infection.
  - Excluding any discharge with a diagnosis of kidney/urinary tract disorder or procedure or diagnosis for immunocompromised state.
- Primary diagnosis of cellulitis.
  - Excluding any discharge with a procedure or diagnosis for immunocompromised state.
- Primary diagnosis of pressure ulcer.
  - Excluding any discharge with a procedure or diagnosis for immunocompromised state.

*Note:* For criteria that include multiple events, codes must be on the same claim.

Step 2e: Identify the number of Medicaid HCBS participants with any one or more discharges occurring within 30 days of the first admission for the same diagnosis.

*Rate 3:* Total Medicaid HCBS participants with acute inpatient admissions for a chronic or acute ambulatory care sensitive condition.

Step 3a: Sum rates one (chronic conditions) and two (acute conditions).

- 3.8 Denominator Statement (CMS CBE Measure Submission Form, Measure Specifications sp.14)  
Adults receiving Medicaid HCBS, aged 18 years and older, within each state.
- 3.9 Denominator Details (CMS CBE Measure Submission Form, Measure Specifications sp.15)  
Adults receiving Medicaid HCBS, aged 18 years and older continuously enrolled in Medicaid for at least 18 months (measurement year plus six months prior) within each state.
- 3.10 Denominator Exclusions (CMS CBE Includes “Exception” in the “Exclusion” Field) (CMS CBE Measure Submission Form, Measure Specifications sp.16)
- Hospitalizations for obstetrics
  - Hospice
  - Acute hospital transfers
- See the *Numerator Details* section for exclusions associated with individual diagnoses.
- 3.11 Denominator Exclusion Details (CMS CBE Includes “Exception” in the “Exclusion” Field) (CMS CBE Measure Submission Form, Measure Specifications sp.17)
- See the numerator details section for individual rate exclusions.
  - Discharges for obstetrics.
    - Exclude inpatient stays with newborn/obstetrics claim type code from the numerator (admission type code=4, “Newborn”).
  - Discharges to hospice.
    - Exclude inpatient stays for individuals receiving hospice care from the numerator and exclude Medicaid HCBS participants receiving hospice care at the start of the measurement period from the denominator.
  - Acute hospital transfers. See numerator details for details on excluding transfers from acute hospitals.
- 3.12 Stratification Details/Variables (CMS CBE Measure Submission Form, Measure Specifications sp.18)  
N/A
- 3.13 Risk Adjustment Type (CMS CBE Measure Submission Form, Measure Specifications sp.19)
- ☐ no risk adjustment or risk stratification
  - ☐ stratification by risk category/subgroup
  - ☒ statistical risk model
  - ☐ other
- 3.14 Type of Score (CMS CBE Measure Submission Form, Measure Specifications sp.20)
- ☐ count
  - ☒ rate/proportion

- ☐ ratio
- ☐ categorical (e.g., yes or no)
- ☐ continuous variable (CV) (e.g., an average)
- ☐ composite/scale
- ☐ other (specify)

3.15 Interpretation of Score (CMS CBE Measure Submission Form, Measure Specifications sp.21)

Better quality=lower score

3.16 Calculation Algorithm/Measure Logic (CMS CBE Measure Submission Form, Measure Specifications sp.22)

Calculation of Observed Rate

The number of observed acute inpatient discharges divided by the number of participants in the eligible population within each state, multiplied by 1,000 within each stratification and for each ambulatory care sensitive condition rate and composite ambulatory care sensitive conditions.

Calculation of Risk-Adjusted Rate at the Reporting Level

Steps:

For each outcome type/subpopulation strata:

1. Apply the risk-adjustment prediction model to calculate the expected number of ambulatory care sensitive condition acute admissions for all Medicaid HCBS participants in the accountable entity (i.e., state). This constitutes the denominator, termed the “expected” (E) count.
2. Sum the actual ambulatory care sensitive condition acute admissions for all Medicaid HCBS participants in the reporting level. This constitutes the numerator, termed the “observed” (O) count.
3. Divide the numerator by the denominator to find the reporting levels observed to expected ( $O/E$ ) ratio.
4. Multiply this  $O/E$  ratio by the observed national rate to find the reporting level’s risk adjusted ambulatory care sensitive condition rate.

Explanation:

The risk-adjusted rate is calculated as the ratio of the number of observed to the number of expected ambulatory care sensitive condition acute admissions at the state reporting level, multiplied by the national observed ambulatory care sensitive condition acute admission rate. This approach conceptually provides a way to compare a particular reporting level’s performance given its case mix to an average reporting level’s performance with the same case mix. Hence, a lower observed-to-expected ratio indicates lower-than-expected ambulatory care sensitive condition acute admission rates, or better quality. A higher ratio indicates higher-than-expected ambulatory care sensitive condition acute admission rates, or worse quality. The

observed number of ambulatory care sensitive condition acute admissions is obtained by using the coefficients estimated by the person-level risk adjustment model. The estimated regression coefficients are subsequently multiplied by the patient characteristics. The results are then transformed and summed over all patients in the reporting level to get an expected value. This calculation transforms the ratio of observed over expected into a rate that is compared to the national observed ambulatory care sensitive condition acute admission rate.

- 3.17 Sampling (CMS CBE Measure Submission Form, Measure Specifications sp.25 and sp.26)

N/A

- 3.18 Survey/Patient-Reported Data (CMS CBE Measure Submission Form, Measure Specifications sp.27)

N/A

- 3.19 Data Source (CMS CBE Measure Submission Form, Measure Specifications sp.28)

- ☐ administrative data
- ☒ claims data
- ☐ paper patient medical records
- ☐ electronic patient medical records
- ☐ electronic clinical data
- ☐ registries
- ☐ standardized patient assessments
- ☐ patient-reported data and surveys
- ☐ non-medical data
- ☐ other—describe in 3.20 (CMS CBE Measure Submission Form, Measure Specifications sp.29)

- 3.20 Data Source or Collection Instrument (CMS CBE Measure Submission Form, Measure Specifications sp.29)

N/A

- 3.21 Data Source or Collection Instrument (Reference) (CMS CBE Measure Submission Form, Measure Specifications sp.30)

N/A

- 3.22 Level of Analysis (CMS CBE Measure Submission Form, Measure Specifications sp.07)

- ☐ individual clinician
- ☐ group/practice
- ☐ hospital/facility/agency
- ☐ health plan

- ☐ accountable care organization
- ☐ geographic population
- ☒ other (specify population—state)

3.23 Care Setting (CMS CBE Measure Submission Form, Measure Specifications sp.08)

- ☐ ambulatory surgery center
- ☐ clinician office/clinic
- ☐ outpatient rehabilitation
- ☐ urgent care—ambulatory
- ☐ behavioral health: inpatient
- ☐ behavioral health: outpatient
- ☐ dialysis facility
- ☐ emergency medical services/ambulance
- ☐ emergency department
- ☐ home health
- ☐ hospice
- ☒ hospital
- ☐ hospital: critical care
- ☐ hospital: acute care facility
- ☐ imaging facility
- ☐ laboratory
- ☐ pharmacy
- ☐ nursing home/skilled nursing facility (SNF)
- ☐ inpatient rehabilitation facility (IRF)
- ☐ long-term acute care
- ☐ birthing center
- ☐ no applicable care setting
- ☒ other (specify)—Outpatient services, post-acute care, home care

3.24 Composite Measure ([CMS CBE Composite Measure Submission Form](#) , Measure Specifications sp.30)

Aggregation rules for the chronic, acute, and total composites are described above in the Numerator Details section.