New Quality Measures: Medicaid Beneficiaries with Physical and Mental Health Integration Needs & Medicaid Beneficiaries with Complex Care Needs

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Webinar Logistics

- **All lines are muted**
- **If you want to send a question or comment during the presentation, use the ON24 "Q&A" function**
  - During the Questions and Answers (Q&A) session, we will address any questions or comments received

Webinar Objectives

This effort is part of a larger CMS project that aims to develop quality measures for certain groups of Medicaid beneficiaries who have the highest costs and greatest needs for health care and social support. These measures are intended for voluntary use in state Medicaid quality improvement efforts.

- ☑ **Describe the purpose of the new quality measures for beneficiaries with complex and integrated care needs**
- ☑ **Describe how to calculate each measure**

Agenda

- **Introductions (5 minutes)**
- **Quality measures for 2 Medicaid populations:**
  - Medicaid beneficiaries with complex care needs and high costs (BCN; 30 minutes)
  - Medicaid beneficiaries with physical and mental health integration needs (PMH; 15 minutes)
- **Q&A (40 minutes)**

Introductions

- **Centers for Medicare & Medicaid Services (CMS)**
  - Karen LLanos
  - Roxanne Dupert-Frank
- **Mathematica**
  - Cara Stepanczuk
  - Jennifer Lyons

Medicaid Beneficiaries with Complex Care Needs and High Costs (BCNs)

Who Are Medicaid Beneficiaries with Complex Care Needs and High Costs (BCNs)?

Medicaid beneficiaries who,
because of their health and/or social conditions,
are likely to experience high levels of
costly but preventable service use,
and whose care patterns and costs
have the potential to be improved.

Source: CMS Medicaid Innovation Accelerator Program. “Improving Care for Medicaid Beneficiaries with Complex Care Needs and High Costs." Available at https://www.medicaid.gov/state-resource-center/innovation-accelerator-program/program-areas/beneficiaries-with-complex-needs/index.html

Defining the BCN Population for Quality Measurement

- **Goals:**
  - Identify a population with high medical acuity, as well as behavioral and psychosocial needs
  - Include at least 5% of beneficiaries in each state
  - Use administrative data to minimize the burden of calculating the measure
- **Recommended BCN population definition:**
  - Medicaid beneficiaries ages 18 to 64
  - At least 10 months of Medicaid eligibility
  - At least 1 inpatient admission
  - At least 2 chronic conditions

Measuring Intermediate Outcomes to Improve Quality of Care for BCNs

Population

Medicaid BCNs have high disease burden and socioeconomic barriers to timely, appropriate care.

These lead to frequent inpatient and emergency services (also known as hospital-based care).

Inputs

BCN programs aim to

- Strengthen beneficiaries' relationships with health care providers
- Improve care coordination and timely outpatient care
- Support chronic disease self-management

These services help mitigate disease burden and frequent use of hospital-based care.

Intermediate outcomes

Reduction in hospital-based care due to

- An increase in timely use of health care in appropriate settings
- Better condition self-management

Outcomes

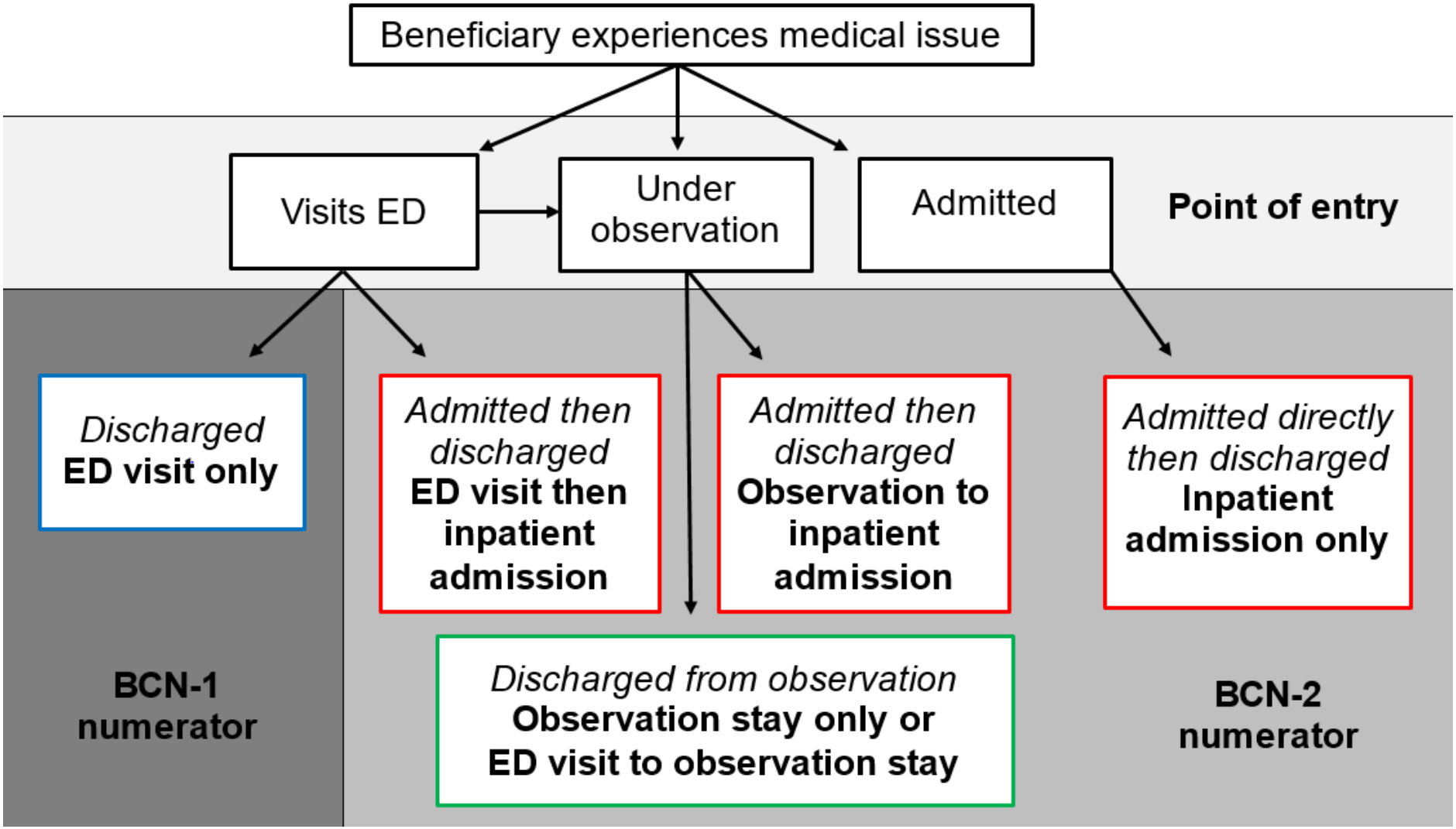
Improved quality of care provided to BCNs results in

- Reduced rate of adverse health events associated with hospital-based care
- Lower overall cost of care

Measuring Hospital-Based Care

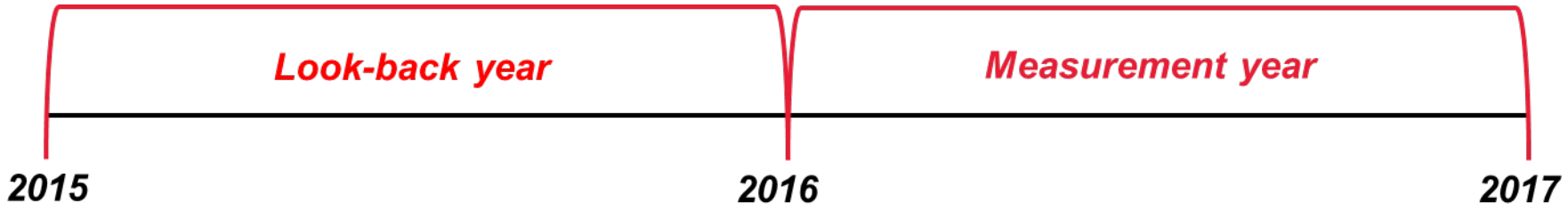
- **BCN-1: All-Cause Emergency Department (ED) Utilization Rate for Medicaid BCNs**
- **BCN-2: All-Cause Inpatient Admission Rate for Medicaid BCNs**

Categories of Hospital-Based Care



Elements Common to Both BCN-1 and BCN-2

- **BCN population definition**
- **Rate: number per 1,000 beneficiary-months**
- **2-year measure period:**
  - Look-back year data used to identify the BCN population
  - Measurement year data used for measure calculation



Identifying the BCN Population

Criteria	Specifications
Ages 18 to 64	Beneficiaries age 18 as of January 1 of the look-back year and age 64 as of December 31 of the measurement year
10 or more months of Medicaid eligibility	Beneficiaries enrolled in Medicaid for at least 10 of the 12 months in the look-back year
1 or more inpatient admission	Claims in which type of service = "01" (for "inpatient hospital").
2 or more chronic conditions	Diagnoses based on Chronic Condition Warehouse* chronic condition list *Apply a one-year look-back period to all conditions. Algorithms are publicly available at https://www.ccwdata.org and in the measures' Value Set Tables.

NOTE: Apply all criteria to look-back year data.

Step 1: Calculate the Measure Denominator

For both measures:

- Use the BCN population identified in previous slide (using the look-back year)
- Sum the number of Medicaid eligible months in the measurement year

Step 2: Calculate the Measure Numerator

BCN-1: number of ED visits that did not end in a hospital admission

- **Sum the total number of ED visits in the measurement year across all beneficiaries identified as BCNs**
- **Use any of the three claim type, revenue code, and procedure code combinations to identify ED visits***
- **Exclude ED visits that …**
  - Result in an inpatient admission or observation stay*
  - Occur during a month in which a beneficiary is not enrolled in Medicaid
- **Allow at most 1 ED visit per beneficiary per day**

* ED visits and observation stays are identified using Healthcare Effectiveness Data and Information Set value sets, which are trademarked by the National Committee for Quality Assurance, and provided for the express purpose of calculating this measure.

Step 2: Calculate the Measure Numerator

BCN-2: number of inpatient admissions and observation stays

- Sum the total number of inpatient admissions and observation stays in the measurement year across all beneficiaries identified as BCNs
- Use institutional claims for which type of service = "01" (for inpatient hospital)
- Use either of the revenue code and procedure code combinations to identify observation stays*
- Exclude inpatient admissions and observation stays that occur during a month in which a beneficiary is not enrolled in Medicaid
- Allow at most 1 inpatient admission or observation stay per beneficiary per day

*Observation stays are identified using Healthcare Effectiveness Data and Information Set value sets, which are trademarked by the National Committee for Quality Assurance, and provided for the express purpose of calculating this measure.

Step 3: Calculate the Observed (unadjusted) Measure Rate

For both measures:

Divide the numerator by the number of beneficiary months, and multiply the resulting ratio by 1,000, as follows:

BCN-1: Observed ED utilization rate	BCN-2: Observed inpatient admission rate
$\frac{Number\ of\ ED\ visits}{Number\ of\ beneficiary\ months} x\ 1{,}000$	$\frac{Number\ of\ inpatient\ admissions\ and\ observation\ stays}{Number\ of\ beneficiary\ months} x\ 1{,}000$

Note: States can use the unadjusted measure rate for internal quality improvement purposes only. For all other purposes, states should use the risk-adjusted measure rate.

Applying Risk Adjustment to BCN-1 and BCN-2

- **Risk adjustment facilitates fair performance comparisons across states serving populations with varying health profiles.**
  - Without it, states with sicker individuals will appear to have worse quality compared with states that serve healthier individuals.
- **Same risk-adjustment model and calculation methods apply to both measures, but you must use different risk factor weights.**
  - Includes 69 risk factors: age, sex, eligibility category, and chronic conditions
  - Refer to the Value Set Tables for risk factor weights

Step 1: Apply Risk Factor Weights

- **Apply the base weight to each beneficiary:**

  Example:

  – All beneficiaries have a value of 1 for the base weight.
  The BCN-2 base weight is -3.739.
  The product for each beneficiary would be 1 x -3.739 = -3.739.

- **Use a beneficiary's age in the look-back year for two risk factors:**

  – **Centered age** = (beneficiary's age) – (mean age across beneficiaries in sample)

  – **Centered age^2** = (beneficiary's age) – (mean age across beneficiaries in sample)^2

  – Mean age across beneficiaries in sample (41.7) applies to BCN-1 and BCN-2

- **For the remaining 66 risk factors, multiply the beneficiary's *value* by the associated *risk factor weight***

  Example:

  – A beneficiary's value for "male" is 1.
  The BCN-2 weight for male is 0.105.
  The product for a male beneficiary would be 1 x 0.105 = 0.105.

Step 1: Apply Risk Factor Weights (cont.)

- **Sample calculation for a hypothetical BCN with the following characteristics**
  - 50 years old (with mean age of 41.7)
  - Female
  - Eligibility category of Aged, Blind, or Disabled (A/B/D)
  - Has diagnosis of depression (DEPR) and chronic heart failure (CHF), and therefore is designated as having both a behavioral and physical health condition (BH/PH)
- **Calculation of final weighting (using BCN-2 weights)**

Base weight	Centered age and age^2	A/B/D	Child	Male	DEPR	CHF	BH/ PH	Sum of weights
-3.739	-0.0222	0.453	0	0	-0.024	0.371	-0.042	-2.456

Uses BCN-2 weights.

Step 2: Calculate the Expected Number of Numerator Events

For both measures:

- Sum products that resulted from multiplying risk factor values and weights to obtain final weighting (as illustrated on previous slide)
- Exponentiate the resulting sum and multiply it by the number of beneficiary months in the measurement year as follows:

BCN-1: Expected number of ED visits	BCN-2: Expected number of inpatient admissions
$(Number\ of\ beneficiary\ months)\ x\ (e^{sum\ of\ BCN1\ weights})$	$(Number\ of\ beneficiary\ months)\ x\ (e^{sum\ of\ BCN2\ weights})$

Step 3: Calculate the Adjusted Measure Rate

For both measures:

- **Divide state's observed numerator value (O) by state's expected numerator value (E) to obtain the O/E ratio**
- **Multiply state's O/E ratio by observed rate across states to obtain the state's risk-adjusted measure rate, as follows:**

BCN-1: Adjusted ED utilization rate	BCN-2: Adjusted inpatient admission rate
$\frac{(Observed\ \#\ ED\ visits)}{(Expected\ \#\ ED\ visits)}\ x\ (234.2)$	$\frac{(Observed\ \#\ admissions)}{(Expected\ \#\ admissions)} x\ (100.5)$

The resulting values will be in the form of number per 1,000 beneficiary months.

Medicaid Beneficiaries with Physical and Mental Health (PMH) Integration Needs

Who Are Beneficiaries in Need of PMH Integration?

For the purposes of this measure:

- Individuals with behavioral health needs, many of whom have comorbid physical health conditions that require medical attention

Defining the PMH Population for Quality Measurement

- **Goals:**
  - Target measures to Medicaid beneficiaries most in need of PMH integration
  - Use administrative data to minimize the burden of calculating the measure
- **Recommended PMH populations of interest:**
  - Beneficiaries with serious mental illness (SMI)
    - Including beneficiaries prescribed antipsychotic medications
  - Beneficiaries with co-occurring physical health and mental health conditions
  - Beneficiaries with co-occurring physical health and substance use disorder (SUD)
  - Beneficiaries with co-occurring mental health conditions and SUD

Measures for PMH Population

PMH measures	
PMH-1: Follow-Up Care for Adult Medicaid Beneficiaries Who Are Newly Prescribed an Antipsychotic Medication (National Quality Forum [NQF] #3313)	PMH-20: All-Cause Emergency Department Utilization Rate for Medicaid Beneficiaries Who May Benefit From Integrated Physical and Behavioral Health Care (forthcoming)

PMH-1 Measure Overview

- **Assesses whether beneficiaries who are newly prescribed an antipsychotic medication receive follow-up care within four weeks**
  - Intended to encompass follow-up provided through integrated approaches to care
  - Does not limit the type of provider who conducts the follow-up visit
- **Measure is based on prescriptions, not individuals**
  - A beneficiary may have more than one qualifying newly prescribed antipsychotic prescription in a measurement year
- **Measure does not require risk adjustment**

PMH-1 Key Terms

Term	Definition
Newly prescribed	Beneficiary had no antipsychotic medications of any type dispensed during a period of 120 days (four months) before antipsychotic prescription fill date
Follow-up period	Four-week (28-day) period following prescription of new antipsychotic medication; day after the prescription is counted as day 1 of follow-up period
Measurement period	To account for follow-up period, measurement period starts January 1 and ends November 30 of the measurement year
Look-back period	Measure includes 120-day (four-month) look-back period to establish new antipsychotic prescriptions
Antipsychotic medications	Antipsychotic medications identified using National Drug Codes
Qualifying follow-up visits	Qualifying follow-up visits identified using Current Procedural Terminology (CPT) and Healthcare Common Procedure Coding System (HCPCS) codes

Step 1: Identify the Eligible Population

- **Identify Medicaid beneficiaries ages 18 years and older**
  - Include both dual eligible and Medicaid-only beneficiaries
- **From this group, identify new prescriptions of one or more antipsychotic medications**

Step 2: Apply Continuous Enrollment Criteria

- **Remove any prescriptions for beneficiaries not continuously enrolled for:**
  - At least four months before the new prescription
  - At least four weeks following the new prescription

Step 3: Apply Exclusions and Determine Denominator

- **Remove any prescriptions for beneficiaries who:**
  - Had an acute inpatient admission during the four weeks following the fill date of the new prescription
  - Died during the four weeks following the fill date of the new prescription
- **Denominator = number of new prescriptions after Step 3 is applied**

Step 4: Calculate Measure Numerator

- Identify number of prescriptions in denominator for which the beneficiary had a follow-up visit within four weeks of the prescription fill date

Step 5: Calculate Performance Rate

$$\frac{Numerator}{Denominator} x\ 100 = performance\ rate$$

Denominator	Numerator
Total number of new antipsychotic prescriptions for beneficiaries after applying continuous enrollment and exclusion criteria	Total number of new antipsychotic prescriptions for beneficiaries who had a qualifying outpatient encounter within the follow−up period

PMH-20 Measure Overview

- **All-cause ED utilization measure**
  - Modeled based on BCN-1 measure
- **Four denominator groups focused on beneficiaries who might benefit from integrated care:**
  - Co-occurring physical health and mental health conditions
  - Co-occurring physical health conditions and substance use disorders (SUDs)
  - Co-occurring mental health conditions and SUDs
  - Serious mental illness
- **Will be risk adjusted, similar to BCN-1 measure**
- **To be submitted to NQF in the future**

PMH-20 Measure Details

Denominator	Numerator
Number of Medicaid-enrolled months among Medicaid beneficiaries who meet eligibility criteria for any of four denominator groups: • Co-occurring physical health and mental health conditions • Co-occurring physical health conditions and substance use disorders (SUDs) • Co-occurring mental health conditions and SUDs • Serious mental illness	Number of ED visits that did not result in an inpatient or observation stay among non−dual eligible Medicaid beneficiaries age 18 and older with at least 10 months of enrollment who met the eligibility criteria for any of the four denominator groups during the measurement year

$$Unadjusted\ measure\ rate = \frac{Number\ of\ ED\ visits}{Number\ of\ beneficiary\ months}\ x\ 1{,}000$$

Questions and Answers

Use the ON24 “Q&A” function to send a message

Additional Resources

- Technical specifications and additional information about the BCN and PMH program areas will be available online later this summer
- For information about the measures discussed today, contact IAPMeasures@cms.hhs.gov