Calculating the Plan All-Cause Readmissions (PCR) Measure in the 2025 Adult and Health Home Core Sets

Introduction

Readmission to the hospital within 30 days of discharge is frequently avoidable and can lead to adverse patient outcomes and higher costs. The Plan All-Cause Readmissions (PCR) measure in the Adult and Health Home Core Sets assesses the percentage of acute inpatient and observation stays during the measurement year that were followed by an unplanned acute readmission for any diagnosis within 30 days and the predicted probability of an acute readmission (see Table 1). State reporting of the PCR measure can help drive quality improvement efforts and monitor progress in reducing readmissions in Medicaid.

This technical assistance resource highlights changes to the PCR measure for 2025 Adult and Health Home Care Sets reporting, which corresponds to measurement year 2024. It also provides a step-by-step guide to calculating the measure.

2025 Reporting Cycle Change

For 2025 reporting, the measure steward clarified that supplemental data can be used to identify required exclusions.

Table 1. Overview of the PCR Measure for 2025 Adult and Health Home Core Sets Reporting

Measure steward	National Committee for Quality Assurance (NCQA)
Description	The number of acute inpatient and observation stays during the measurement year that were followed by an unplanned acute readmission for any diagnosis within 30 days and the predicted probability of an acute readmission. States report the following data: • Count of Index Hospital Stays (IHS) • Count of Observed 30-Day Readmissions • Count of Expected 30-Day Readmissions • Count of Beneficiaries in Medicaid Population[a] • Number of Outliers
IHS	Index hospital stay. An acute inpatient admission or observation stay with a discharge on or between January 1 and December 1 of the measurement year
Index Admission Date	The IHS admission date
Index Discharge Date	The IHS discharge date. The Index Discharge Date must occur on or between January 1 and December 1 of the measurement year.
Age	Ages 18 to 64 as of the Index Discharge Date
Exclusions	• Beneficiaries who are in hospice or who use hospice services during the measurement year • Beneficiaries in the eligible population with four or more hospital stays between January 1 and December 1 of the measurement year (i.e., outlier beneficiaries) • Nonacute inpatient stays • Hospital stays for select diagnoses[b] or that meet specified admission/discharge date criteria, or if the beneficiary died during the stay • Readmissions for select diagnoses[b]

[a] For PCR-HH, this data element is the Count of Enrollees in the Health Home Population.

[b] Please refer to the technical specifications for a list of these diagnoses.

How to Report the PCR Measure for the 2025 Adult and Health Home Core Sets

This section explains how states should report the data elements for the PCR measure in the web-based reporting system, and highlights the data elements that are calculated automatically by the reporting system.

The Count of Index Hospital Stays (IHS) (column 1), the Count of Observed 30-Day Readmissions (column 2), the Count of Expected 30-Day Readmissions (column 4), the Count of Beneficiaries in Medicaid Population (column 7), and the Number of Outliers (column 8) are reported by states.

The Observed Readmission Rate (column 3), the Expected Readmission Rate (column 5), the Observed-to-Expected Ratio (column 6), and the Outlier Rate (column 9) are automatically calculated by the web-based reporting system using the five reported data elements.

Note that the observed-to-expected (O/E) ratio is the ratio of the actual (observed) count of readmissions in relation to the risk-adjusted (expected) count of readmissions. The O/E ratio is interpreted as "lower-is-better":

- O/E ratio < 1.0 means that the state had *fewer* readmissions than expected given the case mix
- O/E ratio = 1.0 means that the number of readmissions was the *same* as expected given the case mix
- O/E ratio > 1.0 means that the state had *more* readmissions than expected given the case mix

Table 2. Overview of PCR Reporting

	(1) Count of IHS	(2) Count of Observed 30-Day Readmissions	(3) Observed Readmission Rate Col. 3 = (Col. 2/Col. 1) * 100	(4) Count of Expected 30-Day Readmissions	(5) Expected Readmission Rate Col. 5 = (Col. 4/Col. 1) * 100	(6) O/E Ratio Col. 6 = Col. 2/Col. 4	(7) Count of Beneficiaries in Medicaid Population[a]	(8) Number of Outliers	(9) Outlier Rate Col. 9 = (Col. 8/Col. 7) * 1,000
Total	State reports data element	State reports data element	Data element automatically calculated	State reports data element	Data element automatically calculated	Data element automatically calculated	State reports data element	State reports data element	Data element automatically calculated

[a] For PCR-HH, this data element is the Count of Enrollees in the Health Home Population.

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Step-by-Step Guide to Calculating the Plan All-Cause Readmissions (PCR) Measure

This section is intended to supplement the technical specification for the PCR measure with step-by-step information for calculating the measure. The steps are aligned with the data elements reported in or calculated by the web-based reporting system. For 2025 reporting, the measurement year is calendar year (CY) 2024. Supplemental data sources, such as electronic health records or registry data, cannot be used to calculate the PCR measure, except for required exclusions.

Column 1: Count of IHS

Identify the eligible population; identify IHS for the eligible population; identify, remove, and report outlier beneficiaries from the eligible population; and report the count of IHS among nonoutliers for the measurement year.

Identify the Eligible Population

The eligible population for this measure is based on discharges, not beneficiaries. Include all acute inpatient and observation stay discharges for beneficiaries who had one or more discharges on or between January 1 and December 1 of the measurement year. The following beneficiary characteristic criteria must be met for each discharge as defined below:

- **Age:** Beneficiaries must be 18 to 64 years of age as of the Index Discharge Date for the IHS.
- **Continuous enrollment:** Beneficiaries must be continuously enrolled for 365 days prior to the Index Discharge Date through 30 days after the Index Discharge Date. There should be no more than one gap in enrollment of up to 45 days during the 365 days prior to the Index Discharge Date and no gap during the 30 days following the Index Discharge Date.

Identify IHS for the Eligible Population

- **Step 1.** Identify all acute inpatient and observation stay discharges on or between January 1 and December 1 of the measurement year. Inpatient and observation stays where the discharge date from the first setting and the admission date to the second setting are two or more calendar days apart are considered distinct stays and should be counted separately. The measure includes acute discharges from any type of acute facility (including behavioral health care facilities). Observation stays that do not have a recorded admission or discharge date should have the admission date set to the earliest date of service on the claim and the discharge date set to the last date of service on the claim.
- **Step 2.** For discharges with one or more direct transfers, keep the original admission date as the Index Admission Date, and use the direct transfer's discharge date as the Index Discharge Date. A direct transfer is when the discharge date from the initial stay precedes the admission date to a subsequent stay by one calendar day or less. Direct transfers may occur from and between different facilities and/or different services levels.[1]
- **Step 3.** Exclude hospital stays where the Index Admission Date is the same as the Index Discharge Date.
- **Step 4.** Exclude hospital stays if the beneficiary died during the stay, was a female beneficiary with a principal diagnosis of pregnancy on the discharge claim, or if the beneficiary had a principal diagnosis of a condition originating in the perinatal period on the discharge claim.
- **Step 5.** Calculate continuous enrollment for each discharge using the definition above.

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[1] In the technical specifications, updates were made to the Administrative specification to identify direct transfers using the definition of "direct transfer" in the Definitions section.

Identify, Remove, and Report Outlier Beneficiaries

Outliers are Medicaid beneficiaries in the eligible population with four or more IHS between January 1 and December 1 of the measurement year.

- **Step 6.** After identifying eligible IHS from the preceding steps 1 through 5, identify any Medicaid beneficiaries with four or more IHS. Remove all hospital stays among these outliers and enter the number of outlier beneficiaries into the Number of Outliers field of the web-based reporting system.

Report the Count of IHS among Nonoutliers

Count the remaining number of IHS among nonoutlier beneficiaries and enter the value into the Count of IHS field of the web-based reporting system.

Column 2: Count of Observed 30-Day Readmissions

Determine the number of IHS that were followed by at least one acute readmission for any diagnosis within 30 days of the Index Discharge Date.

Identify IHS Followed by an Admission within 30 Days after Discharge

- **Step 1.** Identify all acute inpatient and observation stays with an admission date on or between January 3 and December 31 of the measurement year.
- **Step 2.** For discharges with one or more direct transfers, keep the original admission date as the Index Admission Date, and use the direct transfer's discharge date as the Index Discharge Date. A direct transfer is when the discharge date from the first initial stay precedes the admission date to a second subsequent stay by one calendar day or less.
- **Step 3.** Exclude acute hospitalizations for beneficiaries with a principal diagnosis of pregnancy, beneficiaries with a principal diagnosis for a condition originating in the perinatal period, or beneficiaries with a planned hospital stays with a principal diagnosis of maintenance chemotherapy, beneficiaries with a principal diagnosis of rehabilitation, an organ transplant, or a potentially planned procedure without a principal acute diagnosis.
- **Step 4.** For each IHS, determine if any of the acute inpatient and observation stays identified in the numerator have an admission date within 30 days after the Index Discharge Date.

Reporting the Count of Observed 30-Day Readmissions

Count the number of observed IHS with a readmission within 30 days and enter the value into the Count of Observed 30-Day Readmissions field of the web-based reporting system.

Column 3: Observed Readmission Rate

The Observed Readmission Rate is the percentage of acute inpatient stays during the measurement year that were followed by an unplanned acute readmission for any diagnosis within 30 days. It is equal to the Count of Observed 30-Day Readmissions (Column 2) divided by the Count of IHS (Column 1) multiplied by 100. This data element is automatically calculated for states by the web-based reporting system.

Column 4: Count of Expected 30-Day Readmissions

Each IHS has a chance of resulting in a readmission within 30 days. That risk is based on attributes of the beneficiary and hospitalization (e.g., gender, observation stay status at discharge, surgical procedure, discharge condition) and their associated risk weights. A separate base risk weight for Medicaid beneficiary status is no longer included in the risk adjustment calculation. The sum of the risk across all IHS is the Count of Expected 30-Day Readmissions.

Step 1. Classify the Risk Adjustment Categories for Each IHS

For each IHS, classify the risk adjustment categories based on presence of an observation stay status at discharge, surgeries, discharge condition, gender, and age from the IHS, and comorbidities from the classification period.

Observation Stay	Determine if the IHS at discharge was an observation stay (Observation Stay Value Set).
Surgeries	Determine if the beneficiary underwent surgery during the stay using the Surgery Procedure Value Set in the 2025 Core Set HEDIS Measures Value Set Directory. Consider an IHS to include a surgery if at least one procedure code is present from any provider between the admission and discharge dates. The 2025 Core Set HEDIS Measures Value Set Directories are available for download, free of charge in the NCQA store. Links are included in the "Technical Assistance Resources for Calculating the PCR Measure" section at the end of this Technical Assistance resource.
Discharge Condition	Assign a Discharge Clinical Condition (CC) category code or codes to the IHS based on its principal discharge diagnosis, using Table CC-Mapping. Exclude diagnoses that cannot be mapped to Table CC-Mapping. The risk adjustment tables are available to order free of charge in the NCQA store at https://store.ncqa.org/hedis-my-2024-risk-adjustment-tables.html. Once ordered, they can be accessed through the NCQA Download Center (https://my.ncqa.org/Downloads).
Comorbidities	Assign Risk Adjustment Comorbidity Category Determination based on all the encounters during the classification period. For more information, see the "Steps for Risk Adjustment Comorbidity Category Determination" in the Technical Specifications for the Adult Core Set and Health Home Core Set Measures. The links are available in the "Technical Assistance Resources for Calculating the PCR Measure" section at the end of this Technical Assistance Resource.

Step 2. Assign Risk Adjustment Weights

For each IHS among nonoutlier beneficiaries, identify risk adjustment weights based on observation stay status at discharge, surgeries, discharge condition, comorbidity, age, and gender. Each weight indicates how much the attribute raises or lowers the chance of a 30-day readmission. Obtain risk adjustment weights for each classification using the risk adjustment tables available on the NCQA store at https://store.ncqa.org/hedis-my-2024-risk-adjustment-tables.html. The CC-Mapping, HCC-Rank, and HCC-Comb tables can be found in the "RAU Table – PCR Medicaid MY2024," while the remaining tables needed to calculate the measure are in the "PCR Risk Adjustment Tables" at the link provided.

Table 3 illustrates the assignment of risk adjustment weights according to the beneficiary demographics and presence of observation stay status at discharge, surgeries, discharge condition, and presence of comorbidities for a discharge for a hypothetical Medicaid beneficiary.

Step 3. Sum Risk Adjustment Weights

Sum all the risk adjustment weights for each IHS. Table 3 illustrates the sum of the weights for a hypothetical discharge. In this example, the risk adjustment weights are obtained from the PCR Risk Adjustment Table, Medicaid Tab.

Table 3. Example of Risk Adjustment Weighting based on the Attributes of a Hypothetical IHS

Hypothetical Attributes	Value	Weight
Assignment of Risk Adjustment Weights (See Step 2)		
Gender/Age	Female & Age 18–44	-2.7841
Observation Stay Weight	No	-
Surgical Weight	Yes	-0.1251
Discharge CC	CC-57 (Schizophrenia)	0.2516
HCC-PCR	HCC-18 (Diabetes with Chronic Complications)	0.0748
	HCC-55 (Drug/Alcohol Dependence)	0.0832
Sum of Weights (See Step 3) =		**-2.4996**
Estimated Readmission Risk for Hypothetical IHS (See Step 4) =		**0.0759**

Step 4. Calculate the Estimated Readmission Risk for each IHS

Use the formula below to calculate the Estimated Readmission Risk based on the sum of the weights for each IHS. As shown in Table 3, the Estimated Readmission Risk for a hypothetical discharge is 0.0759, applying the formula below.

$$Estimated\ Readmission\ Risk = \frac{e^{(\sum WeightsForIHS)}}{1+e^{(\sum WeightsForIHS)}}$$

OR

Estimated Readmission Risk = [exp (sum of weights for IHS)] / [1 + exp (sum of weights for IHS)]

Note: "Exp" refers to the exponential or antilog function.

Truncate the estimated readmission risk for each IHS to 10 decimal places. Do not truncate or round in previous steps.

Step 5. Calculate the Variance for each IHS (Optional for Core Set Reporting)

States can use the formula below and the Estimated Readmission Risk calculation to calculate the variance for each IHS. The variance is used to calculate confidence intervals, which can help to evaluate the precision of the results. Note that this step is not required for Core Set reporting.

Variance = Estimated Readmission Risk x (1 – Estimated Readmission Risk)

Truncate the variance *for each IHS* to 10 decimal places.

For example: If the Estimated Readmission Risk is 0.1518450741 for an IHS, then the variance for this IHS is 0.1518450741 x 0.8481549259 = 0.1287881475.

Reporting the Count of Expected 30-Day Readmissions

Use the formula below to calculate the Count of Expected Readmissions. Sum the estimated readmission risk for each IHS (calculated in Step 4) and enter the value into Column 4 of the reporting table. The Count of Expected Readmissions should be reported to four decimal places.

$$Count\ of\ Expected\ Readmissions = \sum Estimated\ Readmission\ Risk$$

Column 5: Expected Readmission Rate

The Expected Readmission Rate is the percentage of acute inpatient and observation stays during the measurement year that are predicted to be followed by an unplanned acute readmission for any diagnosis within 30 days. It is equal to the Count of Expected 30-Day Readmissions (Column 4) divided by the Count of IHS (Column 1) multiplied by 100. This data element is automatically calculated for states by the web-based reporting system.

Column 6: Observed-to-Expected (O/E) Ratio

The Observed-to-Expected (O/E) ratio is the ratio of the count of actual (observed) readmissions in relation to the count of risk-adjusted (expected) readmissions. It is equal to the Count of Observed 30-Day Readmissions (Column 2) divided by the Count of Expected 30-Day Readmissions (Column 4). This data element is automatically calculated for states by the web-based reporting system.

Column 7: Count of Beneficiaries in the Medicaid Population

The Count of Beneficiaries in the Medicaid Population serves as the denominator for the Outlier Rate that will be calculated in Column 9 of the reporting table. This estimate identifies the count of beneficiaries who are eligible to experience a hospitalization during the year. This value can be derived using the Count of Beneficiaries in the Medicaid Population definition for the PCR-AD measure or the Health Home Population definition for the PCR-HH measure.

Identify the Count of Beneficiaries in the Medicaid Population or the Health Home Population

Identify the Count of Beneficiaries in the Medicaid population or the Health Home population who meet all of the following criteria:

- **Age:** Beneficiaries must be 18 to 64 years of age as of the earliest Index Discharge Date.
- **Count of Beneficiaries in the Medicaid Population:** Beneficiaries in the eligible population prior to exclusion of outliers (up to and including step 5 of calculating the Count of IHS). The Count of Beneficiaries in the Medicaid Population is used as a denominator for the Outlier Rate and is based on beneficiaries, not discharges. Count beneficiaries only once in the Medicaid population.
- **Health Home Population:** Enrollees in the eligible population prior to exclusion of outliers (up to and including step 5 of calculating the Count of IHS). The Health Home population is based on enrollees, not discharges. Count enrollees only once in the Health Home population.

Reporting the Count of Beneficiaries in Medicaid Population or the Health Home Population

Count the number of beneficiaries that meet the Medicaid population or Health Home population definition and enter the value into the Count of Beneficiaries in Medicaid Population or Enrollees in the Health Home Population field of the web-based reporting system.

Column 8: Number of Outliers

Outliers are Medicaid beneficiaries in the eligible population with four or more IHS between January 1 and December 1 of the measurement year. These individuals are identified in Step 6 of the calculation of Count of IHS.

Reporting the Number of Outliers

Count the number of beneficiaries that are outliers according to age group as identified for the Count of Beneficiaries in the Medicaid Population or Health Home Population and enter the value into the Number of Outliers field of the web-based reporting system.

Column 9: Outlier Rate

The Outlier Rate is the rate of Outlier beneficiaries that were removed from the risk-adjusted measure calculation per 1,000 beneficiaries in the Count of Beneficiaries in the Medicaid Population. It is equal to the (Number of Outliers [Column 8] divided by the Count of Beneficiaries in Medicaid Population [Column 7]) x 1,000. This data element is automatically calculated for states by the web-based reporting system.

Technical Assistance Resources for Calculating the PCR Measure

Several resources are available to help states calculate the PCR measure for Adult and Health Home Core Sets reporting[2]:

- The technical specifications for the PCR-AD measure are available in the 2025 Adult Core Set Resource Manual, at https://www.medicaid.gov/medicaid/quality-of-care/downloads/medicaid-adult-core-set-manual.pdf.
- The value set directory for the PCR-AD measure is available in the 2025 Adult Core Set HEDIS Measures Value Set Directory, at https://store.ncqa.org/hedis-2025-adult-core-set-value-set-directory-my-2024.html.
- The technical specifications for the PCR-HH measure are available in the 2025 Health Home Core Set Resource Manual, at https://www.medicaid.gov/state-resource-center/medicaid-state-technical-assistance/downloads/2025-1945-HH-Core-Set-Manual.pdf.
- The value set directory for the PCR-HH measure is available in the 2025 Health Home Core Set HEDIS Measures Value Set Directory at https://store.ncqa.org/hedis-2025-health-home-core-set-hedis-value-set-directory-my-2024.html
- The risk adjustment tables and the Risk Adjustment Utilization Tables User Manual are available to order free of charge in the NCQA store at https://store.ncqa.org/hedis-my-2024-risk-adjustment-tables.html. Once ordered, the risk adjustment tables can be accessed through the NCQA Download Center (https://my.ncqa.org/Downloads). The tables needed to calculate this measure are found in both the "PCR Risk Adjustment Tables" and the "RAU Table – PCR Medicaid MY2024" which includes the CC-Mapping, HCC-Rank, and HCC-Comb tables.

Adult Core Set resources are available at: https://www.medicaid.gov/medicaid/quality-of-care/performance-measurement/adult-and-child-health-care-quality-measures/adult-core-set-reporting-resources/index.html.

Health Home Core Set resources are available at: https://www.medicaid.gov/state-resource-center/medicaid-state-technical-assistance/health-home-information-resource-center/quality-reporting/index.html.

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[2] Please note that users will be required to agree to the license agreements for the 2025 Medicaid and CHIP Core Sets for use of Resource Manuals and value sets for Core Set reporting.

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For More Information

For technical assistance related to calculating and reporting the PCR measure in the Adult and Health Home Core Sets, or other Child, Adult, and Health Home Core Set measures, contact the TA mailbox at **MACQualityTA@cms.hhs.gov**.

More information on tools to reduce Medicaid readmissions is available at "The Hospital Guide to Reducing Medicaid Readmissions," available at https://www.ahrq.gov/professionals/systems/hospital/medicaidreadmitguide/index.html.