Frequently Asked Questions

For Publicly Reported Outcome and Payment Measures

Summer 2023 Public Reporting

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Publicly Reported Measures

This Frequently Asked Questions (FAQs) document provides general and technical information for the 21 hospital-level risk-standardized outcome and payment measures that are publicly reported (Table 1). Throughout the document, we have noted key terms in blue text that are linked to the Glossary. Please note that the FAQs in this document apply to the risk-standardized outcome and payment measures publicly reported in Summer 2023.

Table 1. Publicly Reported Measures

Measure Outcome	Condition/Procedure	Outcome follow-up timeframe	Included in IQR Program	Included in HRRP Program	Included in HVBP Program
Mortality	Acute myocardial infarction (AMI)	30-day	X	X	✓
	Coronary artery bypass graft (CABG)	30-day	X	X	✓
	Chronic obstructive pulmonary disease (COPD)	30-day	X	X	✓
	Heart failure (HF)	30-day	X	X	✓
	Stroke	30-day	✓	X	X
	Pneumonia	30-day	X	X	✓
Readmission	Acute myocardial infarction	30-day	X	✓	X
	Coronary artery bypass graft	30-day	X	✓	X
	Chronic obstructive pulmonary disease	30-day	X	✓	X
	Heart failure	30-day	X	✓	X
	Hospital-wide readmission (HWR)	30-day	✓	X	X
	Pneumonia	30-day	X	✓	X
	Total knee/total hip arthroplasty (THA/TKA)	30-day	X	✓	X
Complication	Total knee/total hip arthroplasty	90-day	✓	X	✓
Payment	Acute myocardial infarction	30-day	✓	X	X
	Heart failure	30-day	✓	X	X
	Pneumonia	30-day	✓	X	X
	Total knee/total hip arthroplasty	90-day	✓	X	X
EDAC	Acute myocardial infarction	30-day	✓	X	X
	Heart failure	30-day	✓	X	X
	Pneumonia	30-day	✓	X	X

Table 1 Key: ✓= measure is included in the specified program, **X**= measure is not included in the specified program

Resources for the 2023 Claims-Based Measures

The table below lists resources produced for the Complication, Excess Days in Acute Care (EDAC), Mortality, Payment, and Readmission measures that are available on *QualityNet*. For more information on each resource, click the links in the box below. For your initial navigation, please visit www.qualitynet.cms.gov > Hospitals - Inpatient > Measures. The measures are listed under Claims-Based Measures on the webpage.

Measure Updates and Specifications Reports

Technical reports for:

Complication Measure
EDAC Measures
Mortality Measures
Payment Measures
Readmission Measures

Historical Public Reporting Timeline

A comprehensive timeline depicting when each Measure was confidentially reported, first publicly reported, and added to the Hospital Readmissions Reduction or Hospital Value-Based Purchasing program.

Mock Hospital-Specific HSRs

Sample HSRs that contain real national results and simulated state and hospital results.

Complication Measure
EDAC Measures
Mortality Measures
Payment Measures
Readmission Measures

HSR User Guide (HUG)

Provides instructions for interpreting each HSR.

Frequently Asked Questions (FAQs)

Highlights 2023 measure updates and responds to commonly asked questions.

Measure Fact Sheets

Highlights 2023 measure updates and provides a high-level overview of each measure.

COVID-19 Fact Sheet

Highlights impacts of the COVID-19 pandemic on the 2023 claims-based measures.

Disparity Methods Confidential Reporting

Resources that provide information regarding the confidential reporting of two CMS Disparity Methods.

Applies to only the readmission measures.

Videos

Hospital-Specific Reports Tutorial Video

https://youtu.be/0pE6VBUE8c8

A tutorial to help hospitals navigate and interpret their HSRs.

Introduction to the Hospital Return Days Measures

https://youtu.be/PMAxrGknnMA

A brief overview of the EDAC Measures.

Condition Category Crosswalks

Maps the ICD-10 codes to the condition categories (CCs).

National Distribution of Payments

Graphic overview of the national distribution of payments across care settings for 2023.

Chartbook

Data visualizations that use outcome and payment measure results to increase awareness and understanding of national hospital quality.

Updates for Summer 2023 Public Reporting

1. What updates have been made to publicly reported outcome and payment measures?

Table 2 presents the changes and updates that have been made to the 21 outcome and payment measures that will be publicly reported for Summer 2023. For more information, please refer to the Measure Updates and Specifications Reports posted on the Measure Methodology pages on *QualityNet* > Hospitals - Inpatient > Measures >

- Mortality Measures > Methodology
- Readmission Measures > Methodology
- Complication Measure > Methodology
- Payment Measures > Methodology
- Excess Days in Acute Care Measures > Methodology

Table 2. Updates and Changes for Summer 2023 Public Reporting

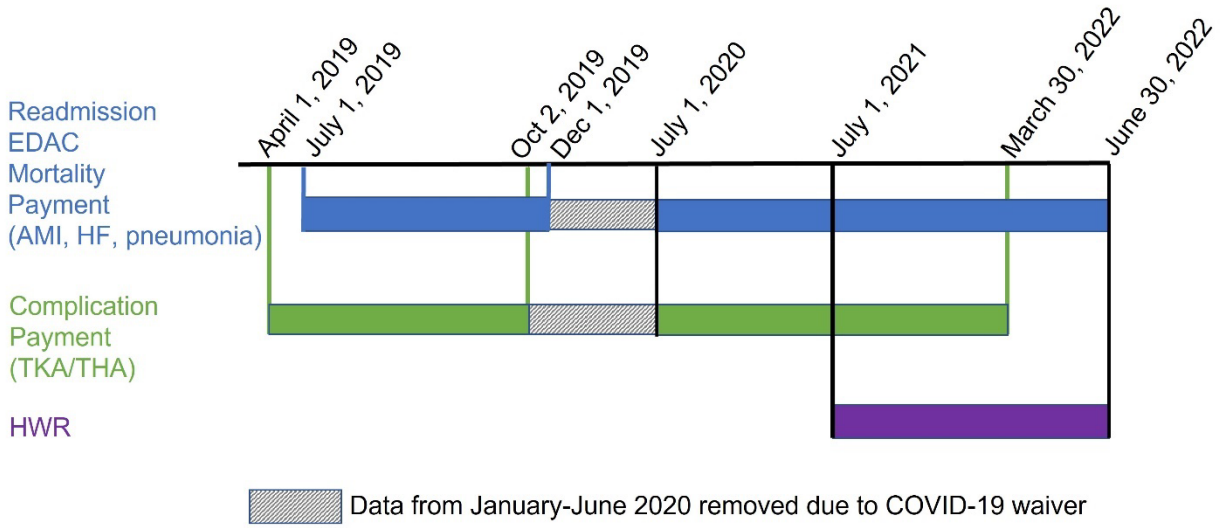
Measure Outcome	Summer 2023 Public Reporting (PR) Updates

All	• Updated measure reporting periods, excluding the COVID-19 waiver data[1], used to calculate the outcome and payment measures (Figure 1)
	• Addition of two codes to the "History of COVID" risk variable:
	  ○ J12.82 Pneumonia due to coronavirus disease
	  ○ U09.9 Post COVID-19 condition, unspecified

Complication	• Expanded outcome, adding 26 International Classification of Diseases, Tenth Revision (ICD-10) diagnosis codes to the mechanical complication outcome definition (IQR only)
EDAC	• Minimum case count threshold for public reporting and performance categorization of the AMI measure increased to 50 from 25
Payment	• Expanded outcome, adding 26 ICD-10 diagnosis codes to the mechanical complication outcome definition

[1]The CMS COVID-19 waiver excludes data from encounters occurring between January and June 2020 from the outcome and payment measures (including risk adjustment, exclusions, and outcomes). CMS has adjusted the measure reporting periods accordingly.

Figure 1. Reporting Periods for Summer 2023 Public Reporting



Measure Cohorts

Inclusion and Exclusion Criteria

2. Which hospitals are included in the measure calculations?

Table 3 below lists the hospitals included and excluded from the measures that make up the Inpatient Quality Reporting (IQR), Hospital Readmissions Reduction Program (HRRP), and Hospital Value-Based Purchasing (HVBP) programs.

Table 3: Hospitals Included and Excluded from the Publicly Reported Measures

	Hospitals Included	Hospitals Excluded
By Program		

IQR	• Subsection(d) hospitals in 50 states and DC participate *(FYI, only subsection(d) hospitals are eligible for Annual Payment Update (APU))*
	• Critical Access Hospitals (CAHs) can opt to participate
	• IQR data also include data from:
	  ○ Subsection(d) Indian Health Service (IHS) hospitals
	  ○ Short-term acute care hospitals located in US territories (including U.S. Virgin Islands, Puerto Rico, Guam, Northern Mariana Islands, and American Samoa)
	  ○ Veterans Affairs (VA) hospitals (HWR, HK complication, and AMI/HF/Pneumonia EDAC)
	  ○ Maryland (MD) short-term acute care hospitals participating in the All-Payer model
		• Department of Defense (DoD) hospitals
		• Certain non-subsection(d) hospitals:
		  ○ Psychiatric hospitals (including psychiatric units)
		  ○ Rehabilitation hospitals (including rehabilitation units)
		  ○ Long Term Care (LTC) hospitals
		  ○ Children's hospitals
		  ○ Prospective payment system (PPS)-exempt cancer hospitals

HRRP	• Subsection(d) hospitals in 50 states and DC *(FYI, only subsection(d) hospitals are subject to payment reduction)*
	• MD hospitals participating in the All-Payer model (data included)
	• Subsection(d) IHS hospitals
		• DoD hospitals
		• VA hospitals
		• Non-subsection(d) hospitals:
		  ○ CAHs
		  ○ Psychiatric hospitals (including psychiatric units)
		  ○ Rehabilitation hospitals (including rehabilitation units)
		  ○ LTC hospitals
		  ○ Children's hospitals
		  ○ PPS-exempt cancer hospitals
		  ○ Short-term acute care hospitals located in US territories

	Hospitals Included	Hospitals Excluded
		○ Religious nonmedical health care institutions
VBP	• Subsection(d) hospitals in 50 states and DC *(FYI, only subsection(d) hospitals are eligible for payment decreases/increases)* • Subsection(d) IHS hospitals	• Maryland hospitals participating in the All-Payer model • DoD hospitals • VA hospitals • Non-subsection(d) hospitals: ○ CAHs ○ Psychiatric hospitals (including psychiatric units) ○ Rehabilitation hospitals (including rehabilitation units) ○ LTC hospitals ○ Children's hospitals ○ PPS-exempt cancer hospitals ○ Short-term acute care hospitals located in US territories • Others as specified on VBP webpage (e.g., hospitals subject to payment reductions under IQR)

3. Where can I find a full list of inclusion and exclusion criteria for each outcome and payment measures?

A full list of inclusion criteria for each measure cohort can be found in Appendix D of the Annual Updates and Specifications Reports on QualityNet for each measure. To access these reports, visit QualityNet > Hospitals - Inpatient > Measures >

- Mortality Measures > Methodology
- Readmission Measures > Methodology
- Complication Measure > Methodology
- EDAC Measures > Methodology
- Payment Measures > Methodology

Hospice

4. Are inpatient hospice admissions included in the measures?

Table 4 lists the measures and associated procedures/conditions that include or exclude Medicare hospice patients (and those who used VA hospice services) in their cohorts. For the measures in which hospice Medicare hospice patients are excluded, patients are only excluded if they are enrolled in hospice prior to or on the first day. Patients enrolled in hospice after are included in the measure (see Figure 2 for more details). Patients in palliative care or comfort care are included in all the measures, assuming they meet the inclusion and exclusion criteria for the measure.

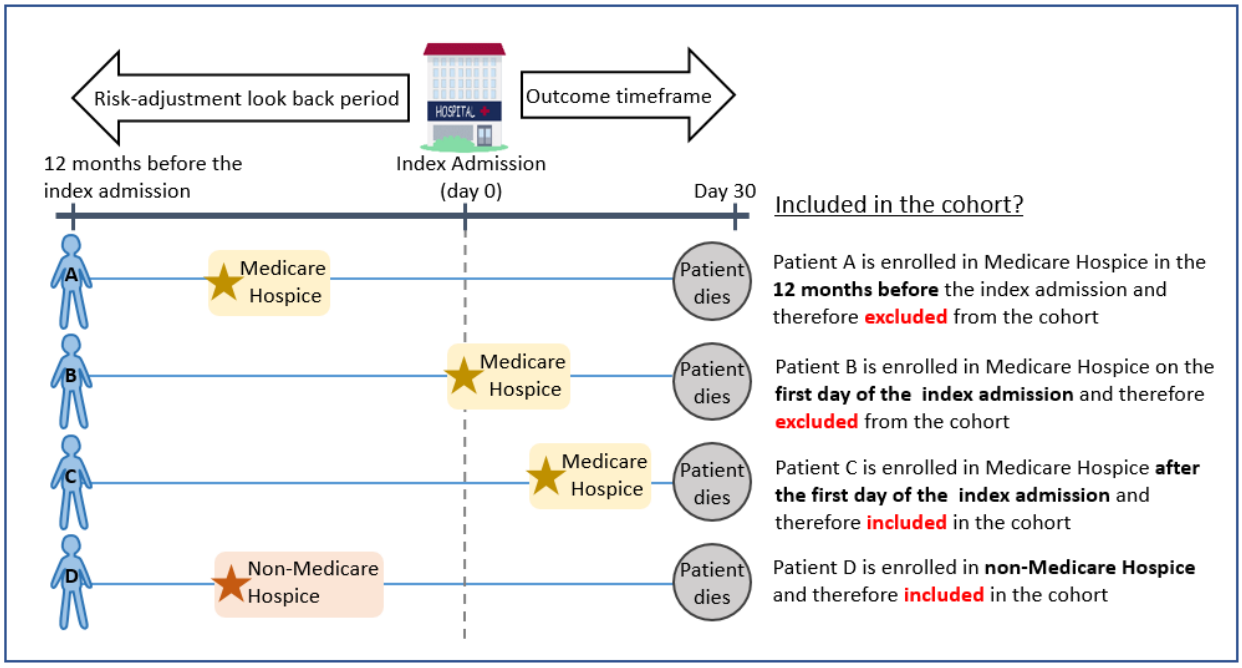
Table 4. Are Hospice Patients Included in the Measure Cohort?

Measure Outcome	Procedure/Condition	Yes/No
Mortality	AMI	X
	HF	X
	Stroke	X
	COPD	X
	Pneumonia	X
	CABG	✓
Readmission	AMI	✓
	COPD	✓
	CABG	✓
	THA/TKA	✓
	Hospital-Wide	✓
	HF	✓
	Pneumonia	✓
Complication	THA/TKA	✓
Payment	AMI	X
	HF	X
	Pneumonia	X
	THA/TKA	✓
EDAC	AMI	✓
	HF	✓
	Pneumonia	✓

Table 3 Key: ✓= Yes, hospice patients are included in the measure cohort, **X**= No, hospice patients are not included in the measure cohort.

Regardless of whether hospice patients are included, all measures adjust for several factors associated with the likelihood that patients are sicker or are at the end of their lives (such as protein-calorie malnutrition, metastatic cancer, dementia, and age), so that hospitals treating older, sicker patients can be compared to hospitals with a healthier case mix. Figure 2 provides an example of the hospice inclusion and exclusion criteria.

Figure 2. Hospice Inclusion and Exclusion Criteria



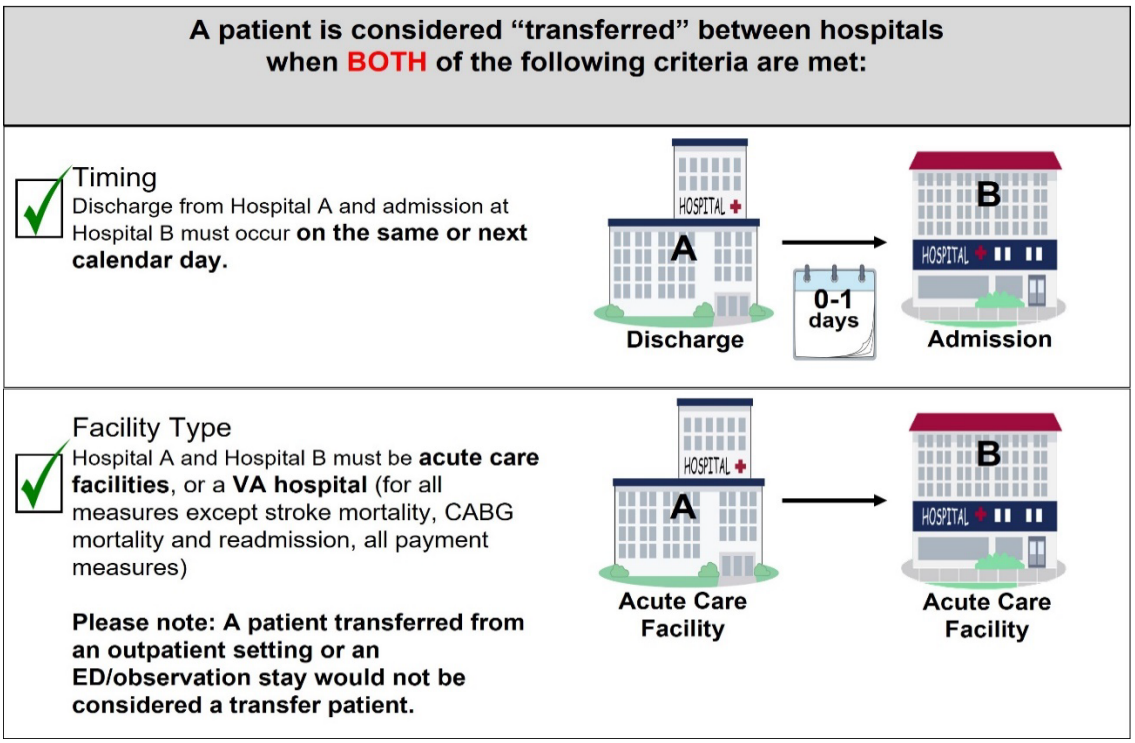
Transferred Patients

5. Who is considered a transferred patient?

Patients are considered transferred patients only if they are discharged from an eligible index admission (at Hospital A), **and** if the subsequent admission (at Hospital B) meets the criteria outlined in Figure 3.

A patient does not need to have the same discharge diagnosis or procedure at both hospitals to be considered transferred.

Figure 3. Transferred Criteria



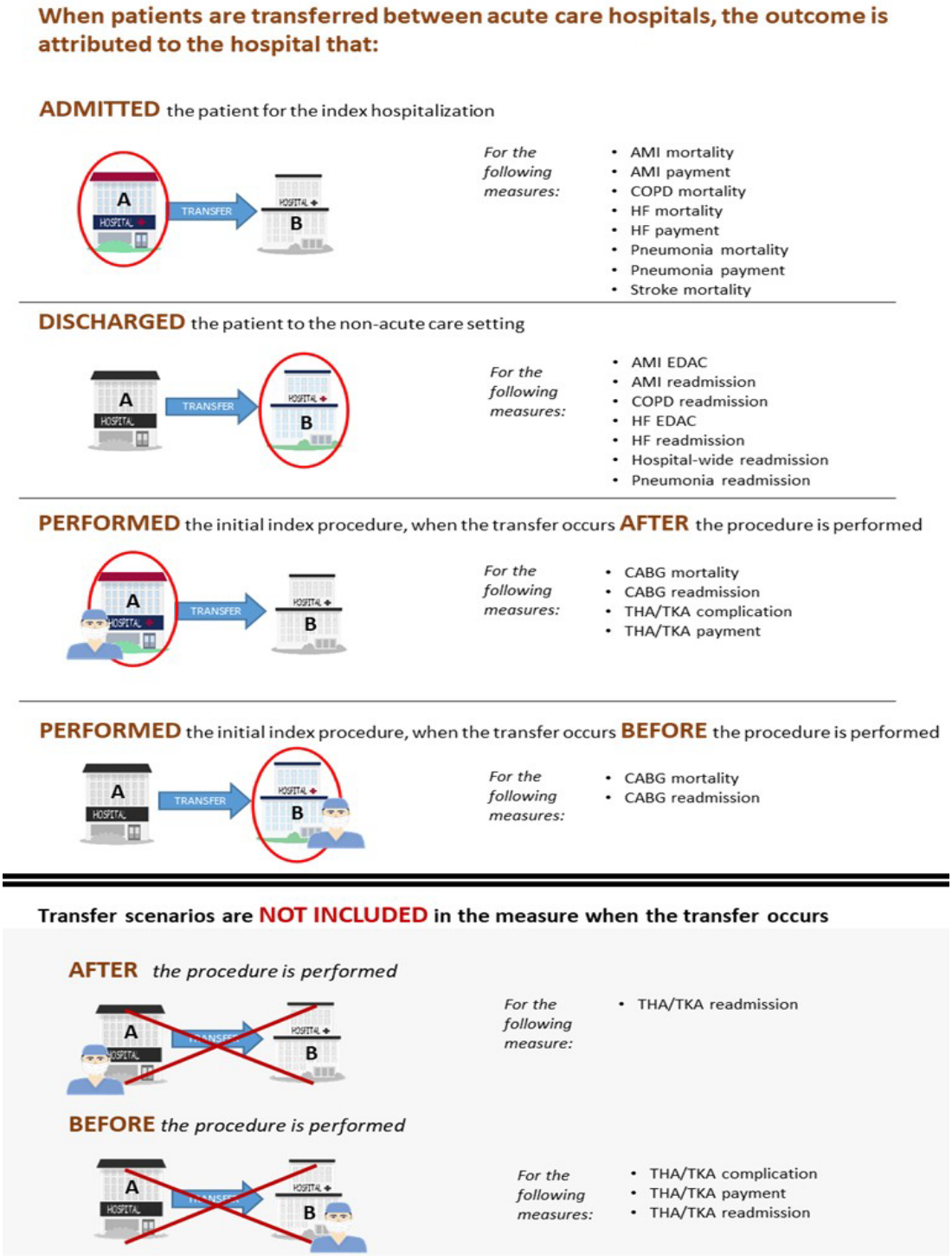
6. How are transferred patients accounted for in the measures?

When a patient is transferred between acute care hospitals, depending on the measure, outcomes for transfer patients may be attributed based on:

- Which hospital admitted the patient to the index admission;
- Which hospital discharged the patient to the post-acute care setting; or
- Which hospital performed the procedure on the patient.

Figure 4 summarizes how each measure attributes outcomes in transfer scenarios. The hospital to which each outcome is attributed is circled in red.

Figure 4. How Each Measure Attributes Outcomes for Transferred Patients



Specialty Cohorts

7. What are specialty cohorts in the HWR measure?

Because of the wide range of hospital admissions included in the HWR measure, admissions that meet inclusion criteria are organized into five mutually exclusive specialty cohorts (medicine; surgery/gynecology; cardiorespiratory; cardiovascular; and neurology) to reflect how patient care is organized within hospitals.

Appendix D of the 2023 All-Cause Hospital-Wide Measure Updates and Specifications Report details the assignment criteria for each cohort. For more information, see the 2023 All-Cause Hospital-Wide Measure Updates and Specifications Report: Hospital-Wide Readmission and Measure Code supplemental files, posted on the Measure Methodology pages at QualityNet > Hospitals - Inpatient > Measures > Readmission Measures > Methodology > 2023 Readmission Measures Updates.

Measure Outcomes

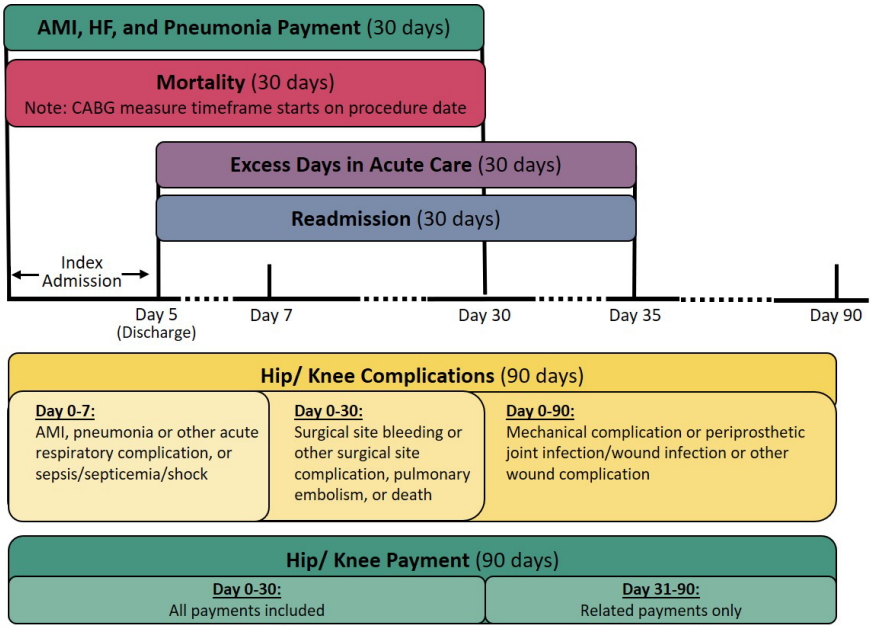
Outcome Timeframes

8. When are measure outcomes observed?

The readmission, mortality, complication, and EDAC measures use standardized timeframes to capture outcomes, including mortality, unplanned readmissions, EDAC outcome events, and eligible complications. Similarly, the payment measures summarize eligible payments during a defined "episode of care" that spans care settings. The measures assess the outcome (or payment) relative to the qualifying index admission or procedure date for 30 or 90 days, starting from admission, procedure, or discharge date, depending on the measure. These start dates are used to mark the beginning of a given outcome timeframe and to assess whether an outcome occurred within that designated timeframe.

Figure 5 shows how the outcome timeframes and differences in start date for each measure (based on admission, discharge, or procedure date) are applied.

Figure 5. Measure Outcome Timeframes



9. How are initial outpatient stays that become inpatient admissions accounted for in the outcome timeframe?

Outpatient services within three days of the inpatient admission that are combined into one claim determine the start date of that admission (except in the case of CAHs). In sum, start dates are used to mark the start of the outcome timeframe and/or assess whether an outcome occurred within the designated timeframe, depending on the measure. Please see the below cases for examples:

- For the AMI mortality measure: if a patient has an observation stay on March 1–2 followed by an inpatient admission to that same hospital on March 3 (and the care is combined into one

claim), then a death on April 1 would NOT be captured in the outcome, as the date of death is outside of the 30-day timeframe of the index start date of March 1.

- For the HF readmission measure: if a patient is discharged from the HF index admission on January 1, and then has an Emergency Department (ED) visit on January 30 followed by a readmission on February 1 at that same hospital (and the care is combined into one claim), this readmission would be captured in the outcome, as the start date of January 30 for the readmission is within the 30-day timeframe of the index discharge on January 1.

Defining a Readmission

10. What hospitalizations are considered readmission outcomes?

Patients with eligible index admissions are considered "readmitted" if they have one or more unplanned, all-cause (for any reason) inpatient admission(s) at a short-term acute care, CAH hospital within 30 days of discharge from the original index admission, regardless of whether the readmission occurred at the same or different hospitals. Apart from the CABG readmission measure, all readmission measures consider admissions to short-term acute care VA hospitals as readmission outcomes.

The following types of admissions are ***not*** considered readmissions in the measures:

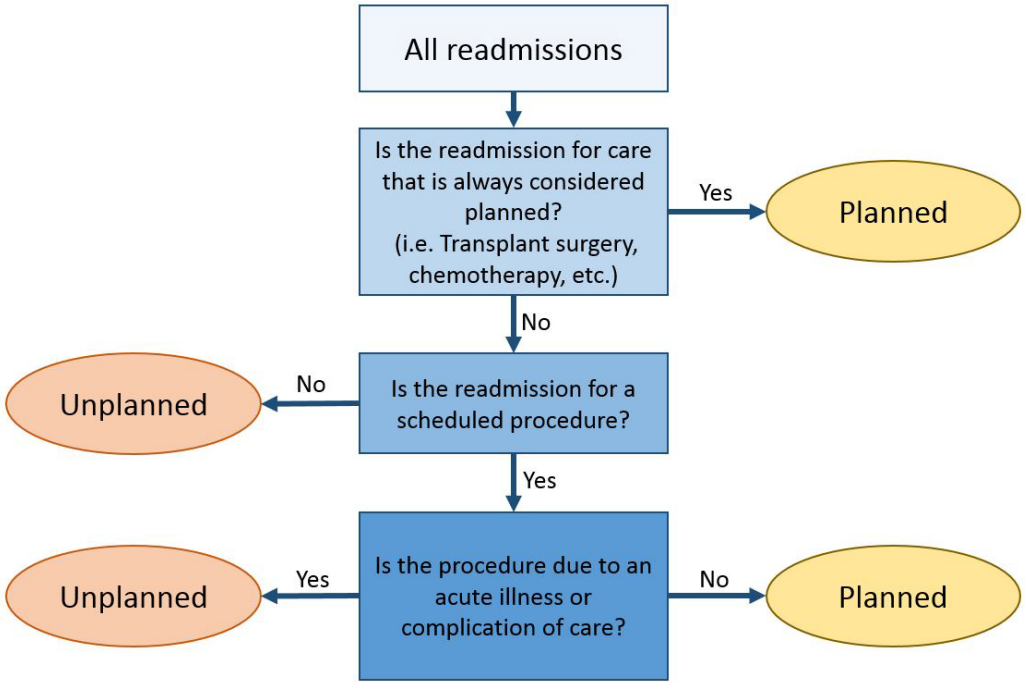
- Planned readmissions (see FAQ 11)
- Same-day readmissions to the same hospital for the same condition (these are combined as a single claim, and thus, considered a continuation of the index admission)
- Observation stays and ED visits
- Admissions to facilities other than short-term acute care hospitals
- Admissions that occur at eligible short-term acute care hospitals but where the patient is admitted to a separate non-inpatient unit, such as rehabilitation, psychiatric care, or long-term care, that bills under a separate Centers for Medicare & Medicaid Services (CMS) Certification Number (CCN) or hospice care

11. What is a planned readmission?

The readmission and EDAC measures use an algorithm (see Figure 6) to identify readmissions that are typically planned and may occur within 30 days of discharge from the hospital. For details of the planned readmission algorithm, see the 2022 Measure Updates and Specifications Reports that are posted on the Measure Methodology pages on QualityNet >Hospitals - Inpatient > Measures >

- Readmission Measures > Methodology
- EDAC Measures > Methodology

Figure 6. Planned Readmission Algorithm

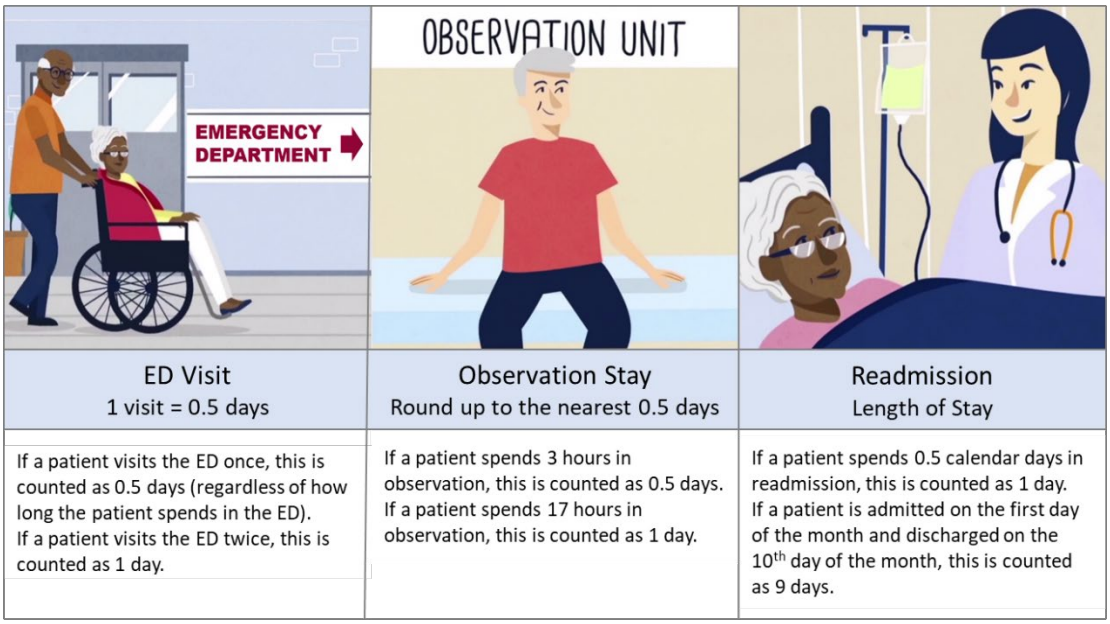


Defining Excess Days in Acute Care

12. What is the Excess Days in Acute Care outcome?

The outcome is a summary of the time or "days" that patients spent in the ED, observation stays, and unplanned inpatient readmissions for any reason within 30 days after discharge from an eligible index admission. For these purposes, a "day" is defined differently in various setting (see Figure 7) and determined based on the level of burden experienced by the patient receiving care from each of these settings, and clinical and expert input on the length of time patients typically spend in each care settings. Unplanned readmissions are counted by the length of stay (discharge date minus the admission date). If the patient was readmitted and discharged on the same day, it is counted as one whole day.

Figure 7. Days in Acute Care in the 30 Days Following Discharge from Eligible Admissions



When eligible acute care events (ED visit, observation stay, or unplanned readmission) overlap (e.g., occur on the same day), the EDAC measures only count time spent in the most severe of the overlapping events (see Figure 7).

For more information about the EDAC measures, please view the Condition-Specific Excess Days in Acute Care Measures Updates and Specifications Report available here and the introductory video available here.

Defining a Complication

13. What qualifies as a complication outcome?

A complication has occurred if any of the criteria listed in Table 5 occur during the index admission and/or at any subsequent inpatient admission for a patient undergoing a THA/TKA procedure at a short-term acute care hospital, CAH, or VA hospital within the relevant timeframe. Complications coded as Present on Admission (POA) are not considered complications for this measure.

Table 5. Timeframes for Complications in the THA/TKA Complication Measure Outcome

Event	That occurs during the index admission or within
AMI, Pneumonia or other acute respiratory complication, or sepsis/septicemia/shock	seven days from the start of the index admission
Surgical site bleeding or other surgical site complication, pulmonary embolism, or death	30 days from the start of the index admission

Event	That occurs during the index admission or within
Mechanical complication, periprosthetic joint infection/wound infection, or other wound complication	90 days from the start of the index admission

Payment Outcomes

14. What payments are included in the payment measures?

The payment measures provide an opportunity for hospitals to explore the drivers of costs for their patients and assess the payment measure results in the context of the quality of care they provide to patients. The payment measures include payments made for Medicare patients aged 65 years and older for a 30- day episode of care for the AMI, HF, and Pneumonia payment measures, and for a 90-day episode of care for the THA/TKA payment measure. The episode of care begins on the date of admission and ends 30 days (or 90 days for THA/TKA) after the index admission date. The measures capture payments for patients across multiple care settings, services, and supplies as outlined in Table 6. Payments can be from Medicare, other health insurers, or the patients themselves. The THA/TKA payment measure continues to assess payments through a 90-day episode of care. However, during days 31–90 of the episode of care, the measure captures only payments that are likely related to the THA/TKA procedure, including physician claims.

Table 6. Payments Included in Days 0-30 for All Payment Measures and Days 31-90 for the THA/TKA Payment Measure

Settings, Services, and Supplies	Payments Included in Days 0–30 for all payment measures	Payments Included in Days 31–90 for the THA/TKA Payment Measure
Inpatient care settings	• Acute inpatient hospitals • Inpatient psychiatric facilities • Inpatient rehabilitation facilities • Long-term care hospitals	• Readmission facility (including inpatient hospital staged or repeat admission for single-site surgeries and/or readmissions for complications) • Inpatient rehabilitation
Outpatient care settings	• Hospital outpatient services • Community mental health centers • Comprehensive outpatient rehabilitation facilities and outpatient rehabilitation facilities • Renal dialysis facilities • Rural health clinics • Federally qualified health clinics • Ambulatory surgical centers	• Outpatient rehabilitation • Joint manipulation under anesthesia
Other care settings	• Home health agencies • Hospice • Skilled nursing facilities	• Skilled nursing facility • Home health agency

Settings, Services, and Supplies	Payments Included in Days 0–30 for all payment measures	Payments Included in Days 31–90 for the THA/TKA Payment Measure
Services and supplies	• Laboratory services • Ambulance services • Part B drugs • Physicians, physician extenders, social work services • Durable medical equipment/prosthetics and orthotics/parenteral and enteral nutrition	• Durable medical equipment

Additional information on the payment measures can be found on QualityNet > Hospitals - Inpatient > Measures > Payment Measures > Resources.

Multiple Admissions/Readmissions

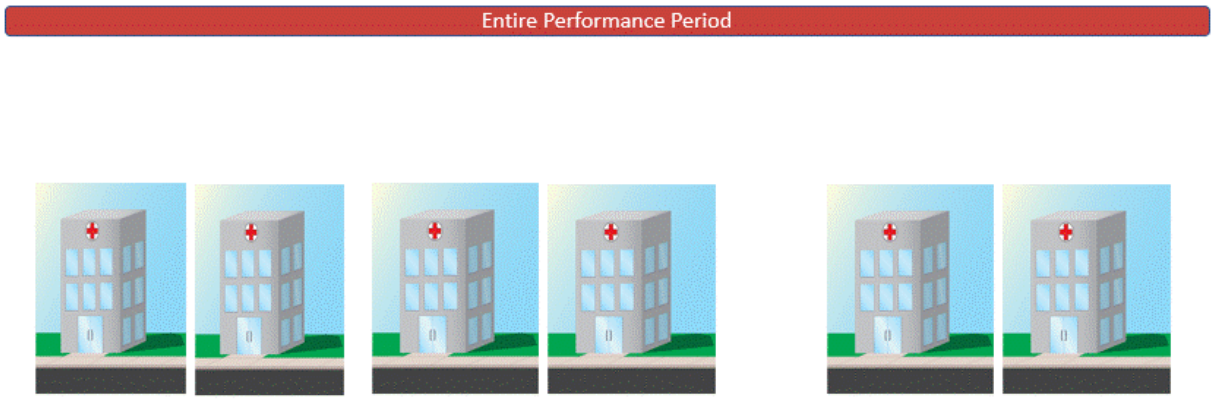
Same Condition or Procedure

15. How are patients with multiple admissions for the same medical condition or procedure during the measurement period accounted for in the measures?

For the readmission (except CABG readmission and HWR) and EDAC measures:

Each eligible admission is included as an index admission in the measure if it does not occur within 30 days of discharge from another index admission for that measure. Admissions that occur within 30 days of discharge (within the outcome timeframe) from an index admission may be counted as a readmission (Figure 8).

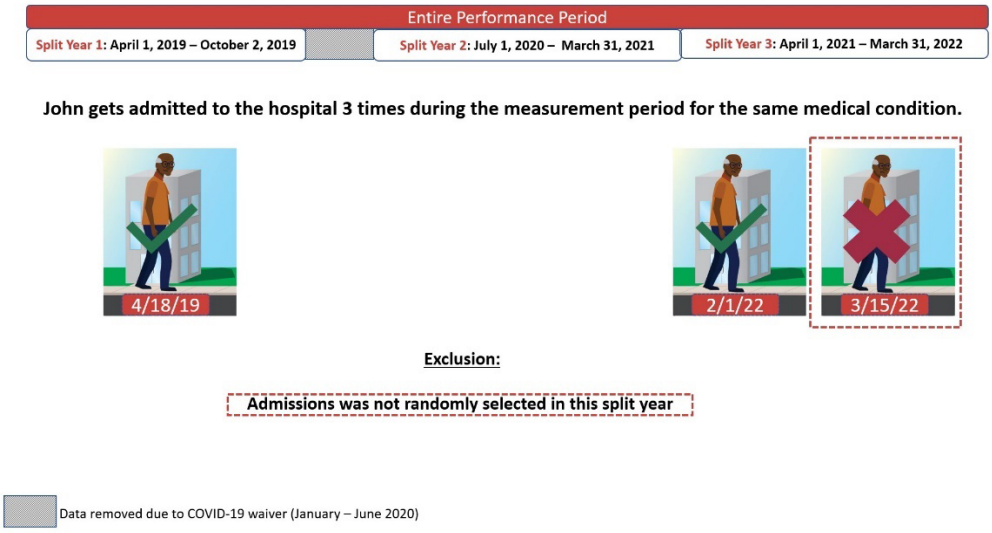
Figure 8. Example of Multiple Admissions for the Same Medical Condition or Procedure During the Measurement Period for Readmission (except CABG and HWR) and EDAC Measures



For the complication measure:

If a patient has multiple eligible admissions for the same THA/TKA complication measure in an individual split year the measure randomly selects one index admission per patient per split year. This means that for the THA/TKA complication measure, a single patient can contribute only one admission per split-year (Figure 9).

Figure 9. Example of Multiple Admissions for the Same Medical Condition or Procedure During the Measurement Period for the Complication Measure

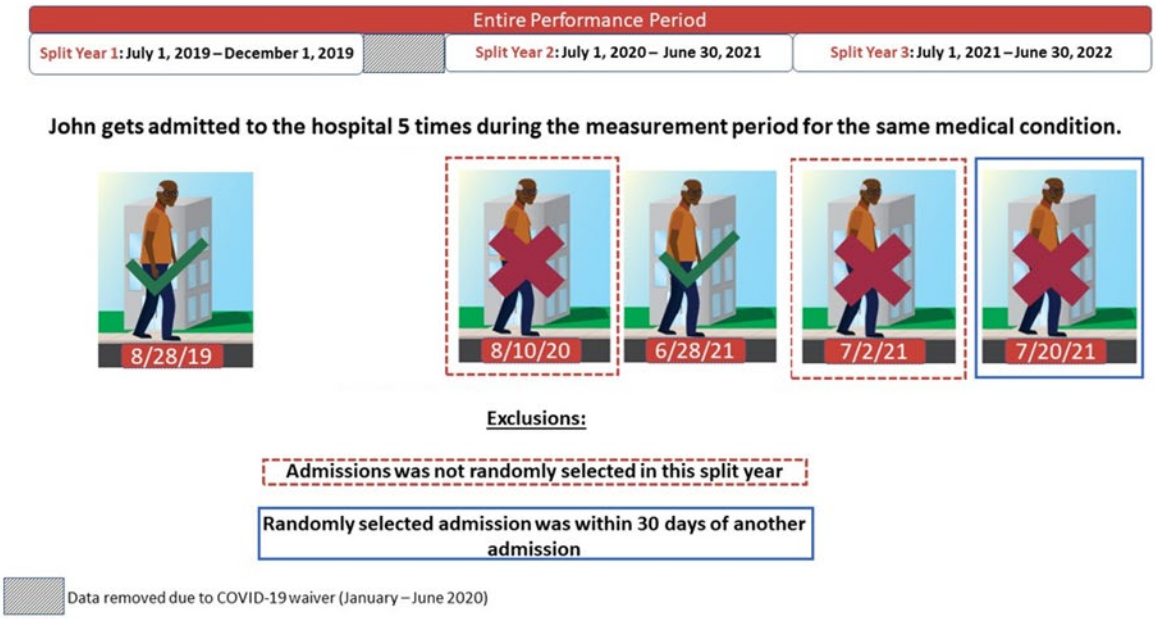


For the mortality (except CABG) and payment measures:

If a patient has multiple eligible admissions for the same condition/procedure in an individual split year the measure randomly selects one index admission per patient per condition/procedure per split year. This means that for each measure, a single patient can contribute one admission per split year, and a maximum of three admissions during the measurement period. Like the EDAC measures, if one of the selected admissions is within 30 days (or 90 days for THA/TKA) of another selected admission, the 2nd admission is excluded to avoid double counting outcomes.

If the patient dies within 30 days of the randomly selected index admission date, that patient's death is counted in the measure. If the patient dies within 30 days of the admission that was not randomly selected as the index admission, that death is not counted in the measure. Because the selection is random, this approach should not bias the model's results against any hospital (Figure 10).

Figure 10. Example of Multiple Admissions for the Same Medical Condition or Procedure During the Measurement Period for Mortality (except CABG) and Payment Measures



For the CABG mortality and readmission measures:

If a patient has multiple qualifying CABG surgeries during the measurement period, only the first qualifying CABG admission is included in the measure. This is because CABG procedures are expected to last for several years without the need for revision or repeat revascularization. A repeat CABG procedure during the measurement period likely represents a complication of the original CABG procedure and is a clinically more complex and higher risk surgery.

For the HWR measure:

The HWR measure allows every eligible hospitalization to be considered an index admission. As a result, there can be multiple index admissions per patient in a 30-day period for the HWR measure, providing each meets the inclusion criteria.

Different Conditions/Procedures

16. How are patients who have a single admission or multiple admissions during the measurement period accounted for in the measures?

The cohorts for the measures are determined independently of each other. As a result, a hospitalization that occurs within 30 days of an index admission for one measure may qualify as an index admission for a different measure.

The subsequent hospitalization may also be considered a readmission to the preceding admission if it meets the applicable inclusion/exclusion criteria.

For example, if a patient has an eligible index admission for the COPD mortality measure and is hospitalized for AMI during the 30-day COPD outcome time period, the AMI hospitalization may be

considered (a) an outcome for the COPD index admission and, (b) an index admission for one or more of the AMI quality measures if eligibility criteria are met for the AMI measure(s).

Similarly, it is possible for an index admission to qualify a patient for more than one outcome measure. For example, if, during a single index admission, a patient has a primary diagnosis of AMI and a CABG procedure, this case could be included in the cohorts for both the AMI and CABG readmission measures (if cohort criteria are met for both measures). If an unplanned readmission (see FAQ 11) occurred within 30 days, the readmission would be captured in the readmission outcome for both measures.

Same-Day Readmissions

17. How are same-day readmissions accounted for in the readmission measures?

None of the readmission measures consider patients "readmitted" if the readmission was to the same hospital for the same condition or procedure and on the same calendar day. CMS rules already require PPS hospitals to combine same-day, same-condition readmissions into one claim.

However, the readmission measures do consider patients "readmitted" if they had an eligible readmission to the same hospital on the same day, but for a *different* condition or procedure.

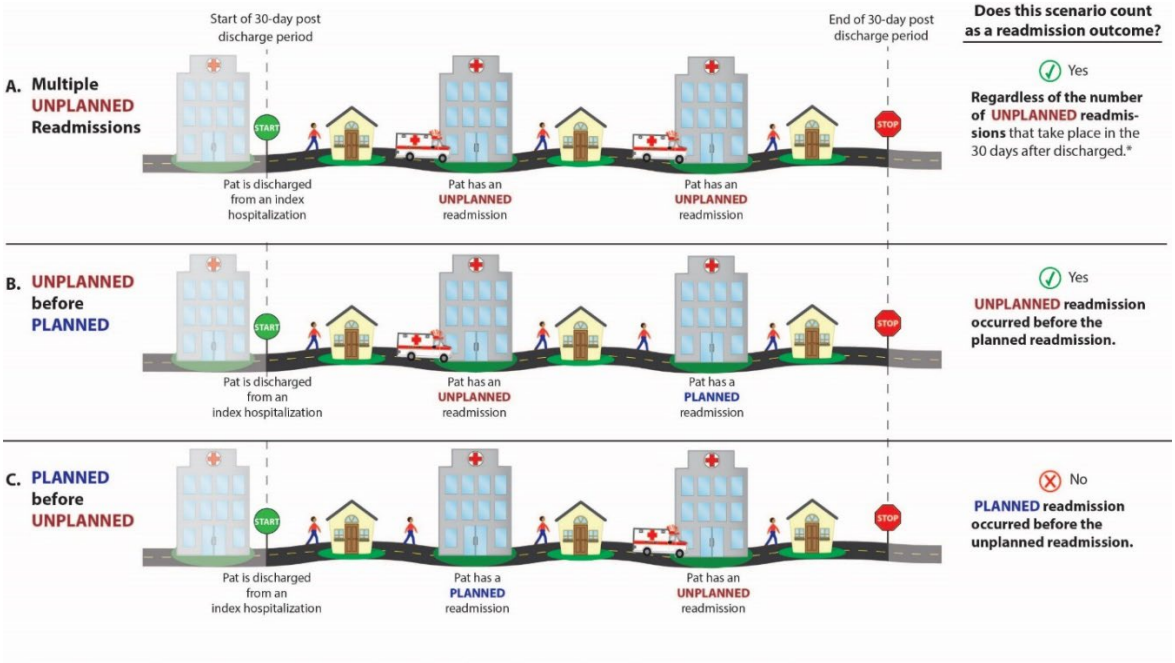
Planned and Unplanned Readmissions

18. How do the readmission measures handle multiple planned and unplanned readmissions that occur within the 30-day outcome window?

In general, if a patient has one or more unplanned inpatient readmissions to a short-term acute care hospital during the 30 days after discharge from a qualifying index admission, then the readmission outcome is "yes." Part A of Figure 11 provides an example scenario of multiple unplanned readmissions. However, if the first readmission is due to COVID-19, and the subsequent readmissions are eligible, the readmission outcome is "no."

If the first readmission within the 30-day outcome period is a planned readmission, the readmission outcome is also "no." This is because subsequent unplanned readmissions may be related to the care provided during the intervening planned readmission rather than during the index admission. Parts B and C of Figure 11 provide example scenarios in which both planned and unplanned readmissions occurred during the 30-day outcome window.

Figure 11. Scenarios With Multiple Readmissions, Planned and Unplanned



*If the first UNPLANNED readmission has a qualifying COVID diagnosis, then the readmission outcome is NO.

Risk Adjustment

Factors and Codes

19. What factors and codes are used in risk adjustment of the measures?

Each outcome and payment measure adjusts for age and comorbid diseases that are clinically relevant and/or have strong relationships with the outcome. These risk factors come from inpatient, outpatient, ambulatory surgical center, or physician office visit claims. CMS does not adjust for social risk and demographic factors, as the association between these factors and health/payment outcomes can be due to differences in the quality of health care received by different groups. The confidentially reported results for the CMS within- and across- hospital Disparity Methods provide additional insight into these differences. For additional information, please see here.

Not all comorbid diseases are used in risk adjustment. Certain risk factors and complications that only occur during the index admission and any complications of care in the index admission are not risk-adjusted for in any measure. Condition categories (CCs) are used for risk adjustment for all the outcome and payment measures, while CCSs are used only for EDAC, readmission measures, and HWR.

The Measure Code Specifications supplemental files include the lists of comorbidity risk factors and their corresponding coefficients, which can be found on QualityNet > Hospitals - Inpatient > Measures >

- Mortality Measures > Methodology
- Readmission Measures > Methodology
- Complication Measure > Methodology
- EDAC Measures > Methodology
- Payment Measures > Methodology

Results

Calculating Results

20. How are Mortality, Complication & Readmission (except HWR) Measure results calculated?

As depicted in Figure 12, the risk-standardized outcome results are calculated as the rate of the number of "predicted" outcomes (deaths, complications, or readmissions) to the number of "expected" outcomes, multiplied by the national observed rate for that measure

Figure 12. Mortality, Complication, and Readmission Measure Calculation

$$\text{Rate} = \frac{\text{Predicted Outcomes}}{\text{Expected Outcomes}} \times \text{National Observed Rate}$$

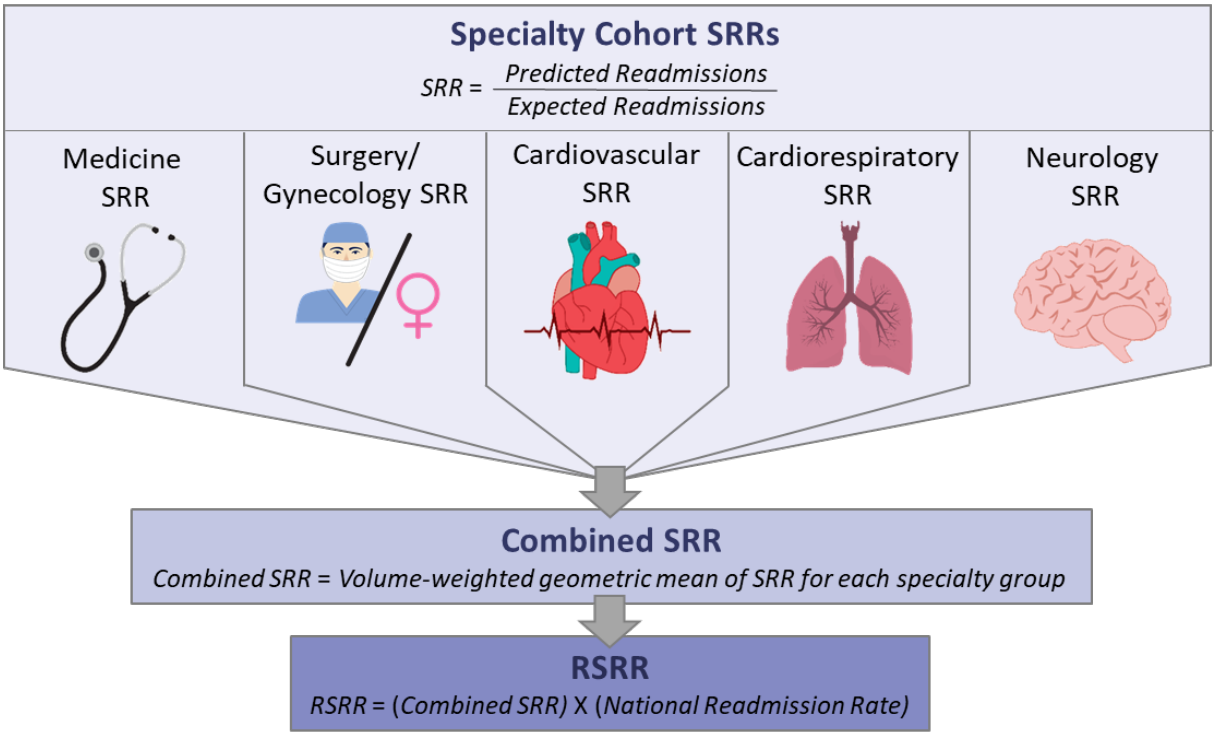
The numerator of the rate is the number of events (deaths, readmissions, or complications) within 30 days (or other timeframes for complications) that are predicted based on the hospital's performance with its observed case mix. The denominator of the rate is the number of outcomes expected based on the nation's performance with that hospital's case mix.

This approach is analogous to a rate of "observed" to "expected" that is used in other types of statistical analyses. It conceptually allows a comparison of a particular hospital's performance, given its case mix, to an average hospital's performance with the same case mix. Thus, a rate lower than one indicates a lower-than-expected measure rate (or better quality), and a rate greater than one indicates a higher-than-expected measure rate (or worse quality).

21. How are the HWR Measure results calculated?

CMS calculates a risk-standardized readmission rate (RSRR) for the HWR measure for each hospital by first assigning admissions to one of the five specialty cohorts. For each specialty cohort, the standardized readmission ratio (SRR) is calculated as the ratio of the number of "predicted" readmissions to the number of "expected" readmissions at a given hospital. The numerator of the ratio is the number of readmissions within 30 days, predicted based on the hospital's performance with its observed case mix and service mix. The denominator of the ratio is the number of readmissions expected, based on the nation's performance with that hospital's case mix and service mix. Once the SRR is calculated for each specialty cohort, the hospital's hospital-wide composite SRR is derived by calculating the volume-weighted geometric mean of the five-specialty cohort SRRs. Finally, the hospital's RSRR is calculated by multiplying the composite SRR by the national observed readmission rate. Figure 13 describes these steps.

Figure 13. HWR Measure Calculation



22. How are the Payment measure results calculated?

As depicted in Figure 14, CMS calculates the risk-standardized payments (RSPs) as the rate of "predicted" payments to "expected" payments, multiplied by the national average payment for an episode of care.

Figure 14. Risk Standardized Payment (RSP) Calculation

$$\text{Payment} = \frac{\text{Predicted Payments}}{\text{Expected Payments}} \times \text{National Average Payment}$$

The numerator of the rate is the payment within 30 days (or other timeframes for THA/TKA) based on the hospital's payments with its observed case mix. The denominator of the rate is the payment expected based on the nation's payments with that hospital's case mix.

This approach is analogous to a rate of "observed" to "expected" used in other types of statistical analyses. It conceptually allows a comparison of a particular hospital's payments, given its case mix, to an average hospital's payments with the same case mix. Thus, a rate lower than one indicates lower-than-expected payments, and a rate of greater than one indicates higher-than-expected payments.

23. How are the EDAC measure results calculated?

CMS calculates the EDAC measures, for each hospital, as the difference ("excess") between each hospital's predicted days and expected days per 100 discharges.

"Predicted days" is the average number of risk-adjusted days a hospital's patients spent in acute care. "Expected days" is the average number of risk-adjusted days in acute care the hospital's patients would have been expected to spend if they had been discharged from an average-performing hospital with the same case mix.

To be consistent with the reporting of the CMS 30-day readmission measure, CMS multiplies the measure result by 100 so that the final EDAC result represents EDAC per 100 discharges.

This calculation is depicted in Figure 15.

Figure 15. EDAC Measure Score Calculation

$$\text{Hospital EDAC} = \left(\text{Predicted Days} - \text{Expected Days}\right) \times 100 \text{ Discharges}$$

Categorizing Results

24. How does CMS categorize hospital results?

CMS's approach for categorizing hospital results is displayed in Table 7. Any outcome rates (or payments) and corresponding interval estimates that are placed in the "number of cases too small" category are not publicly reported.

Table 7. Performance Categories

Measure	Performance/Payment Category	Description
Mortality, Readmission, Complication (see Figure 16)	Better than the National Rate	Entire 95% interval estimate surrounding hospital's rate is ***lower*** than the national rate
	No different than the National Rate	95% interval estimate surrounding hospital's rate ***includes*** the national rate
	Worse than the National Rate	Entire 95% interval estimate surrounding hospital's rate is ***higher*** than the national rate
	Number of cases is too small (fewer than 25) to reliably tell how well the hospital is performing	Hospital has fewer than 25 eligible cases
Payment (see Figure 16)	Less than the National Average Payment	Entire 95% interval estimate surrounding hospital's RSP is ***lower*** than the national average payment
	No Different than the National Average Payment	95% interval estimate surrounding hospital's RSP ***includes*** the national average payment
	Greater than the National Average Payment	Entire 95% interval estimate surrounding hospital's RSP is ***higher*** than the national average payment
	Number of cases is too small (fewer than 25) to reliably estimate the hospital's RSP	Hospital has fewer than 25 eligible cases
EDAC (see Figure 17)	Fewer days than average	Entire 95% interval estimate surrounding hospital's days is ***below zero***

Measure	Performance/Payment Category	Description
	Average	95% interval estimate surrounding hospital's days ***includes zero***
	More days than average	Entire 95% interval estimate surrounding hospital's days is ***above zero***
	Number of cases is too small to reliably tell how well the hospital is performing	Hospital has fewer than 25 eligible cases (50 eligible cases for AMI EDAC measure)

Figure 16. Example Performance Category Assignments for RSRs and RSPs

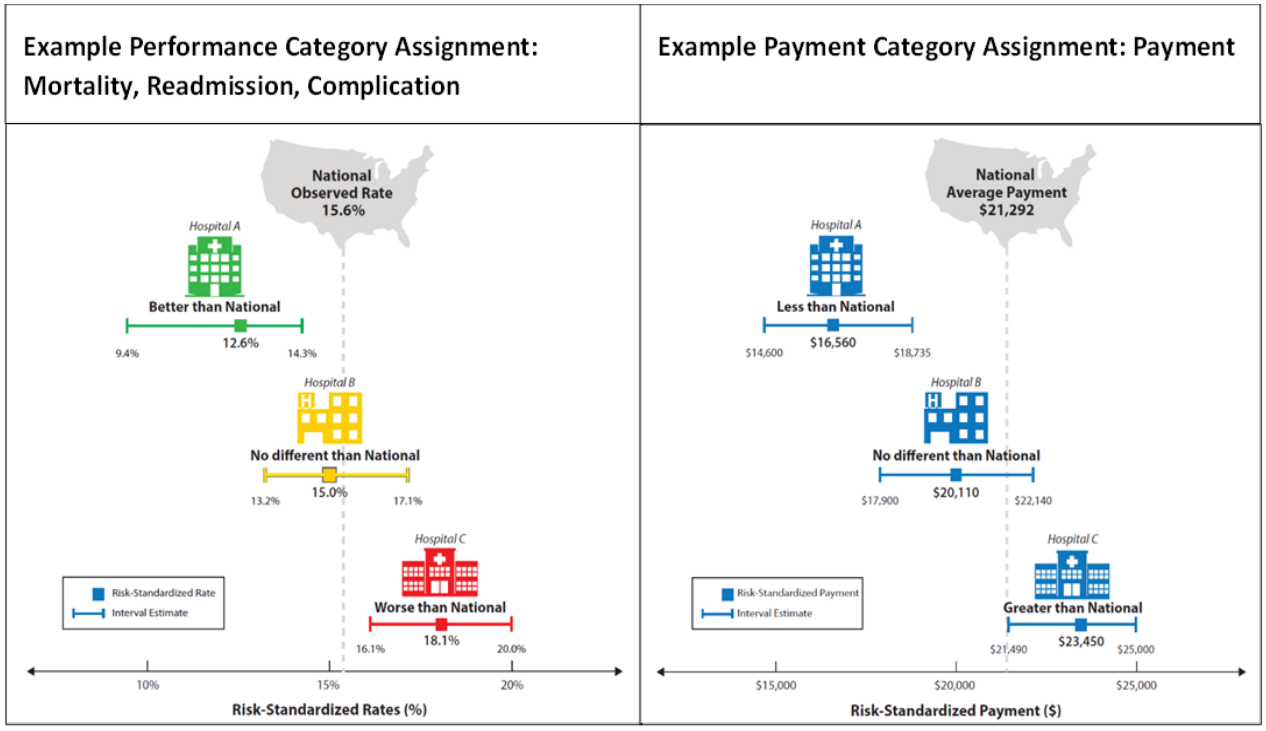
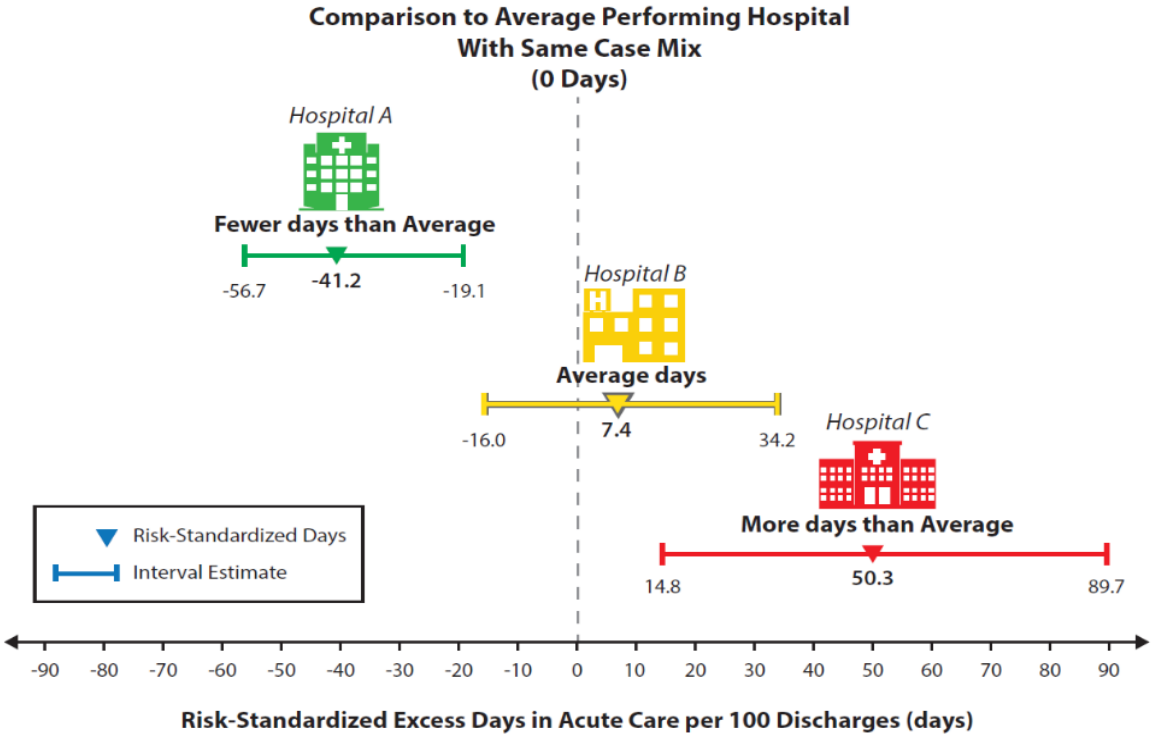


Figure 17. Example Performance Category Assignment for EDAC Measures



Interpreting/Using Results

25. How should hospitals use their results for the Readmission and EDAC measures?

Generally, variation in acute care utilization after hospitalization for AMI, HF, and Pneumonia suggests an opportunity for improvement in care transition processes. After interpreting results (see Table 8 for examples relative to EDAC), hospitals may implement appropriate practices that make patients less likely to return to acute care settings during the 30 days post-discharge or that help their stay to be less often or for fewer days. Examples of these practices include:

- Effective discharge planning
- Transfer of information at the time of discharge
- Patient assessment and education
- Coordination of care and monitoring in the post-discharge period.

Table 8. Interpretation of EDAC Results

EDAC Result	Interpretation
Negative EDAC	Indicates your patients spent fewer days in acute care than would be expected if admitted to an average performing hospital with your case mix.
Zero EDAC	Indicates your hospital is performing exactly as expected.
Positive EDAC	Indicates your patients spent more days in acute care than would be expected if admitted to an average performing hospital with your case mix.

26. How should hospitals interpret and use their results for the Payment measures?

The payment measures provide hospitals, CMS, and other stakeholders with tools for comparing RSPs in hospitals across the nation. However, results of the payment measures alone do not reflect the quality of care provided/coordinated by hospitals. To holistically assess a hospital's payment and quality, RSPs should be considered alongside a hospital's performance on quality measures.

27. Why do hospitals' results for the same measure differ from results in other programs?

A hospital's measure results under the HRRP and the HVBP program may be different from the results for the same publicly reported measure because the different programs can include different hospitals and/or measure calculations. For information on which measures are included in which programs, see Table 1.

Additionally, different versions of the same measure may exist in different programs. As an example, for the 2023 Public Reporting Period/FY 2024 payment determination, the 26 ICD-10 codes added to the mechanical complication outcome definition for the THA/TKA complication and payment measures only applies to the IQR program and will be included in HVBP at a later time.

For more information on the HRRP, visit https://www.cms.gov/medicare/medicare-fee-for-service-payment/acuteinpatientpps/readmissions-reduction-program.html.

For more information on the HVBP program, visit https://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/Value-Based-Programs/HVBP/Hospital-Value-Based-Purchasing.html).

28. Will hospitals be able to replicate their risk-standardized measure results?

Hospitals will not be able to independently replicate the results for any of the outcome or payment measures. While hospitals have access to the inclusion/exclusion criteria and risk adjustment coefficients, the models used to calculate measure results require input of patient longitudinal data across care settings and data from the entire national sample. While hospital-specific effects are provided in the Hospital-Specific Reports (HSRs) for the HVBP and HRRP, these are not applicable for IQR/PR measure results.

Hospitals interested in validating their results *will* be able to do the following:

- Validate the cohort used to calculate their outcome and payment measures using the discharge-level information contained in the HSR
- Request a copy of the SAS programs used to estimate the risk-standardized rates via the Question and Answer (Q&A) Tool

Additional Information

29. How can my hospital access its HSR?

HSRs containing hospitals' publicly reported outcome and payment measures are available for download via the Claims-Based Measures page of the Hospital Quality Reporting (HQR) system (vs. the Managed File Transfer system used in years past). For instructions on accessing these reports, access the following video here. If your hospital did not receive an HSR, see FAQ 30.

Your HSR provides information on the prevalence of each measure's risk factors for patients at your hospital compared to state and national averages. For more information about what you can find in the HSR, please access the following tutorial here.

30. Why didn't my hospital receive an HSR?

Your hospital will not receive an HSR if it meets any of the following criteria:

- Not defined as open during the measurement period/reporting period deadline
- Lacks eligible cases for outcome/payment measures during the applicable discharge timeframe
- Did not pledge for the Optional Public Reporting Notice of Participation (for more information, see the Notice of Participation page on *QualityNet*)

If you believe that your hospital should have received an HSR but did not, please contact the *QualityNet* Service Desk at qnetsupport@cms.hhs.gov. Please ***do not include Personally Identifiable Information or Protected Health Information in questions submitted.***

31. How can I answer my remaining questions?

Table 9 provides navigation support for using the Question and Answer Tool on *QualityNet* (https://cmsqualitysupport.servicenowservices.com/qnet_qa?id=ask_a_question) to inquire about measures or topics within a particular program.

Table 9. *QualityNet* Question and Answer Navigation Assistance

Program	Topics	*QualityNet* Question and Answer Path
IQR/PR	Mortality measures	Program: Inpatient Claims-Based Measures Topic: Mortality > Understanding measure methodology
	Readmission measures	Program: Inpatient Claims-Based Measures Topic: Readmission > Understanding measure methodology
	THA/TKA complication measure	Program: Inpatient Claims-Based Measures Topic: Complication > Understanding measure methodology
	Payment measures	Program: Inpatient Claims-Based Measures Topic: Payment (AMI, heart failure, Pneumonia, hip/knee) > Understanding measure methodology
	EDAC measures	Program: Inpatient Claims-Based Measures Topic: Excess Days in Acute Care (EDAC) > Understanding measure methodology
HVBP	30-day mortality measure specifications	Program: Inpatient Claims-Based Measures Topic: Mortality > Understanding measure methodology

Program	Topics	*QualityNet* Question and Answer Path
	90-day THA/TKA complication measure specifications	Program: Inpatient Claims-Based Measures Topic: Complication > Understanding measure methodology
	Calculation and implementation of the measures as part of the HVBP Program	Program: Hospital Value Based Purchasing Select appropriate topic from the list
HRRP	30-day readmission measures specifications and calculation methodology	Program: Inpatient Claims-Based Measures Topic: Readmission > Understanding measure methodology
	Data, calculation, or reporting for the HRRP	Program: Hospital Readmissions Reduction Program Select appropriate topic from the list
	Hospital reimbursement or penalty	Program: Inpatient Claims-Based Measures Topic: select appropriate measure set > Understanding measure methodology

Glossary

A-C

Acute Care Hospital: A hospital that provides inpatient medical care for surgery and acute medical conditions or injuries (usually for a short-term illness or condition).

Case mix: Illness, severity, and age characteristics of patients with index admissions at a given hospital.

Cohort: The index admissions used to calculate the measure after inclusion and exclusion criteria have been applied.

Comorbidities: Medical conditions that a patient has in addition to their primary reason for admission.

Condition Categories (CCs): Groupings of ICD-10 diagnosis codes in clinically relevant categories from the Hierarchical Condition Categories system. CMS uses the grouping but not the hierarchical logic of the system to create risk factor variables. You can find a description of the CCs at the following link: https://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/Reports/downloads/pope_2000_2.pdf.

Critical Access Hospital (CAH): A small facility that provides outpatient services, and inpatient services on a limited basis, to people in rural areas.

D-G

Excess Days in Acute Care (EDAC): The EDAC measures calculate the time spent for unplanned readmissions, observation stays, and ED visits for any reason, 30 days after an index admission for a given condition. The EDAC measures present a comprehensive picture of acute care utilization and the burden of these events on patients.

H-L

Hospital Readmissions Reduction Program (HRRP): The HRRP is a Medicare program that reduces payments to hospitals with excess readmissions. Read more on QualityNet.

Hospital Value-Based Purchasing (HVBP) Program: The HVBP Program is a Medicare program that attaches value-based purchasing to Medicare payments. Read more on QualityNet.

Hospital-Specific Report (HSR): The HSRs provide hospitals with their detailed measure results, discharge-level data, and state and national results.

Index admission: A hospitalization that meets the measure's inclusion and exclusion criteria and acts as an anchor point for the observation of the measure's outcome.

International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM): ICD-10-CM is a system used by physicians and other healthcare providers to classify and code all diagnoses, symptoms, and procedures recorded in conjunction with hospital care in the U.S.

Interval estimate: The interval estimate is a range of probable values for the measure that characterizes the amount of uncertainty associated with the estimate. For example, a 95% interval estimate for a

mortality rate indicates that one can be 95% confident that the true value of the rate lies between the lower and the upper limit of the interval.

Longitudinal data: Longitudinal data contain data points over a long period of time. The outcome and payment measures use longitudinal data with a collection period of several years.

M-P

Outcome: The result of a broad set of healthcare activities that affect patients' well-being. For mortality measures, the outcome is death within 30 days of admission. For readmission measures, the outcome is readmission within 30 days of discharge (see Figure 5). For the complication measure, the outcome is complications within up to 90 days of admission (see FAQ 13). For EDAC measures, the outcome is time spent back in the hospital in the emergency department, in observation, or inpatient admission within 30 days of discharge (see FAQ 12).

Outcome timeframe: The outcome timeframe is the period of time that the measure assesses the outcome for a given index admission. The readmission, mortality, complication, EDAC, and payment measures all use standardized timeframes to capture mortality, unplanned readmissions, EDAC outcome events, and eligible complications. Similarly, the payment measures summarize eligible payments during a defined "episode of care" that spans care settings. The measures assess the outcome (or payment) relative to the qualifying index admission or procedure date for 30 or 90 days, starting from admission, procedure, or discharge date, depending on the measure.

Planned readmission algorithm: The planned readmission algorithm is a set of criteria for classifying readmissions as planned among the general Medicare population using Medicare administrative claims data. The algorithm identifies admissions that are typically planned and may occur within 30 days of discharge from the hospital. Planned readmissions are not counted in the outcome for the readmission measures, as planned readmissions are not considered a signal of quality.

Present on Admission (POA) codes: Set of codes on conditions present at the time the order for inpatient admission occurs. The POA is intended to differentiate conditions present at the time of admission from those conditions that develop during the inpatient admission.

Prospective Payment System (PPS) hospitals: A PPS is a method of reimbursement in which Medicare payment is made based on a predetermined, fixed amount. The payment amount for a particular service is derived based on the classification system of that service (for example, diagnosis-related groups for inpatient hospital services). CMS uses separate PPSs for reimbursement to acute inpatient hospitals, home health agencies, hospice, hospital outpatient, inpatient psychiatric facilities, inpatient rehabilitation facilities, long-term care hospitals, and skilled nursing facilities.

Q-T

Risk adjustment: A method to account for variation in how sick patients were when admitted for their initial hospital stay. Patients' degree of sickness increases or decreases the probability of observing the measure's outcome. When rates are risk-adjusted, it means hospitals that usually take care of sicker patients won't have a worse rate just because their patients were sicker when they arrived at the hospital. When rates are risk-adjusted, it helps make comparisons among hospitals fair and meaningful.

Risk-standardized outcome results: A summary outcome calculated as the ratio of the predicted outcome to expected outcome and multiplied by the national outcome results for that measure. Risk-standardized outcome measures include readmission, mortality, complication, and EDAC measures.

Risk-standardized payment (RSP): A summary payment calculated as the ratio of predicted payment to expected payment and multiplied by the national unadjusted average payment for that measure.

Service mix: The conditions and procedures of the patients with index admissions at a given hospital.

Specialty cohort: A group of index admissions for patients with related AHRQ CCS diagnosis or procedure categories that are likely treated by similar care teams. The HWR measure includes five cohorts, each with its own risk model.

Split year: Split year is the measurement period used for all of the outcome and payment measures. The measurement period is referred to as a split year because the measurement year is "split" between two calendar years. Note: split year may also be referred to as *time period*.

U-Z

Unplanned readmission: Acute clinical events a patient experiences that require urgent rehospitalization. Unplanned readmissions comprise the outcome of the readmission measures.