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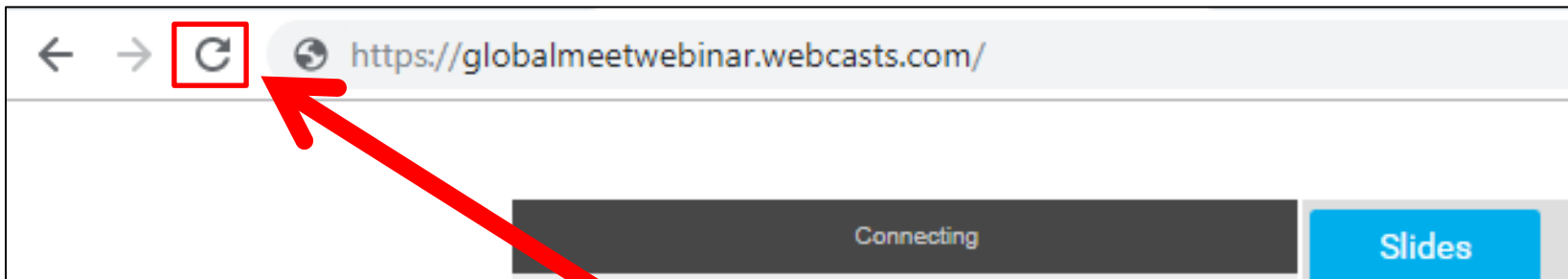
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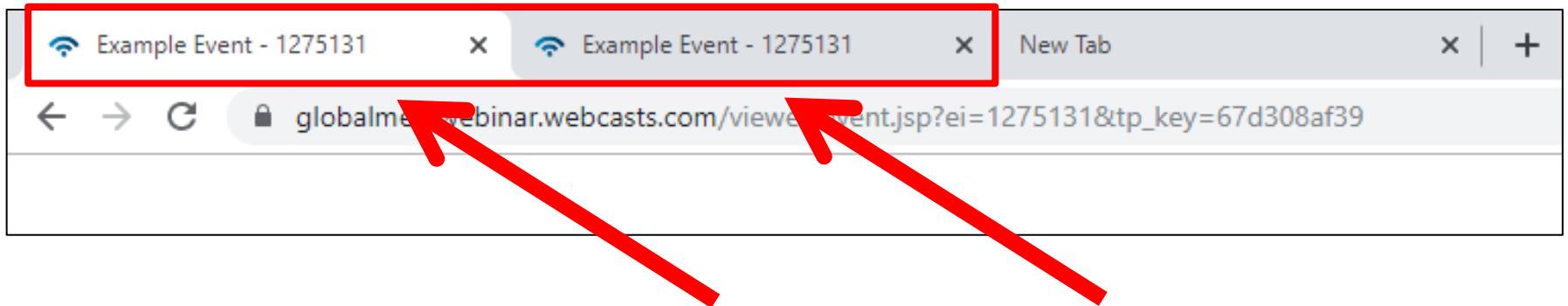
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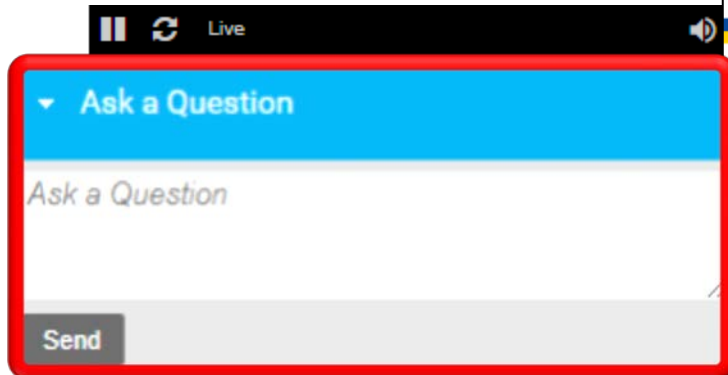
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**Inpatient Value, Incentives, and Quality Reporting (VIQR) Outreach and Education Support Contractor**



**Today's Presentation**



# **Overview of the FY 2022 HAC Reduction Program and HRRP**

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**Hosted by: Inpatient Value, Incentives, and Quality Reporting Outreach  
and Education Support Contractor (Inpatient VIQR SC)**

**August 19, 2021**

# Speakers

**Madeline Pearse, MPH**

HAC Reduction Program Manager  
DVIQR Program Support (DPS) Contractor

**Kristanna Peris, MPH**

HRRP Program Manager  
DPS Contractor

**Moderated by:**

**Maria Gugliuzza, MBA**

Program Lead

Inpatient VIQR Outreach and Education SC

# Purpose

This event will provide an overview of the fiscal year (FY) 2022 HAC Reduction Program and HRRP, including:

- Program updates
- Methodology
- Hospital-Specific Reports (HSRs)
- Review and Correction period

# Objectives

Participants will be able to:

- Interpret the program methodology
- Understand your hospital's program results in your HSR
- Submit questions about your hospital's calculations during the HAC Reduction Program Scoring Calculations Review and Correction period and the HRRP Review and Correction period



**Madeline Pearse, MPH**  
HAC Reduction Program Manager  
DVIQR Program Support (DPS)

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# **HAC Reduction Program**

# Program Background

## What is the HAC Reduction Program?

- A Medicare value-based purchasing program that reduces payments to hospitals based on their performance on measures of hospital-acquired conditions
- The program encourages hospitals to implement best practices to reduce their rates of healthcare-associated infections and improve patients' safety

# Program Background

## How does the HAC Reduction Program work?

- CMS evaluates overall hospital performance by calculating Total HAC Scores as the equally weighted average of scores across measures included in the program
- Hospitals with a Total HAC Score greater than the 75th percentile (that is, the worst-performing quartile) of all Total HAC Scores will be subject to a 1-percent payment reduction

# Eligible Hospitals

## **The HAC Reduction Program includes all subsection (d) hospitals**

- Subsection (d) hospitals are broadly defined as general acute care hospitals
- Maryland hospitals are exempt from payment reductions under the HAC Reduction Program due to an agreement between CMS and Maryland

# Program Measures

Measure	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022
<b>CMS PSI 90</b> (Patient Safety and Adverse Events Composite)*	✓	✓	✓	✓	✓	✓	✓	✓
<b>CLABSI</b> (Central Line-Associated Bloodstream Infection)	✓	✓	✓	✓	✓	✓	✓	✓
<b>CAUTI</b> (Catheter-Associated Urinary Tract Infection)	✓	✓	✓	✓	✓	✓	✓	✓
<b>SSI</b> (Surgical Site Infection for Abdominal Hysterectomy and Colon Procedures)		✓	✓	✓	✓	✓	✓	✓
<b>MRSA</b> (Methicillin-resistant <i>Staphylococcus aureus</i> ) bacteremia			✓	✓	✓	✓	✓	✓
<b>CDI</b> ( <i>Clostridium difficile</i> Infection)			✓	✓	✓	✓	✓	✓

\*CMS adopted the modified version of the CMS PSI 90 measure in the FY 2018 HAC Reduction Program

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# **FY 2022 Program Information**

# Updates for FY 2022

For the FY 2022 HAC Reduction Program, CMS:

- Used v11.0 PSI software to calculate the CMS PSI 90
- Updated the performance period for CMS PSI 90 to include patient discharges from July 1, 2018 to December 31, 2019
- Updated the performance period for the CDC NHSN HAI measures to include patient discharges from January 1, 2019 through December 31, 2019

**CMS did not change the scoring or measure methodology for the FY 2022 HAC Reduction Program**

# FY 2022 Performance Periods

**CMS PSI 90:** patient discharges from July 1, 2018 to December 31, 2019

**CDC NHSN HAI measures:** data submitted to NHSN for January 1, 2019 to December 31, 2019

- **Note:** Due to the impacts of the COVID-19 PHE, CMS is excluding all CY 2020 data (both claims and HAI) from future HACRP scoring calculations.
  - Q1 and Q2 2020: announced in interim final rule published September 2, 2020 (85 FR 54830–54832).
  - Q3 and Q4 2020: finalized in FY 2022 IPPS/LTCH PPS final rule published August 13, 2021 (86 FR 45308–45310).



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# Scoring Methodology

# Scoring Methodology

The HAC Reduction Program scoring methodology consists of 4 high-level steps:

1. Determining measure results
2. Calculating measure scores
3. Calculating Total HAC Scores
4. Determining the worst-performing quartile

# Scoring Methodology

The HAC Reduction Program scoring methodology consists of 4 high-level steps:

## **1. Determining measure results**

# Determining Measure Results

A hospital's measure result is the base value used to calculate performance for the program:

- For the **CMS PSI 90 measure** the measure result is the CMS PSI 90 composite value
- For the **CDC NHSN HAI measures** the measure result is the standardized infection ratio, calculated by the CDC

# Scoring Methodology

The HAC Reduction Program scoring methodology consists of 4 high-level steps:

1. Determining measure results
- 2. Calculating measure scores**

# Calculating Measure Scores

CMS calculates a hospital's measure score as the Winsorized z-score using measure results for the given measure. This involves two steps:

1. Winsorizing measure results
2. Calculating z-scores based on the Winsorized measure results

# Calculating Measure Scores

Winsorization is a process that reduces the impact of extreme or outlying measure results but preserves hospitals' relative results

Hospital's measure result	Winsorized measure result
Less than the 5 <sup>th</sup> percentile	Equal to the 5 <sup>th</sup> percentile value
Between the 5 <sup>th</sup> and 95 <sup>th</sup> percentile	Equal to the measure result
Greater than the 95 <sup>th</sup> percentile	Equal to the 95 <sup>th</sup> percentile value

CMS determines the 5<sup>th</sup> and 95<sup>th</sup> percentiles based on the distribution of measure results from all eligible hospitals with measure results

# Calculating Measure Scores

CMS calculates a hospital's Winsorized z-score,  $z$ , for each measure as:

$$z = \frac{(x_i - \bar{x})}{S}$$

Diagram illustrating the calculation of a hospital's Winsorized z-score,  $z$ , for each measure:

- Hospital's Winsorized measure result ( $x_i$ )
- Mean Winsorized measure result across eligible hospitals ( $\bar{x}$ )
- Standard deviation of Winsorized measure result across eligible hospitals ( $S$ )

The z-score is calculated as  $z = \frac{(x_i - \bar{x})}{S}$ .

- Hospitals that perform **worse** than the mean will earn a **positive** Winsorized z-score
- Hospitals that perform **better** than the mean will earn a **negative** Winsorized z-score



# Scoring Methodology

The HAC Reduction Program scoring methodology consists of 4 high-level steps:

1. Determining measure results
2. Calculating measure scores
- 3. Calculating Total HAC Scores**

# Calculating Total HAC Scores

CMS calculates each hospital's Total HAC Score as the equally weighted average of the hospital's measure scores (that is, the Winsorized z-scores)

- The Total HAC Score calculation includes only the measures for which a hospital receives a measure score
  - Higher Total HAC Scores indicate **worse** overall performance
  - Lower Total HAC Scores indicate **better** overall performance

# Scoring Methodology

The HAC Reduction Program scoring methodology consists of 4 high-level steps:

1. Determining measure results
2. Calculating measure scores
3. Calculating Total HAC Scores
4. **Determining the worst-performing quartile**

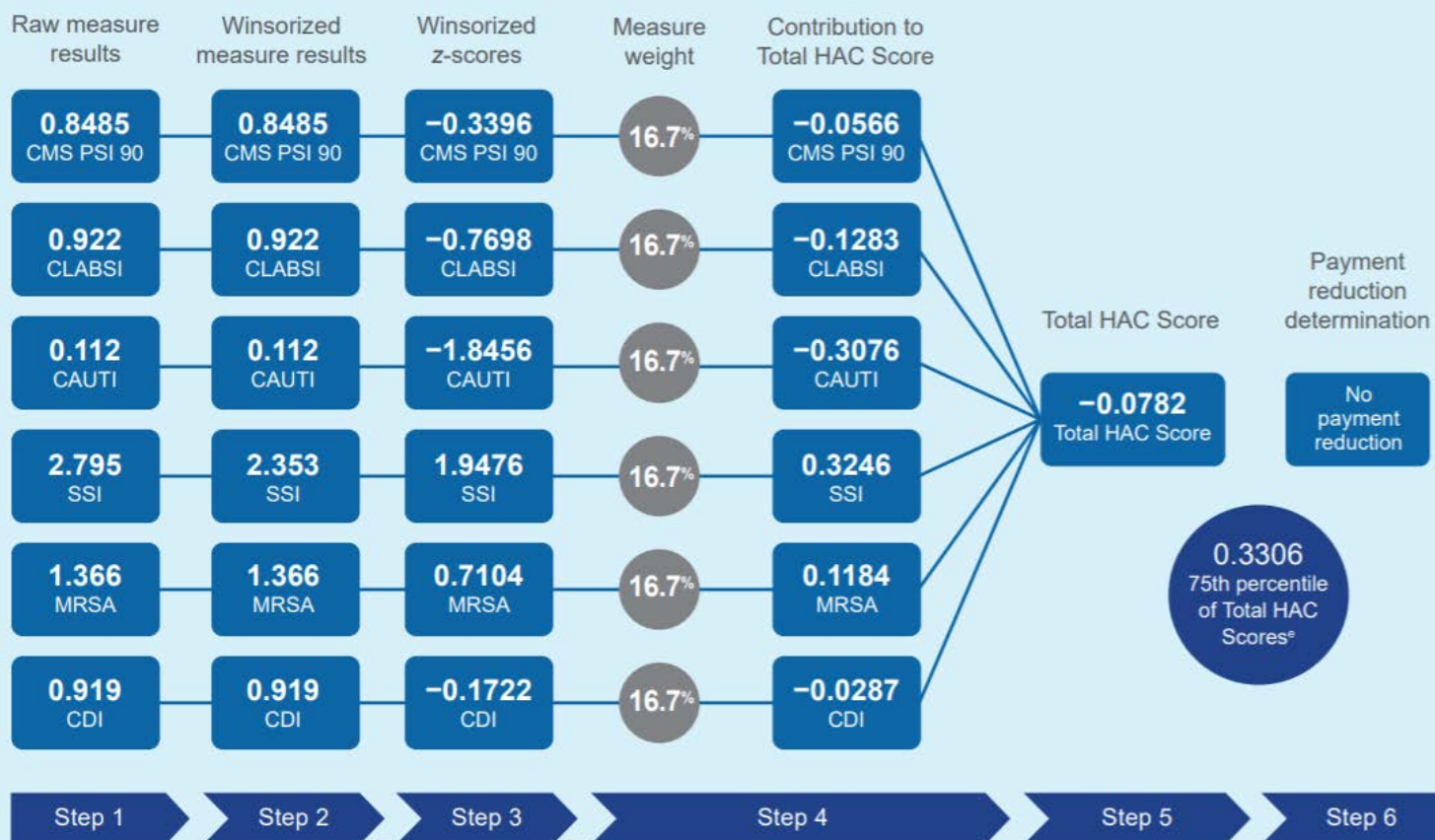
# Determining the Worst-Performing Quartile

Hospitals whose Total HAC Score is greater than the 75<sup>th</sup> percentile Total HAC Score among all eligible hospitals will receive a payment reduction for FY 2022

- CMS exempts Maryland hospitals from payment reductions under the HAC Reduction Program due to an agreement with Maryland, and excludes them from the distribution of hospitals used to determine the 75<sup>th</sup> percentile

# Example Calculation

Example of calculating Hospital A's results using Equal Measure Weights and Winsorized z-scores:



\* CMS includes all non-Maryland subsection (d) hospitals with a Total HAC Score in its calculation of the 75th percentile.

# Payment Reduction

- The 1-percent payment reduction applies to the overall Medicare payment amount for all Medicare fee-for-service discharges during FY 2022 (that is, from October 1, 2021, to September 30, 2022)
- The payment reduction occurs when CMS pays hospital claims

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# **Hospital-Specific Reports (HSRs) and Scoring Calculations Review and Correction Period**

# HSRs and Scoring Calculations Review and Correction Period

CMS provides hospitals with 30 days to review their program data, submit questions about calculations, and request corrections

- This known as the Scoring Calculations Review and Correction period
- Hospitals can review their data and results via the HSRs



# HAC Reduction Program HSR

- The HAC Reduction Program HSR provides hospitals the necessary information to review their program results, replicate the program calculations, and submit correction requests
- Hospitals should refer to the FY 2022 HSR User Guide for instructions on replicating program results using the HSR

# How to Receive Your HSR

## Who has access to the HSRs and User Guide?

- HSRs are accessible to users in your organization who have
  - Basic Hospital Quality Reporting (HQR) system *Managed File Transfer (MFT)* permissions
  - “Auto-Route (IQR)” permissions

## How will I know my report is available?

- An email notification indicating that HSRs are available is sent to users who have the necessary permissions

## Where can I access the report?

- For those with the necessary permissions, the HSRs and User Guide will be in their *MFT* inbox

# HSR Contents

**The HAC Reduction Program HSR provides hospitals with the following information:**

- Contact information for the program and additional resources
- FY 2022 payment reduction status
- Total HAC Score
- Winsorized z-scores for all measures in the Program
- Measure results for all measures in the Program
- Discharge-level information for CMS PSI 90
- Hospital-level information for the CDC NHSN HAI measures

# HSR Table 1 Total HAC Score

Table 1: Your Hospital's Total HAC Score Performance for the FY 2022 HAC Reduction Program

HOSPITAL NAME

CMS PSI 90 Hospital Discharge Period: July 1, 2018 through December 31, 2019

CDC NHSN HAI CLABSI, CAUTI, SSI, MRSA bacteremia, and CDI Measures Hospital Data Period: January 1, 2019 through December 31, 2019

CMS PSI 90 Contribution to Total HAC Score [a]	CLABSI Contribution to Total HAC Score [b]	CAUTI Contribution to Total HAC Score [c]	SSI Contribution to Total HAC Score [d]	MRSA bacteremia Contribution to Total HAC Score [e]	CDI Contribution to Total HAC Score [f]	Total HAC Score for Your Hospital [g]	Payment Reduction Threshold (75th Percentile) [h]	Subject to Payment Reduction (Yes/No) [i]
-0.0677	-0.0683	NMS	0.3888	0.1417	-0.0345	0.3600	0.3799	No

Note: This is an example and is not the actual Payment Reduction Threshold (75th percentile).

# HSR Table 2 Winsorized z-scores

Table 2: Your Hospital's Measure Results and Winsorized z-scores for the FY 2022 HAC Reduction Program

HOSPITAL NAME

CMS PSI 90 Hospital Discharge Period: July 1, 2018 through December 31, 2019

CDC NHSN HAI CLABSI, CAUTI, SSI, MRSA bacteremia, and CDI Measures Hospital Data Period: January 1, 2019 through December 31, 2019

Measure [a]	Measure Result [b]	5th Percentile Measure Result [c]	95th Percentile Measure Result [d]	Winsorized Measure Result [e]	Mean Winsorized Measure Result [f]	Standard Deviation of Winsorized Measure Results [g]	Winsorized z-score [h]	Weight of Winsorized z-score for Your Hospital [i]	Contribution of Winsorized z-score to Total HAC Score [j]
CMS PSI 90	0.8485	0.6537	1.2977	0.8485	0.8885	0.1181	-0.3387	0.2000	-0.0677
CLABSI	0.9920	0.0000	1.3750	0.9920	1.0480	0.1640	-0.3415	0.2000	-0.0683
CAUTI	INS	0.0000	1.8080	INS	0.9980	0.4810	NMS	NMS	NMS
SSI	2.7950	0.0000	2.3530	2.3530	0.9650	0.7140	1.9440	0.2000	0.3888
MRSA bacteremia	1.3660	0.0000	2.1420	1.3660	1.0010	0.5150	0.7087	0.2000	0.1417
CDI	0.9190	0.0000	1.6390	0.9190	0.9790	0.3480	-0.1724	0.2000	-0.0345

# HSR Table 3 CMS PSI Performance

Table 3: Your Hospital's Performance on CMS PSI 90 for the FY 2022 HAC Reduction Program

HOSPITAL NAME

Discharge Period: July 1, 2018 through December 31, 2019

Performance Information	CMS PSI 90 [a]	PSI 03 – Pressure Ulcer Rate	PSI 06 – Iatrogenic Pneumothorax Rate	PSI 08 – In Hospital Fall with Hip Fracture Rate	PSI 09 – Perioperative Hemorrhage or Hematoma Rate	PSI 10 – Postoperative Acute Kidney Injury Requiring Dialysis Rate	PSI 11 – Postoperative Respiratory Failure Rate	PSI 12 – Perioperative Pulmonary Embolism or Deep Vein Thrombosis Rate	PSI 13 – Postoperative Sepsis Rate	PSI 14 – Postoperative Wound Dehiscence Rate	PSI 15 – Abdominopelvic Accidental Puncture or Laceration Rate
1. Composite Value*	0.8485	—	—	—	—	—	—	—	—	—	—
2. Total Number of Eligible** Discharges (Denominator) at Your Hospital [b]	—	4,136	10,255	1,774	5,125	2,356	766	2,671	INS	255	10,933
3. Number of Outcomes (Numerator) [b]	—	0	3	0	1	0	4	8	INS	0	18
4. Observed Rate per 1,000 Eligible** Discharges [b]	—	0.5705	0.9910	1.6853	0.8873	0.9683	0.8624	0.8078	0.5691	0.9670	0.6020
5. Expected Rate per 1,000 Eligible** Discharges [b]	—	0.5246	0.9836	1.3529	0.8347	0.9275	0.7851	0.7449	0.5651	0.9020	0.5148
6. Risk-Adjusted Rate per 1,000 Eligible** Discharges [b]	—	0.5348	0.9755	1.6801	0.8141	0.9742	0.8674	0.8187	0.5746	0.9762	0.5969
7. Smoothed Rate per 1,000 Eligible** Discharges [b] [c]	—	0.0666	0.3586	0.2530	0.5756	0.8243	0.6452	3.0559	INS	1.4081	2.0673
8. National Composite Value [d]	0.8139	—	—	—	—	—	—	—	—	—	—
9. National Risk-Adjusted Rate per 1,000 Eligible** Discharges [b]	—	0.3348	0.3879	0.0869	0.0954	0.0765	1.2500	4.3500	9.7781	1.7048	1.8086
10. Measure's Weight in Composite [b]	—	0.0510	0.0541	0.0111	0.0661	0.0541	0.3115	0.1842	0.2522	0.0106	0.0050
11. Reliability Weight [b]	—	0.8011	0.3493	0.0083	0.0365	0.0036	0.1234	0.7788	INS	0.1741	0.8171

# HSR Table 4 CMS PSI Discharges

Table 4: Your Hospital's Discharge-Level Information for CMS PSI 90 for the FY 2022 HAC Reduction Program

HOSPITAL NAME

Discharge Period: July 1, 2018 through December 31, 2019

**Note:** This Microsoft Excel file contains discharge-level data protected by the Health Insurance Portability and Accountability Act of 1996 (HIPAA). Any disclosure of PHI should only be in accordance with, and to the extent permitted by, the HIPAA Privacy and Security Rules and other applicable law. When referring to the contents of this document, use the ID Number.

ID Number	Measure	HICNO	MBI [a]	Medical Record Number	Beneficiary DOB	Admission Date	Discharge Date	PSI Trigger Diagnoses or Procedures	DX1	POA1
1	IATROGENIC PNEUMOTHORAX RATE (PSI06)	999999999A	--	99999A	99/99/9999	99/99/9999	99/99/9999	5121	4414	Y
2	IATROGENIC PNEUMOTHORAX RATE (PSI06)	999999999A	9AA9AA9AA99	A10002	99/99/9999	99/99/9999	99/99/9999	5121	42781	Y
3	IATROGENIC PNEUMOTHORAX RATE (PSI06)	999999999A	9AA9AA9AA99	A10003	99/99/9999	99/99/9999	99/99/9999	5121	99656	Y
4	PERIOPERATIVE HEMORRHAGE OR HEMATOMA RATE (PSI09)	999999999A	9AA9AA9AA99	A10004	99/99/9999	99/99/9999	99/99/9999	99811	0241	N
5	POSTOPERATIVE RESPIRATORY FAILURE RATE (PSI11)	999999999A	9AA9AA9AA99	A10005	99/99/9999	99/99/9999	99/99/9999	51851	9671	N
6	POSTOPERATIVE RESPIRATORY FAILURE RATE (PSI11)	999999999A	9AA9AA9AA99	A10006	99/99/9999	99/99/9999	99/99/9999	51851	9670	Y
7	POSTOPERATIVE RESPIRATORY FAILURE RATE (PSI11)	999999999A	9AA9AA9AA99	A10007	99/99/9999	99/99/9999	99/99/9999	51853	9604	N
8	POSTOPERATIVE RESPIRATORY FAILURE RATE (PSI11)	999999999A	9AA9AA9AA99	A10008	99/99/9999	99/99/9999	99/99/9999	51853	9671	N
9	PERIOPERATIVE PULMONARY EMBOLISM OR DEEP VEIN THROMBOSIS RATE (PSI12)	999999999A	9AA9AA9AA99	A10009	99/99/9999	99/99/9999	99/99/9999	45341	V5482	--
10	PERIOPERATIVE PULMONARY EMBOLISM OR DEEP VEIN THROMBOSIS RATE (PSI12)	999999999A	9AA9AA9AA99	A10010	99/99/9999	99/99/9999	99/99/9999	41519	73342	Y
11	PERIOPERATIVE PULMONARY EMBOLISM OR DEEP VEIN THROMBOSIS RATE (PSI12)	999999999A	9AA9AA9AA99	A10011	99/99/9999	99/99/9999	99/99/9999	45341	4414	Y

# HSR Table 5 CDC HAI Performance

Table 5: Your Hospital's Performance on CDC NHSN HAI CAUTI, CLABSI, SSI, MRSA bacteremia, and CDI Measures for the FY 2022 HAC Reduction Program

HOSPITAL NAME

Data Period: January 1, 2019 through December 31, 2019

<b>Performance Information</b>	<b>CLABSI [a]</b>	<b>CAUTI [a]</b>	<b>SSI [a]</b>	<b>MRSA bacteremia [a]</b>	<b>CDI [a]</b>
1. Reported Number of HAIs [b]	2.480	2.408	8.385	2.000	1.838
2. Predicted Number of HAIs [c]	2.500	21.500	3.000	2.738	2.000
3. Reported Central-line Days or Urinary Catheter Days; Surgical Procedures Performed; MRSA bacteremia Patient Days; CDI Patient Days [d]	10,768	12,769	335	45,000	38,000
4. SIR [e]	0.992	INS	2.795	1.366	0.919
5. National SIR [f]	1.048	0.481	0.714	0.515	0.348



# Scoring Calculations Review and Correction Period

The FY 2022 HAC Reduction Program Scoring Calculation Review and Correction period begins August 16, 2021, and ends September 14, 2021

- Hospitals have 30 days to review their data, submit questions about the calculation of results, and request corrections to calculation errors
- CMS will distribute HSRs via the Hospital Quality Reporting (HQR) System *Managed File Transfer* (MFT) inbox prior to the start of the Scoring Calculations Review and Correction period

**Submit questions and correction requests to the HAC Reduction Program Support Team via the [Quality Q&A Tool](#) as soon as possible, but no later than 11:59 PM PT on September 14, 2021.**

# What can hospitals correct?

## Hospitals CAN request corrections to the following

- Measure result for the CMS PSI 90 measure
- Measure scores for all measures in the program
- Total HAC Score
- Payment reduction status

## Hospitals CANNOT request corrections to the following

### For the CMS PSI 90 measure:

- Underlying claims data used to calculate the results (this includes adding new claims to the data extract)

### For the CDC NHSN HAI measures:

- Reported number of HAIs
- Standardized infection ratios
- Reported central-line days, urinary catheter days, surgical procedures performed, or MRSA or CDI patient days

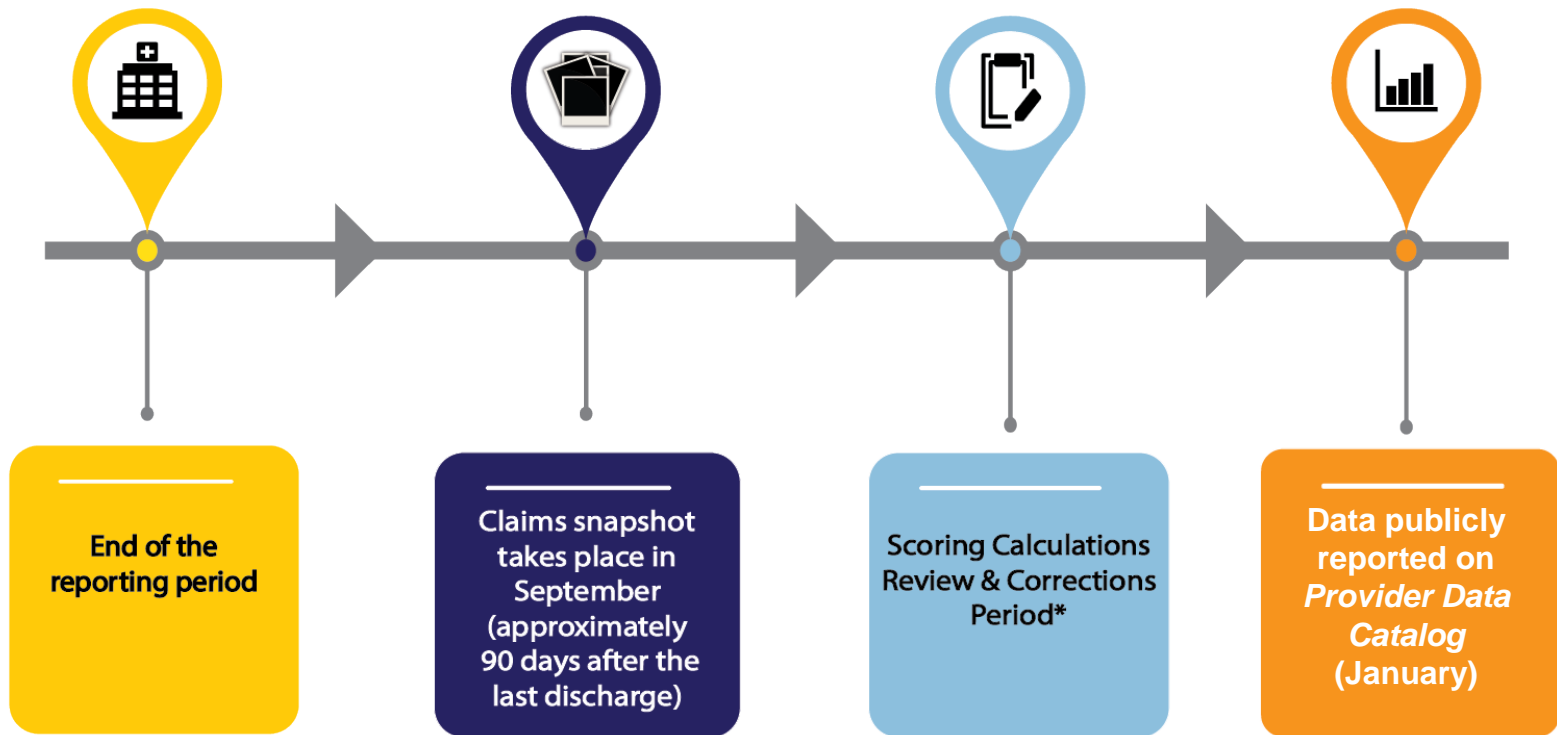
# Correcting CMS PSI 90 Data

Hospitals **cannot** correct underlying data during the Scoring Calculations Review and Correction period, because hospitals have already had the opportunity to review and correct those data

## **For the CMS PSI 90:**

- CMS takes an annual snapshot of claims data to perform measure calculations for claims-based measures
- The snapshot for FY 2022 calculations occurred on September 25, 2020
- Medicare Administrative Contractors must have processed all corrections to underlying claims by the snapshot date, and claim edits after this date will not be reflected in program results
- The next claims snapshot (for FY 2023 calculations) will occur on September 24, 2021

# Claims-Based Data CMS PSI 90



\*Hospitals may not change underlying data during this period

# Correcting CDC NHSN HAI Data

Hospitals **cannot** correct underlying data during the Scoring Calculations Review and Correction period, because hospitals have already had the opportunity to review and correct that data

## **For the CDC NHSN HAI measures:**

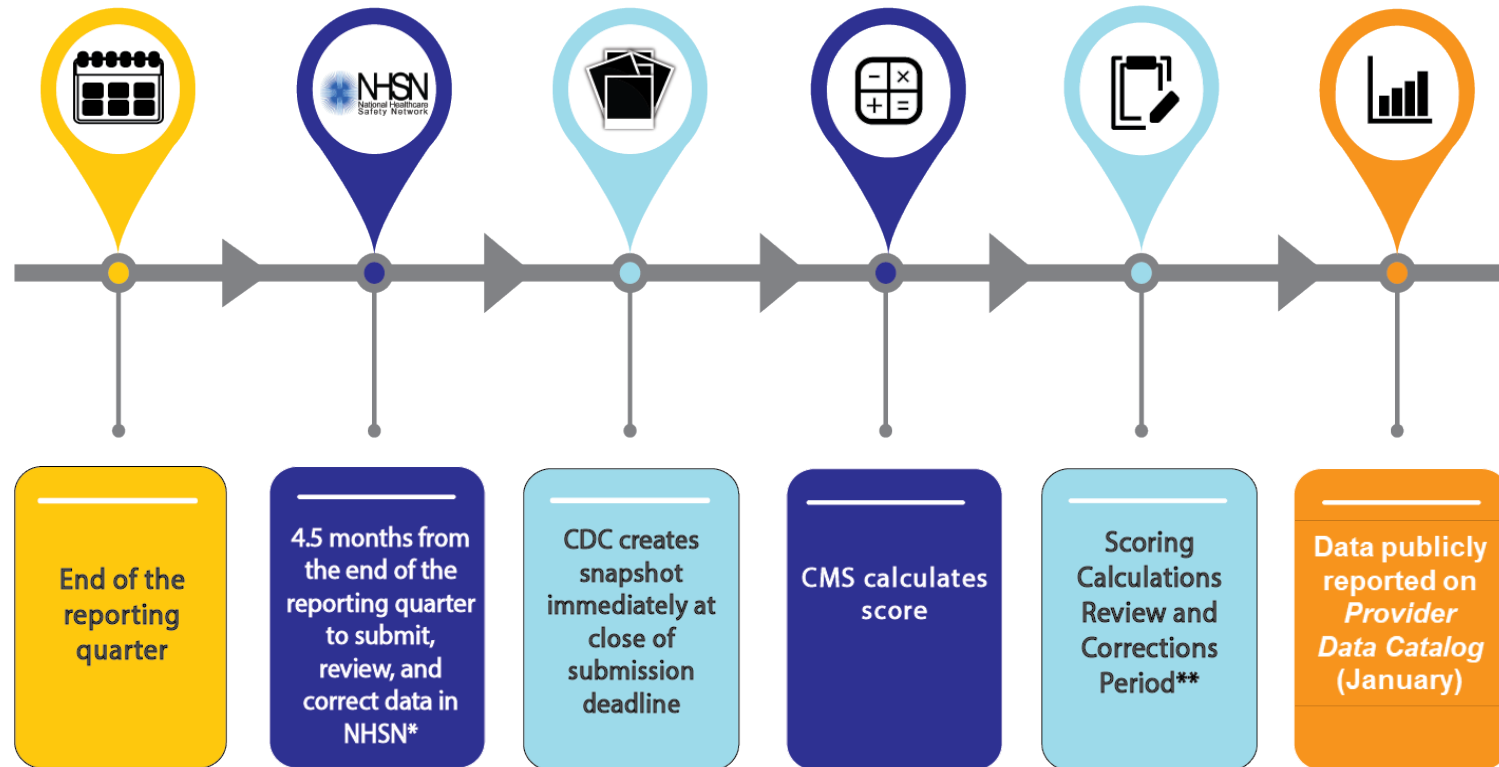
- Hospitals can submit, review, and correct the CDC NHSN HAI data for the full 4.5 months after the end of the reporting quarter
- Immediately after the NHSN submission deadline, CDC creates a data file for CMS to use in HAC Reduction Program calculations
- CMS does not receive or use data entered after the NHSN submission deadline
- CMS expects hospitals to review and correct their data before the NHSN submission deadline

# NHSN Submission Deadlines

Reporting quarter	Applicable calendar months	NHSN submission deadline*
Q1	January, February, March	August 15
Q2	April, May, June	November 15
Q3	July, August, September	February 15
Q4	October, November, December	May 15

\*If the 15th of the month falls on a Friday, Saturday, Sunday, or Federal holiday, the NHSN submission deadline is the following business day

# HAI Data Flow



\*Eligible Hospitals have until May 15 of each year to submit an HAI exemption form for CLABSI, CAUTI, and SSI only.

\*\* The Scoring Calculations Review and Corrections period does not allow hospitals to correct: (1) reported number of HAIs; (2) standardized infection ratios (SIRs); and (3) reported central-line days, urinary catheter days, surgical procedures performed, or patient days.

# More Information

CMS releases a HAC Reduction Program HSR User Guide and a Mock HSR on the *QualityNet* website

For more information on replicating results, hospitals can contact the HAC Reduction Program Support Team via the Quality Q&A Tool to:

- Submit questions about the calculations:  
[https://cmsqualitysupport.servicenowservices.com/qnet\\_qa](https://cmsqualitysupport.servicenowservices.com/qnet_qa)
- Request a copy of the Example Replication Instructions
- Request a copy of v11.0 of the CMS PSI Software
- Refer to the Replication Instructions document on the *QualityNet* CMS PSI Resources webpage for instructions on how to use the CMS PSI Software:  
<https://www.qualitynet.org/inpatient/asures/psi/resources>



# Public Reporting

In early 2022, CMS will release the following FY 2022 HAC Reduction Program information on the [Provider Data Catalog](#):

- CMS PSI 90, CLABSI, CAUTI, SSI, MRSA bacteremia, and CDI measure scores
- Total HAC Score
- Payment reduction indicator

# HAC Reduction Program Resources

General information on the HAC Reduction Program can be found on *QualityNet*: <https://www.qualitynet.org/inpatient/hac>

- Scoring Methodology Information on *QualityNet*:  
<https://www.qualitynet.org/inpatient/hac/methodology>
- Scoring Calculations Review and Corrections Information on *QualityNet*:  
<https://www.qualitynet.org/inpatient/hac/payment#tab2>
- FY 2022 HSR User Guide and Mock HSR on *QualityNet*:  
<https://www.qualitynet.org/inpatient/hac/reports>
- CMS PSI Resources on *QualityNet*:  
<https://www.qualitynet.org/inpatient/measures/psi>

**Submit questions directly to HAC Reduction Program Support Team via the Quality Q&A Tool:**

[https://cmsqualitysupport.servicenowservices.com/qnet\\_qa](https://cmsqualitysupport.servicenowservices.com/qnet_qa)

# HAC Reduction Program Contacts

Submit questions about HAC Reduction Program to the [Quality Q&A Tool](#) by selecting “Ask a Question” and then use the table below to determine which Program, Topic, and Subtopic to select.

Question Subject	Program	Topic and Subtopic (if applicable)
Scoring Calculations Review and Correction Period	HACRP – Hospital-Acquired Condition Reduction Program	Topic: HACRP Review & Correction Requests
Your hospital’s results, issues accessing the HSR, or patient-level data	HACRP – Hospital-Acquired Condition Reduction Program	Topic: Hospital-specific reports & requests
Request for Excel replication example	HACRP – Hospital-Acquired Condition Reduction Program	Topic: HSR replication example
Scoring methodology	HACRP – Hospital-Acquired Condition Reduction Program	Topic: General Information (HACRP)
CMS PSI 90 questions	Inpatient Claims-Based Measures	Topic: Patient Safety Indicators (PSI)

**Kristanna Peris, MPH**  
HRRP Program Manager  
DVIQR Program Support (DPS)

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# **Hospital Readmissions Reduction Program**

# Hospital Readmissions Reduction Program (HRRP) Background

- HRRP is a Medicare value-based purchasing program established under Section 1886(q) of the Social Security Act.
- HRRP encourages hospitals to improve communication and care coordination efforts to better engage patients and caregivers in post-discharge planning.
- CMS reduces payments to subsection (d) hospitals with excess readmissions.

# Eligible Hospitals

HRRP includes all subsection (d) hospitals.

- Subsection (d) hospitals are broadly defined as general acute care hospitals
- CMS exempts Maryland hospitals from HRRP payment reductions because of an agreement between CMS and Maryland.

# HRRP Measures

- The following six condition/procedure-specific 30-day risk standardized unplanned readmission measures are included in HRRP:
  - Acute Myocardial Infarction
  - Chronic Obstructive Pulmonary Disease
  - Heart Failure
  - Pneumonia
  - Coronary Artery Bypass Graft surgery
  - Elective Primary Total Hip Arthroplasty and/or Total Knee Arthroplasty

# Updates for FY 2022 HRRP

- CMS updated the FY 2022 performance period from a 36-month period to a 29-month period due to the Extraordinary Circumstances Exception (ECE) granted in response to the COVID-19 public health emergency.
- The FY 2022 performance period is July 1, 2017 to December 1, 2019. [[CMS-3401-IFC](#)]



# HRRP Stratified Methodology

- Prior to the 21<sup>st</sup> Century Cures Act, CMS used a non-stratified methodology (FY 2013 to FY 2018) to assess hospital performance under HRRP.
- Beginning in FY 2019, the 21<sup>st</sup> Century Cures Act directs CMS to use a stratified methodology to evaluate a hospital's performance relative to other hospitals with a similar proportion of patients who are dually eligible for Medicare and full Medicaid benefits.
- The 21<sup>st</sup> Century Cures Act also requires that the stratified methodology produce the same amount of Medicare savings generated under the non-stratified methodology to maintain budget neutrality.

# Payment Reduction Methodology

- The payment reduction is the percentage a hospital's payments will be reduced based on its performance in the program.
- The payment reduction is a weighted average of a hospital's performance across the 6 HRRP measures during the performance period.
- The payment adjustment factor is the form of the payment reduction CMS uses to reduce hospitals' payments.
- The next slides will describe the steps involved in calculating the payment reduction.

# Payment Reduction Methodology: ERR and Dual Proportion

**Step 1:** CMS calculates a dual proportion for every hospital as well as an excess readmission ratio (ERR) for each of the six HRRP conditions/procedures and a dual proportion.

**Dual proportion:** the proportion of Medicare FFS and managed care stays in a hospital where the patient was dually eligible for Medicare and full Medicaid benefits

## Example dual proportion calculation for Hospital A:

Hospital A has **894** stays in which the beneficiary was dually eligible for Medicare and full Medicaid benefits.

Hospital A has **3,389** total Medicare FFS and managed care stays.

$$\text{Dual proportion} = \frac{894}{3,389} = 0.2638$$

**ERR:** a measure of a hospital's relative performance, calculated using Medicare fee-for-service (FFS) claims

## Example ERR calculations for Hospital A:

$$\text{AMI ERR: } \frac{0.1798}{0.1850} = 0.9719$$

$$\text{COPD ERR: } \frac{0.1649}{0.1574} = 1.0476$$

$$\text{HF ERR: } \frac{0.1349}{0.1351} = 0.9985$$

$$\text{Pneumonia ERR: } \frac{0.1659}{0.1459} = 1.1371$$

$$\text{CABG ERR: } \frac{0.1883}{0.1995} = 0.9439$$

$$\text{THA/TKA ERR: } \frac{NQ}{NQ} = NQ$$

Hospitals with no eligible discharges for a measure will not have an ERR calculated for that measure.

# Payment Reduction Methodology: Peer Groups and Peer Group Median ERR

- **Step 2:** CMS stratifies hospitals into 1 of 5 peer groups (i.e., quintiles) based on hospitals' dual proportions.



Example peer groups:

Peer group	Minimum dual proportion	Maximum dual proportion
1	0	0.1347
2	0.1348	0.1832
3	0.1833	0.2316
<b>4</b>	<b>0.2317</b>	<b>0.3083</b>
5	0.3084	1

Hospital A's dual proportion = **0.2638**

Hospital A is in **Peer Group 4**

- **Step 3:** CMS calculates a median ERR for each peer group and each measure.



Example peer group median ERRs:

Peer group	AMI	COPD	HF	Pneumonia	CABG	THA/TKA
1	0.9941	0.9943	0.9848	0.9876	0.9804	0.9841
2	0.9961	0.9944	0.9865	0.9844	0.9961	0.9969
3	0.9964	0.9956	0.9894	0.9866	0.9979	0.9901
<b>4</b>	<b>0.9970</b>	<b>0.9954</b>	<b>1.0077</b>	<b>0.9971</b>	<b>1.0093</b>	<b>1.0073</b>
5	1.0093	1.0104	1.0258	1.0253	1.0157	0.9989

# Payment Reduction Methodology: Measure Contributions

**Step 4:** CMS determines which ERRs will contribute to the payment reduction. For an ERR to contribute to the payment reduction, it must meet two criteria:

- ERR > peer group median ERR
- Eligible discharges ≥ 25



**Example determination of measures contributing to the payment reduction for Hospital A:**

Measure	ERR	Peer Group 4 median ERR	Eligible discharges	ERR > Peer Group 4 median ERR	Eligible discharges ≥ 25
AMI	0.9719	0.9970	42	X	✓
<b>COPD</b>	<b>1.0476</b>	<b>0.9954</b>	<b>38</b>	✓	✓
HF	0.9985	1.0077	22	X	X
<b>Pneumonia</b>	<b>1.1371</b>	<b>0.9971</b>	<b>25</b>	✓	✓
CABG	0.9439	1.0093	25	X	✓
THA/TKA	NQ	1.0073	0	X	X

The **COPD** and **pneumonia** measures will contribute to Hospital A's payment reduction.

# Payment Reduction Methodology: Measure Contributions

- **Step 5:** CMS calculates each measure's contribution to the payment reduction.



Example calculations of measures' contributions to the payment reduction for **Hospital A:**

Neutrality modifier		DRG ratio		ERR		Peer group median ERR		Contribution
0.9458	X	0.0331 COPD	X	( 1.0476 COPD	-	0.9954 COPD	=	0.0016 COPD
0.9458	X	0.0648 Pneumonia	X	( 1.1371 Pneumonia	-	0.9971 Pneumonia	=	0.0086 Pneumonia

Only the COPD and pneumonia measures are shown in this step because these are the only two measures that will contribute to Hospital A's payment reduction (see Step 4).

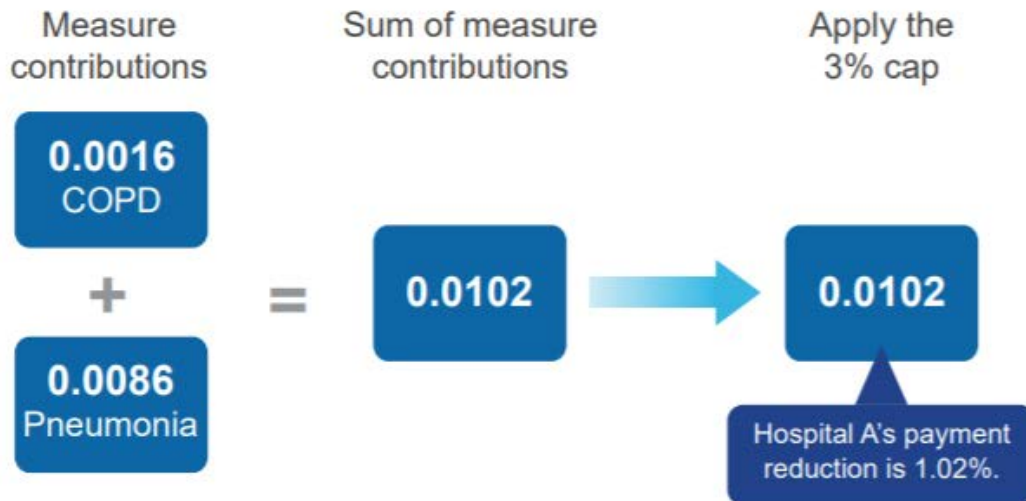
# Payment Reduction Methodology: Payment Reduction

**Step 6:** CMS sums the measure contributions to the payment reduction.

- If the sum of the measure contributions to the payment reduction is  $>0.03$ , CMS applies the 3% cap.



**Example calculation of the payment reduction for Hospital A:**



# Payment Reduction Methodology: Payment Adjustment Factor

**Step 7:** CMS calculates the payment adjustment factor (PAF).

*Payment adjustment factor = 1 – payment reduction*



**Example calculation of the payment adjustment factor for Hospital A:**

*Hospital A's payment adjustment factor = 1 – 0.0102  
= 0.9898*

**Step 8:** CMS applies the payment adjustment factor to payments for Medicare FFS claims submitted starting October 1 each year.

*PAF x Base operating DRG payment amounts\**



**Example application of the payment adjustment factor for Hospital A:**

Hospital A's total base operating DRG payment amount is:  
**\$9,842,675**

Hospital A's payment adjustment factor is: **0.9898**

Hospital A's total payment for Medicare FFS claims\* =  
**\$9,842,675 x 0.9898 = \$9,742,279.72**

\*In general, base operating DRG payment amounts are the Medicare FFS base operating DRG payments without any add-on payments (e.g., Disproportionate Share Hospital and Indirect Medical Education payments).



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# **HOSPITAL-SPECIFIC REPORT (HSR) OVERVIEW**

# HRRP HSR Content

The HRRP HSRs contains tabs that provide hospitals the following information:

- Payment Reduction Percentage
- Payment Adjustment Factor
- Measure results/ERRs
- Neutrality Modifier
- Stratification information
  - Dual stays
  - Dual proportion
  - Peer group assignment
- Discharge-level information for readmission measures
- Contact information for the program and links to additional resources

# Table 1: Payment Adjustment

Table 1: Your Hospital's Payment Adjustment Factor Information

HOSPITAL NAME

Hospital Discharge Period: July 1, 2017 through December 1, 2019

<b>Number of Dual Eligible Stays (Numerator) [a]</b>	<b>Total Number of Stays (Denominator) [b]</b>	<b>Dual Proportion [c]</b>	<b>Peer Group Assignment [d]</b>	<b>Neutrality Modifier [e]</b>	<b>Payment Reduction Percentage [f]</b>	<b>Payment Adjustment Factor [g]</b>
110	728	0.1511	2	0.9637	0.02%	0.9998

Mock HSR (illustrative data)

# Table 2: Hospital Results

Table 2: Your Hospital's Measure Results on 30-Day All-Cause Unplanned Risk-Standardized Readmission for AMI, COPD, HF, Pneumonia, CABG, and THA/TKA

HOSPITAL NAME

Hospital Discharge Period: July 1, 2017 through December 1, 2019

Measure [a]	Number of Eligible Discharges [b]	Number of Readmissions Among Eligible Discharges [c]	Predicted Readmission Rate [d]	Expected Readmission Rate [e]	Excess Readmission Ratio (ERR) [f]	Peer Group Median ERR [g]	Penalty Indicator (Yes/No) [h]	Ratio of DRG Payments Per Measure to Total Payments [i]	National Observed Readmission Rate [j]
AMI	NQ	NQ	NQ	NQ	NQ	0.9955	No	NQ	15.4%
COPD	36	2	17.4724%	18.3572%	0.9518	0.9941	No	0.0581	19.7%
HF	26	5	20.2304%	20.3119%	0.9960	0.9927	Yes	0.0506	21.7%
Pneumonia	59	7	15.1045%	15.5262%	0.9728	0.9865	No	0.1156	16.7%
CABG	NQ	NQ	NQ	NQ	NQ	0.9845	No	NQ	12.5%
THA/TKA	3	0	3.9237%	3.9500%	0.9933	0.9944	No	0.0091	3.9%

Mock HSR (illustrative data)

# Tables 3 – 8: Discharges

Table 5: Discharge-Level Information for the HF 30-Day All-Cause Unplanned Risk-Standardized Readmission Measure

HOSPITAL NAME

Hospital Discharge Period: July 1, 2017 through December 1, 2019

**Note: This Microsoft® Excel® file contains MOCK data except for national results. Your hospital's HSR workbook contains discharge-level data protected by the Health Insurance Portability and Accountability Act of 1996 (HIPAA). Any disclosure of protected health information (PHI) should be in accordance with, and only to the extent permitted by, the HIPAA Privacy and Security Rules and other applicable law. When referring to the contents of your hospital's HSR workbook, use the ID number.**

[Please note row 8 contains risk factor coefficients beginning in column S. Beginning in row 9 of the HSR, the file contains a 1 if the patient was identified as having that risk factor (and equals the years above 65 for the "Years over 65 (continuous)" risk factor); 0 otherwise. The risk factor flags (1 or 0) will be in cells beginning in column T]

ID Number	HICNO	MBI [a]	Medical Record Number	Beneficiary DOB	Admission Date of Index Stay	Discharge Date of Index Stay [b]	Cohort Inclusion/Exclusion Indicator
--	--	--	--	--	--	--	--
1	999999999A	9999999999M	MR999999999	99/99/9999	99/99/9999	99/99/9999	0
2	999999999A	9999999999M	MR999999999	99/99/9999	99/99/9999	99/99/9999	0
3	999999999A	9999999999M	MR999999999	99/99/9999	99/99/9999	99/99/9999	0
4	999999999A	9999999999M	MR999999999	99/99/9999	99/99/9999	99/99/9999	0
5	999999999A	9999999999M	MR999999999	99/99/9999	99/99/9999	99/99/9999	0
6	999999999A	9999999999M	MR999999999	99/99/9999	99/99/9999	99/99/9999	0

Mock HSR (illustrative data)

# Tables 3 – 8: Discharges (Continued)

Index Stay (Yes/No)	Principal Discharge Diagnosis of Index Stay	Discharge Destination	Unplanned Readmission within 30 Days (Yes/No)	Planned Readmission (Yes/No)
--	--	--	--	--
Yes	I130	03	Yes	No
Yes	I130	06	Yes	No
Yes	I5033	01	Yes	No
Yes	I130	03	Yes	No
Yes	I130	03	Yes	No
Yes	I130	06	No	No

Mock HSR (illustrative data)

# Tables 3 – 8: Discharges (Continued)

Readmission Date	Discharge Date of Readmission	Principal Discharge Diagnosis of Readmission	Readmission to Same Hospital (Yes/No)	Provider ID of Readmitting Hospital [c]	HOSP_EFFECT	AVG_EFFECT
--	--	--	--	--	-2.202771164313190	-2.197606907947680
99/99/9999	99/99/9999	J156	No	888888	N/A	N/A
99/99/9999	99/99/9999	I130	Yes	999999	N/A	N/A
99/99/9999	99/99/9999	L03114	Yes	999999	N/A	N/A
99/99/9999	99/99/9999	I130	No	888888	N/A	N/A
99/99/9999	99/99/9999	E870	No	888888	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A

Mock HSR (illustrative data)

# Table 9: Dual Stays

Table 9: Stay-Level Information for Dual Eligibles (Dual Proportion Numerator)

HOSPITAL NAME

Hospital Discharge Period: July 1, 2017 through December 1, 2019

**Note: This Microsoft® Excel® file contains MOCK data except for national results. Your hospital's HSR workbook contains discharge-level data protected by the Health Insurance Portability and Accountability Act of 1996 (HIPAA). Any disclosure of protected health information (PHI) should be in accordance with, and only to the extent permitted by, the HIPAA Privacy and Security Rules and other applicable law. When referring to the contents of your hospital's HSR workbook, use the ID number.**

ID Number	HICNO	MBI [a]	Beneficiary DOB	Admission Date	Discharge Date	Claim Type
1	999999999A	9999999999M	99/99/9999	99/99/9999	99/99/9999	Fee for Service
2	999999999A	9999999999M	99/99/9999	99/99/9999	99/99/9999	Fee for Service
3	999999999A	9999999999M	99/99/9999	99/99/9999	99/99/9999	Fee for Service
4	999999999A	9999999999M	99/99/9999	99/99/9999	99/99/9999	Fee for Service
5	999999999A	9999999999M	99/99/9999	99/99/9999	99/99/9999	Fee for Service
6	999999999A	9999999999M	99/99/9999	99/99/9999	99/99/9999	Managed Care

Mock HSR (illustrative data)



# Review and Correction Period

- The Review and Correction period begins when CMS distributes HSRs via the Hospital Quality Reporting (HQR) System *Managed File Transfer* (MFT) inbox. For FY 2022, the Review and Correction period extends from August 9, 2021 through September 8, 2021.
- CMS grants hospitals 30 days to review their HRRP data, submit questions about their result, and request a correction if a calculation error is identified.
- If a hospital identifies a potential discrepancy in the payment adjustment factor and component results, the hospital should submit an inquiry to the [Quality Q&A Tool](#) no later than 11:59 pm PT on the final day of the Review and Correction period.

# What can hospitals correct?

## Hospitals CAN:

- Submit questions about the calculation of their:
  - Payment Reduction
  - Payment Adjustment
  - Dual Stays
  - Dual Proportion
  - Peer Group Assignment
  - Neutrality Modifier
  - ERR(s)
  - Peer Group Median ERR(s)

## Hospitals CANNOT:

- Submit additional corrections related to the underlying claims data.
- Add new claims to the data used for the calculations.

# Public Reporting

- In early 2022, for hospitals with at least 25 discharges, CMS reports the following data elements for each of the 30-day risk-standardized unplanned readmission measures on the *Provider Data Catalog*:
  - Number of eligible discharges
  - Number of readmissions for hospitals with 11 or more readmissions
  - Predicted readmission rates (i.e., adjusted actual readmissions)
  - Expected readmission rates
  - ERR

# Public Reporting (Continued)

- After the Review and Correction period, CMS releases the IPPS/LTCH PPS final rule Supplemental Data File which includes the following components:
  - Hospital payment reduction percentage
  - Hospital payment adjustment factor
  - Hospital dual proportion
  - Hospital peer group assignment
  - Neutrality modifier
  - ERR for each measure
  - Number of eligible discharges for each measure
  - Peer Group Median ERR for each measure
  - Penalty Indicator for each measure
  - DRG payment ratio for each measure

# HRRP Resources

## **Program information:**

<https://qualitynet.cms.gov/inpatient/hrrp>

## **HSR User Guide, Mock HSR, and Replication Example:**

<https://qualitynet.cms.gov/inpatient/hrrp/reports>

## **30-day risk-standardized unplanned readmission measure information:**

<https://qualitynet.cms.gov/inpatient/measures/readmission/methodology>

# HRRP Contacts

Submit questions about HRRP to the [Quality Q&A Tool](#) by selecting “Ask a Question” and then use the table below to determine which Program, Topic, and Subtopic to select.

Question Subject	Program	Topic and Subtopic (if applicable)
Review and Correction Period	HRRP – Hospital Readmissions Reduction Program	Topic: HRRP Review & Correction Requests
Your hospital’s results, issues accessing the HSR, or patient-level data	HRRP – Hospital Readmissions Reduction Program	Topic: Hospital-specific reports & requests
Request for Excel replication example	HRRP – Hospital Readmissions Reduction Program	Topic: HSR replication example
PAF or payment reduction methodology	HRRP – Hospital Readmissions Reduction Program	Topic: PAF Methodology
Readmission measure methodology	Inpatient Claims-Based Measures	Topic: Readmissions Subtopic: Understanding measure methodology

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# Questions

# Disclaimer

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