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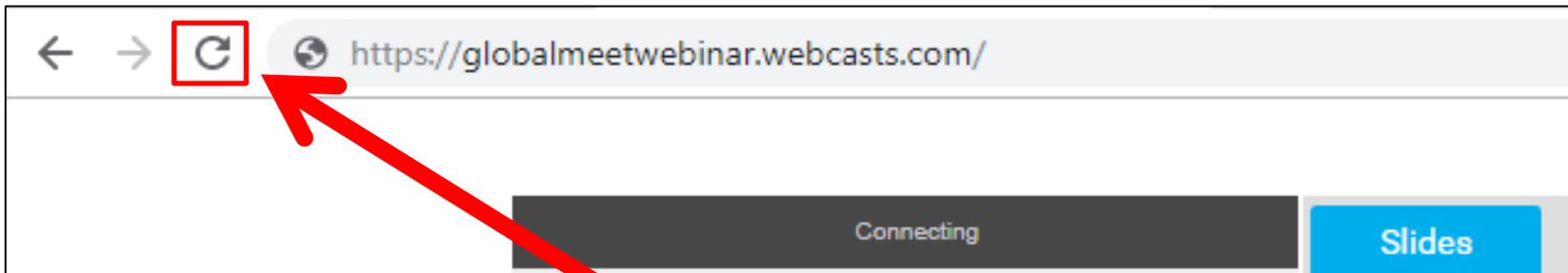
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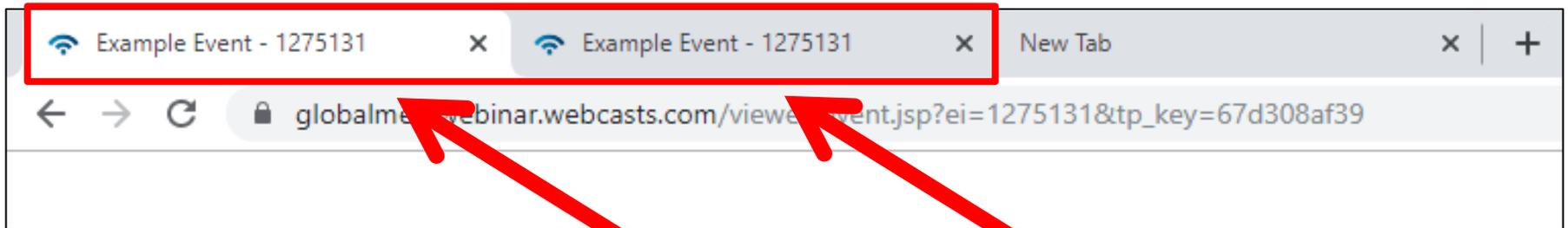
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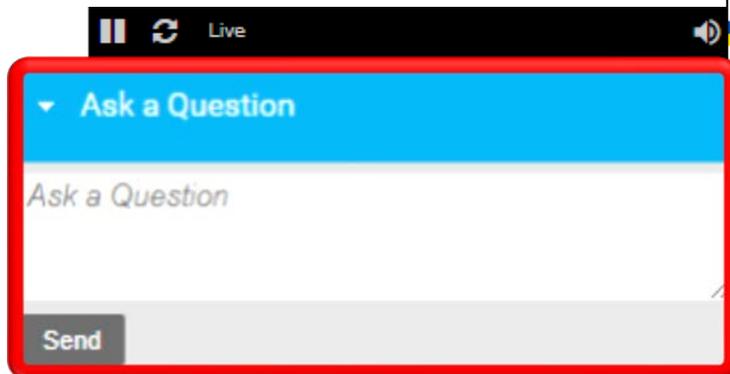
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Inpatient Value, Incentives, and Quality Reporting (VIQR) Outreach and Education Support Contractor



Today's Presentation



Reviewing Your FY 2022 Hospital VBP Program Mortality and Complication Measures Hospital-Specific Report

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

April 22, 2021

Speakers

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Purpose

This event will provide an overview of the hospital-specific reports (HSRs) for the mortality and complication measures used in the Fiscal Year (FY) 2022 Hospital VBP Program. This includes a summary of the new coronary artery bypass graft (CABG) mortality measure methodology, measure calculations, HSR access, and instructions for submitting a review and correction request.

Objectives

Participants will be able to:

- Recall the updates to the FY 2022 Hospital VBP Program Mortality and Complication Measures HSR.
- Access and review the HSR.
- Understand how to submit a review and correction request for the Hospital VBP Program measures.

Acronyms

AMI	Acute Myocardial Infarction	HVBP	Hospital Value-Based Purchasing
CABG	Coronary Artery Bypass Graft	IQR	Inpatient Quality Reporting
CBM	claims-based measure	MFT	Managed File Transfer
CCN	CMS Certification Number	MSPB	Medicare Spending per Beneficiary
CMS	Centers for Medicare & Medicaid Services	PHI	protected health information
COPD	Chronic Obstructive Pulmonary Disease	PII	personally identifiable information
ECE	extraordinary circumstance exception	PN	pneumonia
FFS	fee for service	Q	quarter
FY	fiscal year	RSCR	Risk-Standardized Complication Rate
HARP	HCQIS Access Role and Profile	RSMR	Risk-Standardized Mortality Rate
HF	heart failure	SA/O	Security Administrator/Official
HIPPA	Health Insurance Portability and Accountability Act of 1996	THA/TKA	Total Hip Arthroplasty (THA) and/or Total Knee Arthroplasty
HQR	Hospital Quality Reporting	VBP	value-based purchasing
HSR	Hospital-Specific Report	VIQR	Value, Incentives, and Quality Reporting

Bethany Bunch, MSHA

Hospital VBP Program Lead

Inpatient VIQR Outreach and Education Support Contractor

Included Measures and Important Notes

HSR Overview

- **Purpose of Report:** HSRs are provided for claims-based measures (CBMs) so that hospitals may review and request correction to the calculations of the performance period measure results prior to the results being used to calculate a hospital's Total Performance Score.
- **Included Measures:**
 - Hospital 30-Day, All-Cause, Risk-Standardized Mortality Rate (RSMR)
Following:
 - Acute Myocardial Infarction (AMI) Hospitalization
 - Chronic Obstructive Pulmonary Disease (COPD) Hospitalization
 - Coronary Artery Bypass Graft (CABG) Surgery
 - Heart Failure (HF) Hospitalization
 - Pneumonia (PN) Hospitalization
 - Hospital 90-Day, Risk-Standardized Complication Rate (RSCR)
Following:
 - Primary Elective Total Hip Arthroplasty (THA) and/or Total Knee Arthroplasty (TKA)



New Measure

Hospital VBP Program

FY 2022 Measurement Periods

Measure	Updated Performance Period	Updated Discharge Period
Hospital 30-Day, All-Cause, RSMR Following: <ul style="list-style-type: none"> • AMI Hospitalization • COPD Hospitalization • CABG Surgery • HF Hospitalization 	Jul. 1, 2017–Dec. 31, 2019	Jul. 1, 2017–Dec. 1, 2019
Hospital 30-Day, All-Cause, RSMR Following: <ul style="list-style-type: none"> • PN Hospitalization 	Sep. 1, 2017–Dec. 31, 2019	Sep. 1, 2017–Dec. 1, 2019
Hospital 90-Day, RSCR Following: <ul style="list-style-type: none"> • Primary Elective THA and/or TKA 	Apr. 1, 2017–Dec. 31, 2019	Apr. 1, 2017–Oct. 2, 2019

Updated Performance Period Due to COVID-19 Exception

- As finalized in the Interim final rule with Comment Period (CMS-3401-IFC) published on September 2, 2020, CMS will not use claims reflecting services provided January 1, 2020, through June 30, 2020, (Q1 and Q2 2020) in its calculations for the Medicare quality reporting and VBP programs. The discharge period in this HSR has been updated to reflect this policy.
- The AMI, COPD, HF, pneumonia, and CABG measures identify deaths within 30 days of each index stay and the THA/TKA measure identifies complications within 90 days of each index stay: therefore, the performance periods for the mortality measures and the complication measure end 30 days, and 90 days, respectively before January 1, 2020 so that no claims from Q1 and Q2 2020 are used in the measures calculations.
- Hospitals do **not** need to request an ECE for measures and submissions covered under the COVID-19 exception for Q1 and Q2 2020.

Individual Hospital Extraordinary Circumstance Exception Requests

If a hospital believes that their performance continues to be adversely impacted by this extraordinary circumstance beyond June 30, 2020, they can submit an individual extraordinary circumstance exception (ECE) request to CMS for the Hospital VBP Program within 90 days of the date of the extraordinary circumstance.

- At the latest, ECEs should be submitted no later than 90 days from the last date of the quarter requested due to operational timelines and constraints.
- A granted individual ECE in the Hospital VBP Program would exclude the hospital from the Hospital VBP Program in the fiscal year in which performance was impacted.
- An excluded hospital will not incur the 2 percent reduction in payments, but it would also not receive incentive payments for the fiscal year.
- More information about ECE requests for the Hospital VBP Program can be accessed on *QualityNet*.

<https://qualitynet.cms.gov/inpatient/hvbp/participation#tab6>

Important Dates

- Hospital VBP Program HSRs were delivered **April 12–13, 2021**.
- The review and correction period for FY 2022 Hospital VBP Program HSRs is **April 14–May 13, 2021**.

FY 2022 Baseline Measures Reports

Only performance period data will be included in the HSR for the Hospital VBP Program.

- Baseline period data are displayed on your hospital's Baseline Measures Report.
- The FY 2022 Baseline Measures Report was first made available in February 2020.
- You can request a copy of your hospital's FY 2022 Baseline Measures Report in the Inpatient Questions & Answers tool:
https://cmsqualitysupport.servicenowservices.com/qnet_qa?id=ask_a_question
 - When requesting a copy of this historical Hospital VBP Program report, select **HVBP – Hospital Value Based Purchasing** for Program; select **Reports** for Topic; and include your hospital's CMS Certification Number (CCN), name of the report requested (Baseline Measures Report), and fiscal year (FY 2022) in the Question field.

Coming Soon: Public Reporting CBM HSRs

- CMS anticipates the Public Reporting CBM HSRs will be delivered to hospitals in late April or early May 2021.
- CMS will provide notification of HSR delivery through the **HIQR Notify: Hospital Inpatient Quality Reporting (IQR) Program Notifications** and the **HVBP Notify: Hospital Inpatient Value-Based Purchasing (HVBP) Program Notifications** Program Notification Listserve groups.
 - Sign up for those Listserve groups on *QualityNet*.
<https://qualitynet.cms.gov/listserv-signup>.

Coming Soon: Medicare Spending per Beneficiary (MSPB) HSRs

- CMS anticipates the MSPB HSRs will be delivered to hospitals in May/June 2021.
- CMS will provide notification of HSR delivery through the **HIQR Notify: Hospital Inpatient Quality Reporting (IQR) Program Notifications** and the **HVBP Notify: Hospital Inpatient Value-Based Purchasing (HVBP) Program Notifications** Program Notification Listserve groups.
 - Sign up for those Listserve groups on *QualityNet*.
<https://qualitynet.cms.gov/listserv-signup>.

Contacts for Questions

You can submit questions regarding measures, HSRs, and the Hospital VBP Program through the [Questions and Answers tool on QualityNet](#). Include your hospital's six-digit CCN for all questions and use the following program and topic selections when submitting questions through the tool:

Question Topic	Program Selection	Topic Selection
Mortality measure methodology	Inpatient Claims-Based Measures	Mortality > Understanding measure methodology
Complication measure methodology	Inpatient Claims-Based Measures	Complication > Understanding measure methodology
Data or calculations in the HSR	Inpatient Claims-Based Measures	HVBP Mortality & Complication > Question about results
Review and correction request	Inpatient Claims-Based Measures	HVBP Mortality & Complication > Review & correction request
Request to resend an HSR	Inpatient Claims-Based Measures	HVBP Mortality & Complication > Request for HVBP hospital-specific reports
Hospital VBP Program, COVID-19 Exception, and Individual ECE Requests	HVBP – Hospital Value Based Purchasing	General information (HVBP)

If you experience issues accessing your HSR from Managed File Transfer (MFT) or requesting and reviewing your HARP permissions, contact the *QualityNet* Help Desk at qnetssupport@hcqis.org or (866) 288-8912.

Bethany Bunch, MSHA

Hospital VBP Program Lead

Inpatient VIQR Outreach and Education Support Contractor

Receiving the HSRs and User Guide

How to Receive Your HSR

- A Listserve communication was sent via email to those who are registered for the **HIQR Notify: Hospital Inpatient Quality Reporting (IQR) Program Notifications** and the **HVBP Notify: Hospital Inpatient Value-Based Purchasing (HVBP) Program Notifications** Listserve groups on *QualityNet* announcing the reports would be delivered no later than April 9.
- An AutoRoute File Delivery Notification will be sent to your e-mail once your hospital's HSR has been delivered to your MFT inbox. Only hospital users with the appropriate roles will receive a report and the notification.

From: TEST-CMS-MFT <noreply@hcqis.org>
Date: January 25, 2021 at 8:57:06 AM CST
To:
Subject: AutoRoute - Package 310084_IQR_Test_Zip.zip

CMS.gov | MANAGED FILE TRANSFER

The following file(s) have been sent to you from noreply@hcqis.org:

IQR_Test_Zip.zip 37.14 KB

Please log into MFT using your HARP account and access your inbox to retrieve the file(s).
If you do not have a HARP account, register for a HARP account by clicking the Log into MFT button below and then clicking the Sign Up link from the MFT login.

[MFT Login](#)

How to Receive Your HSR

- HSRs are provided to users with a hospital that have approved **Auto-Route (IQR)** and **Managed File Transfer** permissions associated with their Hospital Quality Reporting (HQR) Profile.
 - If you are not a Security Administrator/Official (SA/O) for your hospital or you have not recently taken action to request these permissions on your account, you **will not** have the permissions on your profile required to receive an HSR.
- Reference the *Important: Request Access to Managed File Transfer (MFT) & Auto-Route Now to Ensure You Receive Your Reports* notification for instructions to request these permissions or to confirm these permissions are active on your profile.
 - Link to notification:
<https://www.qualityreportingcenter.com/globalassets/2021/03/iqr/mft-permissions-announcement508.pdf>

Accessing Your HSR

When your hospital's report is delivered to your MFT mailbox, a notification is sent to the email address associated with your HARP account. Upon receipt of this notification, follow these steps to access your HSR in your MFT mailbox:

1. Navigate to the CMS Managed File Transfer page at:
<https://qnetmft.cms.gov/mft-signin/login>.
2. Enter your HCQIS Access Role and Profile (HARP) User ID and Password. Select the **I agree to the Terms and Conditions** checkbox. Then, select **Sign In**.
3. You will be directed to the Two-Factor Authorization page. A preview of the device or email that will be sent a code will be displayed. Select **Send Code**. After selection, the Send Code button will update to **Sent**.
4. After receipt of the code via your device or email, enter the code. Then, select **Verify**.
5. Upon successful login, you will be directed to the MFT dashboard. Select **Mail** on the left-navigation pane to expand the mailbox.
6. Select **Inbox** under the expanded **Mail** options.
7. This HSR will have a subject of AutoRoute – Package 999999_FY2022_HVBP_HSR with your hospital's CCN replacing 999999. Open the message containing the HSR by clicking on that line.
8. Download the HSR by selecting the file in the **Attachments** section of the message.

HSRs will be available in your MFT mailbox for a thirty (30) day period after delivery.

What if I didn't receive my HSR?

- If after April 13, you have not received an email notifying you of the report delivery and you believe your profile has the appropriate permissions, follow the instructions for accessing your HSR to check if the report was delivered.
- If the report was not delivered, confirm that your profile has the permissions required to receive the report, as detailed above.
 - If your profile did not have active Auto-Route (IQR) and MFT permissions prior to April 12, you may request these permissions now using the instructions in this notification: <https://www.qualityreportingcenter.com/globalassets/2021/03/iqr/mft-permissions-announcement508.pdf>.
Your hospital's SA/O will review your requested permissions. Once you have been granted the proper permissions you will have access to any future report deliveries via MFT; however, this report will not be available unless a request to resend the report is submitted.
 - If your profile did have active Auto-Route (IQR) and MFT permissions prior to April 12, and you did not receive your report, please contact the *QualityNet* Help Desk for further assistance at qnetsupport@hcqis.org.

How do I submit a request to resend my HSR?

- Requests to resend the HSR can be submitted through the Questions and Answers tool on *QualityNet*.
https://cmsqualitysupport.servicenowservices.com/qnet_qa?id=ask_a_question
 - When submitting the request, select **Inpatient Claims-Based Measures** from the Program drop-down menu and select **Request for HVBP hospital-specific reports** from the HVBP Mortality & Complication topic drop-down menu. In the subject line, type **Request to Resend FY 2022 Hospital VBP Program Mortality and Complication Measures HSR**.
 - In the *please describe your question* text box, include your hospital's CCN.
- Do not email HSR files or their contents. HSRs contain discharge-level data protected by the Health Insurance Portability and Accountability Act of 1996 (HIPAA). Any disclosure of protected health information (PHI) should only be in accordance with, and to the extent permitted by, the HIPAA Privacy and Security Rules and other applicable law.

HSR User Guide

The FY2022-HVBP-Mortality-Complication-HUG.pdf is the User Guide accompanying the HSRs with additional information about the measure data.

The User Guide is also available on *QualityNet*.
<https://qualitynet.cms.gov/inpatient/asures/hvbp-mortality-complication/resources>.



Hospital Value-Based Purchasing Program

User Guide for the Hospital-Specific Reports on Mortality and
Complication Measures

Fiscal Year 2022

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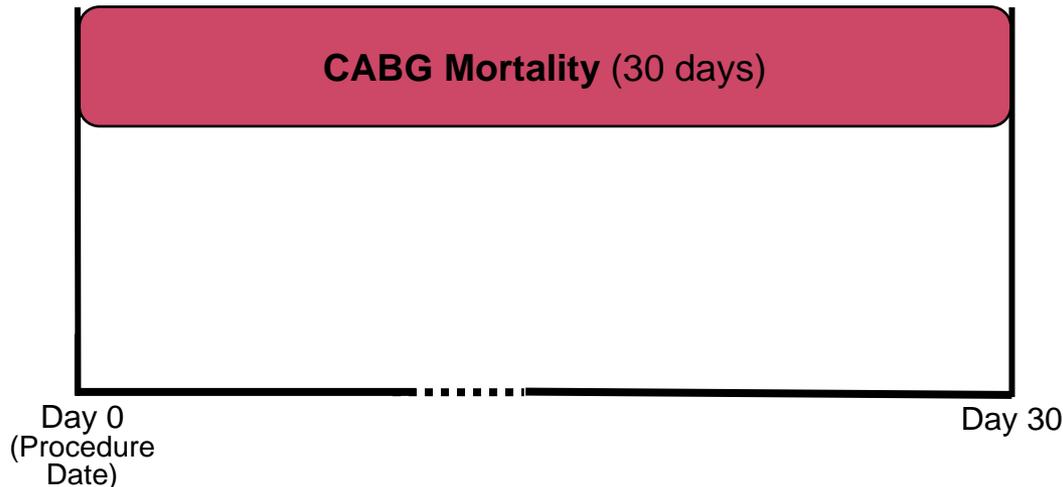
CABG Mortality Measure Methodology

Background

- In 2016, CMS began publicly reporting 30-day mortality for the CABG measure as part of the Hospital IQR Program.
- In the FY 2022 Hospital VBP Program, the 30-day risk-standardized CABG Mortality measure will be included.
- Performance period is July 1, 2017–December 1, 2019.

Outcome

- Death
 - Occurs within 30 days from the procedure date.
 - Is for any cause, not just those that appear related to the procedure.



Cohort and Risk Adjustment

- **Cohort**
 - Having a qualifying isolated CABG surgery during the index admission
 - Enrolled in Medicare Fee-For-Service (FFS) Part A and Part B for the 12 months prior to the date of admission and Part A during the index admission
 - Aged 65 or over
 - Not discharged against medical advice
 - Not an admission for a subsequent qualifying CABG procedure during the measurement period
- **Risk Adjustment**
 - Adjusted for differences in risk variables such as age, comorbidities (e.g., hypertension, asthma), and indicators of patient frailty

For additional information, please see the resources available on [QualityNet](#).

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Healthcare Quality Analytics and Reports Contractor

Hospital VBP Program Mortality HSRs

Table 1 Hospital Results

Table 1. 30-Day Mortality Measure Results for the FY 2022 Hospital VBP Performance Period

HOSPITAL NAME

Hospital Discharge Period: July 1, 2017 through December 1, 2019 for AMI, COPD, HF, and CABG measures

Hospital Discharge Period: September 1, 2017 through December 1, 2019 for Pneumonia measure

Measure	Number of Eligible Discharges [a]	Performance Period Survival Rate [b]	Achievement Threshold [c]	Benchmark [d]
AMI 30-Day Mortality	7	0.876214	0.861793	0.881305
COPD 30-Day Mortality	5	0.918755	0.920058	0.936962
HF 30-Day Mortality	10	0.887610	0.879869	0.903608
Pneumonia 30-Day Mortality	10	0.854658	0.836122	0.870506
CABG 30-Day Mortality	7	0.971940	0.968210	0.979000

[a] Final number of discharges from your hospital used for measure calculation.

Results for hospitals with fewer than 25 eligible discharges will not be used to calculate the score for that measure for the FY 2022 Hospital VBP Performance period; your results are presented here for your information.

[b] FY 2022 Performance Period Survival Rate = 1 – Risk Standardized Mortality Rate (RSMR). See Table 2 for RSMR.

[c] Achievement Threshold = the median survival rate among all hospitals with measure results and minimum case size (n=25) during the FY 2022 baseline periods (July 1, 2012 - June 30, 2015 for AMI, COPD, HF, Pneumonia, and CABG measures).

[d] Benchmark = the mean of the top decile of survival rates among all hospitals with measure results and minimum case size (n=25) during the FY 2022 baseline periods (July 1, 2012 - June 30, 2015 for AMI, COPD, HF, Pneumonia, and CABG measures).

Notes:

1. The 30-day risk-standardized pneumonia mortality measure used in the FY 2022 Hospital VBP Program includes the expanded cohort.
2. N/A = Your hospital had no qualifying cases for the measure.
3. AMI = acute myocardial infarction; COPD = chronic obstructive pulmonary disease; HF = heart failure; CABG = coronary artery bypass graft

Table 2 Additional Information

Table 2. Additional Information for Replicating Your Hospital's Risk-Standardized Mortality Results for the FY 2022 Hospital VBP Performance Period

HOSPITAL NAME

Hospital Discharge Period: July 1, 2017 through December 1, 2019 for AMI, COPD, HF, and CABG measures

Hospital Discharge Period: September 1, 2017 through December 1, 2019 for Pneumonia measure

Measure	Number of Eligible Discharges [a]	Predicted Deaths [b]	Expected Deaths [c]	National Observed Mortality Rate [d]	Risk-Standardized Mortality Rate [e]	Performance Period Survival Rate [f]
AMI 30-Day Mortality	7	0.65	0.64	0.122608	0.123786	0.876214
COPD 30-Day Mortality	5	0.46	0.48	0.083139	0.081245	0.918755
HF 30-Day Mortality	10	0.96	0.96	0.112175	0.112390	0.887610
Pneumonia 30-Day Mortality	10	1.52	1.61	0.153846	0.145342	0.854658
CABG 30-Day Mortality	7	0.19	0.19	0.029090	0.028060	0.971940

[a] Final number of discharges from your hospital used for measure calculation.

[b] The number of predicted deaths within 30 days from admission, on the basis of your hospital's performance with its observed case mix and your hospital's estimated effect on mortality (provided in your hospital discharge-level data). The numbers of predicted deaths are not whole numbers because they are generated from a statistical model.

[c] The number of expected deaths within 30 days of admission, on the basis of average hospital performance with your hospital's case mix and the average hospital effect (provided in your hospital discharge-level data). The numbers of expected deaths are not whole numbers because they are generated from a statistical model.

[d] National Observed Mortality Rate = (Number of observed 30-day deaths nationally / Number of eligible discharges nationally).

[e] Risk-Standardized Mortality Rate (RSMR) = (Predicted Deaths / Expected Deaths) * National Observed Mortality Rate.

[f] Performance Period Survival Rate = (1 - RSMR).

Notes:

1. The information in this table is provided only to help in replicating your hospital's survival rate in Table 1; other than the number of eligible discharges and the survival rate, information in this table will not be publicly reported.
2. See the Replication Instructions provided as part of the Hospital VBP Program HSR User Guide for more information for replicating your hospital's risk-standardized mortality measure results.
3. N/A = Your hospital had no qualifying cases for the measure.
4. AMI = acute myocardial infarction; COPD = chronic obstructive pulmonary disease; HF = heart failure; CABG = coronary artery bypass graft

Tables 3, 4, 5, 6, and 7 Discharge Tables

ID Number	HICNO	MBI [a]	Medical Record Number	Beneficiary DOB	Admit Date of Index Stay	Discharge Date of Index Stay	Principal Diagnosis	Discharge Destination	Index Stay (Yes/No)	Inclusion/ Exclusion Indicator
--	--	--	--	--	--	--	--	--	--	--
1	999999999A	--	99999A	99/99/9999	99/99/9999	99/99/9999	41091	20	Yes	0
2	999999999A	1EG4TE5MK73	99999A	99/99/9999	99/99/9999	99/99/9999	41071	3	Yes	0

- The discharge tables contain discharge-level data for all Part A Medicare FFS patients with a principal qualifying diagnosis of AMI, COPD, HF, pneumonia, or CABG accordingly; patients with a discharge date in the reporting period; and patients age 65 and above at the time of admission.
- The **ID Number** is provided for use if needed to reference records in this table in an email or otherwise, so that sharing of personally identifiable information (PII) or PHI is avoided.

Tables 3, 4, 5, 6, and 7 Discharge Tables

Death within 30 Days	Death Date	Years over 65 (continuous)	Male	History of percutaneous transluminal coronary angioplasty (PTCA)	History of coronary artery bypass graft (CABG) surgery	HOSP_EFFECT	AVG_EFFECT
--	--	0.05613360869352	0.07171376712451	-0.25462712330261	0.12250827680849	-3.23114762930669	-3.24200678618723

Row 8 in the HSR contains the model coefficients for each risk factor, which are estimates over data for all hospitals.

Understanding the Mortality Calculations Through Replication

The replication process for the Mortality measures includes the following steps:

- Calculate predicted deaths
- Calculate expected deaths
- Calculate the risk-standardized mortality rate
- Calculate the performance period survival rate

Understanding Your Mortality Calculation – Calculate Predicted Deaths

ID Number	HICNO	MBI [a]	Medical Record Number	Beneficiary DOB	Admit Date of Index Stay	Discharge Date of Index Stay	Principal Diagnosis	Discharge Destination	Index Stay (Yes/No)
--	--	--	--	--	--	--	--	--	--
1	999999999A	9AA9AA9AA99	99999A	99/99/9999	99/99/9999	99/99/9999	J9621	1	Yes
2	999999999A	9AA9AA9AA99	99999A	99/99/9999	99/99/9999	99/99/9999	J9601	6	Yes
3	999999999A	9AA9AA9AA99	99999A	99/99/9999	99/99/9999	99/99/9999	J9692	6	Yes
4	999999999A	9AA9AA9AA99	99999A	99/99/9999	99/99/9999	99/99/9999	J9601	6	Yes
5	999999999A	9AA9AA9AA99	99999A	99/99/9999	99/99/9999	99/99/9999	J440	6	Yes

Limit your replication calculations to rows where “INDEX STAY” (column J) equals “YES.” In this example, “INDEX STAY” of “YES” is represented by discharges for ID 1 and 2.

Understanding Your Mortality Calculation – Calculate Predicted Deaths

	A	J	K	L	N	O	P	Q	
6									
	ID Number	Index Stay (Yes/No)	Inclusion/Exclusion Indicator	Death within 30 Days	Years over 65 (continuous)	History of mechanical ventilation	Metastatic cancer and acute leukemia	Lung and other severe cancers	
7									
8	--	--	--	--	0.03405420316912	0.19357141934084	0.94550633345284	0.45705131037565	
9	1	Yes	0	No	3	1	0	0	
10	2	Yes	0	No	4	0	0	0	
11	3	Yes	0	No	12	0	0	0	
12	4	Yes	0	No	9	0	0	0	
13	5	Yes	0	No	21	0	0	0	
14									
15		Patient ID	Multiply each risk factor flag where Index Stay = "YES" rows by the relevant coefficient found in Row 8						
16	1	=N\$8*N9	=O\$8O9	=P\$8*P9	0				
17	2	=N\$8*N10	=O\$8O10	0	0				
18	3	=N\$8*N11	0	0	0				
19	4	0.306487829	0	0	0				
20	5	0.715138267	0	0	0				

Understanding Your Mortality Calculation – Calculate Predicted Deaths

	BA	BB	BC	BD	BE	BF
6						
7	Vertebral fractures without spinal cord injury	Major complications of medical care and trauma	HOSP_EFFECT	AVG_EFFECT		
8	0.20603423767796	-0.08732758666131	-3.06119895737601	-3.03377739121104		
9	0	0	-	-		
10	0	0	-	-		
11	0	0	-	-		
12	0	1	-	-		
13	0	1	-	-		
14						
15					SUM	ADD HOSP_EFFECT
16	0	0			=SUM(N16:BB16)	=BE16+BC\$8
17	0	0			-0.17718542905313	-3.23838438642914
18	0	0			-0.47079752497354	-3.53199648234955
19	0	-0.087327587			1.81212958895791	-1.24906936841810
20	0	-0.087327587			1.27145398299867	-1.78974497437734

Understanding Your Mortality Calculation – Calculate Predicted Deaths

	BA	BB	BC	BD	BE	BF	BG
6							
7	Vertebral fractures without spinal cord injury	Major complications of medical care and trauma	HOSP_EFFECT	AVG_EFFECT			
8	0.20603423767796	-0.08732758666131	-3.06119895737601	-3.03377739121104			
9	0	0	-	-			
10	0	0	-	-			
11	0	0	-	-			
12	0	1	-	-			
13	0	1	-	-			
14							
15					SUM	ADD HOSP_EFFECT	Predicted Probability
16	0	0			-0.32080937081033	-3.38200832818634	$= (1 / (1 + \text{EXP}(-1 * \text{BF16})))$
17	0	0			-0.17718542905313	-3.23838438642914	0.03774652858052
18	0	0			-0.47079752497354	-3.53199648234955	0.02841541691780
19	0	-0.087327587			1.81212958895791	-1.24906936841810	0.22286127717944
20	0	-0.087327587			1.27145398299867	-1.78974497437734	0.14310399321209

Predicted probability for each discharge = $(1 / (1 + \text{EXP}(-1 * \text{Add HOSP_EFFECT results})))$

Understanding Your Mortality Calculation – Calculate Predicted Deaths

SUM	ADD HOSP_EFFECT	Predicted Probability
-0.32080937081033	-3.38200832818634	0.03286250506773
-0.17718542905313	-3.23838438642914	0.03774652858052
-0.47079752497354	-3.53199648234955	0.02841541691780
1.81212958895791	-1.24906936841810	0.22286127717944
1.27145398299867	-1.78974497437734	0.14310399321209
	=SUM(BG16:BG20)	Predicted Deaths
	Rounded	0.46498972095758
		0.46

Understanding Your Mortality Calculation – Calculate Expected Deaths

	BC	BD	BE	BF	BG	BH	BI	BJ													
6																					
7	<table border="1"> <thead> <tr> <th>HOSP_EFFECT</th> <th>AVG_EFFECT</th> </tr> </thead> <tbody> <tr> <td>-3.06119895737601</td> <td>-3.03377739121104</td> </tr> <tr> <td>-</td> <td>-</td> </tr> </tbody> </table>		HOSP_EFFECT	AVG_EFFECT	-3.06119895737601	-3.03377739121104	-	-	-	-	-	-	-	-	-	-					
HOSP_EFFECT	AVG_EFFECT																				
-3.06119895737601	-3.03377739121104																				
-	-																				
-	-																				
-	-																				
-	-																				
-	-																				
8	-3.06119895737601	-3.03377739121104																			
9	-	-																			
10	-	-																			
11	-	-																			
12	-	-																			
13	-	-																			
14																					
15			SUM	ADD HOSP_EFFECT	Predicted Probability		ADD AVG_EFFECT	Predicted Probability													
16			-0.32080937081033	-3.38200832818634	0.03286250506773		-3.35458676202137	0.03374528544679													
17			-0.17718542905313	-3.23838438642914	0.03774652858052		-3.21096282026417	0.03875525031327													
18			-0.47079752497354	-3.53199648234955	0.02841541691780		-3.50457491618458	0.02918234047860													
19			1.81212958895791	-1.24906936841810	0.22286127717944		-1.22164780225313	0.22764659799298													
20			1.27145398299867	-1.78974497437734	0.14310399321209		-1.76232340821237	0.14649958807174													

Expected probability for each discharge = $(1/(1+\exp(-1 * \text{Add AVG_EFFECT results})))$

Understanding Your Mortality Calculation – Calculate Expected Deaths

ADD

AVG_EFFECT

Predicted Probability

-3.35458676202137	0.03374528544679
-3.21096282026417	0.03875525031327
-3.50457491618458	0.02918234047860
-1.22164780225313	0.22764659799298
-1.76232340821237	0.14649958807174

Expected Deaths

=SUM(BJ16:BJ20)

0.47582906230337

Rounded

0.48

Calculate the Risk-Standardized Mortality Rate

	BE	BF	BG	BH	BI	BJ	BK	BL	BM
15	SUM	ADD HOSP_EFFECT	Predicted Probability		ADD AVG_EFFECT	Predicted Probability			
16	-0.32080937081033	-3.38200832818634	0.03286250506773		-3.35458676202137	0.03374528544679			
17	-0.17718542905313	-3.23838438642914	0.03774652858052		-3.21096282026417	0.03875525031327			
18	-0.47079752497354	-3.53199648234955	0.02841541691780		-3.50457491618458	0.02918234047860			
19	1.81212958895791	-1.24906936841810	0.22286127717944		-1.22164780225313	0.22764659799298			
20	1.27145398299867	-1.78974497437734	0.14310399321209		-1.76232340821237	0.14649958807174			
21									
22			Predicted Deaths			Expected Deaths			
23		=SUM(BG16:BG20)	0.46498972095758		=SUM(BJ16:BJ20)	0.47582906230337			
24		Rounded	0.46		Rounded	0.48			
25									
26				=BG23/BJ23	0.977220094	Standardized Mortality Rate (SMR)			
27					0.083139	National Observed Mortality Rate from Table 2			
28				=BI26*BI27	0.081245	Risk Standardized Mortality Rate (RSMR)			

Calculate the Performance Period Survival Rate

	BE	BF	BG	BH	BI	BJ	BK	BL	BM
15	SUM	ADD HOSP_EFFECT	Predicted Probability		ADD AVG_EFFECT	Predicted Probability			
16	-0.32080937081033	-3.38200832818634	0.03286250506773		-3.35458676202137	0.03374528544679			
17	-0.17718542905313	-3.23838438642914	0.03774652858052		-3.21096282026417	0.03875525031327			
18	-0.47079752497354	-3.53199648234955	0.02841541691780		-3.50457491618458	0.02918234047860			
19	1.81212958895791	-1.24906936841810	0.22286127717944		-1.22164780225313	0.22764659799298			
20	1.27145398299867	-1.78974497437734	0.14310399321209		-1.76232340821237	0.14649958807174			
21									
22			Predicted Deaths			Expected Deaths			
23		=SUM(BG16:BG20)	0.46498972095758		=SUM(BJ16:BJ20)	0.47582906230337			
24		Rounded	0.46		Rounded	0.48			
25									
26				=BG23/BJ23	0.977220094	Standardized Mortality Rate (SMR)			
27					0.083139	National Observed Mortality Rate from Table 2			
28				=BI26*BI27	0.081245	Risk Standardized Mortality Rate (RSMR)			
29									
30				=1-BI28	0.918755	Performance Period Survival Rate			

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Hospital VBP Project Lead

Healthcare Quality Analytics and Reports Contractor

Hospital VBP Program Complication HSRs

Table 1 Hospital Results

Table 1. Risk-Standardized THA/TKA Complication Measure Results for the FY 2022 Hospital VBP Performance Period

HOSPITAL NAME

Hospital Discharge Period: April 1, 2017 through October 2, 2019

Measure	Number of Eligible Discharges [a]	Risk-Standardized Complication Rate [b]	Achievement Threshold [c]	Benchmark [d]
THA/TKA Complication	4	0.025900	0.029833	0.021493

[a] Final number of discharges from your hospital used for measure calculation.

Results for hospitals with fewer than 25 eligible discharges will not be used to calculate the score for that measure for the FY 2022 Hospital VBP Performance period; your results are presented here for your information.

[b] FY 2022 Risk-Standardized Complication Rate = (Predicted Admissions with a Complication / Expected Admissions with a Complication)

* National Observed Complication Rate. See Table 2 for additional information.

[c] Achievement Threshold = the median complication rate among all hospitals with measure results and minimum case size (n=25) during the FY 2022 baseline period (April 1, 2012 - March 31, 2015).

[d] Benchmark = the mean of the top decile of complication rates among all hospitals with measure results and minimum case size (n=25) during the FY 2022 baseline period (April 1, 2012 - March 31, 2015).

Notes:

1. N/A = Your hospital had no qualifying discharges or results for the procedure.

2. THA/TKA = total hip arthroplasty/total knee arthroplasty

Table 2 Additional Information

Table 2. Additional Information for Replicating Your Hospital's Risk-Standardized THA/TKA Complication Results for the FY 2022 Hospital VBP Performance Period

HOSPITAL NAME

Hospital Discharge Period: April 1, 2017 through October 2, 2019

Measure	Number of Eligible Discharges [a]	Predicted Admissions with a Complication [b]	Expected Admissions with a Complication [c]	National Observed Complication Rate [d]	Risk-Standardized Complication Rate [e]
THA/TKA Complication	4	0.10	0.10	0.023583	0.025900

[a] Final number of discharges from your hospital used for measure calculation.

[b] The number of predicted complications within 90 days from the start of the index admission, on the basis of your hospital's performance with its observed case mix and your hospital's estimated effect on complications (provided in your hospital discharge-level data). The numbers of predicted complications are not whole numbers because they are generated from a statistical model. A patient may have more than one complication associated with an index admission, but only one complication is counted in the raw complication rate.

[c] The number of expected complications within 90 days of the index admission, on the basis of average hospital performance with your hospital's case mix and the average hospital effect (provided in your hospital discharge-level data). The numbers of expected complications are not whole numbers because they are generated from a statistical model. A patient may have more than one complication associated with an index admission, but only one complication is counted in the raw complication rate.

[d] National Observed Complication Rate = (Number of observed 90-day complications nationally / Number of eligible discharges nationally).

[e] Risk-Standardized Complication Rate = (Predicted Admissions with a Complication / Expected Admissions with a Complication) * National Observed Complication Rate.

Notes:

1. The information in this table is provided only to help in replicating your hospital's complication rate in Table 1; other than the number of eligible discharges and the complication rate, information in this table will not be publicly reported.
2. See the Replication Instructions provided as part of the Hospital VBP Program HSR User Guide for more information for replicating your hospital's risk-standardized THA/TKA Complication results.
3. N/A = Your hospital had no qualifying discharges or results for the procedure.
4. THA/TKA = total hip arthroplasty/total knee arthroplasty

Table 3 Discharges

ID Number	HICNO	MBI [a]	Medical Record Number	Beneficiary DOB	Admit Date of Index Stay	Discharge Date of Index Stay [b]	Index Stay (Yes/No)	Additional Complication Record (Yes/No) [c]	Inclusion/Exclusion Indicator	Number of TKAs Performed (0, 1, or 2)	Number of THAs Performed (0, 1, or 2)	Patient Had a Complication (Yes/No)
--	--	--	--	--	--	--	--	--	--	--	--	--
1	999999999A	9AA9AA9AA99	99999A	99/99/9999	99/99/9999	99/99/9999	Yes	No	0	1	0	Yes
2	999999999A	9AA9AA9AA99	99999A	99/99/9999	99/99/9999	99/99/9999	Yes	Yes	0	1	0	Yes
3	999999999A	9AA9AA9AA99	99999A	99/99/9999	99/99/9999	99/99/9999	Yes	No	0	1	0	No
4	999999999A	9AA9AA9AA99	99999A	99/99/9999	99/99/9999	99/99/9999	Yes	No	0	1	0	No
5	999999999A	9AA9AA9AA99	99999A	99/99/9999	99/99/9999	99/99/9999	Yes	No	0	0	1	No
6	999999999A	9AA9AA9AA99	99999A	99/99/9999	99/99/9999	99/99/9999	No	No	1	1	0	No

- The discharge table contains discharge-level data for Part A Medicare FFS patient stays.
- There are several columns unique to the THA/TKA Complication HSR.
- The same stay can appear multiple times on your Discharges tab if the patient has more than one complication. However, the stay is only included once in the calculation of the measure.

Table 3 Discharges Complication Fields

Patient Had a Complication (Yes/No)	Complication	Complication Occurred During Index Stay (Yes/No)	Admit Date for Complication (If Not During Index Stay)	Death Date	Readmission to Same Hospital (Yes/No)	Provider ID of Readmitting Hospital [d]
--	--	--	--	--	--	--
Yes	Mechanical complication	No	99/99/9999	N/A	No	888888
Yes	Infection	No	99/99/9999	N/A	No	888888
No	N/A	N/A	N/A	N/A	N/A	N/A
No	N/A	N/A	N/A	N/A	N/A	N/A
No	N/A	N/A	N/A	N/A	N/A	N/A
No	N/A	N/A	N/A	N/A	N/A	N/A

Understanding the Calculations Through Replication

ID Number	HICNO	MBI [a]	Medical Record Number	Beneficiary DOB	Admit Date of Index Stay	Discharge Date of Index Stay [b]	Index Stay (Yes/No)	Additional Complication Record (Yes/No) [c]	Inclusion/Exclusion Indicator	Number of TKAs Performed (0, 1, or 2)	Number of THAs Performed (0, 1, or 2)	Patient Had a Complication (Yes/No)	Complication	Complication Occurred During Index Stay (Yes/No)
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1	999999999A	9AA9AA9AA99	99999A	99/99/9999	99/99/9999	99/99/9999	Yes	No	0	1	0	Yes	Mechanical complication	No
2	999999999A	9AA9AA9AA99	99999A	99/99/9999	99/99/9999	99/99/9999	Yes	Yes	0	1	0	Yes	Infection	No
3	999999999A	9AA9AA9AA99	99999A	99/99/9999	99/99/9999	99/99/9999	Yes	No	0	1	0	No	N/A	N/A
4	999999999A	9AA9AA9AA99	99999A	99/99/9999	99/99/9999	99/99/9999	Yes	No	0	1	0	No	N/A	N/A
5	999999999A	9AA9AA9AA99	99999A	99/99/9999	99/99/9999	99/99/9999	Yes	No	0	0	1	No	N/A	N/A
6	999999999A	9AA9AA9AA99	99999A	99/99/9999	99/99/9999	99/99/9999	No	No	1	1	0	No	N/A	N/A

The replication process for the THA/TKA Complication measure is the same as the Mortality measures with one difference:

In the first step, when you limit your replication calculations to rows where “Index Stay” (column H) equals “Yes,” you must also limit them to rows where “Additional Complication Record [c]” (column I) equals “No.”

The rest of the replication process would follow the same steps as those outlined for the Mortality measures.

Anoosha Akhlaq

Hospital VBP Project Lead

Healthcare Quality Analytics and Reports Contractor

Hospital VBP Program HSR Review and Correction Requests

Review and Corrections Process

- The review and correction period for FY 2022 Hospital VBP Program HSRs is **April 14–May 13, 2021**.
- A Listserve notification was sent informing hospitals of when HSRs would be available, the review and correction request deadline, and instructions for submitting a review and correction request.
- Review and correction requests sent after the deadline will **not** result in a correction.
- The review and correction period and process are only applicable to the Hospital VBP Program HSRs and do not apply to the *Public Reporting* HSRs, which will be distributed in the upcoming weeks.

Review and Corrections Process

To submit a review and correction request:

- Send via email to qnetsupport@hcqis.org, by phone at (866) 288-8912, or over TTY at (877) 715-6222.
- Use the *QualityNet* Inpatient Question & Answer tool at <https://qualitynet.cms.gov/> > Help > Question and Answer Tools: “Hospitals - Inpatient” > Ask a Question
 - Program: Inpatient Claims-Based Measures
 - Topic: HVBP Mortality & Complication > Review & correction request

* Please include your hospital’s CCN when submitting your request.

Review and Corrections Process

Do not email HSR files or their contents. HSRs contain discharge-level data protected by 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. Use the ID number found within the HSR when referring to the contents of that report.

Review and Corrections Process

What **can** I submit for a review and correction?

What **can't** I submit for a review and correction?

- Suspected calculation errors on your report **can** be submitted for review with the possibility of a correction.
- Requests for submission of new or corrected claims to the underlying data **are not** allowed; they **cannot** be submitted.
- General questions about the HSRs, the Mortality measures, or the Complication measures **can** be submitted.

Reviewing Your FY 2022 Hospital VBP Program Mortality and Complication Measures Hospital-Specific Report

Questions

Resources

You can submit questions regarding measures, HSRs, and the Hospital VBP Program through the [Questions and Answers tool on QualityNet](#). Include your hospital's six-digit CCN for all questions and use the following program and topic selections when submitting questions through the tool:

Question Topic	Program Selection	Topic Selection
Mortality measure methodology	Inpatient Claims-Based Measures	Mortality > Understanding measure methodology
Complication measure methodology	Inpatient Claims-Based Measures	Complication > Understanding measure methodology
Data or calculations in the HSR	Inpatient Claims-Based Measures	HVBP Mortality & Complication > Question about results
Review and correction request	Inpatient Claims-Based Measures	HVBP Mortality & Complication > Review & correction request
Request to resend an HSR	Inpatient Claims-Based Measures	HVBP Mortality & Complication > Request for HVBP hospital-specific reports
Hospital VBP Program, COVID-19 Exception, and Individual ECE Requests	HVBP – Hospital Value Based Purchasing	General information (HVBP)

If you experience issues accessing your HSR from Managed File Transfer (MFT) or requesting and reviewing your HARP permissions, contact the *QualityNet* Help Desk at qnetsupport@hcqis.org or (866) 288-8912.

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