



# **Reviewing Your Hospital VBP Program Mortality and Complication Measures Hospital-Specific Report**

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

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# Speakers

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# Purpose

This event will provide an overview of hospital-specific reports (HSRs) for the Mortality and Complication claims-based measures (CBMs) used in the Fiscal Year (FY) 2021 Hospital Value-Based Purchasing (VBP) Program, including a summary of the new COPD Mortality measure methodology, other measure calculations, ways to receive and read the HSR, and steps to submit a review and correction request.

# Objectives

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Participants will be able to:

- Recall the updates to the FY 2021 Hospital VBP Program Mortality and Complication Measures HSR.
- Access and review the HSR.
- Submit the review and corrections request for the Hospital VBP Program measures.

# Webinar Questions

Please email any questions that are pertinent to the webinar topic to [WebinarQuestions@hsag.com](mailto:WebinarQuestions@hsag.com) with the following information:

- Subject Line: Reviewing Your Hospital VBP Program Mortality and Complication Measures Hospital-Specific Report
- Email Body: If your question pertains to a specific slide, please include the slide number

If you have a question unrelated to the current webinar topic, we recommend that you first search for it in the [QualityNet](#) Inpatient Questions and Answers tool, at [https://cmsqualitysupport.service-now.com/qnet\\_qa?kb\\_id=bb8e900fdbb6bf0092d5365e7c9619a9&id=kb\\_view2](https://cmsqualitysupport.service-now.com/qnet_qa?kb_id=bb8e900fdbb6bf0092d5365e7c9619a9&id=kb_view2). If you do not find an answer, then submit your question to us via the same tool.

# Acronyms

AMI	acute myocardial infarction	PII	personally identifiable information
CBM	claims-based measure	PN	pneumonia
CMS	Centers for Medicare & Medicaid Services	POA	present on admission
COPD	chronic obstructive pulmonary disease	PSI	Patient Safety Indicator
FFS	fee for service	RSCR	Risk-Standardized Complication Rate
FY	fiscal year	RSMR	Risk-Standardized Mortality Rate
HF	heart failure	SMR	Standardized Mortality Rate
HSR	Hospital-Specific Report	THA	Total Hip Arthroplasty
IQR	Inpatient Quality Reporting	TKA	Total Knee Arthroplasty
MORT	mortality	VBP	value-based purchasing
PHI	protected health information	VIQR	Value, Incentives, and Quality Reporting

**Bethany Bunch, MSHA**, Hospital VBP Program Lead  
Inpatient VIQR Outreach and Education Support Contractor

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## **Included Measures and Important Notes**

# Hospital VBP Program Fiscal Year (FY) 2021 Measurement Periods

Measure Set	Baseline Period	Performance Period
Hospital 30-Day, All-Cause, Risk-Standardized Mortality Rate (RSMR) <ul style="list-style-type: none"> <li>• Acute Myocardial Infarction (AMI)</li> <li>• Chronic Obstructive Pulmonary Disease (COPD)</li> <li>• Heart Failure (HF)</li> </ul>	July 1, 2011–June 30, 2014	July 1, 2016–June 30, 2019
Hospital 30-Day, All-Cause, Risk-Standardized Mortality Rate (RSMR) <ul style="list-style-type: none"> <li>• Pneumonia (PN) (expanded cohort)</li> </ul>	July 1, 2012–June 30, 2015	September 1, 2017–June 30, 2019
Hospital-Level Risk-Standardized Complication Rate (RSCR) <ul style="list-style-type: none"> <li>• Total Hip Arthroplasty (THA)/Total Knee Arthroplasty (TKA)</li> </ul>	April 1, 2011–March 31, 2014	April 1, 2016–March 31, 2019



# FY 2021 Hospital VBP Program HSR Notes

- Hospital VBP Program HSRs were delivered **April 9–10, 2020.**
- The review and correction period for FY 2020 Hospital VBP Program HSRs is **April 13–May 12, 2020.**
- 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 available to run in the *QualityNet Secure Portal*.
  - The FY 2021 Baseline Measures Report was first made available in March 2018.

# FY 2021 Hospital VBP Program HSR Notes

- The CMS Patient Safety Indicator (PSI) 90 Composite will not be included in the Hospital VBP Program HSRs or the FY 2021 Percentage Payment Summary Report. CMS will begin using the CMS PSI 90 Composite in the FY 2023 Hospital VBP Program.
- The MORT-30-COPD measure is included in the Hospital VBP Program for the first time.

# FY 2021 Hospital VBP Program

## HSR Notes

- The MORT-30-Pneumonia measure used in the FY 2021 Hospital VBP Program **does include** the expanded cohort of:
  - Patients with a principal discharge diagnosis of aspiration pneumonia.
  - Patients with a principal discharge diagnosis of sepsis (not including severe sepsis) with a secondary diagnosis of pneumonia (including aspiration pneumonia) coded as present on admission (POA) and no secondary diagnosis of severe sepsis coded as POA.

**Note:** CMS started using the updated pneumonia cohort in the FY 2021 Hospital VBP Program. The updated pneumonia cohort is already used in the publicly reported data.

# Coming Soon: Public Reporting CBM HSRs

- Public Reporting CBM HSRs will be delivered in a separate bundle.
- CMS anticipates the Public Reporting CBM HSRs will be delivered to hospitals in late April or early May 2020.
- CMS will provide notification of HSR delivery through the **Hospital IQR and Improvement** and the **Hospital Inpatient VBP and Improvement** Program Notification Listserve groups.
  - Sign up for those Listserve groups on *QualityNet*:  
<https://www.qualitynet.org/listerv-signup>.

# Coming Soon: Medicare Spending per Beneficiary (MSPB) HSRs

- MSPB HSRs will be delivered in a separate bundle.
- CMS anticipates the MSPB HSRs will be delivered to hospitals in May/June 2020.
- CMS will provide notification of HSR delivery through the **Hospital IQR and Improvement** and the **Hospital Inpatient VBP and Improvement** Program Notification Listserve groups.
  - Sign up for those Listserve groups on *QualityNet*:  
<https://www.qualitynet.org/listserv-signup>.

**Kristina Burkholder, MS, CAS**

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## **COPD Mortality Measure Methodology**

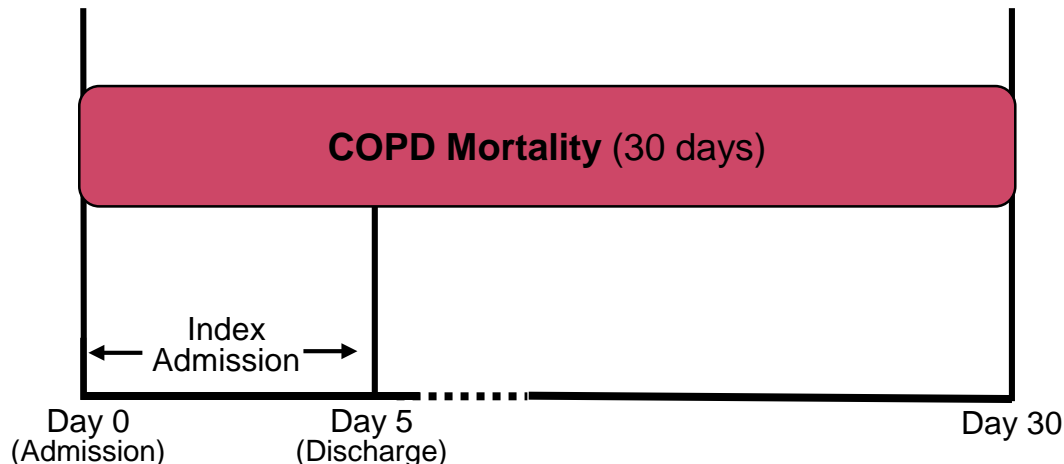
# Background

- In 2014, CMS began publicly reporting 30-day mortality for COPD as part of the Hospital IQR Program.
- In the FY 2021 Hospital VBP Program, the 30-day risk-standardized COPD Mortality measure will be included.
- Performance period is July 1, 2016–June 30, 2019.

# Outcome

- **Death**

- Occurs within 30 days from the start of a qualifying index admission.
- Is for any cause, not just those that appear related to the initial admission.





# Cohort and Risk Adjustment

- **Cohort**

- A principal discharge diagnosis of COPD or principal discharge diagnosis of acute respiratory failure with a secondary diagnosis of COPD with exacerbation
- Enrolled in Medicare Fee-For-Service
- Aged 65 or older
- Not transferred from another acute care facility
- Not discharged against medical advice

- **Risk Adjustment**

- Adjusted for differences in risk variables such as age and comorbidities (e.g., hypertension, asthma)

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

**Ellen Jarosinski**

Hospital VBP Project Lead

Healthcare Quality Analytics and Reports Contractor

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## **Receiving the HSRs and User Guide**

# How to Receive Your HSR

How to know your report is available:

- A Listserve communication was sent via email to those who are registered for the **Hospital IQR and Improvement** and the **Hospital Inpatient VBP and Improvement** Program Notification Listserve groups on *QualityNet*.
- An Auto Route File Delivery Notification will be sent to your e-mail once your hospital's HSR has been delivered to your account. Only hospital users with the appropriate roles will receive a report and the notification.



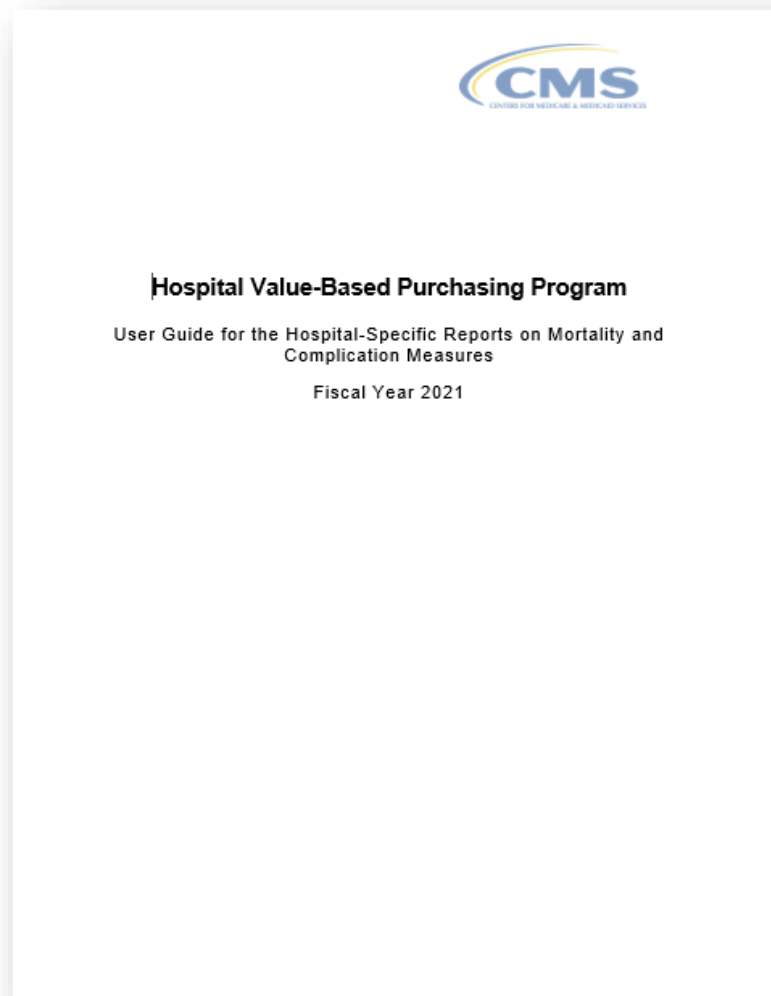
# How to Receive Your HSR

- Who has access to the report:
  - Hospital users with the **Hospital Reporting Feedback-Inpatient** role and the **File Exchange and Search** role will have access to the HSRs and User Guide.
- How to access the report:
  - For those with the appropriate access, the HSRs and User Guide will be delivered to their *QualityNet* Secure File Transfer Inbox.

# HSR User Guide (HUG)

The FY2021-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://www.qualitynet.org/inf/patient/measures/hvbp-mortality-complication/resources>.



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## **Hospital VBP Program Mortality HSRs**

# Table 1 Hospital Results

Table 1. 30-Day Mortality Measure Results for the FY 2021 Hospital VBP Performance Period

HOSPITAL NAME

Hospital Discharge Period: July 1, 2016 through June 30, 2019 for AMI, COPD, and HF measures

Hospital Discharge Period: September 1, 2017 through June 30, 2019 for Pneumonia measure

Measure	Number of Eligible Discharges [a]	Performance Period Survival Rate [b]	Achievement Threshold [c]	Benchmark [d]
AMI 30-Day Mortality	5	0.870355	0.860355	0.879714
COPD 30-Day Mortality	22	0.915888	0.923253	0.938664
HF 30-Day Mortality	2	0.887095	0.883803	0.906144
Pneumonia 30-Day Mortality	12	0.856146	0.836122	0.870506

[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 2021 Hospital VBP Performance period; your results are presented here for your information.

[b] FY 2021 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 2021 baseline periods (July 1, 2011 - June 30, 2014 for AMI, COPD, and HF measures, and July 1, 2012 - June 30, 2015 for the Pneumonia measure).

[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 2021 baseline periods (July 1, 2011 - June 30, 2014 for AMI, COPD, and HF measures, and July 1, 2012 - June 30, 2015 for the Pneumonia measure).

## Notes:

1. N/A = Your hospital had no qualifying discharges or results for that condition.

2. AMI = acute myocardial infarction; COPD = chronic obstructive pulmonary disease; HF = heart failure

3. The 30-day risk-standardized pneumonia mortality measure used in the FY 2021 Hospital VBP Program includes the expanded cohort.

# Table 2 Additional Information

Table 2. Additional Information for Replicating Your Hospital's Risk-Standardized Mortality Results for the FY 2021 Hospital VBP Performance Period

HOSPITAL NAME

Hospital Discharge Period: July 1, 2016 through June 30, 2019 for AMI, COPD, and HF measures

Hospital Discharge Period: September 1, 2017 through June 30, 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	5	1.49	1.45	0.125983	0.129645	0.870355
COPD 30-Day Mortality	22	1.35	1.37	0.085646	0.084112	0.915888
HF 30-Day Mortality	2	0.17	0.17	0.113824	0.112905	0.887095
Pneumonia 30-Day Mortality	12	1.46	1.55	0.152433	0.143854	0.856146

[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 discharges or results for that condition.
4. AMI = acute myocardial infarction; COPD = chronic obstructive pulmonary disease; HF = heart failure



# Table 3, 4, 5 and 6

## Discharges Columns

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	9AA9AA9AA99	99999A	99/99/9999	99/99/9999	99/99/9999	I213	20	Yes	0
2	999999999A	9AA9AA9AA99	99999A	99/99/9999	99/99/9999	99/99/9999	I214	3	Yes	0

- The discharge tables contain discharge-level data for all Part A Medicare Fee-for-Service (FFS) patients with a principal qualifying diagnosis of AMI, COPD, HF, or pneumonia accordingly; who had a discharge date in the reporting period; and were 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 protected health information (PHI) is avoided.

# Table 3, 4, 5 and 6

## Discharges Columns

Death within 30 Days	Death Date	Age minus 65 (years above 65, continuous)	Male	Major psychiatric disorders	Chronic liver disease	HOSP_EFFECT	AVG_EFFECT
--	--	0.05495142766779	0.08438341902664	0.02396216663011	0.55709180823347	-3.16459055050238	-3.20981178144787

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

	A	B	C	D	E	F	G	H	I	J	
	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)	Incl Excl Indi
7	--	--	--	--	--	--	--	--	--	--	
8	1	999999999A	9AA9AA9AA99	99999A	99/99/9999	99/99/9999	99/99/9999	I213	20	Yes	
9	2	999999999A	9AA9AA9AA99	99999A	99/99/9999	99/99/9999	99/99/9999	I214	3	Yes	
10	3	999999999A	9AA9AA9AA99	99999A	99/99/9999	99/99/9999	99/99/9999	I2109	1	Yes	
11	4	999999999A	9AA9AA9AA99	99999A	99/99/9999	99/99/9999	99/99/9999	I214	62	Yes	
12	5	999999999A	9AA9AA9AA99	99999A	99/99/9999	99/99/9999	99/99/9999	I214	62	Yes	
13											
14											
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29											
30											

The series of steps in this worksheet provide an example of how to replicate your 30-day Risk-Standardized Mortality Rate (RSMR) calculated for the FY 2021 Hospital VBP Discharge Period.

It presents a mock example of a hospital with 5 qualifying discharges for the AMI 30-day risk-standardized mortality measure.

**Step 1:**  
**Important**  
Limit your replication calculations to rows where "Index Stay" (Column J) equals "Yes". Click the drop down in cell J7 of your HSR and uncheck "No" if applicable.

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								
7	ID Number	Index Stay (Yes/No)	Inclusion/Exclusion Indicator	Death within 30 Days	Age minus 65 (years above 65, continuous)	Male	History of percutaneous transluminal coronary angioplasty (PTCA)	History of coronary artery bypass graft (CABG) surgery
8	--	--	--	--	0.04518279626066	0.18230889475050	-0.13252676933820	0.04506901879653
9	1	YES	0	NO	9	0	1	0
10	2	YES	0	NO	17	0	0	0
11	3	YES	0	NO	10	0	0	0
12	4	YES	0	NO	17	1	0	0
13	5	YES	0	NO	13	1	0	0
14	6	YES	0	NO	8	1	0	0
15								
16	Patient ID      Multiply each risk factor flag where Index Stay = "YES" rows by the revelant coefficient found in Row 8							
17	1	=N\$8*N9	=O\$8O9	=P\$8*P9	0			
18	2	=N\$8*N10	=O\$8O10	0	0			
19	3	=N\$8*N11	0	0	0			
20	4	0.768107536	0.182308895	0	0			
21	5	0.587376351	0.182308895	0	0			
22	6	0.36146237	0.182308895	0	0			

# Understanding Your Mortality Calculation – Calculate Predicted Deaths

	AU	AV	AW	AX	AY	AZ	BA
	Seizure disorders and convulsions	Asthma	Vertebral fractures without spinal cord injury	HOSP_EFFECT	AVG_EFFECT		
7							
8	0.05072191920291	-0.32633784562655	0.10722036501797	-3.37477213846811	-3.30219978619231		
9	0	0	0	-	-		
10	0	0	0	-	-		
11	0	0	0	-	-		
12	0	0	0	-	-		
13	0	0	0	-	-		
14	1	0	0	-	-		
15							
16						<b>SUM</b>	<b>ADD</b>
17	0	0	0			=SUM(N17:AW17)	HOSP_EFFECT
18	0	0	0				=AZ17+AX\$8
19	0	0	0			0.701911662	-2.67286047630554
20	0	0	0			0.935084047	-2.43968809196212
21	0	0	0			1.185473452	-2.18929868669500
22	0.050721919	0	0			1.054902964	-2.31986917469253
						1.825167416	-1.54960472259738

# Understanding Your Mortality Calculation – Calculate Predicted Deaths

	AV	AW	AX	AY	AZ	BA	BB
	Asthma	Vertebral fractures without spinal cord injury	HOSP_EFFECT	AVG_EFFECT			
7							
8	-0.32633784562655	0.10722036501797	-3.37477213846811	-3.30219978619231			
9	0	0	-	-			
10	0	0	-	-			
11	0	0	-	-			
12	0	0	-	-			
13	0	0	-	-			
14	0	0	-	-			
15							
16					SUM	ADD HOSP_EFFECT	Predicted Probability
17	0	0			0.431355846	-2.94341629259954	=1/(1+EXP(-1*BA17))
18	0	0			0.701911662	-2.67286047630554	0.064593919
19	0	0			0.935084047	-2.43968809196212	0.080195917
20	0	0			1.185473452	-2.18929868669500	0.100715595
21	0	0			1.054902964	-2.31986917469253	0.089490719
22	0	0			1.825167416	-1.54960472259738	0.175143366

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

# Understanding Your Mortality Calculation – Calculate Predicted Deaths

	AZ	BA	BB
		<b>ADD</b>	<b>Predicted</b>
16	<b>SUM</b>	<b>HOSP_EFFECT</b>	<b>Probability</b>
17	0.431355846	-2.94341629259954	0.0500486
18	0.701911662	-2.67286047630554	0.064593919
19	0.935084047	-2.43968809196212	0.080195917
20	1.185473452	-2.18929868669500	0.100715595
21	1.054902964	-2.31986917469253	0.089490719
22	1.825167416	-1.54960472259738	0.175143366
23			
24			<b>Predicted Deaths</b>
25		=SUM(BB17:BB22)	0.560188115
26		<b>Rounded</b>	0.56



# Understanding Your Mortality Calculation – Calculate Expected Deaths

	AX	AY	AZ	BA	BB	BC	BD	BE
	HOSP_EFFECT	AVG_EFFECT						
7								
8	-3.37477213846811	-3.30219978619231						
9	-	-						
10	-	-						
11	-	-						
12	-	-						
13	-	-						
14	-	-						
15								
16			SUM	ADD HOSP_EFFECT	Predicted Probability		ADD AVG_EFFECT	Expected Probability
17			0.431355846	-2.94341629259954	0.0500486		-2.87084394032374	0.053613815
18			0.701911662	-2.67286047630554	0.064593919		-2.60028812402974	0.069119879
19			0.935084047	-2.43968809196212	0.080195917		-2.36711573968632	0.085714903
20			1.185473452	-2.18929868669500	0.100715595		-2.11672633441920	0.107481708
21			1.054902964	-2.31986917469253	0.089490719		-2.24729682241673	0.095582891
22			1.825167416	-1.54960472259738	0.175143366		-1.47703237032158	0.185876081
23								
24								
25					Predicted Deaths			
26				=SUM(BB17:BB22)	0.560188115			
				Rounded	0.56			

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

# Understanding Your Mortality Calculation – Calculate Expected Deaths

	AZ	BD	BE
		<b>ADD</b>	<b>Expected</b>
16	<b>SUM</b>	<b>AVG_EFFECT</b>	<b>Probability</b>
17	0.431355846	-2.87084394032374	0.053613815
18	0.701911662	-2.60028812402974	0.069119879
19	0.935084047	-2.36711573968632	0.085714903
20	1.185473452	-2.11672633441920	0.107481708
21	1.054902964	-2.24729682241673	0.095582891
22	1.825167416	-1.47703237032158	0.185876081
23			
24			<b>Expected Deaths</b>
25		=SUM(BE17:BE22)	0.597389276
26		<b>Rounded</b>	0.60
27			

# Calculate the Risk-Standardized Mortality Rate

	AZ	BA	BB	BC	BD	BE	BF	BG	BH
		<b>ADD</b>	<b>Predicted</b>		<b>ADD</b>	<b>Expected</b>			
16	<b>SUM</b>	<b>HOSP_EFFECT</b>	<b>Probability</b>		<b>AVG_EFFECT</b>	<b>Probability</b>			
17	0.431355846	-2.94341629259954	0.0500486		-2.87084394032374	0.053613815			
18	0.701911662	-2.67286047630554	0.064593919		-2.60028812402974	0.069119879			
19	0.935084047	-2.43968809196212	0.080195917		-2.36711573968632	0.085714903			
20	1.185473452	-2.18929868669500	0.100715595		-2.11672633441920	0.107481708			
21	1.054902964	-2.31986917469253	0.089490719		-2.24729682241673	0.095582891			
22	1.825167416	-1.54960472259738	0.175143366		-1.47703237032158	0.185876081			
23									
24			<b>Predicted Deaths</b>			<b>Expected Deaths</b>			
25		<b>=SUM(BB17:BB22)</b>	0.560188115		<b>=SUM(BE17:BE22)</b>	0.597389276			
26		<b>Rounded</b>	0.56		<b>Rounded</b>	0.60			
27									
28				<b>=BB25/BE25</b>	0.937727	<b>Standardized Mortality Rate (SMR)</b>			
29					0.152433	<b>National Observed Mortality Rate from Table 2</b>			
30				<b>=BD28*BD29</b>	0.142941	<b>Risk Standardized Mortality Rate (RSMR)</b>			

# Calculate the Performance Period Survival Rate

	AZ	BA	BB	BC	BD	BE	BF	BG	BH
		<b>ADD</b>	<b>Predicted</b>		<b>ADD</b>	<b>Expected</b>			
16	<b>SUM</b>	<b>HOSP_EFFECT</b>	<b>Probability</b>		<b>AVG_EFFECT</b>	<b>Probability</b>			
17	0.431355846	-2.94341629259954	0.0500486		-2.87084394032374	0.053613815			
18	0.701911662	-2.67286047630554	0.064593919		-2.60028812402974	0.069119879			
19	0.935084047	-2.43968809196212	0.080195917		-2.36711573968632	0.085714903			
20	1.185473452	-2.18929868669500	0.100715595		-2.11672633441920	0.107481708			
21	1.054902964	-2.31986917469253	0.089490719		-2.24729682241673	0.095582891			
22	1.825167416	-1.54960472259738	0.175143366		-1.47703237032158	0.185876081			
23									
24			<b>Predicted Deaths</b>			<b>Expected Deaths</b>			
25		<b>=SUM(BB17:BB22)</b>	0.560188115		<b>=SUM(BE17:BE22)</b>	0.597389276			
26		<b>Rounded</b>	0.56		<b>Rounded</b>	0.60			
27									
28				<b>=BB25/BE25</b>	0.937727	<b>Standardized Mortality Rate (SMR)</b>			
29					0.152433	<b>National Observed Mortality Rate from Table 2</b>			
30				<b>=BD28*BD29</b>	0.142941	<b>Risk Standardized Mortality Rate (RSMR)</b>			
31									
32				<b>=1-BD30</b>	0.857059	<b>Performance Period Survival Rate</b>			

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## **Hospital VBP Program Complication HSRs**

# Table 1 Hospital Results

Table 1. Risk-Standardized THA/TKA Complication Measure Results for the FY 2021 Hospital VBP Performance Period

HOSPITAL NAME

Hospital Discharge Period: April 1, 2016 through March 31, 2019

Measure	Number of Eligible Discharges [a]	Risk-Standardized Complication Rate [b]	Achievement Threshold [c]	Benchmark [d]
THA/TKA Complication	5	0.026524	0.031157	0.022418

[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 2021 Hospital VBP Performance period; your results are presented here for your information.

[b] FY 2021 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 2021 baseline period (April 1, 2011 - March 31, 2014).

[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 2021 baseline period (April 1, 2011 - March 31, 2014).

## Notes:

1. N/A = Your hospital had no qualifying discharges or results for that condition.

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 2021 Hospital VBP Performance Period

HOSPITAL NAME

Hospital Discharge Period: April 1, 2016 through March 31, 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	5	0.14	0.13	0.024187	0.026524

[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 that 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	0	1	Yes
2	999999999A	9AA9AA9AA99	99999A	99/99/9999	99/99/9999	99/99/9999	Yes	Yes	0	0	1	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	1	0	No
6	999999999A	9AA9AA9AA99	99999A	99/99/9999	99/99/9999	99/99/9999	Yes	No	0	1	0	No
7	999999999A	9AA9AA9AA99	99999A	99/99/9999	99/99/9999	99/99/9999	No	No	1	0	1	No
8	999999999A	9AA9AA9AA99	99999A	99/99/9999	99/99/9999	99/99/9999	No	No	6,7	0	1	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	Yes	999999
Yes	Sepsis	No	99/99/9999	N/A	Yes	999999
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
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

Table 3. Discharge-level Worksheet for Risk-Standardized THA/TKA Complication for the FY 2021 Hospital VBP Performance Period

HOSPITAL NAME

Hospital Discharge Period: April 1, 2016 through March 31, 2019

**Note:** This 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.

[Row 8 contains risk factor coefficients - see data beginning at column T.]

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 "Age minus 65" risk factor); 0 otherwise. The risk factor flags (1 or 0) will be in cells beginning in column U.

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	0	1	Yes	Mechanical complication	No
2	999999999A	9AA9AA9AA99	99999A	99/99/9999	99/99/9999	99/99/9999	Yes	Yes	0	0	1	Yes	Sepsis	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	1	0	No	N/A	N/A
6	999999999A	9AA9AA9AA99	99999A	99/99/9999	99/99/9999	99/99/9999	Yes	No	0	1	0	No	N/A	N/A
7	999999999A	9AA9AA9AA99	99999A	99/99/9999	99/99/9999	99/99/9999	No	No	1	0	1	No	N/A	N/A
8	999999999A	9AA9AA9AA99	99999A	99/99/9999	99/99/9999	99/99/9999	No	No	6,7	0	1	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.

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## **Hospital VBP Program HSR Review and Correction Requests**

# Review and Corrections Process

- The review and correction period for FY 2021 Hospital VBP Program HSRs is **April 13–May 12, 2020**.
- 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

How to submit a review and correction request:

- Requests can be submitted via email to [qnetsupport@hcqis.org](mailto:qnetsupport@hcqis.org), over the phone at (866) 288-8912, or over TTY at (877) 715-6222.
- When emailing a request for Mortality measures, please include “Hospital VBP Program Mortality Review and Corrections Inquiry” in the subject line to aid in the help desk process.
- When emailing a request for the THA/TKA Complication measure, please include “Hospital VBP Program Complication Review and Corrections Inquiry” in the subject line to aid in the help desk process.

**Note:** TTY=Text Telephone

# Review and Corrections Process

The HSRs contain PII and PHI. Emailing such data is a security violation. If you have questions on transmitting data, please contact the *QualityNet* Help Desk. Use the ID number found within the HSR when referring to the contents of that report.

# Review and Corrections Process

What can/cannot be submitted 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 CMS PSI measures **can** be submitted.

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

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### **Questions**



# Webinar Questions

Please email any questions that are pertinent to the webinar topic to [WebinarQuestions@hsag.com](mailto:WebinarQuestions@hsag.com) with the following information:

- Subject Line: Reviewing Your Hospital VBP Program Mortality and Complication Measures Hospital-Specific Report
- Email Body: If your question pertains to a specific slide, please include the slide number

If you have a question unrelated to the current webinar topic, we recommend that you first search for it in the [QualityNet](#) Inpatient Questions and Answers tool, at [https://cmsqualitysupport.service-now.com/qnet\\_qa?kb\\_id=bb8e900fdbb6bf0092d5365e7c9619a9&id=kb\\_view2](https://cmsqualitysupport.service-now.com/qnet_qa?kb_id=bb8e900fdbb6bf0092d5365e7c9619a9&id=kb_view2). If you do not find an answer, then submit your question to us via the same tool.

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# Survey

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