



## Hospital Value-Based Purchasing (VBP) Program

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#### **HSR Fast-Track: The Quickest and Easiest Way to Examine Your July 2019 *Hospital Compare* and FY 2020 Hospital VBP Claims-Based Measure Hospital-Specific Reports**

#### **Presentation Transcript**

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**Maria Gugliuzza:** I would like to welcome everyone to today's presentation titled *HSR Fast-Track: The Quickest and Easiest Way to Examine Your July 2019 Hospital Compare and Fiscal Year 2020 Hospital VBP CBM HSRs*. I am Maria Gugliuzza, the education and support lead at the CMS's Hospital Inpatient VIQR Outreach and Education Support Contractor. I will be the moderator for today's event. Before we begin, I'd like to make our first few regular announcements. This program is being recorded. A transcript of the presentation, along with the answers to the questions asked today, will be posted to the inpatient website, [www.QualityReportingCenter.com](http://www.QualityReportingCenter.com), at a later date. If you registered for this event, a reminder email and a copy of today's slides were sent out to your email about a few hours ago. If you did not receive that email, you can download the slides at our inpatient website, [www.QualityReportingCenter.com](http://www.QualityReportingCenter.com). If you have a question as we move through the webinar, please type your question into the chat window, and we will answer questions as time allows at the end of the webinar. For the presenters to best answer your question, we request at the beginning of your question, please type the slide number associated into the chat window.

I would now like to introduce our speakers for today's event. Bethany Bunch is the Hospital Value-Based Purchasing Program Lead at the Hospital Inpatient Value, Incentives, and Quality Reporting Outreach and Education Support Contractor. Kristina Burkholder is the Measure Implementation and Stakeholder Communication Lead at the Hospital Outcome Measure Development, Reevaluation, and Implementation Contractor and Bonnie Rebeck is the Claims-Based Measure Project Lead at the Healthcare Quality Analytics and Reports Contractor.

Today's event will provide an overview of the hospital-specific reports, HSRs, for claims-based measures, CBMs, publicly reported on *Hospital Compare* and used in the Hospital Value-Based Purchasing Program, including a summary of national rates and performance categories, ways to receive and read HSRs, CBM calculations, and Hospital VBP Program measure calculation review and correction requests.

At the conclusion of the presentation, participants should be able to recall how performance categories are assigned using national rates, how to

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access and interpret HSRs and results, and will be able to submit the review and corrections requests for the Hospital VBP Program measures.

I would now like to turn the presentation over to Bethany Bunch, your next presenter, as we review the HSR fast track.

**Bethany Bunch:** Thank you, Maria, and thank you to everyone for joining us today. Before we discuss the national result trends and how to read your reports, I wanted to make sure everyone has a good understanding of the measures and the updates for this year's HSRs. The fiscal year 2020 hospital value-based purchasing HSRs contain four measures, the mortality measures for AMI, heart failure, and pneumonia, and the complication measure for total hip and knee arthroplasty. The baseline period for fiscal year 2020 runs from July 1, 2010, through June 30, 2013, and the performance period runs from July 1, 2015 through June 30, 2018, for all four measures.

The Hospital VBP Program-specific HSRs were delivered April 29 through 30 to your *QualityNet Secure Portal* Secure File Transfer Auto Route Inbox. If you received the report, you should have received the notification in your email that the reports were available to download. Following the 30 days after the delivery of the HSRs, you have the opportunity to review the HSR and request a calculation correction. All review and correction requests must be submitted by May 30. Bonnie will provide instructions and more details regarding the review and correction process later in the presentation. In these HSRs, only performance period data will be included in the HSR. As I mentioned on the last slide, the performance period for the four Hospital VBP Program measures is July 1, 2015 through June 30, 2018. If you are interested in seeing your baseline period rates for these four measures and all the other measures in the Hospital VBP Program, you can run a baseline measures report for fiscal year 2020 in the *QualityNet Secure Portal*. There are a few items that I would like you to remember when reviewing your Hospital VBP Program HSRs. First, the CMS PSI 90 measure is not included in the fiscal year 2020 Hospital VBP Program and is not included in the Hospital VBP Program HSR. It is still included in your *Hospital Compare* HSR, which we will touch on in a few slides. The PSI 90 measure used in the Hospital VBP Program from fiscal year 2015

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through fiscal year 2018 underwent National Quality Forum maintenance review and re-endorsement in 2015, leading to several substantive measure changes. Due to statutory requirements in the Hospital VBP Program, CMS was unable to adopt the newly re-endorsed version of the PSI 90 measure into the Safety domain for fiscal year 2019 through fiscal year 2022. As a result, CMS finalized the removal of the current PSI 90 measure, Patient Safety for Selected Indicators, in the fiscal year 2018 IPPS final rule. In the fiscal year 2018 IPPS final rule, CMS also finalized their proposal to adopt a new version of PSI 90 beginning in the fiscal year 2023. To summarize, CMS removed the current version of PSI 90 in fiscal year '19 through fiscal year 2022— reminder, we are currently in fiscal year 2020—and adopted the new version of the measure for inclusion in the Hospital VBP Program beginning in fiscal year 2023.

The other item that I would like you to know is the patient cohort of the pneumonia mortality measure. Fiscal year 2020 is the last year in which CMS will use the old cohort for this measure in the Hospital VBP Program. In fiscal year 2021, CMS will begin to use the expanded cohort of patients that is listed on this slide. *Hospital Compare* will continue to use the expanded cohort and you will notice that difference in your HSRs.

The second set of HSRs, the July 2019 *Hospital Compare* or HC HSRs, contain the following measures: mortality for AMI, CABG, COPD, heart failure, pneumonia, and stroke; readmission for AMI, CABG, COPD, heart failure, pneumonia, total hip and knee arthroplasty, and the hospital-wide readmission measure; complication for the total hip and knee arthroplasty; payment for AMI, heart failure, pneumonia, and total hip and knee arthroplasty; Excess Days in Acute Care, or EDAC, for AMI, heart failure and pneumonia; and the CMS PSI 4 and PSI 90 measures. The measurement period for each of those measures is also listed on this slide for your reference.

The July 2019 Hospital Compare HSRs were delivered to your *QualityNet Secure Portal* Secure File Transfer Auto Route Inbox a few weeks ago on April 18 and 19. The preview period for July 2019 *Hospital Compare* runs from April 22 through May 21. CMS renamed these HSRs from Fiscal Year

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2020 Hospital IQR Program HSRs to July 2019 *Hospital Compare* HSRs. The July 2019 date is the anticipated month that this measure information will be available on *Hospital Compare*. A few additional notes to remember when you are reviewing the HSRs: The stroke readmission measure was removed from all inpatient quality programs and will be removed from *Hospital Compare* in July 2019. This measure was not included in your readmission HSR. The pneumonia readmission measure will include disparity method results reflecting hospital performance based on patients dual eligibility status. Bonnie will show you what that display looks like later in the presentation. Finally, the Medicare beneficiary identifier, or MBI, is now included in the HSR. The other claims-based measure that was not included in the set of HSRs is the Medicare Spending per Beneficiary, or MSPB, measure. CMS anticipates CMS MSPB HSRs will be delivered to hospitals in June or July. When the HSRs are delivered, we will provide a notification through the hospital IQR and VBP ListServes. In addition, you will receive the same email notification that your report is available to download once it has been delivered. I would now like to hand the presentation over to Kristina Burkholder to present on the national trends of the measure results. Thank you.

**Kristina**

**Burkholder:**

Thank you, Bethany. Hi, everyone. I'm going to present to you briefly on two things. First, I'm going to provide you with an overview of the national results for the July 2019 *Hospital Compare* claims-based outcome measures. Secondly, I'm going to review the approaches CMS uses to categorize hospital performance for these measures.

Slide 17 provides you with information on the national results for the mortality readmission complication and payment measures. To quickly orient you to the table, the column on the left-hand side lists the measures. The column in the middle lists the national observed results to be displayed on *Hospital Compare* this summer, and the last column on the right-hand side depicts the change in the national rate from last year. This column tells you whether the rates remain the same or whether they have increased or decreased. For mortality measures, the 2019 national results range from

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about 3 percent for CABG and 15.6 percent for pneumonia mortality, and with the exception of the COPD and CABG mortality, you can see that, in 2019, we've experienced reduction in the national mortality rate in comparison to 2018 by about 0.1 to 0.5 percentage points. Next on the table are the readmission measures. The national observed rates this year range from 4 percent for the total hip/knee replacement readmission and to 21.6 percent for heart failure readmission. With the exception of the hospital-wide remission measure, which remains unchanged, all of the national readmission results have decreased from 0.1 to 0.4 percentage points. The national rate for the hip/knee complication measure is 2.5 percent. This is a slight reduction compared to last year. At the bottom of the table are the national payments, which range from about \$17,000 for heart failure and almost \$25,000 for AMI payments. The payment measures you see here are inflation adjusted, so they're presented to you on 2017 dollars. We don't compare these payment measures across years because the national payment results are usually adjusted for inflation based on a specific year, which is why the changes from 2018 are indeterminable. The national rates you see here are used by CMS to categorize hospital performance on these measures.

Slides 18 and 19 depict the approach that CMS uses to categorize hospital performance on these measures. First, I'll describe the approach CMS uses for most of the outcome measures and then discuss the payment measures. I'll end with an explanation of the categorization approach that CMS uses for the EDAC, or Excess Days in Acute Care measures. I'm going to start with the image on the left-hand side of the screen. This image describes the approach CMS uses to categorize hospital performance for the mortality, readmission, and complication measures. At the top of the image is a small gray map of the United States that depicts the national rates. In this example, the national rate is 15.6 percent, and there's a small dotted line going down the page that shows you how three hospitals compare to the national rate of 15.6. Three performance categories are depicted in this image. At the top left-hand corner, you can see the green hospital. Hospital A shows you an example of a hospital that's been categorized as Better than National. In the middle, Hospital B in yellow shows you an example for a hospital categorized as No different than National, and, at the bottom, Hospital C in

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red, depicts an example of a hospital categorized as Worse than National. Also provided in this graphic are the risk-standardized rates and the interval estimates represented by the square and line under each hospital. To classify these hospitals into these categories, CMS compares the hospital's 95 percent interval estimates against the national observed rate. Let's pretend this example is pneumonia mortality measure with the national rate of 15.6. If we look at the example of Hospital A, the green hospital, you can see that its risk standardized rate is 12.6 percent and the entire interval estimate for that hospital ranges from 9.4 percent to 14.3 percent. What this means is that we have to make the hospital's pneumonia mortality rate 12.6 percent, and we're 95 percent sure that the true score is somewhere between 9.4 percent and 14.3 percent. When we compare this interval estimate for the entire green line to the national observe rate, which is represented by the grey dotted line, you can see that the green line is less than the national observed rate. Because the interval estimate is less than the national rate, this hospital is categorized as Better than National. In contrast, in Hospital C, the entire area interval estimate, the entire red line, is greater than the national observed rate of 15.6 and is classified as Worse than National. And lastly, for the yellow hospital, Hospital B, you can see that the 95 percent interval estimate, which ranges from 13.2 percent to 17.1 percent, includes the national rate of 15.6 percent. The yellow line crosses over the dotted line that represents the national observed rate. In this instance, because the interval estimate contains the national observed rate, this means that the hospital is classified as No different than National. For the payment measures, in the image on the right-hand side of the screen, a similar approach is used to categorize hospitals. This time, the interval estimate is compared against the national average payment, rather than a rat, and the performance categories have a different label. Instead of being categorized as better or worse, they're categorized as Less than the National average payment, or Greater than National average payment. As is done with the outcome measures, the entire interval estimate is compared against the national results in order to determine the hospital's performance category.

Lastly, shown here on Slide 19, for the Excess Days in Acute Care, or EDAC measures, the concept is essentially the same, but this time, instead

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of using a national rate, we're comparing against zero days for the expected performance for hospital A. This measure looks at the difference between your hospital's performance and the expected performance for your hospital, if you're performing the same as an average hospital, with a similar case next to you. If these two numbers are the same, the difference would be zero days, which is depicted by the blue dotted line. Positive numbers mean the hospital had more days and negative indicate less. Using a similar approach as the other measures, the 95 percent interval estimate, hospitals are characterized as Fewer days than Average, Average days or More days than Average. If the entire interval estimate is less than zero days, then the hospital is classified as Fewer days than Average, as depicted with the green line. This means that your patients spend fewer days in acute care than would be expected if they were admitted to an average performing hospital with your case mix. If the entire interval estimate, the one in red, is greater than zero days or expected, that's classified as More days than Average, and if the entire interval estimate contains zero days within that range, then the hospital is classified as Average days. As a reminder, you'll see updated information for your hospital's performance on each of these measures, and these performance categories will be publicly reported on *Hospital Compare* around July 2019. Now, I'm going to turn over to the next presenter.

**Bonnie Rebuck:**

Thank you. Hi. I'm Bonnie Rebuck with Customer Value Partners. I'm a project lead on the Healthcare Quality Analytics and Reporting Contract, or HCQAR.

A ListServe communication was sent via email to those who are registered for the Hospital IQR and Improvement and Hospital Inpatient VBP and Improvement Program Notification ListServe groups on *QualityNet*.

A second Auto Route File Delivery Notification will be sent to your email once your hospital's HSR has been delivered. Note, only hospital users with the appropriate roles will receive a report and notification.

Hospital users with Hospital Reporting Feedback-Inpatient role and File Exchange and Search role will have access to HSRs and the user guide. For

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those with the correct access, the HSR and user guide will be in their my *QualityNet* Secure File Transfer inbox.

The FY 2020 HVBP HSR PDF user guide that accompanies your mortality and complication HSRs includes additional information about the data in your HSRs and includes examples for the complication and mortality replication process. The July 2019 *Hospital Compare* public reporting PDF user guide that accompanies your *Hospital Compare* HSRs includes additional information about the data in the HSR.

*Hospital Compare* HSRs are provided to hospitals to allow them to preview their information before it is publicly reported. Here, we will provide an overview of the *Hospital Compare* HSRs.

For *Hospital Compare*, you will receive an HSR bundle zip file that includes the following items: your readmission HSR; your hospital-wide readmission HSRs; your mortality HSR; your complication HSR; your payment HSR; your CMS PSI HSR; your Excess Days in Acute Care, or EDAC, HSR; and your *Hospital Compare* public reporting hospital user guide.

Each of the *Hospital Compare* HSRs uses the same basic structure for consistency with tabs providing the following information: your hospital's measure results, the distribution of State and national performance categories, the discharge-level data used to calculate your hospital's measures result, and the case mix comparison of the risk factors used for risk adjusting the measure.

Each HSR starts with a measure results performance table that provides your hospital's measure results for the measures included in a given HSR. It provides the following information: the performance category that will be reported on *Hospital Compare*, the number of eligible discharges included in the measure, your hospital's rate for each category, and interval estimates that were used to define the performance category that was assigned to your hospital. The national values are provided for comparison, and, with the exception of CMS PSI, state values are provided for comparison as well.

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Each *Hospital Compare* HSR includes a Distribution tab that shows the distribution of hospitals across the different performance categories within the nation and within your state. When coupled with the performance categories for your hospital from the previous tab, this can show how your hospital's performance compares against the rest of the hospitals of the nation, as well as in your state.

The readmission, mortality, hospital-wide readmission complications, and CMS PSI HSRs have a Discharge tab that provides the discharge-level data that [were] used to produce each measure. The readmission and mortality HSRs include all discharges that leave the inclusion requirements for each measure and use the inclusion/exclusion indicator to identify discharges that were excluded from the measure. In these HSRs, the counter discharges with the inclusion/exclusion indicator of zero can be tied to the denominator of each measure and performance task. These are the eligible discharges. Due to the volume of discharges in the measures, the hospital-wide readmission and CMS PSI HSRs only include discharges that are part of the numerator for each measure. The count of events in eligible discharges, for example readmission mortality or complications for the measures, can be tied to the numerator and the Performance tab. Beginning in the July 2019 HVBP program HSRs, both the Health Insurance Claim Number, HICNO, and the new Medicare Beneficiary Identifiers, MBI, can be found for each discharge. If a Medicare Beneficiary Identifier, MBI, is not available for a patient, then a double dash will display in the corresponding row.

In the hip/knee complications measure, an index discharge can have more than one complication associated with it. However, only one complication is included in the calculation of the measure. When there is more than one complication for an additional complication record, it will have a No value for the first complication and a Yes value for each additional complication attributed to that index discharge. If you filter the additional complication record column to No, you can follow the same process used in readmission and mortality HSRs to identify the count of eligible discharges and events

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and the eligible discharges that can be tied to the denominator and numerator in your Performance tab.

The EDAC HSR differs from other HSRs in that it uses two discharge-level data tabs to provide the discharge-level detail and event-level detail. The Summary of Events tab lists the discharges that are included in the measure. It follows the same inclusion/ exclusion numerator and denominator logic as the discharge tab from other HSRs. It lists summary-level event information about the emergency department visit, observation day visits, and unplanned inpatient readmissions within the 30 days following discharge. The ID number on this tab is used to tie the events on the patient-level summary tab. Note that in the row with the ID number 9, it lists a patient that had one emergency department visit and three observation stays within 30 days following discharge.

The EDAC patient-level summary tab provides the detailed information for the emergency department observation and unplanned readmission visits listed in the summary of events tab. There are one to many patient-level summary records for each summary event tab that had a record. Each individual event for a given discharge is listed on its own row. The ID number on the patient-level summary tab can be used to tie the record or records to the corresponding number on the summary of events tab. The row here with ID number 9 is one emergency department visit and three observation stays on the patient-level summary records for the summary of events we saw in the previous slide.

The payment HSR has three tabs for providing discharge-level data, the index stay, the summary tab, and two post-acute care tabs. The index stay and temporary tab list the discharges that are included in the measure. It includes all discharges that meet the inclusion requirements for each measure and uses the inclusion/exclusion indicator to identify discharges that were excluded from the measure. It provides this summary-level of payment information that provides the split between facility, physician, and post-acute care payments. The Total Episode Payments value, shown in blue in column N, is split into payments for each index admission and payments after the index admissions, represented by the Total Index Admission

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Payment column and the Total Post-Acute Care Payments column shown in green in columns O and U, along with their percentages in column P and B. The Total Index Admission Payments, column O, is further split up into facility and physician payment columns, seen in yellow in columns Q and S, along with their percentages in columns R and T.

Beginning with the July 2019 *Hospital Compare* payment HSRs, the ID numbers in the post-acute care tabs will correspond to the same ID number on the index stay and summary tab. There are one to many post-acute care records for each summary of events tab records on the index stay and summary tab. ID numbers 1, 2, and 3 will be shown on the next slide.

The payment post-acute care tables break out the post-acute care cost to provide further detail on where the post-acute care payments were made. The condition payment post-acute care tab provides distribution of post-acute care cost across 11 care settings for AMI, heart failure, and pneumonia payment measures. The procedure payment post-acute care tab provides distributions of post-acute care cost across 13 care settings for the total hip arthroplasty and total knee arthroplasty payment measure. ID numbers 1, 2, and 3 correspond to the first three records listed in the index stay and summary tab of the previous slide.

Each HC HSR, except for CMS PSI, includes one or two case mix comparison tabs with the distribution of patient risk factors for the included measures. Procedure -based measures are listed in a separate tab from diagnosis-based measures and readmission mortality and payment HSRs. Note that not all risk factors apply to every measure. N/A is used to denote risk factors that do not apply to the given measure. If your hospital has no qualifying cases for the measure, then N/Q will show in the risk factor cell. These are conditions that are used to risk adjust the measure rate to account for the differences in health of your patient population in comparison to the national average. Hospital percentages are provided along with the state and national percentages to let you see how your patient population compares for each risk factor.

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In the complication HSR, Table 2 displays the percentage of eligible index admissions where the patient experienced each type of complication. A patient may have more than one complication associated within index admission but only one complication is counted in the raw complication rates. The percentages for the individual complications may not add up to the raw complication rates. If a patient has the same specific complication coded multiple times, this is only counted once in the specific complication rates provided in the table.

Beginning in the July 2019 HSRs, a dual eligible column has been added to the readmission HSRs discharge tab. The column is provided to distinguish patients who are dual eligible from those who are non-dual eligible for the pneumonia measure only. Missing/Unknown means the dual eligible status is unable to be determined.

In addition to the dual eligible column on the discharges tab, each HC readmission HSR will contain two tabs. The first tab is known as [Readmission] Within-Hospital Disparity Method tab. The Within-Hospital Disparity Method calculates the difference or disparity in 30-day risk standardized pneumonia readmission rates between dual eligible and non-dual eligible patients to compare performance for these two groups of patients within an individual hospital. Please note that the data within this tab [are] confidential and will not be publicly reported. It's included for your reference only.

The second new tab is known as the [Readmission] Across-Hospital Disparity Method tab. The Across-Hospital Disparity Method compares performance across hospitals by calculating the hospital outcome rate for dual eligible patients only. The data within this tab [are] also confidential and will not be publicly reported. It's included for your reference only.

Next is the HVBP mortality HSR.

The mortality HSR is laid out to provide the hospital results in the first table and then go into further detail in the tables that follow to show how that information was derived. Table 1 provides hospital results for the acute

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myocardial infarction (AMI), heart failure, and pneumonia mortality measures that will be used in the Hospital VBP Program for calculating the achievement and improvement points for these outcome measures. The achievement thresholds and benchmark were calculated on FY 2020 baseline data, and they're provided here for convenience. The following columns are found in Table 1. The Number of Eligible Discharges is the count of discharges used for measure calculation. The Performance Period Survival Rate will be used to calculate achievement and improvement points for these outcome measures in the Hospital VBP Program. The Achievement Threshold was calculated as the median survival rate among all hospitals with measure results and at least 25 cases during the FY 2020 baseline period. The Benchmark was calculated at a mean average of the top 10 percent of survival rates among all hospitals with measure results, and at least 25 cases during the FY 2020 baseline period.

Table 2 includes additional provider-level values that are used in the calculation of performance period survival rates. The following columns are found in Table 2. The Predicted Deaths is 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. The Expected Deaths is the number of expected deaths within 30 days of admission on the basis of average hospital performance with your hospital's case mix and average hospital effect. The replication process, detailed later, will show how the Predicted Death and the Expected Deaths are calculated. The National Observed Mortality Rate is calculated as the number of observed 30-day deaths nationally divided by the number of eligible discharges nationally. The Risk-Standardized Mortality Rate, or RSMR, is the mortality rate that has been adjusted for differences in the case mix across hospitals and a hospital-specific effect. The Performance Period Survival Rate is calculated as one minus RSMR.

The discharge table contains discharge-level data for all Part A Medicare Fee-for-Service patient stays with a primary qualifying diagnosis of AMI, heart failure, or pneumonia, accordingly, that had a discharge date and a reporting period for patients who were aged 65 or above at the time of

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admission. The ID number is provided as a way to reference records while avoiding sharing PII or PHI. The HICNO column through the Discharge Designation column contain data as [they were] pulled from hospital claims. The Index Stay column indicates whether the stay is included in the measure calculations by Yes or No. The stays flagged Yes represent the discharge found in a number of discharges columns in Tables 1 and 2. For stays that are not included in the measure, the Inclusion/Exclusion Indicator column has numbers 1–9 indicating the reason or reasons why the stay was excluded. The corresponding descriptions for these numbered reasons are defined in the user guide that accompanies the HSR.

Deaths within 30 days are flagged Yes or No if the patient died within 30 days of admission. Risk factor variable columns contain model risk factors, which vary by measure. For each measure, these columns start with a mean age minus 65 risk factor and end with a chronic liver disease risk factor. The risk factors vary by measure. Table 4 in user guide provides a description for each. Row 8 in the HSR contains the model coefficients for each risk factor, which are estimates over data for all hospitals. Beginning in row 9 of the HSR under the risk factors, the cell will contain a 1 if the patient was identified as having that risk factor and equals the years above 65 for age 65 variable. Otherwise, it will have a zero. HOSP\_EFFECT represents the underlying risk of a mortality at the specific hospital after accounting for patient risk. AVG\_Effect represents the underlying risk for mortality of the average hospital after accounting for patient risk.

The user guide distributed with your HSRs and Excel document with sample calculations and step by step instructions can be requested from the *QualityNet* help desk. The replication process for mortality measures include the following steps: calculate predicted deaths, calculate expected deaths, calculate the risk-standardized mortality rate, calculate the performance period survival rate.

For replication, save a copy of the HSR to work from and complete the calculations in Excel. Work below the actual data. The replication steps should be completed on the discharge-level worksheet for each mortality measure. The first step of replicating the results is to identify

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eligible discharges. To do this, limit Index Stay column to Yes using the filter above.

For each eligible discharge identified in the previous step, multiply each risk factor flagged by the relevant coefficient found in row 8. As an example of the calculation, the formulas used are shown in rows 17, 18, 19 and also highlighted in blue. When the results are compared to the table above, note the coefficients are brought down for the rows that had a risk factor flagged as 1.

Next, sum all products risk factor flagged times coefficient from the previous step for each index discharged. The calculation that's shown as an example is for the value in the first row. Then, add the hospital-specific effect, which is the hospital-effect value found in cell AX8. A calculation is shown as an example. Note, this example is for the pneumonia mortality measure. The heart failure and AMI measures both have less risk factors. So, the formula examples shown in these steps will be different for those measures.

Next, calculate the predicted probability of a 30-day death for each stay using the formula shown and the results from the previous step. Note that EXP in the formula is an Excel exponential function.

Finally, sum predicted probability of 30-day deaths for all stays to get the number of predicted deaths within 30 days from readmission. When this value is rounded to two decimals, it should match the Predicted Deaths value for this measure in Table 2. The example formula in BA25 was used to sum the values for the Predicted Deaths in cell BB25. Each hospital will likely have a different quantity of discharges. So, the formulas will need to be adjusted accordingly.

To calculate the expected deaths, start with the sum products, respective flags, times coefficient that were created in the Predicted Deaths calculations at an average hospital effect, which is the average effect value found in cell AY8. Next, calculate the expected probability of a 30-day death for each day using the formula shown and the results from the previous step.

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Finally, sum the expected probability of 30-day deaths for all the stays to get the number of expected deaths within 30 days of readmission. When this value is rounded to two decimals, it should match the Expected Deaths value for this measure in Table 2. The example formula shown in BD25 was used to sum the value for the predicted deaths in cell BE25. Again, each hospital will likely have a different quantity of discharges and will need to adjust the formulas accordingly.

To calculate the Risk-Standardized Mortality Rate, first divide the Predicted Deaths by the Expected Deaths. The result is the Standardized Mortality Rate. This value is then multiplied by the National Observed Mortality Rate from Table 2 to get the Risk-Standardized Mortality Rate. When this value is rounded to six decimal places, it should match the Risk-Standardized Mortality Rate found in Table 2. The Excel formula shown for calculations are shown in column BC. The results of these calculations are shown in column BD.

The Performance Period Survival Rate is calculated as one minus the Risk-Standardized Mortality Rate. When this value is rounded to six decimal places, it should match the Performance Period Survival Rate found in Table 2. The Excel formula used for this calculation is shown in column BC. The result calculation is shown in column BD. due to differences in rounding between SASS and Excel, there may be minor difference at the 6th decimal place. When CMS calculates your hospital rates, it uses SASS And values in your HSR are based on those SASS calculations.

Now, I will discuss fiscal year 2020 elective primary total hip arthroplasty/ total knee arthroplasty risk-standardized complication measure.

Similar to mortality HSR, the complication HSR is laid out to provide hospital results in the first table and then go into further detail in the later tables. The following columns are found in Table 1. The Number of Eligible Discharges is the count of discharges used for the measure calculations. The Risk-Standardized Complication Rate will be used to calculate achievement and improvement points for this outcome measure in the Hospital VBP Program. The Achievement Threshold was calculated as

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the median complication rate among all hospitals with measure results and minimum case size greater than 25 during the fiscal year 2020 baseline period. The Benchmark was calculated as the mean of the top decile of complication rates among all hospitals, with measure results and minimum case size greater than 25 during the fiscal year 2020 baseline period.

Table 2 includes additional provider-level values that are used in the calculation of Risk-Standardized Complication Rates. The following columns are found in Table 2. The Predicted Admissions with [a] Complication is the number of predicted admissions with a complication within 90 days from admission based on your hospital's performance with its observed case mix and your hospital's estimated effect on complications. The Expected Admissions with a Complication is the number of expected admissions with a complication within 90 days of admission based on your average hospital performance with your hospital's case mix and average hospital effect on complications. The replication process detailed earlier shows how predicted and expected rates are calculated. The National Observed Complication Rate is the number of observed admissions with a complication within 90 days nationally, divided by the number of eligible discharges nationally. The Risk-Standardized Complication Rate is the predicted admissions with the complication divided by the expected admission with a complication, then multiplied by the National Observed Complication Rate.

The complication HSR discharge table contains many of the same columns as the mortality HSR discharge table. A stay can appear multiple times during a discharge tab if the patient had more than one complication for that discharge. However, it is only included once in the calculation of the measure. Similar to the HC complications HSR, the Additional Complication Record column is used to flag additional complications. In the example seen here, the first four rows are the same index discharge and list four complication records that are attributed to that discharge. This [is] easily identified noting the Additional Complication Record column has a Yes value for the second to the fourth record.

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The discharge table contains further discharge-level data for the complication measure. The complication fields identify the complication that occurred, AMI, pneumonia, sepsis, surgical site bleeding, pulmonary embolism, death, mechanical complication, or infection. If a patient did not have a complication, it will appear as n/A. The rest of the columns shown here contain specific information pertaining to the listed complications.

The replication process for hip/knee complication measure is the same as the mortality measures with one difference. The first step, you limit your replication calculation to rows where index stay or Column H equals Yes. You must also limit it to rows where Additional Complication Record [c], or column I, equals No. The rest of the replication process would follow the same steps as those laid out for the mortality measures.

When is the review and corrections period? The HVBP review and corrections period for fiscal year 2020 is May 1, 2019, through May 30, 2019. Pay special attention to the deadlines of the review and correction period sent after May 30, 2019 will not result in a correction.

The review and correction requests can be submitted via email, [qnetsupport@hcqis.org](mailto:qnetsupport@hcqis.org), or over the phone to the numbers on your screen. When emailing any request, include “Hospital VBP Program Mortality Review and Corrections Inquiry,” or Hospital VBP Program [Complications] Review and Corrections inquiry in the subject line to aid in the help desk process.

The HSRs contain PII and PHI. Emailing PII or PHI is a security violation. If you have questions on transmitting data, please contact the *QualityNet* help desk. Again, if you’re referencing a specific case or discharge, please reference the ID number associated in the HSR, rather than sending patient information via email.

Suspected calculation errors on your report can be submitted for review, with the possibility of corrections. General questions about HSRs, the mortality HSRs, or the complication measures may also be submitted. Requests for submission of new or corrected claims are not allowed. A snapshot of the

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administrative claims data available approximately 90 days after the end of the applicable period is taken in order to perform program calculations.

For FY 2020, the applicable period ended on June 30, 2018, and the administrative claim data file used for calculations was produced on September 28, 2018. The review and corrections process does not allow hospitals to submit additional corrections related to the underlying claim data used to calculate the rates, nor add new claims to the data extract used to calculate the rates. CMS cannot regenerate the report for this period to reflect corrected claims. If your facility submitted or wishes to submit a corrected claim after September 28, 2018, that pertained to an incorrect claim originally submitted prior to September 28, 2018, the corrected claim will not be included in your measure results. Those claims data are generated by the hospital itself. Hospitals in general always have the opportunity to review and correct these data until the deadline that's specified. In many cases where the claim is listed and the HSRs don't match the internal records, it is due to the fact that corrections were made to those claims after the deadline. So, that is the end of the presentation, and I will hand it back to Maria.

**Maria Gugliuzza:** Okay. Now, we will begin the question and answer portion of today's presentation, and we will try to answer as many questions as time allows. Our first question is for Kristina. How many patients are needed for each measure to receive a category?

**Kristina**

**Burkholder:** For these measures, if the hospital has at least 25 eligible cases during the performance period, they'll be classified into one of three categories. Otherwise, they'll be assigned to the category "The number of cases is too small."

**Maria Gugliuzza:** Thank you. The next question: Are the changes in national results from 2018 to 2019 percent changes?

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**Kristina**

**Burkholder:** Good clarifying question. No. The changes from 2018 listed are percentage point changes or the national rates from 2019 minus 2018.

**Maria Gugliuzza:** Our next question: For the payment measures, does Less than the National mean better or worse performance?

**Kristina**

**Burkholder:** For the payment measures, a performance category of Less than National does not imply whether or not the hospital's performing better or worse because the measure results do not find an indication of the quality of care to hospitals. This is also true for the payment category Greater than National. It doesn't mean that the hospital is performing better or worse. This is because the payment measures are not meant to be interpreted in isolation. They're meant to be considered alongside with existing quality measures such as mortality measures. A payment categorization of Less or Greater than National simply indicates that the average cost of treatment at your hospital for AMI, heart failure, and pneumonia tends to be either significantly less or significantly more than the average cost of treatment for that condition in the nation.

**Maria Gugliuzza:** Thank you. Our next question: Why is there so much time spent on calculation replications? Have hospitals reported errors in calculations?

**Bonnie Rebeck:** Sure. Replication instructions are available to hospitals to help them understand the calculation steps. Hospitals are encouraged, but not required, to verify results in Table 1 and 2 of the Hospital VBP Program HSR through replication. Further explanation of the replication process can be found in your hospital user guide. Please note that the national rate and risk factor coefficient cannot be replicated.

**Maria Gugliuzza:** Thank you. The next question: Why is a patient counted in our complication rate twice when they had another joint replacement done at the time of the first readmission?

**Bonnie Rebeck:** If a patient had more than two hip/knee procedure codes during the index admission, they would meet exclusion criteria for the measure.

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Explanations of the measure and inclusion and exclusion indicators can be found in the hospital user guide sent with your HVBP report.

**Maria Gugliuzza:** Okay. Our next question: Why is the THA/TKA complication measure reporting baseline period for the fiscal year 2020 the same as the fiscal year 2019?

**Bonnie Rebuck:** Sure. To extend that performance period to three years, the same baseline period would be used for fiscal year 2019 as fiscal year 2020. The fiscal year 2020 performance period includes all performance periods of the fiscal year 2019, adding one year.

**Maria Gugliuzza:** Thank you. The next question: What is the MBI variable?

**Bonnie Rebuck:** The MBI is a Medicare Beneficiary Identifier. Beginning in July 2019, HC program HSRs and fiscal year 2020 HVBP HSRs, both health insurance claim number, HICNO, and the new Medicare Beneficiary Identifier, MBI, can be found for each discharge. If a Medicare Beneficiary Identifier, MBI, is not available for the patient, then a double dash will display in the corresponding row.

**Maria Gugliuzza:** Thank you. The next question: Is it possible to have a heart failure index admission claim included in my HVBP heart failure mortality HSR and excluded from my *Hospital Compare* heart failure mortality HSR?

**Bonnie Rebuck:** If a patient has multiple eligible heart failure index admissions in a 12-month period, going from July to June, one admission is randomly selected for inclusion in the measure and other eligible index admissions are excluded in that year. The eligible admission claim that is randomly selected is often different between the two programs.

**Maria Gugliuzza:** Why aren't the ID numbers on the payment HSR the 0.4 condition payment pack and the 0.5 procedure payment pack tables in sequential order?

**Bonnie Rebuck:** Beginning with the July 2019 HC payment HSRs, the ID numbers in the post-acute care tabs will correspond to the same ID number on the index stay and summary tab. There are one to many post-acute care records for

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each family of events tab record on the index day and summary tab. The ID numbers from the index stay and summary tab now correspond to the 11 or 13 records in the corresponding pack tab. So, it's easier to find the records that go together.

**Maria Gugliuzza:** Thank you. Why in the complication HSR, are there more rows in Table 3 than eligible discharges in Table 1 and 2, and how do multiple complications affect complication rate calculation?

**Bonnie Rebuck:** Sure. There are more discharges charges in Table 3, but they are not all eligible. Reasons for ineligibility include if the patient left against medical advice, the patient was transferred to a facility where index admission occurred, the patient had more than two hip/knee procedures during the index admissions, etc. Additionally, some discharges have multiple rows if there are multiple complications during the stay. These are indicated by the Additional Complication Record column. If you count all the rows where index stays equals Yes and additional complication record equals No, then it should match your eligible discharges from Table 1. Additionally, complication rate replication should be performed using only rows in which the index stay equals Yes and additional complication records equals No. This is necessary because a patient may have more than one complication associated with the index admission, but the raw complication rate only counts one complication.

**Maria Gugliuzza:** Next question: How is my NIHSS percentage calculated in Table 1 of my mortality *Hospital Compare* HSR?

**Bonnie Rebuck:** The NIHSS percentage is calculated as the total number of eligible stroke discharges with the NIHSS score assigned, divided by the total number of eligible stroke discharges on or after October 1, 2016, which is the date NIHSS data collection began.

**Maria Gugliuzza:** Thank you. Next question: There are two new tabs included on the readmission HSR for disparity method. Can you explain the difference between Within-Hospital and Across-Hospital comparison?

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- Bonnie Rebuck:** Sure. The Within-Hospital disparity method identifies disparities in health outcomes between dual eligible and non-dual eligible patients within a hospital. The Across-Hospital disparity method calculates an outcome rate for dual eligible patients to compare hospital performance to other hospitals, as well as state and national rates. This method only assesses performance for dual eligible patients.
- Maria Gugliuzza:** We have time for one last question today. What does a negative EDAC value represent in my HSR?
- Bonnie Rebuck:** A negative EDAC indicates your patient spent fewer days in acute care than would be expected if admitted to an average performing US hospital with a similar case mix.
- Maria Gugliuzza:** That is all the time we have for questions today. I would now like to thank everyone for their participation and thank you to the presenters for presenting our webinar today. I will now pass the presentation over to Dr. Price who will review the continuing education credits. Thank you.
- Dr. Debra Price:** Thanks and, due to time constraints, please review the CE slides and, if you have any issues, contact me at [DPrice@HSAG.com](mailto:DPrice@HSAG.com). Thank you.