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To: Hospital CFOs

Cc: Case Mix Liaisons, Hospital Quality Contacts

From: Alyson Schuster, Ph.D., Associate Director – Performance Measurement

Date: June 21, 2017

Re: Readmissions Reduction Incentive Program (RRIP) Policy for Rate Year (RY) 2019

This memo summarizes the changes to the Readmission Reduction Incentive Program (RRIP) that will impact hospital rates in RY 2019. The RY 2019 RRIP was approved by the Commission on May 10, 2017. The RRIP methodology measures hospital performance based on the better of attainment or improvement. The Commission approved that the RY 2019 policy would reward hospitals that achieve a modified cumulative improvement rate of -14.50 percent between CY 2013 to CY 2017, or an attainment rate of 10.83% (adjusted for out-of-state readmissions). The final, approved RRIP recommendation can be found on the HSCRC website in the [May 2017 Commission Meeting](#) Packet.

Measuring the Better of Attainment or Improvement in RY 2019

Based on staff assessment and stakeholder input, the following program updates were approved to measure attainment and improvement reliably across hospitals (further details are included in the recommendation):

- 1) Hospital readmission rates should be adjusted for out-of-state readmissions for all payers based on a ratio developed using Medicare data.
- 2) The hospital attainment benchmark should be set at the cutoff rate for the current lowest 25th percentile, adjusted downward, which is 10.83% for RY 2019.
- 3) The improvement benchmark should be set at 14.50 percent for the CY 2017 performance period compared to CY 2013 readmission rates. Due to the ICD-10 transition and changes to the All Patient Refined Diagnosis Related Group (APR-DRG) grouper, the modified cumulative improvement rate will be calculated by adding the RY 2018 improvement (CY 2013 to CY 2016 improvement under APR-DRG grouper versions 32 and 33) to the one-year CY 2016 to CY 2017 improvement (both under APR-DRG grouper version 34). The HSCRC has

added the one-year improvement to the RY 2018 improvement to ensure that hospitals that made early investments in readmission reductions are not unduly penalized in RY 2019.

- a. Cumulative improvement example: A hospital that reduced its case-mix adjusted readmission rate by -10.75% in RY 2018 would need to achieve an additional -3.75% reduction in CY 2017 over CY 2016 rates, in order to achieve the modified cumulative improvement target of -14.50%.

Scaling and Magnitude of Revenue At-Risk

For the RY 2019 RRIP, the Commission approved scaled penalties of up to 2% and scaled rewards of up to 1% of inpatient revenue. These rewards and penalties are not revenue neutral.¹

Appendix A contains the RY2019 preset scales for rewards and penalties linked to improvement and attainment performance levels. The percent change will be rounded to two decimal places for the payment incentive.

Readmission Measure Methodology

For the RRIP methodology, performance is measured using the 30-day all-payer all hospital readmission rate (both within and between hospitals) with adjustments for patient severity (based upon discharge APR-DRG severity of illness (SOI)) and planned admissions. There were no major changes to the Readmission Measure Methodology for RY 2019. See Appendix B for additional details on the HSCRC readmission measure specifications.

Grouper Versions

For RY 2019, the data for CY 2017 (performance period) will be run using version 34 of the APR grouper (ICD-10 compatible) and CY 2016 will be rerun using version 34 to calculate the one year improvement. The RY 2018 readmission rates were calculated using version 32 (CY 2013) and version 33 (CY 2016) of the APR-DRG grouper.

Readmission Reduction Incentive Program Reporting

Summary reports and case-level data for the RRIP program are sent to hospitals via the CRISP Reporting Services (CRS) Portal. Each hospital has a point-of-contact, the Chief Financial Officer or their designee, who is contacted by CRISP to approve requests for access. If you need access to quality reports, please send an email to CRISP Support (support@crisphealth.org) indicating level of access (summary reports or case-level data).

For RY 2019, CRISP has created a single summary workbook that contains the normative values, full CY 2016 readmission results, CY 2017 year-to-date one-year and cumulative improvement, and the readmission rate adjusted for out-of-state

¹ Across all quality programs, this is a hospital maximum penalty guardrail of 3.5% of total revenue for RY 2019. None of these programs are revenue neutral.

readmissions used for attainment. In addition, technical documentation, SAS programs, and a calculation sheet are being finalized so that they can be posted on the CRISP portal.

Please note that the report released by CRISP on 06/02/2017 has an error on the attainment tab, and that the base year CY 2016 data is being rerun with final January 2017 data and most recent CRISP Enterprise IDs (EIDs), the unique patient identifiers. This update will change the CY 2016 base period results and normative values slightly. A revised report should be published on the CRISP portal with performance period results through April (using data through May) in early July. Case level base and performance period results will also be available at that time.

If you have any questions, please e-mail hscrc.quality@maryland.gov or call Dr. Alyson Schuster at 410-764-2673.

Appendix A: RY 2019 RRIP Revenue Adjustment Scales

The tables below summarize the revenue adjustment scales for the improvement and attainment scales. All readmission rates used for the RRIP calculations are case-mix adjusted.

Improvement

Per Figure 1 below, hospitals with a 25.00 percent or larger cumulative decline (improvement) in CY 2017 readmission rates compared to CY 2013 base year rates will receive a positive adjustment of one percent of their inpatient revenue. Hospitals with a 6.50 percent or larger increase in their readmission rates will receive a negative adjustment of two percent of their inpatient revenue. Hospitals with performance between these two points will receive rewards and penalties based on their performance proportionate with the improvement target. For example, a hospital with 19.8 percent decline (improvement) would receive 0.5 percent positive adjustment.

Attainment

A similar point scale is created to calculate rewards and penalties based on attainment rates, illustrated in Figure 2. Hospitals with a CY 2017 Readmission Rate of 9.83 percent or lower will receive a positive adjustment of 1 percent inpatient revenue. Hospitals with a 12.83 percent or larger increase in their readmission rates will receive a negative adjustment of two percent of their inpatient revenue

The final adjustment amounts are determined by the better of attainment or improvement (Column C in both Figures).

Figure 1. Abbreviated RY 2019 Improvement Scale

Improvement Target: CY 2013 – CY 2017 Change = **-14.50%**

All Payer Readmission Rate Change CY13-CY17	Over/Under Target	RRIP % Inpatient Revenue Payment Adjustment
A	B	C
LOWER		1.0%
-25.0%	-10.5%	1.0%
-19.8%	-5.3%	0.5%
-14.5%	0.0%	0.0%
-9.2%	5.3%	-0.5%
-4.0%	10.5%	-1.0%
1.3%	15.8%	-1.5%
6.5%	21.0%	-2.0%
HIGHER		-2.0%

Figure 2. Abbreviated RY 2019 Attainment Scale

Attainment Target: CY 2017 = **10.83%**

All Payer Readmission Rate CY17	Over/Above Target From Target	RRIP % Inpatient Revenue Payment Adjustment
A	B	C
LOWER		1.0%
9.83%	-1.0%	1.0%
10.33%	-0.5%	0.5%
10.83%	0.0%	0.0%
11.33%	0.5%	-0.5%
11.83%	1.0%	-1.0%
12.33%	1.5%	-1.5%
12.83%	2.0%	-2.0%
Higher		-2.0%

Appendix B: HSCRC RY 2019 Readmissions Measure Specifications

1) Performance Metric

The methodology for the Readmissions Reduction Incentive Program (RRIP) measures performance using the 30-day all-payer all hospital (both intra and inter hospital) readmission rate with adjustments for patient severity (based upon discharge all-patient refined diagnosis-related group severity of illness [APR-DRG SOI]) and planned admissions. Unique patient identifiers from CRISP are used to be able to track patients across hospitals for readmissions.

The measure is similar to the readmission rate that will be calculated for the new All-Payer Model with some exceptions. The most notable exceptions are that the HSCRC measure includes psychiatric patients and currently excludes oncology admissions (due to concerns with how the planned admission logic handles these discharges). In comparing Maryland's Medicare readmission rate to the national readmission rate, the Centers for Medicare & Medicaid Services (CMS) will calculate an unadjusted readmission rate for Medicare beneficiaries. Since the Health Services Cost Review Commission (HSCRC) measure is for hospital-specific payment purposes, adjustments had to be made to the metric that accounted for case-mix. See below for details on the readmission calculation for the RRIP program.

2) Adjustments to Readmission Measurement

- Planned readmissions are excluded from the numerator based upon the CMS Planned Readmission Algorithm V. 4.0. The HSCRC has also added all vaginal and C-section deliveries and rehabilitation as planned using the APR-DRGs rather than principal diagnosis (APR-DRGs 540, 541, 542, 560, 860). Planned admissions are counted in the denominator because they could have an unplanned readmission.
- APR-DRG-SOI categories with less than two discharges statewide are removed.
- Discharges for newborn APR-DRG are removed due to CRISP EID concerns for newborns.
- Oncology cases are removed prior to running readmission logic (APR-DRGs 41, 110, 136, 240, 281, 343, 382, 442, 461, 500, 511, 512, 530, 680, 681, 690, 691, 692, 693 (prior to version 34), 694, 695 (new version 34), and 696 (new version 34)).
- Rehabilitation cases as identified by APR-860 (which are coded under ICD-10 based on type of daily service = 8 [Rehab]) are marked as planned admissions and made ineligible for readmission after readmission logic is run.
- Admissions with ungroupable APR-DRGs (955, 956) are not eligible to serve as an admission for a future readmission but can be a readmission for a previous admission.
- Hospitalizations within 30 days of a hospital discharge where a patient dies is counted as a readmission; however, the readmission is removed from the denominator because there cannot be a subsequent readmission.
- Admissions that result in transfers, defined as cases where the discharge date of the admission is on the same or next day as the admission date of the subsequent admission, are removed. Thus when there is a transfer, only one admission is counted in the denominator, and that is the admission to the transfer hospital. It is this discharge date that is used to calculate the 30-day readmission window.
- Discharges from rehabilitation hospitals (provider IDs Chesapeake Rehab 213028,

- Adventist Rehab 213029, and Bowie Health 210333) are removed.
- Holy Cross Germantown 210065 (one-year improvement and attainment) and Levindale 210064 are included in the program.
- Starting Jan 2016, HSCRC is receiving information about discharges from chronic beds within acute care hospitals with the same data submissions. These discharges were excluded from RRIP for RY 2018 improvement **but are included in CY 2016 and CY 2017 data run under version 34.**
- In addition, the following data cleaning edits are applied:
 - Cases with null or missing Chesapeake Regional Information System for our Patients (CRISP) unique patient identifiers (EIDs) are removed.
 - Duplicates are removed.
 - Negative interval days are removed.
 - HSCRC staff is continuing to improve its case-mix data edits to prevent submission of duplicates and negative intervals, which are very rare. In addition, CRISP EID matching benchmarks are monitored on a monthly basis. Currently, hospitals are required to make sure 99.5 percent of inpatient discharges have a CRISP EID.

3) Details on the Calculation of Case-Mix Adjusted Readmission Rate

Data Source:

To calculate readmission rates for RRIP, inpatient abstract/case-mix data with CRISP EIDs (so that patients can be tracked across hospitals) are used for the measurement period, plus an additional 30 days. To calculate the case-mix adjusted readmission rate for CY 2016 base period and CY 2017 performance period, data from January 1 through December 31, plus 30 days in January of the next year are used.

SOFTWARE: APR-DRG Version 34 (ICD-10) for CY 2016-CY 2017. The RY 2018 improvement was calculated using APR-DRG Version 32 (CY 2013) and Version 33 (CY 2016).

Calculation:

$$\text{Case-Mix Adjusted Readmission Rate} = \frac{\text{(Observed Readmissions)}}{\text{(Expected Readmissions)}} * \text{Statewide Base Year Readmission Rate}$$

Numerator: Number of observed hospital-specific unplanned readmissions.

Denominator: Number of expected hospital specific unplanned readmissions based upon discharge APR-DRG and Severity of Illness. See below for how to calculate expected readmissions adjusted for APR-DRG SOI.

Risk Adjustment Calculation:

- Calculate the Statewide Readmission Rate without Planned Readmissions.
 - Statewide Readmission Rate = Total number of readmissions with exclusions removed / Total number of hospital discharges with exclusions removed.
- For each hospital, calculate the number of observed, unplanned readmissions.
- For each hospital, calculate the number of expected unplanned readmissions based upon discharge APR-DRG SOI (see below for description). For each hospital, cases are removed if the discharge APR-DRG and SOI cells have less than two total cases in the base period data.
- Calculate the ratio of observed (O) readmissions over expected (E) readmissions. A ratio of > 1 means that there were more observed readmissions than expected, based upon a hospital's case-mix. A ratio of < 1 means that there were fewer observed readmissions than expected based upon a hospital's case-mix.
- Multiply the O/E ratio by the base year statewide rate to get case-mix adjusted readmission rate by hospital.

Expected Values:

The expected value of readmissions is the number of readmissions a hospital would have experienced had its rate of readmissions been identical to that experienced by a reference or normative set of hospitals, given its mix of patients as defined by discharge APR-DRG category and SOI level. Currently, HSCRC is using state average rates as the benchmark.

The technique by which the expected number of readmissions is calculated is called indirect standardization. For illustrative purposes, assume that every discharge can meet the criteria for having a readmission, a condition called being "eligible" for a readmission. All discharges will either have zero readmissions or will have one readmission. The readmission rate is the proportion or percentage of admissions that have a readmission.

The rates of readmissions in the normative database are calculated for each APR-DRG category and its SOI levels by dividing the observed number of readmissions by the total number of eligible discharges. The readmission norm for a single APR-DRG SOI level is calculated as follows:

Let:

N = norm

P = Number of discharges with a readmission

D = Number of eligible discharges

i = An APR DRG category and a single SOI level

$$N_i = \frac{P_i}{D_i}$$

For this example, the expected rate is displayed as readmissions per discharge to facilitate the

calculations in the example. Most reports will display the expected rate as a rate per one thousand.

Once a set of norms has been calculated, the norms can be applied to each hospital's APR-DRG SOI distribution. In this example, the computation presents expected readmission rates for an individual APR-DRG category and its SOI levels. This computation could be expanded to include multiple APR-DRG categories or any other subset of data, by simply expanding the summations.

Consider the following example for an individual APR-DRG category.

Expected Value Computation Example

1 Severity of Illness Level	2 Eligible Discharges	3 Discharges with Readmission	4 Readmissions per Discharge	5 Normative Readmissions per Discharge	6 Expected # of Readmissions
1	200	10	.05	.07	14.0
2	150	15	.10	.10	15.0
3	100	10	.10	.15	15.0
4	50	10	.20	.25	12.5
Total	500	45	.09		56.5

For the APR-DRG category, the number of discharges with a readmission is 45, which is the sum of discharges with readmissions (column 3). The overall rate of readmissions per discharge, 0.09, is calculated by dividing the total number of discharges with a readmission (sum of column 3) by the total number of eligible discharges (sum of column 2), i.e., $0.09 = 45/500$. From the normative population, the proportion of discharges with readmissions for each SOI level for that APR-DRG category is displayed in column 5. The expected number of readmissions for each SOI level shown in column 6 is calculated by multiplying the number of eligible discharges (column 2) by the normative readmissions per discharge rate (column 5). The total number of readmissions expected for this APR-DRG category is the sum of the expected numbers of readmissions for the 4 SOI levels.

In this example, the expected number of readmissions for this APR-DRG category is 56.5, compared to the actual number of discharges with readmissions of 45. Thus, the hospital had 11.5 fewer actual discharges with readmissions than were expected for this APR-DRG category. This difference can also be expressed as a percentage or the O/E ratio.