

To: Hospital Chief Financial Officers
CC: Case Mix Liaisons, Hospital Quality Contacts
From: HSCRC Quality Team
Date: May 23, 2025
Re: Readmission Reduction Incentive Program (RRIP) Policy for
Rate Year (RY) 2027

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In April 2025, the Commission approved the Rate Year (RY) 2027 Readmission Reduction Incentive Program (RRIP). This memo summarizes the key elements of the RY 2027 program.

Approved Recommendations

The RRIP policy was updated in RY 2027 to further the improvements in readmissions experienced during the first five years of the Total Cost of Care Model. The RY 2027 final recommendations maintain the measure updates and methodology determinations that were developed and approved for RY 2022.¹

These are the final recommendations for the RY 2027 RRIP policy:

1. Maintain the all-payer, 30-day, all-cause readmission measure.
2. Improvement Target - Maintain the statewide 4-year improvement target of -5.0 percent through 2026 with a blended base period of CY 2022 and CY 2023.
3. Retroactively apply a blended base period of CY 2022 and CY 2023 to the RY 2026 policy.

¹ See the [RY 2022 policy](#) for detailed discussion of the RRIP redesign, rationale for decisions, and approved recommendations.

4. Attainment Target - Maintain the attainment target whereby hospitals at or better than the 65th percentile of statewide performance receive scaled rewards for maintaining low readmission rates.
5. Maintain maximum rewards and penalties at 2 percent of inpatient revenue.
6. Provide additional payment incentive (up to 0.50 percent of inpatient revenue) for reductions in within-hospital readmission disparities. Scale rewards:
 - a. beginning at 0.25 percent of IP revenue for hospitals on pace for 50 percent reduction in disparity gap measure over 8 years, and;
 - b. capped at 0.50 percent of IP revenue for hospitals on pace for 75 percent or larger reduction in disparity gap measure over 8 years.
7. Monitor emergency department and observation revisits by adjusting readmission measure and through the all-payer Excess Days in Acute Care measure. Consider future inclusion of ED and/or observation stay revisits in the RRIP measure.
8. Update the RRIP policy in future years to align with statewide AHEAD model goals for readmissions.

The final, approved RRIP policy can be found on the HSCRC quality website:

[RY 2027 Readmission Reduction Incentive Program.](#)

Readmission Measurement

For the RRIP methodology, performance is measured using the 30-day, all-payer, all-cause readmission rate (both within and between hospitals in Maryland) with case-mix adjustments for patient severity (based upon discharge diagnosis and severity of illness (SOI)) and with exclusions granted for planned readmissions.²

² The CMS Planned Readmission logic under Version 4.0 2022 is currently used.

Readmissions to specialty hospitals in Maryland are also included.³ See Appendix A for additional details on the HSCRC readmission measure specifications.

Measuring the Better of Attainment or Improvement

Using the readmission measure that was approved by the Commission, the improvement and attainment targets for CY 2025 performance are as follows:

1. Set the all-payer case-mix adjusted readmission rate improvement target at 3.78 percent for CY 2022/23 to CY 2025, to align with the four-year statewide improvement goal of 5 percent.
2. Set the attainment performance standards for CY 2025 to reward hospitals performing better than the 65th percentile. The calculation is as follows:
 - a. Use CY 2022/23 hospital performance results adjusted for out-of-state readmissions and the 3.78 percent improvement factor.
 - b. Calculate reward threshold to begin at the 65th percentile (RY 2027 Threshold = 11.25%)
 - c. Calculate the benchmark for the full attainment reward at the 95th percentile (RY 2027 = 8.83%).

Based on the better of attainment or improvement, the Commission approved scaled penalties of up to 2% and scaled rewards of up to 2% of inpatient revenue. These penalties and rewards are not revenue neutral.⁴

³ The specialty hospitals at this time are: 210089- Adventist Rehabilitation at White Oak; 213028- Chesapeake Rehab; 213029- Adventist Rehabilitation of Maryland; 213030- Encompass Health Rehabilitation Hospital of Southern Maryland; 213300- Mt Washington Pediatric Hospital; 214000- Sheppard Pratt; 214003- Brook Lane; 214004- Springfield Hospital Center; 214012- Thomas B. Finan Center; 214013- Adventist Behavioral Health- Rockville; 214020- McNew Family Medical Center

⁴ Across all quality programs, there is a hospital maximum penalty guardrail of 3.54% of total revenue for RY 2027. The maximum guardrail policy will be calculated in accordance with the following formula, per the "Final Maximum Revenue Guardrail for Maryland Hospital Quality Programs" during the November 2019 Commission Meeting - Percent of Medicare revenue at-risk for quality multiplied by the percent of Maryland revenue attributable to inpatient services.

Within-Hospital Disparity Measurement Using Patient Adversity Index (PAI)

The RY 2027 policy continues incentives for hospitals to reduce socioeconomic disparities in readmission rates. To be eligible for the incentive, which is calculated using the steps described below, hospitals must not have an increase in their overall case-mix adjusted readmission rate. Also extended from RY 2026, hospitals must submit details on interventions aimed at reducing disparities to qualify for the reward via the Population Health Inventory.

We assess patient socioeconomic exposure with the Patient Adversity Index (PAI), a measure developed by the HSCRC. The PAI is calculated for each discharge record. It relies on the patient's Medicaid status, race, and Area Deprivation Index score from the inpatient case-mix data. Each of the three items is given a weight that reflects the strength of its association with readmissions. The PAI score for each discharge is then calculated by summing the applicable weights for each factor based on the patient's characteristics.

Once we have calculated the PAI score for each discharge, we calculate the gap measure for each hospital in the base and performance period. The gap measure is a reflection of how readmission risk within a hospital changes for patients with varying levels of PAI. The measure relies on a statistical model (specifically, a random-slope Poisson regression model) that estimates the change in readmission rate for a one-unit change in PAI at each hospital, after controlling for patient age, APR-DRG, gender, and the mean PAI value for the hospital.

The change in the gap measure for the base and the performance period is then used to calculate revenue adjustments for each hospital. Hospital rewards are based on progress toward a goal of reducing disparities by at least 50% over the eight year TCOC model. Additional information in the disparity gap metric can be found in the RRIP policy and in a recent online webinar that is posted on the quality webpage.

Grouper Versions

For RY 2027, the data for CY 2025 (performance period) will be run using version 42 of the APR grouper. The base period for assessing hospital improvement will be CY 2022 and CY 2023 and is also run under version 42 of the grouper; the two-year base period will be used to calculate the normative values for determining the hospital expected readmissions used to case-mix adjust hospital performance.

RRIP Program Reporting

The HSCRC provides hospitals with monthly summary reports and detail-level files for monitoring readmissions during the performance period. A separate summary level report on the disparity gap is also available; the detail-level reports contain the variables that make up the PAI measure (i.e., Medicaid status, race, ADI) so that hospitals can track readmissions for these populations.

Summary reports and detail-level data for the RRIP program are available 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). In addition, an interactive Tableau report is available on the portal that allows users to stratify hospitals' readmission trends - by service line, by PAI component, and by other summary and detail-level data elements. To understand the implications of a hospital's performance on their revenue, the CRS portal also hosts the Quality Financial Impact Dashboard (QFID) which is a tableau dashboard that provides hospitals with estimates of their quality revenue adjustments based on their current performance.

For RY 2027, the CRS Portal provides a readmissions summary workbook that contains: a) the normative values; b) full base period CY 2022/23 readmission results under v42 (may vary over time; see Appendix B for details); c) CY 2022/23 to CY 2025 year-to-date performance overall and by payer; and d) the readmission rate adjusted for out-of-state readmissions (updated quarterly), which is used for attainment. The summary report also contains a revenue adjustment calculation sheet and the improvement and attainment revenue adjustment scales. A separate disparity gap summary report is also posted, which contains a tab with the calculated disparity gap and change over time, as well as tabs providing the readmission rate by the PAI components (e.g., for Medicaid and non-Medicaid).

If you have any questions, please e-mail hsrcr.quality@maryland.gov.

Appendix A: HSCRC RY 2027 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.⁵ 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 is calculated by CMMI to track Maryland performance versus the nation, with some exceptions. The most notable exceptions are that the HSCRC measure includes all-payers, psychiatric patients in acute care hospitals, and readmissions that occur at specialty hospitals. 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, an additional adjustment is made to account for differences in case-mix. See below for details on the readmission calculation for the RRIP program.

2. Inclusions and Exclusions in 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.⁶ Planned admissions are counted as eligible discharges in the denominator, because they could have an unplanned readmission.
- Discharges for newborn APR-DRG are removed.⁷
- Exclude bone marrow transplants and liquid tumor patients by making these discharges not eligible to have an unplanned readmission or count as an unplanned readmission⁸

⁵ Planned admissions defined under [CMS Planned Admission Logic version 4.0 2022]

⁶ **Rehab DRGs:** 860; **OB Deliveries and Associated DRGs:** 540, 541, 542, 560, 539

⁷ **Newborn APR-DRGs:** 580, 581, 583, 588, 589, 591, 593, 602, 603, 607, 608, 609, 611, 612, 613, 614, 621, 622, 623, 625, 626, 630, 631, 633, 634, 636, 639, 640, and 863.

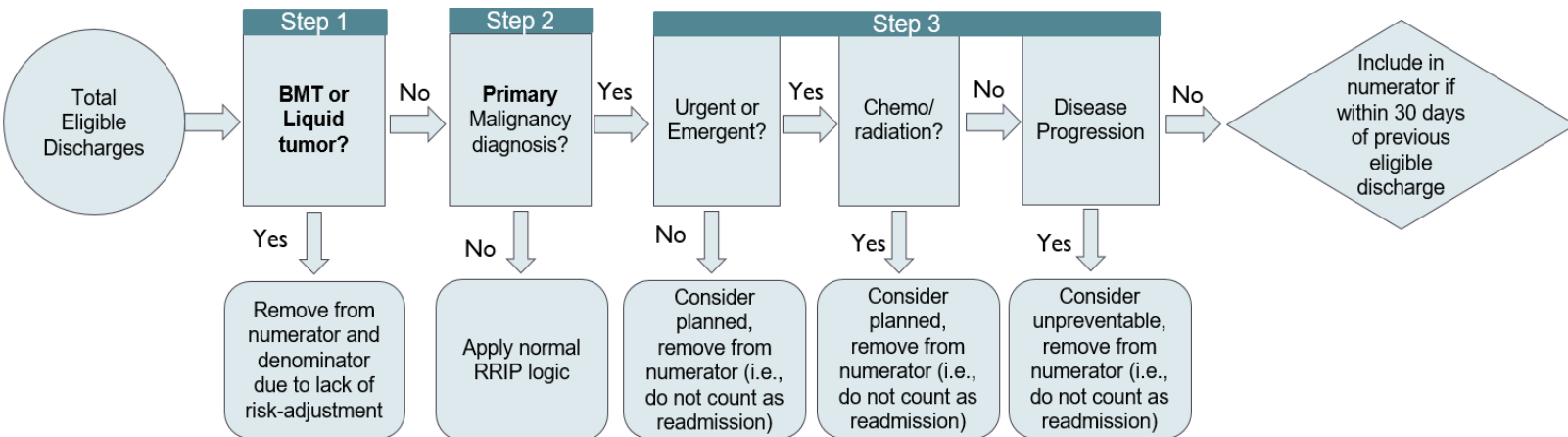
⁸ **Bone marrow transplant:** Diagnosis code Z94.81 or CCS procedure code 64; **Liquid Tumor:** Diagnosis codes C81.00-C96.0. See section below for additional details on the oncology logic.

- Pediatric oncology cases are removed prior to running readmission logic.⁹
- Rehabilitation cases as identified by APR-860 (which are coded under ICD-10 based on type of daily service) 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 for a readmission, but can be a readmission for a previous admission.
- Exclude from the denominator patients with a discharge disposition of Left Against Medical Advice (PAT_DISP = 71, 72, or 73 through FY 2018; 07 FY 2019 onward)
- APR-DRG-SOI categories with less than two discharges statewide are removed.
- 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 the case is not eligible for 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 from the denominator. Thus, only one admission is counted in the denominator, and that is the admission to the transfer hospital (unless otherwise ineligible, i.e., died). It is the second discharge date from the admission to the transfer hospital that is used to calculate the 30-day readmission window.
- Beginning in RY 2019, HSCRC started including information about discharges from chronic beds within acute care hospitals.
- In addition, the following data cleaning edits are applied:
 - Cases with null or missing CRISP unique patient identifiers (EIDs) are removed.
 - Duplicates are removed.
 - Negative interval days are removed.

HSCRC staff is revising case-mix data edits to prevent submission of duplicates and negative intervals, which are very rare. In addition, CRISP EID matching benchmarks are closely monitored. Currently, hospitals are required to make sure 99.5 percent of inpatient discharges have a CRISP EID.

⁹ **Oncology DRGs (for which only pediatric cases are removed):** 41, 110, 136, 240, 281, 343, 382, 442, 461, 500, 511, 512, 530, 680, 681, 690, 691, 692, 693, 694, 695, and 696

Additional Details on Oncology Logic:



*Items that are **bolded** are adaptations from NQF measure

Step 1: Exclude discharges where patients have a bone marrow transplant procedure, bone marrow transplant related diagnosis code, or liquid tumor diagnosis. This logic varies from the NQF cancer hospital measure which risk-adjusts for bone marrow transplant and liquid tumors.

Step 2: Flag discharges with a primary malignancy diagnosis to apply cancer specific logic for determining readmissions. This varies from the NQF cancer hospital measure that flags patients with primary or secondary malignancy diagnosis being treated in a cancer specific hospital.

Step 3: Flag planned admission using additional criteria beyond the CMS planned admission logic:

- Nature of admission of urgent or emergent considered unplanned, all other nature of admission statuses are planned
- Any admission with primary diagnosis of chemotherapy or radiation is considered planned
- Any admission with primary diagnosis of metastatic cancer is not considered preventable, and thus gets excluded from being a readmissions

In Step 3, admission are deemed not eligible to be a readmission but they are eligible to have a subsequent unplanned readmission

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, with an additional 30 day runout. To calculate the case-mix adjusted readmission rate for CY 2022 base period and CY 2024 performance period, data from January 1 through December 31, plus 30 days in January of the next year are used. CY 2022 data are used to calculate the normative values, which are used to determine a hospital's expected readmissions, as detailed below, as well as the estimated CY 2022 readmission rates.

Please note that, beginning in RY 2020, the base year readmission rates will not be "locked in", and may change if there are CRISP EID or other data updates. The HSCRC does not anticipate that any EID updates will change the base period data significantly; however, the HSCRC has decided the most up-to-date data should be used to measure improvement. As with previous performance periods, the CRISP EIDs are updated throughout the year, and thus, month-to-month results may change based on changes in EIDs.

SOFTWARE: APR-DRG Version 42 for CY 2022/23-CY 2025.

Calculation:

Case-Mix Adjusted Readmission Rate= (Observed Readmissions) / (Expected Readmissions) * 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, enumerate the number of observed, unplanned readmissions.
- For each hospital, calculate the number of expected unplanned readmissions at the APR-DRG SOI level (see Expected Values 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 at the hospital level 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, which is used to get the case-mix adjusted readmission rate by hospital. Multiplying the O/E ratio by the base year state rate converts it into a readmission rate that can be compared to unadjusted rates and case-mix adjusted rates over time.

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 are applied to each hospital's DRG and SOI distribution. In the example below, the computation presents expected readmission rates for a single diagnosis category and its four severity levels. This computation could be expanded to include multiple diagnosis categories, by simply expanding the summations.

Consider the following example for a single diagnosis category.

Expected Value Computation Example – Individual APR-DRG

A Severity of Illness Level	B Eligible Discharges	C Discharges with Readmission	D Readmissions per Discharge (C/B)	E Normative Readmissions per Discharge	F Expected # of Readmissions (A*E)
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

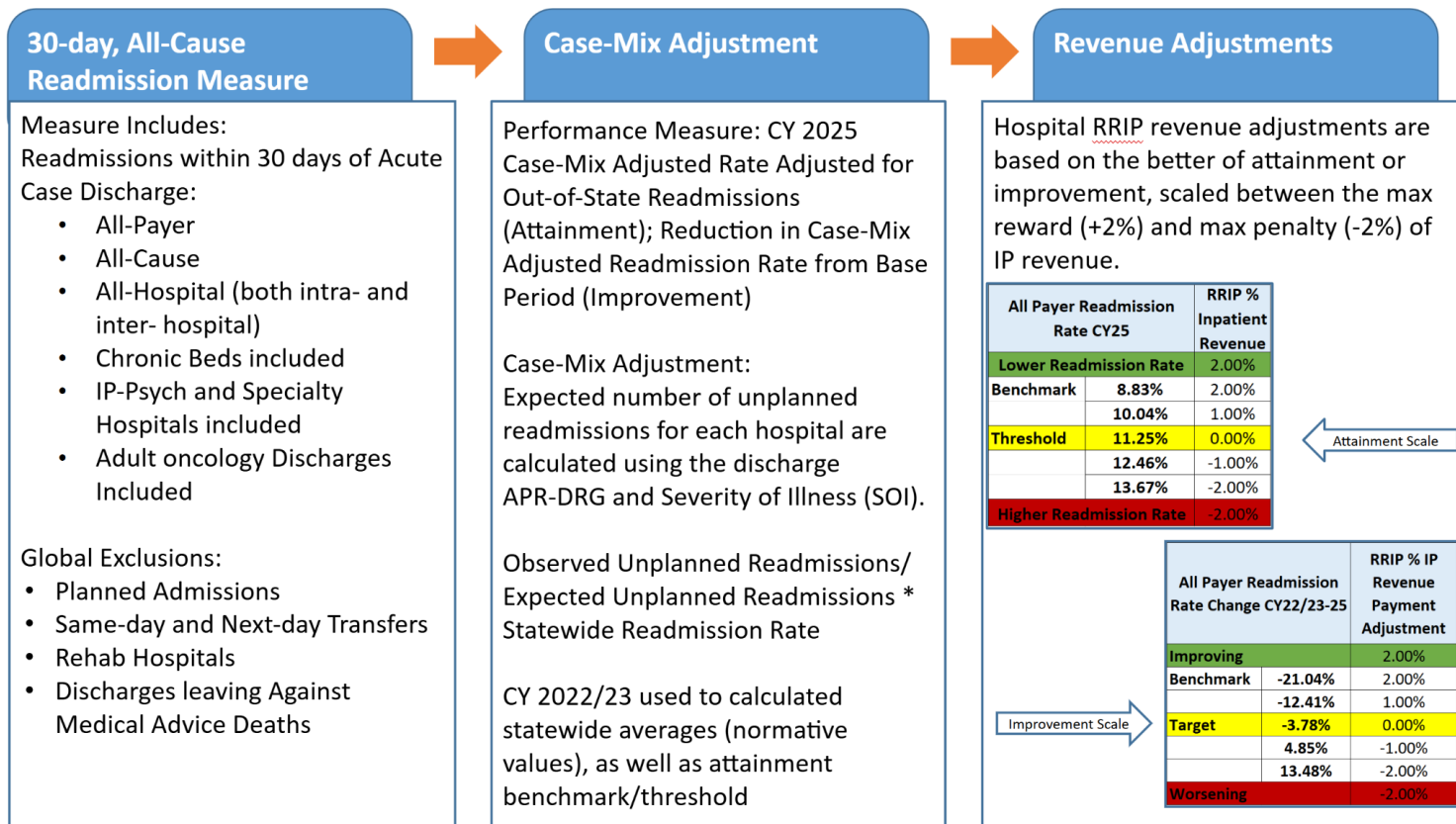
For the diagnosis category, the number of discharges with a readmission is 45, which is the sum of discharges with readmissions (column C). The overall rate of readmissions per discharge, 0.09, is calculated by dividing the total number of eligible discharges with a readmission (sum of column C) by the total number of discharges at risk for readmission (sum of column B), i.e., $0.09 = 45/500$. From the normative population, the proportion of discharges with readmissions for each severity level for that diagnosis category is displayed in column E. The expected number of readmissions for each severity level shown in column F is calculated by multiplying the number of eligible discharges (column B) by the normative readmissions per discharge rate (column E). The total number of readmissions expected for this diagnosis category is the sum of the expected numbers of readmissions for the 4 severity levels.

In this example, the expected number of readmissions for this diagnosis 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 diagnosis category. This difference can also be expressed as a percentage or the O/E ratio.

4. Revenue Adjustment Methodology

The RRIP assesses improvement in readmission rates from base period, and attainment rates for the performance period with an adjustment for out-of-state readmissions. The policy then determines a hospital's revenue adjustment for improvement and attainment and takes the better of the two revenue adjustments, with scaled rewards and penalties of up to 2 percent of inpatient revenue. The figure below provides a high level overview of the RY 2027 RRIP methodology for reference.

Overview of Rate Year 2027 RRIP Methodology



Appendix B: HSCRC RY 2027 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; readmission rates used to calculate attainment adjustment are further adjusted for proportion of out-of-state readmissions.

Improvement

Per Figure 1 below, hospitals with a 21.04 percent or larger decline (improvement) in CY 2025 readmission rates compared to CY 2022/23 base year rates will receive a positive adjustment of two percent of their inpatient revenue. Hospitals with a 13.48 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 a 12.41 percent decline (improvement) would receive a one percent positive adjustment.

Attainment

A similar point scale is created to calculate rewards and penalties based on attainment rates, as illustrated in Figure 2. Hospitals will begin receiving attainment rewards with a CY 2025 readmission rate of 11.25 percent or lower. Hospitals with a CY 2025 readmission rate of 8.83 percent or lower will receive a positive adjustment of 2 percent of their inpatient revenue. Hospitals with a rate of 13.67 percent or greater 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.

Figure 1. Abbreviated RY 2027 Improvement Scale
Improvement Target CY 2022/23-CY 2025: **-3.78%**

All Payer Readmission Rate Change CY22/23-25		RRIP % IP Revenue Payment Adjustment
Improving		2.00%
Benchmark	-21.04%	2.00%
	-12.41%	1.00%
Target	-3.78%	0.00%
	4.85%	-1.00%
	13.48%	-2.00%
Worsening		-2.00%

Figure 2. Abbreviated RY 2027 Attainment Scale
Attainment Target CY 2025: **11.25%**

All Payer Readmission Rate CY25		RRIP % Inpatient Revenue
Lower Readmission Rate		2.00%
Benchmark	8.83%	2.00%
	10.04%	1.00%
Threshold	11.25%	0.00%
	12.46%	-1.00%
	13.67%	-2.00%
Higher Readmission Rate		-2.00%