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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 30, 2016

Re: Readmissions Reduction Incentive Program (RRIP) Policy for Rate Year (RY) 2018 and RY 2017 Updates

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This memo summarizes the changes to the Readmission Reduction Incentive Program (RRIP) that will impact hospital rates in RY2018 as approved by the Commission on June 8, 2016. The Commission approved that the RY 2018 methodology would also be applied to RY 2017 (with previously approved RY 2017 improvement target of 9.3%). The updated RRIP methodology measures hospital performance based on the better of attainment or improvement. The final approved RRIP recommendation can be found on the HSCRC website (http://hscrc.maryland.gov/documents/commission-meeting/2016/06-08/HSCRC-Post-Meeting-Packet-2016-06-08.pdf)

1. Measuring the Better of Attainment or Improvement

The RRIP was modified to assess hospital performance based on the better of attainment or improvement due to concerns about hospitals with low readmission rates having less opportunity for improvement. Based on the assessment of several issues, the following program updates were approved to measure attainment and improvement reliably across hospitals (details contained in recommendation):

1) Hospital readmission rates should be adjusted for out-of-state readmissions for all payers based on a factor developed using Medicare data.

2) The hospital attainment benchmark should be set at the cutoff rate for the lowest 25th percentile, which would equal 11.85% for RY 2018 and 12.09% for RY 2017.

3) The reduction target should be set at 9.50 percent for CY 2016 performance period compared to CY 2013 readmission rates. The reduction target will remain

at the originally approved 9.30 percent for CY 2015 performance period compared to CY 2013 readmission rates.

2. Scaling and Magnitude of Revenue At-Risk

For the RY 2018 RRIP, as part of the Aggregate Revenue Amount At-Risk recommendation, 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 RY2018 preset scales for rewards and penalties linked to improvement and attainment performance levels. In addition, the steps for calculating the penalties and rewards for attainment and improvement are provided. The percent change comparing CY 2013 to CY 2016 will be rounded to two decimal places for the payment incentive.

3. Readmission Algorithm Changes for Hospital Readmission Reduction Incentive Program for RY 2018

For the RRIP methodology, performance is measured using the 30-day all-payer all hospital (both within and between hospitals) 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. For RY2018, there were four changes made to the readmission measure:

1) Updated the transfer definition to add next day admissions to transfer counts (i.e., the first admission is counted as a transfer and is ineligible for readmission if the discharge date is the one day before the admission date). FY 2017 definition required transfers to be on the same day.
2) Suspended oncology discharges from the readmissions logic due to concerns that planned admission logic does not capture planned readmissions accurately for this service line.
3) Overrode the APR DRG grouper results for ensure all rehabilitation discharges are grouped under APR-DRG 860 and are ineligible for readmissions. After evaluating the options with the industry, HSCRC is using Type of Daily Service equal to 8 to recode APR DRG 860 and defines all these discharges as planned and ineligible for readmission. <u>This change was also made when the final results were run for RY 2017</u>.
4) Updated to the latest CMS Planned Admission Logic Version 4 (see Appendix B for changes).

In addition, Levindale and Holy Cross Germantown (attainment only) will be included in the RRIP for RY 2018. Figure 1 provides CY 2013 statewide readmission rates under the original RY 2017 and the revised RY 2018 methodology for comparison.

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1 Across all quality programs, the Commission approved a hospital maximum penalty guardrail of 3.5% of total revenue for RY2018.

See Appendix C for additional details on the HSCRC readmission measure specifications.

Figure 1: CY 2013 Readmission Rates

Rate Year Methodology	CY 2013 Unadjusted Readmission Rate
RY 2017	13.86%
RY 2018	12.93%

4. Measurement Periods and Grouper Versions

The base period for RY 2018 remains at CY 2013, which is run using version 32 of the APR grouper (ICD-9 compatible). The performance period is CY 2016, which is run using version 33 of the APR grouper (ICD-10 compatible).

5. Readmission Reduction Incentive Program Reporting

All summary reports and case level data for the RRIP program is 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 the specific quality programs and whether you need summary reports or case level data.

- Base Period: An Excel workbook with the updated CY 2013 base period rates, CY 2016 improvement goal, updated normative values for calculating expected readmissions, and a data dictionary for the case level files will be sent by email to all persons receiving this memo. We are currently validating the final CY 2013 readmission rates with CRISP and anticipate sending out this workbook by mid-July. Preliminary readmission rates under the RY 2018 methodology are provided in Appendix D.

- Performance Period: All summary reports and case level data will be made available to hospitals/health systems through the CRISP Reporting Services (CRS) portal and *not* distributed through Repliweb/email. By mid-July we will have the final revised logic validated and provide the most up-to-date data to hospitals. Preliminary readmission rates under the RY 2018 methodology are provided in Appendix D.

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

Appendix A: Readmission Payment Scale and Penalty/Reward Calculation Steps

RY 2018 RRIP Adjustments

The table below summarizes the scaling points for the improvement and attainment scales. All readmission rates used for the RRIP calculations are case-mix adjusted (this detail is omitted from the table headers).

Hospitals with a 20 percent or larger decline in CY 2016 readmission rates compared to CY 2013 base year rates will receive a positive adjustment of one percent of their inpatient revenue. Hospitals with a 10 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 10 percent decline would receive 0.05 percent positive adjustment. A similar point scale is created to calculate rewards and penalties based on attainment rates. Hospitals with CY 2015 Readmission Rate lower than 10.61 percent will receive a positive adjustment of 1 percent inpatient revenue.

The final adjustment amounts are determined by the better of attainment or improvement (Columns C vs Column F).

RY 2018 Scaling Points
Improvement Target: CY 13-CY16 Change =-9.50%
Attainment Benchmark: CY 2016 Readmission Rate=11.85%

Improvement Payment Scale		Attainment Payment Scale	
All-Payer Readmission Rate Change CY13-CY16	**RRIP % Inpatient Revenue Payment Adjustment**	**All Payer Readmission Rate CY16**	**RRIP % Inpatient Revenue Payment Adjustment**
A	**C**	**D**	**F**
Lower	1.00%	**Lower**	1.00%
-20.0%	1.00%	**10.61%**	1.00%
-18.0%	0.81%	**10.85%**	0.81%
-15.0%	0.52%	**11.20%**	0.52%
-10.0%	0.05%	**11.79%**	0.05%
-9.5%	0.00%	**11.85%**	0.00%
-9.0%	-0.05%	**11.91%**	-0.05%
5.0%	-1.49%	**13.57%**	-1.49%
9.0%	-1.90%	**14.05%**	-1.90%
10.0%	-2.00%	**14.16%**	-2.00%
Higher	-2.00%	**Higher**	-2.00%

Appendix B: Planned Readmission Logic Changes Version 3 versus Version 4

CMS updated their Planned Readmissions Algorithm effective CY2016.

FUNDAMENTAL PRINCIPLES
1. A few specific, limited types of care are always considered planned (transplant surgery, maintenance chemotherapy/immunotherapy, rehabilitation);
2. Otherwise, a planned readmission is defined as a non-acute readmission for a scheduled procedure; and,
3. Admissions for acute illness or for complications of care are never planned.

LOGIC
1. A procedure is performed that is in one of the procedure categories that are always planned regardless of diagnosis;
2. The principal diagnosis is in one of the diagnosis categories that are always planned; or,
3. A procedure is performed that is in one of the potentially planned procedure categories and the principal diagnosis is not in the list of acute discharge diagnoses.

UPDATES
- Removed 5 CCS Categories
  - AHRQ CCS 47 - Diagnostic cardiac catheterization; coronary arteriography
  - AHRQ CCS 48 - Insertion; revision; replacement; removal of cardiac pacemaker or cardioverter/defibrillator
  - AHRQ CCS 62 - Other diagnostic cardiovascular procedures
  - AHRQ CCS 157 - Amputation of lower extremity
  - AHRQ CCS 169 - Debridement of wound; infection or burn
- Added 1 CCS Category
  - AHRQ CCS 1 - Incision and excision of CNS

EXPECTED IMPACT

Table 3.2.2 – Effect of Planned Readmission Algorithm on HWR Measure (July 2013-June 2014)

	HWR with Planned Readmission Version 3.0	HWR with Planned Readmission Version 4.0
Number of Admissions	6,843,808	6,843,808
Number of Unplanned Readmissions	1,042,729	1,059,655
Unplanned Readmission Rate	15.2%	15.5%
Number of Planned Readmissions	75,436	58,510
Planned Readmission Rate	1.1%	0.9%
% of Readmissions that are Planned	6.7%	5.2%

Tables with additional detail and specific codes needed for programming are available using zip files on the CMS website.

Appendix C: HSCRC CURRENT 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 on discharge all-patient refined diagnosis-related group severity of illness [APR-DRG SOI]) and planned admissions.

The measure is very similar to the readmission rate that will be calculated for the new All-Payer Model with a few exceptions. For 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 planned admissions and SOI. See below for details on the readmission calculation for the program.

2) Adjustments to Readmission Measurement

The following discharges are removed from the numerator and/or denominator for the readmission rate calculations:

- 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.
- Discharges for newborn APR-DRG are removed.
- Oncology cases are removed prior to running readmission logic (APR-DRGs 41, 110, 136, 240, 281, 343, 382, 442, 461, 500, 511, 512, 530, 690, 691, 692, 693, 694, 680, 681).
- Rehabilitation cases as identified by APR-860 (which are coded after 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.
- 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 from the denominator counts. Thus, 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).
- Holy Cross Germantown (attainment only) and Levindale are included in the program; and
- Starting Jan 2016, HSCRC is receiving information about discharges from chronic beds within acute care hospitals with the same data submissions. These discharges are excluded from RRIP for this year.
- In addition, the following data cleaning edits are applied:
    - Cases with null or missing Chesapeake Regional Information System unique patient identifiers (CRISP 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 have 9905 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) is used for the measurement period plus an extra 30 days. To calculate case-mix adjusted readmission rate for CY 2013 base period and CY 2016 performance period, data from January 1 through December 31, plus 30 days in January of the next year will be used.

SOFTWARE: APR-DRG Version 32 (ICD-9) and Version 33 (ICD-10)

Calculation:

Risk-Adjusted   (Observed Readmissions)
Readmission Rate = ------------------------------------   X Statewide Readmission Rate
                         (Expected Readmissions)

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 (CY 2013).
- Calculate the ratio of observed (O) readmissions over expected (E) readmissions. A ratio of > 1 means there were more observed readmissions than expected based upon that hospital's case mix. A ratio < 1 means that there were fewer observed readmissions than expected based upon that hospital's case mix.
- Multiply O/E ratio by the statewide rate to get risk-adjusted readmission rate by hospital.

Expected Values:

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

The technique by which the expected value or 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 "at risk" for a readmission. All discharges will either have no 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 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 discharges that can potentially have a readmission
i = An APR DRG category and a single SOI level

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

For this example, this number is displayed as readmissions per discharge to facilitate the calculations in the example. Most reports will display this number as a rate per one thousand.

Once a set of norms has been calculated, they can be applied to each hospital. For this example, the computation is 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 Discharges at Risk for Readmission	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 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 discharges at risk for readmission (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 discharges at risk for a readmission (column 2) by the normative readmissions per discharge rate (column 5) The total number of readmissions expected for this APR-DRG category is the expected number of readmissions for the SOI.

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.

APR-DRGs by SOI categories are excluded from the computation of the actual and expected rates when there are only zero or one at risk admission statewide for the associated APR-DRG by SOI category.

Appendix D: Preliminary RY 2018 Case-Mix Adjusted Readmission Rates

Hospital ID	Hospital Name	Case-Mix Adjusted Readmission Rate			
		CY 2013	CY 2013 YTD (April)	CY 2016 YTD (April)	Percent Change
210023	Anne Arundel	12.10%	11.66%	10.26%	-11.99%
210061	Atlantic General	11.91%	12.27%	9.09%	-25.89%
210013	Bon Secours	19.10%	19.70%	13.90%	-29.43%
210039	Calvert	9.82%	10.42%	9.45%	-9.34%
210033	Carroll	12.18%	11.86%	11.14%	-6.06%
210051	Doctors	12.77%	12.59%	11.31%	-10.16%
210005	Frederick	10.60%	10.92%	9.51%	-12.91%
210060	Ft. Washington	13.06%	12.55%	10.14%	-19.19%
210017	Garrett	7.04%	7.01%	5.88%	-16.11%
210044	GBMC	11.19%	11.33%	10.09%	-10.96%
210065	HC-Germantown			9.18%	
210004	Holy Cross	11.32%	11.56%	11.78%	1.85%
210048	Howard County	11.80%	10.55%	10.55%	-0.04%
210029	JH Bayview	15.30%	15.14%	14.25%	-5.85%
210009	Johns Hopkins	14.68%	14.60%	12.86%	-11.93%
210055	Laurel Regional	13.89%	13.39%	11.39%	-14.93%
210064	Levindale	13.67%	12.34%	11.05%	-10.53%
210045	McCready	11.93%	11.69%	14.59%	24.80%
210015	MedStar Fr Square	12.94%	12.94%	11.77%	-9.07%
210056	MedStar Good Sam	14.45%	14.49%	11.94%	-17.59%
210034	MedStar Harbor	13.02%	12.42%	11.55%	-6.98%
210018	MedStar Montgomery	12.44%	12.00%	10.13%	-15.57%
210062	MedStar Southern MD	11.91%	11.78%	10.69%	-9.26%
210028	MedStar St. Mary's	12.69%	12.51%	10.38%	-17.02%
210024	MedStar Union Mem	14.35%	14.28%	11.90%	-16.68%
210008	Mercy	14.61%	14.25%	12.09%	-15.15%
210001	Meritus	11.83%	11.65%	10.78%	-7.47%
210040	Northwest	15.07%	14.99%	12.47%	-16.83%
210019	Peninsula	11.02%	10.69%	9.54%	-10.83%
210003	PG Hospital	10.67%	10.58%	9.67%	-8.55%
210057	Shady Grove	10.89%	11.61%	9.92%	-14.57%
210012	Sinai	14.27%	13.78%	12.05%	-12.55%
210011	St. Agnes	13.86%	13.35%	12.32%	-7.70%
210022	Suburban	11.14%	11.20%	10.76%	-3.93%
210043	UM-BWMC	14.15%	14.17%	12.59%	-11.15%

Hospital ID	Hospital Name	Case-Mix Adjusted Readmission Rate			
		CY 2013	CY 2013 YTD (April)	CY 2016 YTD (April)	Percent Change
210035	UM-Charles Regional	11.79%	11.26%	9.30%	-17.40%
210030	UM-Chestertown	13.20%	13.55%	13.88%	2.42%
210010	UM-Dorchester	11.37%	11.49%	9.69%	-15.67%
210037	UM-Easton	10.56%	10.21%	10.71%	4.87%
210006	UM-Harford	11.53%	12.05%	11.93%	-1.06%
210002	UMMC	14.38%	13.78%	12.74%	-7.57%
210038	UMMC Midtown	16.69%	16.40%	14.85%	-9.44%
210058	UMROI	7.70%	6.00%	7.27%	21.20%
210063	UM-St. Joe	11.76%	11.61%	10.49%	-9.62%
210049	UM-Upper Chesapeake	11.59%	11.26%	11.37%	0.99%
210032	Union of Cecil	9.80%	10.24%	10.80%	5.51%
210016	Washington Adventist	11.33%	11.78%	10.03%	-14.84%
210027	Western Maryland	12.41%	13.55%	10.55%	-22.11%