To: Hospital CFOs

Cc: Case Mix Liaisons, Hospital Quality Contacts

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

Date: April 2, 2015

Re: Readmissions Reduction Incentive Program Policies for Rate Year (RY) 2017

This memo summarizes the key components of the Readmission Reduction Incentive Program that will impact hospital rates in RY2017 as approved by the Commission on March 13, 2015. The Commission approved to measure the improvement cumulatively using CY2013 as the base period. The performance period for RY 2017 will be CY 2015. The Commission approved a cumulative improvement target of 9.3% for all hospitals for Calendar Year (CY) 2015 compared to CY 2013.

1. Scaling and Magnitude of Revenue At-Risk

The Commission also approved adding penalties in addition to the rewards to the program and making payment adjustments in proportion to the improvement rates using a predetermined values (continuous scaling with preset values).

The recommendations to add penalties and to use a preset scaling approach are new for RY 2017 and were implemented to strengthen the program incentives in response to concerns regarding the CY 2014 improvement. The final approved aggregate revenue amount at-risk policy for RY 2017 specifies a 2% of inpatient revenue scaled maximum penalty and up to 1% of inpatient revenue reward for hospitals that reduce readmission rates at or better than the minimum required improvement target. These rewards and penalties would not be revenue neutral.

Across all quality programs the Commission approved a hospital maximum penalty guardrail of 3.5% of total revenue for RY2017.

Appendix A contains the present scale of rewards and penalties for RY2017 for the readmission program for percentages rounded to a whole number. In addition, the exact formula for calculating the penalties and rewards is provided. The percent change comparing CY 2013 to CY 2015 will be rounded to two decimal places for the payment incentive.

2. Readmission Algorithm Changes for Hospital Readmission Reduction Incentive Program for RY 2017

The methodology for the readmission incentive program 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 APR-DRG SOI) and planned admissions. For RY2017, there were two changes made to the readmission measure:

- Removal of all newborn APR-DRG discharges from being eligible for a readmission.
- Updating to the latest CMS Planned Admission Logic (Version 3).

See Appendix B for additional details on the readmission calculation for the program.

3. Version

APR version 32 will be used for the RY 2017 program.

4. Readmission Reduction Incentive Program Reporting

- Base Period: An Excel workbook with the CY 2013 base period rates, CY 2015 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 being able to send out this workbook within a week.

- 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. A memo explaining this process and requesting updated contacts for receiving the readmission reports was recently sent out to all CFOs.

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 Formulas

All Payer Readmission Rate Change CY13-CY15	Over/Above Target From Target	RRIP % Inpatient Revenue Payment Adjustment
A	B	C
LOWER		1.00%
-18.0%	-8.7%	1.00%
-17.0%	-7.7%	0.89%
-16.0%	-6.7%	0.77%
-15.0%	-5.7%	0.66%
-14.0%	-4.7%	0.54%
-13.0%	-3.7%	0.43%
-12.0%	-2.7%	0.31%
-11.0%	-1.7%	0.20%
-10.0%	-0.7%	0.08%
-9.0%	0.3%	-0.03%
-8.0%	1.3%	-0.15%
-7.0%	2.3%	-0.26%
-6.0%	3.3%	-0.38%
-5.0%	4.3%	-0.49%
-4.0%	5.3%	-0.61%
-3.0%	6.3%	-0.72%
-2.0%	7.3%	-0.84%
-1.0%	8.3%	-0.95%
0.0%	9.3%	-1.07%
1.0%	10.3%	-1.18%
2.0%	11.3%	-1.30%
3.0%	12.3%	-1.41%
4.0%	13.3%	-1.53%
5.0%	14.3%	-1.64%
6.0%	15.3%	-1.76%
7.0%	16.3%	-1.87%
8.0%	17.3%	-1.99%
9.0%	18.3%	-2.00%
Higher		-2.00%

Formula:

Penalty/Reward =
(Hospital Readmission Change – Minimum Improvement Target of 9.3%) * (Maximum Reward of 1% / (Improvement Rate of Max Reward of -18% - *Minimum Improvement Target of 9.3%))*

Example1:
Hospital has a 13.52% reduction in risk-adjusted readmissions in CY15 compared to CY13. There reward would be 0.49%.

$$(-13.52\% – -9.3\%) * (1\% / (-18\% - -9.3\%)) = 0.49\%$$

Example 2:
Hospital has a 7.65% reduction in risk-adjusted readmissions in CY15 compared to CY13. There penalty would be -0.19%.

$$(-7.65\% – -9.3\%) * (1\% / (-18\% - -9.3\%)) = -0.19\%$$

Appendix C: Hospital Readmission Reduction Incentive Program Calculation

Data Source:
To calculate readmission rates for the Hospital Readmission Reduction Incentive Program, the 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 the risk-adjusted readmission rate for the CY2013 base period and the CY2015 performance period, data from January 1 through December 31, plus 30 days in January of the next year would be used.

SOFTWARE: APR-DRG Version 32

Calculation:

$$\text{Risk-Adjusted Readmission Rate} = \frac{(\text{Observed Readmissions})}{(\text{Expected Readmissions})} \times \text{Statewide Readmission Rate}$$

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 and Severity of Illness (see below for description). For each hospital, cases are removed if the discharge APR-DRGs and Severity of Illness cell has less than 2 total cases in the base period data (CY2013).
- Calculate ratio of observed (O) readmissions over expected (E) readmissions. A ratio of > 1 means that 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 severity of illness 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 proportion or percent of admissions which have a readmission.

The rates of readmissions in the normative database are calculated for each APR DRG category and its severity of illness levels by dividing the observed number of readmissions by the total number of discharges. The readmission norm for a single APR DRG severity of illness 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 severity of illness 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 severity of illness 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.

Table 1 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 readmission (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 = 44/500. From the normative population, the proportion of discharges with readmissions for each severity of illness level for that APR DRG category is displayed in column 5. The expected number of readmissions for each severity of illness 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 severity of illness 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 be expressed as a percentage difference as well.

APR DRG 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.