Performance Measurement Work Group Meeting

02/21/2018

HSCRC
Health Services Cost Review Commission

Agenda

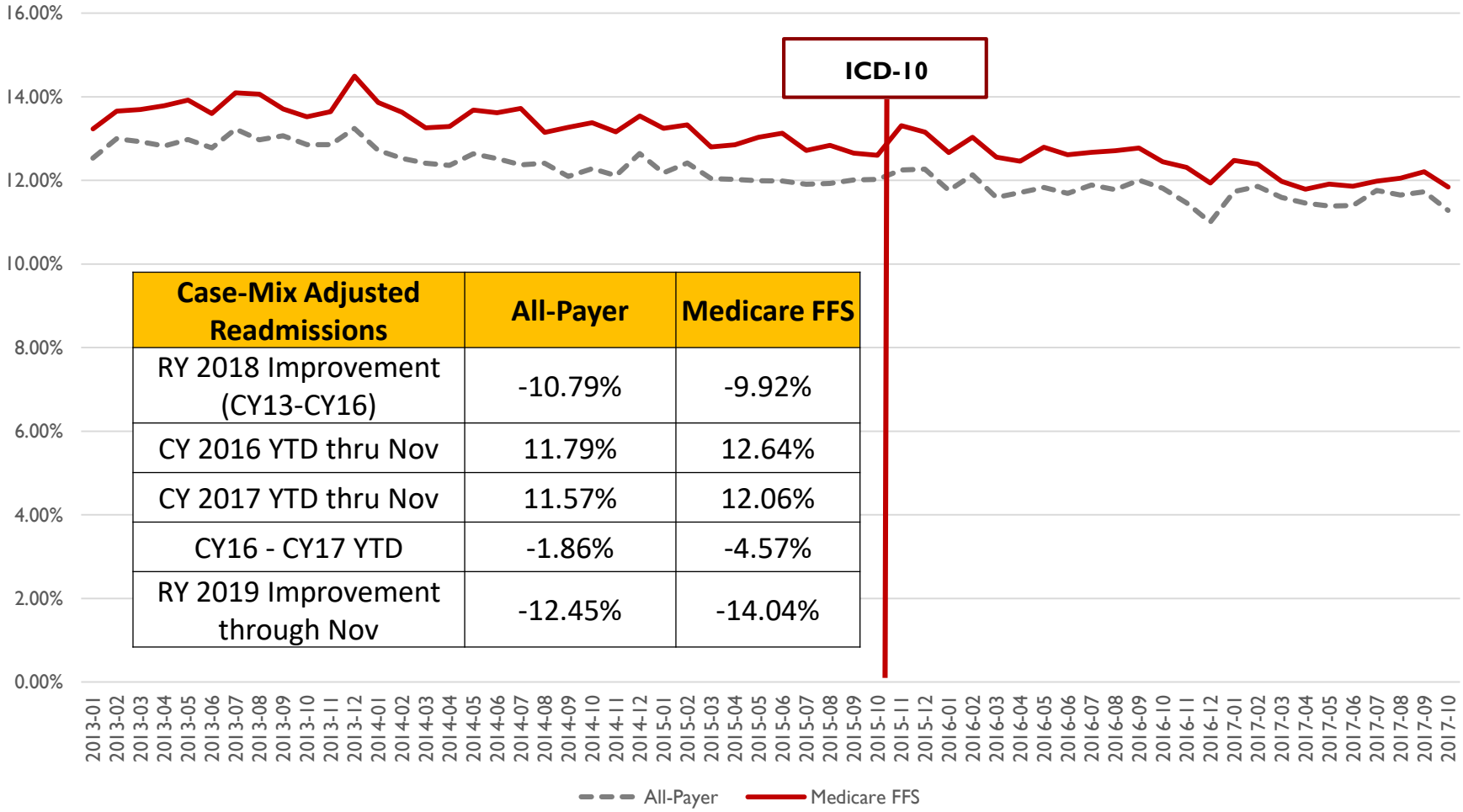
- RY 2020 RRIP
  - Improvement Target
    - National Forecasting (data delays, re-stated beneficiary counts);
    - Conversion to All-Payer – (New, more consistent approach);
  - Attainment Target (updated data and targets)
  - Re-calibrate Improvement Target with final CY 2017 data?
    - Available from CMS on or around May 2018.
- RY 2019 PAU
- RY 2020 QBR Status Update
- TCOC Model – Measurement Strategy Discussion
  - Critical Action List
  - Clinical Adverse Event Measures Work Group - Update

Readmission Reduction Incentive Program (RRIP)

Readmission Reduction Incentive Program

- Payment program supports the waiver goal of reducing inpatient Medicare readmissions to national level, but applied to all-payers.
- **Case-Mix Adjusted Inpatient Readmission Rate**
  - 30-Day
  - All-Payer
  - All-Cause
  - All-Hospital (both intra- and inter-hospital)
  - Chronic Beds included
- **Exclusions:**
  - Same-day and next-day transfers
  - Rehabilitation Hospitals
  - Oncology discharges
  - Planned readmissions
    - (CMS Planned Admission Version 4 + all deliveries + all rehab discharges)
  - Deaths

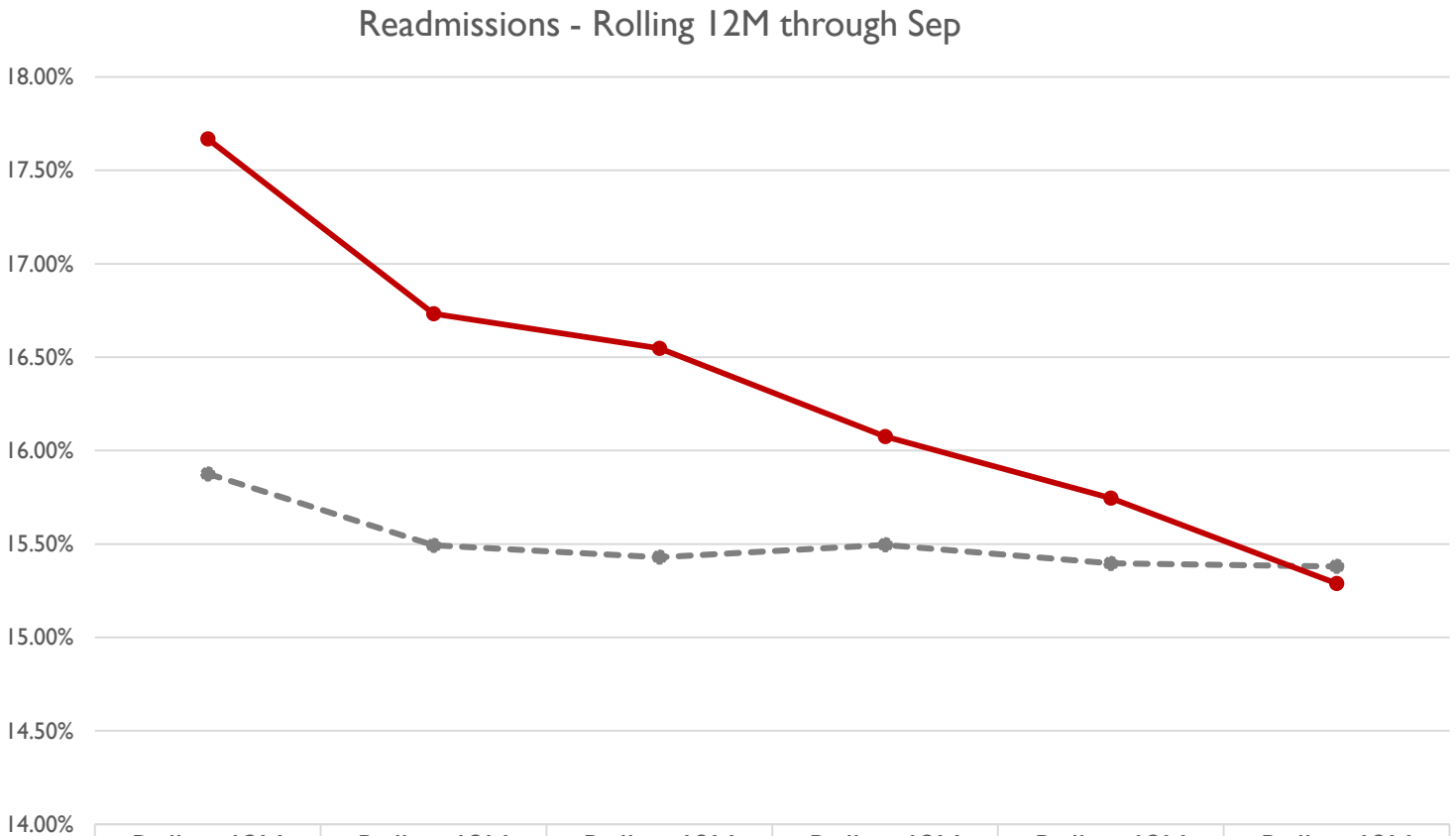
Monthly Case-Mix Adjusted Readmission Rates



Case-Mix Adjusted Readmissions	All-Payer	Medicare FFS
RY 2018 Improvement (CY13-CY16)	-10.79%	-9.92%
CY 2016 YTD thru Nov	11.79%	12.64%
CY 2017 YTD thru Nov	11.57%	12.06%
CY16 - CY17 YTD	-1.86%	-4.57%
RY 2019 Improvement through Nov	-12.45%	-14.04%

Note: Based on final data for Jan 2012 – Sep 2017; Preliminary Data for Oct-Dec 2017. Statewide improvement to-date is compounded with complete RY 2018 and RY 2019 YTD improvement.

Medicare Readmissions – Rolling 12 Months Trend



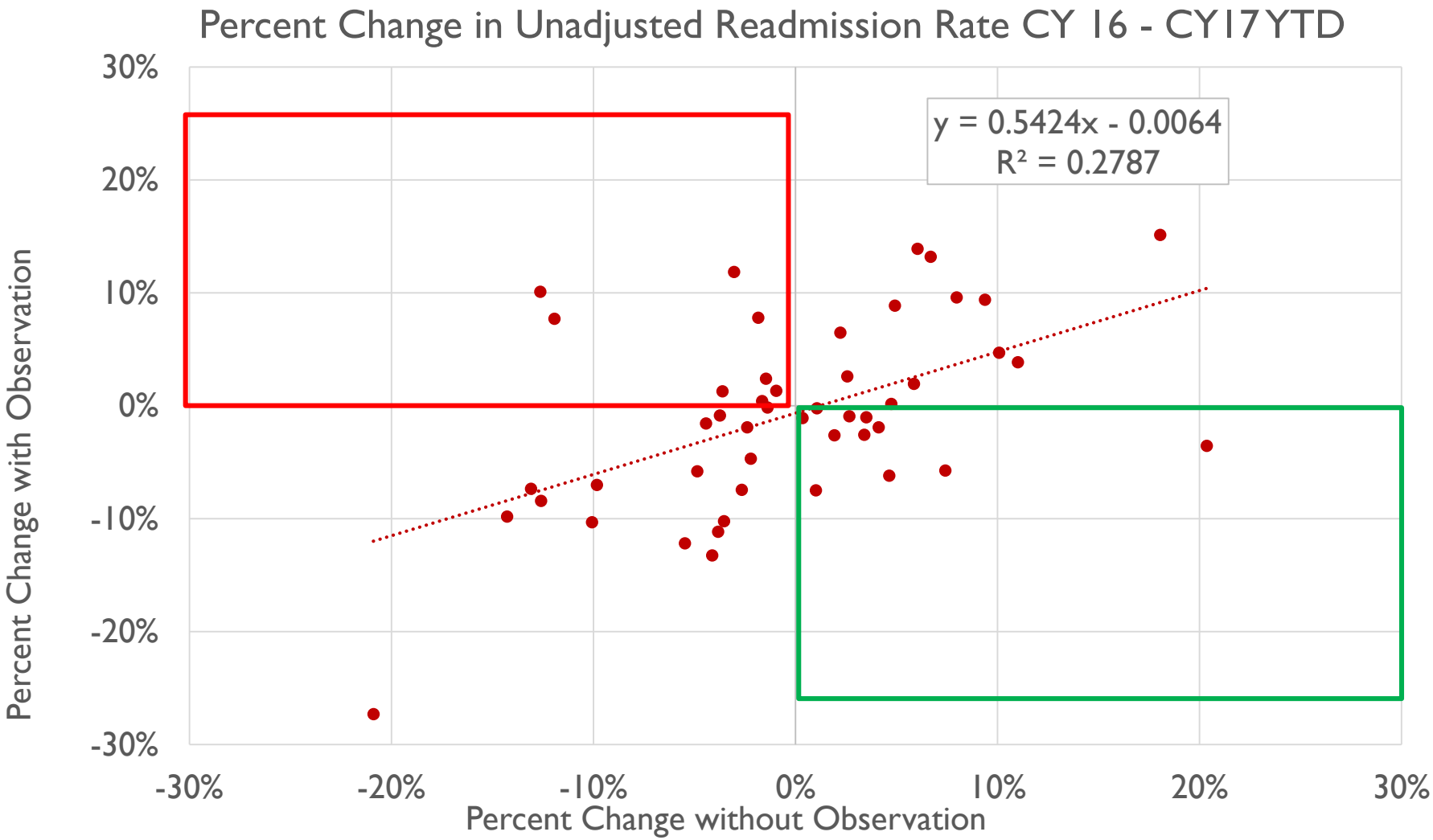
	Rolling 12M 2012	Rolling 12M 2013	Rolling 12M 2014	Rolling 12M 2015	Rolling 12M 2016	Rolling 12M 2017
National	15.88%	15.49%	15.43%	15.50%	15.40%	15.38%
Maryland	17.67%	16.73%	16.55%	16.08%	15.75%	15.29%

Proposed Timeline

- Base Period: **CY 2016**
  - Used for normative values for case-mix adjustment
- Performance Period: **CY 2018**
- Grouper Version: **APR-DRG Grouper Version 35**

Rate Year (Maryland Fiscal Year)	FY16-Q3	FY16-Q4	FY17-Q1	FY17-Q2	FY17-Q3	FY17-Q4	FY18-Q1	FY18-Q2	FY18-Q3	FY18-Q4	FY19-Q1	FY19-Q2	FY19-Q3	FY19-Q4	FY20-Q1	FY20-Q2	FY20-Q3	FY20-Q4
Calendar Year	CY16-Q1	CY16-Q2	CY16-Q3	CY16-Q4	CY17-Q1	CY17-Q2	CY17-Q3	CY17-Q4	CY18-Q1	CY18-Q2	CY18-Q3	CY18-Q4	CY19-Q1	CY19-Q2	CY19-Q3	CY19-Q4	CY20-Q1	CY20-Q2
Quality Programs that Impact Rate Year 2020																		
RRIP Incentive	RRIP Base Period (Proposed)														Rate Year Impacted by RRIP			
									RRIP Performance Period (Proposed)									

Observation Analysis



Flowchart of Predicting Improvement Target

Step 1
- **Test Past Accuracy of Medicare Predictive Models**

Step 2
- **Project CY 2018 National Medicare rates**

Step 3
- **Add a cushion to Medicare projections**

Step 4
- **Convert MD Medicare (projected) reduction to All-Payer Improvement Target**

Step 5
- **Compound 2016-2018 Improvement Target (RY 2020) with 2013-2016 Improvement (RY 2018)**

HSCRC expects to have more recent data to improve predictions for final policy.

Step 1: Testing Past Accuracy of Forecasting Models

- We tested accuracy of 7 forecasting models to forecast the National Medicare Readmissions at end of CY 2018.

		Predicted Rates						
Year	Actual Rate	Average Annual Change	Most recent annual change (cummulative CY rates)	12 MMA	24 MMA	PROC FORECAST	ARIMA	STL
2013	15.38%	15.24%	15.24%	15.90%				
2014	15.49%	14.93%	15.01%	15.51%	15.66%	14.91%	15.21%	15.28%
2015	15.42%	15.22%	15.60%	15.42%	15.41%	14.83%	15.57%	15.48%
2016	15.31%	15.20%	15.35%	15.47%	15.46%	14.96%	15.61%	15.47%

- Given forecast variation and that some models under predict National improvement, staff recommend using the average of the 7 forecasting models for CY 2018.

Step 2: Projecting National Medicare Rate

- Average of Projections for CY 2018 National Readmission Rate is ~**15.28%**.
  - Range of CY 2018 estimates is **15.07% to 15.39%.**
  - In previous years, MD slowed improvement in 2nd half of year.

Model	AAC	MRAC	12MMA	24MMA	PROC FCST	ARIMA	STL
CY 2018	15.38%	15.37%	15.31%	15.39%	15.07%	15.17%	15.28%

Step 2: Projecting National Medicare Rate

Year	National Medicare Rate
CY 13	15.38%
CY14	15.50%
CY 15	15.46%
CY16	15.40%
CY17 (YTD through Sep)	15.38%

	Model	Projections of National Rate
2018	AAC	15.38%
	MRAC	15.37%
	12MMA	15.31%
	24MMA	15.39%
	PROC FCST	15.07%
	ARIMA	15.17%
	STL	15.28%
	Avg of Models	15.28%

Step 3: Cushion for CY 2018 Predictions

- Per discussions, we will include a cushion in our predictive methodology to ensure waiver test is achieved at end of CY 2018
  - Cushion assume the prediction methodology is *under*-predicting the National readmission improvement for CY 2018.
  - Need to be conservative in predictions in final year of Model and need to have a target that is higher than CY17 target.
  - With restated data, a cushion -0.3 percentage points was added to ensure CY18 target > than CY17 target.

	Predicted Trend	Predicted Trend + -0.1% Cushion	Predicted Trend + -0.2% Cushion	Predicted Trend + -0.3% Cushion
CY 2018 National Readmission Rate	15.28%	15.18%	15.08%	14.98%

Step 3: Cushion for CY 2018 Predictions

- Calculate the reduction in MD Medicare Readmission rate that will reach the projected National Rate.
- MD Medicare rate in CY 2016 was 15.65%. To reach the projected national numbers by CY 2018, MD Medicare Readmissions must reduce by:

	Predicted Trend	Predicted Trend + -0.1% Cushion	Predicted Trend + -0.2% Cushion	Predicted Trend + -0.3% Cushion
CY 2018 National Readmission Rate	15.28%	15.18%	15.08%	14.98%
=Prediction/MD CY 2016 rate (15.65)-1 will yield MD Medicare improvement necessary from CY 2016 to reach CY 2018 Waiver Test				
MD Medicare Improvement Needed from CY 2016 to reach CY 2018 National Readmission Rate	-2.34%	-2.98%	-3.61%	-4.25%

Calculations may be vary due to rounding; Improvement Target inputs are not truncated until final step.

Step 4: Conversion to All-Payer Target

- Once MD Medicare reduction target is determined, need to calculate corresponding All-Payer reduction.
- NEW – More stable ratio of all-payer to CMMI Medicare rates is used for converting target

Year	CMMI MD Medicare FFS Rate	All Payer Rate	All Payer to Medicare Ratio of Rates
CY 12	17.41%	12.49%	71.7%
CY 13 Rolling 12M thru Sep	16.73%	12.74%	76.1%
CY 14 Rolling 12M thru Sep	16.55%	12.58%	76.0%
CY 15 Rolling 12M thru Sep	16.08%	12.13%	75.4%
CY16 Rolling 12M thru Sep (v34)	15.75%	11.90%	75.6%
CY2017 Rolling 12 Months Sep	15.29%	11.59%	75.8%
		Average Ratio	**75.1%**

Step 4: Conversion to All-Payer Target

- Conversion yields the following output:

	Predicted Trend	Predicted Trend + -0.1% Cushion	Predicted Trend + -0.2% Cushion	Predicted Trend + -0.3% Cushion
CY 18 **National Readmission Rate Prediction**	15.28%	15.18%	15.08%	41.98%
Conversion Method: Use ratio of rates to scale FFS target (74.9%)	= (National Prediction * Conversion Ratio (74.9%))/All-Payer CY 2016 Rate (11.72%) -1			
All-Payer CY 2016 – CY 2018 Improvement	-2.03%	-2.68%	-3.32%	-3.96%

- Current suggestion to Model with -3.96% improvement CY 2018 compared to CY 2016.

Step 5. Compounded Improvement Target

- **RY 2019 Improvement Target** WITH Compounded Target

$$(1-.1075) * (1-.0375) - 1$$
$$\sim 14.10\%$$

  - Original Improvement Target (without compounding) was 14.50%

- RY 2020 Modeled Improvement Target (-3.96%) compounded with experienced RY 2018 Improvement (-10.75%) yields:
- **RY 2020 Improvement Target*:***

$$(1-.1075) * (1-.0396) - 1$$
$$\sim 14.28\%$$

- Recommend rounding target to -14.30%

Difference From Draft Policy

December 2016 All-Payer Readmission Rate 11.72%		
	Draft Policy with .2% cushion (ratio 74.8%)	Final Policy with .3% cushion (ratio 75.1%)
CY18 Predicted National Medicare Rate	15.24%	15.28%
Cumulative Improvement Target with cushion	-14.34%	-14.28%
Targeted Statewide All-Payer Readmission Rate	11.25%	11.26%

Flowchart of Predicting Attainment Target

Step 1

- **Take Current All-Payer Casemix-Adjusted Readmission Rates**

Step 2

- **Adjust these rates for Out-of-State Readmissions**
- Using CMMI data, the ratio is as follows: $Total\ Readmissions : InState\ Readmissions$

Step 3

- **Calculate the 25th and 10th percentiles for the statewide distribution of scores**
- 25th Percentile is **threshold** to receive attainment point rewards
- 10th Percentile is **benchmark** to receive maximum attainment point rewards

Step 4

- **Adjust benchmark and threshold downward 2.33%, per principles of continuous quality improvement**

Attainment Target – Calculation Outputs

- Currently modeled using Case-Mix Adjusted Readmissions Rates preliminary through December, with Readmissions through November.
  - (Out-of-State Ratios currently Oct 2016-Sep 2017, given CMMI data run-out).

	CY17 Jan-Sep	With Cushion%*
CYTD17 Top 10%	10.30%	**10.10%**
CYTD17 Top 25%	10.90%	**10.70%**

*2.083% cushion based on 2% cushion adjusted for 13 months

RY 2020 Revenue Adjustment Scales

- RY 2020 Improvement Scale –

All Payer Readmission Rate Change CY13-CY18		RRIP % IP Revenue Adjustment
	A	B
Improving Readmission Rate		1.0%
	-24.80%	1.00%
	-19.55%	0.50%
Target	-14.30%	0.00%
	-9.05%	-0.50%
	-3.80%	-1.00%
	1.45%	-1.50%
	6.70%	-2.0%
Worsening Readmission Rate		-2.0%

- The improvement scale uses the slope of the RY 2018 scaling, adjusted for the RY 2020 reward/penalty cut point.
- **RY 2020 Improvement Target – 14.30%**

- RY 2020 Attainment Scale

All Payer Readmission Rate CY18		RRIP % IP Revenue Adjustment
	A	B
Lower Absolute Readmission Rate		1.0%
Benchmark	10.10%	1.00%
	10.40%	0.50%
Threshold	10.70%	0.00%
	11.00%	-0.50%
	11.30%	-1.00%
	11.60%	-1.50%
	11.90%	-2.0%
Higher Absolute Readmission Rate		-2.0%

- The attainment scale calculates maximum rewards at the 10th percentile of performance for most recent performance (adjusted to CY 2017), and maximum penalties are linearly scaled based on max reward and reward/penalty cut point.
- **RY 2020 Attainment Target – 10.70%**

These targets will be updated with refreshed data between Draft and Final Policies.

PAU Savings Policy Discussion

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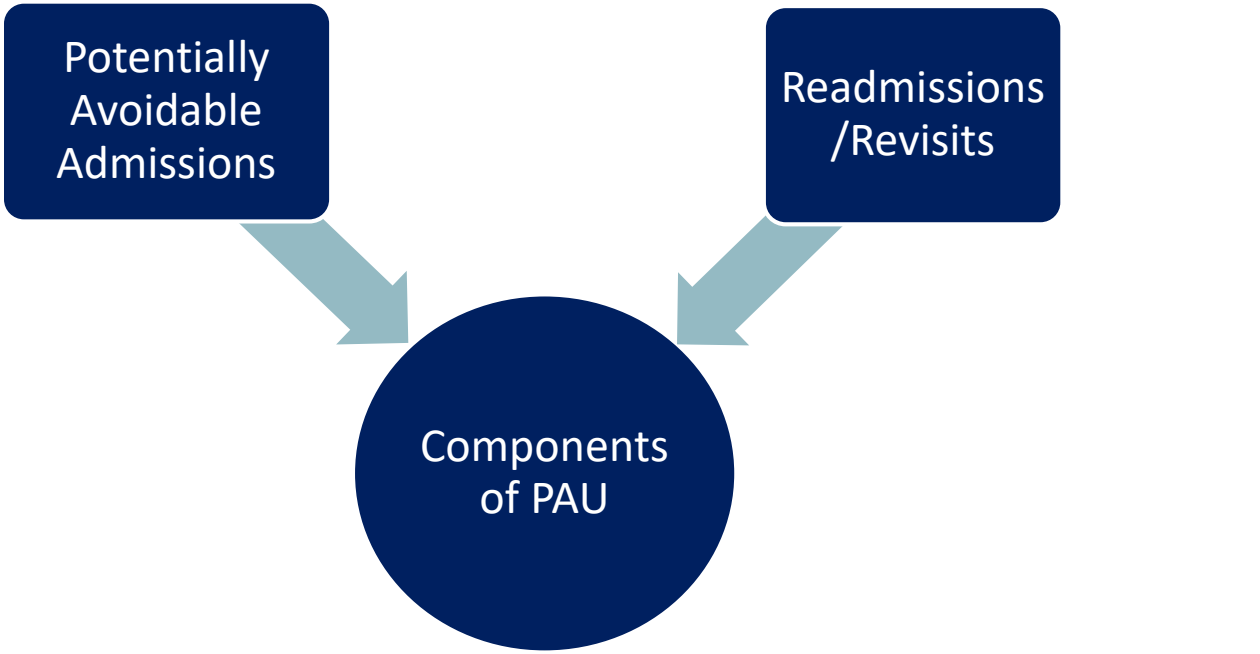
PAU: Purpose and Measure

Definition: "Hospital care that is unplanned and can be prevented through improved care coordination, effective primary care and improved population health."



HSCRC Calculates Percent of Revenue Attributable to PAU

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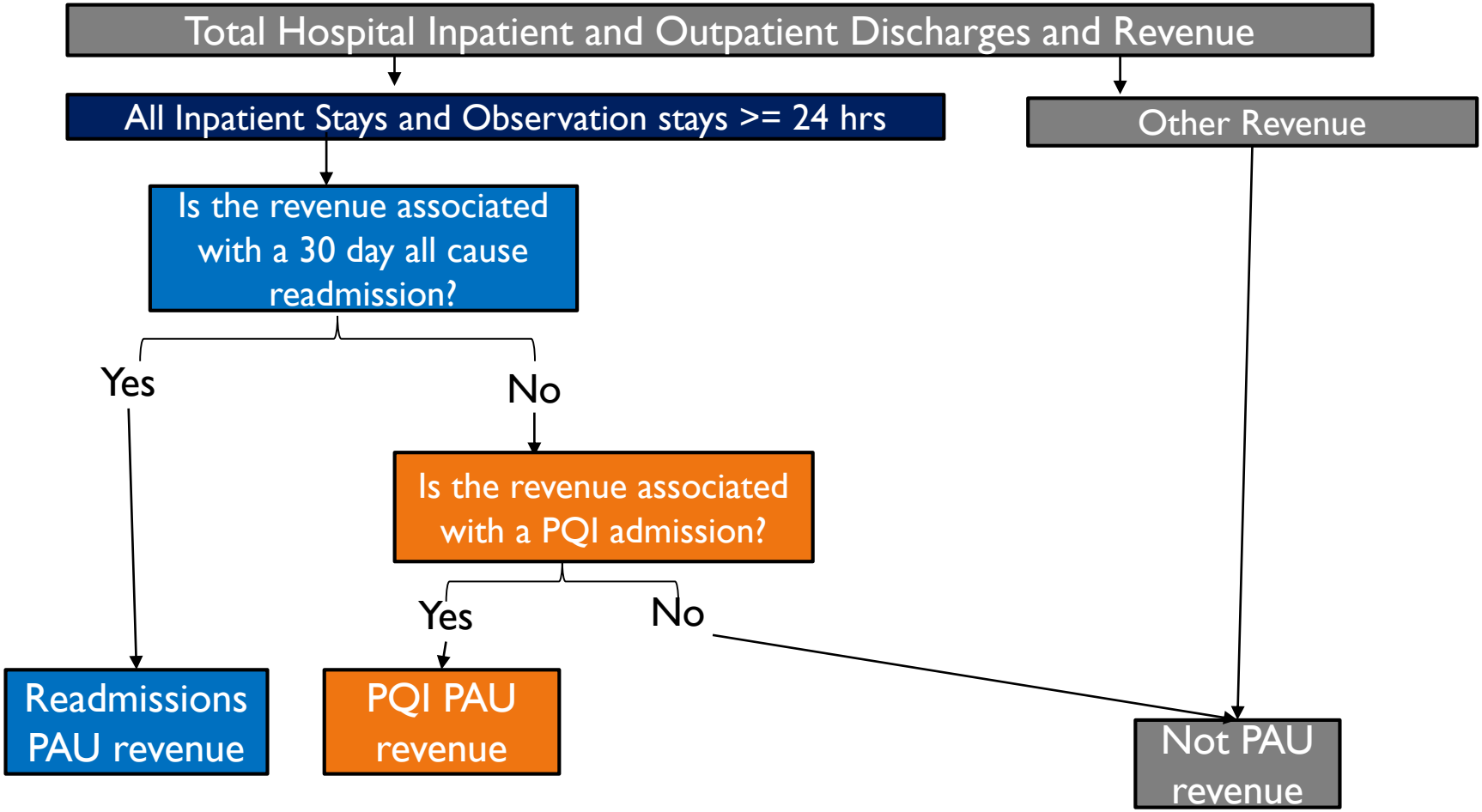
Current PAU measure

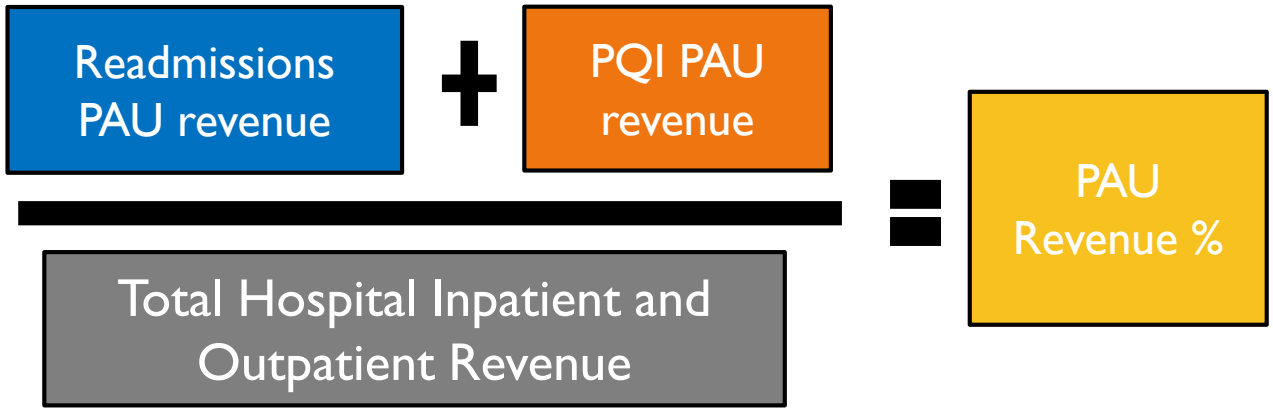
- Revenue from Readmissions
  - 30 day readmissions (inpatient and observation stays > 23 hours) at the receiving hospital
  - Includes readmission clinical logic, such as excluding planned admissions
- Revenue from AHRQ Preventable Quality Indicators (PQIs)
  - Hospitalizations from ambulatory-care sensitive conditions that may be preventable through effective primary care and care coordination.

List of included PQIs (PQI version 6)
PQI 01 Diabetes Short-Term Complications
PQI 02 Perforated Appendix Admission
PQI 03 Diabetes Long-Term Complications Admission
PQI 05 COPD or Asthma in Older Adults Admission
PQI 07 Hypertension Admission
PQI 08 Heart Failure Admission
PQI 10 Dehydration Admission
PQI 11 Bacterial Pneumonia Admission
PQI 12 Urinary Tract Infection Admission
PQI 14 Uncontrolled Diabetes Admission
PQI 15 Asthma in Younger Adults Admission
PQI 16 Lower-Extremity Amputation among Patients with Diabetes

Current PAU Flowchart



PAU Revenue %


Readmissions PAU revenue
+
PQI PAU revenue
Total Hospital Inpatient and Outpatient Revenue
=
PAU Revenue %

PAU Savings Program

PAU Savings Program

- The Global Budget Revenue (GBR) system assumes that the state will be reducing potentially avoidable utilization as care delivery transformation is ongoing

- The PAU Savings Policy prospectively reduces hospital GBRs in anticipation of those reductions
  - All hospitals contribute to the statewide PAU savings, however, each hospital's reduction is proportional to their percent PAU revenue.

PAU Savings Program con't

- Hospital-specific reductions are scaled based on the percentage of PAU revenue received at the hospital in a prior year
  - i.e., hospitals with higher than average PAU revenue will have a higher reduction than the statewide average and hospitals with lower PAU will have a lower reduction
- Example: If the statewide PAU revenue % is 10% and the statewide % reduction is set at 1.0%:

	PAU %	PAU Savings Adjustment
Hospital A	10%	-1.0%
Hospital B	20%	-2.0%
Hospital C	5%	-0.5%

Summary of methodology approach

1. Determine statewide % reduction in PAU revenue
2. Calculate scaled revenue reductions for each hospital based on prior CY PAU revenue %
3. Apply protection for hospitals meeting certain criteria
4. Apply adjustments to total hospital revenue

Statewide % Reduction: RY 2018 Example

- Set the value of the PAU savings amount to 1.45 percent of total permanent revenue in the state, which is a 0.20 percent net reduction from RY 2017.

Statewide Results		**Value**		
RY 2017 Total Approved Permanent Revenue	A	$15.8 billion		
Total RY18 PAU %	B	10.86%		
Total RY18 PAU $	C	$1.7 billion		
Statewide Total Calculations		**Total**	**Last year**	**Net**
RY 2018 Revenue Adjustment %	D	-1.45%	-1.25%	-0.20%
RY 2018 Revenue Adjustment $	E=A*D	-$228.4 million	-$194.4 million	-$34.0 million

Hospital Scaling

- Calculate scaled revenue reduction for each hospital based on CY PAU revenue %

Rate Year	Performance
RY2018	CY2016
RY2019	CY2017
RY2020	CY2018
RY2021	CY2019
RY2022	CY2020

- RY18 (CY16) PAU % was 10.86% statewide, with hospital-specific values ranging from:
  - 5.25% of total revenue (RY18 adjustment = -0.73%) to
  - 19.71% of total revenue (RY18 adjustment = -2.74% before protections, -1.51% with protections)

*Excluding UMROI (CY16 PAU % = 0.32%)

Hospital Protections: RY2018 Policy

- RY2018: Cap the PAU savings reduction at the statewide average reduction for hospitals with higher socio-economic burden
  - Higher socio-economic burden defined as hospitals in the top quartile of Medicaid/Self-Pay % of ECMADs
    - % of inpatient ECMADs from Medicaid/Self-Pay over total inpatient ECMADs (equivalent case-mix adjusted discharges).

- Revenue adjustments are calculated for hospitals meeting the criteria before and after protection.
- Hospitals are assessed on the smaller of the hospital-calculated or statewide average reduction

Hospital Protections con't

- Rationale
  - Hospitals serving populations with lower socio-economic status may need additional resources to reduce PAU %
  - However, PAU Savings program is attainment only and does not include improvement methodology
  - Policy attempts to limit this potential annual disadvantage while still incentivizing hospitals to reduce PAU % below the statewide level

- Concerns:
  - ECMADs from Medicaid/Self-Pay may not be the best way to account for differences in socio-economic status.

Hospital Revenue Adjustment

- Apply hospital-specific revenue adjustment to total hospital inpatient and outpatient revenue
  - Note: other quality programs are applied to inpatient revenue only
- Entered into update factor as one time adjustments and are not permanent.

Future discussions

- RY19/RY20 discussions
  - Protection analyses

- RY 2021 and beyond discussions
  - Measure and program construction
  - Expanded and new PAU measures
    - Expanding PQIs and readmissions
      - Examples: Pediatric Quality Indicators (Asthma Admissions); Nursing Home avoidable admissions, 90 day readmissions, etc.
    - New types of PAU measures
      - Examples: Potentially unnecessary CAT scans, etc.
  - Hospital-defined PAU (as mentioned in Commissioner White Paper)

RY 2020 QBR Status Update

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QBR – MD Mortality

- RY 2020: MD Mortality includes palliative care (PC) cases for both improvement and attainment
  - PC is included primarily to avoid hospitals receiving improvement points as PC rates increase over time
  - Regression model compares observed mortality to predicted mortality adjusting for diagnosis, risk of mortality, age, sex, transfer status, and PC status (i.e., a hospital's predicted mortality will be higher for PC discharges)
  - Mortality measure is restricted to the DRGs where 80% of deaths occur, after removing some high mortality DRGs
- Question for PMWG consideration:
  - When selecting the DRGs for analysis, should we include PC cases?
  - Staff recommendation is to select DRGs *without* PC and then add in PC discharges for those DRGs. This avoids selecting DRGs with high proportion of PC.

QBR – ED Wait Times

- Per final (approved) RY 2020 QBR policy, commissioners recommended that staff and industry explore additional risk adjustment beyond ED volume. Factors under consideration:
  - Occupancy rates, urban/rural location, case-mix, behavioral health
  - Other thoughts on things we should consider?

- Next Steps
  - Staff engaging Mathematica to complete analysis and develop recommendation
  - MHA is also engaging stakeholders to develop recommendation (meeting with Mathematica and MHA scheduled to collaborate)
  - Plan to have final recommendation for PMWG input at May meeting; interim updates will be provided as appropriate.

TCOC Model – Measurement Strategy Discussion

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General Priorities Discussion

- Critical Action List to determine priorities under TCOC Model
  - **PLEASE SEE HANDOUT**

- HSCRC welcomes stakeholder feedback on these priorities/timelines.

Complications in New Model – Update

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Complications Sub-Group: Goals and Scope of Work

- Establish Overarching **goals**:
  - Incentivize Maryland hospitals to provide the safest care to their patients
  - Meet or exceed TCOC waiver requirements for at-risk payments linked to Hospital Acquired Conditions and Adverse Events
  - Select high quality performance measures in high priority clinical areas, preferably aligned with CMS payment programs.
  - Other?
- Project **Scope**:
  - Acute Care Inpatient Facilities
  - Fully specified Hospital Acquired Conditions and Adverse Event performance measures currently in use or available for use with discharges in Performance Year 2019.

Complications Sub-Group: Anticipated Deliverables

- Phase I Deliverables (CY 2019 performance, RY 2021)
  - Develop a Measure Evaluation Framework
    - Identify high priority clinical areas
    - Develop criteria for formal measure selection process.
  - Create a Preliminary MHAC Measures Under Consideration (MHAC MUC) list from the existing inventory of available measures, potentially including:
    - Current MHAC patient safety measures;
    - Current QBR patient safety measures; and/or
    - Other measures that meet criteria
  - Develop consensus recommendation on performance measures in the MHAC program regarding payment commitments under the TCOC Waiver

- Phase II Recommendations (CY 2020 performance and beyond)
  - Identify important gaps; where possible identify potential future measure development opportunities to address gaps (especially with eCQMs using EHR data).

Complications Sub-Group: Anticipated Timeline for Phase I

- Anticipated **timeline**:
  - January 2018: Sub-group members nominated and selected
  - February 2018 onward: Sub-group will meet approximately monthly beginning in February 2018
  - Early Fall 2018: Sub-group will recommend measure options to the PMWG
  - Late Fall 2018: PMWG to develop payment adjustment methodology
- Timeline subject to change

Our next **Performance Measurement Work Group** Meeting is scheduled to take place **Wednesday, March 21st 2018 at 9:30 AM**

Contact Information

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