



PMWG Readmissions Sub-group

06/25/2019

Agenda

1. Revisit Workplan/Vision of Sub-Group
2. In-depth Issue Exploration:
 - a. Assessing Performance: Improvement and Attainment vs. Attainment-Only
 - b. Impact of Observation Re-visits
3. Status Update on Priority Areas:
 - a. Social Determinants of Health (SDOH) - Update, No Modeling
 - b. Shrinking Denominator
4. Non-traditional Measure(s) - Per Capita Utilization

Check-in on Vision of Work Group

Workplan Revisited: Envisioning a New RY 2022 RRIP policy

- Analyze concerns on **Shrinking Denominator**
 - Thus far analyses presented to this subgroup have indicated that shrinking denominator is handled by case-mix adjustment
- Establish a Statewide **Improvement Target**
 - Consider ways to set a responsible TCOC improvement target (e.g., literature, expert opinion, external benchmarks, analysis of improvement opportunities)
- Establish a Statewide **Attainment Benchmark**
 - Consider whether changes are needed to existing attainment reward parameters - for example should we mirror HRRP that penalizes those above the median?
 - Consider if updates to Out-of-State Ratios are needed based on other payer data
 - Evaluate modifying program to assess performance on attainment-only now or in future? If so, consider impact on reward parameters, need for SDOH adjustment, reliance on Medicare out of state ratio
- Refinements to **existing readmission measure** (AMA, oncology, case-mix adjustment)
- Develop and monitor **non-traditional readmission measures** (future P4P?)
 - All-Payer Excess Days in Acute Care, as way to monitor readmission severity and observation and emergency department revisits
 - Plan for migration to all-payer eCQM for readmissions
 - Monitor within hospital readmissions disparities using Adversity Index
 - Consider relevance of per capita measures

Timelines

- Benchmarks will not be available until Fall; other work ongoing as well (within-hospital disparity, EDAC)
- Will meet in July and August only if new analyses are available
- Subgroup may need to meet for couple of meetings in the Fall
- Transition draft recommendations from subgroup to PMWG for final development
- Anticipating draft RRIP policy early 2020

Improvement and Attainment vs. Attainment-Only

Improvement and Attainment vs. Attainment-Only

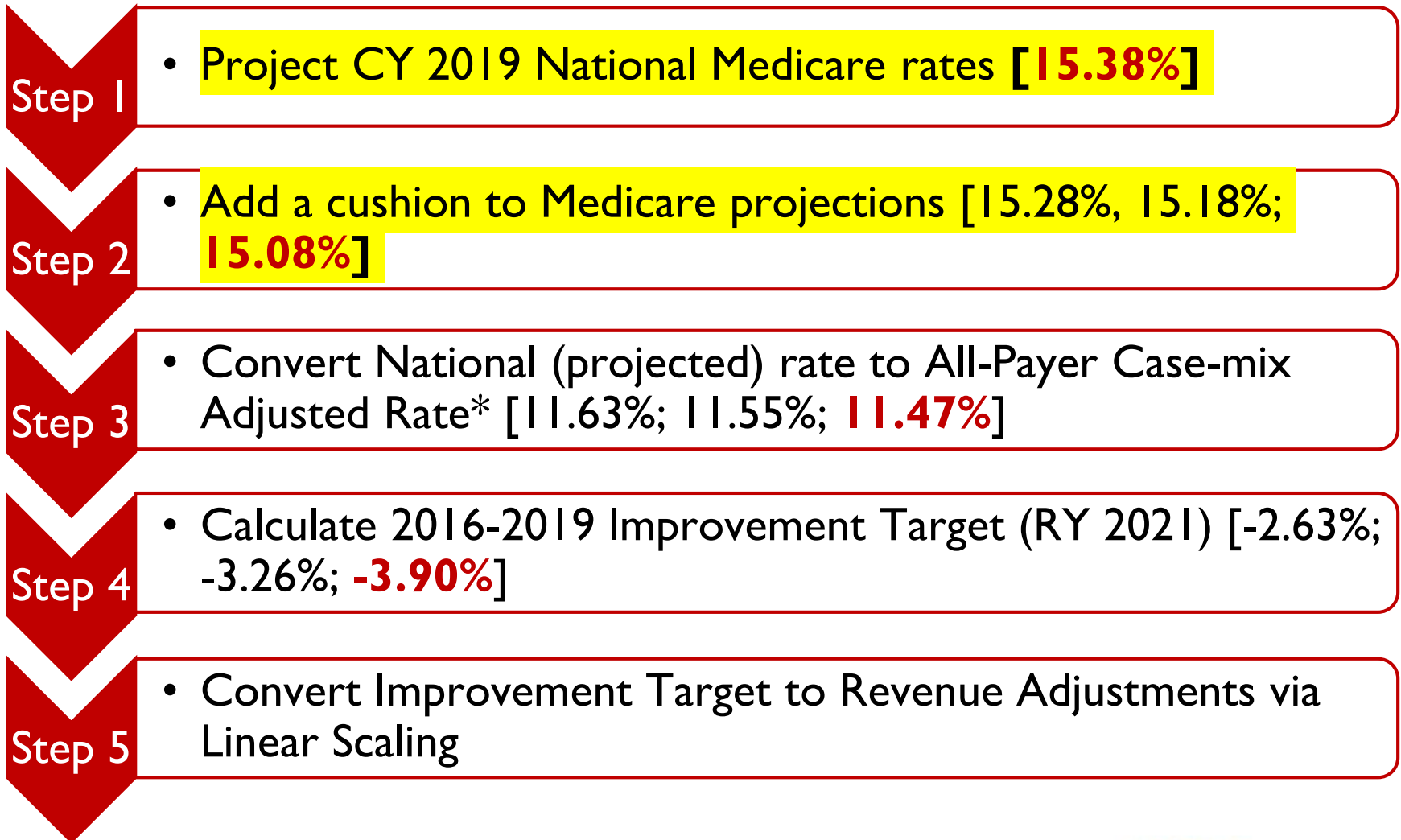
1. **Mechanics of Existing Improvement-Attainment Program**
 - a. Calculation Steps
 - b. Benefits and considerations of improvement and attainment
2. **Current (historical) performance on RRIP**
 - a. Distribution of Improvement vs Attainment
 - b. Modeling of Attainment with different performance standards
3. **Attainment Considerations**
 - a. Benchmark/Threshold - Statewide targets
 - b. SES or further risk adjustment beyond case-mix adjustment
 - c. Out-of-state adjustment or further accuracy beyond case-mix data

RY 2021 Revenue Adjustment Scales (Better of Attainment or Improvement)

All Payer Readmission Rate Change CY16-CY19		RRIP % Inpatient Revenue Payment Adjustment
	A	B
Improving Readmission Rate		1.0%
	-14.40%	1.00%
	-9.15%	0.50%
Target	-3.90%	0.00%
	1.35%	-0.50%
	6.60%	-1.00%
	11.85%	-1.50%
	17.10%	-2.0%
Worsening Readmission Rate		-2.0%

All Payer Readmission Rate CY19		RRIP % Inpatient Revenue Payment Adjustment
	A	B
Lower Absolute Readmission Rate		1.0%
Benchmark	8.94%	1.00%
	10.03%	0.50%
Threshold	11.12%	0.00%
	12.21%	-0.50%
	13.30%	-1.00%
	14.39%	-1.50%
	15.47%	-2.0%
Higher Absolute Readmission Rate		-2.0%

Flowchart of Predicting Improvement Target



Step 1: Projecting National Medicare Rate

□ National Improvement is relatively stagnant across past 5 years, making it difficult use National trends to set improvement target.

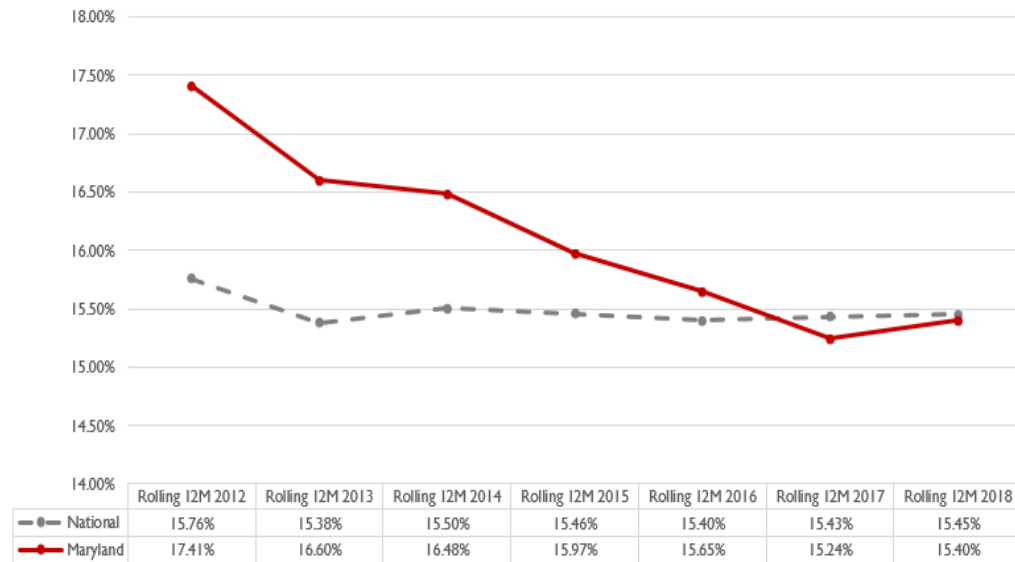
□ Calculate projected Medicare readmission rate for following year using 7 estimation methods

□ Examples: Average annual change, 12/24-month moving averages, more complex statistical approaches that take into account overall trends and seasonality (ARIMA, LOESS)

□ In the past we have taken the average of these 7 methods

□ Will need to discuss alternative methods: Medicare only? How this interacts with benchmarks for other payers, literature, expert opinion, select percentile using hospital-wide readmission measure?

Readmissions - Rolling 12M through Dec 2018



Step 2: Add a cushion

- ▶ Previously, cushion provided insurance against under-anticipating improvement
- ▶ Currently, having met APM target, cushion is functioning rather as a way to be beneath national target.
 - ▶ How do we set what cushion should be? 0.1%, 0.2%, 0.3%?

Flowchart of Predicting Improvement Target

Step 1

- Project CY 2019 National Medicare rates [**15.38%**]

Step 2

- Add a cushion to Medicare projections [15.28%, 15.18%; **15.08%**]

Step 3

- Convert National (projected) rate to All-Payer Case-mix Adjusted Rate* [11.63%; 11.55%; **11.47%**]

Step 4

- Calculate 2016-2019 Improvement Target (RY 2021) [-2.63%; -3.26%; **-3.90%**]

Step 5

- Convert Improvement Target to Revenue Adjustments via Linear Scaling

HSCRC

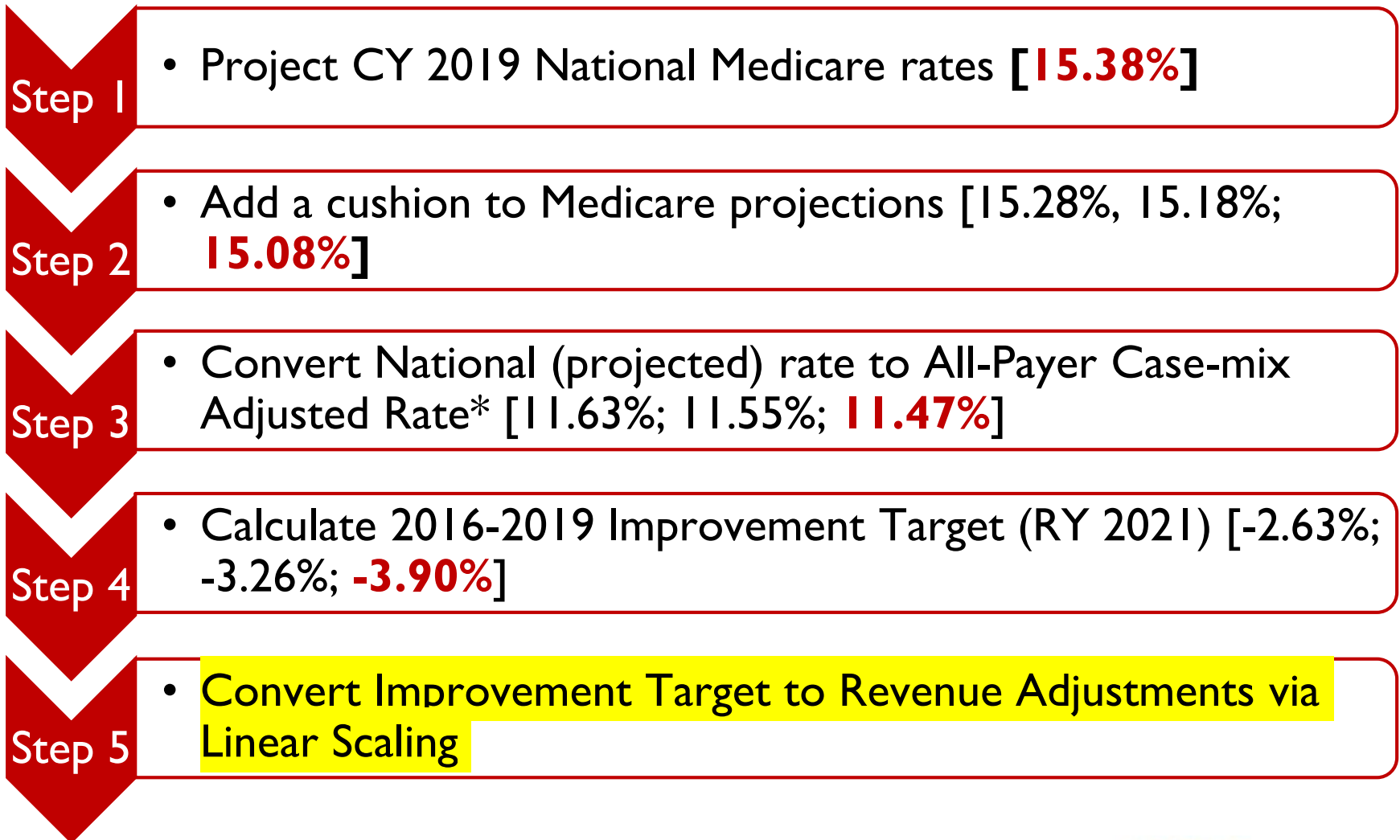
Health Services Cost
Review Commission

Step 3: Conversion to All-Payer Target

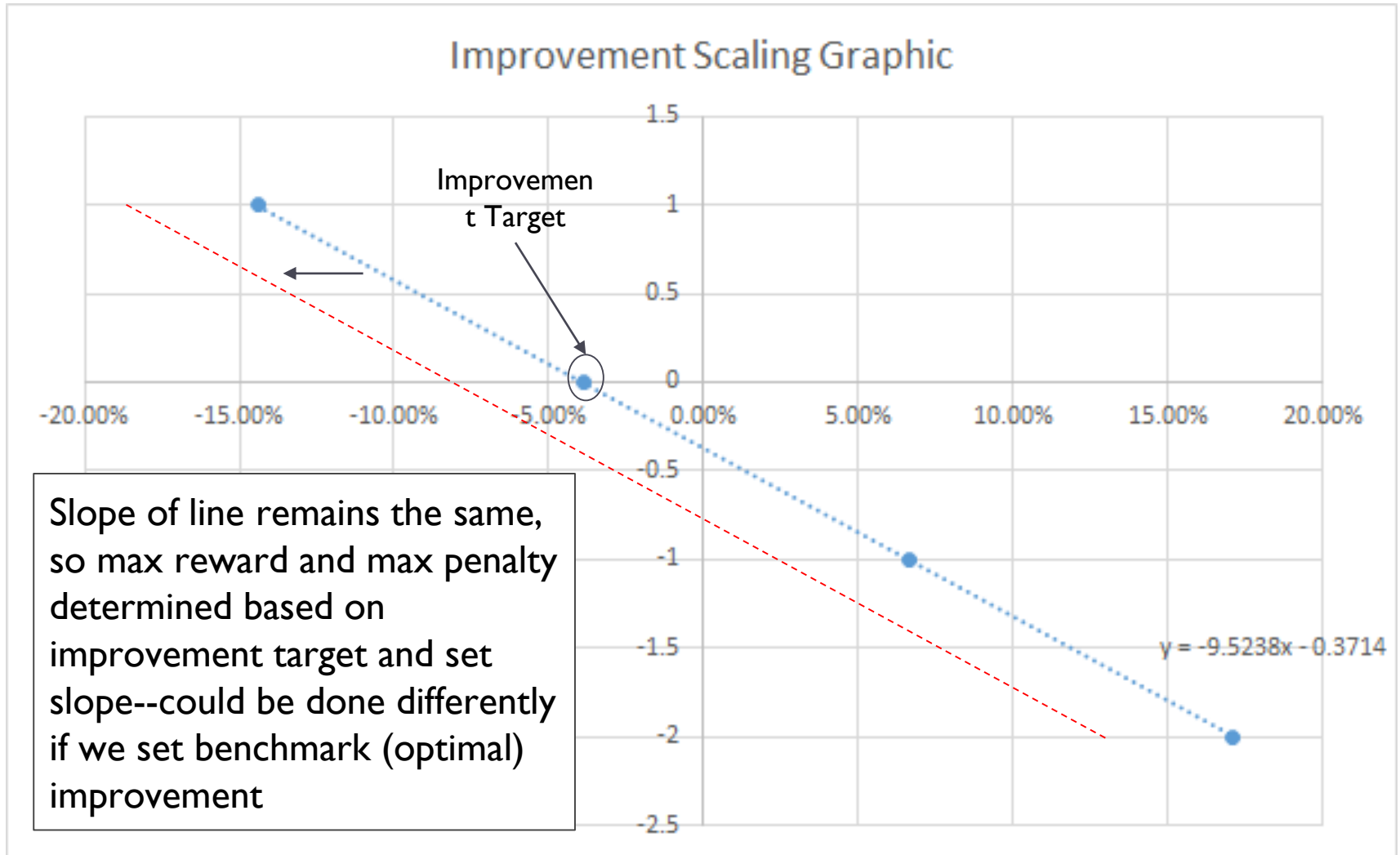
- ▶ Once projected MD Medicare FFS Rate is calculated, need to convert to a corresponding All-Payer reduction
- ▶ Last year, tested multiple conversion methods and ended up using the (average, historical) ratio of the MD Medicare numbers and the all-payer case-mix adjusted readmission rate:
 - ▶ Average of ratios for 2012-2018 is 76.1% (relatively stable)
 - ▶ Multiply Medicare rate by average ratio to get the corresponding all-payer case-mix adjusted rate, and then calculate improvement needed to achieve that rate

Projected CY 2019 National Medicare FFS	15.08%
Corresponding CY 2019 All-Payer Case-mix Adjusted Rate (15.08% * 76.1%)	11.47%
Step 4: CY 2016-2019 All-Payer Improvement (11.47% / CY16 Rate - 1)	-3.90%

Flowchart of Predicting Improvement Target



Improvement Scaling Graphic and Assumptions



Improvement Target - Benefits

- ▶ Assessing hospitals on improvement provides strong incentive to improve, which was needed under APM
- ▶ Incentivizes all hospitals, in that poorer performers have opportunity for rewards even if they cannot hit attainment target
- ▶ Measuring improvement allows hospitals to be measured against **own** patient population, reducing need for further SES adjustment beyond case-mix
- ▶ Addresses concerns with in-state, out-of-state differences

Improvement Target - Considerations

- Under TCOC model, Maryland must continue to be at or below the national Medicare readmission rate, however should the state set a more aggressive goal?
 - TCOC model provides resources and incentives to further improve quality of care and care coordination, so why shouldn't we set a more aggressive goal?
 - Or is further improvement too aggressive (i.e., risks for unintended consequences)?
 - Or should state instead focus on other goals like reducing avoidable admissions?

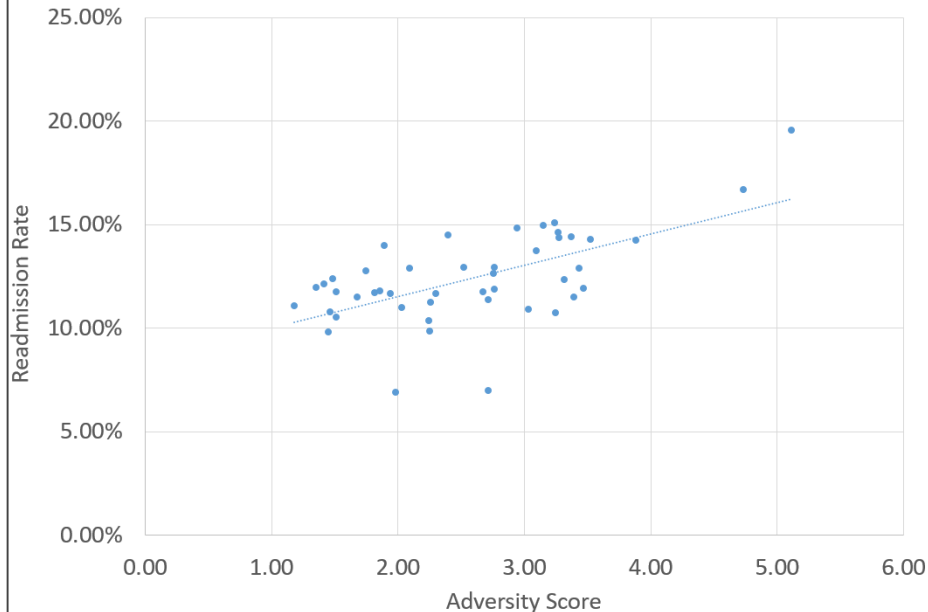
- If we set a more aggressive improvement goal:
 - How should we set target? Cushion? Use benchmarks for other payers, literature, expert opinion, select percentile using hospital-wide readmission measure?
 - Other ways we might do a conversion factor to get all-payer, case-mix adjusted target?
 - Should improvement goal be annual or should we set goal for the next several years?
 - Should we consider phasing out improvement overtime?

Adversity Score and Readmission Performance

Higher average adversity index is somewhat correlated with higher readmission rates in 2013 (and in 2018 - not shown)



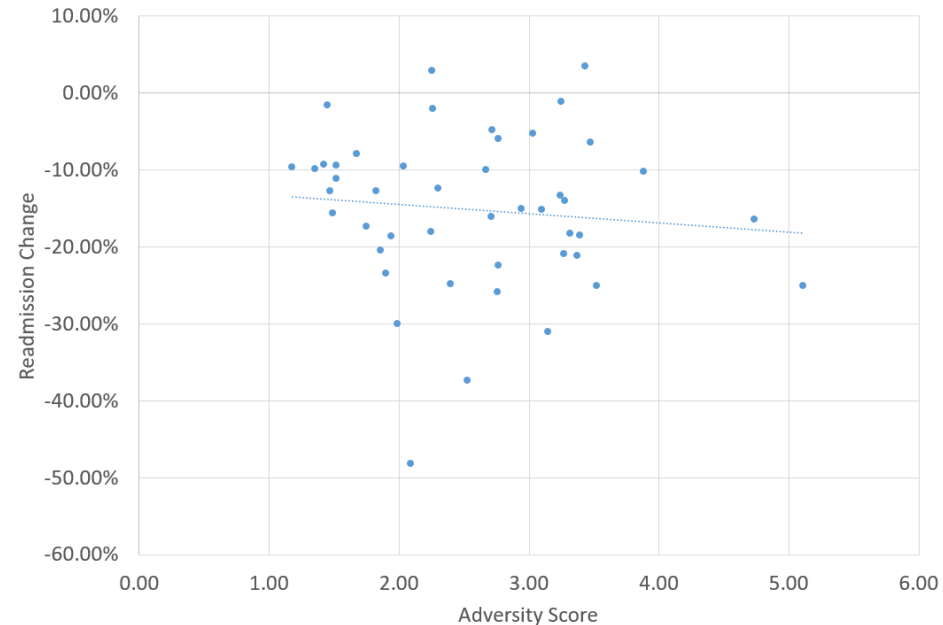
Disadvantage by 2013 CM Adjusted Readmission Rate



Higher average adversity index is not correlated with change/improvement in readmissions; most hospitals improved



Disadvantage by RY 2020 Compounded Improvement

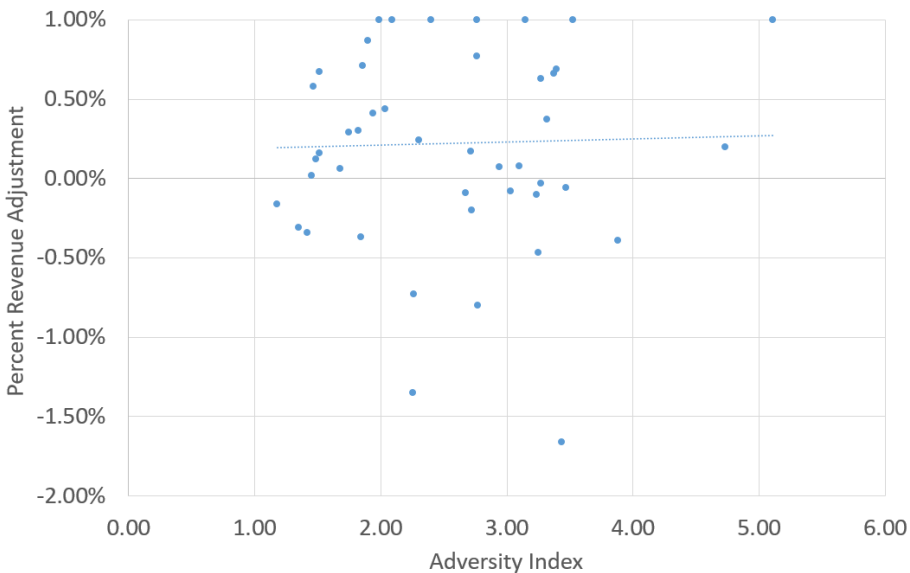


Adversity Score and Revenue Adjustments

Higher adversity index not associated with higher penalties with improvement and attainment system



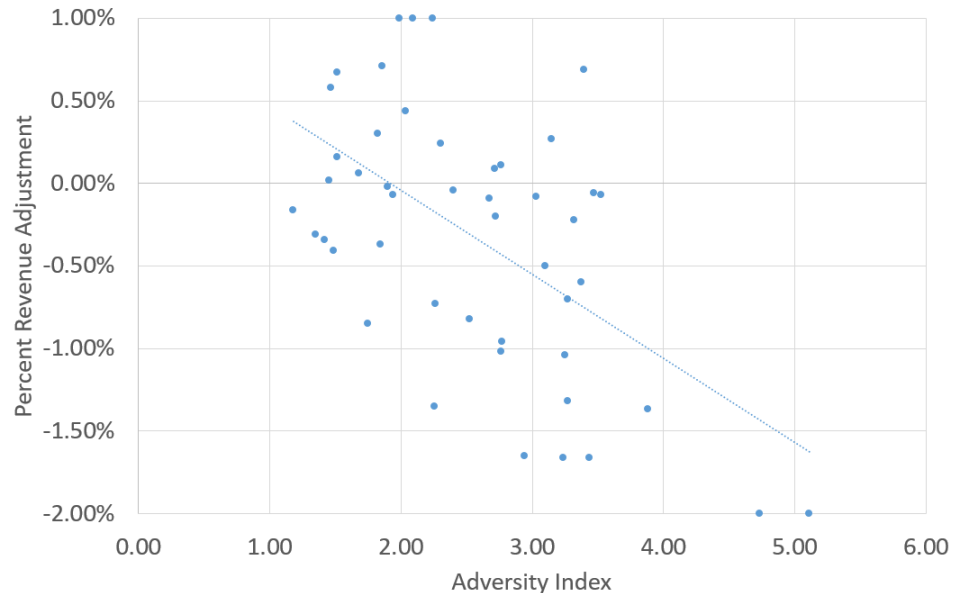
Disadvantage by RY 2020 Revenue Adjustment
Improvement and Attainment (RY21 Scale)



Higher adversity index associated with higher penalties in attainment only system without further SDOH adjustment



Disadvantage by RY 2020 Revenue Adjustment
Attainment Only RY 2021 Scale



Flowchart of Predicting Attainment Target

Step 1

- Take Current All-Payer Case-mix Adjusted Readmission Rates (**2018 YTD through Sep**)

Step 2

- Increase these rates for Out-of-State Readmissions (**Jul 17-Jun 18**)
- Using CMMI data, the ratio is as follows:

Step 3

- Calculate the 35th and 5th percentiles for the statewide distribution of scores
- 35th Percentile is **threshold** to receive attainment point rewards (**11.30%**)
- 5th Percentile is **benchmark** to receive maximum attainment point rewards (**9.08%**)

Step 4

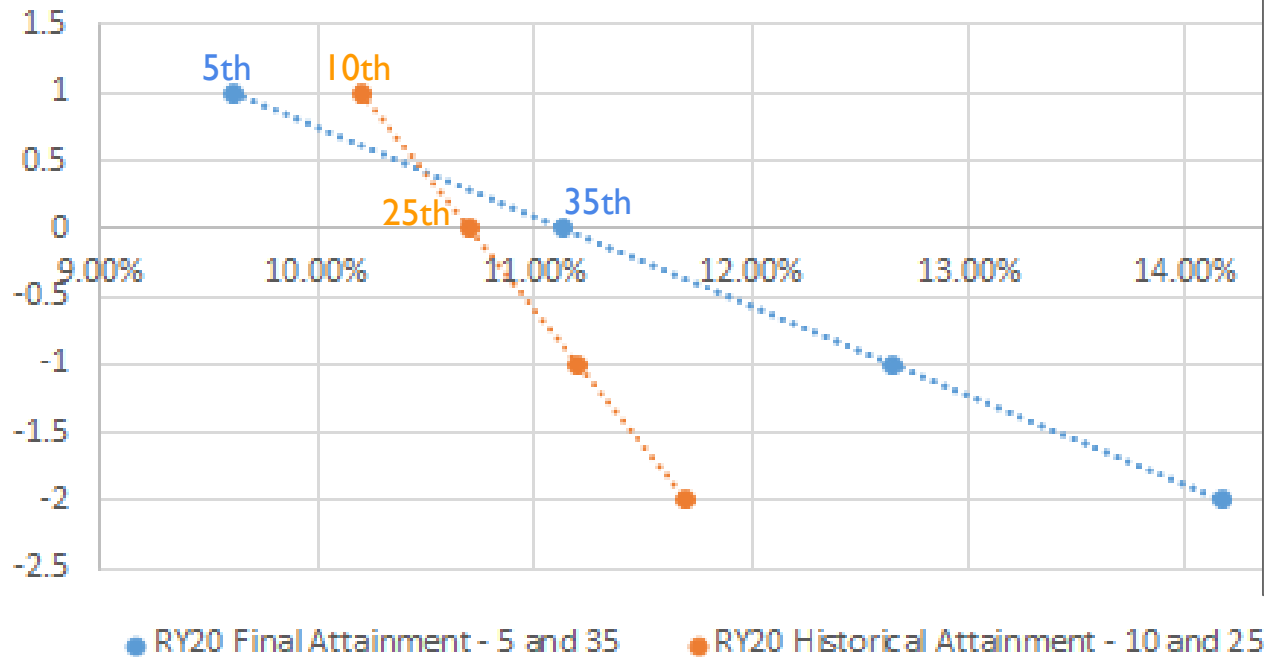
- Adjust benchmark and threshold downward **1.62%**, per principles of continuous quality improvement (Threshold **11.12%**; Benchmark **8.94%**)

Step 5

- Convert Attainment Benchmark/Threshold to Revenue Adjustments via Linear Scaling

Attainment-Only - a note on Scaling

Attainment Scaling



Attainment scale determined by the benchmark (performance = max reward) and threshold (minimum rate to not get penalty), linearly scaled to max penalty of 2%.

When we extend the range between benchmark and threshold, greater differentiation of performance.

Attainment Target - Benefits

- Aligns with national program
- Rewards hospitals with low readmission rates
- Does not penalize hospitals with lower readmission rates, where continued improvement may be difficult/detrimental

Attainment Considerations

- Mechanics of Attainment Threshold/Benchmark
 - What is acceptable level of readmissions?
 - Historically range of rewards set at 10th and 25th percentiles; recently expanded to 35th and 5th percentiles
 - National HRRP begins penalties at 50th percentile
- Out-of-State Readmissions
- Difference in Patient Population across hospitals (beyond case-mix)
- **Uncertainties in the Attainment methodology come under closer scrutiny in an attainment-only program**

Results: RRIP Revenue Adjustments

- Attainment first added RY18, retrospective RY17
- Majority hospitals get rewards from improvement
- Without improvement, attainment-only revenue adjustments have high penalties given the narrow range of performance for receiving reward

RY2017		
	Attainment Only	Attainment and Improvement
Penalty	\$ (113,932,221)	\$ (28,724,546)
Reward	\$ 4,683,177	\$ 12,646,542
Net	\$ (106,477,043)	\$ (16,078,004)
RY2018		
	Attainment Only	Attainment and Improvement
Penalty	\$ (61,445,253)	\$ (8,391,783)
Reward	\$ 17,239,661	\$ 35,363,967
Net	\$ (44,205,592)	\$ 26,972,184
RY2019		
	Attainment Only	Attainment and Improvement
Penalty	\$ (121,041,253.53)	\$ (33,553,422.00)
Reward	\$ 3,957,645.17	\$ 13,930,812.00
Net	\$ (117,083,608.35)	\$ (19,622,610.00)
RY2020		
	Attainment Only	Attainment and Improvement
Penalty	\$ (142,840,986.00)	\$ (20,710,401.00)
Reward	\$ 7,745,281.46	\$ 26,009,389.00
Net	\$ (135,095,704.54)	\$ 5,298,988.00

Improvement and Attainment Considerations Combined

Improvement

- Provides all hospitals with opportunity to receive rewards
- Compares hospital against own historical performance, and thus controls for differences across hospital patient population (beyond case-mix adjustment)

Attainment

- Aligns with National program
- Rewards those with low readmission rates, where additional improvement may be difficult/detrimental

- What should readmission improvement goal be under TCOC?
- How should we set improvement target?
- Other concerns: Calculation of Medicare projections? Other payer benchmarks? Conversation factors? Annual vs cumulative target? Phase out?

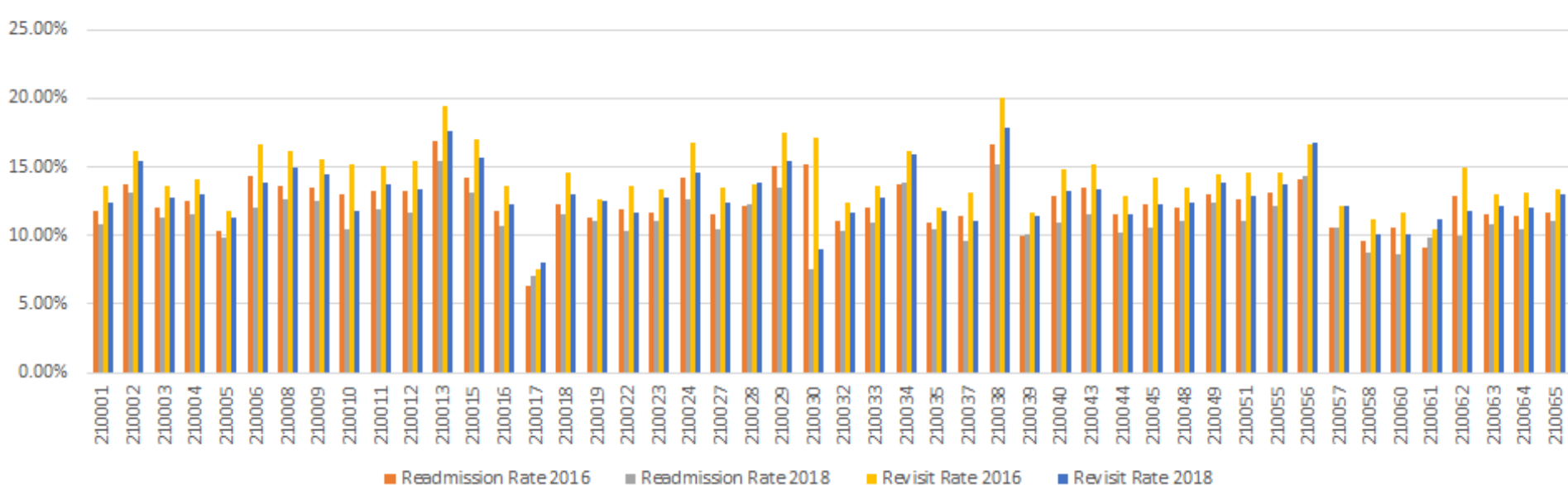
- What is acceptable readmission rate?
- How should we set attainment performance standards?
- Do we need to further adjust for social determinants of health?
- Is existing out of state adjustment adequate?

Quantifying OBS “Re-visits”

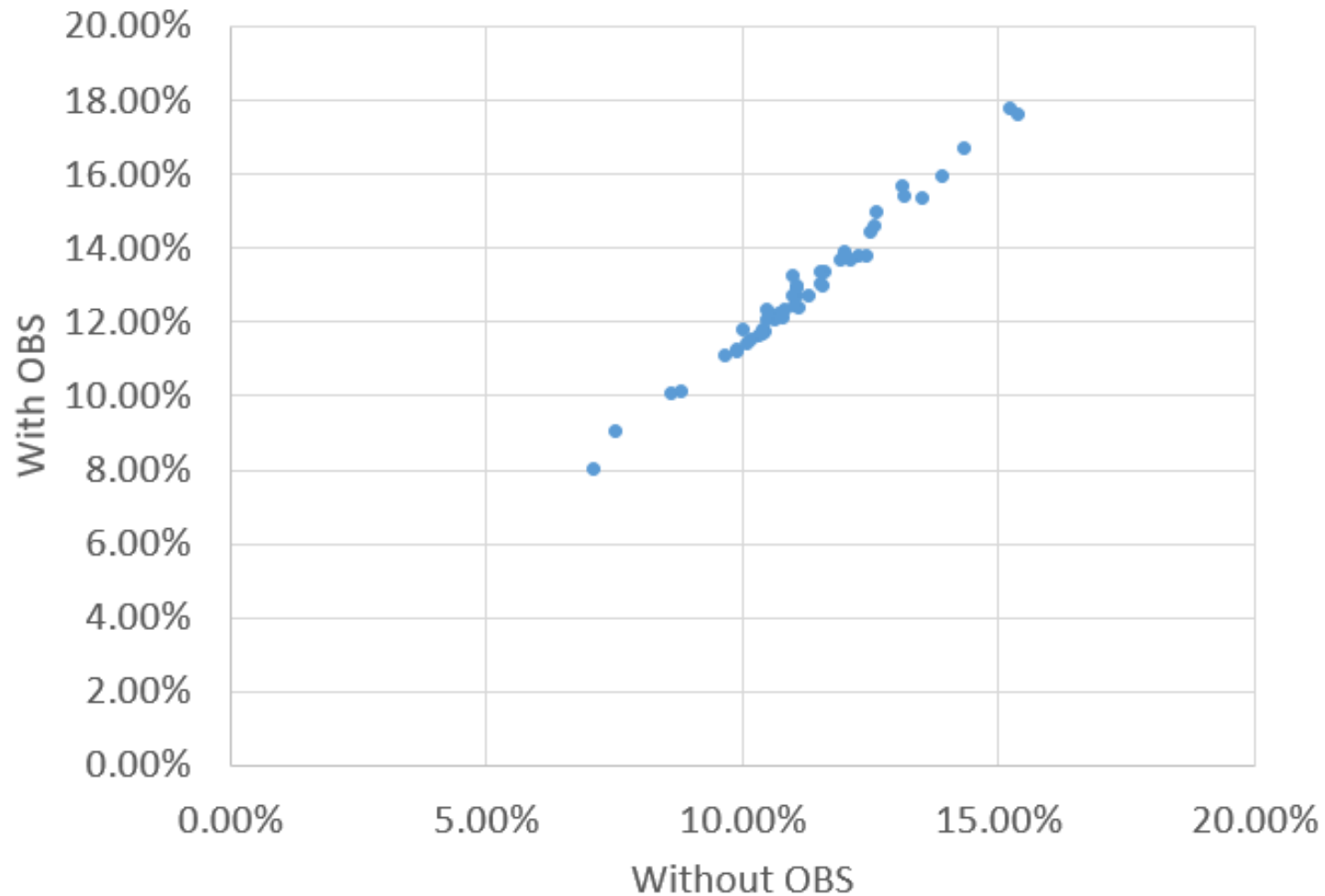
Readmissions + Observation Re-visits

- Analysis suggests that increases in readmissions with inclusion of observation re-visits with index admissions are within reason
- Rank-order correlation suggests heavily correlated
 - Outliers are not showing substantially irregular trends

Case-mix Adjusted Readmissions and Re-visits, 2016 and 2018



Scatterplot for 2018 With and Without Revisits



Readmissions + Observation Re-visits

- Wide range of increase in rate from readmission rate to readmission + observation re-visit rate
 - HOWEVER, increase is generally highly correlated with higher readmission rates

	2016	2017	2018
Rank-Order Correlation of Readm Rate and Revisit Rate	0.9909	0.9859	0.9858

- **Next steps:**
 - Consider review of Emergency Department visits
 - Generate ongoing monitoring report of Re-visits (OBS and ED stays) via EDAC Measure?
 - Also takes into account severity of readmission
 - Other?

Next Steps to create EDAC All-Payer Measure

- Use case-mix data to calculate excess days in acute care
- Adapt CMS methodology:
 - All-payer, all-cause vs. Medicare condition-specific
 - Case-mix adjust using APR-DRG SOI indirect standardization on historical time period (proposed FY 17 & FY 18)
 - Use same method for counting days (sum IP days for unplanned readmissions, sum observation hours and round to half day, ED visit = 0.5 days)
 - Will apply other inclusion/exclusion criteria when possible including considering survival time
 - Will seek clinical expertise on additional exclusions under all-cause measure

Social Determinants of Health (SDOH) - Update

NQF Panel Recommendation

Recommendations Related to NQF Criteria and Processes Related to SDS Adjustment

Recommendation 1: When there is a conceptual relationship (i.e., logical rationale or theory) between sociodemographic factors and outcomes or processes of care and empirical evidence (e.g., statistical analysis) that sociodemographic factors affect an outcome or process of care reflected in a performance measure:

- those sociodemographic factors should be included in risk adjustment of the performance score (using accepted guidelines for selecting risk factors) unless there are conceptual reasons or empirical evidence indicating that adjustment is unnecessary or inappropriate;

AND

- the performance measure specifications must also include specifications for stratification of a clinically-adjusted version of the measure based on the sociodemographic factors used in risk adjustment.

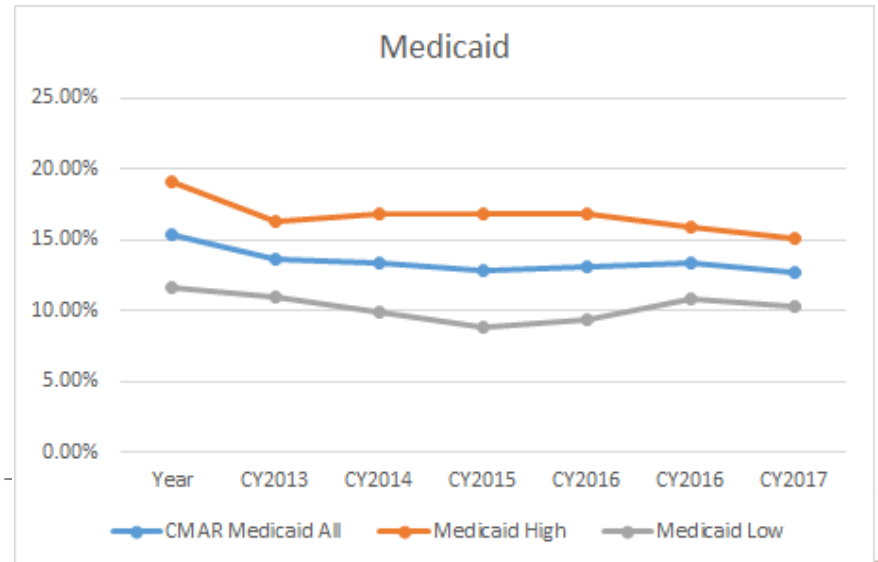
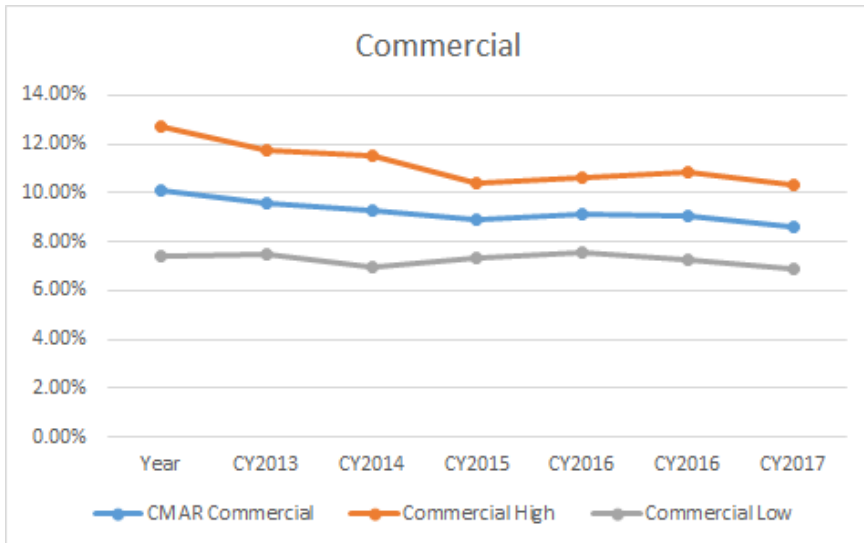
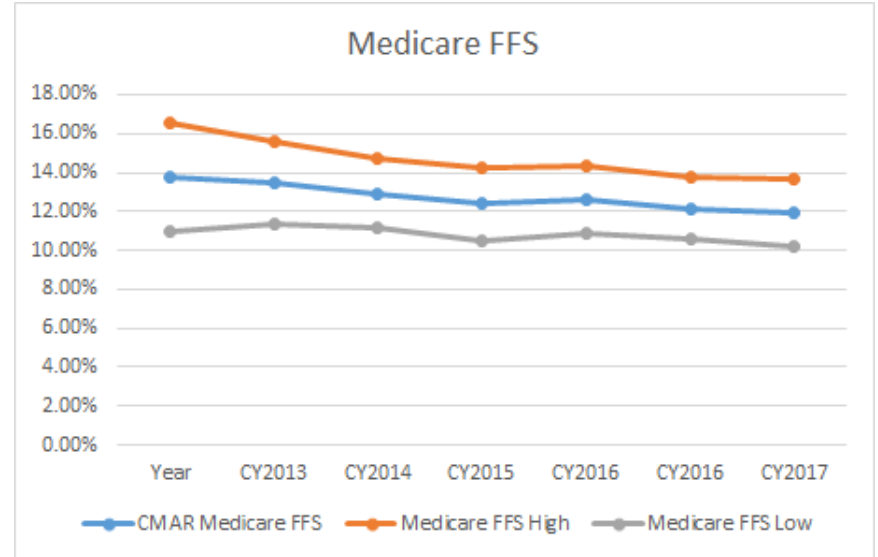
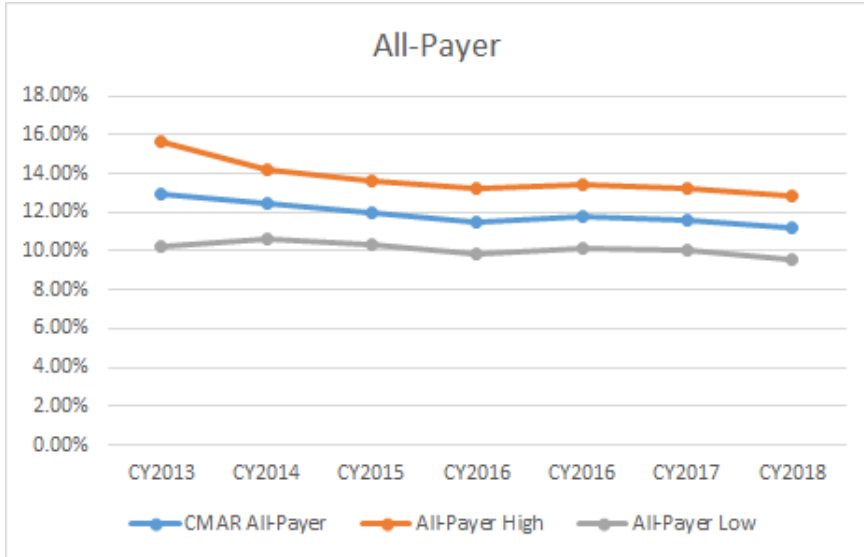
Update--Plan to present additional analyses at next meeting

- ▶ **Feedback from last subgroup meeting:**
 - ▶ Consider each factor separately (race, ADI, medicaid)
 - ▶ Examine within hospital variation in adversity to ensure sufficient spread for meaningful analysis of within hospital differences
 - ▶ Break race into additional categories
 - ▶ Standardize centering to ensure values in expected ranges
 - ▶ Consider use of confidence intervals
 - ▶ How will this be used? How to best display data?

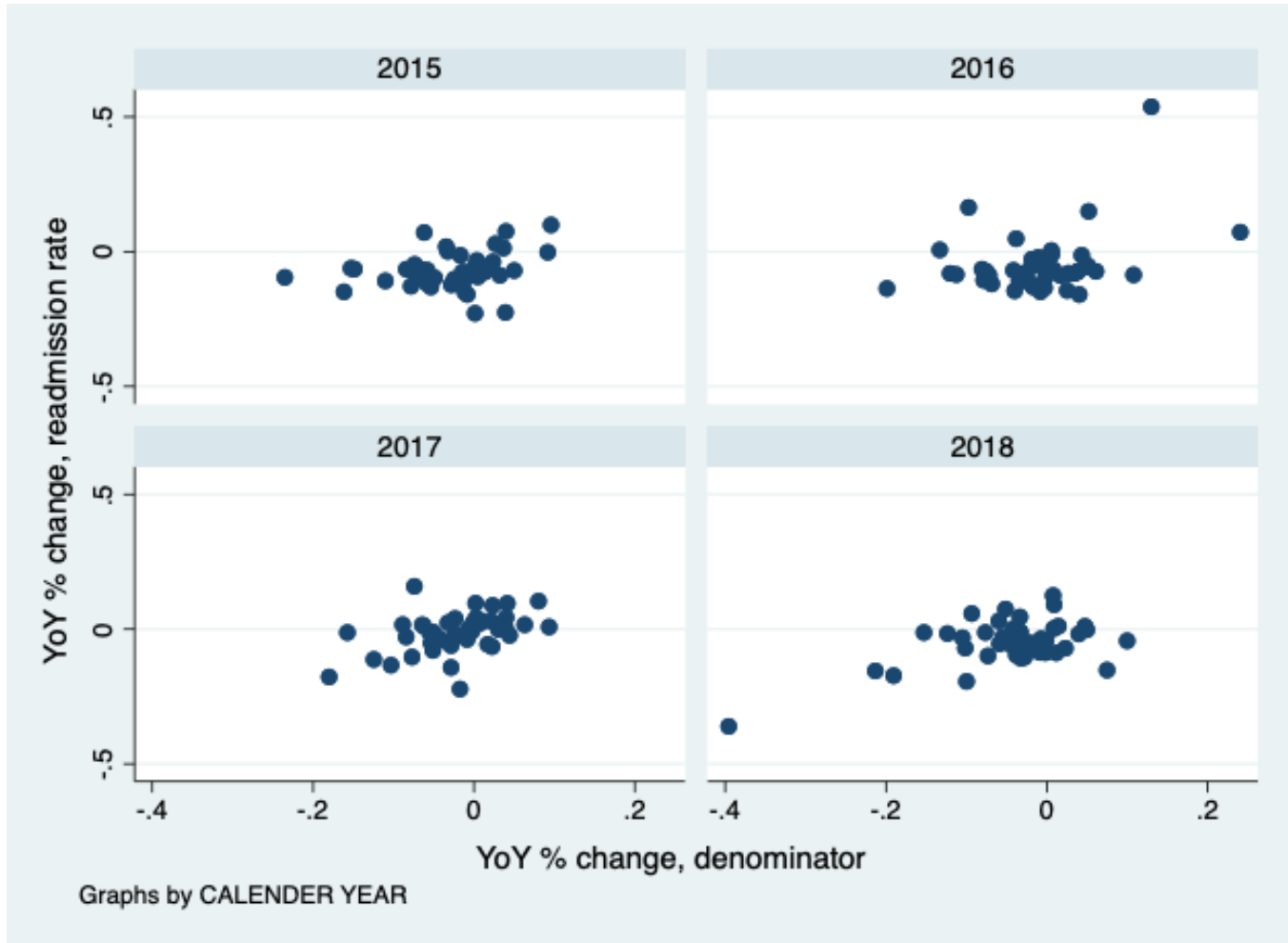
CY 2019	Develop measure of disadvantage/adversity and methodology to assess within hospital disparity
CY 2020 (with improvement)	Report on within hospital disparity (monitor) and refine methodology/reporting if needed; consider goal for disparity reduction
CY 2021	Include within hospital disparity measure in RRIP program at small domain weight for improvement

Shrinking Denominator?

Standard Deviation of Case-mix Adjusted RR by Payer



Denominator Shrinkage Not Associated with Worse RRIP Performance



Spotlight on: per capita Utilization

Per Capita Utilization

- ▶ Focuses on the outcome of interest among a whole community or population
- ▶ Commonly used in managed care, where the focus is on the overall health of a population
 - ▶ Examples: per 1000 Medicare beneficiaries, per 1000 adults, etc.
- ▶ May indicate effective care and prevention in the population or community, rather than the clinical quality of a health service
 - ▶ In contrast to a per discharge/procedure measure which focuses on the outcomes of patients receiving a particular service

Per Capita PQIs

- ▶ HSCRC uses AHRQ's Prevention Quality Indicators (PQIs) in the Potentially Avoidable Utilization (PAU) Savings Policy
 - ▶ PQIs are defined as admissions for ambulatory-care sensitive conditions that may be prevented with effective primary care and population health
- ▶ Starting in RY2021, HSCRC plans to measure PQIs on a per capita basis.
 - ▶ Previously HSCRC measured PQIs on a revenue-basis
 - ▶ Per Capita better aligns with how AHRQ intended the measures and the population health focus of the TCOC model

Per Capita PQIs (methodology)

- ▶ How do you determine which hospital is responsible for which PQI?
 - ▶ No longer attributing to hospital where PQI occurred
 - ▶ Per discussions within PAU Subgroup and PMWG
- ▶ Base first on Medicare Performance Adjustment (MPA) attribution, then all-payer geographic attribution
 - ▶ MPA: Attribute Medicare beneficiaries to PCPs based on primary care use, and then link providers with hospitals based on existing relationships.
 - ▶ Beneficiaries not linked to a primary care provider are attributed based on geography* (<15% of PQIs).
 - ▶ Geographic: Attribute PQIs and population to one or more hospitals based on patient geography*

Per capita as related to readmissions

- ▶ Readmissions are generally reported as a rate of discharge, not as per capita
 - ▶ Readmissions only occur after an index admission, so only people with an admission are at risk for a readmission
 - ▶ Per capita would include both people at risk and not at risk in the denominator, although could consider geographic with denominator of those who had been admitted
- ▶ However, some concern that if the risk profile of hospitalized patients increases over time, readmission rates could look worse
 - ▶ As noted earlier in this presentation, HSCRC believes increased risk profile is acknowledged in case-mix adjustment (i.e., no shrinking denominator concerns)

Challenges in applying per capita methodology to readmissions for PAU

- ▶ Preference towards maintaining the index admission hospital/readmission link
 - ▶ Hospitals have set up systems of care coordination for discharged patients to prevent readmissions
 - ▶ Concerns that readmissions often reflect the initial hospital care rather than preventive or community health
- ▶ About 20% of patients go to a hospital not located within their geography* for both index admission and readmission

*Geography as defined by Primary Service Area-Plus (PSAP): Built on zip codes listed in hospital GBR agreements with some adjustments

PAU readmissions

- ▶ Potentially could implement ‘direct with geographic’ approach
 - ▶ Uses the index hospital as the link and geography as the denominator.
 - ▶ Focuses PAU readmissions measure on discharge planning and follow-up within a hospital’s community
 - ▶ Responsive to hospital and clinical concerns of sending vs. receiving hospital
 - ▶ Could consider geographical denominator of those who have been admitted to your hospital
 - ▶ Excludes readmits occurring outside of index hospital geography
 - ▶ Limited comprehensiveness may be an acceptable tradeoff, especially given all readmissions included in RRIP

Next meeting and conclusion

Next meeting is **Tuesday, Jul 29**

Topics may include:

- ▶ Refinement of Improvement/Attainment Methodology
- ▶ Benchmarking Update