Maryland Hospital Acquired Conditions Program
RY 2020 Draft Recommendation

1/10/2018

HSCRC
Health Services Cost Review Commission

RY 2020 DRAFT MHAC Policy

- **No vote is required at this time**
- Staff proposes minimal changes for RY 2020:
  - Continue to use established features of the MHAC program in its final year of operation.
  - Continue to set the maximum penalty at 2% and the maximum reward at 1% of hospital inpatient revenue.
- Updates to RY 2020 MHAC Policy:
  - Raise the minimum number of discharges required for pay-for-performance evaluation in each APR-DRG SOI category from 2 discharges to 30 discharges.
  - Exclude low frequency APR-DRG-PPC groupings from pay-for-performance.
  - Establish a subgroup that will consider Hospital-acquired Complications in RY 2021 and beyond.

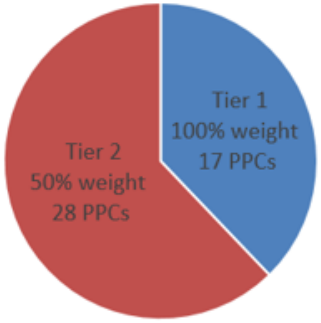
MHAC Program - Background

- Based on **Potentially Preventable Complications** classification system developed by 3M, which initially included 65 PPC measures.
- PPCs, like national HAC measures, **rely on present-on-admission (POA)** codes to identify post-admission complications.
- Reliance on POA codes - improvement could be achieved through better documentation and coding, as opposed to real clinical improvement.
  - HSCRC has employed targeted and randomized audits to ensure the integrity of the data in each year of the program.

MHAC Program Current Methodology

Potentially Preventable Complication Measures

RY 2019: 43 Individual PPCs and 2 Combos (w/6 PPCs) included in payment program



Global Exclusions:

- Palliative care
- Discharges >6 PPCs
- Apr-DRG SOI cells with less than 2 at-risk discharges

Hospital PPC Exclusions:

- <10 at-risk discharges
- <1 expected PPC

Case-Mix Adjustment and Standardized Scores

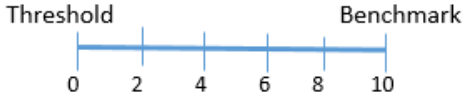
PPC scores (0-10 points) calculated using observed to expected ratios.

Expected calculated by applying statewide average PPC rates by APR-DRG-SOI to hospitals case-mix (i.e., indirect standardization).

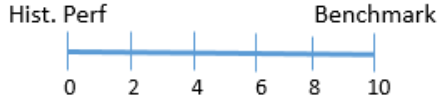
Threshold: State Median (O/E=1)

Benchmark: Top performing hospitals w/ 25% discharges

Attainment Points:



Improvement Points:



Final Points are Better of Improvement or Attainment

Hospital MHAC Score & Revenue Adjustments

Hospital MHAC Score is Sum of Earned Points / Possible Points with Tier Weights Applied

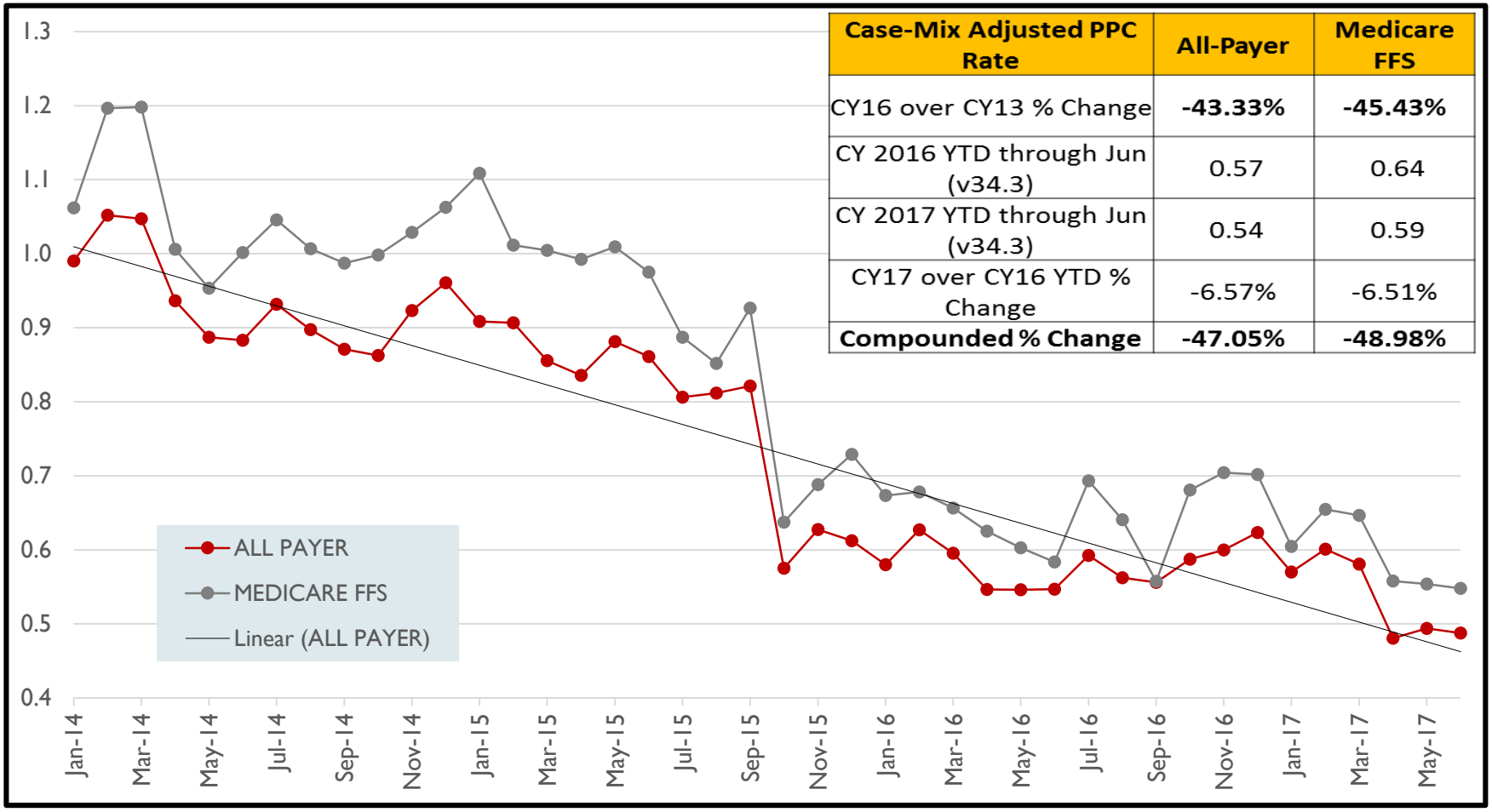
Scores Range from 0-100%, with revenue neutral zone 45-55%

Max Penalty 2% & Reward +1%

Abbreviated Preset Scale	MHAC Score	Financial Adjustment
Max Penalty	**0%**	**-2.00%**
	10%	-1.56%
	20%	-1.11%
	30%	-0.67%
	40%	-0.22%
Penalty/Reward Cut Point (Range)	**45-55%**	**0.00%**
	60%	0.11%
	70%	0.33%
	80%	0.56%
	90%	0.78%
Max Reward	**100%**	**1.00%**

MHAC Program Statewide Performance

Case-Mix Adjusted Cumulative PPC Rates as of June 2017



Case-Mix Adjusted PPC Rate	All-Payer	Medicare FFS
CY16 over CY13 % Change	**-43.33%**	**-45.43%**
CY 2016 YTD through Jun (v34.3)	0.57	0.64
CY 2017 YTD through Jun (v34.3)	0.54	0.59
CY17 over CY16 YTD % Change	-6.57%	-6.51%
Compounded % Change	**-47.05%**	**-48.98%**

MHAC Program Concern

MHAC may penalize random variation in PPC occurrence, as opposed to poor performance, due to an **increasing number of APR-DRG SOI cells with a normative value of zero**

- Program has a very granular indirect standardization
  - Complications are measured at the diagnosis and severity of illness level (APR-DRG SOI), of which there are approximately 1,200 combinations *before* considering clinical logic and PPC variation.

- Program rebases every year
  - Assesses observed complications using a more recent baseline, which is only one year of evaluation that has multiple years of improvement built into it

Zero norm issue has always existed in MHAC, but has increased over time

RY	Zero Norms	Total Cells	% Zero of Total Cells	Cells with Norms	% Zero of Cells with Norms
RY 2015	40,418	80,916	49.95%	50,626	**79.84%**
RY 2020	33,503	57,150	58.62%	37,969	**88.24%**

Potential Solutions to Concern

- 3M proposed **extending the base period** and **raising the minimum number** of discharges at-risk from 2 to 30 discharges per APR-DRG SOI cell.
  - Reduced the number of cells with a norm of zero from **89% → 82%.**
- UMMS/JHHS proposed focusing on the APR-DRG and PPC groupings, where at least 80% of the complications occur (similar to the approach used to measure mortality)
  - In combination with raising at-risk discharges from 2 to 30, reduced the number of cells with a norm of zero from **89% → 70%.**
- Other proposals staff considered, not modeled in draft policy:
  - Adjust the **revenue adjustment scale** from a linear scale to a quadratic or exponential scale;
  - Move away from indirect standardization for **case-mix adjustment**

80% APR-DRG-PPC Groupings

- Proposal maintains current methodology but restricts P4P program assessment to the types of patients and PPCs where at least 80% of complications occur.
- Advantages
  - Reduces the number of cells with a normative value of zero
  - Aligns P4P incentives with quality improvement initiatives, which may increase provider engagement
- Disadvantages
  - Removes APR-DRGs and PPCs where up to 20% of PPCs occur
  - Does not match waiver test, under which MD must continue to report PPCs for all patients

Example 80% Restriction

- APR-DRG-PPC Groupings: Each combination of APR-DRG (328 in total) and clinically eligible PPC included in payment program (44 PPC/PPC combos in total).

APR-DRG	PPC	Sorted by Observed Counts (highest to lowest)	% of Total Observed PPCs	Cumulative Percent
720	14	45	23%	23%
181	39	36	18%	41%
540	59	25	13%	53%
194	14	22	11%	64%
720	21	21	11%	75%
230	42	11	6%	80%
230	9	11	6%	86%
540	60	9	5%	90%
560	59	9	5%	95%
166	8	6	3%	98%
190	52	3	2%	99%
201	6	2	1%	100%
Observed PPCs across all groupings		200		

MHAC Modeling

- **Model 1**:
  - Raise minimum number of at-risk discharges per APR-DRG SOI from 2 to 30 discharges

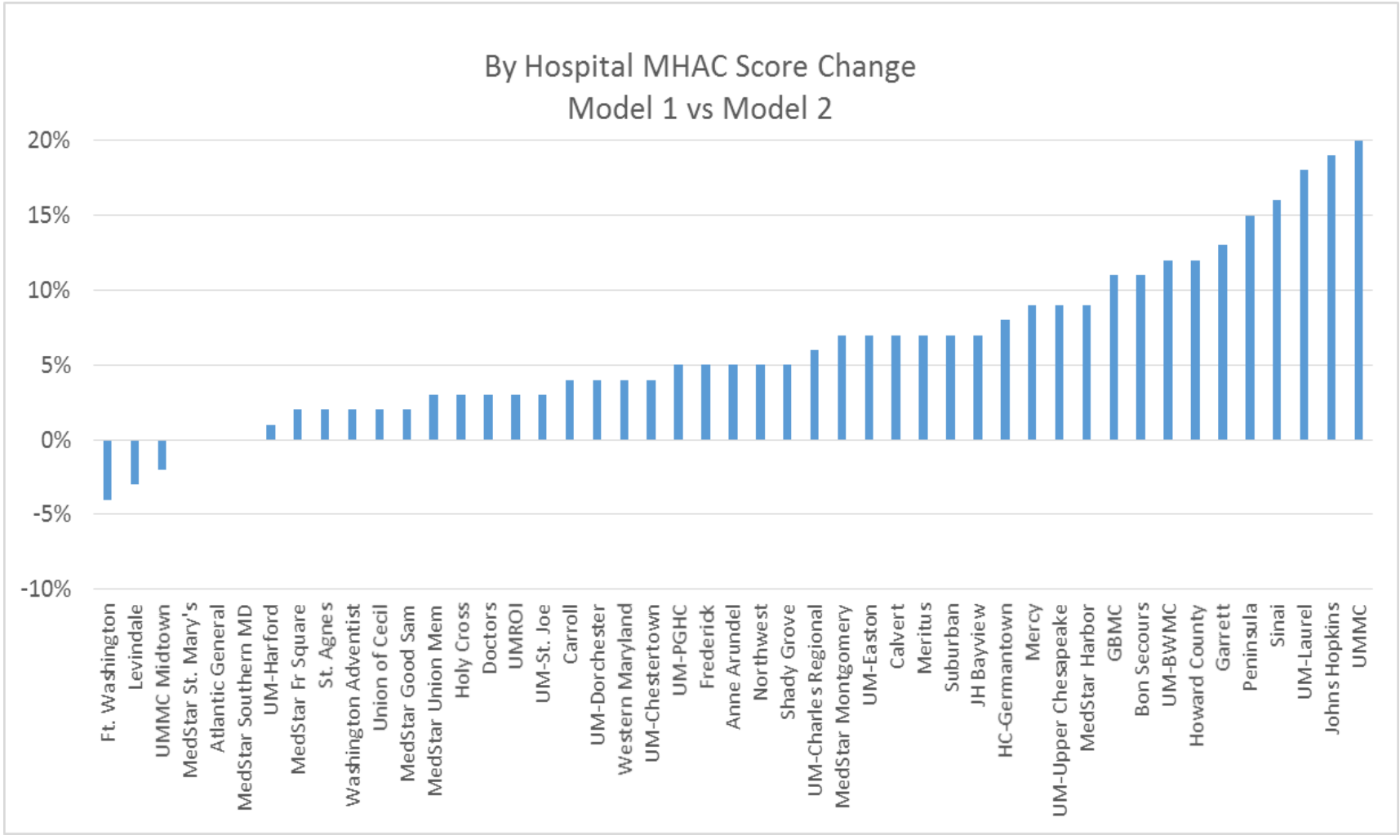
- **Model 2:**
  - Raise minimum number of at-risk discharges per APR-DRG SOI cell from 2 to 30 discharges
  - Restrict to the APR-DRG-PPC groupings where at least 80% of PPCs occur in the base to reduce number of cells with a norm of zero in the base period,

MHAC Modeling Results

Model #	Model Description	Statewide Total At-Risk Discharges	Statewide Total PPCs	PPC Rate per 1,000 Discharges	Cells w/ Norms >0	Zero Norms	% Zero Norm
1	>30 change only	13,220,025	8,688	0.66	5,173	43,676	89%
2	>30 + 80% APR-DRG-PPC Combos	5,405,445	7,429	1.37	3,190	7,437	70%

- Model 2 retains 85.5% of eligible PPCs in base period.
- Other areas staff evaluated for Model 1 and Model 2 include:
  - The impact on benchmarks
  - PPC counts by hospital
  - Attainment-only scores, and
  - Associated revenue adjustments.

MHAC **Scores** – Model 1 → Model 2

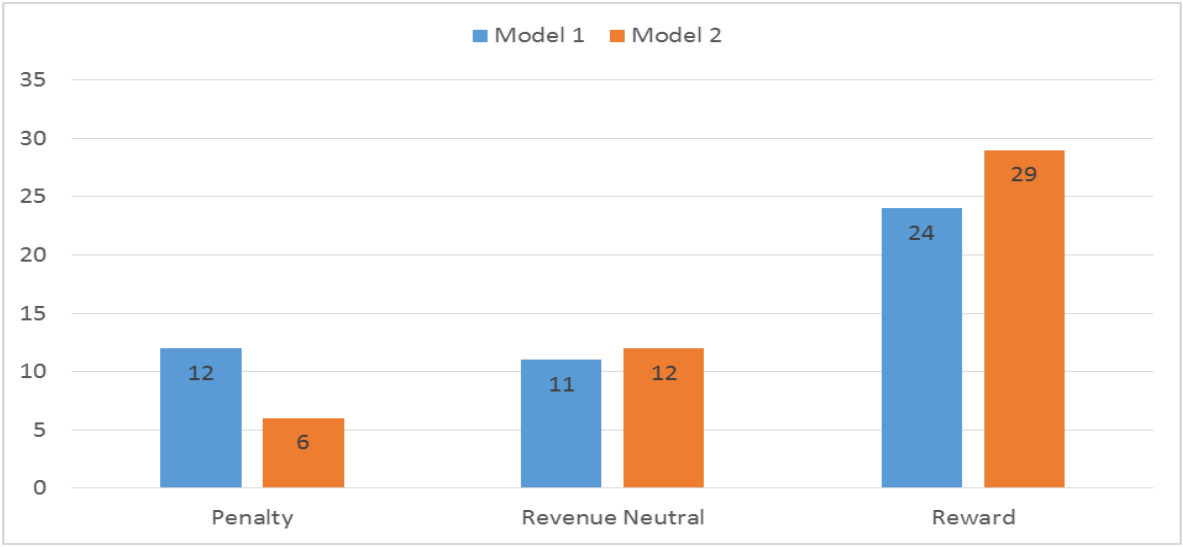


Scores are calculated using better of attainment/improvement with RY 2019 Base (Oct15-Sep16); RY 2019 Performance YTD (Jan17-Sep17)

MHAC **Revenue Adjustments** – Model 1 → Model 2

Model #	Model Description	Statewide Penalties	Statewide Rewards	Net Revenue Adjustments
1	>30 At-Risk Discharges	-13.5 M	6.1 M	-7.3 M
2	>30 + 80% APR-DRG-PPC Groupings	-3.7 M	14.1 M	+10.5 M

Count of Hospitals in the Penalty, Reward, or Revenue Neutral Zone by Model



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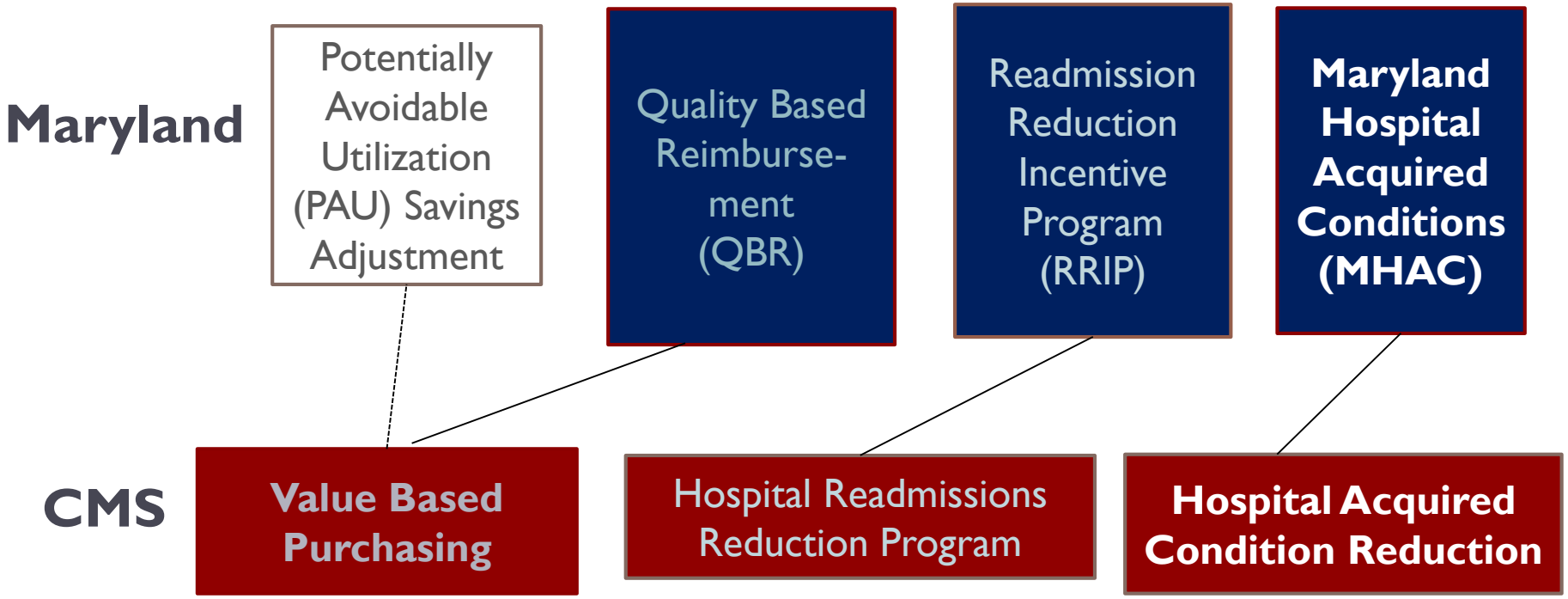
RY 2020 MHAC Draft Recommendations

- Continue to use established features of the MHAC program in its final year of operation;
- Set the maximum penalty at 2% and the maximum reward at 1% of hospital inpatient revenue;
- Raise the minimum number of discharges required for pay-for-performance evaluation in each APR-DRG SOI category from 2 discharges to 30 discharges **(NEW!);**
- Exclude low frequency APR-DRG-PPC groupings from pay-for-performance **(NEW!);** and
- Establish a complications subgroup to the Performance Measurement Workgroup **(NEW!).**

Appendix

MHAC Program is One of Three Core Performance-Based Payment Programs

Maryland Programs must: be comparable to Federal programs; have aggressive and progressive annual targets; meet annual potential and realized at-risk targets; and meet contractually obligated targets, where specified, by end of 2018.



Hospital Acquired Conditions (HACs)

- Defined as harmful events that develop *after* the patient is admitted to the hospital and may result from processes of care and treatment rather than from the natural progression of the underlying illness.
- For example, an adverse drug reaction or an infection at the site of a surgery are referred to as hospital-acquired conditions or complications. *
- HACs can lead to:
  - 1) poor patient outcomes, including longer hospital stays, permanent harm, and death, and
  - 2) increased costs.

*Cassidy, A. (2015, August 6). Health Policy Brief: Medicare's Hospital-Acquired Condition Reduction Program. *Health Affairs*. Retrieved from http://www.healthaffairs.org/healthpolicybriefs/brief.php?brief_id=142

National Medicare Efforts Targeting HACs- Background

- CMS operates two programs targeting HACs
  - DRA HAC Program- beginning in Federal Fiscal Year 2009 (FFY 2009), CMS stopped assigning patients to higher-paying DRGs for certain conditions if they were *not* present on the patient's admission,
  - ACA Hospital-Acquired Condition Reduction Program (HACRP) - beginning in FFY 2015, the HACRP focused on a narrower list of complications in two domains,^ with penalties applied to worst 25% of hospitals based on relative ranking.

HACRP Domain 1 – Recalibrated Patient Safety Indicator (PSI) measure:
Recalibrated PSI 90 Composite
HACRP Domain 2 – National Healthcare Safety Network (NHSN) Healthcare-Associated Infection (HAI) measures:*
Central Line-Associated Bloodstream Infection (CLABSI)
Catheter-Associated Urinary Tract Infection (CAUTI)
Surgical Site Infection (SSI) – colon and hysterectomy
Methicillin-resistant Staphylococcus aureus (MRSA) Bacteremia
Clostridium Difficile Infection (CDI)

*Measures also included in the QBR program

^Of note, the measures used for the HACRP program are the same measures used under the Safety Domain of the CMS Value Based Purchasing (VBP) and the Maryland Quality Based Reimbursement (QBR) Programs

Maryland HAC (MHAC) Program

- Initial methodology estimated the percentage of inpatient revenue associated with excess numbers of PPCs, penalized hospitals that had higher estimated PPC costs
- Beginning in RY 2016, methodology fundamentally changed to evaluate hospital performance based on case-mix adjusted PPC rates rather than excess PPC costs.
- In RY 2019, there were two major changes to the revenue adjustment scale:
  - Removed the two-scale approach, whereby achievement of a minimum statewide reduction goal determined the scale (i.e. contingent scaling).
  - Shifted from using the statewide average performance to determine the revenue adjustment scale to instead using the full range of scores (0% to 100%), with a revenue neutral zone between 45% and 55%.

Rate Year 2020 MHAC Timeline

- Base Period = **FY 2017**
  - Used for normative values for case-mix adjustment
- Performance Period = **CY 2018**
- Grouper Version: **3M APR-DRG and PPC Grouper Version 35**

Rate 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																		
MHAC: Better of Attainment or Improvement			MHAC Base Period (Proposed)												Rate Year Impacted by MHAC Results			
									MHAC Performance Period: Better of Attainment or Improvement (Proposed)									

Next Steps: Complications under the New Model

- HSCRC procured a **vendor to convene a sub-group** of clinical and performance measurement experts.
  - Sub-group will build plan to measure and report complications under the TCOC Model
    - Scope will include review of potential all-payer, clinically valid complication measures, including risk adjustment
- Anticipated **timeline**:
  - Sub-group will meet beginning in early 2018
  - Sub-group will recommend measures options to the PMWG by Summer/early Fall 2018
  - PMWG to develop payment adjustment methodology Fall 2018