maryland
health services
cost review commission

Third Volume Workgroup Meeting

September 6, 2024

Agenda

- Workgroup Work Plan Update
- Stakeholder Feedback
- Repatriation Methodology
- CY 2023 Results
  - Implementation Discussion (Efficiency/Volume Efficacy)
- Implementation Considerations
- Variable Cost Factor Analysis
- Volume Scorecard Update

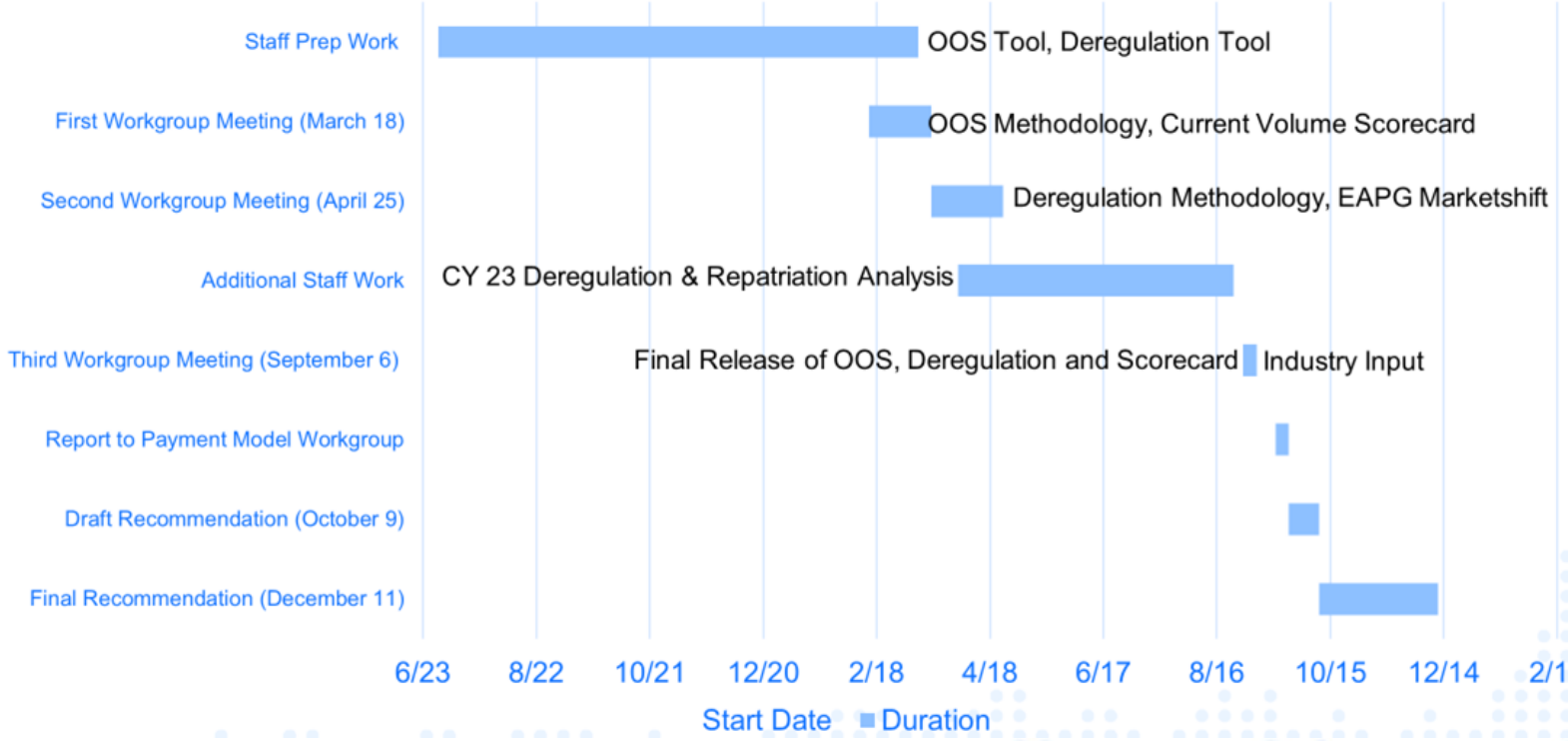
Global Budget Volume Policy Background

- The HSCRC adjusts global budgets for anticipated changes in demographics/volume patterns and observed shifts in the market
- To that end, the Commission implements the following volume adjustments:

Volume Adjustment	Approved Policy	Stand Alone	Purpose	Comment
Demographic Adjustment	X		Annual age adjusted population funding for in-state use rate growth	
Marketshift	X		Semi-annual adjustments for regulated market shifts (zero sum)	
Out-of-State			Annual adjustments for material changes to out-of-state volumes	Due to WG will use ECMADS
Deregulation			As needed reductions for observed shifts to unregulated settings	Delayed due to WG concerns
Repatriation			As needed adjustments for cross state border hospital shifts	New methodology requested by WG
Complexity and Innovation	X	X	Prospective funding to Academic Medical Centers for growth in unique quaternary services	
CDS-A	X	X	Funding for changes in volume for select drugs (only volume variable methodology)	

- Once the last remaining policies are established (with the Volume Scorecard), staff will reconsider with Commissioners any necessary modifications to volume policies.
  - Ex: New service lines independent of population growth

Revised Timeline for CY 2024 Volume Workgroup



Due to data delays as well as requests for Repatriation and VCF Analyses, staff extended the timeline

Stakeholder Feedback

Stakeholder Feedback

Item	Stakeholder Comment	Staff Response
Deregulation Backfilling	Concerns were raised regarding the use of service lines in deregulation, which due to isolated analyses could fail to account for backfilling (e.g., decreases in Minor Surgery are replaced with increases in Major Surgery)	Staff have completed analyses that consolidate clinically similar EAPGs across Major and Minor surgery and have not discovered a reduction in potential deregulation, suggesting the service lines are not failing to account for backfilling (see analysis on slide 7).
Deregulation of non-Ambulatory Surgical Center (ASC) Services	Concerns were raised that various procedure codes cannot be done in an ASC and thus scoring a potential deregulation adjustment lacks face validity	Staff have completed analyses that compare potential deregulation with HCPCS codes outlined on the CMS "Surgical Procedures to be Excluded from Payment in ASCs for CY 2024." In light of identified overlap, stall will utilize this list each year to reduce cases that can be considered potential deregulation (see analysis on slide 8).
Average Charge for Deregulation	Staff raised concern that prior use of service line average charge may have been inappropriate	Small coefficient of variation for service line average charges suggests that there is no need to utilize EAPG average charge
Reregulation	Stakeholder noted that staff should consider what it means if a hospital had unrecognized growth in deregulation tool, e.g., should there be an associated revenue adjustment	Staff are not going to advance to Commissioners a reregulation adjustment as part of the deregulation methodology for the following reasons: 1) it is likely unrecognized growth has been funded by the Demographic Adjustment 2) generally hospitals have received more than adequate reimbursement for changes in volume 3) a reregulation adjustment would be akin to rewarding hospital for moving services up the continuum of care and 4) to the degree that a hospital has brought services into regulated space from non-Maryland competitors, staff will address that through a repatriation policy.

Deregulation Backfilling: Major and Minor Surgery Consolidation Analysis

- 57 EAPGs with Severity Levels (e.g., ORAL AND MAXILLOFACIAL PROCEDURES, Levels 1-4), which could map to Major or Minor Surgery, were collapsed into 25 EAPGs
  - Staff selected Level EAPGs because it lent itself to clinical mapping aggregation AND it was a representative sample ($14.4M out of total $56.9M statewide deregulation in CY 2022)
  - Consolidation occurred in Medicare TCOC dataset and Unrecognized Marketshift
  - Deregulation analysis was rerun with consolidated EAPGs
- Original deregulation methodology quantified $14.4M for Level EAPGs when not consolidated; under consolidation the potential deregulation was $17.7M
  - Statewide increase suggests consolidation undermines granular approach of EAPG deregulation while not addressing potential backfilling concern
  - 11 hospitals did see a net decrease in potential deregulation ($545k), but average variance of $49k is immaterial and potentially indicative of random variation

Deregulation of Non-ASC Services Analysis

- To assess the potential overlap between EAPGs identified as potential deregulation and HCPCS codes that are outlined on the CMS "Surgical Procedures to be Excluded from Payment in ASCs for CY 2024," staff used the following method:
  a. Stratify major, minor and cardiovascular service line EAPGs from CY 2022 statewide potential deregulation ($41.9M out of $56.9M), as the cases represent a preponderance of the data and are the most susceptible to delivery in an ASC setting
  b. For each hospital, identify the high weighted CPT for each EAPG using the patient level case-mix data set so as to compare against the ASC Exclusion List
     - EAPGs could have more than one high weight CPT
  c. Identify overlap between high weight CPT and ASC Exclusion List ($13M)
  d. Reduce overlap by removing all CPTs in the data set that have description of "unlisted" or have a "99" at the end of the code ($5.4M resulting in $7.7M potential dereg identified on ASC Exclusion List)
  e. Reduce overlap further by removing EAPGs with a high weighted CPT that maps to the non-ASC list but also have occurrences where the EAPG maps to a high weighted CPT that can received reimbursement in an ASC (results in a total of $65k in potential dereg)

Deregulation of Non-ASC Services Analysis cont.

- While staff's analysis can only definitively quantify $65k of EAPG potential dereg that is not eligible for reimbursement in an ASC, which is quite insignificant, staff cannot rule out that potentially $7.7M is ineligible for reimbursement.

- As such, staff recommend that after running the deregulation tool each year, an additional analysis will be done to remove from "potential deregulation" all cases where the associated high weight CPT maps to the current ASC Exclusion list
  - Will be done by hospital
  - Exclusion will not be extended to CPT's with a description of "Unlisted" or "99" at the end of the code.

- As previously indicated, hospitals may still bring forward additional concerns about identified deregulation once a dollar amount is outlined by staff, but the burden of proof will fall on the hospital to disprove that the scored deregulation is inappropriate prior to the next rate file issuance.

Repatriation Methodology

Repatriation Methodology

- Data
  - Medicare TCOC Claims Data for non-Maryland facilities (only includes border states and DC)
    - 2019 Baseline, 2023 Performance Period
    - Unlike Deregulation, will include inpatient and outpatient services
    - Grouped all non-Maryland facilities into regions (e.g., Pennsylvania vs. D.C.) for ease of analysis and to remove potential scoring of marketshifts outside of Maryland
  - Medicare TCOC Claims Data for Maryland facilities
    - Will require extrapolation to yield all-payer Unit of Analysis
  - ECMADs at the Service Line level
  - Geography is based on patient's county due to availability of data
  - Average charge is based on hospital specific service line from regular marketshift
- Evaluation
  - Marketshift Assessment, but assessment is always Maryland facilities compared to non-Maryland facilities
  - Will reconcile to unrecognized growth in Regular Marketshift (ECMADS, not charges)
  - Unlike Deregulation, it will be a two-sided assessment to potentially capture "expatriation" that cannot be identified in a facility to non-facility assessment

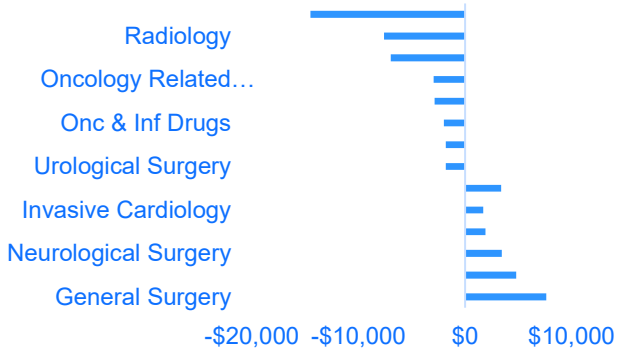
Repatriation Example (Cardiology, Allegany County)

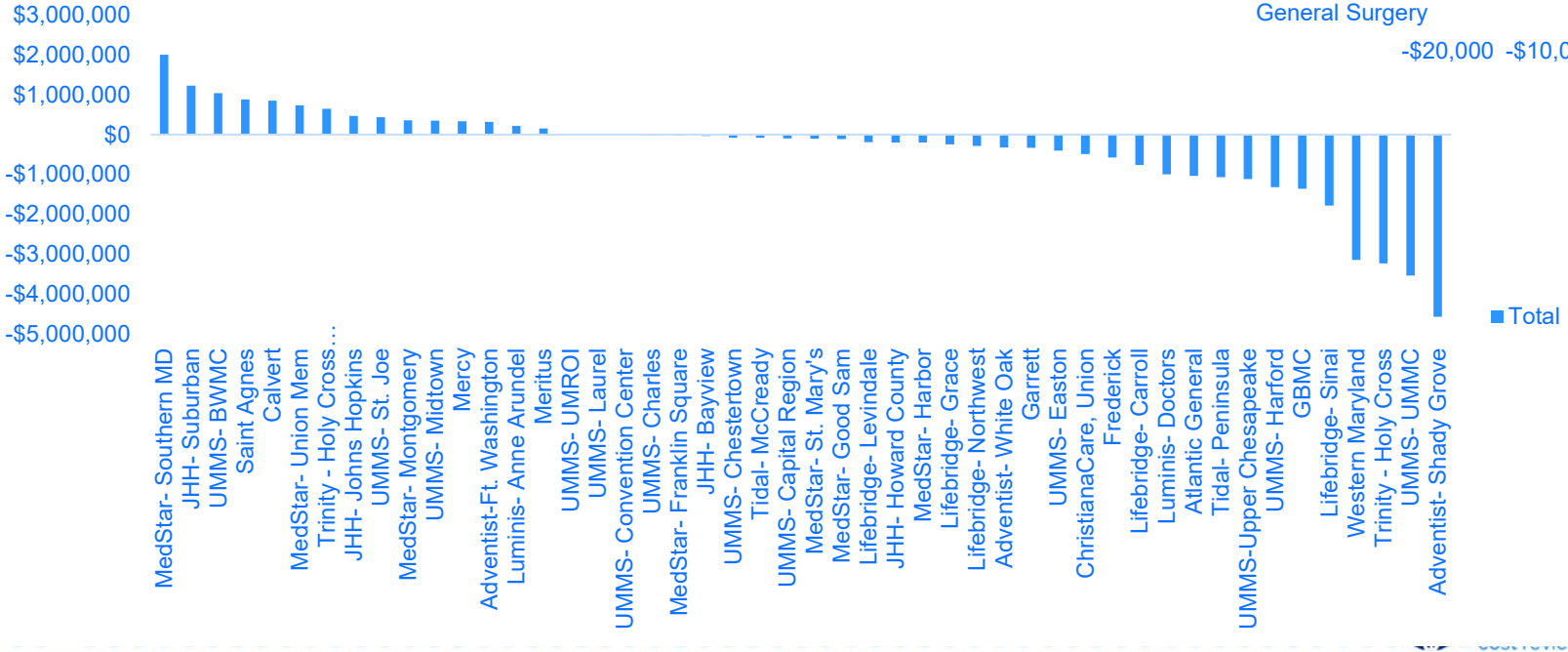
Hospital	ECMAD Change	MD Net Change	Non-Maryland Net Change	Eligible for MS	Proportion of Shift	Medicare FFS MS	Medicare FFS %	Allpayer MS	Unrecognized ECMADS	Repatriation (Expatriation)	Average Charge	Repatriation (Expatriation) Adjustment
Algebra>>>>	A=CY23 ECMADS - CY 2019 ECMADS	B=∑A(Maryland)	C=∑A(Border States)	D= Minimum of Absolute Value for B & C	E=A/(B or C)	F=KXD	G = 2019 or 2023 Med FFS % or 1	H=F/G	I = CY 2022 + CY 2023 Unrecognized ECMADS	J = Minimim of H or I if Positive, Maximum if Negative	K= 2023 or 2019 Average Charge	L=J X K X 50%
Western Maryland	49.72	42.92	-0.69	0.69	115.84%	0.80	70%	1.13	3.38	1.13	$19,015	$10,787
Meritus	3.15	42.92	-0.69	0.69	7.34%	0.05	100%	0.05	(0.32)	-	$16,096	$0
Frederick	1.13	42.92	-0.69	0.69	2.63%	0.02	100%	0.02	-	-	$17,147	$0
Calvert	0.6	42.92	-0.69	0.69	1.40%	0.01	100%	0.01	-	-	$15,554	$0
UMMS- UMMC	-0.37	42.92	-0.69	0.69	-0.86%	(0.01)	30%	(0.02)	-	-	$26,039	$0
GBMC	-0.47	42.92	-0.69	0.69	-1.10%	(0.01)	100%	(0.01)	(0.08)	(0.01)	$17,946	-$68
JHH- Howard County	-0.48	42.92	-0.69	0.69	-1.12%	(0.01)	100%	(0.01)	-	-	$13,596	$0
Lifebridge- Northwest	-0.5	42.92	-0.69	0.69	-1.16%	(0.01)	100%	(0.01)	-	-	$16,523	$0
UMMS- Charles	-0.56	42.92	-0.69	0.69	-1.30%	(0.01)	100%	(0.01)	-	-	$15,504	$0
MedStar- Southern MD	-0.76	42.92	-0.69	0.69	-1.77%	(0.01)	100%	(0.01)	(0.11)	(0.01)	$17,611	-$108
JHH- Bayview	-0.87	42.92	-0.69	0.69	-2.03%	(0.01)	100%	(0.01)	-	-	$23,417	$0
Trinity - Holy Cross Germantown	-1.35	42.92	-0.69	0.69	-3.15%	(0.02)	100%	(0.02)	-	-	$12,419	$0
Saint Agnes	-1.46	42.92	-0.69	0.69	-3.40%	(0.02)	100%	(0.02)	-	-	$24,802	$0
MedStar- Harbor	-1.51	42.92	-0.69	0.69	-3.52%	(0.02)	100%	(0.02)	-	-	$18,234	$0
Garrett	-1.53	42.92	-0.69	0.69	-3.56%	(0.02)	82%	(0.03)	-	-	$20,097	$0
JHH- Johns Hopkins	-1.82	42.92	-0.69	0.69	-4.24%	(0.03)	9%	(0.33)	(0.38)	(0.33)	$31,537	-$5,177
WV	*6.16*	*42.92*	*-0.69*	0.69	-892.75%	(6.16)	*100%*	(6.16)	-	-	-	$0
PA	*5.42*	*42.92*	*-0.69*	0.69	-785.51%	(5.42)	*100%*	(5.42)	-	-	-	$0
DE	*1.86*	*42.92*	*-0.69*	0.69	-269.57%	(1.86)	*100%*	(1.86)	-	-	-	$0
DC	*-3.72*	*42.92*	*-0.69*	0.69	539.13%	3.72	*100%*	3.72	-	-	-	$0
VA	*-10.41*	*42.92*	*-0.69*	0.69	1508.70%	10.41	*100%*	10.41	-	-	-	$0

- Above example outlines algebra for Repatriation
- Staff are working with data team to determine what level of distribution is allowed

2023 Repatriation (Expatriation) Results

Individual hospital adjustments were relatively small. Statewide repatriation modelling yielded $10M, $27.8M in expatriation (Net $17.7M)





Surgical services mostly drove repatriation. Imaging and oncology drove expatriation.

CY 2023 Results

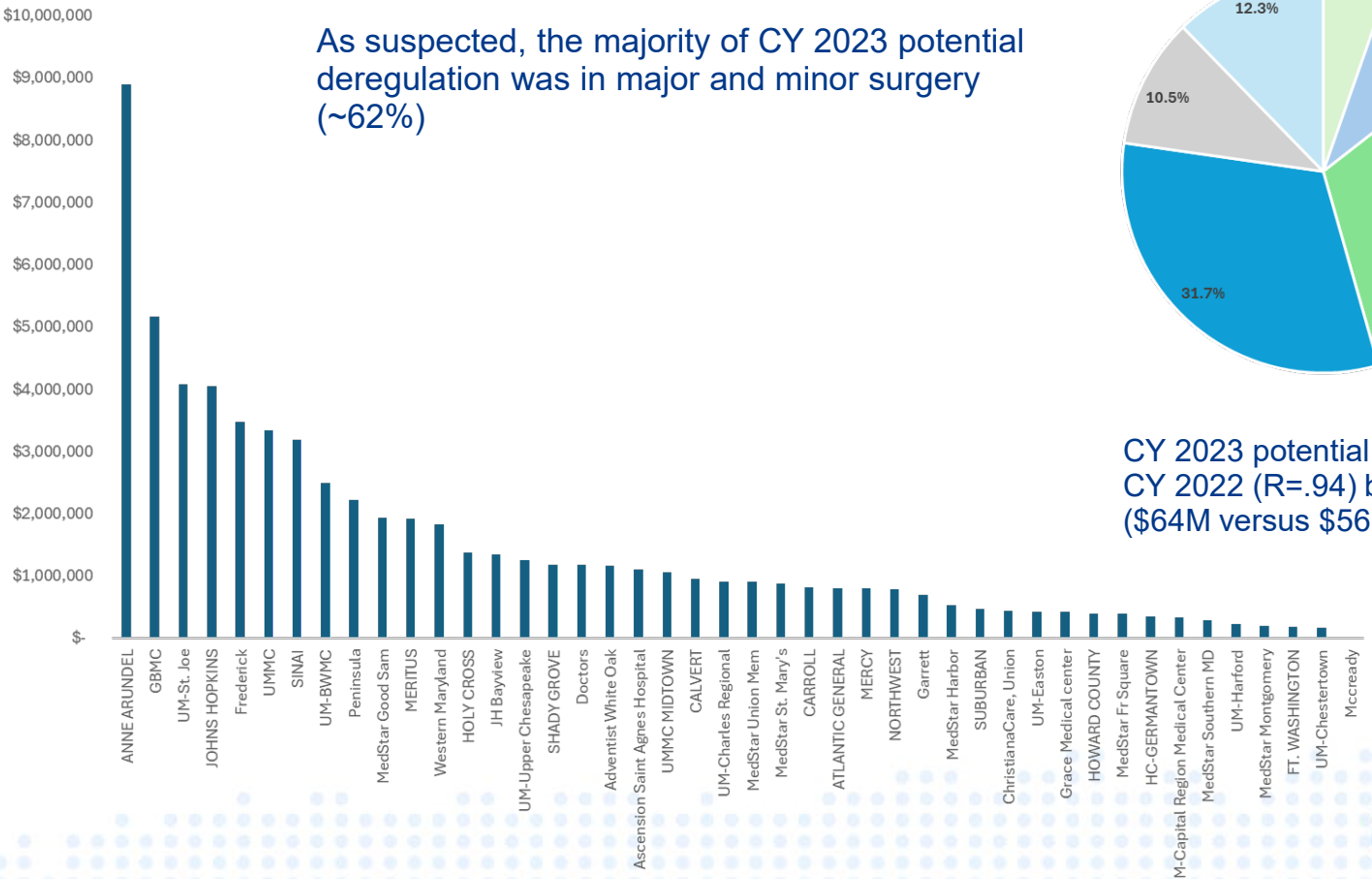
Proposed Methodology & Deregulation Model

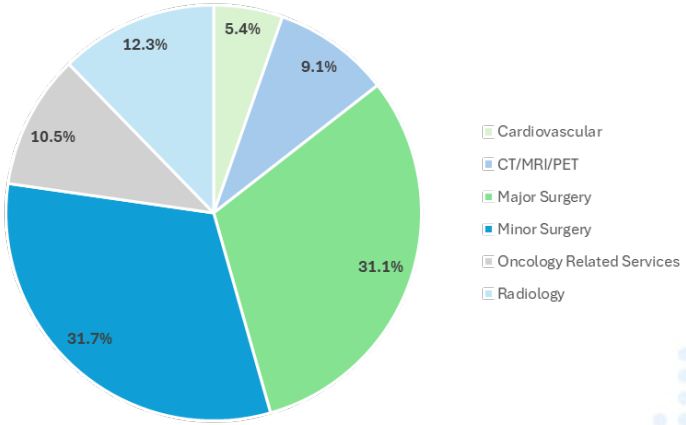
Step	Methodology Description	Algebra	Example (AAMC; SPINE INJECTIONS AND OTHER RELATED PROCEDURES)
1	Array at an EAPG level the base year ECMAD count for hospital outpatient Medicare FFS claims for beneficiaries living in the hospital PSAP.	A	101 ECMADS
2	Array at an EAPG level the performance year ECMAD count for hospital outpatient Medicare FFS claims for beneficiaries living in the hospital PSAP.	B	56 ECMADS
3	At an EAPG level evaluate year over year ECMAD % growth in hospital outpatient Medicare FFS claims for beneficiaries living in the hospital PSAP.	C=B/A-1	-45%
4	At an EAPG level evaluate year over year ECMAD % growth in non-hospital outpatient Medicare FFS claims for beneficiaries living in the hospital PSAP (similar to Step 3).	D	2%
5	At an EAPG level evaluate year over year ECMAD % growth in total outpatient Medicare FFS claims for beneficiaries living in the hospital PSAP (similar to Step 3).	E	-2%
6	Subtract the hospital year over year % change from the total year over year % change. *Exceptions: If the hospital year over year % change is greater than 0, value is listed as 0. If the total year over year % is greater than 0, it is not subtracted from the hospital year over % change.*	F=E-C	43%
7	Determine potential deregulated ECMADS for Medicare FFS by multiplying the base year ECMAD volume count by the variance calculated under Step 6	G =A x F	43
8	Calculate the regulated Medicare FFS hospital share of evaluated EAPGs from base year casemix data	H	38%
9	Determine potential deregulated ECMADS for all-payer by dividing potential deregulated ECMADS for Medicare FFS by EAPG Medicare FFS Share	I=G/H	115
10	Array unrecognized ECMADS from EAPG marketshift	J	94
11	Determine all-payer ECMADS eligible for deregulation by calculating the lesser of unrecognized ECMADS & potential deregulated ECMADS for all-payer	K=Lesser of I & J	94
12	Array performance year average charge per ECMAD for relevant service line (base year if not available plus inflation)	L	$14,057
13	Determine all-payer $ amount eligible for deregulation by multiplying relevant service line average charge by all-payer ECMADS eligible for deregulation and a 50% variable cost factor	M	$662,276

Does not include:
1) ASC exclusion
2) Materiality Thresholds

2023 Deregulation Results

As suspected, the majority of CY 2023 potential deregulation was in major and minor surgery (~62%)





CY 2023 potential deregulation was similar to CY 2022 (R=.94) but $8M more statewide ($64M versus $56M)

Implementation Considerations

Existing Staff Recommendations

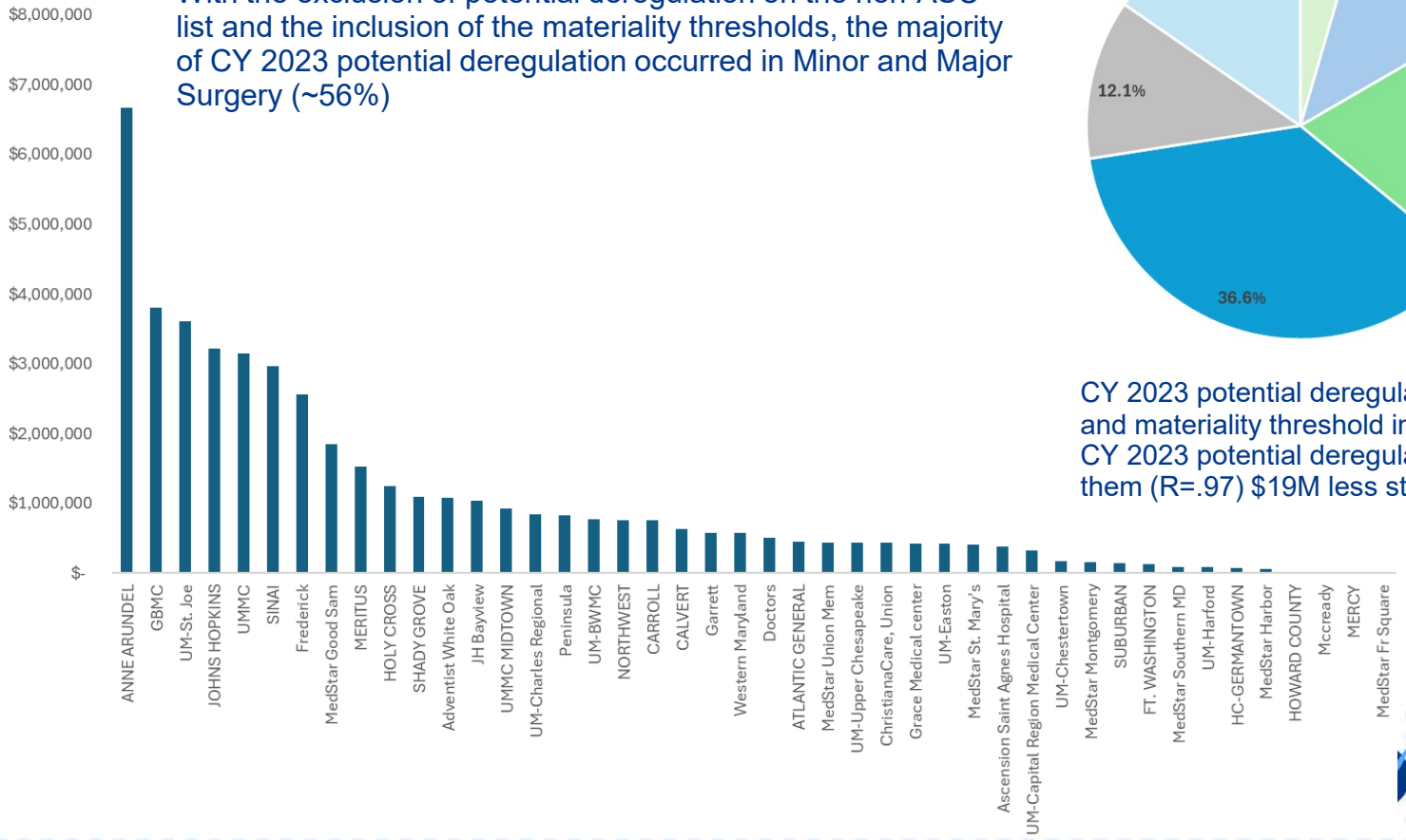
- Based on the workgroup discussion thus far, staff will make the following recommendations when it advances a formal policy to the Commission
  - Deregulation and Repatriation will be based on CY 2023 and will be implemented in January 2025 rate orders
    - Staff will exclude from deregulation, cases that are identified on the non-ASC list ("unlisted" descriptions omitted from this exclusion)
    - Hospitals can provide additional information to contest deregulation finding, but will have burden of proof
  - Deregulation adjustments will be implemented on a one-time basis in the first year and if backfilling does not occur, e.g., a departing physician practice is not replaced, then the adjustments will be made permanent in the following year
  - OOS adjustments will be based on RY 2023 experience data and will be implemented in January 2025 orders
    - Future evaluations of OOS will utilize ECMADS for RY 2024 and each year thereafter in concert with prior year experience data

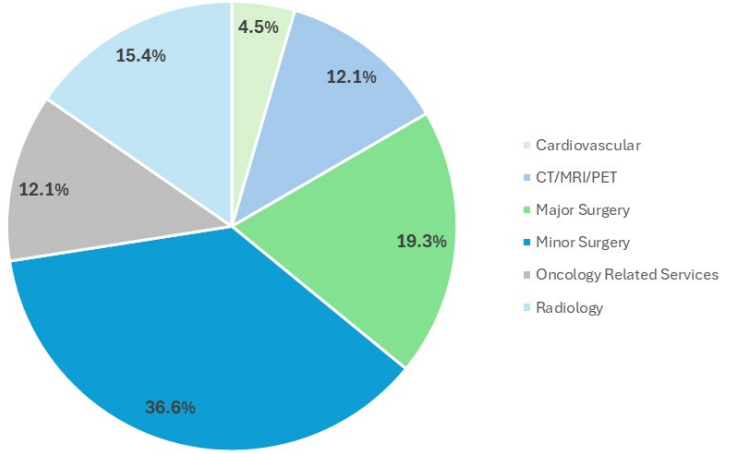
Recommendation for Consideration

- Staff believe strongly that not all negative adjustments from these new volume policies should be implemented
  - Some volume changes are potentially small and temporal
  - Various policies incentivize deregulation (GBR's, MPA, EQIP)
  - Future maturity of the model depends on moving to greater capitation risk
  - Not all hospitals have the same level retained revenue and/or efficiency performance
- For these reasons, staff are considering recommending that negative adjustments through deregulation, OOS, and repatriation policies should only occur if:
  - The hospital is in the worst quartile of the Integrated Efficiency policy OR
  - The adjustment exceeds 3% of the hospital's GBR OR
  - The adjustment exceeds 3% of the associated service line revenue
  - ALL PLANNED DEREGULATIONS SHOULD STILL BE REPORTED TO THE COMMISSION AND ADJUSTED FOR ACCORDINGLY
    - If deregulation tool indicates a potential deregulation that varies from planned deregulation by more than 10%, staff may consider revising the deregulation adjustment

2023 Deregulation Results with ASC Exclusion and Materiality Thresholds

With the exclusion of potential deregulation on the non-ASC list and the inclusion of the materiality thresholds, the majority of CY 2023 potential deregulation occurred in Minor and Major Surgery (~56%)





CY 2023 potential deregulation with the ASC exclusion and materiality threshold inclusion was lower than the CY 2023 potential deregulation determined without them (R=.97) $19M less statewide ($46M versus $65M)

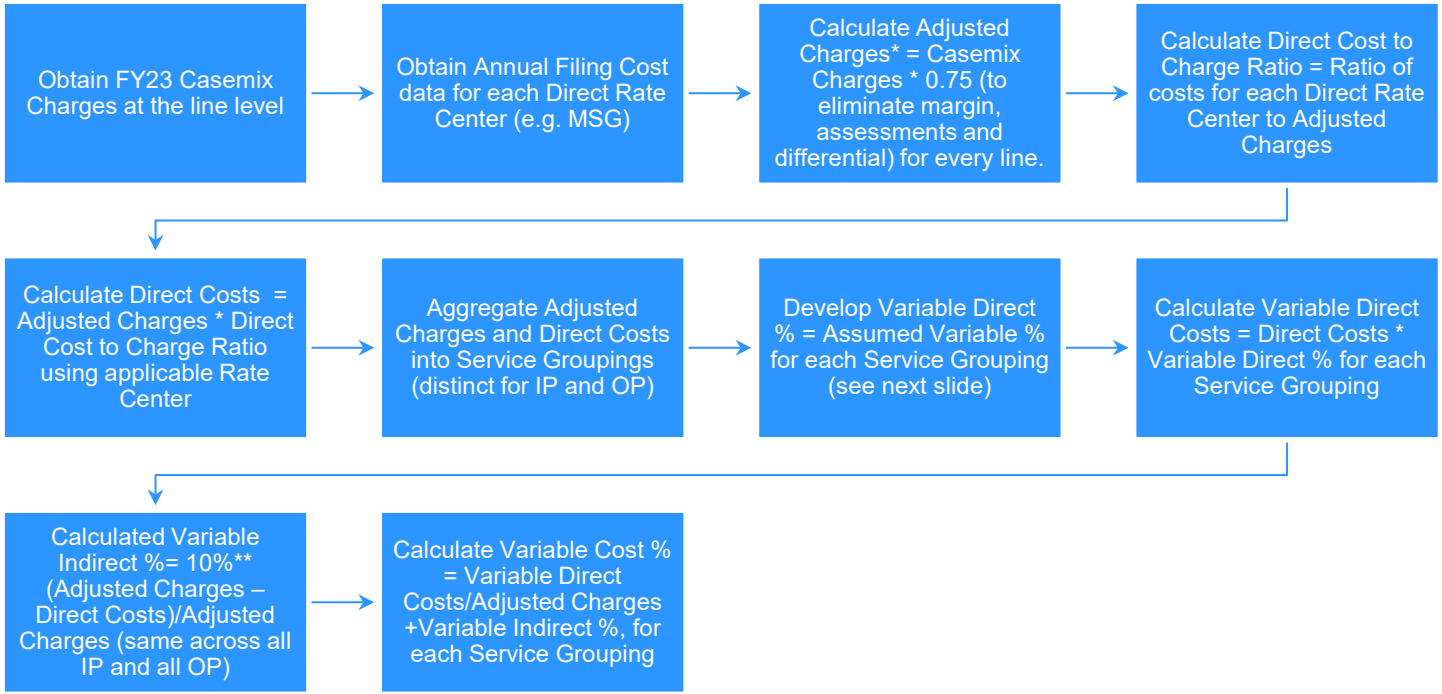
Variable Cost Factor Analysis

Overview

- In 2018 HSCRC Staff developed an approach to evaluate with a 50% variable cost factor was supported by data
- Staff have refreshed this analysis. Analysis is based on making assumptions about the level of variability in each annual filing cost center and then applying those assumptions to casemix claims to allow evaluation of the level of variable costs on an aggregated service line and place of service level.[1]
- Following slides review:
  - Process Used
  - Summary Outcomes
- Overall calculation supports a 50% variable cost factor for inpatient but calculates a lower factor for outpatient – 41%. Blended total = 46% variable
  - Analysis can also be used to calculate service line level factors
  - Analysis presented sets assumptions for a short-term variable cost % but could be adapted to a longer-term assumption set

1. Analysis focuses on acute hospitals and excludes FMFs, specialty hospitals, and Fort Washington

Process



* Adjusted Charges is conceptually = total costs since all non-cost items have been stripped out.

** Indirect variable ratio of 10% was obtained based on a review of which indirect cost centers were likely to flex with volume in the short term. As all costs are variable in the long term this value would move towards 100% with time, this approach can be used to derive estimates of variable % over the longer time windows.

Service Groupings and Assumed % Variable

Outpatient

Service Grouping	Share of Adjusted Charges	Assumed Direct Variable %
Emergency	12%	50%
Lab & Tests	9%	20%
MSS & CDS	31%	100%
OR	22%	50%
Other	0%	50%
Clinic	7%	50%
Radiation Therapy	4%	20%
Radiology	13%	30%
Therapy	2%	80%

Inpatient

Service Grouping	Share of Adjusted Charges	Assumed Direct Variable %
Emergency	8%	50%
Lab & Tests	15%	20%
MSS & CDS	18%	100%
OR	12%	50%
Other	1%	50%
R&B	42%	90%
Therapy	5%	80%

Results – Inpatient

Calculation	Service Grouping	Emerg.	Lab & Tests	MSS & CDS	OR	Other	R&B	Therapy	Total
A=Charges X .75	Adjusted Charges($M)	$698	$1,377	$1,636	$1,081	$100	$3,848	$494	$9,234
B	Direct Costs ($M)	$377	$677	$1,196	$507	$62	$2,507	$311	$5,637
C	Variable Direct %	50.0%	20.0%	100.0%	50.0%	50.0%	90.0%	80.0%	
D=B*C	Variable Direct Costs ($M)	$189	$135	$1,196	$253	$31	$2,257	$249	$4,310
E	Variable Indirect %	3.9%	3.9%	3.9%	3.9%	3.9%	3.9%	3.9%	3.9%
F=D/A+E	Variable Cost %	30.9%	13.7%	77.0%	27.3%	35.2%	62.5%	54.3%	**50.6%**

Results – Outpatient (see formulas on IP Tab)

Service Grouping	Emerg.	Lab & Tests	MSS & CDS	OR	Other	Clinic	Rad. Therapy	Radiol.	Therapy	Total
Adjusted Charges($M)	$687	$526	$1,767	$1,255	$16	$370	$202	$714	$95	$5,632
Direct Costs ($M)	$444	$271	$1,235	$556	$6	$252	$81	$317	$51	$3,214
Variable Direct %	50.0%	20.0%	100.0%	50.0%	50.0%	50.0%	20.0%	30.0%	80.0%	
Variable Direct Costs ($M)	$222	$54	$1,235	$278	$3	$126	$16	$95	$41	$2,070
Variable Indirect %	4.3%	4.3%	4.3%	4.3%	4.3%	4.3%	4.3%	4.3%	4.3%	4.3%
Variable Cost %	36.7%	14.6%	74.2%	26.5%	23.9%	38.5%	12.4%	17.6%	47.3%	**41.1%**

Summary of Sensitivities

	Point Estimate	If all Direct Variables are 15% points lower	if all Direct Variables are 15% points higher	If Indirect is 25% Variable (instead of 10%)
Inpatient	51%	43%	58%	56%
Outpatient	41%	36%	46%	47%
Total	46%	40%	53%	53%

Additional VCF Analysis

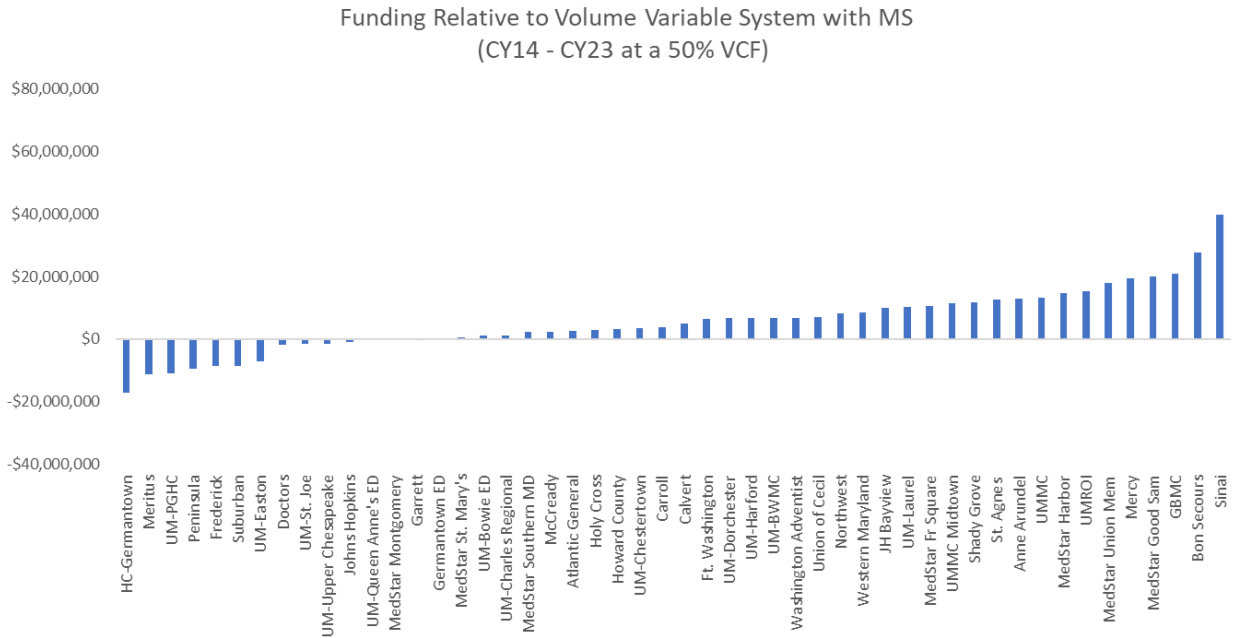
- Staff also tested the effect of differential variable cost factors on the marketshift methodology
- Using 3M summary designations of DRGs, staff categorized service lines as surgical or medical
- The CY 2019 marketshift was rerun with a 65% variable cost factor for service lines designated as surgical and 40% for medical
- The results are as follows:
  - Resulted in a $10M statewide variance from actual marketshift; actual redistribution was similar in total (~$57M), the winners and losers just moved a little
  - Correlation for marketshift adjustments was 0.972503
  - Absolute Average Variance for marketshift adjustments was $396k
  - Absolute Average Variance for marketshift adjustments as a percent of hospital GBR's was 0.26% (range was -0.76% to 0.46%)
- Given the relatively small impact this change had and the lack of empirical support for a significantly higher variable cost factor for surgical services, staff do not believe that the variable cost factor should be altered in the marketshift methodology
- Additionally, staff are concerned that a higher variable cost factor for surgical services may reward hospitals that currently have large amounts of retained revenue and in the future elect to grow surgical services after a switch to a differential variable cost factor approach

Updated Volume Scorecard

Details on Volume Scorecard Background

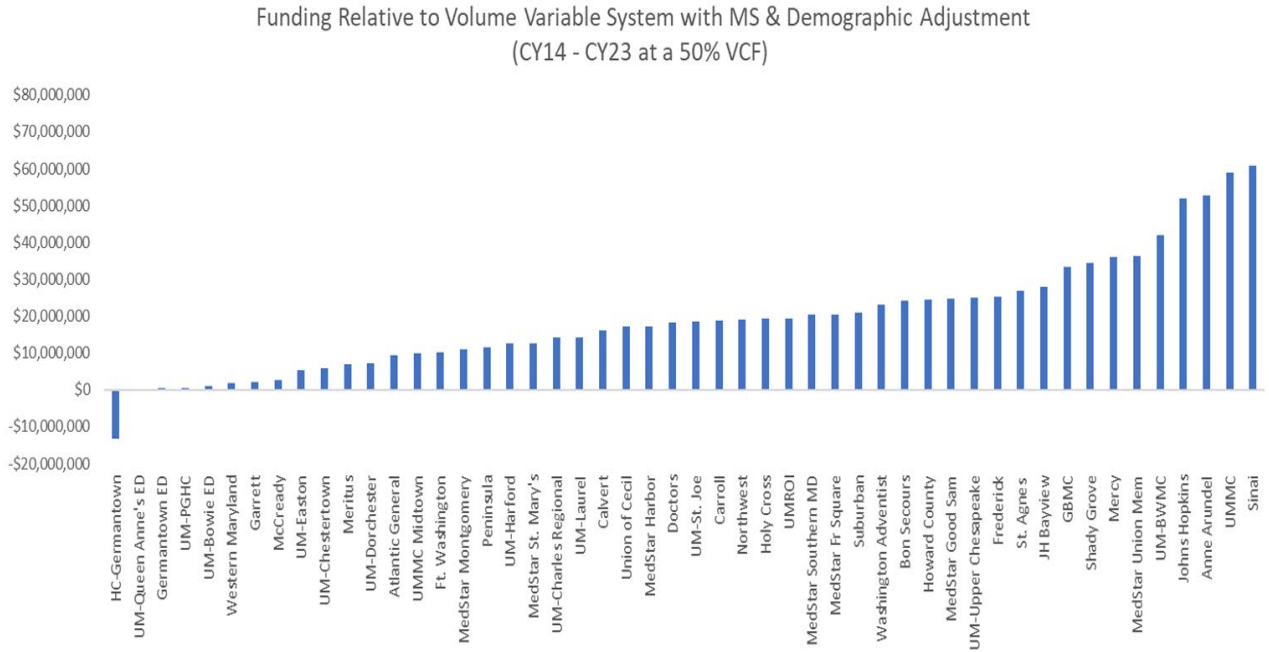
- Expected out-of-state revenue adjustments do not have any exclusions for PAU
- Expected PAU adjustments include unrecognized marketshift values and marketshift values
- New PAU Shared Savings Approach is reflected in CY23 assessment
- Marketshift values are final values
- Hospital specific adjustments have been reviewed by external consultants and only exclude the following:
  - Capital Adjustments
  - Oncology Drug Adjustments
  - Quaternary Care Adjustments
  - Capital Adjustments

Volume Efficacy: Marketshift Funding Only



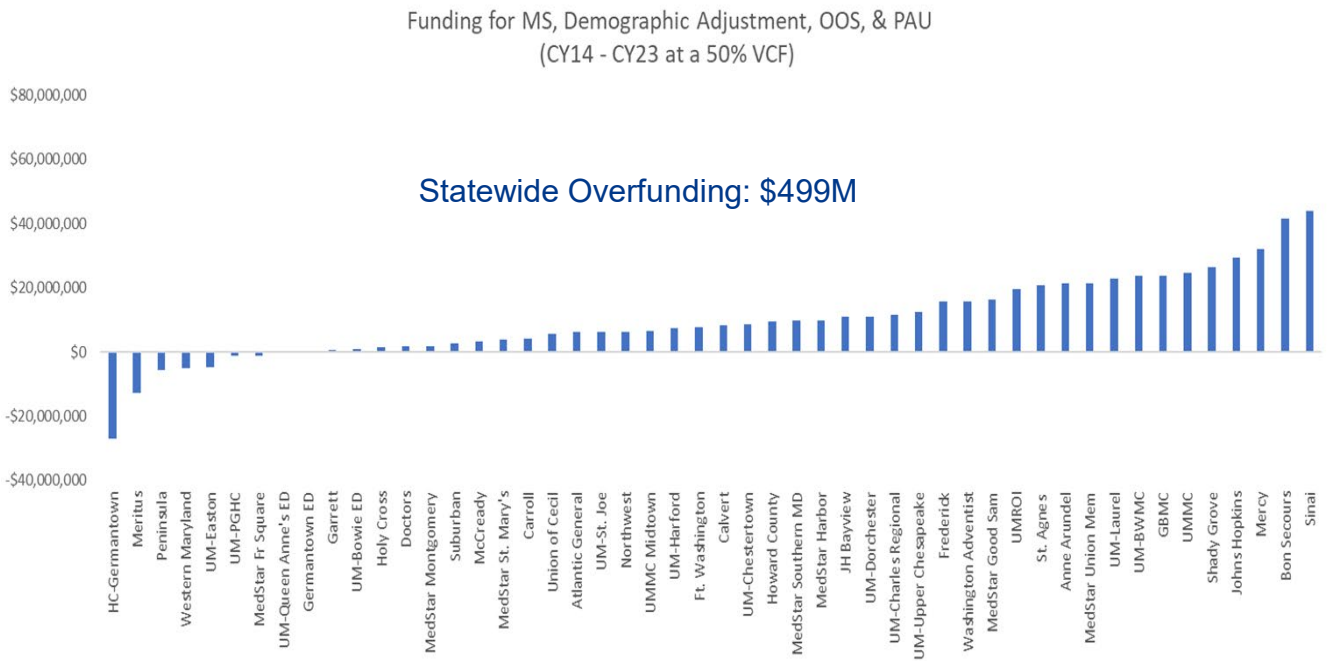
- Updates through CY 2023 still demonstrate that through the Marketshift alone very few hospitals are not funded for volume at at least a 50% variable cost factor
  - CY22 overfunding -$467M
  - CY23 overfunding - $275M
- Analysis that only uses Marketshift and/or excludes Demographic Adjustment funding is flawed
  - Underfunding is by design, as the Demographic Adjustment funds use rate growth
  - Marketshift is not intended to capture all volume growth

Volume Efficacy: Current Scorecard



- Staff continue to demonstrate that most hospitals are funded at at least a 50% VCF for in-state volume changes
  - CY22 Overfunding - $1.10B
  - CY23 Overfunding - $958M
- Scorecards on next few slides will layer in
  - Out-of-state
  - PAU
  - Deregulation
  - Miscellaneous Volume Adjustments
  - Efficiency

Volume Efficacy: Current Scorecard with OOS & PAU



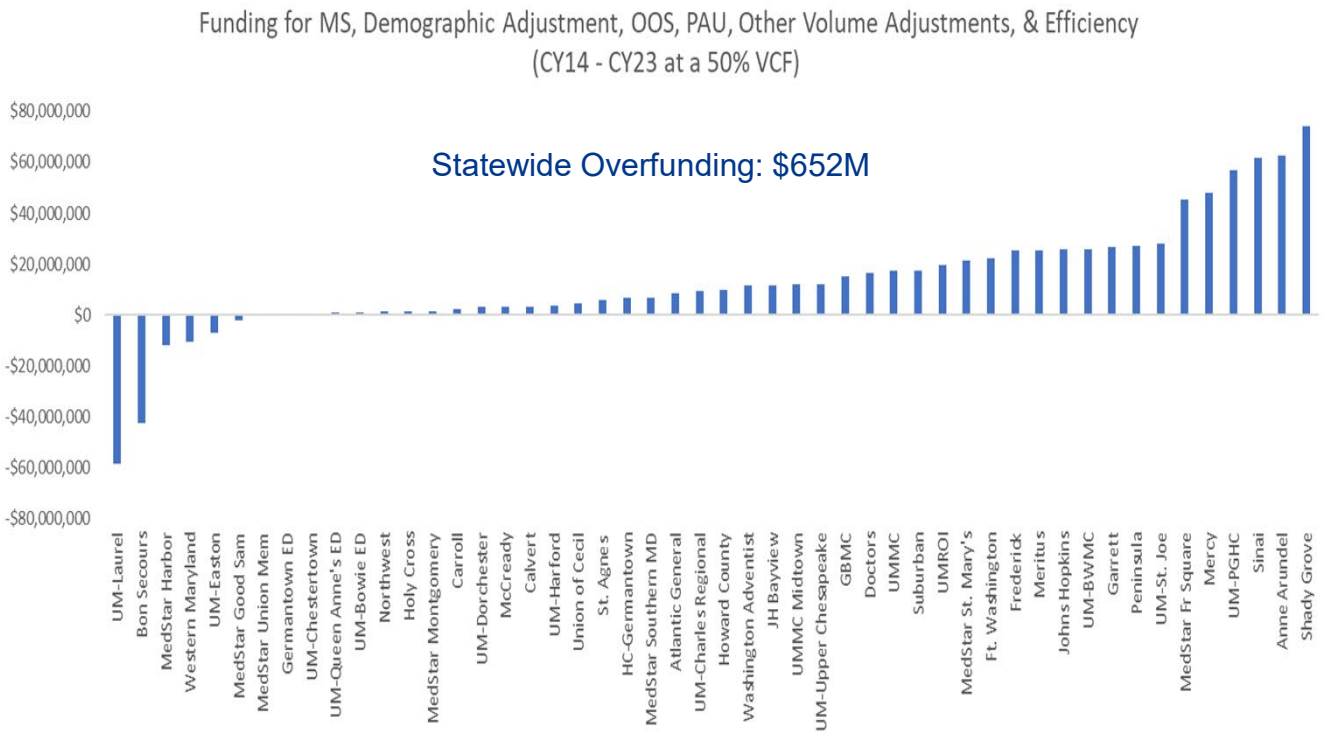
Inclusion of OOS volume adjustments generally increases overfunding

- Statewide Increase $139M

Inclusion of PAU generally decreases overfunding

- Statewide Decrease $597M

Volume Efficacy: Current Scorecard with OOS, PAU and Misc.



- Miscellaneous adjustments fall into three categories
  - Deregulation
  - Other Volume (e.g., system realignments, payer initiated shifts)
  - Efficiency
- Inclusion of miscellaneous adjustments generally increases overfunding, due to newly regulated services and efficiency adjustments
  - Adjustments will require further review from industry, both for accuracy and categorization

Next Steps

- Present findings/recommendations to Payment Model Workgroup
- Draft Recommendation in October
- Final Recommendation in December
- Implement adjustments from new volume policies in January 2025 rate orders

Questions?