maryland
health services
cost review commission

Final Recommendation for Deregulation, Repatriation, and Out-of-State Volume Policies

December 11, 2024

This document contains staff final recommendations for Deregulation, Repatriation, and Out-of-State Volume Policies.

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Recommendations

Staff recommend the following:

1. Establish a Deregulation policy based on the methodology outlined herein that will result in negative revenue adjustments to hospitals' global budgets.
2. Establish a Repatriation policy based on the methodology outlined herein that will result in positive (repatriation) and negative (expatriation) revenue adjustments to hospitals' global budgets. The terms, "repatriation" and "expatriation," refer to volumes related to Maryland residents moving into and out of state and are described in full below.
3. Establish an Out-of-State policy based on the methodology outlined herein that will result in positive and negative revenue adjustments to hospitals' global budgets.
4. Implement Deregulation and Expatriation adjustments at the next available rate issuance on a one-time basis and negative Out-of-State adjustments on a permanent basis, when the following materiality thresholds are met:
    a. The adjustment exceeds 3 percent of the hospital's GBR OR
    b. The adjustment exceeds 3 percent of the associated service line revenue
    c. All Planned Deregulations should still be reported to the Commission in conformance with the GBR agreement and adjusted accordingly.

   i. If deregulation methodology indicates a potential deregulation that varies from planned deregulation by more than 10 percent, staff may consider revising the deregulation adjustment
5. Implement Repatriation at the next available rate issuance on a one-time basis, positive Out-of-State adjustments on a permanent basis, when the following materiality thresholds are met:
   a. The adjustment exceeds 1 percent of the hospital's GBR OR
   b. The adjustment exceeds 1 percent of the associated service line revenue
6. Implement Deregulation, and Repatriation/Expatriation adjustments on a permanent basis one year following the initial revenue adjustment to allow for potential backfilling and/or dissipation. Hospitals can provide additional information to contest the volume finding but will have the burden of proof and HSCRC staff will be the final arbiters of this decision.

Introduction

The State of Maryland has led an effort to transform health care delivery systems to a population-based system that increases the emphasis on patient-centered care, improves population health, and lowers health care costs. To achieve these goals, the State of Maryland worked closely with hospitals, payers, other providers, consumers and the Centers for Medicare & Medicaid Services to develop the Maryland All-Payer Model, which was implemented in 2014, and later the Total Cost of Care Model, which was implemented in 2019. The Models moved away from a volume-based payment system that limited the growth in inpatient charge-per-case to a system that limits the growth in total hospital spending per capita and increasingly focused on outcomes: readmissions, in-hospital complications, potentially avoidable utilization, total cost of care, and patient satisfaction, among others.

Fundamental to the Models was the Global Budget Revenue (GBR) methodology, which was piloted by ten rural hospitals in 2010 and aimed to provide stability to hospitals by establishing annual prospective budgets and allowing for charges to fluctuate in line with reasonable changes in volume.[1] However, while hospital budgets were fixed during a given fiscal year, thereby incentivizing hospitals not to grow volumes unnecessarily and providing a high level of predictability, the Commission had to develop strategies to modify budgets in future years based on changes in population, the aging of the population, changes in market selection, and new health care innovation cost drivers, the latter of which has been directly addressed by the Commission's two stand-alone volume methodologies, the CDS-A and Complexity and Innovation policies.

To achieve the twin goals of funding population related utilization changes and realigning budgets for market shifts, the HSCRC developed two core volume funding methodologies: the

[1] The HSCRC allows hospitals to adjust charges for individual rate centers (e.g., room and board) to fluctuate within a 5 percent corridor. HSCRC reviews hospital requests to adjust prices beyond a 5 percent corridor.

Demographic Adjustment and Market Shift Adjustment. The Demographic Adjustment methodology provides funding for age-adjusted growth/decline at the zip code or county level in order to anticipate changes in utilization based on demographic changes.[2]

The HSCRC staff also developed a Market Shift Adjustment methodology that evaluates hospitals' growth/decline for each defined service line and geography to determine the degree to which patients moved from one hospital to another in the most recent calendar year in comparison to the prior year. The Market Shift moves money in the following year at a 50 percent variable cost factor[3] when volumes are moved up at one hospital and down at another in the same service line and geography.

Taken together, the Demographic Adjustment and Market Shift policies ensure a competitive hospital market where money follows the patient but only such that statewide volume on net does not grow for anything other than population growth and various forms of healthcare innovation. Both of these methodologies resulted in adequate volume funding statewide while maintaining the Model's status as population-based but have not addressed less common shifts in market share that occur due to deregulation, repatriation/expatriation (for Maryland residents), and changes in out-of-state service delivery. See Table 1 below for an overview of Commission policies that are either currently approved or for which staff is seeking approval by way of this recommendation; additionally, please note that staff has categorized policies as either "Stand Alone," meaning they do not require additional policies to account for volume change or not Stand Alone because they work in concert with other volume policies to appropriately address volume change.

[2] The Demographic Adjustment is capped by Maryland Department of Planning estimates of statewide population growth to align with the per capita nature of the Model tests, i.e., the contractual tests are not age-adjusted.
[3] A 50 percent variable cost factor is the industry standard for determining the percent of charges necessary to cover all marginal or variable costs associated with providing one additional service and is the standard by which the Commission will evaluate its volume methodologies.

Table 1: Volume Policy Overview

Volume Adjustment	Approved Policy	Stand Alone	Purpose
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		X	Annual adjustments for material changes to out-of-state volumes
Deregulation			As needed reductions for observed shifts to unregulated settings
Repatriation			As needed adjustments for cross state border hospital shifts
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)

While the Commission does not currently have policies that outline the methodologies for Deregulation, Repatriation, and Out-of-State volume changes, staff have made, over the course of the All-Payer and Total Cost of Care Models, adjustments to hospitals' global budgets for these changes in volume, in keeping with language in hospital's global budget contracts.

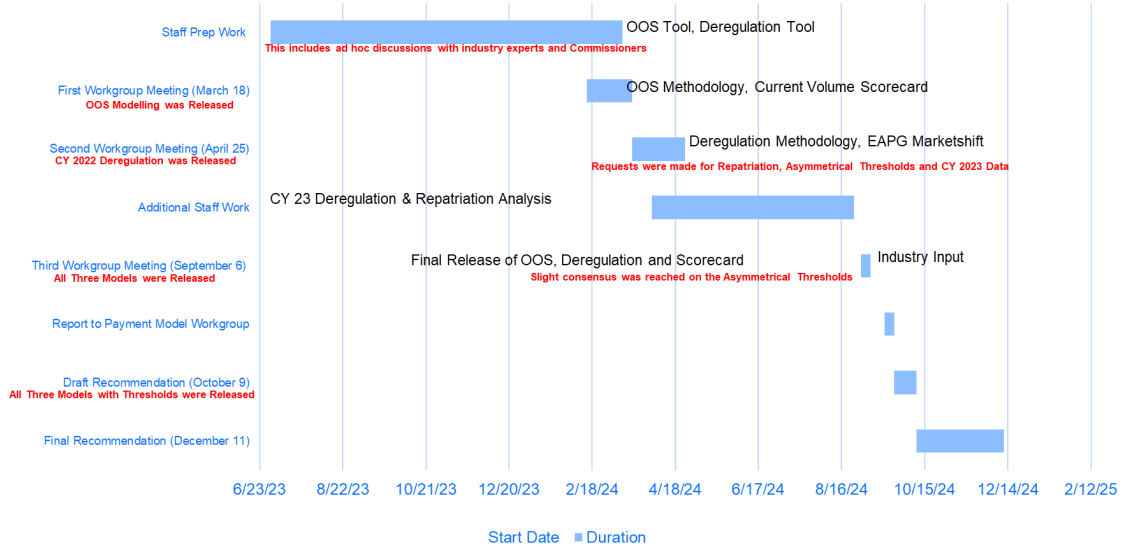
The purpose of this recommendation is to officially establish methodologies for making these volume adjustments, thereby reducing any potential arbitrary and capricious treatment that might result from not having methodologies first vetted by external stakeholders and then reviewed and approved by HSCRC Commissioners. Additionally, this recommendation will lay out for the first time a complete accounting of all volume adjustments that have occurred over the course of the All-Payer and Total Cost of Care Models, otherwise known as the "Volume Scorecard," and in so doing allow future policy makers to assess the need for potential revisions to Commission volume policies.

Background & Methodology Overview

Workgroup Engagement & Impetus for New Policies

Over the past year, staff have worked on developing new volume methodologies, which included extensive data validation, modeling, four stakeholder engagement meetings, and additional analyses in response to stakeholder feedback.[4] See Table 2 below for an overview of the Volume Workgroup Work Plan.

Table 2: Volume Workgroup Work Plan



This is first time staff have significantly reviewed volume policies since 2019 when it consolidated the geographies and service lines in the Market Shift, thereby reducing Market Shift cells (e.g., Cardiology services in Allegany County) from approximately 20,000 to 5,000, and markets with less than 10 discharges (an indicator of a potentially unstable cell size) from approximately 7,000 to 1,000. Staff additionally created new volume policies unique to the COVID -19 pandemic in 2020[5] that have since been suspended, as well as an update to the Demographic Adjustment policy in 2023[6] to account for the misestimate of population growth identified in the 2020 census.

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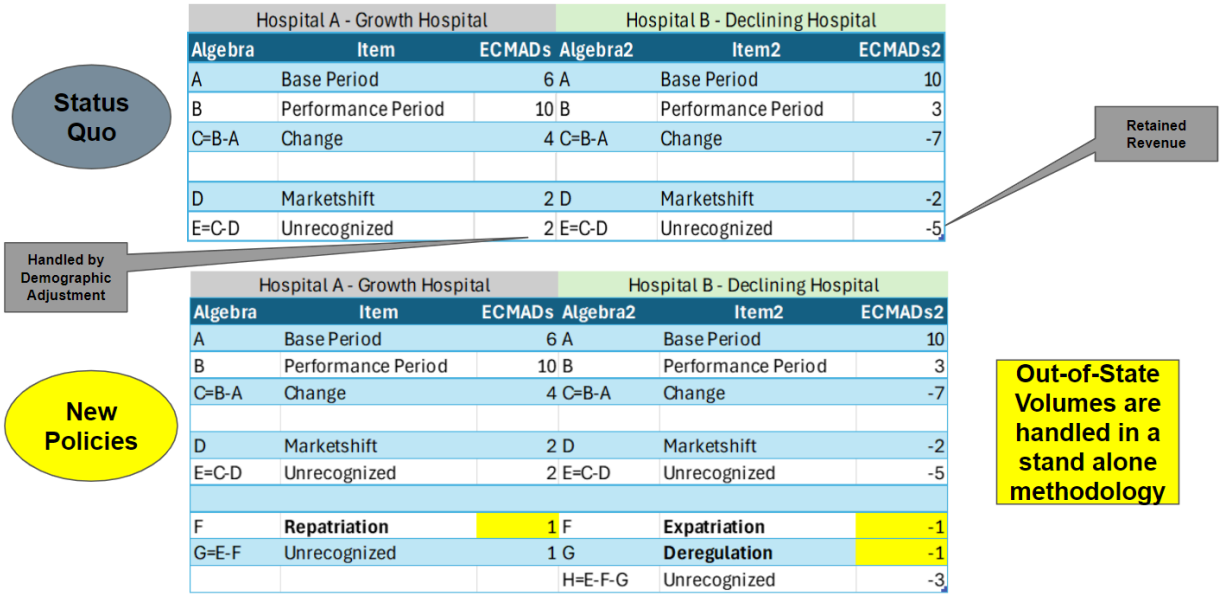
[4] Over the course of Volume Workgroup engagement, staff performed requested analyses related to the appropriateness of Commission approved variable cost factors as well as reviews of overlap with Ambulatory Surgical Center fee schedules.

[5] https://hscrc.maryland.gov/Documents/April%2030%202020%20Public%20Meeting%20Materials.pdf (Pages 6 -15)

[6] https://hscrc.maryland.gov/Documents/Strong%20als%20Folder/AUUR%20-%20Unit%20Rates%20and%20GBR/FY%202024/RY24%20Amended%20Final%20UF%20Recommendation%2006142023%20%20with%20comment%20letters%20(1).pdf (Page 11)

Staff proposed and Commissioners agreed that in 2024 the Commission should revisit its volume policies to codify adjustments that were being made at the request of hospitals and payers. Hospitals often requested revenue enhancements due to growth in out-of-state and repatriated volumes, and payers often requested that hospitals should have revenue write-downs for volume that shifted down the continuum of care from acute care settings to unregulated sub-acute settings, e.g., ambulatory surgical centers. In effect, both sets of stakeholders were requesting that the Commission reduce the extent of use rate growth (or decline) that was not recognized in the Market Shift methodology, otherwise known as Unrecognized Equivalent Casemix Adjusted Discharges (ECMADS). See Table 3 below that outlines how Unrecognized ECMADS are classified in the absence of Deregulation and Repatriation policies, and how they can be reclassified if these volumes policies are established, thereby reducing retained revenue and extending the utility of Demographic Adjustment funding:

Table 3: New Volume Policies Overview Example



	Hospital A - Growth Hospital			Hospital B - Declining Hospital		
Algebra	Item	ECMADs	Algebra2	Item2	ECMADs2	
A	Base Period	6	A	Base Period	10	
B	Performance Period	10	B	Performance Period	3	
C=B-A	Change	4	C=B-A	Change	-7	
D	Marketshift	2	D	Marketshift	-2	
E=C-D	Unrecognized	2	E=C-D	Unrecognized	-5	

	Hospital A - Growth Hospital			Hospital B - Declining Hospital		
Algebra	Item	ECMADs	Algebra2	Item2	ECMADs2	
A	Base Period	6	A	Base Period	10	
B	Performance Period	10	B	Performance Period	3	
C=B-A	Change	4	C=B-A	Change	-7	
D	Marketshift	2	D	Marketshift	-2	
E=C-D	Unrecognized	2	E=C-D	Unrecognized	-5	
F	**Repatriation**	1	F	**Expatriation**	-1	
G=E-F	Unrecognized	1	G	**Deregulation**	-1	
			H=E-F-G	Unrecognized	-3	

Deregulation

Deregulation is the movement of a hospital service from an HSCRC regulated space to an unregulated space (most often outpatient services but also chronic and rehab). A service is presumed to be regulated if it is provided on the campus of a hospital. Criteria outlined in COMAR 10.37.10.07-1 are considered for determination of whether a service is considered regulated or unregulated.

Deregulation can be initiated by three principal actors: 1) payers/patients, 2) the hospital itself, and 3) physician practices. Examples of deregulation include:

1. Payer Initiative Example: A payer makes the decision to no longer reimburse for certain procedures or therapies to be administered in a regulated hospital setting and move them to an Ambulatory Surgery Center. Examples of this type of shift include immunoglobulin therapies and endoscopies.
2. Hospital Example: The hospital makes the decision to shift radiation therapy services to an unregulated setting. Perhaps the most straightforward example because the hospital makes the decision to move services.
3. Physician Practices Example: A community physician makes the decision to no longer perform hand surgeries at the hospital. In this instance, the physicians made the decision outside of the hospital's control. A deregulation adjustment still needs to occur because the service is no longer being provided at the hospital.

Deregulation is similar to the Commission's Market Shift policy in that there is a shift in services from one facility to another; however, because the unregulated facility that is experiencing use rate growth is outside of the HSCRC regulatory scope (and thus data availability is limited), it is difficult to quantify precisely the extent of a deregulation. The evaluation of deregulation is further complicated by the different service offerings that occur between regulated and unregulated facilities as well as the incompleteness of data, as the Commission only reliably has access to Medicare total cost of care claims data and yet all-payers are susceptible to deregulation. For these reasons, staff have created a methodology that:

1. Utilizes Medicare data to determine shifts across all settings of care
2. Utilizes 3M's Enhanced Ambulatory Patient Groups (EAPGs) for outpatient services, in lieu of 3M's aggregated service lines to better identify at a more granular level potential deregulation (e.g., pacemaker replacement and/or echocardiography versus "Cardiovascular" service line)
3. Incorporates total trend in EAPGs to remove use rate decline across all settings, which is not indicative of deregulation
4. Extrapolates to all-payer using hospital casemix data
5. Cross references against the Market Shift methodology to ensure there are effectively no duplicative volume adjustments.
6. Removes from consideration all EAPG cases that have a dominant procedure code that maps to CMS Addendum EE -- Surgical Procedures to be Excluded from Payment in Ambulatory Surgical Centers[7] (only applicable to the following service lines: Major Surgery, Minor Surgery, and Cardiovascular)

Greater details of the proposed methodology are summarized below:

[7] https://www.cms.gov/medicare/payment/prospective-payment-systems/ambulatory-surgical-center-asc/asc-payment-rates-addenda

Table 4: Actual Example and Methodology Description of Deregulation

Step	Methodology Description	Algebra	Example (AAMC; SPINE INJECTIONS AND OTHER RELATED PROCEDURES)	Comments
1	Array at an EAPG level the base year ECMAD count for regulated Medicare FFS services	A	101 ECMADS	Staff utilized 2019 base period
2	Array at an EAPG level the performance year ECMAD count for regulated Medicare FFS services	B	56 ECMADS	Staff utilized 2023 performance period in line with volume subgroup recommendation to not use 2022 due to ongoing COVID confounding
3	At an EAPG level evaluate year over year ECMAD % growth in Medicare FFS regulated services	C=B/A-1	-45%	
4	At an EAPG level evaluate year over year ECMAD % growth in Medicare FFS regulated & unregulated services (similar to Step 3)	D	-2%	
5	Subtract the regulated year over year % change from the regulated & unregulated year over year percentage change. *Exceptions: If the hospital year over year % change is greater than 0, value is listed as 0. If the total year over year % change is greater than 0, it is not subtracted from the year over year % change*	E=D-C	43%	Step ensures that general use rate decline as opposed to movement of services down the continuum of care are not scored
6	Determine potential deregulated ECMADS for Medicare FFS by multiplying the base year ECMAD volume count by the variance calculated under Step 5	F =A x E	43	If step 5 is negative (total use rate decline is greater than hospital use rate decline), there is no potential deregulation
7	Array the share of evaluated EAPG attributable to Medicare FFS from base year	G	38%	Derived from hospital casemix data
8	Determine potential deregulated ECMADS for all-payer by dividing potential deregulated ECMADS for Medicare FFS by EAPG Medicare FFS Share	H=F/G	115	
9	Array unrecognized ECMADS from EAPG marketshift*	I	94	Requires creating EAPG marketshift analysis from regular service line marketshift by prorating quantifiable shifts and unrecognized ECMADS to individual EAPGs
10	Determine all-payer ECMADS eligible for deregulation by calculating the lesser of unrecognized ECMADS & potential deregulated ECMADS for all-payer	J=Lesser of H & I	94	Ensures that deregulation does not remove more volume than actual use rate decline not recognized by Market Shift methodology
11	Array performance year average charge per ECMAD for relevant service line (base year if not available plus inflation)	K	$14,057	
12	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	L=J x K x 50%	$662,276	
13	Identify and itemize dollars associated with EAPG's under Step 12 that have a Dominant Procedure Code which cannot be performed in an Ambulatory Surgical Center (only performed for services that map to Major Surgery, Minor Surgery, and Cardiovascular Service Lines)	M	0	Per recommendation from workgroup, staff identified and removed all EAPG cases where the dominant procedure code was listed on Addendum EE -- Surgical Procedures to be Excluded from Payment in ASCs
14	Determine final potential deregulation for Hospitals	N=L-M	$662,276	

*EAPG Market Shift example can be found in Appendix 2

Repatriation/Expatriation

Repatriation is the cross-border movement of Maryland residents from out-of-state hospital facilities back to Maryland regulated facilities. Unlike deregulation, the

assessment is localized to Maryland residents and does not account for any movement across the continuum of care; it only assesses patient movement from one acute care facility to another and in this case when that transpires across state lines. It is important to note that repatriation potentially improves access, patient satisfaction and clinical outcomes, because Marylanders do not have to travel out-of-state for care. Additionally, repatriation improves TCOC Model savings because funding is reduced at a 100 percent variable cost factor outside of the state, and in Maryland it is increased at a 50 percent variable cost factor, the imbalance of which may increase further if materiality thresholds that will be discussed below are included in

the methodology. In effect, the Commission should consider how to more directly incentivize repatriation, as it does represent "good volumes."

Expatriation, on the other hand, is cross border movement of Maryland residents from Maryland regulated hospital facilities to out-of-state hospital facilities. When expatriation occurs, there are TCOC Model dissavings, because funding is increased at a 100 percent variable cost factor outside of the state, and in Maryland it is decreased at a 50 percent variable cost factor. However, it should be noted that there are several mechanisms currently in place to mitigate potential expatriation, including GBR corridors that limit hospital delegated pricing authority to 5 percent, the Medicare Performance Adjustment (MPA) that assesses Medicare TCOC performance that penalizes hospitals for volume loss to border states (among other things), the Integrated Efficiency Policy that scales inflation for hospitals deemed relatively inefficient (potentially due to expatriation), and the TCOC Model savings targets that ensure that any significant dissavings from activities like expatriation are accounted for in the annual Update Factor policy.

Repatriation, like deregulation, is similar to the Commission's Market Shift policy in that there is a shift in services from one facility to another; however, again it is difficult to precisely quantify the extent of the shift because non-Maryland facilities are not subject to HSCRC regulations and as such the data is incomplete. Additionally, staff were concerned that: a) assessments of volume change among hospitals not located in contiguous states (or Districts) would be indicative of random variation versus genuine, permanent changes in market selection; and b) the current Market Shift methodology that evaluates all facilities separately would be confounded by market shifts that are occurring within border states versus shifts that are occurring across state lines. For those reasons, staff have created a methodology that:

1. Utilizes Medicare data to determine shifts across state lines by determining the aggregate change for Maryland and non-Maryland facilities in a given geographic area and service line
2. Utilizes 3M's inpatient and outpatient service lines because both settings are susceptible to repatriation, and there is no need for more granular analysis since acute care facilities (in-state and out-of-state) have similar service offerings.
3. Extrapolates to all-payer using hospital casemix data
4. Cross references against the Market Shift methodology to ensure there are effectively no duplicative volume adjustments.

Greater details on the proposed methodology are outlined below in an actual example:

Table 5: 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

Out-of-State

Out-of-state evaluations of volume are specific to patients that live outside of the state of Maryland, which is different from repatriation and expatriation volume assessments that are specific to Maryland residents. Per the GBR contract, the Commission can adjust a hospital's GBR "If this percentage [out-of-state volume] changes materially during the term of this Agreement…" - Section X, Global Budget Revenue Agreement.[8] To date, staff have adjudicated a few out-of-state adjustments because: a) the volume change was material; and b) the volume change represented a material share of the hospital's global budget. Due to the increasing frequency of hospital requests to adjust for out-of-state volumes, staff believe it is necessary to establish a formal policy.

Unlike typical volume methodologies, staff elected to use reported experience data in lieu of ECMADS, e.g., patient days versus weighted APR-DRGs, when previously adjudicating out-of-state volume adjustments because these evaluations were longitudinal assessments with base[9] and performance years under:

- Different Groupers
- Different Casemix Weighting Methodologies
- Different Diagnosis and Procedure Code Versions (e.g., ICD-9 to ICD-10)[10]

[8] Hospital GBR Agreement, section X, page 13

[9] Most hospitals have a base year of 2014 because that is when global budgets were established. A few hospitals have a more advanced base year because they were effectively rebased through a direct out-of-state adjustment or indirectly through a full rate application policy.

[10] The transition from ICD-9 to ICD-10 codes for diagnoses and inpatient procedures in the United States occurred on October 1, 2015. https://www.cms.gov/medicare/coding-billing/icd-10-codes#:~:text=Pages%20in%20this%20section&text=What's%20New?,who%20bill%20Medicare%20or%20Medicaid.

With the exception of utilizing experience data, the out-of-state methodology is pretty straight forward, as it is a volume variable methodology[11] that is only implemented when there is a material change.[12] The specifics of the methodology are as follows:

1. Out-of-state Revenue Increase = Current Hospital Rate X (Performance Year Volume - Base Year Volume) X 50 percent Variable Cost Factor
2. Excluded from this analysis are drug and supply rate centers because of the unreliable unit of cost and because a significant portion of drug costs are covered by the Commission's stand-alone CDS-A policy
3. Conversion factors are accounted for in volume assessment, e.g., clinic RVU conversion

During the volume workgroup engagement, stakeholders understood the need for utilizing experience data, especially over the course of the ICD-9 to ICD-10 conversion but were nevertheless concerned about the permanent departure from using ECMADS in a volume assessment because: a) growth in out-of-state drugs and supplies would not be accounted for; and b) multiple volume statistics would over complicate the volume ecosystem. Staff concurred and furthermore agreed to the workgroup's suggestion to lock in out-of-state assessments from Rate Year 2014 to Rate Year 2023 using experience data, and then to advance to ECMAD assessments for Rate Year 2023 to future fiscal years. Moving forward, this will require a compounding calculation on the part of HSCRC staff between the two volume statistic periods but will ensure that no future volume adjustments will be made without utilizing ECMADS, the industry standard for assessing acuity adjusted volumes.

Implementation

In this section, staff explains implementation considerations that were discussed by the Volume Workgroup and reported out to the Payment Model Workgroup.

Accuracy of Volume Evaluation and Potential for Temporal Volume Change

Three principal concerns were raised by the Volume Workgroup. First, workgroup members raised the issue of methodology accuracy, given the reliance on Medicare total cost of care data and the small and potentially temporal nature of the associated volume changes. Second, members noted that not all hospitals have the same efficiency and retained revenue levels, and thus there should be some consideration of varying cost structures and profitability when implementing adjustments. Third, members noted that in certain cases the reduction of services through deregulation, expatriation, and/or out-of-state movement may not be driven by a hospital and/or may happen rather suddenly, e.g., a physician practice elects to quickly sever affiliation with a hospital and moves its referrals elsewhere. In this case the hospital may still like to replace the departing practice with a new physician group over the course of the next

[11] The Total Cost of Care contract requires that 95 percent of all in-state revenue be under a population-based methodology. Out-of-state volume is not subject to this requirement, which is why it can be evaluated through a volume variable methodology.

[12] Materiality will be discussed in the following *Implementation* section.

year which would make any adjustment temporary. This last point is particularly salient for deregulation, as Commission staff noted in the workgroup engagement that it would not advance a policy incentive to Commissioners that reverses deregulation and rewards movement up the continuum of care, given the goals of the TCOC Model.

For these reasons, staff proffered the following implementation approaches:

1. Deregulation, Repatriation, and Out-of-State adjustments are to be implemented at the next available rate issuance on a one-time basis, thereby recognizing potentially temporal volume change
2. Hospitals can provide additional information to contest an HSCRC finding, but will have the burden of proof, and HSCRC staff will be final arbiters of this decision.
3. If one-time adjustments are made and the same finding is made the following year, the adjustment will be made permanent.
4. All adjustments will be subject to a materiality threshold.

Materiality Thresholds

Staff spent the majority of time with the workgroup debating what are appropriate materiality thresholds, which represent a tool the Commission has previously used to reduce the need for making out-of-state volume adjustments year after year, per the GBR contracts. While no consensus was reached, many members supported the idea of asymmetrical materiality thresholds, whereby hospitals would receive a negative adjustment only when a larger materiality was met - a commercial payer representative did not agree with this recommendation.

Initially staff did not support the asymmetrical proposal because symmetry is methodologically desirable and more intuitive; however, upon further reflection, staff identified that all growth in out-of-state volumes is beneficial for the Model because Maryland is effectively exporting services, which when reimbursed at a 50 percent variable cost factor, lowers hospital price per case and Maryland TCOC. Additionally, all repatriation is favorable for the Model because reimbursement at a 50 percent variable cost factor inside the state and divestment at a 100 percent variable cost factor outside the state lowers hospital price per case and Maryland TCOC. Thus, applying a higher materiality threshold to desirable actions, albeit symmetrical, may disincentive hospitals from growing “good volumes.”

In light of these considerations, staff propose the following recommendations:

Table 6: Recommendations for Materiality Threshold Implementation

Policy	Materiality Threshold	Implement one-time initially and permanently one year later (Recommendation 5)	Implement permanently upon initial adjustment
Deregulation			
Decreases GBR	Approach A	X	
Change to Rendering Location State for MD resident			
Repatriation	Approach B	X	
Expatriation	Approach A	X	
Change to Rendering Location State for Out of State residents			
Into State	Approach B		X
Out of State	Approach A		X

Materiality Approach A is:
1. The adjustment exceeds 3 percent of the hospital's GBR **OR**
2. The adjustment exceeds 3 percent of the associated service line revenue

Materiality Approach B is
1. The adjustment exceeds 1 percent of the hospital's GBR **OR**
2. The adjustment exceeds 1 percent of the associated service line revenue

Stakeholder Comments

Following the draft recommendation, staff received comment letters from seven stakeholders and several verbal comments from Commissioners.

Adventist Health (Adventist)	Maryland Hospital Association (MHA)
CareFirst Blue Cross Blue Shield (CareFirst)	MedStat Health (MedStar)
Johns Hopkins Health System (JHHS)	University of Maryland Medical System (UMMS)
Lifebridge Health (Lifebridge)	

The comments from stakeholders and Commissioners can be broadly categorized into 11 areas of concern.

Topics	Adventist	CareFirst	JHHS	LifeBridge	MHA	MedStar	UMMS	Commissioners
Efficiency	✓			✓			✓	
Implementation Process	✓				✓			
Materiality Thresholds		✓			✓			✓
Face Validity	✓						✓	
Extrapolation	✓			✓	✓	✓	✓	
Interactions					✓	✓	✓	
Exclusions					✓	✓		
Variable Cost Factor		✓	✓		✓			
Volume Scorecard	✓	✓			✓	✓		
Workgroup Process	✓			✓		✓		
General Volume Policy Concerns			✓	✓	✓		✓	✓

Staff will address each category below:

Efficiency Comments

Topic	Adventist	LifeBridge	UMMS
Efficiency	"Hospitals in the bottom quartile of IE results already receive an efficiency penalty and can submit a Revenue for Reform (R4R) application to show how their retained revenue is being used to support population health investments in the community. It is duplicative to then hit these hospitals with an additional penalty… While we respect and understand the reasoning behind using the IE results as materiality criteria in these policies, the Integrated Efficiency policy is a standalone policy that has a specific structure combined with R4R to address inefficient hospitals. It creates a cause for concern if the IE results begin to be used as a precursor in every other HSCRC policy to further penalize those hospitals."	"Ultimately, as currently adopted, the integrated efficiency policy evaluates hospitals on a price per case basis and is intended to act as a catch-all methodology to account for price drivers that cannot be accounted for through the market-shift volume and other methodologies. Layering on additional penalties results in duplicative penalties and implies the efficiency policy as currently approve no longer satisfies the staff's goals for how much and how quickly revenue should be removed from inefficient hospitals."	"We strongly believe the Integrated Efficiency policy in its current form is inherently biased against hospitals which serve the state's most difficult populations. We believe that the Integrated Efficiency policy needs to be re-thought through the lens of health equity and consideration for differential investments in challenging geographies needs to be included in the policy. Volume policies were developed to address volume funding. No other volume policy, including the main volume funding mechanisms of Market Shift and Demographic Adjustment, contemplates any factors other than volume growth or decline. It is for this reason and our concern over the Integrated Efficiency's bias that we firmly believe that volume policies should not apply results differentially based on a hospital's ranking in the Efficiency policy."

Staff concur with the concern that using the Integrated Efficiency Policy conflates volume and efficiency policies and excessively penalizes hospitals in the bottom quartile of that evaluation. **Thus, staff recommend discontinuing its use in line with the precedent established during the Complexity and Innovation policy development:**

> "While staff appreciates CareFirst's support of the Integrated Efficiency policy, which was developed to evaluate both hospital cost per case and total cost of care performance for purposes of scaling the annual update factor, staff recommends not conflating analyses. Instead, staff recommends handling efficiency concerns through the Integrated Efficiency policy and adjusting funding for highly specialized care through the Complexity and Innovation policy" – Complexity and Innovation Policy Recommendation (page 19)

Staff disagree with the assertion that the Integrated Efficiency policy "is inherently biased against hospitals which service the state's most difficult population," as:

- The evaluation directly risk adjusts for serving a disadvantaged population
- There is no statistically significant relationship between a measure of adverse social exposure and ICC performance
- There is strong correlation between above average levels of overhead and ICC performance
- The policy allows for hospitals to reinvest in their communities versus incurring a revenue reduction through r4r

Nevertheless, staff welcome the opportunity to amend the efficiency policy evaluation and/or implementation if directed so by Commissioners, especially given concerns about ordinal ranking issues over time

Implementation Consideration Comments

Topic	Adventist	CareFirst	MHA
Materiality Thresholds		• "First, we don't believe it [the materiality threshold] is necessary. Under staff's proposal, adjustments that do not exceed a materiality threshold of either 3% of the hospital's GBR or 3% of the service line revenue would be waived. Staff has argued the materiality threshold will promote financial stability for hospitals by limiting adjustments from year to year. However, by definition, waiting for an adjustment to become "material" suggests a single large adjustment to the hospital's revenue will be more disruptive to a hospital's financial stability than incremental, immaterial adjustments. • Second, staff's proposal uses both arbitrary and asymmetrical materiality thresholds. While we do not believe the thresholds are necessary, requiring negative adjustments to reach a higher threshold for application than positive adjustments on the same issue would not defy good policy and logic"	"MHA supports the proposal to adopt a larger threshold for deregulation, expatriation, or a negative OOS adjustment. The proposed threshold—requiring a downward change of more than 3% of global budget revenue (GBR) or of the associated service line—is sound policy, recognizing that volume changes may be small or temporary while allowing greater funding predictability and financial stability for hospitals. The proposal would implement a materiality threshold for repatriation and positive OOS changes so that an adjustment would occur if it exceeds 1% of GBR or of the associated service line."
Implementation Process	"The deregulation, repatriation, and out-of-state adjustment policies should be run once a year in tandem with the final market shift policy. The results, inclusive of materiality thresholds, should be shared with hospitals at the same time market shift results are shared (approximately April-May). At the time results are shared, no overlap should remain between the policies. Positive adjustments can be included at the issuance of the next rate order; however, no negative adjustments should be included in the rate order unless hospitals have the opportunity to review and contest the results. Hospitals should have a pre-defined amount of time to review and contest the results. The HSCRC should outline specifics on the data required to contest the results within the final policy. The HSCRC should then have the same pre-defined amount of time to respond to the contested data with a final decision needing to be made by the end of that timeframe."		"In the draft, deregulation, repatriation, and OOS adjustments would be implemented at the next rate issuance, on a one-time basis with a permanent adjustment made the following year if the same change is confirmed. This is a fair approach that recognizes volume changes may be temporary. The proposal rightfully allows hospitals to provide additional information to contest an HSCRC finding in this process."

Staff concur with MHA's assertion that the asymmetrical materiality thresholds are sound policy that balance the need to:

- Recognize that volume changes may be small and/or temporary
- Provide an incentive to hospitals to bring back Marylanders back into the state for acute care services
- Provide an incentive to hospitals to attract out-of-state residents to Maryland facilities

Staff disagree with CareFirst's suggestion to abandon the asymmetrical materiality thresholds because:

- The methodology has imperfect data that requires extrapolation, albeit with a failsafe of referencing "unrecognized volume decline"
- The volume shifts are small and/or temporary
- The materiality thresholds are not arbitrary, as they:

    - Were purposefully chosen as a mid-point between 0%, the starting point for materiality, and 5%, a threshold which already triggers GBR corridors, the Commission's main deterrent to excessive volume reductions
    - Align with other methodologies that utilize a 3% statistic to determine statistical significance
- There is a misunderstanding of how the materiality thresholds will be utilized, i.e., once a threshold is triggered, the adjustment will reconcile to the threshold and not the entire variance, which negates the point that this practice will be disruptive to hospital finances

Staff disagree with MHA's suggestion to utilize a 0.5% materiality threshold for OOS growth and repatriation, because:

- This extends beyond what staff believe is a balance between recognizing small and/or temporary changes and creating an incentive to grow "good volumes"
- It is not paired with a similar reduction to the downside materiality threshold of 3%

Staff appreciate MHA's support of the implementation process that calls for a one-time adjustment with a permanent adjustment made the following year if the same change is confirmed. Staff share Adventist's concerns about delays in the data that would reduce the time period by which hospitals can contest findings, but given the data should be available in May, staff do not believe establishing a deadline is required. Staff do not agree with Adventist's suggestion that the HSCRC must provide the specifics on the data necessary to contest the results of a volume finding, as the specifics can change based on the reasoning advanced and the burden of proof rests on the hospital, per the policy recommendation. Staff do believe, however, that any data utilized to contest a finding should be: publicly available or subject to audited verification if proprietary.

Immediate Technical Consideration Comments

Topic	Adventist	LifeBridge	MHA	MedStar	UMMS
Interactions			"Hospitals may face double penalties under both policies. MHA requests excluding Equivalent Case-Mix Adjusted Discharges (ECMAD) accounted for under deregulation from the unrecognized ECMADs under the repatriation policy."	"Need to exclude Equivalent Case-Mix Adjusted Discharges (ECMADs) that are the basis of any deregulation adjustment from repatriation calculation to prevent double counting"	"These policies should be mutually exclusive and current methodology does not adjust for the results of one another, which double counts adjustments in both policies." "Results are unadjusted for any special negotiations which may be double counted in the policy."
Extrapolation	"AHC encourages additional exploration of an alternate method to estimate these volume shifts in service lines with very low Medicare volumes."	"[Extrapolation] may not be appropriate to apply to all payers when considering factors like changes in payer mix since the base period."	"We recommend removing or using alternative methods to assess repatriation for service lines with low Medicare FFS percentages." "A significant percentage (nearly half) of the procedure categories lack an appropriate Medicare FFS percentage and use a default percentage of 100%"	"Extrapolation from Medicare fee-for-service (Medicare FFS) data to calculate an all-payor adjustment may lead to distorted results that do not reflect actual experience "Use of a Medicare FFS default percentage of 100% for procedure categories that lack a Medicare FFS percentage caps repatriation funding at Medicare growth level which may not be reflective of actual experience"	"Extrapolation methodology produces unreasonable results for service lines with limited Medicare volume (ie, Obstetrics, Newborn)."
Face Validity	"We urge the HSCRC to reconsider the current volume approach. We ask the HSCRC to carefully consider the cumulative and compounding effect of all existing policies and the potential for "penalty stacking". When penalties are layered without balanced incentives, hospitals experience financial shock that disrupts long-term planning and limits the ability to sustain improvements."		\		"Deregulation policy identifies that the entire amount of use rate is taken as deregulation in over 80% of the instances across the state where the algorithm identifies the EAPG as potential deregulation. For UMMS hospitals, nearly 100% of unrecognized market shift was considered deregulation, which seems highly unlikely."

Staff agree with the concern regarding interactions, as aforementioned in the draft recommendation. The final policy results now remove volume scored in the Deregulation methodology from the unrecognized volume in the Repatriation methodology, which effectively removes approximately 689 ECMADS from expatriation ($5.3M out of a total scored expatriation of $29.9M). Additional interactions related to prior agreements with hospitals on volume funding can be adjudicated through the implementation process when hospitals can contest findings

Staff believe the concerns over extrapolation should be weighed against the following considerations:

- There is a failsafe in Deregulation and Repatriation methodologies, i.e., a reference against a hospital's unrecognized volume reductions, that ensures the Commission does not remove more volume than actual declines
- Materiality thresholds further remove the likelihood that the Commission will score deregulation or expatriation artificially due to inaccurate extrapolation
- The implementation process outlined in the recommendation purposefully allows hospitals to contest findings, which staff expect will be based on concerns over extrapolation
- Review of the Repatriation methodologies indicate that concerns related to cells where there is no available Medicare fee-for-service percentage to extrapolate is quite limited, (~400 entries out of approximately 17 thousand or ~2 percent of cells that have no extrapolation).
- As demonstrated below, the Deregulation methodology, which uses extrapolation, aligns quite well with planned deregulations hospitals have brought forward, suggesting that extrapolation has face validity

Staff do not agree with UMMS' concern that 80 percent of the use rate decline in the State is scored as deregulation, as modelling indicates that 28 percent of total declines is scored as deregulation (prior to use of materiality thresholds). Additionally, examination of several planned deregulations suggest the tool is working well:

Hospital	Planned Deregulation	Deregulation Tool
Anne Arundel	$5.8M (OP Surgery)	$5.9M (Major, Minor Surgery)
Calvert Health	$355k (OP Cardiac Testing Center)	$613k (Radioloogy)
Johns Hopkins	$3.6M (Green Spring Volume Shift)	$3.5M (Major, Minor Surgery)
Meritus	$1.5M (Pain and Gastro Surgery)	$1.7M (Major, Minor Surgery)
UM Midtown	$455k (OP Tower Deregulation)	$642k (Minor Surgery, Radiology)

Less Immediate Technical Consideration Comments

Topic	CareFirst	JHHS	MHA	MedStar
Exclusions			"CDS-A and innovation service lines are addressed already in their stand-alone policies and should be excluded from the repatriation analysis."	"CDS-A and innovation service lines should be excluded from the repatriation calculation as they are addressed in stand-alone HSCRC payment policies"
Variable Cost Factor	"During the review of volume policies, stakeholders questioned staff's consistent use of a 50% variable cost factor. In response, staff has provided analyses supporting their use of a 50% variable cost factor. However, regardless of the variable cost factor used, hospitals on GBR in a declining volume environment will always be funded above fee-for-service relative to volume. As such, staff's time would be better spent on policy issues that address equity, access, affordability, and quality."	"We have found that a 50% across the board VCF does not properly account for the real costs of providing care to certain types of patients. This can disadvantage a hospital that has service lines which carry a higher VCF like Oncology, Cardiac Services and Orthopedic Services. JHHS favors a methodology that recognizes a greater share of costs overall as variable by evaluating costs on a service line basis."	"MHA favors a methodology that recognizes a greater share of costs overall as variable by evaluating costs on a service line basis. In work group discussions, HSCRC staff offered analyses that support an overall 50% VCF. However, a preliminary service line analysis by MHA shows adoption of a higher overall VCF for inpatient and outpatient services is required, with drugs and supplies appropriately funded at a 100% VCF."	

Staff concur with the suggestion to remove CDS-A and innovation service lines from the repatriation analyses and will ensure this is accounted for moving forward. Staff's analyses of variable cost factors suggests that a 50% variable cost factor is appropriate, but we appreciate the work MHA has done to help inform this statistic. Further consideration of the appropriate variable cost factor could be included as Staff continue to revise the policies over time.

Volume Scorecard Comments

Topic	Adventist	CareFirst	MHA	MedStar
Scorecard	"AHC is concerned that the results of the scorecard have not been fully validated – most notably the special adjustment section of the scorecard. While staff has been open to addressing any remaining concerns, AHC strongly urges against any formalization of the scorecard until those concerns are fully addressed."	"We applaud staff for the extensive work that has gone into the volume scorecard. Staff have demonstrated that nearly all hospitals have received more funding than they would have if volumes were funded on a fee-for-service basis and a 50% variable cost factor. While hospital volumes have declined since the start of the model, statewide hospital costs have increased because the global budgeted revenue (GBR) model allows hospitals to retain the revenues associated with avoided utilization. Thus, generous funding relative to volume should not be surprising."	"HSCRC should consider retaining an independent third-party to validate the approach before using the scorecard to evaluate the over and underfunding of volume and whether modification is needed to methodologies for funding volume changes."	"MedStar is supportive of the volume scorecard in concept to provide the industry with a longitudinal assessment of volume funding across the state. MedStar stresses that Staff should continue to be clear that this scorecard does not provide an assessment of the appropriateness of hospital funding in totality and should not be used in HSCRC rate setting policy determinations." "The scorecard is appropriate only for use as an approximation when assessing if hospitals are appropriately funded for volume changes."

Staff appreciate CareFirst's acknowledgement of the extensive work that went into the Volume Scorecard. Staff additionally appreciate MedStar's support of the Volume Scorecard concept,

i.e., as a tool that approximates appropriate funding for volume changes and not a methodology for rate setting determinations

Before determining if the scorecard needs to be independently validated, staff believe the following should be considered:

- The HSCRC is an independent regulator with no incentive to deviate from objective scorekeeping
- Multiple staff within the HSCRC have modelled volume funding and have reached the same findings
- The tool has been validated by consultants for select hospitals
- Hospitals and consultants are regularly supplied with this data and have been afforded the opportunity over the last 6 months to dispute any findings

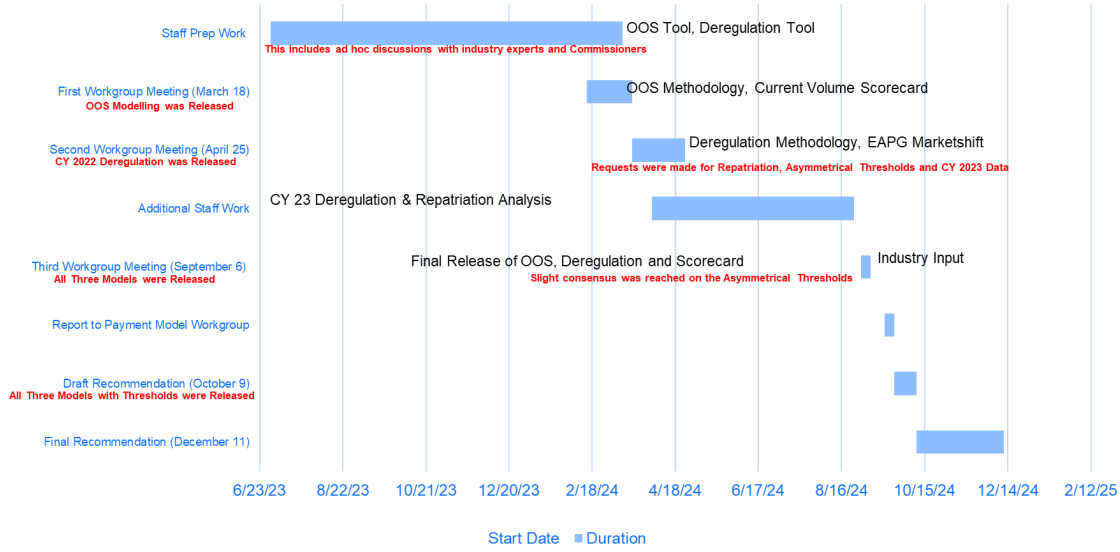
Workgroup Process Comments

Topic	Adventist	Lifebridge	MedStar
Workgroup Process	"While AHC is in full support of the development of these policies, there is an overarching concern with the timeline to finalize and execute these policies when there has been limited time for the industry to fully vet and validate the complete results. Final workbooks with the inclusion of materiality thresholds were just shared with the industry on October 9th giving hospitals only three weeks to thoroughly review each of the three distinct complex policies and provide comment."	"While there was a workgroup that discussed the need for more precise volume adjustments outside of the existing market-shift policy, in our opinion more time was spent on the principles of additive volume methodologies as opposed to the level of detail and specificity presented in the Staff's October draft recommendation."	"We want to acknowledge the tremendous amount of work that Staff did to develop these policies over the previous year as well as the collaborative nature in which Staff engaged with and was responsive to stakeholders during this process."

Staff thank MedStar for their recognition of staff's work over the past year to bring forward formulaic volume policies that adjust for shifts requested by stakeholders.

Staff do not agree with Adventist's and LifeBridge's assertion that there has been limited time to fully vet these methodologies and that discussions in the workgroup mainly focused on the principles of additive volume methodologies

As demonstrated on the next table, this engagement took over a year of work, was delayed because industry requested that staff utilize CY 2023 data in lieu CY 2022, was further delayed because Adventist requested a new methodology that was not contemplated in the original workplan (i.e., Repatriation), and results were shared well in advance of the Draft Recommendation except for the Repatriation policy.



Note: the 2024 volume workgroup was in addition to substantial work done on the demographic adjustment during the 2024 update factor workgroup in the summer of 2023 and a complete review of market shift approaches during 2019 that resulted in material redefinition of the markets.

General Volume Policy Comments

Topic	JHHS	Lifebridge	MHA	UMMS
General Policy Concerns	"Current market shift methodology, which tracks shifts by ZIP code, does not sufficiently capture shifts. The ZIP code specific methodology does not account for patient movement over a broader geographic area. Use of broader geographic definitions could improve the methodology. Additionally, the current methodology for demographic adjustments insufficiently accounts for age-adjusted growth, as mentioned in our previous letter. Lowering the adjustment to align with unadjusted state projections for annual population change has reduced the adjustment and substantially underfunded age adjusted demographic growth at a time when the state has higher utilization with an aging population. The current demographic adjustment allocates funding to hospitals whether or not they experience any actual use rate growth. This approach also needs to be reconsidered." "Broad volume policy review is needed because market shift and demographic aren't working."	"With the addition of these new policies, there will be 7 volume policies in use; none of the policies adequately adjust for the aging demographics in our communities. We believe more work and review is needed prior implementing these policies to ensure they appropriately interact with each other and comprehensively adjust for volume changes."	"The existing policy governing market shifts needs important, unaddressed updates. The methodology needs to fund variable and fixed costs more precisely." "Current market shift methodology, which tracks shifts by ZIP code, does not sufficiently capture shifts. Broader geographic definitions (e.g., county level) could improve the methodology. MHA urges HSCRC to change to the market shift methodology to allow potentially avoidable utilization (PAU) to flow through the underlying service line." "The current methodology for demographic adjustments insufficiently accounts for age-adjusted growth. Lowering the adjustment to align with unadjusted state projections for annual population change has reduced the adjustment from 4.25% to 0.25%. This substantially underfunds age-adjusted demographic growth at a time when the state has higher utilization with an aging population." "We urge you to also consider the other volume policies, including market shift and demographic adjustment, that need improvement."	"UMMS is concerned that the current approach of multiple policies overlaying volume funding is too complicated with various incentives that, at times, compete with one another. We do not believe that adding additional policies to address the limitations of existing volume funding mechanisms, including both the Market Shift and Demographic policies, is the correct approach. UMMS urges the Commission to instead, evaluate all existing volume policies to ensure they are achieving the intended policy aim. Intentional focus should be directed toward straightforward incentives that align volume policies with model goals. This review should be completed prior to year one of the AHEAD model and prior to considering additional policies in an already complex system that is challenging for hospitals to navigate."

Staff recognize that general volume policy concerns are causing consternation in the field, but would note the following considerations:

- Aging of the population does not necessarily lead to increased hospitalizations, especially when technological advances occur. For example, staff analyzed the rate of IP utilization by non-dual eligible 70-year olds represented in the Medicare's national 5

percent sample and found that utilization within this age cohort dropped by 27 percent from 2013 to 2023. Maryland hospitals also benefit from these broad-based trends which run counter to the impact of aging

- Hospitals do lose revenue when PAU Shared Savings is considered; however, this was a purposeful incentive to compel hospitals to reduce readmissions and avoidable admissions, which some hospitals failed to do

Staff believe it is important to systematically update policies for various stakeholder considerations. For example, considerations could include: modifying variable cost factors, realigning global budget revenue based on market shifts in readmissions and avoidable admissions, and considering the impact of other broad secular trends on utilization. The next steps on volume policies will be discussed at the Commissioner retreat.

Results

This section will outline the results of the proposed methodologies,[13] both with and without the materiality thresholds and not inclusive of consideration of efficiency, which staff in the *Stakeholder Comment* section recommended discontinuing. For Deregulation and Repatriation the assessment is calendar year 2023 over 2019, per the workgroup recommendation. For out-of-state volume the assessment is rate year 2023 over rate year 2014 (except for hospitals that have been rebased since 2014).

In the draft recommendation, staff noted that there could be a scenario where deregulation adjustments and expatriation adjustments can simultaneously but independently cross reference the same service lines in the Market Shift policy, which could result in removing more volume from GBR's than actual declines that occurred - no such duplication exists for repatriation. In light of this concern, staff created an additional analysis that removes from the expatriation analysis all volumes scored as deregulation.[14] The following modeling and future iterations of these policies will account for this interaction and thus ensure that deregulation and expatriation methodologies are not duplicative.

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[13] Please note that the modeling will differ slightly from what was provided during the draft recommendation because staff amended the materiality thresholds to remove a consideration of efficiency performance.

[14] The interaction analysis is as follows: ECMADs flagged as possible deregulation in the Deregulation methodology are rolled up per service line, with no consideration for geography, and compared against the Unrecognized ECMAD counts that are used in the same service line in the Repatriation/Expatriation methodology - geography is not considered because Deregulation is assessed using the hospital's primary service area, inclusive of zip codes, and Repatriation is assessed at the county level due to data availability. Following this, ECMADs flagged as possible deregulation are removed from Unrecognized ECMAD counts, thereby yielding a lower Unrecognized ECMAD decline, which reduces the potential for scored expatriation. If the resulting Unrecognized ECMAD decline is greater than the scored expatriation (lower in terms of absolute value), a credit to the Repatriation/Expatriation methodology is applied by multiplying the average charge per case, inclusive of a 50 percent variable cost factor, by the difference between the scored expatriation prior to the interaction analysis with the scored expatriation following the interaction analysis. This analysis is limited to just those service lines assessed in both the deregulation and repatriation/expatriation policies. There is no interaction analysis for repatriation, as deregulation is downside risk only. For an example of the interaction analysis, please see Appendix 4.

Deregulation

Table 7: Deregulation 2019-2023 ($ Thousands; with and without materiality thresholds)[15]

Hospital	Cardiovascular	CT/MRI/PET	Major Surgery	Minor Surgery	Oncology Related Services	Radiology	Total	Total with Materiality Thresholds
ANNE ARUNDEL	$68	$7	$4,558	$1,346	$698	$111	$6,788	$1,655
GBMC	$1	$51	$635	$512	$3,475	$359	$5,033	$3,390
JOHNS HOPKINS	$0	$161	$448	$3,005	$0	$41	$3,655	$33
UMMC	$94	$539	$705	$1,393	$0	$166	$2,898	$178
UM-St. Joe	$735	$60	$842	$618	$110	$516	$2,881	$962
SINAI	$56	$186	$870	$821	$479	$454	$2,865	$351
Frederick	$15	$34	$1,141	$744	$0	$161	$2,095	$788
MedStar Good Sam	$0	$0	$1	$1,924	$27	$43	$1,995	$1,373
Peninsula	$108	$144	$325	$53	$473	$638	$1,741	$577
MERITUS	$35	$0	$56	$1,628	$0	$0	$1,720	$1,073
UM-BWMC	$0	$64	$507	$850	$196	$46	$1,664	$316
Doctors	$166	$1	$459	$456	$178	$206	$1,467	$481
Western Maryland	$235	$253	$397	$313	$33	$82	$1,312	$136
ATLANTIC GENERAL	$0	$56	$58	$446	$307	$421	$1,288	$615
HOLY CROSS	$51	$195	$35	$713	$0	$172	$1,166	$347
NORTHWEST	$1	$30	$52	$146	$466	$448	$1,141	$694
Ascension Saint Agnes Hospital	$301	$0	$278	$227	$232	$77	$1,115	$64
SHADY GROVE	$70	$896	$22	$1	$0	$67	$1,054	$906
CALVERT	$56	$0	$121	$155	$0	$614	$946	$605
UM-Charles Regional	$59	$23	$73	$669	$15	$49	$888	$459
JH Bayview	$120	$80	$104	$523	$0	$37	$864	$0
MERCY	$9	$93	$82	$197	$0	$472	$853	$0
CARROLL	$21	$3	$358	$402	$0	$22	$806	$76
UMMC MIDTOWN	$1	$62	$60	$393	$9	$250	$773	$246
UM-Upper Chesapeake	$125	$218	$212	$155	$0	$41	$751	$217
MedStar Union Mem	$246	$6	$22	$35	$0	$436	$745	$315
MedStar St. Mary's	$38	$0	$177	$203	$160	$161	$738	$82
MedStar Fr Square	$0	$0	$56	$115	$459	$6	$635	$0
Adventist White Oak	$5	$270	$21	$47	$0	$249	$591	$501
UM-Easton	$6	$41	$129	$32	$0	$340	$549	$226
SUBURBAN	$13	$18	$115	$173	$0	$116	$435	$106
UM-Harford	$0	$67	$189	$54	$0	$116	$425	$98
ChristianaCare, Union	$0	$83	$124	$15	$5	$178	$405	$26
MedStar Harbor	$35	$16	$270	$11	$0	$69	$402	$30
Garrett	$7	$0	$13	$280	$0	$36	$337	$22
UM-Capital Region Medical Center	$86	$5	$19	$5	$0	$196	$310	$166
HOWARD COUNTY	$13	$2	$77	$126	$0	$28	$246	$0
Grace Medical center	$0	$128	$0	$0	$0	$108	$237	$231
MedStar Southern MD	$105	$11	$0	$10	$0	$71	$197	$48
HC-GERMANTOWN	$5	$19	$85	$28	$1	$1	$138	$10
UM-Chestertown	$0	$0	$0	$130	$0	$5	$136	$0
MedStar Montgomery	$9	$53	$29	$2	$0	$37	$129	$66
FT. WASHINGTON	$0	$0	$28	$10	$0	$59	$96	$51
Mccready	$0	$0	$0	$1	$0	$0	$1	$0
Grand Total	**$2,897**	**$3,874**	**$13,750**	**$18,966**	**$7,321**	**$7,701**	**$54,510**	**$17,522**

[15] Values are subject to change because the Rate Year 2025 Integrated Efficiency rankings have yet to be finalized due to data delays in Commercial TCOC data.

Repatriation

Table 7: Repatriation 2019-2023 ($ Thousands; with and without materiality thresholds)[16]

Hospital	Repatriation/ (Expatriation)	Interaction Analysis Credit	Repatriation/(Expatriation) with Interaction Credit and Materiality Thresholds
Adventist- Shady Grove	-$2,838	$892	-$1,244
Western Maryland	-$3,072	$375	-$1,187
Luminis- Doctors	-$1,355	$209	-$944
ChristianaCare, Union	-$1,294	$92	-$734
Adventist- White Oak	-$519	$406	-$618
Frederick	-$551	$158	-$428
MedStar- Harbor	-$965	$11	-$414
Lifebridge- Sinai	-$3,514	$0	-$373
Garrett	-$701	$0	-$307
Meritus	-$9	$0	-$252
UMMS- St. Joe	-$25	$233	-$160
UMMS- Easton	-$767	$194	-$99
Lifebridge- Grace	-$291	$0	-$85
Lifebridge- Carroll	-$1,340	$373	-$76
MedStar- Good Sam	-$119	$0	-$66
Atlantic General	-$187	$14	-$66
UMMS- Chestertown	-$197	$0	-$59
Lifebridge- Northwest	-$25	$86	-$43
Tidal- Peninsula	-$987	$139	-$42
MedStar- St. Mary's	-$151	$5	-$13
Tidal- McCready	-$86	$0	-$3
GBMC	-$1,585	$119	$0
UMMS- Capital Region	$217	$89	$0
UMMS- Laurel	$0	$0	$0
UMMS- Convention Cente	$0	$0	$0
UMMS- Aberdeen	$0	$0	$0
UMMS- UMROI	-$85	$0	$10
Mercy	$363	$188	$20
JHH- Bayview	$6	$0	$32
JHH- Howard County	-$399	$0	$63
Lifebridge- Levindale	-$120	$0	$74
Saint Agnes	$141	$47	$84
Trinity - Holy Cross	-$2,886	$209	$101
MedStar- Franklin Square	$391	$82	$112
UMMS- Charles	$217	$16	$121
Trinity - Holy Cross Germa	$269	$1	$122
UMMS-Upper Chesapeake	-$35	$231	$139
MedStar- Montgomery	$206	$55	$152
Adventist-Ft. Washington	$324	$38	$287
UMMS- Midtown	$629	$7	$336
UMMS- UMMC	-$2,778	$0	$384
JHH- Johns Hopkins	-$1,611	$0	$536
Calvert	$157	$253	$712
UMMS- BWMC	$978	$0	$859
Luminis- Anne Arundel	-$1,470	$625	$906
MedStar- Union Mem	$1,629	$0	$913
JHH- Suburban	$570	$149	$1,000
MedStar- Southern MD	$2,678	$0	$2,663
Total	-$21,186	$5,297	$2,413

[16] See supra note 15

Out-of-State

Table 9: OOS Volume Change through RY 2023 (removes potential adjustments under $500k)

Hospital	OOS Volume Change at 50% VCF	OOS Volume Change at 50% VCF with Materiality Thresholds
ChristianaCare, Union	$2,642,943	$934,768
Suburban	$2,436,391	$0
MedStar Montgomery	$1,352,522	$0
Anne Arundel	$1,204,766	$0
UM-Charles Regional	-$510,257	$0
MedStar Harbor	-$522,913	$0
Grace Medical Center	-$562,990	$0
UM-Harford	-$597,587	$0
Garrett	-$606,328	$0
UM-BWMC	-$722,384	$0
Doctors	-$882,268	$0
Holy Cross	-$923,236	$0
MedStar Union Memorial	-$1,237,563	$0
St. Agnes	-$1,402,526	$0
UM-Upper Chesapeake	-$1,488,932	$0
Shady Grove	-$1,612,735	$0
Carroll	-$1,900,591	$0
Sinai	-$2,496,323	$0
MedStar Good Sam	-$2,629,575	$0
UM-Laurel FMF	-$3,226,947	-$2,345,398
UM-St. Joe	-$3,278,295	$0
Frederick	-$3,614,904	$0
GBMC	-$3,644,367	$0
Mercy	-$5,406,642	$0
JH Bayview	-$6,222,775	$0
Adventist White Oak	-$6,669,239	$0
Western Maryland	-$8,226,074	-$616,389
UM-Capital Region	-$10,162,905	-$338,126
UMMC	-$12,358,036	$0
Johns Hopkins	-$65,682,740	-$567,814
Total	-$138,952,509	-$2,932,960

Future Considerations

Since 2014, the HSCRC has been much more than a price regulator. The Commission has direct oversight of price, volume, and revenue under GBRs. One of the goals of the Commission is to make sure that hospitals have adequate resources for the clinical services provided.

For several years, staff have determined that the combination of the Demographic Adjustment and Market Shift policy revenue adjustments exceed total in-state volume changes. However, there was no accounting for additional adjustments related to irregular volume change (deregulation, repatriation, out-of-state, and miscellaneous), negative adjustments that occurred due to the Potentially Avoidable Utilization Shared Savings policy, and Efficiency adjustments that are heavily influenced by volume change.

As such, during the Volume Workgroup engagement, staff created a "Volume Scorecard" to assess the relationship of volume to funding during the All-Payer and Total Cost of Care Models. Specifically, staff calculated an expected volume funding that would have occurred each year if all volume change was adjusted through a volume variable or fee-for-service methodology (utilizing a 50 percent variable cost factor), otherwise known as "FFS Counterfactual Funding," versus all revenue adjustments that occurred, otherwise known as "Observed Funding." Staff purposefully used a 50 percent variable cost factor because the fixed costs are already covered by the base global budgets and are adjusted each year for inflation through the Annual Update Factor.[17] The evaluation builds off previous analyses of Market Shift and Demographic Adjustment policies and purposefully demonstrates how each revenue adjustment layers on top of each other at both the state and individual hospital level.

The purpose of this scorecard is not to use it to set funding levels. It is a tool that permits a view of the impact of volume policies against the fee-for-service counterfactual to inform policymaking. Below is the Volume Scorecard for calendar year 2014 through 2023:

[17] During the Volume workgroup engagement staff did extensive analyses, per workgroup member requests, to support the use of a 50 percent variable factor. Highlights of those analyses can be found in Appendix 3.

Table 10a: Volume Scorecard (with Market Shift Adjustments)

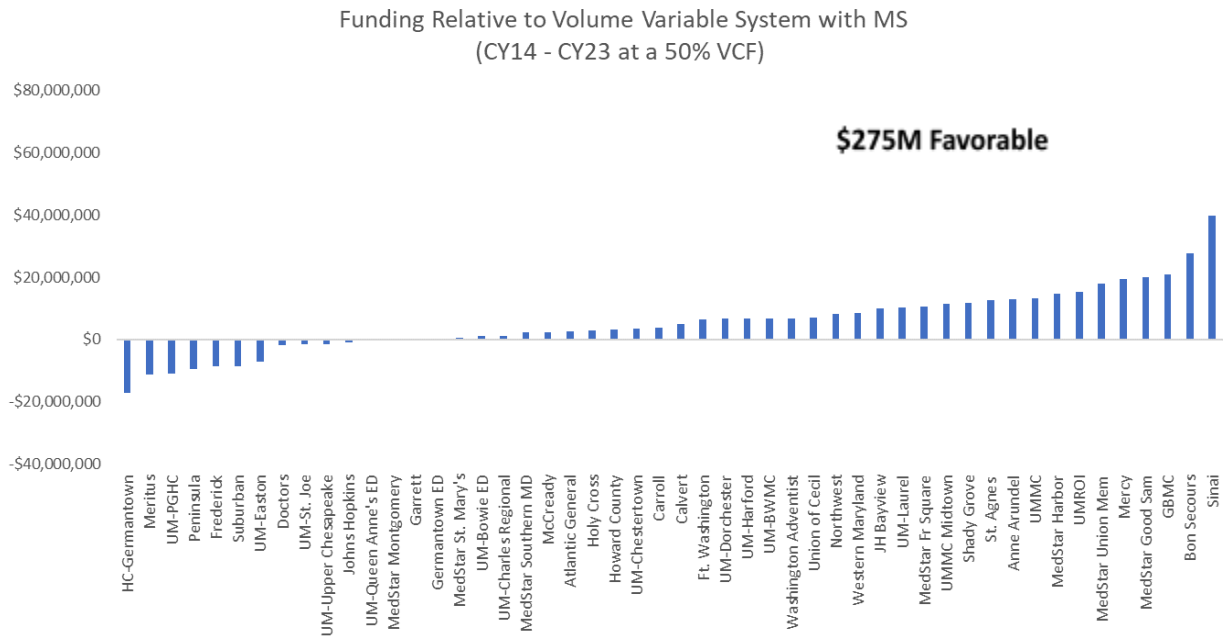


Table 10b: Volume Scorecard (with Market Shift and Demographic Adjustments)

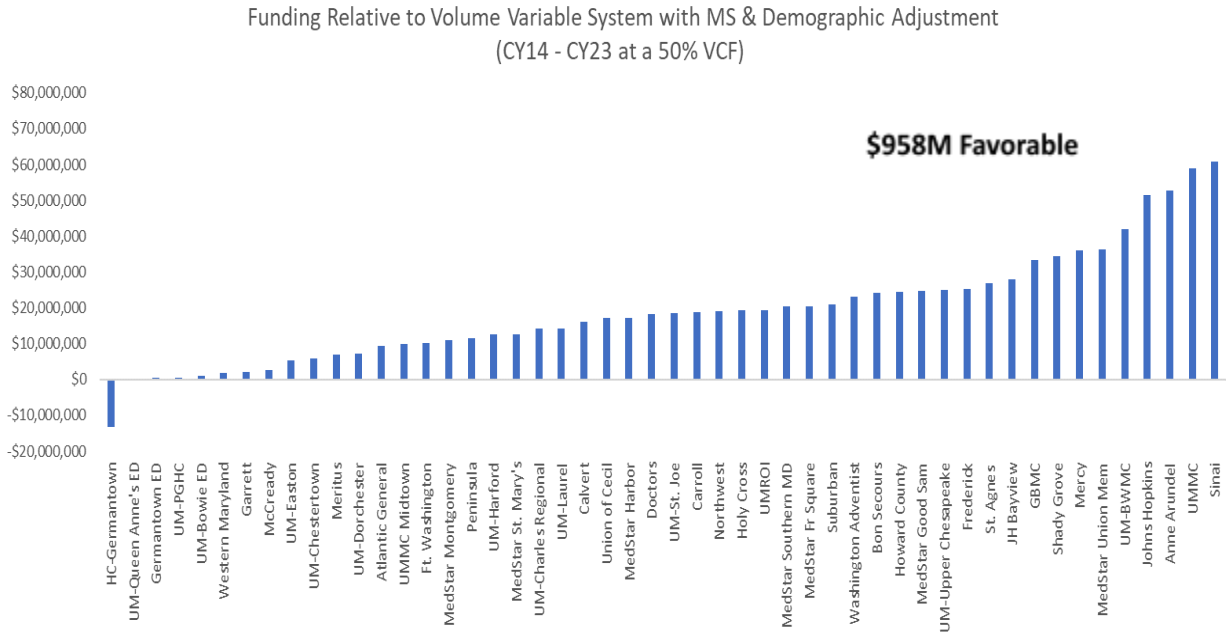


Table 10c: Volume Scorecard (with Market Shift and Demographic Adjustments & Out-of-State and Potentially Avoidable Utilization Adjustments)

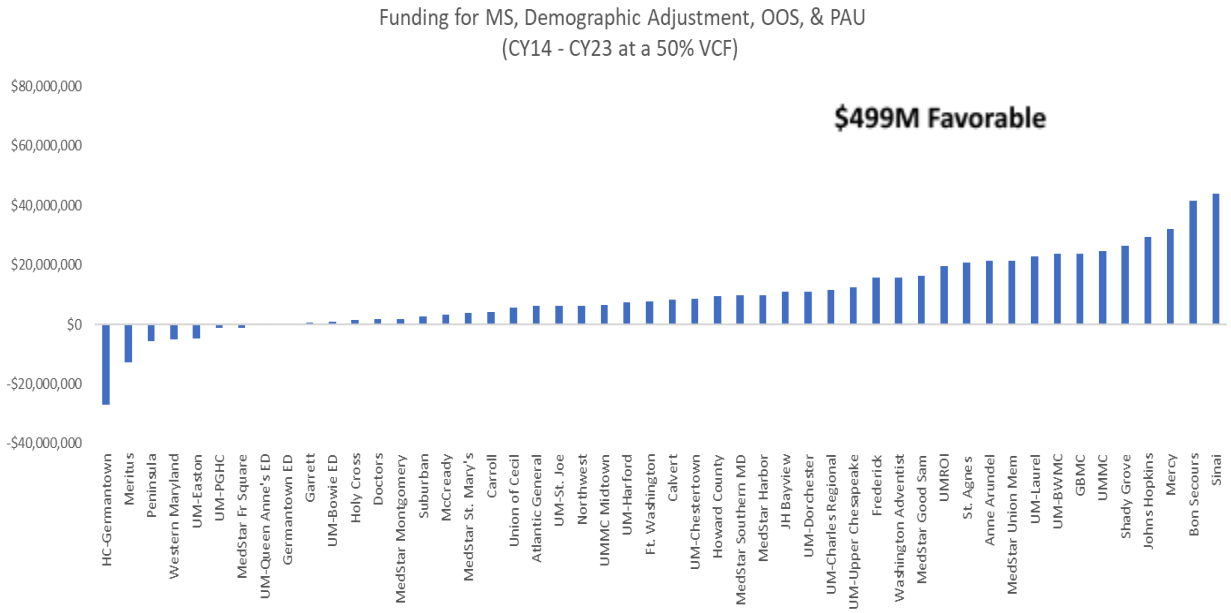
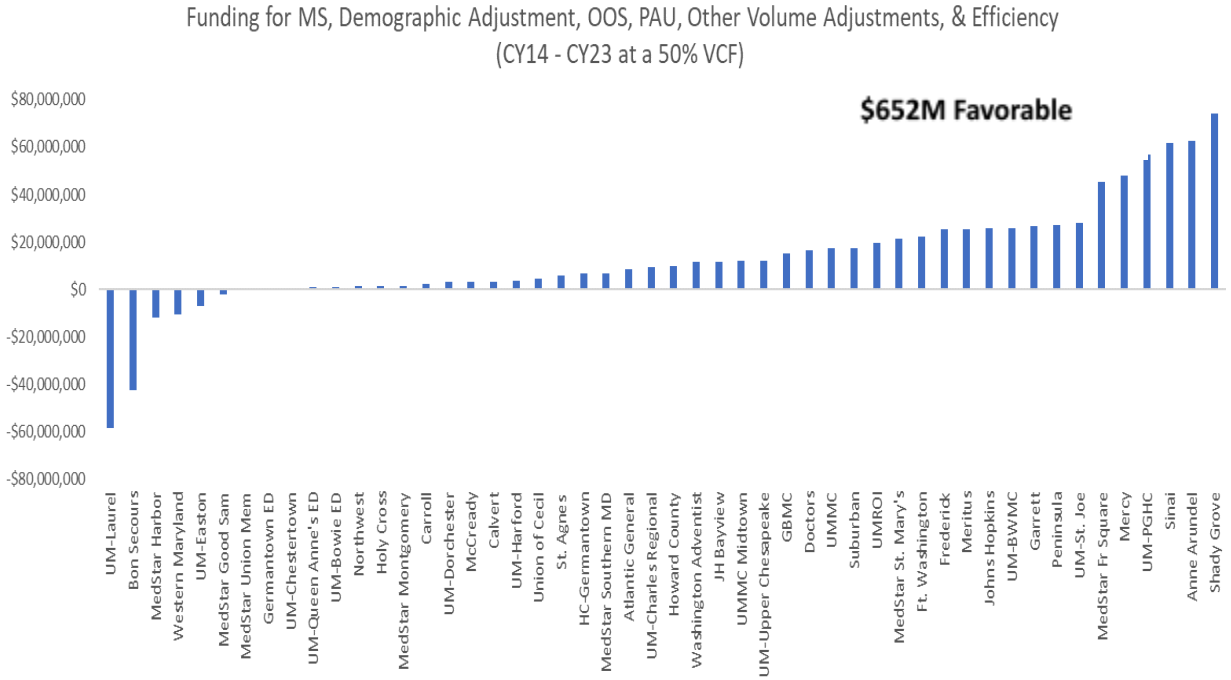


Table 10d: Volume Scorecard (with Market Shift and Demographic Adjustments, Out-of-State and Potentially Avoidable Utilization Adjustments, & Other Volume and Efficiency Adjustments)



This comparison demonstrates that when the revenue shifts are included, nearly all Maryland hospitals are receiving more funding for volume than the FFS counterfactual. This is a helpful insight but, as noted above, not dispositive in policymaking.

It is important to systematically evaluate and, if merited, update policies for various Commission goals and stakeholder requests for consideration. For example, considerations could include: modifying variable cost factors, realigning global budget revenue based on market shifts in readmissions and avoidable admissions, and considering the impact of other broad secular trends on utilization. The next steps on volume policies will be discussed at the Commission retreat.

Recommendations

1. Establish a Deregulation policy based on the methodology outlined herein that will result in negative revenue adjustments to hospitals' global budgets.
2. Establish a Repatriation policy based on the methodology outlined herein that will result in positive (repatriation) and negative (expatriation) revenue adjustments to hospitals' global budgets.
3. Establish an Out-of-State policy based on the methodology outlined herein that will result in positive and negative revenue adjustments to hospitals' global budgets.
4. Implement Deregulation, and Expatriation, the next available rate issuance on a one-time basis, negative Out-of-State adjustments on a permanent basis, when the following materiality thresholds are met:
    a. The adjustment exceeds 3 percent of the hospital's GBR OR
    b. The adjustment exceeds 3 percent of the associated service line revenue
    c. All Planned Deregulations should still be reported to the Commission in conformance with the GBR agreement and adjusted accordingly.
        i. If deregulation methodology indicates a potential deregulation that varies from planned deregulation by more than 10 percent, staff may consider revising the deregulation adjustment
5. Implement Repatriation at the next available rate issuance on a one-time basis, positive Out-of-State adjustments on a permanent basis, when the following materiality thresholds are met:
    a. The adjustment exceeds 1 percent of the hospital's GBR OR
    b. The adjustment exceeds 1 percent of the associated service line revenue
6. Implement Deregulation, and Repatriation/Expatriation adjustments on a permanent basis one year following the initial one-time revenue adjustment to allow for potential backfilling and/or dissipation. Hospitals can provide additional information to contest the volume finding, but will have the burden of proof, and HSCRC staff will be final arbiters of this decision.

Appendix 1. Key Methodology Concepts and Definitions

1. All-Payer Refined Diagnosis Related Groups (APR-DRG) – 3M's classification system that groups hospital inpatients according to their reason for admission, severity of illness and risk of mortality.

2. Enhanced Ambulatory Patient Groups (EAPGs) – 3M's classification system that groups outpatient medical visits and procedures based on similar clinical characteristics, resource use and costs. 3M EAPGs are designed to reflect the resources used in an ambulatory visit and to calculate expected payments for outpatient services.

3. Equivalent Case Mix Adjusted Discharges (ECMADS) – Often referred to as casemix, ECMADS are a volume statistic that account for acuity, as not all services require the same level of care and resources.

4. Markets Shift Policy (Market Shift) – Provides the criteria to reallocate funding to account for shifts in cases between regulated hospitals, with the objective of ensuring that funding follows the patient and hospitals continue to have a competitive interest in serving patients. The MSA does not currently address all volume changes, only those the Commission can quantify as shifts between hospitals and only volumes the Commission deems appropriate.

5. Demographic Adjustment Policy (Demographic Adjustment) – Provides funding for age-adjusted growth at the zip code or county level in order to anticipate changes in utilization based on demographic changes. The Demographic Adjustment is capped by Maryland Department of Planning estimates of statewide population growth to align with the per capita nature of the All-Payer/Total Cost of Care Model tests.

6. Unrecognized ECMADS – Acuity adjusted volume that grew or declined but was not shifted in the Market Shift methodology.

7. Casemix Data –Confidential patient-level hospital administrative data on all inpatient admissions and outpatient visits.

8. Experience Data – Monthly hospital unaudited revenue and volumes data by rate center used to monitor hospital charging compliance with approved rates.

9. Variable Cost Factor – The percentage of charges required to reimburse a hospital for the variable costs (supplies, drugs, etc.) associated with increases in volume. The standard by which the industry and the Commission evaluates volume funding adequacy is 50 percent, as 50 percent of all service charges on average covers fixed costs and 50 percent covers variable costs. This value is not uniform by service line.

10. Service Lines – Groupings of services into higher level categories that reflect similar clinical delivery. Service lines are utilized to determine market shifts in the Market Shift methodology and the proposed Deregulation and Repatriation Policies.

11. Volume Scorecard – A comprehensive visualization tool that accounts for all volume policies. The Volume Scorecard assesses Market Shift, Demographic Adjustment, out-of-state volumes,

deregulation, repatriation/expatriation and PAU, as well as adjustments related to efficiency policies. The scorecard will not include CDS-A and Complexity and Innovation, as those policies are standalone.

12. Chronic Condition Warehouse (CCW) Data - Medicare and Medicaid beneficiary, claims, and assessment data linked by beneficiary across the continuum of care.

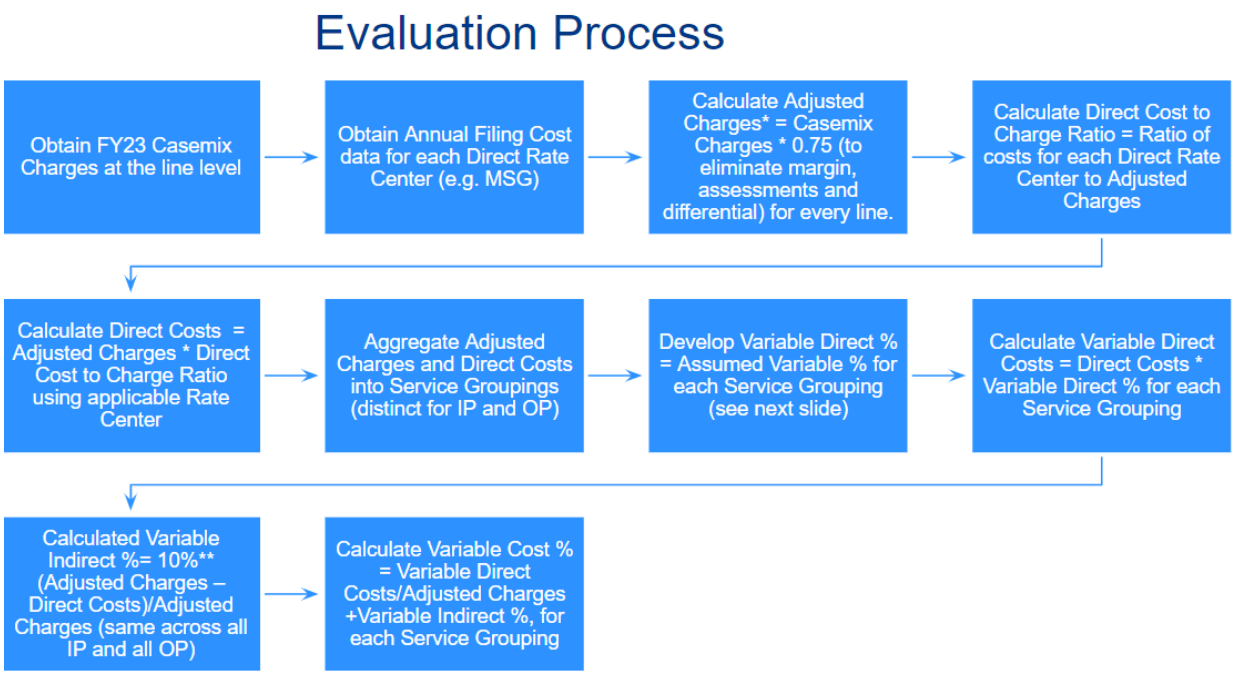
Appendix 2. EAPG Market Shift Example

Actual Unrecognized ECAMDS for Frederick Hospital, Major Surgery in Prince George's (0.953)

HOSPITALNAME	Frederick
PROD_CAT	Major Surgery
zipcode	Prince Georges

					Calculated Proof	
	A	*B*	*C=B-A*	*D*	*E=C/SUM(C:C)*	*F=CXSUM(D:D)*
Row Labels	Sum of ecmadCY1922	Sum of hospshift	Unrecog ecmads	Allocated Unrecog ecmads	Share of EAPG/Unrecognized	Normalized Unrecognized ECMADS
115:::DEEP LYMPH STRUCTURE PROCEDURES	(0.62)	(0.38)	(0.242)	(0.234)	25%	(0.234)
172:::LEVEL III KIDNEY AND URETERAL PROCEDURES	(0.94)	(0.94)	-	-	0%	-
208:::LEVEL II OTHER UTERINE AND ADNEXA GYNECOLOGICAL PROCEDURES	(0.59)	(0.29)	(0.302)	(0.292)	31%	(0.292)
26:::LEVEL I KNEE AND LOWER LEG PROCEDURES	(0.52)	(0.52)	-	-	0%	-
28:::LEVEL I SPINE PROCEDURES	(0.68)	(0.24)	(0.442)	(0.428)	45%	(0.428)
29:::LEVEL II SPINE PROCEDURES	(1.52)	(1.52)	-	-	0%	-
64:::LEVEL I LOWER AIRWAY ENDOSCOPY	0.33	0.33	-	-	0%	-
Grand Total	**(4.54)**	**(3.55)**	**(0.985)**	**(0.953)**	100%	(0.953)

Appendix 3. 50 Percent Variable Cost Factor Analyses



* 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.

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 Table)

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%**

Appendix 4. Interaction Analysis Example

Interaction Analysis

A= Hospital Name	*B =Hospital Service line*	*C = Sum of all Unrecognized ECMADs per hospital per service line in CY22 using CY19 as the base year (Same periods used in the RY24 marketshift)*	*D = Sum of all Unrecognized ECMADs per hospital per service line in CY23 using CY22 as the base year (Same periods used in the RY25 Marketshift)*	*E = C + D*	*F = Sum of all EAPGs tagged as possible DEREG per hospital per service line (From the Deregulation Assesment tool)*	*G = E + F*	*H = Sum of all county ECMADs tagged as possible expatriation per hospital per service line (From the Repatriation/Expatriation Assesment tool)*	*I = if absolute value of G is less than the absolute valute of H, then G. If G is greater than declines in H, then 0. (Only scoring expatriation)*	*J = CY23 average charge per hospital per service line (from the RY25 Marketshift report)*	*K= (I-H) * J / 2*
HOSPID	SERVICE LINE	CY22 UNRECOG_ECMADS	CY23 UNRECOG_ECMADS	Net Unrecognized CY22 and CY 23	Scored Dereg	New Net Unrecognized after scoring for Dereg	Scored Repatriation / Expatriation	Allowed Repatriation / Expatriation After Interaction Review	CY 2023 Service Line Average Charge	Repatriation / Expatriation Funding After Interaction
Hosp A	Radiology	(81)	(12)	(93)	73	(20)	(90)	(20)	$ 24,487	$ 854,318
Hosp B	Cardiovascular	(16)	(5)	(20)	46	25	(18)	-	$ 20,722.05	$ 187,859