maryland
health services
cost review commission

Final Recommendation for Demographic Adjustment Refinement

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This document contains the final staff recommendations for updating the Demographic Adjustment methodology. A Commissioner vote on this matter is expected during the January 2026 Commission meeting.

Key Methodology Concepts, Definitions, and Abbreviations

1. Achieving Healthcare Efficiency through Accountable Design (AHEAD)
2. CMS - Centers for Medicare & Medicaid Services
3. CY - Calendar year
4. 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.
5. FFS - Fee-for-service
6. FFY - Federal fiscal year refers to the period of October 1 through September 30
7. FY - Fiscal Year, typically refers to a State fiscal year from July 1 through the following June 30
8. Global Budget Revenue (GBR) - a single, fixed-income budget for hospitals to cover all services for all payers, including Medicare, Medicaid, and commercial insurance. The goal is to control costs, improve quality of care, and ensure a stable financial environment for hospitals.
9. HSCRC or Commission - Health Services Cost Review Commission
10. RY - Rate year, which is July 1 through June 30 of each year
11. TCOC - Total Cost of Care, which is a measure of beneficiary's total healthcare spending, regardless of site of service
12. Total Patient Revenue (TPR) - a revenue constraint system developed by the HSCRC and available to sole community provider hospitals and hospitals operating in regions of the State characterized by an absence of densely overlapping services areas, which provided hospitals with a financial incentive to manage their resources efficiently and effectively in order to slow the rate of increase in the cost of health care.
13. 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 historical standard by which the industry and the Commission evaluate volume funding adequacy is 50 percent, as prior analyses indicated that 50 percent of all service charges on average covers fixed costs and 50 percent covers variable costs. The Commission is currently considering a revision to the calculated variable cost factor, which would result in an effective variable cost factor of 59 percent.

Table of Contents

Key Methodology Concepts, Definitions, and Abbreviations 2
Table of Contents 3
Executive Overview 3
Introduction 4
Background 5
Methodology Assessment 7
Age Adjusted Growth 7
Additional Considerations 12
Implications and Policy Options 13
Stakeholder Feedback 13
Recommendations 19
Appendix **20**
Appendix 1. Results of Changes in Maryland Outpatient Days per Thousand Due to Demographics and Changing Practice Patterns 20
Appendix 2. Results of Changes in Maryland Total EIPDs per Thousand Due to Demographics and Changing Practice Patterns 20
Appendix 3. Results of Changes in National Inpatient Days per Thousand Due to Demographics and Changing Practice Patterns 20
Appendix 4. Results of Changes in National Outpatient Days per Thousand Due to Demographics and Changing Practice Patterns 21
Appendix 5. Results of Changes in National Total EIPDs per Thousand Due to Demographics and Changing Practice Patterns 21
Appendix 6. Estimates for Revisions to RY 2026 Demographic Adjustment 22

Executive Overview

Since 2014, Maryland has transformed its healthcare payment system through the All-Payer Model and the Total Cost of Care Model, shifting from volume-based reimbursement to a population-based approach that emphasizes per capita hospital spending and quality outcomes. Central to this transformation is the Global Budget Revenue (GBR) system and its Demographic Adjustment policy, which allocates funding based on age-adjusted population growth to align with statewide per capita targets. However, as Maryland's population ages—projected to reach 26 percent aged 60 and older by 2030—stakeholders have raised concerns that the current methodology may not fully account for utilization changes tied to aging and other risk factors. HSCRC staff, supported by the *Volume Workgroup* and an actuarial analysis of 2013–2023 data, found that while demographics alone would have increased hospital utilization by 10 percent, practice pattern changes reduced utilization by 18 percent, resulting in a net 10 percent decline. National comparisons suggest that Maryland's utilization would have risen only modestly under national trends, supporting a conservative adjustment of 0.1 percent annually to account for national demand growth. To maintain alignment with the Total Cost of Care and AHEAD Models, HSCRC staff recommend applying this 0.1 percent modifier beginning in Rate Year (RY)) 2026, reassessing it every two to three years, and excluding non-population-based revenues from the Demographic Adjustment. These updates ensure the policy continues to balance equitable hospital funding with the Models' goals of efficiency, sustainability, and accountability.

Introduction

The shift of Maryland's health care system since 2014 moved the state from volume-based payments to a population-based model, focusing on total hospital spending per capita and various outcomes, including readmissions, in-hospital , complications, potentially avoidable utilization, and overall cost of care. The state successfully met all contractual targets through 2024.[1]

A crucial element of this transformation was the Global Budget Revenue (GBR) methodology, which provided hospitals with annual prospective budgets. To address population-related utilization changes and market shifts, the HSCRC developed the Demographic Adjustment and Market Shift methodologies at the outset of the All-Payer Model. The Market Shift Adjustment accounts for changes in patient choice and is zero-sum, meaning volume adjustments must have an equal offsetting value.

The Demographic Adjustment aims to provide funding for age-adjusted population growth or decline at the zip code or county level, anticipating utilization changes based on demographic shifts. This adjustment serves as the primary policy mechanism or governor for recognizing system-wide demand changes within the Model. Currently, this policy is capped by Maryland Department of Planning estimates of statewide population growth to align with the per capita nature of the All-Payer and Total Cost of Care Model tests, which are not risk-adjusted. Therefore, while age is used to allocate funding between hospitals it does not drive the total amount of funding.

However, concerns have arisen that population growth adjustments without risk adjustment, particularly for an aging population, may not adequately account for changes in healthcare utilization rates. The

[1] Limiting all-payer hospital spending per capita in line with the growth of the economy, saving Medicare a total of at least $795 million by keeping Maryland's Medicare per beneficiary growth below the national growth rate (currently the state has cumulatively saved $3.6 billion), reducing Medicare readmissions to the national average (currently 2.7% lower than national average; 4.7% on a risk adjusted basis), reducing hospital acquired complications by 30 percent (currently the state has reduced from 2018 to 2024 by 41 percent), moving virtually all hospital payment methodologies to approved population based approaches, and effectively incentivizing hospitals to engage in site neutral activities that improve the affordability of the system.

Maryland Department of Planning reports that the population aged 60 and older increased from 15 percent of all Marylanders in 2000 to 23 percent in 2020, with a projected increase to 26 percent by 2030.[2] This aging rate is slightly above national forecasts. Hospital representatives have noted that the current Demographic Adjustment generates an age-adjusted growth statistic, primarily for distributing population growth, which has been 0.65 percent higher (approximately $130 million) than the average annual population growth of 0.33 percent (approximately $65 million) incorporated into hospital rates since the 2020 census.

Conversely, HSCRC staff and other stakeholders acknowledge that while statewide population growth does not capture all factors influencing hospital utilization, it has served as a reasonable guide for determining statewide funding under a per capita model. This is supported by the consistent finding in the HSCRC *Volume Scorecard* analytic that hospitals generally have been overfunded for volume changes within the Model. Additionally, staff and stakeholders point to numerous other factors beyond aging that influence future hospital use rates, such as patient acuity, shifts in care settings, innovation and technology, and socioeconomic factors. The new Achieving Healthcare Efficiency through Accountable Design (AHEAD) Model also recognizes the multifaceted nature of projecting future hospital use rates. This is evident in its incorporation of the Hierarchical Condition Category risk adjustment model into the CMS-designed Demographic Adjustment policy, which considers aging and various other cost-influencing variables like gender, dual eligible status, disability status, and medical conditions.

This policy recommendation will detail the work staff did with the *Volume Workgroup* and the methods by which staff and stakeholders concluded that modifications to the Demographic Adjustment policy are necessary, especially concerning the effective cap on statewide funding.

Background

In 2011, the HSCRC introduced a demographic adjustment for the 10 rural hospitals operating under the Total Patient Revenue (TPR) System, the predecessor to the GBR methodology. This adjustment utilized age-adjusted county projections and was initially set at 25 percent of the projected age-adjusted population change, due to reductions for a 50 percent variable cost factor and a 50 percent productivity adjustment.

The current Demographic Adjustment policy was fully implemented for the remaining hospitals in Rate Year 2015. In subsequent years, the Commission incorporated the full value of statewide population growth into the adjustment calculation with no variable cost factor and applied it to all revenue (regardless of whether or not revenue was adjusted through a non-population based methodology). To better distribute funding to areas experiencing faster aging, an age-weighting formula was later integrated. While this formula increased potential statewide funding, it was not intended to be the sole determinant of statewide funding, as it did not account for complete risk change or year-over-year utilization trends.

In the current *Volume Workgroup* engagement, staff utilized the following principles to guide its review of the Demographic Adjustment methodology:

[2] https://aging.maryland.gov/Pages/LRM.aspx#:~:text=Why%20Maryland%20Needs%20a%20Multisector,and%20purposeful%20lives.%E2%80%8B%E2%80%8B

Table 1: Guiding Principles for Demographic Adjustment Review

	Guiding Principle	Comment
1.	Account for Year-Over-Year Changes in Hospital Use Rates	The current age-adjusted growth statistic is based on an evaluation of current year variation in per member per year (PMPY) spending. If average PMPY spending changes each year in line with secular trends, using the current age-adjusted growth statistic will fail to account for changes in trend
2.	Account for Total Risk Change	Aging is one of the most significant factors in changing hospital use rates, but it is not the only factor. To accurately modify population growth projections for changing risk profiles, total risk change should be accounted for.
3.	Align with AHEAD Methodology When Possible	The AHEAD Financial Specifications calls for Medicare Hospital Global Budgets to be adjusted for population growth that is risk adjusted for changes in Hierarchical Condition Categories (HCC's), which is risk adjustment model that accounts for aging and several other factors (e.g., disability status, diagnoses). While HCC's (or a similar grouper) is not available on a total population level, the AHEAD Model is clearly declaring its intention to adjust population growth for total risk change.
4.	Do Not Build in All TCOC Model Impacts into Estimating Future Demand	One particular approach to assessing use rate changes would be to longitudinally assess changes in utilization in Maryland since the start of Global Budgets in 2014. While this might make sense for various types of services that have generated savings and the State would not want to unwind through a revision to the Demographic Adjustment (e.g., site neutral service offerings), using Maryland experience for all use rate change would build in Model effects and would create an unsustainable Model that might compromise access.
5.	Consider Baseline Methodology Decisions that have Impact on Population Governor in Demographic Adjustment	Similar to other reviews of methodologies, staff took this opportunity to review all the underpinnings of the population governor in the current Demographic Adjustment policy. Due to timing constraints, staff did not review the distribution logic in the Demographic Adjustment, nor did it review if there were better data sources to more accurately project population change.

Overview of Demographic Adjustment Calculation

The Demographic Adjustment calculation starts by defining a hospital's virtual patient service area (VPSA). This is achieved by aggregating the hospital's service volume across all zip codes for eight distinct age groups within the state.[3] The HSCRC then uses this service area distribution to assign population to each hospital. This assignment is based on the proportional share of casemix-adjusted services a hospital provides to patients in each zip code, relative to all hospitals (i.e., market share, so as a hospital's market share grows so will their share of demographic funding).

Next, the HSCRC calculates the estimated population change for the attributed population using population projections.[4] An age weight is applied to each age/zip code cohort within the hospital's VPSA. This adjusts for differences in the cost per capita for each age cohort and accounts for changes due to population aging.

A portion of the existing service volume is considered potentially avoidable utilization (PAU). The HSCRC removes this hospital-specific portion of the base volume to prevent any growth allowance for PAU when projecting a hospital's expected volume growth driven by demographic changes. The remaining statewide age-adjusted population growth is then compared to population growth estimates from the state's Department of Planning. Each hospital's Demographic Adjustment is subsequently multiplied by a pro-rata reduction factor. This factor accounts for expected per capita efficiencies, which are necessary to achieve the overall per capita savings targets outlined in the All-Payer and Total Cost of Care Models. Essentially, the final statewide Demographic Adjustment matches the Department of Planning's growth estimates. The outcome of this process is the population-driven volume growth that will be incorporated into each hospital's global budget for the upcoming fiscal year.

Summary:

[3] The eight age cohorts (0 to 4, 5 to 14, 15 to 44, 45 to 54, 65 to 74, 75 to 84, 85+) within each zip code provide more specific cost trends than would otherwise result from an overall distribution, since population growth trends and health care use within these cohorts differ significantly.

[4] HSCRC obtains its projections from a private vendor, Claritas, who provides zip code and age specific population estimates for current year and 5-year population projections.

1. Calculate base population estimates for the current calendar year for each hospital based on a hospital's share of volume, as measured by equivalent case-mix adjusted discharges, in a given zip code age cohort.
2. Calculate age adjusted population growth rates by multiplying statewide age cost weights with zip/age population growth rates.
3. Calculate hospital specific age adjusted population growth by multiplying hospital specific base population by age adjusted population growth rates for each zip/age cohort and calculating total projected age adjusted population growth
4. Calculate final demographic adjustment by applying efficiency adjustments
    a. Reduce age adjusted population growth by hospital specific PAUs as a percent of total all-payer revenue
    b. Reduce PAU/age adjusted population growth by pro-rata per capita efficiency adjustment reduction so that the statewide Demographic Adjustment is equivalent to unadjusted population growth.

Below is an example calculation with just one zip code for a GBR hospital to arrive at the statewide per capita efficiency adjustment.

Table 2: Demographic Example:

Zip Code	Age Cohort	Base Year ECMADs for Hospital	Total ECMADs for All Hospitals	Share of ECMADs	Base Population	Allocated Base Population	State Total Hospital Revenue per Capita	Age Cost Weights	Projected Population Growth Rate of Cohort	Age Adjusted Population Growth Rates	Hospital Age Adjusted Population Growth	Hospital Overall Age Adjusted Population Growth	Hospital PAU %	Hospital Specific PAU Adjusted Growth Rate	Statewide Per capita Efficiency Adjustment
		STEP 1a			Step1b		Step2a		Step2b		Step 3			Step 4	
A	B	C	D	E = C/D	F	G=F * E	H	I=H/H(total)	J	K=J*I	L=G*K	M=sum(L) /sum(G)	N	O=M*(1-N)	P=O*50%
00000	0-4	30	60	50%	3,713	1,857	$1,577	0.68	0.77%	0.52%	10				
00000	05-14	45	100	45%	23,471	10,562	$119	0.05	-0.07%	0.00%	(0)				
00000	15-44	100	210	48%	8,902	4,239	$3,798	1.63	-1.16%	-1.89%	(80)				
00000	45-55	20	35	57%	7,533	4,305	$2,822	1.21	1.18%	1.43%	61				
00000	55-64	25	40	63%	7,450	4,657	$3,413	1.46	0.16%	0.23%	11				
00000	65-74	25	30	83%	4,517	3,764	$5,162	2.21	2.73%	6.04%	227				
00000	75-84	55	70	79%	2,282	1,793	$7,337	3.14	2.42%	7.60%	136				
00000	85+	60	80	75%	1,044	783	$8,009	3.43	1.32%	4.53%	35				
Total	Total	360	625	58%	58,913	31,959	$2,335				401	1.3%	14%	1.08%	0.54%

Methodology Assessment

In this section, staff will analyze current concerns and/or potential advancements to the Demographic Adjustment methodology.

Age Adjusted Growth

Staff analysis began by considering the hospital field's request for an additional 0.65 percent for the RY 2026 Demographic Adjustment, representing the annual reduction between age-adjusted growth and population growth. The Demographic Adjustment is currently funded at 1.50 percent in rates in RY 2026, comprising 0.74 percent for CY 2024 over CY 2023 population growth and 0.76 percent for prior-year restatements of population growth from the Maryland Department of Planning. The hospital field's request would increase the CY 2024 growth of 0.74 percent to 1.39 percent and the total Demographic Adjustment from 1.50 percent to 2.15 percent (an increase of approximately $130 million).

Staff have consistently argued that this statistic is based on a false premise for two main reasons:

a) It relies on current-year variations in per-member per-year spending, thus failing to account for year-over-year secular changes.
b) It does not consider other changes in risk that could either amplify or mitigate the effects of aging, such as technological advancements that reduce hospitalization rates.

In essence, the age-adjusted growth statistic was created to allocate population funding, not to impact total funding (i.e., the population governor). In light of these concerns, staff conducted several analyses to demonstrate that while age cost weights are appropriate for distributing population growth, they are not suitable for adjusting total funding via the Demographic Adjustment. The *Volume Workgroup* understood the importance of a retrospective analysis of Maryland and the nation encompassing age and non-age factors. To perform this analysis, staff engaged an actuarial consultancy firm that utilized the following approach:

1) **Measures** - Inpatient days per thousand for inpatient services was selected as was equivalent inpatient days (EIPDs)[5] per thousand for outpatient services - drugs were excluded because they do not reliably convert to EIPDs.[6] This allowed the evaluation to have a consistent measurement across inpatient and outpatient, namely total EIPDs (or the sum of inpatient days and EIPDs).
2) **Data Sources** - For the aged 65 and older or disabled[7] population, hospital claims from the Medicare Fee-For-Service 5 percent Sample or Limited Data Set (2013-2023) were utilized. For the under 65 non-disabled population, hospital claims from Milliman's Consolidated Health Cost Guidelines Sources Database (2013-2023) were utilized. And to evaluate population change, the Claritas database, which is currently used to project zip code population growth in the Demographic Adjustment, was utilized.
3) **Principal Methodology** - Separate models were developed for inpatient and outpatient utilization in Maryland and nationally, resulting in four distinct models (see table 3 for one example model).
    a) Each model initially determined the per capita utilization for 2013 and 2023 through regression analysis, controlling for age, sex, and disability status.
    b) After establishing hospital use rates for demographic groupings of patients, the methodology estimated secular population-level utilization changes (or changing practice patterns),[8] while controlling for demographic changes. This was achieved by applying the regression-based estimates to a fixed population distribution derived from Maryland census data. Specifically, changes in Maryland's utilization patterns from 2013 to 2023 were estimated by comparing the 2013 and 2023 regression results that were applied to the 2023 Maryland population distribution. Non-Maryland estimates were calculated similarly, using non-Maryland regression results and the same Maryland census distribution, which enabled demographically-standardized comparisons.
    c) Finally, Maryland's demographic changes and its impact on utilization were estimated by keeping the utilization year estimates constant at 2013 and comparing both the calculated utilization for 2013 and 2023 Maryland census distributions (see table 4 below for summary results of the four models)
4) **Medicare Advantage Discount** - For the Medicare population, Medicare FFS data was used to fit the models. Given the growth and favorable selection in Medicare Advantage, the remaining

[5] Calculated as total outpatient allowed charges divided by average inpatient cost-per-day (CPD), a standard measurement that allows for comparisons across inpatient and outpatient services.

[6] While this is a limitation in the methodology, it is not an acute concern given that HSCRC policies currently carve out a significant share of outpatient drugs from population based payments through the CDS-A volume policy for high cost outpatient drugs.
[7] A person was considered disabled if enrolled in Medicare and initially eligible for a reason other than age.
[8] Changing practice patterns is defined as changes in hospital utilization reflecting evolving medical practices, technologies, or policies, rather than changes in population demographics.

Medicare FFS population has become increasingly higher-acuity. Therefore, using estimates from the Medicare Payment Advisory Commission (MedPAC), the results of the 4 models were reduced by approximately 1 percent over the ten year evaluation so the FFS-calibrated models could be used to estimate utilization for the entire Medicare population.

5) **Sensitivity Tests** - Alternative data sources, utilization metrics, and fixed demographic and census years, as well as an alternative fully interacted regression specification were utilized to determine if results changed materially. Sensitivity test findings were directionally consistent with primary analysis

Table 3: Example: Results of Changes in Maryland Inpatient Days per Thousand Due to Demographics and Changing Practice Patterns[9]

Maryland Inpatient Days		Utilization Pattern Year											Util Pattern Change
		2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	(2023/2013)
Demo	2013	**481**	446	434	448	440	430	445	374	419	396	391	-18.5%
Year	2014	487	452	441	454	446	436	451	379	424	401	396	-18.7%
	2015	494	459	447	460	451	441	456	383	429	406	401	-18.8%
	2016	500	466	453	467	457	447	461	388	434	411	406	-18.8%
	2017	507	472	459	472	462	452	466	392	439	415	411	-18.9%
	2018	513	478	465	478	467	457	471	396	444	420	416	-19.0%
	2019	519	485	471	484	472	462	476	400	449	425	420	-19.1%
	2020	525	491	477	489	477	467	481	405	454	429	425	-19.1%
	2021	532	498	484	496	483	473	486	409	459	434	430	-19.1%
	2022	535	502	488	499	485	476	488	411	462	437	433	-19.1%
	2023	**540**	507	493	504	489	480	492	415	466	441	**437**	**-19.2%**
Demo Change		**12.4%**	13.7%	13.5%	12.3%	11.2%	11.6%	10.5%	10.9%	11.1%	11.4%	11.6%	**-9.1%**

How to Read these Tables:
- **Down a column**: Shows the impact of population changes (aging) assuming fixed practice patterns.
- **Across a row**: Shows the impact of health practice pattern changes (e.g., shift away from inpatient care) assuming a fixed population.
- **Along the diagonal**: Reflects the combined impact of both population aging and changes in practice patterns.

As shown above, this methodology isolates the extent to which: a) utilization changes are driven by demographics, i.e., from 2013 to 2023 Maryland's changing demographics contributed to a 12 percent increase in inpatient utilization; and b) utilization changes are driven by changing practice patterns (once demographic changes are controlled for), i.e., from 2013 to 2023 Maryland's shifting practice patterns decreased inpatient utilization by 19 percent. Taken together, these isolated influences on hospital use rates can then be combined to see the net effect (-9 percent), and the same analysis can be performed on national data but with Maryland demographics, permitting a demographically-standardized comparison.

[9] For the other Maryland and national models, see appendices 1-5

Table 4: Summary Results of Changes in Maryland and National EIPDs per Thousand Due to Demographics and Changing Practice Patterns[10]

Setting (Metric)	Utilization Pattern Change	Maryland Demographic Composition Change	Combined Change
Maryland			
Inpatient Utilization (Days)	-20%	+12%	-10%
Outpatient Utilization (EIPDs)	-15%	+6%	-10%
Total Utilization (EIPDs)	-18%	+10%	**-10%**
Non-Maryland			
Inpatient Utilization (Days)	-16%	+12%	-5%
Outpatient Utilization (EIPDs)	+7%	+5%	+12%
Total Utilization (EIPDs)	-5%	+9%	**+3%**
Difference (Maryland minus non-Maryland)			
Inpatient Utilization (Days)	-4%	+0%	-4%
Outpatient Utilization (EIPDs)	-22%	+1%	-21%
Total Utilization (EIPDs)	-12%	+1%	-12%

The summary results table above highlights the following key findings for Maryland from 2013 to 2023:

- Overall Maryland hospital utilization, including demographic impacts, decreased by 10 percent.
- If Maryland had followed the utilization patterns of other states while experiencing its own demographic changes, total hospital utilization would have increased by 3 percent.
- Maryland's inpatient utilization patterns decreased by 4 percent more than other states.
- Maryland's outpatient utilization patterns decreased by 22 percent more than other states.

Staff do not believe that Maryland's performance over the past ten years should be used to modify the population governor in the Demographic Adjustment, as that builds in the incentives of the Model and its impacts into future volume funding allotments. Additionally, it would inappropriately accrue all savings to payers, and it would fail to recognize that hospitals have to make ongoing investments in order to maintain reductions in utilization, e.g., case managers, mobile integrated homes, sub-acute hospital alternatives. Finally, if the utilization declines experienced across the first ten years of the Model are not

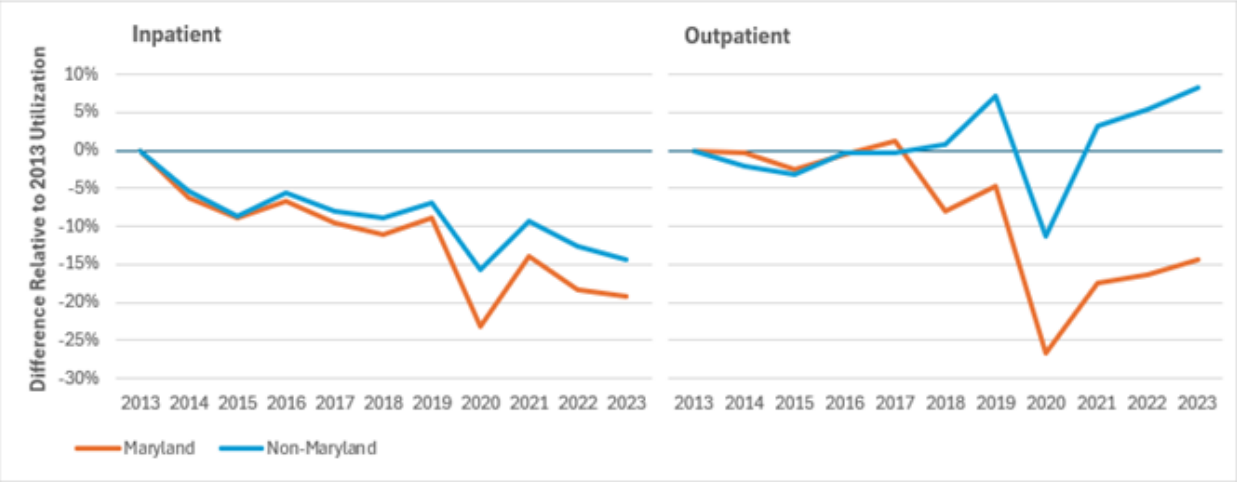
[10] The Maryland Inpatient *Combined Change* value of -10% differs from the -9.1% referenced in table 3, because the former also accounts for Medicare Advantage morbidity discount to recognize that as Medicare Advantage increases its penetration, the remaining Medicare Fee-For-Service population has higher morbidity owing to the documented favorable selection in the Medicare Advantage market.

replicated, building in this performance into future Demographic Adjustments could result in access to care issues.

Staff suggest that any retrospective evaluation of demographic and practice pattern changes used to modify the population governor in the Demographic Adjustment should be based on a national assessment. This means that if Maryland's utilization patterns mirrored national trends, while experiencing its own demographic shifts, total hospital utilization would have increased by approximately 3 percent, or 0.3 percent annually. Consequently, the Demographic Adjustment would incorporate Maryland's population growth along with changes in national demand for hospital services (around 0.3 percent per year).

However, it's important to note a key caveat: national outpatient demand is partly influenced by a lack of site-neutral incentives, which are inherent in the Maryland Model. This difference[11] is likely a major factor in the greater variation observed between Maryland's and national outpatient use rates (refer to Table 5 below).

Table 5: Hospital Utilization Patterns in Maryland and Non-Maryland Relative to 2013, Adjusted for Changes in Demographic Composition



To address concerns regarding the absence of national site-neutral incentives, staff, in collaboration with actuarial consultants, conducted an additional analysis. This analysis estimated the potential reduction in national hospital use rates from 2016-2023 if the nation had mirrored Maryland's utilization trends in selected service areas where the potential for site neutrality is well established . These service areas were 66 ambulatory payment categories (APCs) identified by MedPac[12] as services that could be safely performed in a physician's office and considered for site-neutral payment. For detailed results, please refer to Table 6 below.

[11] "These payment differences encourage arrangements among providers, such as consolidation of physician practices with hospitals, which result in care being billed from settings with the highest payment rates. The net effect of these arrangements increases total Medicare spending and beneficiary cost sharing without significant improvements in patient outcomes." - https://www.medpac.gov/wp-content/uploads/2023/06/Jun23_Ch8_MedPAC_Report_To_Congress_SEC.pdf

[12] https://www.medpac.gov/wp-content/uploads/2023/06/Jun23_Ch8_MedPAC_Report_To_Congress_SEC.pdf

Table 6: Hospital Utilization Patterns in Maryland and Non-Maryland, using Maryland patterns for Services Under Site-Neutral Consideration

	Utilization Pattern Change			
	Primary Results (2023 vs 2013; all ages)	Subset Results (2023 vs 2016; Medicare only)	Using MD pattern for site neutral services (2023 vs 2016; Medicare Only)	Impact (Difference)
Maryland Total Utilization (EIPDs)	-18%	-12%	-12%	-
Non-Maryland Total Utilization (EIPDs)	-5%	-8%	-10%	**-1.9%**

Analysis suggests that the observed differences in hospital use rates between Maryland and the rest of the nation are likely due to the national incentive for hospitals to shift low-acuity services to outpatient departments for higher facility fees. Specifically, if national utilization for these services, where the appropriateness of site-neutrality is strongly established, had mirrored Maryland's pattern, overall national utilization changes would have been 2 percent lower - staff only quantified the impact of these services where the appropriateness of site neutrality was well documented by Medpac; however, it is likely there are significant additional services where the MD utilization pattern is appropriate and national utilization is primarily driven by national payment incentives to increase outpatient hospital utilization. This finding, combined with the earlier observation that Maryland's total hospital utilization would have increased by 3 percent if it had followed other states' utilization patterns while experiencing its own demographic shifts, indicates that any adjustments to the Demographic Adjustment to account for national demand should not exceed 1 percent over a decade, or 0.1 percent annually, assuming historic patterns continue.

Additional Considerations

While staff did not evaluate the accuracy of the Demographic Adjustment's distribution logic, a task recommended for a future workgroup, staff's review of the population governor's appropriateness brought three additional considerations to the *Volume Workgroup:*

1) **Hierarchical Condition Categories (HCC)** - HCC is a risk adjustment methodology that allows CMS to evaluate total population risk change for Medicare Advantage beneficiaries; it is also often applied to Medicare FFS populations. Theoretically, staff could apply an HCC risk adjustment to the portion of the Demographic population that is attributable to Medicare FFS, as the beneficiary count and HCC risk scores are known statistics. In the future, Medicare FFS global budgets will utilize HCC risk scores, in line with the AHEAD Model Financial Specifications;[13] however, staff have concerns about using the HCC risk assessments now because Maryland has historically not focused on optimizing the input variables in the HCC risk adjustment model, most notably diagnosis codes. If HCC risk adjustments for the Medicare FFS population (and no other modifications) were applied to the current RY 2026 Demographic Adjustment of 1.50 percent, the resulting value would be approximately 0.97 percent.
2) **100 Percent Variable Cost Factor** - historically the Demographic Adjustment has not applied a variable cost factor, despite the fact that some of the volume change to ongoing population growth may not necessitate additional fixed costs. While staff are concerned about potentially overfunding fixed costs, there are many cases in which a hospital may incur costs over and

[13] https://www.cms.gov/files/document/ahead-tech-specs-v30.pdf

above the newly established variable cost factor of 59 percent, e.g., enough population volume growth requires opening a floor that was previously shelf space.

3) **Population Based Payment Carveouts** - historically the Demographic Adjustment has been applied to all hospital global budget revenue; however, a portion of a hospital's revenue is attributable to services that are evaluated in distinct volume variable methodologies, e.g., out-of-state volumes through the Out-of-State policy, high cost drug volumes through the CDS-A policy, and to some extent quaternary services through the Complexity and Innovation policy. Staff are concerned that applying volume adjustments to these revenues based on Maryland population growth is unreasonable and will result in double payment for volume change.

Implications and Policy Options

To summarize all of the potential revisions to the population governor in the Demographic Adjustment policy, staff have created the following table:

Table 7: Summary of Policy Options and Staff Recommendations

	Policy Consideration	Contingencies	Staff Recommendation
1.	Fund Age-Adjusted Demographic Growth currently calculated in Demographic Adjustment policy		**Reject -** Staff do not recommend funding an additional 0.65% per year for "age adjusted growth" as it does not account for year over year secular changes and it does not account for complete risk change. Additionally, staff are concerned that utilizing a flawed statistic to inflate volume growth will potentially incentivize hospitals to grow avoidable volumes, e.g., readmissions, PQIs, and inpatient length of stay.
2.	Fund HCC Adjusted Population Growth for Medicare	May require assessing the degree to which Maryland HCCs are not indicative of risk change due to suboptimal nature of input risk variables	**Reject -** Staff believe, at this time, it is unwise to utilize a Medicare risk adjustment model that Maryland hospitals may have underreported values for. Additionally, data isn't available to support populations other than Medicare so this would result in an inconsistent adjustment.
3.	Fund Population Growth with National Demand Modifier Applied	Will necessitate similar future assessments to ensure retrospective analysis of 1% demand growth over 10 years is indicative of ongoing trends	**Support -** Staff believe this is the most reasonable modifier to population growth that can be applied on all-payer basis for the next two calendar years, as the State transitions into a bifurcated Model where CMMI will adjust Medicare volumes with the HCC risk adjustment model and the HSCRC continues to adjust volumes for population growth and an assessment for appropriate national demand changes.
4.	Apply Variable Cost Factor to DA Funding	May require additional assessments to determine if longer term fixed costs need to be accounted if a variable cost factor is applied	**Reject -** Staff believe the exact value to account for variable costs and necessary fixed costs for ongoing population related volume growth is not currently established, nor easily ascertained. Thus, does not recommend applying a variable cost factor at this time.
5.	Exclude DA Funding from Volume Variable Services	Will require a future workgroup engagement to establish all volumes that will be carved out of population based payments moving forward.	**TBD -** Staff believe that the application of a population growth statistic on volumes adjudicated through a separate volume variable policy is flawed. Thus, staff recommend against applying the demographic adjustment in that instance. However, the extent of volume carved out of population based payments is still under development and subject to contractual requirements in the AHEAD State Agreement, so staff recommends delaying the implementation until carved out volumes are known.

Stakeholder Feedback

The Demographic Adjustment is intended to reflect factors that impact demand for hospital services (as opposed to price). These factors can be broadly categorized in 3 buckets:

- The size of the population served
- The age of the population served
- Changes in technology, clinical practices, and population health (aside from aging)

Historically, for various reasons, the HSCRC has only considered the first factor (age is used to distribute funding but does not change the total amount provided).

There has been considerable concern that the failure to acknowledge age has resulted in systematic underfunding. During this process, the HSCRC demonstrated that excluding the impact of aging has not resulted in systematic underfunding as it has been offset by the third factor. This is consistent with evidence from national data sets, and many commenters acknowledged this in their comment letters.

Having ruled out existing underfunding, the discussion in the Volume Workgroup moved to the appropriate future funding formula. There are three potential options:

A. Continue the current practice of assuming that age will be offset by other changes in demand
B. Add a factor for age and other considerations based on average historical experience (past is prologue)
C. Building into the future process a dynamic estimate of changing hospital demand (considering clinical risk and other demand drivers).

While experience of the model to date has shown that approach A is adequate, Staff have proposed moving to option B to acknowledge the various drivers of population demand. A few commenters argued for returning to Approach A while others argued for either revising the estimate derived for Approach B or moving to Approach C. Staff have not changed their proposal based on the comments because:

- Staff believe the data supports a small incremental increase beyond population growth
- Staff do not believe the proposed revisions to approach B were an improvement
- Staff believe that the added complexity of moving to Approach C is not merited given the limitations on available data and the subjectivity involved in any projection approach

The remainder of this section will address the seven stakeholder comment letters in more detail, which can be broadly categorized into five thematic areas of concern:

Table 8: Summary of Stakeholder Comments

Topics	MHA	UMMS	JHHS	Frederick Health	Adventist	CareFirst	HME
Fund Age Adjusted Population growth	✓	✓	✓	✓	✓	✓	✓
Use SG2 to Fund Projected Future Utilization Growth	✓	✓		✓			
Incorporate National Demand Modifier	✓	✓	✓	✓	✓		✓
Continue Including Volume Variable Funding in DA	✓	✓	✓	✓	✓		
AHEAD Alignment & Other comments	✓	✓	✓		✓		

1. Fund Age Adjusted Population Growth Comments: Many Stakeholders strongly support fully funding age-adjusted population growth, averaging about 0.65 percent annually, stating that the current methodology underfunds aging-related utilization. They also argue that the Demographic Adjustment serves as the sole means to finance anticipated increases in utilization driven by an aging population. In contrast, CareFirst and HME oppose additional funding, citing efficiency gains, technology improvements, and sufficient current funding.

Table 9: Fund Age Adjusted Population Growth Comments Summary:

Organization	Summary of Comments
MHA	MHA recommends HSCRC to fully fund estimated age-adjusted population growth and supported an adjustment of 0.65% to account for average annual amount of age adjusted growth between 2020–2024 as the current methodology insufficiently accounts for age-adjusted population growth. They believe discounting this statistic for efficiency is unnecessary since existing PAU scaling and other policy levers with GBR adjustments already promote efficiency.
UMMS	UMMS emphasizes that the Demographic Adjustment methodology should be risk-adjusted to account for aging and socioeconomic factors and proposed an age-adjustment factor, which has averaged 0.65% above pure population growth annually since 2020, serves as a relatively appropriate risk adjustor.
JHHS	JHHS stresses that the current Demographic Adjustment methodology insufficiently accounts for age-adjusted population growth, as it effectively caps adjustments at unadjusted population growth projections. They argue that since global budgets are not case-mix adjusted, the Demographic Adjustment is the only mechanism to fund expected utilization growth due to aging. JHHS supports fully funding estimated age-adjusted growth in the interim and is open to a more comprehensive risk adjustment approach in the future.
Adventist	Adventist highlights that age-adjusted population growth has exceeded total population growth by about 0.65% annually and argues that the Demographic Adjustment should fully fund this growth to reflect increasing acuity and resource intensity. They caution that underfunding risks access constraints, especially in aging markets, and emphasize that Demographic Adjustments under AHEAD are intended to account for both population size and medical risk and encourage HSCRC to explore incorporating additional non-age-related demographic and social risk factors—such as sex, race, and socioeconomic status.
Frederick Health	Frederick Health states that the current methodology caps Demographic Adjustments at unadjusted population growth, leaving a significant gap between age-adjusted growth and the scaled adjustment provided. Since this adjustment is the only mechanism for revenue tied to aging-related utilization, they strongly support fully funding estimated age-adjusted growth in the interim while broader refinements are developed.
CareFirst	CareFirst believe additional funding for age-adjusted growth is not currently needed because improvements in technology, population health, and care transformation have reduced reliance on hospital services.
HME	HME opposes the provision of additional funding due to aging as they feel Maryland hospitals are sufficiently funded to respond to the state's aging population.

Staff Response: *Staff have considered this approach and analyzed the growth statistic cited in the comments supporting this approach. However, the value was specifically designed to distribute population funding, not to function as a governor for statewide funding.*

As has been discussed in both the Volume Workgroup and the November Commission meeting, the age-adjusted growth statistic in the Demographic Adjustment is inappropriate for two reasons: it fails to account for year-over-year growth, thus missing broader secular trends, and it only considers one factor (aging) that affects changes to hospital utilization.

Given these limitations of the adjusted growth growth statistic, staff conducted new analyses for the December workgroup engagement focused on the proposed approaches that more comprehensively account for aging and other important factors that impact population-level risk. Since commenters, including the Maryland Hospital Association (MHA), have advanced new proposals that align with the prerequisites staff have identified for amending the Demographic Adjustment, i.e., it must account for for year-over-year growth and consider factors other than aging that affect changes to hospital utilization, staff consider the request to fund age adjusted growth with no consideration of secular factors and other factors other than aging resolved.

2. Use Sg2, a Division of Vizient, to Fund Projected Future Utilization Growth Comments: Stakeholders broadly cited independent forecasts like Sg2 showing 4.5 percent inpatient and 17.4 percent outpatient growth from 2025–2035, supporting a higher national demand modifier (0.52 percent–0.64 percent annually) versus the proposed 0.10 percent. They emphasize the need for prospective forecasts to ensure hospitals are adequately resourced in 2026 to close the gap between age-adjusted growth and the scaled Demographic Adjustment.

Table 10: Use Sg2 to Fund Projected Future Utilization Growth Comments Summary:

Organization	Summary of Comments
MHA	MHA questions HSCRC's reliance on historical trends without projecting future utilization, noting that other forecasts e.g., Sg2 predict significantly higher growth, 4.5% inpatient and 17.4% outpatient from 2025–2035. MHA estimates total growth of 8.3% over the decade and recommends applying a 0.64% annual national demand modifier, rather than the 0.10% proposed, starting with RY 2026 to ensure hospitals are adequately resourced.
UMMS	UMMS strongly recommends using prospective forecasts rather than retrospective data and cited Kaufman Hall Consulting's (earlier Sg2) 2025 Impact of Change Forecast which states 4.5% inpatient growth and 17.4% outpatient growth from 2025–2035. Equivalent to 8.3% total growth or 0.83% annually, UMMS supports applying a 0.64% annual national demand modifier.
Frederick Health	Frederick Health notes that the draft recommendation relies on historical trends without projecting future utilization, despite Frederick County's expected significant demographic growth, especially among those over 75. They point to independent forecasts like Sg2, which project much higher inpatient and outpatient growth, and agree with MHA that applying these projections would justify a national demand modifier closer to 0.52% annually, rather than the proposed 0.10% in RY 2026 to close the gap between age-adjusted growth and the scaled Demographic Adjustment in current FY26 rates.

Staff Response: *Staff thanks stakeholders for providing an alternative to the 0.1 percent national demand modifier statistic outlined in the Demographic Adjustment Draft Recommendation. We appreciate that this alternative accounts for year-over-year growth and non-aging factors, fulfilling the necessary requirements for consideration. However, staff are concerned that the proposal is not viable for the following reasons:*

1. *Proprietary Data: The specifics of the Sg2 forecast are proprietary and not available to non-hospital entities, making external vetting difficult.*
2. *Variability: Sg2's annual ten-year forecasts exhibit significant variation (as shown in table 11). This suggests the statistic may not be sufficiently reliable or predictable to serve as a volume governor in a capitated model.*

Table 11: Summary of Annual Sg2 Report Projections

SG2 Report Year	Forecast Period	Population	IP Discharges 10-Year Growth	OP Visits 10-Year Growth
2021	2019 - 2029	NA	-1%	14%
2022	2022 - 2032	13%	8%	16%
2023	2023 - 2033	10%	2%	16%
2024	2024 - 2034	13%	3%	17%
2025	2025 - 2035	14%	5%	18%

3. *Additional Hospital Industry Methodological Concerns: The initial proposal by MHA and other hospital stakeholders resulted in double counting within the existing HSCRC methodology for population growth, as it included both base population growth and other factors, such as aging and technological improvements, that affect hospitalizations. Subsequent proposals from MHA that utilize Sg2 data and were presented to HSCRC staff after the issuance of their comment letter raised additional methodological issues. HSCRC met with MHA to better understand the underlying assumptions of their new proposals. After working with MHA to better understand their new modeling, staff determined that when it accounted for the methodological issues staff perceived (population growth and population weighting), HSCRC modelling yielded a range from 0.04 to 0.12 percent, which aligns with the staff's proposed national demand modifier of 0.10 percent.*

3. Incorporate National Demand Modifier Comments: Stakeholders raised concerns that HSCRC's analysis understates demographic impacts and overstates practice pattern changes. They question the reasonableness of assumptions, noting in particular that reliance on historical trends and a 3 percent projected growth rate is too conservative. Some highlight national all-payer data and suggest incorporating a national demand modifier to more explicitly account for Medicaid, which based on stakeholder modelling would result in a 0.28 percent national modifier versus staff's proposal of 0.1 percent.

Table 12: Incorporate National Demand Modifier Comments Summary

Organization	Summary of Comments
MHA	MHA raises concerns that HSCRC understates demographic impacts and overstates practice pattern changes. They question if the Medicare Advantage adjustment is necessary given Maryland's low enrollment and non inclusion of Medicaid, which saw a dramatic increase in enrollment during the evaluation period due to the Affordable Care Act. Also, MHA have conducted an analysis of all-payer data and suggested National demand modifier should account for Medicaid, which would increase it to 0.28%.
UMMS	UMMS believe HSCRC's retrospective analysis (2013–2023) fails to account for future expectations in terms of both expected demand and total risk. It assumes a 3% national growth rate for the next decade, which is too conservative.
JHHS	JHHS believes the current Demographic Adjustment Policy's reliance on historical growth to set prospective adjustments is problematic because use-rate growth reflects more than demographics. They suggest reconsidering whether future adjustments should be based on historical trends or incorporate actual forward-looking utilization growth estimates for greater accuracy.
Frederick Health	Frederick Health appreciates HSCRC's empirical approach but raises concerns that the analysis understates demographic impacts and overstates practice pattern changes. They question the appropriateness of Medicare Advantage adjustments given Maryland's lower enrollment and note the omission of Medicaid data, which saw significant growth. Additionally, MHA's review of national all-payer data indicates higher utilization growth than HSCRC estimates, supporting the need for a larger national demand modifier.
Adventist	Adventist suggested using quality and access indicators alongside utilization metrics to ensure lower use rates are not achieved at the expense of care quality. They explained that to fully assess whether lower use reflects healthier populations versus constrained access, complementary outcome and throughput indicators should be reviewed in tandem, for example, diabetes prevalence or control, obesity and BMI trends, ambulatory care–sensitive condition rates, ED wait and boarding times, and mortality.
HME	HME cites HSCRC's analysis showing age-adjusted hospital utilization in Maryland decreased by 10%, with outpatient utilization declining even more. They note that global budgets have increased during this period, meaning hospitals have been funded based on outdated utilization patterns. This supports their position that additional demographic funding is unnecessary.

Staff Response: *Staff again thanks stakeholders for providing an alternative to the 0.1 percent national demand modifier statistic outlined in the Draft Recommendation. We appreciate that this alternative accounts for year-over-year growth and non-aging factors, fulfilling the necessary requirements for consideration. However, staff does not believe there is a basis for changing the approach used for the following reasons:*

A. *Staff's approach relies on claims data while the proposed approach relies on Medicare cost report data, and there is significant research into the challenges of cost report data.[14] As such, staff believe the claims-based approach is preferable.*
B. *Staff believe the answers are effectively the "same" given the level of precision feasible in deriving these estimates. For example, using a different source of population estimates changes the outcomes of the stakeholder modeling from 0.28 percent to 0.19 percent or 0.23 percent (depending on whether or not Maryland is included in the assessment). Staff believe the relatively narrow range of the various estimates should provide comfort, and that using the claims-based estimate as the point estimate is preferable.*

4. Continue Including Volume Variable Funding in DA Comments: Stakeholders urge HSCRC to continue to apply Demographic Adjustments to all revenues until the scope of services carved out of Global Budgets is fully established.

[14] Examples of literature on the challenges of cost report data:
The Medicare Cost Report and the limits of hospital accountability: improving financial accounting data - highlights the general issue of cost reports not being audited
Hospitals in Some States Under Report Medicaid Discharge Counts in Cost Report Data - shows the disconnect in claims-based discharges and those in cost reports (within Medicaid)
Statewide Hospital Discharge Data: Collection, Use, Limitations, and Improvements - in 28 studies using discharge data, only 7 used cost reports, and all of those 7 supplemented with another source (typically HCUP).

Table 13: Continue Including Volume Variable Funding in DA Comments Summary

Organization	Summary of Comments
MHA	MHA urges HSCRC to maintain the policy of applying Demographic Adjustments to all revenues.
JHHS	JHHS supports continuing to apply the Demographic Adjustment to all revenues.
Frederick Health	Frederick Health support MHA's request to maintain the policy of applying Demographic Adjustments to all revenues to ensure hospitals are adequately resourced for community needs.
UMMS	UMMS suggests not to discontinue the application of the Demographic Adjustment to volumes that are not part of population-based payments until the definition and methodology treatment of those volumes are known and evaluated on these terms.
Adventist	Adventist does not support moving forward with any carveouts until additional workgroup discussion and analysis occur. Adventist explains that the extent of volumes to be carved out of population-based payments remains under development.

Staff Response: *Staff have some serious concerns regarding the current request. We believe that applying Maryland population growth projections to volumes evaluated under a fee-for-service methodology is double counting since fee-for-service reimbursement automatically includes demographic driven volume growth, particularly when non-Maryland populations are being considered, i.e., out-of-state volumes.*

Staff could not find an analogous adjustment in a fee-for-service context and could not identify a clear policy rationale for this approach.

5. AHEAD Alignment & Other Comments: Stakeholders suggest that the Demographic Adjustment should be aligned with AHEAD methodologies when applicable. Other recommendations include support in postponing HCC risk score application, utilizing variable cost factors, evaluating alternative sources for population data, and incorporating regional variation in Demographic Adjustment

Table 14: AHEAD Alignment & Other Comments Summary

Organization	Summary of Comments
MHA	MHA recommends that any Demographic Adjustment changes for 2026–2027 be reassessed before CMS takes over Medicare global budgets in 2028 to ensure utilization needs of the changing population. They also urge HSCRC to consider implications of any changes in Demographic Adjustments policy as part of broader discussions about additional exclusions from hospital global budgets under AHEAD.
JHHS	JHHS emphasizes that as Maryland transitions to the AHEAD model, Demographic Adjustment policies must align with future requirements. They recommend reevaluating any changes for 2026–2027, before CMS assumes Medicare global budgets in 2028 to ensure adequacy.
Adventist	Adventist supports postponing HCC risk score application until AHEAD implementation, agrees with staff not to apply a variable cost factor, as it would complicate methodology and distort funding balance, warns that demographic change varies by region, with some markets facing capacity constraints and urges exploring alternative data sources for age-adjusted estimates, presenting ranges or sensitivity analyses to account for uncertainty and strengthen methodology.
UMMS	UMMS suggests establishing the steps and timeline for reviewing potential changes to the Demographic Adjustment Methodology after CMS assumes responsibility for Medicare population under AHEAD.

Staff Response: *Staff agree that the Demographic Adjustment should align with AHEAD methodologies to the furthest extent possible. To achieve this alignment, staff have taken the following actions:*

A. *Advanced a total risk adjustment*
B. *Not recommended incorporating a variable cost factor.*
C. *Signaled that future Demographic Adjustments should utilize more sophisticated risk adjustment for Medicare and non-Medicare HGB's.*

Moving forward, staff will work with stakeholders to ensure that approaches analogous to the Medicare HGB Demographic Adjustment are utilized and that population funding is clearly delineated between Medicare and non-Medicare global budgets.

If authorized, staff will explore alternative sources for population data in a future year, which could potentially better address regional variation in population growth. However, staff note that the gold standard for population growth estimates is the U.S. Census Bureau. Claritas, the proprietary dataset the Commission currently uses to distribute population funding, relies on the Census Bureau for all of its estimates but uses a zip code level, which already accounts for regional variation at a granular level.

Recommendations

Staff recommend the following updates to the Demographic Adjustment policy:

1. Apply a national demand modifier of 0.1 percent to the Demographic Adjustment policy, starting with the RY 2026 policy. Funding adjustment will be implemented July 1, 2026 in concert with the RY 2027 Update Factor.
2. Revisit the national demand analysis every 2-3 years to determine if the calculation requires updating and if a retrospective adjustment to prior year Demographic Adjustments is warranted.
3. Discontinue the application of the Demographic Adjustment to volumes that are adjudicated through a distinct volume variable methodology and are not part of population based payments. Funding adjustment will be implemented July 1, 2026 in concert with the RY 2027 Update Factor once non-population based volumes are established (estimates of discontinuing the application of the Demographic Adjustment to services outside of population based payments are listed in Appendix 6).

Appendix

Appendix 1. Results of Changes in Maryland Outpatient Days per Thousand Due to Demographics and Changing Practice Patterns

Maryland Outpatient EIPDs		Utilization Pattern Year											Util Pattern Change (2023/2013)
		2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	
Demo Year	2013	**407**	405	396	406	414	369	387	296	332	338	345	-15.2%
	2014	411	409	400	410	418	373	391	299	335	341	349	-15.2%
	2015	414	412	403	413	421	376	394	301	338	344	352	-15.1%
	2016	417	415	406	416	424	379	397	304	341	346	354	-15.1%
	2017	420	418	409	418	426	382	399	306	344	349	357	-15.0%
	2018	423	421	412	421	429	385	402	308	346	352	360	-14.9%
	2019	425	423	414	423	431	388	405	310	349	354	362	-14.8%
	2020	427	425	417	426	433	391	407	312	351	357	364	-14.7%
	2021	430	428	419	428	435	394	409	314	353	359	367	-14.6%
	2022	430	429	420	429	436	395	410	315	355	360	368	-14.5%
	2023	**432**	431	422	430	438	397	412	317	357	362	**370**	**-14.4%**
Demo Change		**6.1%**	6.4%	6.4%	5.9%	5.6%	7.6%	6.5%	7.0%	7.3%	7.2%	7.1%	**-9.2%**

Appendix 2. Results of Changes in Maryland Total EIPDs per Thousand Due to Demographics and Changing Practice Patterns

Maryland Total EIPDs		Utilization Pattern Year											Util Pattern Change (2023/2013)
		2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	
Demo Year	2013	**888**	851	831	855	855	800	832	670	751	733	737	-17.0%
	2014	898	861	840	864	864	809	841	677	759	741	745	-17.1%
	2015	908	870	849	873	872	817	849	684	767	749	753	-17.1%
	2016	918	880	859	882	880	826	858	691	776	757	760	-17.1%
	2017	927	890	868	891	888	834	866	698	783	764	768	-17.1%
	2018	936	899	877	899	896	843	873	705	791	772	775	-17.2%
	2019	944	908	885	907	903	850	880	711	798	779	782	-17.2%
	2020	953	916	894	915	911	858	888	717	805	786	789	-17.2%
	2021	961	926	903	923	918	867	895	723	812	793	797	-17.1%
	2022	966	930	908	927	921	871	898	726	816	797	801	-17.1%
	2023	**973**	938	915	934	927	877	904	732	822	803	**807**	**-17.1%**
Demo Change		**9.5%**	10.2%	10.1%	9.3%	8.5%	9.7%	8.6%	9.2%	9.5%	9.5%	9.5%	**-9.1%**

Appendix 3. Results of Changes in National Inpatient Days per Thousand Due to Demographics and Changing Practice Patterns

Non-Maryland Inpatient Days		Utilization Pattern Year											Util Pattern Change (2023/2013)
		2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	
Demo Year	2013	**484**	456	437	459	446	444	457	414	450	432	423	-12.5%
	2014	490	462	443	465	452	450	462	419	455	437	428	-12.7%
	2015	496	468	449	471	457	455	467	424	460	441	432	-12.9%
	2016	503	474	456	476	463	461	473	429	464	446	437	-13.1%
	2017	509	480	461	482	469	466	478	433	469	451	441	-13.3%
	2018	515	487	468	488	474	471	483	438	474	455	446	-13.5%
	2019	521	492	474	493	480	477	488	442	478	460	450	-13.7%
	2020	528	499	480	499	486	482	493	447	482	464	455	-13.9%
	2021	534	505	487	505	492	488	499	452	487	469	460	-14.0%
	2022	538	509	491	508	496	491	502	454	489	471	462	-14.2%
	2023	**543**	514	496	513	501	496	506	458	493	475	**466**	**-14.3%**
Demo Change (2023/2013)		**12.3%**	12.8%	13.5%	11.8%	12.2%	11.6%	10.7%	10.6%	9.5%	10.0%	10.0%	**-3.8%**

Appendix 4. Results of Changes in National Outpatient Days per Thousand Due to Demographics and Changing Practice Patterns

Non-Maryland Outpatient EIPDs		Utilization Pattern Year											Util Pattern Change (2023/2013)
		2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	
Demo	2013	**429**	417	411	425	424	428	458	377	440	450	463	7.8%
Year	2014	432	420	414	428	427	432	461	380	444	453	466	7.8%
	2015	435	423	417	431	430	435	464	383	446	456	469	7.9%
	2016	437	425	420	433	433	438	467	385	449	459	472	7.9%
	2017	439	428	422	436	435	440	469	387	452	461	474	8.0%
	2018	442	431	425	438	438	443	472	390	454	464	477	8.0%
	2019	444	433	427	441	440	445	474	392	457	466	480	8.1%
	2020	446	435	430	443	443	448	477	394	459	469	482	8.1%
	2021	448	438	432	445	445	450	479	396	461	471	484	8.2%
	2022	449	439	434	446	446	452	480	397	462	472	485	8.2%
	2023	**450**	441	436	448	448	454	482	399	464	474	**487**	**8.3%**
Demo Change (2023/2013)		**4.9%**	5.8%	6.1%	5.6%	5.7%	5.9%	5.3%	5.9%	5.5%	5.5%	5.4%	**13.6%**

Appendix 5. Results of Changes in National Total EIPDs per Thousand Due to Demographics and Changing Practice Patterns

Non-Maryland Total EIPDs		Utilization Pattern Year											Util Pattern Change (2023/2013)
		2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	
Demo	2013	**913**	873	848	884	870	873	915	791	890	882	886	-3.0%
Year	2014	922	882	857	893	879	881	924	799	898	890	894	-3.1%
	2015	931	891	866	901	888	890	932	806	906	897	901	-3.2%
	2016	940	900	875	910	896	898	940	814	914	905	909	-3.3%
	2017	948	908	883	918	904	906	947	820	920	912	916	-3.4%
	2018	957	917	893	926	913	914	955	828	928	919	923	-3.5%
	2019	965	925	901	934	921	922	963	834	934	926	930	-3.7%
	2020	974	934	910	942	929	930	970	841	941	933	937	-3.8%
	2021	982	943	919	950	937	938	978	848	948	940	944	-3.9%
	2022	987	948	925	955	942	943	982	852	951	944	947	-4.0%
	2023	**994**	955	932	962	949	950	988	857	957	949	**953**	**-4.1%**
Demo Change (2023/2013)		**8.8%**	9.5%	9.9%	8.8%	9.0%	8.8%	8.0%	8.4%	7.5%	7.7%	7.6%	**4.4%**

Appendix 6. Estimates for Revisions to RY 2026 Demographic Adjustment

HOSPID	Curremt RY 2026 Demographic Adjustment	RY 2026 Demographic Adjustment with 0.1% Demand Modifier	Estimated %of Revenue Not Attritubtable to Population Based Pamyments (CY 2024)	RY 2026 Demographic Adjustment with .1%Demand Modifier & Deduction for Revenue Not Attriubtable to Population Based Payments
210001	1.41%	1.50%	22.48%	1.17%
210002	1.03%	1.10%	23.32%	0.84%
210003	1.29%	1.38%	8.75%	1.26%
210004	1.03%	1.10%	8.92%	1.01%
210005	4.17%	4.45%	4.12%	4.26%
210006	1.56%	1.66%	5.19%	1.58%
210008	0.81%	0.87%	6.85%	0.81%
210009	0.79%	0.85%	29.05%	0.60%
210010	0.78%	0.84%	5.51%	0.79%
210011	1.27%	1.35%	4.37%	1.29%
210012	0.77%	0.82%	6.06%	0.77%
210013	-0.80%	-0.80%	1.39%	-0.79%
210015	1.00%	1.07%	6.85%	0.99%
210016	2.31%	2.47%	4.42%	2.36%
210017	0.81%	0.87%	34.04%	0.57%
210018	1.78%	1.90%	7.35%	1.76%
210019	1.46%	1.56%	21.05%	1.23%
210022	2.79%	2.97%	11.57%	2.63%
210023	1.79%	1.91%	2.83%	1.86%
210024	1.42%	1.51%	3.65%	1.46%
210027	-0.52%	-0.52%	29.24%	-0.37%
210028	1.82%	1.94%	4.23%	1.86%
210029	1.32%	1.40%	10.70%	1.25%
210030	1.91%	2.03%	3.53%	1.96%
210032	2.62%	2.79%	16.64%	2.33%
210033	2.16%	2.31%	8.18%	2.12%
210034	0.78%	0.83%	2.02%	0.81%
210035	2.91%	3.10%	3.71%	2.98%
210037	2.71%	2.89%	2.28%	2.83%
210038	0.34%	0.37%	3.07%	0.36%
210039	1.92%	2.05%	6.57%	1.92%
210040	1.15%	1.22%	2.00%	1.20%
210043	2.28%	2.43%	1.99%	2.38%
210044	0.65%	0.69%	3.33%	0.67%
210045	0.58%	0.62%	6.14%	0.58%
210048	2.10%	2.24%	3.40%	2.16%
210049	2.38%	2.54%	3.52%	2.45%
210051	2.15%	2.30%	6.57%	2.15%
210055	0.42%	0.45%	6.81%	0.42%
210056	0.99%	1.05%	1.08%	1.04%
210057	1.26%	1.35%	3.31%	1.30%
210058	0.68%	0.73%	3.35%	0.70%
210060	1.63%	1.74%	11.09%	1.55%
210061	2.87%	3.07%	29.80%	2.15%
210062	1.95%	2.08%	6.96%	1.94%
210063	1.57%	1.67%	3.39%	1.62%
210064	0.57%	0.61%	3.96%	0.59%
210065	2.06%	2.20%	5.56%	2.08%
210087	0.28%	0.30%	3.34%	0.29%
210088	1.47%	1.57%	5.71%	1.48%
210333	-0.26%	-0.26%	10.01%	-0.23%
Statewide	1.51%	1.61%		1.47%