Final Recommendations for the Potentially Avoidable Utilization Savings Policy for Rate Year 2017

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Health Services Cost Review Commission

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# List of Abbreviations

ADI Area deprivation index

ARR Admission-Readmission Revenue Program

CMS Centers for Medicare & Medicaid Services

CY Calendar year

DRG Diagnosis-related group

ECMAD Equivalent case-mix adjusted discharge

FFY Federal fiscal year

FY Fiscal year

GBR Global budget revenue

HSCRC Health Services Cost Review Commission

IPPS Inpatient prospective payment system

PAU Potentially avoidable utilization

PQI Prevention quality indicators

RRIP Readmissions Reduction Incentive Program

RY Rate year

SOI Severity of Illness

TPR Total patient revenue

# Introduction

The Maryland Health Services Cost Review Commission (HSCRC or Commission) operates a potentially avoidable utilization (PAU) savings policy as part of its portfolio of value-based payment policies. This policy was formerly referred to as the readmission shared savings policy. The PAU savings policy is important for maintaining hospitals’ focus on improving care and health for patients by reducing PAU and its associated costs. The PAU savings policy is also important for maintaining Maryland’s exemption from the Centers for Medicare & Medicaid Services (CMS) quality-based payment programs, as this exemption allows the state to operate its own programs on an all-payer basis.

In this recommendation, staff is proposing to update the policy to incorporate an additional category of PAU, to increase the level of savings derived from the policy, and to specify the calculations and application of the policy in conjunction with the state fiscal year (FY) 2017 update. The purpose of this report is to present background information and supporting analyses for the PAU savings recommendations for rate year (RY) 2017. Based on the stakeholder comments, staff updated the measurement of socio-economic protection from percent of total case-mix adjusted volume for Medicaid patients to percent of inpatient case-mix adjusted volume for Medicaid and self-pay and charity patients. Data for the calculation of PAU is also updated to reflect the corrections made for ICD-10 rehab cases. Staff will finalize PAU percentages by the end of June 2016.

# Background

The United States ranks behind most countries on many measures of health outcomes, quality, and efficiency. Physicians face particular difficulties in receiving timely information, coordinating care, and dealing with administrative burden. Enhancements in chronic care— with a focus on prevention and treatment in the office, home, and long-term care settings—are essential to improving indicators of healthy lives and health equity. Such indicators include mortality amenable to health care and a healthy life expectancy at age 60. As a consequence of inadequate chronic care and care coordination, the healthcare system currently experiences an unacceptably high rate of preventable hospital admissions and readmissions. Maryland’s new All-Payer Model was approved by CMS effective January 1, 2014. This Model is premised on the opportunity for Maryland and CMS to test whether an all-payer system that is accountable for the total hospital cost of care on a per capita basis is an effective model for advancing better care, better health, and reduced costs.

HSCRC, together with stakeholders, has adapted and developed a series of policies and initiatives aimed at improving care and care coordination, with a particular focus on reducing PAU.

Under the state’s previous Medicare waiver, the Commission approved a shared savings policy on May 1, 2013, which reduced hospital revenues based on case-mix adjusted readmission rates[[1]](#footnote-1) using specifications set forth in the HSCRC’s Admission-Readmission Revenue (ARR) Program. Nearly all hospitals in the state were participating in the ARR program, which incorporated 30-day readmissions into a hospital episode rate per case, or in the Total Patient Revenue (TPR) system, a global budget for more rural hospital settings. Because Medicare policies are tied to a fee-for-service system, it receives savings when avoidable admissions are reduced. In contrast, Maryland’s ARR and TPR systems locked in the savings, and Maryland was required to reduce approved revenues to ensure savings to purchasers, including Medicare, from the reductions in readmissions to maintain Maryland’s exemption from the CMS Medicare Hospital Readmission Reduction Program. The Commission initiated a reduction of 0.20 percent of total revenues starting in FY 2014 to implement this policy. Under the new All-Payer Model, the Commission continued to use the savings adjustment to assure a focus on reducing readmissions, assure savings to purchasers, and to meet the exemption requirements for “revenue at risk” under Maryland’s value-based programs.

For RYs 2014 and 2015, the HSCRC calculated a case-mix adjusted readmission rate based on ARR specifications[[2]](#footnote-2) for each hospital for the previous calendar year.[[3]](#footnote-3) The statewide savings percentage was converted to a required reduction in readmission rates, and each hospital’s contribution to savings was determined by its case-mix adjusted readmission rates. Based on 0.20 percent annual savings, the total reduction percentage was 0.40 percent of total revenue in RY 2015.

For RY 2016, the HSCRC updated the methodology for calculating the savings reduction to use the case-mix adjusted readmission rate based on the specifications for the Readmissions Reduction Incentive Program (RRIP).[[4]](#footnote-4) Based on 0.20 percent annual savings, the total reduction percentage was 0.60 percent of total revenue in RY 2016.

## Exemption from CMS Quality-Based Payment Programs

Section 3025 of the Affordable Care Act[[5]](#footnote-5) established the federal Medicare Hospital Readmission Reduction Program in federal fiscal year (FFY) 2013, which requires the Secretary of the U.S. Department of Health and Human Services to reduce payments to inpatient prospective payment system (IPPS) hospitals with excess readmissions for patients in fee-for-service Medicare.[[6]](#footnote-6) According to the IPPS rule published for FFY 2015, the Secretary is authorized to exempt Maryland hospitals from the Medicare Hospital Readmissions Reduction Program if Maryland submits an annual report describing how a similar program in the State achieves or surpasses the nationally measured results for patient health outcomes and cost savings under the Medicare program. As mentioned in other HSCRC quality-based payment recommendations reports, the new All-Payer Model changed the criteria for maintaining exemptions from the CMS programs. As part of the new All-Payer Model Agreement, the aggregate amount of revenue at risk in Maryland quality/performance-based payment programs must be equal to or greater than the aggregate amount of revenue at risk in the CMS Medicare quality programs. The PAU savings adjustment is one of the performance-based programs used for this comparison. This policy is intentionally different from the other quality-based programs that are scaled to provide rewards or penalties based on improvement or attainment levels in that it is designed to assure savings from the application of the policy.

# Assessment

## Alignment of Savings with Potentially Avoidable Utilization

With the introduction of the new All-Payer Model and global budgets, reducing PAU through improved care coordination and enhanced community-based care became a central focus. HSCRC provided additional revenue in global budgets over the last three years to bolster investments in care coordination resources and infrastructure. Infrastructure adjustments of 0.325 percent in FY 2014, 0.325 percent in FY 2015, and 0.40 percent in FY 2016 were included in most global budgets to enable the successful transition to the new model and provide funds for the needed investments. The total ongoing commitment for infrastructure is approximately $180 million for global budget revenue (GBR) hospitals—an amount approaching the statewide estimated operating costs for care coordination developed by consultants for the Care Coordination Workgroup.[[7]](#footnote-7) These adjustments recognized the need for investment in care coordination, care management, population health improvement, and other requirements of global models. Successful care management and population health efforts will require hospitals to maintain and enhance their investments in addressing the needs of complex patients; improving and coordinating care for individuals with chronic conditions; integrating and coordinating care with other hospitals and non-hospital providers; and investing in IT, analytics, human resources, training, and alignment models to support these efforts.

As the Model is premised on the ability to improve care and health, thereby reducing the pace of hospital cost increases, an intense focus needs to be placed on achieving these results that are both beneficial to patients and the system. HSCRC staff is proposing to focus the savings program more broadly on PAU. For FY 2017, HSCRC staff proposes to use the same definition of PAU that is used for the market shift calculations, incorporating both readmissions and admissions for ambulatory care sensitive conditions as measured by the Agency for Health Care Research and Quality’s Prevention Quality Indicators (PQIs) [[8]](#footnote-8). Last year, the savings measure focused on readmissions, as the Commission was concerned about the slow rate of improvement in readmissions in Maryland. Calendar year (CY) 2015 trends indicate that readmission improvement is accelerating, while progress in reducing PQIs has been limited. Figure 1 below shows trends in readmissions and PQIs since CY 2013. While the CY 2015 equivalent case-mix adjusted readmission discharges (ECMADs) declined by 5.03 percent over CY 2013, PQIs increased by 0.92 percent, which was preceded by a 1.30 percent PQI reduction in CY 2014. Appendix I shows more detailed information on specific PQI trends.

Figure 1. Changes in Maryland’s Readmission and PQI Rates over CY 2013

In addition to including PQIs in the savings methodology, alignment with PAU will change the focus of the readmissions measure from “sending” hospitals to “receiving” hospitals. In other words, the PAU methodology currently calculates the percentage of revenue associated with readmissions that occur at the hospital regardless of where the first (index) admission occurred. This is more consistent with the opportunities for savings under global budgets since the readmit hospital only accrues savings if the actual number of readmissions at that hospital decreases. This also incentivizes hospitals to collaborate with other area hospitals to reduce readmissions.

Alignment with PAU will also enable the measure to include observation stays in the calculation of both readmissions and PQIs. As the use of observation stays has increased over the past few years, HSCRC staff recommends including observation stays that are longer than 23 hours in avoidable utilization measures.

## Proposed Required Revenue Reduction

HSCRC staff proposes to increase annual savings amount from 0.20 % to 0.45 % reductions, which will result in a statewide PAU savings adjustment of 1.25 percent of total hospital revenue. Because last year’s statewide savings reduction of 0.60 percent is added back into rates, this represents an incremental reduction of 0.65 percent. Statewide required reductions in PAU are determined based on the proposed reduction in total revenue.

In the third year of the All-Payer Model, with its intense focus on improving care and health and reducing PAU, there is a need to provide increased savings from reducing PAU. This proposal provides these savings and also apportions the savings to hospitals with higher levels of PAU. Both of these policy outcomes are important as the federal government increases the pace of reductions in hospital payments under the Affordable Care Act, (which is discussed in more detail in the RY 2017 Balanced Update Draft Recommendation), and hospitals need to keep up/accelerate the pace in reducing avoidable utilization to achieve the care improvements that are essential for success under the All-Payer Model.

Figure 2. Proposed RY 2017 Statewide Savings

|  |  |  |
| --- | --- | --- |
| **Statewide Savings** | **Formulas** |  |
| RY 2016 Total Approved Permanent Revenue | A | $15.4 billion |
| Proposed RY 2017 Incremental Revenue Adjustment % | B | -0.65% |
| Incremental Revenue Adjustment | E=C-D | -$100.6 million |

The PAU savings adjustment has a number of advantages, including the following:

* Every hospital contributes to the PAU savings; however, the PAU savings are distributed in proportion to each hospital’s PAU in the most recent year. See Appendix II for more information on PAU by hospital.
* The PAU savings adjustment amount is not related to an actual reduction in PAU during the rate year, hence providing an equitable reduction for quality improvement related to PAU reductions across all hospitals. Hospitals that reduce their PAU beyond the savings benchmark during the rate year will retain 100 percent of the difference between their actual reduction and the savings benchmark.
* When applied prospectively, the HSCRC sets the targeted dollar amount for savings, thus guaranteeing a fixed amount of savings.

## Hospital Protections

The Commission and stakeholders are concerned about ensuring that hospitals that treat a higher proportion of disadvantaged patients have the needed resources for care delivery and improvement, while not excusing poor quality of care or care coordination because of higher deprivation. The HSCRC convened a subgroup to discuss risk-adjusting the readmissions measures for socio-demographic factors and evaluate the impact of the Area Deprivation Index (ADI) on readmission rates.[[9]](#footnote-9) As the ADI is currently being updated with more recent data, more work is needed to understand the hospital-level impact of this specific measure. In the meantime, staff proposes to apply a methodology similar to last year’s and to cap the PAU savings contributions at the state average if a hospital has a high proportion of disadvantaged populations. Last year, staff used the percentage of discharges for those aged 18 years and older with Medicaid as the payer as a measure of the proportion of disadvantaged patients. This year, staff proposes to update the measure to include the percentage of Medicaid and Self-pay or Charity ECMADs for inpatient and observation cases with 23 hour or longer stays, with protection provided to those hospitals in the top quartile.

Appendix III provides the results of the PAU savings policy based on the proposed 0.65 percent annual (1.25 percent total) reduction in total patient revenues with and without these protections.

## Comments Received on Proposed Savings Policy Recommendation

MHA’s letter of 5/25/16 with comments on the May 2016 draft updated policies for the Readmission Reduction Incentive Program, Potentially Avoidable Utilization (PAU) Savings Program, and on Aggregate Revenue Amount at Risk for Hospital Quality Programs is provided in a separate attachment file entitled: ***Attachment I\_ RRIP\_PAU Shared Savings Aggregate at Risk\_2016.05.25\_MHA HSCRC Letter Quality for FY2018\_attachments.pdf.*** CareFirst submitted their comments as part of the update factor recommendation.

## Future Expansion of PAU

Staff intends to continue its focus of adding categories of admissions to the PAU measures. We considered adding sepsis to the measure for FY 2017, but this will require more vetting and specification development. It also appears that there may be coding discrepancies among hospitals in identifying sepsis cases. Staff is recommending that hospitals with high levels of sepsis cases or apparent shifts in PQI coding take the opportunity to evaluate their coding. Staff may need to focus coding audit resources on these hospitals if we do not see progress in this area. Other areas of future focus for additional PAU measures include admissions from long-term care and post-acute settings, as well as unplanned medical admissions through the emergency department setting.

# Recommendations

Based on this assessment, staff recommends the following for the PAU savings policy for RY 2017:

1. Align the measure with the PAU definitions used in the market shift adjustment, which is comprised of readmissions and PQIs (inclusive of observation cases that are greater than 23 hours).
2. Increase the annual value of the PAU savings amount from 0.20 percent to 0.45 percent. This will result in 1.25 percent of reduction in total revenue, which is a 0.65 percent net reduction in RY 2017.
3. Cap the PAU savings reduction at the statewide average reduction for hospitals with higher socio-economic burden.
4. Evaluate further expansion of PAU definitions for RY 2018 to incorporate additional categories of unplanned admissions.
5. Evaluate progress on sepsis coding and the apparent discrepancies in levels of sepsis cases across hospitals, including the need for possible independent coding audits.

# Appendix I. Analysis of PQI Trends

PQIs—developed by the Agency for Healthcare Research and Quality—measure inpatient admissions for ambulatory care sensitive conditions. The following figure presents an analysis of the change in PQI rates between CYs 2014 and 2015. The table shows that 7 of the 13 PQIs measured increased during this time period. PQIs 10 (dehydration), 08 (heart failure), and 14 (uncontrolled diabetes) accounted for the majority of this increase. Of the PQIs that decreased, 05 (chronic obstructive pulmonary disease or asthma in older adults), 03 (diabetes long-term complications), and 11 (bacterial pneumonia) accounted for the majority of the decrease.

Appendix I. Figure 1. PQI Trends, CY 2014-CY 2015

| **PQI Admission Rate** | **CY 2014 PQI COUNT**  **A** | **CY 2015 PQI COUNT**  **B** | **CY 2014-2015 %CHANGE**  **C=D/A** | **CY 2015-2014 PQI COUNT**  **D=B-A** | **CY 2015 % CONTRIBUTION** |
| --- | --- | --- | --- | --- | --- |
| **PQI 15 Asthma in Younger Adults** | 1,188 | 1,070 | -9.9% | -118 | -10.85% |
| **PQI 03 Diabetes Long-Term Complications** | 4,853 | 4,454 | -8.2% | -399 | -36.67% |
| **PQI 05 Chronic Obstructive Pulmonary Disease or Asthma in Older Adults** | 13,826 | 13,327 | -3.6% | -499 | -45.86% |
| **PQI 11 Bacterial Pneumonia** | 9,712 | 9,504 | -2.1% | -208 | -19.12% |
| **PQI 02 Perforated Appendix** | 1,091 | 1,069 | -2.0% | -22 | -2.02% |
| **PQI 07 Hypertension** | 2,887 | 2,873 | -0.5% | -14 | -1.29% |
| **PQI 01 Diabetes Short-Term Complications** | 2,933 | 2,935 | 0.1% | 2 | 0.18% |
| **PQI 12 Urinary Tract Infection** | 7,446 | 7,603 | 2.1% | 157 | 14.43% |
| **PQI 08 Heart Failure** | 13,744 | 14,435 | 5.0% | 691 | 63.51% |
| **PQI 16 Lower-Extremity Amputation among Patients with Diabetes** | 773 | 822 | 6.3% | 49 | 4.50% |
| **PQI 10 Dehydration** | 4358 | 5,161 | 18.4% | 803 | 73.81% |
| **PQI 14 Uncontrolled Diabetes** | 629 | 957 | 52.1% | 328 | 30.15% |
| **PQI 13 Angina Without Procedure** | 571 | 889 | 55.7% | 318 | 29.23% |
| **Total PQI, Unduplicated** | **64,011** | **65,099** | **1.7%** | **1,088** | **100%** |

# Appendix II. Percent of Revenue in PAU by Hospital

The following figure presents the total non-PAU revenue for each hospital, total PAU revenue by PAU category (PQI, readmissions, and total), total hospital revenue, and PAU as a percentage of total hospital revenue for CY 2015. Overall, 12.14 percent of total statewide hospital revenue was for PAU. (Updated from the Draft Recommendation to incorporate ICD-10 corrections. Final numbers for RY 2017 rate orders will be published by the end of June 2016).

Appendix II. Figure 1. PAU a Percentage of Total Revenue by Hospital, CY 2015

| **Hospital Name** | **Non-PAU Revenue**  **A** | **Readmission Revenue**  **B** | **PQI Revenue**  **C** | **Total PAU Revenue**  **D=B+C** | **Grand Total Hospital Revenue**  **E=A+D** | **% Readmission**  **F=B/E** | **% PQI**  **G=C/E** | **% PAU**  **H=F+G** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| MERITUS | $278,758,032 | $23,935,112 | $16,539,435 | $40,474,547 | $319,232,579 | 7.50% | 5.18% | 12.68% |
| UNIVERSITY OF MARYLAND | $1,377,464,969 | $124,801,439 | $28,095,737 | $152,897,176 | $1,530,362,144 | 8.16% | 1.84% | 9.99% |
| PRINCE GEORGE | $239,882,933 | $24,966,656 | $15,411,410 | $40,378,066 | $280,260,999 | 8.91% | 5.50% | 14.41% |
| HOLY CROSS | $423,324,914 | $43,016,259 | $20,094,808 | $63,111,066 | $486,435,981 | 8.84% | 4.13% | 12.97% |
| FREDERICK MEMORIAL | $317,248,500 | $22,847,968 | $17,388,012 | $40,235,980 | $357,484,480 | 6.39% | 4.86% | 11.26% |
| HARFORD | $85,109,236 | $10,887,383 | $8,301,450 | $19,188,833 | $104,298,069 | 10.44% | 7.96% | 18.40% |
| MERCY | $471,837,685 | $21,767,464 | $10,694,324 | $32,461,787 | $504,299,472 | 4.32% | 2.12% | 6.44% |
| JOHNS HOPKINS | $2,009,019,808 | $198,729,754 | $42,322,463 | $241,052,217 | $2,250,072,025 | 8.83% | 1.88% | 10.71% |
| DORCHESTER | $42,913,840 | $5,810,179 | $6,099,254 | $11,909,432 | $54,823,272 | 10.60% | 11.13% | 21.72% |
| ST. AGNES | $357,085,002 | $37,698,472 | $25,327,535 | $63,026,007 | $420,111,009 | 8.97% | 6.03% | 15.00% |
| SINAI | $643,855,411 | $54,805,585 | $23,959,492 | $78,765,077 | $722,620,488 | 7.58% | 3.32% | 10.90% |
| BON SECOURS | $88,888,125 | $15,008,008 | $6,078,826 | $21,086,833 | $109,974,958 | 13.65% | 5.53% | 19.17% |
| FRANKLIN SQUARE | $420,619,700 | $51,762,928 | $30,126,699 | $81,889,627 | $502,509,327 | 10.30% | 6.00% | 16.30% |
| WASHINGTON ADVENTIST | $225,202,801 | $23,610,443 | $13,138,857 | $36,749,299 | $261,952,100 | 9.01% | 5.02% | 14.03% |
| GARRETT COUNTY | $42,130,137 | $1,428,688 | $2,998,235 | $4,426,923 | $46,557,060 | 3.07% | 6.44% | 9.51% |
| MONTGOMERY GENERAL | $148,145,664 | $14,176,460 | $8,239,791 | $22,416,251 | $170,561,915 | 8.31% | 4.83% | 13.14% |
| PENINSULA REGIONAL | $373,984,935 | $29,899,934 | $22,521,716 | $52,421,650 | $426,406,584 | 7.01% | 5.28% | 12.29% |
| SUBURBAN | $269,251,785 | $21,755,907 | $10,402,538 | $32,158,445 | $301,410,230 | 7.22% | 3.45% | 10.67% |
| ANNE ARUNDEL | $516,488,974 | $31,579,286 | $22,787,257 | $54,366,543 | $570,855,517 | 5.53% | 3.99% | 9.52% |
| UNION MEMORIAL | $355,148,712 | $33,572,118 | $16,492,523 | $50,064,641 | $405,213,352 | 8.29% | 4.07% | 12.36% |
| WESTERN MARYLAND HEALTH SYSTEM | $289,308,265 | $22,810,433 | $14,351,484 | $37,161,917 | $326,470,182 | 6.99% | 4.40% | 11.38% |
| ST. MARY | $150,042,473 | $10,201,193 | $9,257,977 | $19,459,170 | $169,501,643 | 6.02% | 5.46% | 11.48% |
| HOPKINS BAYVIEW MED CTR | $516,803,980 | $52,100,389 | $24,399,968 | $76,500,357 | $593,304,337 | 8.78% | 4.11% | 12.89% |
| CHESTERTOWN | $51,364,263 | $3,656,943 | $4,942,230 | $8,599,173 | $59,963,436 | 6.10% | 8.24% | 14.34% |
| UNION HOSPITAL OF CECIL COUNT | $137,071,783 | $11,514,876 | $10,577,694 | $22,092,570 | $159,164,353 | 7.23% | 6.65% | 13.88% |
| CARROLL COUNTY | $218,972,313 | $20,254,167 | $16,823,734 | $37,077,901 | $256,050,214 | 7.91% | 6.57% | 14.48% |
| HARBOR | $175,672,868 | $17,294,894 | $10,450,553 | $27,745,447 | $203,418,315 | 8.50% | 5.14% | 13.64% |
| CHARLES REGIONAL | $128,961,719 | $12,444,699 | $10,535,610 | $22,980,309 | $151,942,028 | 8.19% | 6.93% | 15.12% |
| EASTON | $165,740,757 | $12,503,629 | $11,444,605 | $23,948,234 | $189,688,991 | 6.59% | 6.03% | 12.62% |
| UMMC MIDTOWN | $167,394,950 | $25,932,131 | $8,825,245 | $34,757,377 | $202,152,326 | 12.83% | 4.37% | 17.19% |
| CALVERT | $127,370,735 | $7,752,786 | $9,387,103 | $17,139,889 | $144,510,623 | 5.36% | 6.50% | 11.86% |
| NORTHWEST | $211,908,045 | $24,266,540 | $18,167,037 | $42,433,576 | $254,341,622 | 9.54% | 7.14% | 16.68% |
| BALTIMORE WASHINGTON MEDICAL CENTER | $342,411,318 | $40,794,574 | $25,500,029 | $66,294,602 | $408,705,920 | 9.98% | 6.24% | 16.22% |
| G.B.M.C. | $400,652,316 | $24,235,115 | $14,576,995 | $38,812,110 | $439,464,425 | 5.51% | 3.32% | 8.83% |
| MCCREADY | $13,226,530 | $393,646 | $699,421 | $1,093,067 | $14,319,597 | 2.75% | 4.88% | 7.63% |
| HOWARD COUNTY | $252,809,879 | $23,143,070 | $13,851,236 | $36,994,306 | $289,804,185 | 7.99% | 4.78% | 12.77% |
| UPPER CHESAPEAKE HEALTH | $284,683,721 | $23,198,373 | $16,258,058 | $39,456,431 | $324,140,153 | 7.16% | 5.02% | 12.17% |
| DOCTORS COMMUNITY | $188,832,099 | $24,920,871 | $15,482,969 | $40,403,840 | $229,235,939 | 10.87% | 6.75% | 17.63% |
| LAUREL REGIONAL | $79,169,945 | $8,475,374 | $4,792,072 | $13,267,446 | $92,437,391 | 9.17% | 5.18% | 14.35% |
| GOOD SAMARITAN | $249,094,825 | $31,259,300 | $17,277,581 | $48,536,881 | $297,631,706 | 10.50% | 5.81% | 16.31% |
| SHADY GROVE | $345,873,078 | $29,710,171 | $14,228,530 | $43,938,701 | $389,811,779 | 7.62% | 3.65% | 11.27% |
| REHAB & ORTHO | $104,007,760 | $341,828 | $- | $341,828 | $104,349,588 | 0.33% | 0.00% | 0.33% |
| FT. WASHINGTON | $40,693,732 | $3,068,272 | $4,358,517 | $7,426,789 | $48,120,521 | 6.38% | 9.06% | 15.43% |
| ATLANTIC GENERAL | $93,620,264 | $4,390,104 | $5,193,041 | $9,583,145 | $103,203,409 | 4.25% | 5.03% | 9.29% |
| SOUTHERN MARYLAND | $216,826,400 | $27,065,827 | $20,381,819 | $47,447,646 | $264,274,046 | 10.24% | 7.71% | 17.95% |
| UM ST. JOSEPH | $374,832,474 | $22,943,101 | $11,745,266 | $34,688,367 | $409,520,840 | 5.60% | 2.87% | 8.47% |
| HOLY CROSS GERMANTOWN\* | $56,181,444 | $6,750,014 | $5,143,503 | $11,893,518 | $68,074,962 | 9.92% | 7.56% | 17.47% |
| GERMANTOWN | $13,564,670 |  |  | $- | $13,564,670 | 0.00% | 0.00% | 0.00% |
| QUEEN ANNES | $5,095,489 |  |  | $- | $5,095,489 | 0.00% | 0.00% | 0.00% |
| BOWIE HEALTH | $21,300,381 |  |  | $- | $21,300,381 | 0.00% | 0.00% | 0.00% |
|  | $14,109,849,635 | $1,283,482,360 | $665,672,639 | $1,949,154,999 | $16,059,004,635 | 7.99% | 4.15% | 12.14% |

\*Holy Cross Germantown will be combined with Holy Cross Hospital for PAU Savings calculations.

# Appendix III. Modeling Results Proposed PAU Savings Policy Reductions For RY 2017

The following figure presents the proposed PAU savings reduction policy for each hospital for RY 2017 (FY 16 Total Permanent revenue and PAU percents are updated from draft recommendation. Final adjustments will be published by the end of June).

Appendix IV. Figure 1. Proposed PAU Savings Policy Reductions for RY 2017, by Hospital

| **Hospital Name** | **FY16 Total Permanent Revenue**  **A** | **CY15 PAU %**  **B** | **FY17 PAU Savings Adjustment**  **C=(B\*-10.63%)[[10]](#footnote-10)** | **FY 17 PAU Savings Adjustments before Protection**  **D=A\*C** | **CY 15 % Inpatient ECMAD Medicaid &SelfpayCharity**  **E** | **FY17 PAU Savings Adjustment with Protection**  **F** | **FY 17 PAU Savings with Protections Revenue Impact**  **G=A\*F** | **FY2016 PAU Savings Adjustment**  **H** | **Net Impact to RY 2017 Inflation Factor**  **I=F-H** | **Net RY 17 Revenue Impact**  **J=A\*O** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| DORCHESTER | $49,366,715 | 21.72% | -2.31% | $(1,139,783) | 23.78% | -2.31% | ($1,139,783) | -0.42% | -1.89% | **$(932,671)** |
| BON SECOURS | $122,434,137 | 19.17% | -2.04% | $(2,495,066) | 57.59% | -1.29% | ($1,579,400) | -0.60% | -0.69% | **$(844,796)** |
| HARFORD | $100,472,983 | 18.40% | -1.96% | $(1,964,643) | 17.98% | -1.96% | ($1,964,643) | -0.42% | -1.53% | **$(1,540,409)** |
| SOUTHERN MARYLAND | $265,443,855 | 17.95% | -1.91% | $(5,065,179) | 22.27% | -1.91% | ($5,065,179) | -0.59% | -1.32% | **$(3,508,483)** |
| DOCTORS COMMUNITY | $226,236,757 | 17.63% | -1.87% | $(4,238,040) | 19.33% | -1.87% | ($4,238,040) | -0.56% | -1.31% | **$(2,965,417)** |
| UMMC MIDTOWN | $223,767,089 | 17.19% | -1.83% | $(4,089,088) | 45.61% | -1.29% | ($2,886,595) | -0.60% | -0.69% | **$(1,543,993)** |
| NORTHWEST | $247,056,826 | 16.68% | -1.77% | $(4,380,776) | 20.24% | -1.77% | ($4,380,776) | -0.63% | -1.14% | **$(2,817,106)** |
| GOOD SAMARITAN | $283,376,592 | 16.31% | -1.73% | $(4,911,550) | 18.26% | -1.73% | ($4,911,550) | -0.67% | -1.06% | **$(3,005,753)** |
| FRANKLIN SQUARE | $488,282,513 | 16.30% | -1.73% | $(8,457,030) | 26.69% | -1.29% | ($6,298,844) | -0.60% | -0.69% | **$(3,369,149)** |
| BALTIMORE WASHINGTON | $396,558,220 | 16.22% | -1.72% | $(6,836,537) | 17.18% | -1.72% | ($6,836,537) | -0.64% | -1.08% | **$(4,295,768)** |
| FT. WASHINGTON | $46,558,629 | 15.43% | -1.64% | $(763,718) | 22.44% | -1.64% | ($763,718) | -0.42% | -1.22% | **$(569,724)** |
| ST. AGNES | $413,273,339 | 15.00% | -1.59% | $(6,589,540) | 21.56% | -1.59% | ($6,589,540) | -0.60% | -0.99% | **$(4,102,853)** |
| CHARLES REGIONAL | $143,315,213 | 15.12% | -1.61% | $(2,303,733) | 16.36% | -1.61% | ($2,303,733) | -0.54% | -1.07% | **$(1,531,088)** |
| CARROLL COUNTY | $245,978,519 | 14.48% | -1.54% | $(3,785,726) | 13.81% | -1.54% | ($3,785,726) | -0.54% | -1.00% | **$(2,468,432)** |
| LAUREL REGIONAL | $101,288,035 | 14.35% | -1.53% | $(1,545,111) | 29.90% | -1.29% | ($1,306,616) | -0.60% | -0.69% | **$(698,887)** |
| PRINCE GEORGE | $278,868,894 | 14.41% | -1.53% | $(4,270,167) | 45.25% | -1.29% | ($3,597,409) | -0.56% | -0.73% | **$(2,039,951)** |
| CHESTERTOWN | $53,997,130 | 14.34% | -1.52% | $(823,006) | 12.40% | -1.52% | ($823,006) | -0.49% | -1.04% | **$(560,627)** |
| WASHINGTON ADVENTIST | $253,346,309 | 14.03% | -1.49% | $(3,777,493) | 31.92% | -1.29% | ($3,268,167) | -0.60% | -0.69% | **$(1,748,090)** |
| UNION HOSPITAL OF CECIL COUNT | $153,588,495 | 13.88% | -1.48% | $(2,265,797) | 28.02% | -1.29% | ($1,981,292) | -0.36% | -0.93% | **$(1,424,084)** |
| HARBOR | $190,199,181 | 13.64% | -1.45% | $(2,757,225) | 33.93% | -1.29% | ($2,453,569) | -0.60% | -0.69% | **$(1,312,374)** |
| HOLY CROSS | $473,189,703 | 13.53% | -1.44% | $(6,802,600) | 22.06% | -1.44% | ($6,802,600) | -0.68% | -0.76% | **$(3,587,331)** |
| HOLY CROSS GERMANTOWN | $88,000,000 | 13.53% | -1.44% | $(1,265,093) | 23.98% | -1.44% | ($1,265,093) | 0.00% | -1.44% | **$(1,265,093)** |
| MONTGOMERY GENERAL | $168,451,048 | 13.14% | -1.40% | $(2,352,971) | 15.17% | -1.40% | ($2,352,971) | -0.50% | -0.90% | **$(1,509,878)** |
| HOPKINS BAYVIEW MED CTR | $610,423,590 | 12.89% | -1.37% | $(8,365,255) | 29.06% | -1.29% | ($7,874,464) | -0.60% | -0.69% | **$(4,211,923)** |
| HOWARD COUNTY | $284,424,840 | 12.77% | -1.36% | $(3,858,866) | 14.14% | -1.36% | ($3,858,866) | -0.57% | -0.79% | **$(2,241,171)** |
| MERITUS | $309,029,336 | 12.68% | -1.35% | $(4,164,247) | 18.67% | -1.35% | ($4,164,247) | -0.60% | -0.75% | **$(2,305,550)** |
| EASTON | $192,089,981 | 12.62% | -1.34% | $(2,577,496) | 17.32% | -1.34% | ($2,577,496) | -0.52% | -0.82% | **$(1,581,849)** |
| UNION MEMORIAL | $411,630,821 | 12.36% | -1.31% | $(5,405,268) | 17.66% | -1.31% | ($5,405,268) | -0.62% | -0.69% | **$(2,852,296)** |
| PENINSULA REGIONAL | $413,594,890 | 12.29% | -1.31% | $(5,404,107) | 18.16% | -1.31% | ($5,404,107) | -0.53% | -0.78% | **$(3,213,316)** |
| UPPER CHESAPEAKE HEALTH | $319,063,053 | 12.17% | -1.29% | $(4,127,846) | 10.86% | -1.29% | ($4,127,846) | -0.49% | -0.81% | **$(2,579,263)** |
| CALVERT | $140,329,390 | 11.86% | -1.26% | $(1,768,963) | 16.42% | -1.26% | ($1,768,963) | -0.33% | -0.93% | **$(1,299,956)** |
| WESTERN MARYLAND HEALTH SYSTEM | $312,666,774 | 11.38% | -1.21% | $(3,782,668) | 15.60% | -1.21% | ($3,782,668) | -0.58% | -0.63% | **$(1,960,906)** |
| ST. MARY | $168,090,518 | 11.48% | -1.22% | $(2,050,952) | 18.69% | -1.22% | ($2,050,952) | -0.38% | -0.84% | **$(1,417,198)** |
| FREDERICK MEMORIAL | $350,725,799 | 11.26% | -1.20% | $(4,195,532) | 11.03% | -1.20% | ($4,195,532) | -0.50% | -0.70% | **$(2,440,515)** |
| SHADY GROVE | $374,624,719 | 11.27% | -1.20% | $(4,487,977) | 19.76% | -1.20% | ($4,487,977) | -0.53% | -0.67% | **$(2,509,843)** |
| SINAI | $698,636,216 | 10.90% | -1.16% | $(8,093,502) | 24.05% | -1.16% | ($8,093,502) | -0.66% | -0.50% | **$(3,462,623)** |
| SUBURBAN | $290,002,663 | 10.67% | -1.13% | $(3,288,524) | 7.53% | -1.13% | ($3,288,524) | -0.58% | -0.55% | **$(1,603,745)** |
| JOHNS HOPKINS | $2,178,990,299 | 10.71% | -1.14% | $(24,810,297) | 23.04% | -1.14% | ($24,810,297) | -0.73% | -0.41% | **$(9,001,453)** |
| ANNE ARUNDEL | $553,902,629 | 9.52% | -1.01% | $(5,606,617) | 12.02% | -1.01% | ($5,606,617) | -0.54% | -0.47% | **$(2,608,775)** |
| GARRETT COUNTY | $45,640,340 | 9.51% | -1.01% | $(461,240) | 19.56% | -1.01% | ($461,240) | -0.24% | -0.77% | **$(352,014)** |
| ATLANTIC GENERAL | $100,960,082 | 9.29% | -0.99% | $(996,381) | 11.51% | -0.99% | ($996,381) | -0.36% | -0.63% | **$(634,652)** |
| UNIVERSITY OF MARYLAND | $1,289,991,934 | 9.99% | -1.06% | $(13,697,907) | 29.87% | -1.06% | ($13,697,907) | -0.60% | -0.46% | **$(5,957,955)** |
| G.B.M.C. | $423,026,290 | 8.83% | -0.94% | $(3,970,753) | 9.87% | -0.94% | ($3,970,753) | -0.41% | -0.53% | **$(2,246,614)** |
| UM ST. JOSEPH | $384,647,527 | 8.47% | -0.90% | $(3,462,843) | 11.82% | -0.90% | ($3,462,843) | -0.54% | -0.36% | **$(1,392,995)** |
| MCCREADY | $14,230,659 | 7.63% | -0.81% | $(115,452) | 15.85% | -0.81% | ($115,452) | -0.19% | -0.62% | **$(87,784)** |
| MERCY | $491,288,212 | 6.44% | -0.68% | $(3,361,106) | 24.64% | -0.68% | ($3,361,106) | -0.52% | -0.16% | **$(801,106)** |
| REHAB & ORTHO | $117,875,574 | 0.33% | -0.03% | $(41,040) | 21.53% | -0.03% | ($41,040) | -0.30% | 0.27% | **$312,587** |
|  |  |  |  |  |  |  |  |  |  |  |
| **Total** | **$15,488,936,318** | **12.14%** | **-1.29%** | **$(199,807,279)** |  |  | **($194,157,796)** | **-0.60%** | **-0.65%** | **$(104,405,458)** |
|  |  |  |  | Top Quartile= | 21.37% |  |  |  |  |  |

1. A readmission is an admission to a hospital within a specified time period after a discharge from the same or another hospital. [↑](#footnote-ref-1)
2. Only same-hospital readmissions were counted, and stays of one day or less and planned admissions were excluded. [↑](#footnote-ref-2)
3. The case-mix adjustment was based on a total of observed readmissions vs. expected readmissions, which is calculated using the statewide average readmission rate for each diagnosis-related group (DRG) severity of illness (SOI) cell and aggregated for each hospital. [↑](#footnote-ref-3)
4. This measures 30-day all-cause, all hospital readmissions with planned admission and other exclusions. [↑](#footnote-ref-4)
5. Patient Protection and Affordable Care Act, 124 Stat. 119 (2010) (codified as amended at 42 U.S.C. § 1395ww(q) (Supp. 2010)). [↑](#footnote-ref-5)
6. For more information on this program, see <https://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/AcuteInpatientPPS/Readmissions-Reduction-Program.html>. [↑](#footnote-ref-6)
7. <http://hscrc.maryland.gov/hscrc-workgroup-care-coordination.cfm> [↑](#footnote-ref-7)
8. PQIs measure inpatient admissions for ambulatory care sensitive conditions. For more information on these measures, see <http://www.qualityindicators.ahrq.gov/modules/pqi_overview.aspx> . [↑](#footnote-ref-8)
9. The original Area Deprivation Index was developed in 2003 by Gopal Singh, and has been widely disseminated by HIPxChange, which is sponsored by the University of Wisconsin-Madison. The ADI is a composite measure of the socioeconomic deprivation of a geographic location (like a Census-block). It reflects various socioeconomic indicators like the level of education of the population, the employment rate, median family income, home value, and percent of the population below 150 percent of the federal poverty level. Higher values of the index indicate higher levels of socioeconomic deprivation. For more information, see: <https://www.hipxchange.org/ADI>. [↑](#footnote-ref-9)
10. PAU reduction= % PAU (12.14%) / Savings (-1.25%) + the statewide impact of Medicaid Protection (0.04%) = -10.63%. [↑](#footnote-ref-10)