

**615th Meeting of the Health Services Cost Review Commission
January 10, 2024**

(The Commission will begin in public session at 11:30 am for the purpose of, upon motion and approval, adjourning into closed session. The open session will resume at 1:00pm)

**CLOSED SESSION
11:30 am**

1. Discussion on Planning for Model Progression - Authority General Provisions Article, §3-103 and §3-104
2. Update on Administration of Model - Authority General Provisions Article, §3-103 and §3-104

**PUBLIC MEETING
1:00 pm**

Informational

1. Presentation on Assistance in Community Integration Services (ACIS) Pilot in Baltimore City
- Kevin Lindamood, Redonda Miller, Christopher Thomaskutty
2. Overview of Data Validation Activities

Specific Matters

3. Docket Status – Cases Closed
2631N Tidal Health Peninsula
4. Docket Status – Cases Open
2640A University of Maryland Medical Center
2641R UM Upper Chesapeake Behavioral Health Pavilion
2642N University of Maryland Medical Center
5. University of Maryland Rehabilitation and Orthopaedic Institute Recommendation

Subjects of General Applicability

6. Review of Minutes from the Public and Closed Meetings on December 6 and December 13, 2023
7. Draft Recommendation on Maryland Hospital Acquired Conditions Program (MHAC)

8. Emergency Department Dramatic Improvement Effort (EDDIE) Update
9. Policy Update and Discussion
 - a. Model Monitoring
 - b. Hospital Reimbursement Law Stakeholder Engagement
 - c. Processes Update
10. Hearing and Meeting Schedule

**IN RE: THE APPLICATION FOR
ALTERNATIVE METHOD OF RATE
DETERMINATION
UNIVERSITY OF MARYLAND
MEDICAL CENTER
BALTIMORE, MARYLAND**

*** BEFORE THE MARYLAND HEALTH
* SERVICES COST REVIEW
* COMMISSION
* DOCKET: 2023
* FOLIO: 2450
* PROCEEDING: 2640A**

Staff Recommendation

January 10, 2024

I. INTRODUCTION

The University of Maryland Medical Center (the “Hospital”) filed a renewal application with the HSCRC on November 30, 2023, for an alternative method of rate determination, pursuant to COMAR 10.37.10.06. The Hospital requests approval from the HSCRC to continue to participate in a global rate arrangement for solid organ and blood and bone marrow transplant services with OptumHealth Care Solutions, Inc. for a one-year period, effective January 1, 2024.

II. OVERVIEW OF APPLICATION

The contract will continue to be held and administered by University of Maryland Faculty Physicians, Inc. (FPI), which is a subsidiary of the University of Maryland Medical System. FPI will manage all financial transactions related to the global price contract including payments to the Hospital and bear all risk relating to regulated services associated with the contract.

III. FEE DEVELOPMENT

The hospital component of the global rates was developed by calculating mean historical charges for patients receiving the procedures for which global rates are to be paid. The remainder of the global rate is comprised of physician service costs. Additional per diem payments were calculated for cases that exceed a specific length of stay outlier threshold.

IV. IDENTIFICATION AND ASSESSMENT OF RISK

The Hospital will continue to submit bills to FPI for all contracted and covered services. FPI is responsible for billing the payer, collecting payments, disbursing payments to the Hospital at its full HSCRC approved rates, and reimbursing the physicians. The Hospital contends that the arrangement between FPI and the Hospital holds the Hospital harmless from any shortfalls in payment from the global price contract. FPI maintains that it has been active in similar types of fixed fee contracts for several years, and that FPI is adequately capitalized to bear risk of potential losses.

V. STAFF EVALUATION

The staff found that the Hospital's experience under this arrangement for the previous year was favorable. Staff believes that the Hospital can continue to achieve a favorable performance.

VI. STAFF RECOMMENDATION

Staff recommends that the Commission approve the Hospital's application to continue to participate in an alternative method of rate determination for solid organ and blood and bone marrow transplant services for a one-year period beginning January 1, 2024.

Consistent with its policy paper regarding applications for alternative methods of rate determination, the staff recommends that this approval be contingent upon the execution of the standard Memorandum of Understanding ("MOU") with the Hospital for the approved contract. This document would formalize the understanding between the Commission and the Hospital and would include provisions for such things as payments of HSCRC-approved rates, treatment of losses that may be attributed to the contract, quarterly and annual reporting, confidentiality of data submitted, penalties for noncompliance, project termination and/or alteration, on-going monitoring, and other issues specific to the proposed contract. The MOU will also stipulate that operating losses under the contract cannot be used to justify future requests for rate increases.

IN RE: THE PERMANENT RATE * BEFORE THE HEALTH SERVICES
APPLICATION OF * COST REVIEW COMMISSION
UM UPPER CHESAPEAKE * DOCKET: 2023
BEHAVIORAL HEALTH PAVILION * FOLIO: 2450
AT ABERDEEN * PROCEEDING: 2641R
ABERDEEN, MARYLAND

* * * * *

STAFF RECOMMENDATION

January 10, 2023

I. INTRODUCTION

On October 26, 2023, Upper Chesapeake Health System (“UCHS”) submitted a full rate application to the Health Services Cost Review Commission (“HSCRC” or “the Commission”) to establish a permanent rate structure for UM Upper Chesapeake Behavioral Health Pavilion at Aberdeen (“BHP” or “the Hospital”) to be effective February 6, 2024. BHP is a new 33-bed psychiatric hospital located in Aberdeen, Maryland.

II. BACKGROUND

On April 16, 2020, the Maryland Health Care Commission (“MHCC”) approved a CON authorizing UCHS to establish a 33-bed specialty psychiatric hospital in Aberdeen, Maryland. The new specialty psychiatric hospital, BHP, is part of UCHS’ plan to restructure its health care services and modernize its delivery system, which will consolidate services and realize cost savings and efficiencies. UM Harford Memorial Hospital (“HMH”) will be converting to a freestanding medical facility (“FMF”) and, while maintaining psychiatric services in Harford County, will be establishing a psychiatric specialty hospital in the same building as the FMF. UCHS is constructing a new two-story building five miles from the HMH campus, which will house both the FMF and BHP. The opening is targeted for February 6, 2024. The first floor will house the FMF, and the second floor will include thirty-three inpatient psychiatric beds. Outpatient services including a partial hospitalization program and an outpatient psychiatric clinic will be in the medical office building adjacent to the FMF/BHP building and connected via a skywalk. HMH operates the only acute care adult psychiatric hospital program in Harford County. The establishment of the specialty psychiatric hospital ensures that access to psychiatric services remains in Harford County. As outlined in the CON, UCHS demonstrated that Harford County has a need for thirty-three inpatient psychiatric beds, and the proposed plan complies with the applicable State Health Plan standards.

III. THE HOSPITAL REQUEST AND JUSTIFICATION

BHP is expected to begin operations on February 6, 2024, and, therefore, is requesting a new set of rates for its opening. In the CON application, revenue was based on HMH utilization patterns and unit rates. It is expected that BHP will serve the same patient population currently treated at HMH, as well as additional gero-psych patients and expanded outpatient psych services (primarily partial hospitalization). The gero-psych patients will include dually diagnosed

med/surg acute patients, the likely result of which is expected to increase with the aging of the population.

As an adult only unit that includes the additional gero-psych beds, BHP’s payer mix includes a significantly higher share of Medicare patients (49 percent) compared to Sheppard Pratt Hospital’s (“SPH’s”) 17 percent. This difference in payer mix results in a mark-up at BHP approximately 10.7 percent higher than SPH. This is due to lower Medicare and Medicaid reimbursement for specialty psychiatric hospitals in Maryland, which is based on the CMS’ prospective payment system for Medicare patients and State of Maryland Department of Health for Medicaid patients, not HSCRC approved rates. Historically, Medicare payments have been approximately 30 percent lower than HSCRC approved rates and Medicaid outpatient rates have been 10 percent lower than HSCRC approved outpatient rates.

Table 1
Requested Rates

| Upper Chesapeake Behavioral Health | | | | | |
|---|-----------------------------------|--------------|-------------------------|--------------------|---------------------|
| Requested Rates | | | | | |
| FY2024 | | | | | |
| Rate Center - Description | Unit of Measure | Upper | Total Psych | Total Psych | |
| PAD | Psychiatric Acute | Patient Days | \$1,731.78 ¹ | 7,843 | \$13,582,678 |
| PSG | Psych Geriatric | Patient Days | 1,545.64 ¹ | 2,204 | 3,406,581 |
| ADM | Admissions | Admission | 761.41 ¹ | 1,220 | 928,726 |
| CL | Clinic Services | RVU | 15.39 ¹ | 21,042 | 323,737 |
| PDC | Psychiatric Day/Night | Visits | 726.40 ¹ | 3,900 | 2,832,964 |
| LAB | Laboratory | RVU | 7.65 ¹ | 437,213 | 3,345,744 |
| EKG | Electrocardiography | RVU | 16.00 ¹ | 5,189 | 83,018 |
| EEG | Electroencephalography | RVU | 3.71 ¹ | 2,231 | 8,275 |
| RAD | Radiology-Diagnostic ³ | RVU | 59.43 ¹ | 2,697 | 160,271 |
| CAT | CT Scanner ³ | RVU | 5.58 ¹ | 4,689 | 26,161 |
| MRI | MRI Scanner ³ | RVU | 39.82 ¹ | 1,120 | 44,616 |
| PTH | Physical Therapy | RVU | 35.74 ² | 1,229 | 43,915 |
| RES | Respiratory Therapy | RVU | 4.88 ² | 17,139 | 83,723 |
| OTH | Occupational Therapy | RVU | 24.64 ² | 951 | 23,444 |
| STH | Speech Therapy | RVU | 12.46 ² | 144 | 1,794 |
| MSS | Med./Surg. Supplies | Invoice Cost | 1.92 ² | 4,693 | 9,008 |
| CDS | Drugs | Invoice Cost | 4.10 ¹ | 479,007 | 1,963,082 |
| | | | | Total | <u>\$26,867,736</u> |

Note 1: Based on RY2024 Sheppard Pratt approved rates adjusted for Upper Chesapeake Behavioral Health mark-up

Note 2: Sheppard Pratt does not have this rate therefore UM Harford Memorial's RY2024 approved rate was utilized

Note 3: Reflects a rebundled rate

It is the position of BHP that these requested rates are reasonable because:

1. Rates are consistent with SPH’s current rate structure adjusted for BHP’s payer mix.
2. Due to lower Medicare payment rates, the requested rates would result in System savings compared to if the services remained in an acute care hospital.

IV. HOSPITAL RATE HISTORY

As noted above, BHP is expected to commence operations on February 6, 2024, and therefore, there is no rate history.

V. PROJECTED SYSTEM SAVINGS

The Hospital projects that it will generate \$5.4 million in system savings related to the opening of this facility. The change in net reimbursement is based on projected BHP Medicare net reimbursement compared to HMH approved rates for a similar volume of services. This amount of projected gross savings is illustrated in table 2 below.

Table 2

| Payer | Current at RY2024 HMH rates | | | | Psych Specialty Hospital | | |
|---------------------------------------|-----------------------------|----------------|----------------|----------------|--------------------------|----------------|--------------|
| | Payer Mix | Charges | Payer Discount | Net Revenue | Charges | Payer Discount | Net Revenue |
| Medicare | 49.3% | \$12,513,571 | 7.7% | \$11,550,026 | \$13,245,794 | 54.7% 1 | \$6,004,900 |
| IP Medicaid | 25.9% | 6,574,067 | 7.7% | 6,067,863 | 6,958,744 | 6.0% | 6,541,219 |
| OP Medicaid | 6.6% | 1,675,245 | 7.7% | 1,546,251 | 1,773,271 | 10.0% | 1,595,944 |
| IP Blue Cross | 5.0% | 1,269,125 | 2.3% | 1,240,570 | 1,343,387 | 2.3% | 1,313,161 |
| OP Blue Cross | 4.7% | 1,192,977 | 2.0% | 1,169,118 | 1,262,784 | 2.0% | 1,237,528 |
| Provision for Uncollectable Accounts: | 3.8% | 964,535 | 100.0% | - | 1,020,974 | 100.0% | - |
| Provision for Other Payors: | 4.7% | 1,192,977 | 2.0% | 1,169,118 | 1,262,784 | 2.0% | 1,237,528 |
| Total | 100.0% | \$25,382,497 a | | \$22,742,945 b | \$26,867,736 | | \$17,930,279 |

| | | |
|-----------------------------|---------------|---------------|
| Change in Net Reimbursement | c | (\$4,812,666) |
| Change in Gross Charges | d = c / (b/a) | (\$5,371,225) |

Staff is seriously concerned over the calculation of these projected savings. A 30 percent markup has been built into rates at SPH. This amount has not been updated in their mark-up calculation over concerns that an even higher discount to Medicare would shift even more costs to other payers. Staff reviewed inpatient claims data for Medicare patients using data available in the chronic conditions warehouse (“CCW”). A review of CCW data revealed that the actual Medicare discount or reimbursement for psychiatric facilities in the State averaged approximately 43 percent. Given that the details in table 2 were calculated on a series of assumptions, with the patient discount being the most concerning to staff, staff has updated the

table and savings amount with a more accurate estimate for the Medicare discount that utilizes the statewide average for psychiatric facilities.

Table 3
Estimated Staff Projections of System Savings

| Payer | Current at RY2024 HMH rates | | | | Psych Specialty Hospital | | | |
|-------------------------------------|-----------------------------|----------------------------------|----------------|----------------------------------|--------------------------|--------------------|--------------------------|----------------------|
| | Payer Mix | Charges | Payer Discount | Net Revenue | Charges | Payer Discount | Net Revenue | |
| Medicare | 49.3% | \$12,513,571 | 7.7% | \$11,550,026 | \$13,245,794 | 43.0% ¹ | \$7,550,103 | |
| IP Medicaid | 25.9% | 6,574,067 | 7.7% | 6,067,863 | 6,958,744 | 6.0% | 6,541,219 | |
| OP Medicaid | 6.6% | 1,675,245 | 7.7% | 1,546,251 | 1,773,271 | 10.0% | 1,595,944 | |
| IP Blue Cross | 5.0% | 1,269,125 | 2.3% | 1,240,570 | 1,343,387 | 2.3% | 1,313,161 | |
| OP Blue Cross | 4.7% | 1,192,977 | 2.0% | 1,169,118 | 1,262,784 | 2.0% | 1,237,528 | |
| Provision for Uncollectable Account | 3.8% | 964,535 | 100.0% | - | 1,020,974 | 100.0% | - | |
| Provision for Other Payors: | 4.7% | 1,192,977 | 2.0% | 1,169,118 | 1,262,784 | 2.0% | 1,237,528 | |
| Total | 100.0% | \$25,382,497 ^a | | \$22,742,945 ^b | \$26,867,736 | | \$19,475,482 | |
| Change in Net Reimbursement | | | | | | | ^c | (\$3,267,464) |
| Change in Gross Charges | | | | | | | ^{d = c / (b/a)} | (\$3,646,686) |

As seen in table 3 above, staff estimates that the highest value of gross savings that will be achieved at the psychiatric facility is \$3.6 million, if reimbursement is actually 43 percent.

VI. STAFF ANALYSIS

This staff recommendation is the culmination of significant analysis and consideration of the BHP CON application, the process that resulted in CON approval, and analysis of the assumptions included in the CON compared to current market conditions. In addition, significant consideration was given to the implications of funding BHP relative to the Total Cost of Care. Additionally, staff evaluated the rate structure and approved rates for both Sheppard Pratt Hospital and UM Harford Memorial Hospital.

The requested rates for BHP were based on Sheppard Pratt’s approved rates for RY 2024. There are several rate centers that will be at BHP that Sheppard Pratt does not use. For those rate centers, the requested rates were based on Harford Memorial’s approved rates for RY 2024. The requested rates were then marked up based on the projected payer mix of patients receiving care at BHP.

Staff compared the requested rates and revenue at projected volume to the RY 2024 rates for Sheppard Pratt, Harford Memorial, and the statewide median. The requested rate structure

was 10.7 percent higher than Sheppard Pratt, 10 percent higher than the statewide median, and six percent higher than Harford Memorial.

As noted, in section III of this document, BHP will be an adult only unit, which establishes two clinically distinct programs: a non-geriatric adult psychiatric program and a geriatric program. There is no age restriction on patients who will be treated for psychiatric disorders within the geriatric program; however, these patients are projected to be in the 65 and older cohort. As a result of the large volume of patients projected to be older than 65, the payer mix is expected to be inclusive of an increased proportion of Medicare patients. The expected payer mix at BHP is the driver for the increased rate structure when compared to target hospitals. It is important to note that the payer mix gets updated each rate year but not the differential. To the extent that this expected payer mix changes, the change in mark-up will be incorporated into rates the following year. Medicare does not reimburse private psychiatric hospitals in Maryland based on Commission approved rates. Instead, private psychiatric hospitals are reimbursed based on Medicare's own reimbursement schedule. These payments had previously resulted in a difference of approximately 30 percent less than Commission approved rates at Sheppard Pratt. Private psychiatric hospitals do not operate under a global budget agreement. These hospitals were not included under the previous waiver or the current waiver.

In addition, staff notes that after a full year of rate history has been developed at the Hospital, it is possible for hospitals to be exempted from Maryland rate setting based on a payer mix that is at least 66-2/3 percent governmental payers.

VII. Staff Recommendation

The Staff Recommendation provides BHP with reasonable revenue to cover costs associated with the projections cited in the full rate application. Staff recommends that the Commission approve the recommended revenue and unit rates set forth in table 4 below, effective February 6th, 2024, for the UM Upper Chesapeake Behavioral Health Pavilion at Aberdeen. Staff also recommends the following:

- That the recommended revenue and unit rates be considered a stub period to account for the five months of the fiscal year that the Hospital will be open.
 - These rates are being recommended for commercial payers. Rates for Governmental payers will be based on Medicare and Medicaid reimbursement schedules and the Hospital will not be subject to a Global Budget.

- That the Commission provides full inflation for BHP for Fiscal Years 2025 and 2026 without an offset for efficiency.
- That if the Hospital does not achieve the anticipated level of savings set forth in table 2, revenue will be removed from UM Upper Chesapeake to ensure previously agreed upon savings levels are met.

Table 4
Recommended Unit Rates

| <u>HEALTH SERVICES COST REVIEW COMMISSION</u> | | | | |
|---|-----------------------------|-------------------|------------------------|---------------------------------|
| New Approved Revenue and Unit Rates for UM Upper Chesapeake Behavioral Health Pavilion at Aberdeen | | | | |
| Effective February 6, 2024 | | | | |
| <u>Revenue Center</u> | <u>Service Unit</u> | <u>Unit Rates</u> | <u>Budgeted Volume</u> | <u>Budgeted Annual Revenues</u> |
| Psych Adult | Patient Days | \$1,731.7800 | 3,268 | \$5,659,465 |
| Psychiatric - Geriatric | Patient Days | \$1,545.6400 | 918 | \$1,419,413 |
| Admissions | Admission | \$761.4100 | 508 | \$386,969 |
| Clinic Services | RVU'S | \$15.3900 | 8,767 | \$134,930 |
| Psychiatric Day/Night | Visits | \$726.4000 | 1,625 | \$1,180,400 |
| Laboratory | MD RVU'S | \$7.6500 | 182,172 | \$1,393,617 |
| Electrocardiography | MD RVU'S | \$16.0000 | 2,162 | \$34,593 |
| Electroencephalography | 74 CAL RVU'S | \$3.7100 | 929 | \$3,448 |
| Radiology-Diagnostic | R HSCRC RVU'S | \$59.4300 | 1,124 | \$66,784 |
| CT Scanner | R RVU'S | \$5.5800 | 1,954 | \$10,903 |
| MRI Scanner | R RVU'S | \$39.8200 | 467 | \$18,589 |
| Physical Therapy | MD RVU'S | \$35.7400 | 512 | \$18,297 |
| Respiratory Therapy | MD RVU'S | \$4.8800 | 7,141 | \$34,849 |
| Occupational Therapy | RVU'S | \$24.6400 | 396 | \$9,768 |
| Speech Therapy | RVU'S | \$12.4600 | 60 | \$748 |
| (R) Rebundled Rate | TOTAL | | | <u>\$10,372,772</u> |
| <u>CHARGES for MEDICAL SUPPLIES and DRUGS SOLD</u> | | | | |
| | | <u>Mark up</u> | | <u>Maximum Annual Overhead</u> |
| Med/Surg Supplies | Invoice Cost plus Markup of | 1.26750 | , plus Overhead of | \$1,276 |
| Drugs | Invoice Cost plus Markup of | 1.26750 | , plus Overhead of | \$565,328 |

This facility is expected to open in February, 2024, therefore, the rate order shown in table 4 represents a stub period of 5 months of the fiscal year.

University of Maryland Rehabilitation and Orthopedic Institute

Trauma Reunification Project

Staff Recommendation

January 10, 2024

Overview and Hospital Request

On November 15, 2023, the University of Maryland Medical System (UMMS) provided a Letter of Intent (LOI) on behalf of UM Downtown Baltimore hospitals - University of Maryland Rehabilitation and Orthopedic Institute (UMROI), University of Maryland Medical Center (UMMC) and University of Maryland Medical Center Midtown Campus (UMMC Midtown) - requesting to move global budget revenue in future years from UMROI to UMMC and UMMC Midtown with no intended reduction in net services. Specifically, the LOI outlined that UMMS, as part of its “Trauma Reunification Project,” will transfer from UMROI, as early as the second quarter of 2027, 25 acute inpatient rehab traumatic brain injury beds, 18 acute inpatient rehab spinal cord injury beds, and 5 chronic care beds to UMMC, as well as 10 dually licensed acute inpatient rehab and chronic beds to UMMC.¹ Together, these system realignments constitute 27 percent of UMROI’s global budget. Concurrent with the relocation of beds to UMMC, UMROI’s medical and surgical acute care volumes, approximately 48 percent of UMROI’s global budget, will be absorbed by existing operating room capacity and acute hospital facilities, primarily those within the UMMS system, at which time UMROI plans to close its four acute care hospital beds. UMROI’s pediatric dental surgical volumes will be relocated to the UMMC downtown campus and UMMS intends to relocate UMROI’s dental clinic volumes to UMMC Midtown. UMMS also intends to shift UMROI’s outpatient clinic services to other UMMS campuses including the UMMC Midtown Campus. Finally, for the remainder of UMROI’s care delivery (25 percent of revenue) UMMS is investigating new locations for the construction of a freestanding facility to provide non-trauma acute inpatient rehabilitation care, inclusive of neurology and stroke, in a modern setting. Until a site is identified, which UMROI envisions will be approximately 60 beds, the hospital will continue to provide these services and chronic care at its existing campus. UMROI intends to pursue an exemption from rate regulation from the HSCRC for the special acute inpatient rehabilitation and chronic care hospital that will remain at its existing campus.²

¹ While Rehabilitation and Chronic beds are similar, there are some distinct differences that can be best captured by the patient characteristics and services: Rehab - a) Regular, direct individual contact by a physiatrist or physician of equivalent training and/or experience in rehabilitation who serves as their lead provider; 1 COMAR 10.24.09, p.4. (b) Daily rehabilitation nursing for multiple and/or complex needs; (c) A minimum of three hours of physical or occupational therapy per day, at least five days per week, in addition to therapies or services from a psychologist, a social worker, a speech-language pathologist, and a therapeutic recreation specialist, as determined by their individual needs; and (d) Based on their individual needs, other services provided in a healthcare facility that is licensed as a hospital . Chronic - a) Requires frequent physician intervention (on average, three visits per patient per week) b) Requires continuous intensive professional nursing services and intervention from a registered nurse. Examples include, but are not limited to, frequent deep tracheal suctioning (more frequently than six times daily), total parenteral nutrition, serious wound (such as, multiple stage III or stage IV decubiti) care, and management of acute medical exacerbations appropriate to the resources of the chronic hospital. c) Has a medical condition that is sufficiently complex to require continuous monitoring, and requires an intensity of resources that is not available in alternative non-acute hospital settings.

<https://msa.maryland.gov/megafile/msa/speccol/sc5300/sc5339/000113/001000/001816/unrestricted/20061831e-0007.pdf>

² See Appendix A for Bed Categorization Schedule

For a complete itemization of UMROI’s Trauma Reunification Project, please see exhibit 1 below:

Exhibit 1: UMMS Itemized Proposed Global Budget Adjustments for UMROI

| <u>Service</u> | <u>Revenue</u> | <u>Trauma Reunification Project Action</u> |
|--|----------------------|--|
| Spinal Cord Injury (SCI) -- Acute | \$14,597,507 | Shift to UMMC; FMF Analagous (Component 1) |
| Traumatic Brian Injury (TBI) -- Acute | \$12,933,003 | Shift to UMMC; FMF Analagous (Component 1) |
| Comprehensive Rehab (CMR) -- Acute (30%) | \$5,246,268 | Shift to UMMC; FMF Analagous (Component 1) |
| Traumatic Brian Injury (TBI) -- Chronic | \$5,903,230 | Shift to UMMC; FMF Analagous (Component 1) |
| Spinal Cord Injury (SCI) -- Chronic | \$1,750,141 | Shift to UMMC; FMF Analagous (Component 1) |
| OP Orthopedic Surgery - Faculty (74%) | \$18,716,635 | Absorb into UMMC DTC or Midtown (Component 2) |
| OP Dental Surgery | \$7,161,790 | Absorb into UMMC DTC or Midtown (Component 2) |
| OP Pain Clinic | \$7,001,036 | Absorb into UMMC DTC or Midtown (Component 2) |
| OP Clinics | \$4,442,966 | Absorb into UMMC DTC or Midtown (Component 2) |
| IP Surgery - Faculty | \$3,363,523 | Absorb into UMMC DTC or Midtown (Component 2) |
| OP therapy (68%) | \$3,350,170 | Absorb into UMMC DTC or Midtown (Component 2) |
| OP Dental Clinics | \$1,259,385 | Absorb into UMMC DTC or Midtown (Component 2) |
| OP Surgery - Non-Ortho | \$177,150 | Absorb into UMMC DTC or Midtown (Component 2) |
| OP Orthopedic Surgery - Non-Faculty | \$12,577,903 | Dissipate to other acute provider (Component 3) |
| OP Orthopedic Surgery - Faculty (26%) | \$6,684,513 | Dissipate to other acute provider (Component 3) |
| IP Surgery - Non-Faculty | \$2,751,973 | Dissipate to other acute provider (Component 3) |
| OP Therapy (32%) | \$1,546,232 | Dissipate to other acute provider (Component 3) |
| OP Surgery -- Other | \$1,099,688 | Dissipate to other acute provider (Component 3) |
| All Other | \$153,769 | Dissipate to other acute provider (Component 3) |
| Stroke (CVA) -- Acute | \$14,876,576 | Deregulate (Component 4) |
| Comprehensive Rehab (CMR) -- Acute (70%) | \$12,241,292 | Deregulate (Component 4) |
| Stroke (CVA) -- Chronic | \$5,036,843 | Deregulate (Component 4) |
| Comprehensive Rehab (CMR) -- Chronic | \$4,483,401 | Deregulate (Component 4) |
| Total | \$147,354,995 | |

To effectuate this transition of services, UMMS will submit a Request for Exemption from Certificate of Need Review to the Maryland Health Care Commission, pursuant to which they will seek approval to relocate UMROI’s traumatic brain injury (“TBI”) and spinal cord injury (“SCI”) acute inpatient rehabilitation service lines, along with associated chronic care beds, to UMMC. UMMC will construct four additional floors on top of the planned Stoler Center for Advanced Medicine and will renovate certain existing space in UMMC’s North Hospital. The relocated rehab and chronic care beds from UMROI will occupy two of these floors, as well as a portion of existing space in the North Hospital, which UMMC will renovate to accommodate rehab services.

UMMS’ request of the HSCRC is to allow the health system, whose aim is to consolidate physical capacity without reducing access, to retain 75 percent of UMROI’s global budget revenue for volume that remains at UMMS regulated facilities, 50 percent of UMROI’s global budget revenue related to volume that shifts to non-UMMS hospitals or to any unregulated facilities, and

exemption of UMROI from the Commission’s Integrated Efficiency policy until such time as the Project is completed. This proposal will yield approximately \$21.5 million in system savings (14.6 percent of UMROI’s global budget revenue).

Background

UMROI is licensed as an acute care, specialty rehabilitation, and specialty chronic hospital in the Forest Park/Gwynns Falls community in southwest Baltimore City with 2 licensed medical/surgical/gynecological/addictions beds, 102 licensed rehabilitation beds, and 40 licensed chronic hospital beds, including 16 dually licensed chronic/rehabilitation beds. UMROI is a provider of orthopedic surgery, the largest state provider of outpatient pediatric dental services, and the largest inpatient rehabilitation hospital and provider of rehabilitation services in the state of Maryland. The Hospital’s total approved revenue cap for Fiscal Year 2024 is \$148,915,470. In CY 2022, which is a fairly representative year, approximately 23 percent of its revenues came from Baltimore city residents, 20 percent came from Baltimore county residents, 13 percent came from Anne Arundel county residents, 9 percent from Howard county residents, 8 percent came from Carroll and Harford county residents, 6 percent came from Prince George’s county residents, 4 percent came from out-of-state residents, and the remaining 17 percent was derived from all other counties in Maryland.

From Fiscal Years 2014 through 2022, UMROI had an average regulated operating margin of 5.5 percent based on its annual filing Schedule RE reporting. Average total operating margin for the same period, inclusive of unregulated losses, most notably physician subsidies, was 3.3 percent. From 2014 through 2022, the operating cash flow margin, which removes depreciation and amortization and better represents the ongoing cash generation of the organization’s operation, was 4.1 percent, yielding cash generation of \$41 million.

Analyses

The HSCRC staff reviewed the Letter of Intent for consistency with existing policies (e.g., marketshift, deregulation) as well as prior facility conversions. Additionally, because the Commission does not have a formalized facility conversion policy, staff assessed savings from the UMROI conversion relative to the values outlined in the HSCRC Full Rate Application methodology, prior facility conversions, and site neutral rates for services that do not need to be performed in a regulated facility. In effect, staff have acquired additional statistics that help validate the reasonableness of system savings from this transformation.

A: Variable Cost Factors

UMMS’ proposal for global budget adjustments is composed of four components which are detailed in exhibit 1 and highlighted in exhibit 2 below:

Exhibit 2: UMMS Proposed Global Budget Adjustments for UMROI³

| | 1) Trauma Rehab/Chronic to Stoler Center (Build at DTC) | 2) Acute Relocated to DTC/MTC | 3) Acute Care Shifted to Other Providers | 4) Shift to Freestanding | Total | % of Current GBR |
|---------------------------------------|---|-------------------------------|--|--------------------------|-----------------|------------------|
| UM Rehab GBR | \$40,430 | \$45,473 | \$24,814 | \$36,638 | \$147,355 | |
| Proposed Retention | 75% | 75% | 50% | 50% | | |
| Retained GBR @ UMMS | \$30,323 | \$34,104 | \$12,407 | \$18,319 | \$95,153 | 65% |
| Redistribution of UM Rehab GBR | | | | | | |
| Retained at UMMS | \$30,323 | \$34,104 | \$12,407 | \$18,319 | \$95,153 | 65% |
| Shift to Other Providers | - | - | 12,407 | 18,319 | 30,726 | 21% |
| System Savings | 10,108 | 11,368 | - | - | 21,476 | 15% |
| UM Rehab FY 2023 GBR | \$40,430 | \$45,473 | \$24,814 | \$36,638 | \$147,355 | 100% |

Each component must be considered individually against existing Commission policies and prior facility conversion practices. In the absence of a planned transition, components 1 and 2 - the movement of services to another UMMS facility - would typically be handled through the Commission marketshift policy and would utilize a 50 percent variable cost factor to recognize the variable cost per unit that would be incurred by the facility providing new services, e.g., increased drugs, supplies, and hourly labor. UMMS has proposed a 75 percent variable cost factor to recognize some level of fixed costs that are necessary to provide these services (e.g., depreciation and interest, new base salaries), and to ensure the UMROI transformation results in system savings (14.6 percent) that is fairly similar to other facility conversions. Prior UMMS free-standing medical facility conversions resulted in savings of 13 percent for Dorchester Hospital, 12 percent for Harford Memorial, and 3 percent for Laurel Medical Center.⁴

Prior practice indicates that the Commission has allowed a 100 percent variable cost factor if the services are being transitioned to a facility substitute, e.g., a hospital converted to a free standing medical facility, and a 65 percent factor if the service is being transitioned to another facility within the health system.⁵ The current UMMS proposal is not a facility substitute per se because the services are being transitioned to UMMC. However, the movement of rehab and chronic care beds will require the wholesale transition of salaried employees from UMROI as well as additional capital improvements (for which UMMS is not seeking additional rate support), because these services are highly specialized and UMMC currently does not have licensed rehab or chronic beds. Thus, for Component 1 a higher variable cost factor than is allotted by the marketshift policy is a valid request, and staff believe the prior practice of allowing 100 percent revenue retention is most appropriate given the transition is analogous to a facility substitute. Conversely, given the additional acute care bed capacity at UMMC and UMMC Midtown, which

³ Source: UMMS/Berkeley Research Group; See Appendix B for Variations of Model

⁴ Savings generated from Laurel transitioning to an FMF were used to finance additional debt associated with building a new hospital for Capital Region Medical Center. The savings were used to finance the remaining portion of the capital project that was not covered by the State or County

⁵ Ex: The conversion of Dorchester Hospital utilized a 100 percent variable cost factor for services that were still provided by the Dorchester FreeStanding Medical Facility and 65 percent variable cost factor for services that were transitioned to Easton Hospital.

obviates the need for significant fixed cost investments, using a 100 percent variable cost factor makes less sense for acute care services (Component 2). However, staff do recognize that there will be additional fixed patient care and general overhead costs that will need to transition to UMMC because they cannot be absorbed by existing overhead, e.g., dietary services, medical records, and patient accounts, among others. Given an analysis of UMROI's costs indicate that these are approximately 24 percent of costs and staff anticipates some economies of scale, a 15 percent increase to the typical 50 percent variable cost factor seems reasonable.

Based on review of UMMS proposals, existing policy parameters, prior practice and analysis of estimated cost savings from the Full Rate Application and site neutral estimates (see next section), staff recommend that a 100 percent variable cost factor be utilized for trauma and chronic services (Component 1) and a 65 percent variable cost factor for acute care services in line with other (Component 2).

Staff are in agreement that a 50 percent variable cost factor is appropriate for Component 3 (Acute Care Shifted to Other Providers), as this approach is in line with the marketshift policy. However, staff does not agree that a 50 percent variable cost factor should be utilized for Component 4 (Shift to Freestanding), because although deregulation policy typically uses a 50 percent variable cost factor, it does so because the facility with dissipation to an unregulated space remains regulated by HSCRC global budget methodologies, i.e., a regulated fixed cost component still exists that requires funding support. In this case, UMMS is envisioning that a future freestanding facility will be exempt from HSCRC rate setting and thus each unit of service reimbursement will presumably reflect both variable and fixed costs, albeit at a significantly reduced rate, i.e., 43.1 percent of the current regulated rate. Again though, some level of fixed general overhead costs currently at the UMROI facility will be necessary to support the delivery of services in an unregulated setting, e.g., patient accounts, medical records, and general accounting, among other things. Given an analysis of UMROI's costs indicate that these are approximately 14 percent of costs, a 15 percent variable cost factor seems reasonable. To ensure that the deregulated services are not rationed in a future state, staff do recommend that the retained revenue associated with the 15 percent variable cost factor (\$5.5 million) be contingent on UMMS continuing to provide the projected volumes in a freestanding facility

The table below outlines staff's recommendation for each component of UMMS Trauma Reunification Project.

Exhibit 3: Potential Variable Cost Factors for UMROI Services Relocated to UMMS Facilities

| | HSCRC | | | | | |
|---------------------------------------|---|-------------------------------|--|--------------------------|-----------|------------------|
| | 1) Trauma Rehab/Chronic to Stoler Center (Build at DTC) | 2) Acute Relocated to DTC/MTC | 3) Acute Care Shifted to Other Providers | 4) Shift to Freestanding | Total | % of Current GBR |
| UM Rehab GBR | \$40,430 | \$45,473 | \$24,814 | \$36,638 | \$147,355 | |
| Proposed Retention | 100% | 65% | 50% | 15% | | |
| Retained GBR @ UMMS | \$40,430 | \$29,557 | \$12,407 | \$5,496 | \$87,890 | 60% |
| Redistribution of UM Rehab GBR | | | | | | |
| Retained at UMMS | \$40,430 | \$29,557 | \$12,407 | \$5,496 | \$87,890 | 60% |
| Shift to Other Providers | - | - | 12,407 | 18,319 | 30,726 | 21% |
| System Savings | - | 15,915 | - | 12,823 | 28,739 | 19.5% |
| UM Rehab FY 2023 GBR | \$40,430 | \$45,473 | \$24,814 | \$36,638 | \$147,355 | 100% |

B: Corroborating Statistics

As discussed above, the Commission does not have a formalized facility conversion policy, which would dictate expected savings and appropriate variable cost factors, among other things (e.g., required maintenance of effort for access to care). While the Commission does have experience with several facility conversions and thus reasonable expectations of savings, relying on past practice alone is not sufficient because staff believe a future conversion policy would scale expected savings by current efficiency performance, i.e. a facility with excessive fixed costs will be expected to generate greater savings than a facility with limited excess capacity. This dynamic is particularly salient because UMROI is a relatively inefficient provider that was identified as such in the RY 2024 Integrated Efficiency policy. Therefore, staff have assessed two additional statistics to validate the reasonableness of the savings being put forward by the HSCRC Proposal delineated in Exhibit 3 (\$28.7M, 19.5 percent).

The first statistic staff considered was the value outlined under the Full Rate Application policy. Under the Inter-hospital Cost Comparison methodology that is used to assess hospital cost efficiency per case, UMROI would incur a reduction of 27.11 percent.⁶ While this value exceeds the UMMS proposed savings of 14.6 percent and HSCRC’s proposal of 19.5 percent, staff would note that in a future facility conversion policy rebasing hospitals to the statewide average cost per case with no allotment for profit to subsidize physician coverage and future recapitalization, as is the norm, would likely not incentivize any hospital to reduce excess capacity. Thus, staff would like to propose a strawman for future policy consideration that could also be used to assess the reasonableness of the Trauma Reunification Project. Specifically, staff propose that a future facility incentive conversion policy consider rebasing hospitals to the statewide average cost per case plus the historical statewide average regulated profit of 8 percent, which if implemented in this case, would yield a revenue reduction of 22.10 percent, excluding any negative scaling related to total cost of performance. This approach does not entirely align with HSCRC’s savings proposal of 19.5 percent, but it is reasonably related and staff do believe strongly that a future facility incentive conversion policy must a) recognize that acute care rates have historically cross subsidized low physician

⁶ Under the complete Full Rate Application methodology, which further incorporates total cost of care performance, UMROI would incur a reduction of 30.16 percent, a increased reduction of \$4.1 million relative to the ICC, because UMROI’s attributed Medicare population is higher than its national benchmark average and the population has exceeded statewide total cost of care growth by 9.51 percent. However, given the proposed savings of at least \$20.8 million would completely eliminate the TCOC scaling component of the Full Rate Application, staff have elected to eliminate TCOC consideration in this recommendation.

reimbursement rates in the State of Maryland and b) create a reasonable incentive appealing enough to compel hospitals to remove excess capacity while also generating system savings.

The second statistic staff considered was the savings that would accrue to the public if rehabilitation and chronic services were deregulated and reimbursed at rates similar to other national freestanding rehabilitation facilities. Using MedPAR⁷ data and limiting the analysis to national claims with a length of stay greater than 0 and less than 91, UMMS was able to demonstrate that UMROI's rehabilitation and chronic services would result in a rate that was 23.5 percent of the Spine and Traumatic Brain Injury regulated rates and 43.1 percent for Comprehensive Medical Rehabilitation.⁸ As outlined below, this suggests that the potential savings opportunity for moving to a "site neutral rate" would be \$50.7 million; however, a portion of these services, specifically the spine and traumatic brain injury rehabilitation, are significantly more resource-intensive and require an intermediate step down setting before admission to a rehabilitation specialty hospital, skilled nursing facility, or home.⁹ As such, the following table quantifies potential site neutral savings with and without the spine and traumatic brain injury rehabilitation, \$50.7 million and \$21.2 million respectively. Given the need for these specialized acute care services, staff recommend that the relevant statistic to determine the reasonableness of the savings from the Trauma Reunification Project is without the spine and traumatic brain injury rehabilitation, i.e. \$21.2 million, which is in line with the proposed savings put forth by UMMS (\$21.5 million) but less than the savings put forth by HSCRC staff (\$28.7 million).

⁷ MedPAR data contains information about inpatient (IP) hospital and skilled nursing facility (SNF) stays that were covered by Medicare. MedPAR records are created by rolling up information for a single stay from individual IP and SNF claims. The data on these claims was originally submitted on the CMS 1450 or UB04.

<https://www.cms.gov/data-research/statistics-trends-and-reports/medicare-fee-for-service-parts-a-b/medpar>

⁸ Rehabilitation and Chronic Services Deregulation Analysis Notes:

[1] Source: Maryland non-confidential data grouped under APR-DRG v38, Inpatient cases only, Separated by Daily Service code (8=Rehab, 9=Chronic, 1=Acute IP)

[2] Modeled CMS payments utilizing average CMS+coins/eductibles CY2022 MedPar LDS data - applied based on MS-DRG and LOS range, inflated for one quarter of CY23

[3] Limited to claims with payments >0, LOS <91, claims at freestanding rehab hospitals with an admit and dischg date in the data, excluded hospital-based rehab units

[4] Type of care categories (stroke, ortho, brain, etc) based on Rehab Impairment group assignment

[5] Assumption: Medicaid pays 88% of Medicare Fee Schedule, Medicare pays 100%, Commercial Pays 120% of Medicare Fee Schedule.

⁹ For patients who cannot return home safely after post-acute care, transfer to a care setting that provides interdisciplinary comprehensive inpatient rehabilitation is most beneficial (DaVanzo et al., 2014; Nehra et al. 2016). For some patients with complex medical needs, an intermediate stepdown setting may be required before admission to comprehensive rehabilitation. For example, the setting may provide care through a Commission on Accreditation of Rehabilitation Facilities (CARF)-accredited brain injury specialty program designed to meet the complex needs of the patient with TBI. Medicare patients with medical necessity who can tolerate 3 hours of therapy per day or 15 hours per week are eligible for admission for an inpatient rehabilitation case.

Source: NIH National Library of Medicine – Rehabilitation and Long-Term Care Needs after Traumatic Brain Injury. <https://www.ncbi.nlm.nih.gov/books/NBK580075/>

Exhibit 4: Potential Deregulation Savings from Rehabilitation and Chronic Services

| <i>Services with an Applicable Unregulated Rate Schedule</i> | | | |
|--|-------------------|---|--|
| | Revenue | Site-Neutral Savings Opportunity | Algebra |
| Spinal Cord Injury (SCI) -- Acute | 14,597,507 | 11,167,093 | Rev. X (1-.235) for Spine & TBI |
| Traumatic Brian Injury (TBI) -- Acute | 12,933,003 | 9,893,747 | Rev. X (1-.235) for Spine & TBI |
| Comprehensive Rehab (CMR) -- Acute (30%) | 5,246,268 | 2,985,126 | Rev. X (1-.431) for CMR |
| Traumatic Brian Injury (TBI) -- Chronic | 5,903,230 | 4,515,971 | Rev. X (1-.235) for Spine & TBI |
| Spinal Cord Injury (SCI) -- Chronic | 1,750,141 | 1,338,858 | Rev. X (1-.235) for Spine & TBI |
| Stroke (CVA) -- Acute | 14,876,576 | 8,464,772 | Rev X (1-.431) for CMR |
| Comprehensive Rehab (CMR) -- Acute (70%) | 12,241,292 | 6,965,295 | Rev X (1-.431) for CMR |
| Stroke (CVA) -- Chronic | 5,036,843 | 2,865,964 | Rev X (1-.431) for CMR |
| Comprehensive Rehab (CMR) -- Chronic | 4,483,401 | 2,551,055 | Rev X (1-.431) for CMR |
| Total Potential Site Neutral Savings Opportunity | 77,068,261 | 50,747,882 | A = sum of rev X (1-unregulated reimbursement rate) |
| <i>Services that Cannot be Deregulated</i> | | | |
| | Revenue | Site-Neutral Savings Opportunity | Algebra |
| Spinal Cord Injury (SCI) - Acute Regulated | 14,597,507 | 11,167,093 | Rev. X (1-.235) for Spine & TBI |
| Traumatic Brian Injury (TBI) - Acute Regulated | 12,933,003 | 9,893,747 | Rev. X (1-.235) for Spine & TBI |
| Spinal Cord Injury (SCI) - Chronic Regulated | 5,246,268 | 4,013,395 | Rev. X (1-.235) for Spine & TBI |
| Traumatic Brian Injury (TBI) - Chronic Regulated | 5,903,230 | 4,515,971 | Rev. X (1-.235) for Spine & TBI |
| Non-applicable Site Neutral Savings Opportunity | 38,680,008 | 29,590,206 | B = sum of rev X (1-unregulated reimbursement rate) |
| Realizable Savings from Deregulated Pricing Model | | 21,157,675 | C=A-B |

C: Additional Considerations

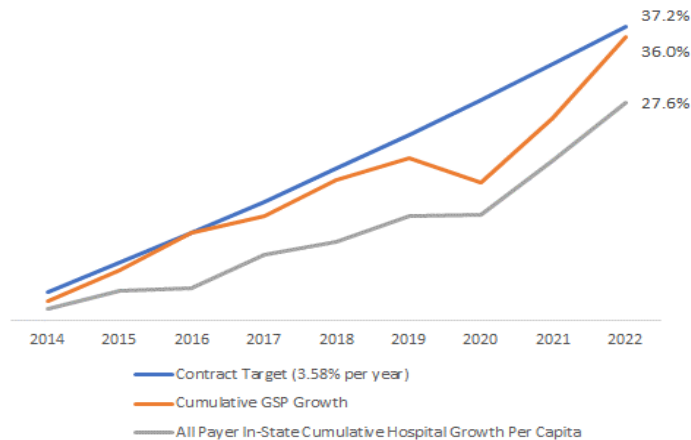
There are two additional considerations to examine in the proposed Trauma Reunification Project, namely exemption from Commission’s Integrated Efficiency Policy and the degree to which system savings should be redirected to population health investments in line with goals of the Model and the Revenue for Reform Policy.

In RY 2024, UMROI incurred an inflation offset of \$2.3 million through the Integrated Efficiency Policy, which they are currently trying to “buyout” from through the Revenue for Reform policy. In lieu of participating in this dynamic each year, which will presumably take 10 years to recoup the funding UMMS has proposed as system savings (\$21.5 million), UMROI is putting forward that system savings be scored when the project goes live in 2027 and in return the hospital be exempt from future Integrated Efficiency inflation offsets in RY 2025 and each year until the project is completed. In effect, the Integrated Efficiency policy is achieving one of its intended aims to compel hospitals to transform its care delivery model, but in this case in a more expedited manner. If the proposed savings amount is sufficient relative to the potential opportunity as outlined by the Full Rate Application methodology, staff believe this approach is a benefit to the system because savings and associated transformation occurs at a faster rate. As such, staff strongly endorse this proposal and the idea generally that hospitals that come forward with a reasonable savings proposal be exempted from the Integrated Efficiency policy.

The second consideration is if the Commission should consider redirecting a portion of the Trauma Reunification Project savings to population health investments. Staff believe at a minimum the \$21.5 million (14.6 percent) put forward by UMMS as system savings should be returned to payers and the public writ large, as it aligns with prior practice that facility conversions generate 10-15 percent system savings. However, staff believe the additional savings that were identified in its proposal (\$28.7 million, a variance of \$7.3 million from UMMS proposal) should be earmarked for population investments, and similar to other hospitals participating in the RY 2024 Integrated Efficiency policy be approved through the Revenue for Reform application process, which will repeated each year as long as the funding is not redirected to system savings. Staff’s rationale on this threefold: a) the intention of the Model is to use healthcare dollars for genuine care delivery transformation, not to simply generate savings as other models, e.g., the Inpatient Prospective Payment System, are for more effective at the latter b) the Model currently

does not require additional Medicare total cost of care savings to comply with contractual savings targets and c) the main lever to achieve savings in the Model for all-payers continues to be the annual Update Factor, which to date has been quite successful at bending the cost curve relative to statewide economic growth - see exhibit 5:

Exhibit 5: Affordability Scorecard



Recommendations

The HSCRC staff makes the following recommendations:

1. Utilize a 100 percent variable cost factor to realign services rehabilitation and chronic care services from University of Maryland Rehabilitation and Orthopedic Institute to University of Maryland Medical Center
2. Utilize a 65 percent variable factor to realign acute care services from University of Maryland Rehabilitation and Orthopedic Institute to University of Maryland Medical Center Downtown and Midtown Campus’
3. Utilize a 50 percent variable cost factor to realign acute care services from University of Maryland Rehabilitation and Orthopedic Institute to non-University of Maryland Medical System facilities
4. Utilize a 15 percent variable cost factor to realign other rehabilitation services from University of Maryland Rehabilitation and Orthopedic Institute to a unregulated freestanding rehabilitation facility
5. Funding agreements for each realignment outlined in recommendations 1-4 are contingent on actual volume changes being equivalent to projected volumes. If volumes deviate from projected shifts, staff will adjust accordingly.
6. Earmark \$7.3 million from the proposed system savings for population health investments to be approved each year through the Revenue for Reform policy
7. Exempt University of Maryland Rehabilitation and Orthopedic Institute from the Integrated Efficiency Policy in RY 2025 and each year until the Trauma Reunification Project is completed
8. Direct staff to develop a facility conversion policy in CY 2024 that will be used for all future care delivery realignments.

APPENDIX A: Bed Categorization Schedule

UM Rehabilitation and Orthopaedic Institute

Estimated Bed Capacity in Future State

| | Bed Need to Accommodate Current ADC ^[1] (FY 2024 Dec YTD) | | | | Estimated Future State | | |
|--------|---|---------|---------|--|------------------------|--|---------|
| | A | B | C = A+B | D = C/80% | E | F | G = E+F |
| | Acute Rehab | Chronic | Total | Bed Need (Actual ADC at 80% Occupancy) ^[2] | UMMC DTC | Estimated Unregulated Rehab Facility | Total |
| TBI | 23.8 | 4.5 | 28.3 | 36.0 | 25.0 | | 25.0 |
| Spine | 16.6 | 2.7 | 19.3 | 25.0 | 18.0 | | 18.0 |
| CMR | 17.8 | 3.8 | 21.6 | 28.0 | | 25.0 | 25.0 |
| Stroke | 17.5 | 4.6 | 22.1 | 28.0 | | 25.0 | 25.0 |
| Stroke | | | | | 15.0 | 10.0 | 25.0 |
| Stroke | 75.7 | 15.6 | 91.3 | 117.0 | 58.0 | 60.0 | 118.0 |

Note:

[1] ADC represents actual FY 2024 Dec YTD

[2] 80% occupancy assumption consistent with CON methodology for calculating bed need

[3] These are estimates based on FY 2024 Dec YTD actual numbers, and subject to change in official CON filings

APPENDIX 1B: Potential Variable Cost Factors for UMROI Services Relocated to UMMS Facilities (100% Variable Cost Factor)

| | 100% Variable Cost Factor | | | | Total | % of Current GBR |
|---------------------------------------|--|----------------------------|---------------------------------------|-----------------------|------------------|------------------|
| | Trauma Rehab/Chronic to Stoler Center (Build at DTC) | Acute Relocated to DTC/MTC | Acute Care Shifted to Other Providers | Shift to Freestanding | | |
| UM Rehab GBR | \$40,430 | \$45,473 | \$24,814 | \$36,638 | \$147,355 | |
| Proposed Retention | 100% | 100% | 100% | 100% | | |
| Retained GBR @ UMMS | \$40,430 | \$45,473 | \$24,814 | \$36,638 | \$147,355 | 100% |
| Redistribution of UM Rehab GBR | | | | | | |
| Retained at UMMS | \$40,430 | \$45,473 | \$24,814 | \$36,638 | \$147,355 | 100% |
| Shift to Other Providers | - | - | 24,814 | 15,754 | 40,568 | 28% |
| System Savings | - | - | (24,814) | (15,754) | (40,568) | -27.5% |
| UM Rehab FY 2023 GBR | \$40,430 | \$45,473 | \$24,814 | \$36,638 | \$147,355 | 100% |

APPENDIX 2B: Potential Variable Cost Factors for UMROI Services Relocated to UMMS Facilities (75% Variable Cost Factor)

| | 75% Variable Cost Factor | | | | Total | % of Current GBR |
|---------------------------------------|--|----------------------------|---------------------------------------|-----------------------|------------------|------------------|
| | Trauma Rehab/Chronic to Stoler Center (Build at DTC) | Acute Relocated to DTC/MTC | Acute Care Shifted to Other Providers | Shift to Freestanding | | |
| UM Rehab GBR | \$40,430 | \$45,473 | \$24,814 | \$36,638 | \$147,355 | |
| Proposed Retention | 75% | 75% | 75% | 75% | | |
| Retained GBR @ UMMS | \$30,323 | \$34,104 | \$18,611 | \$27,479 | \$110,516 | 75% |
| Redistribution of UM Rehab GBR | | | | | | |
| Retained at UMMS | \$30,323 | \$34,104 | \$18,611 | \$27,479 | \$110,516 | 75% |
| Shift to Other Providers | - | - | 18,611 | 15,754 | 34,365 | 23% |
| System Savings | 10,108 | 11,368 | (12,407) | (6,595) | 2,474 | 1.7% |
| UM Rehab FY 2023 GBR | \$40,430 | \$45,473 | \$24,814 | \$36,638 | \$147,355 | 100% |

APPENDIX 2C: Potential Variable Cost Factors for UMROI Services Relocated to UMMS Facilities (65% Variable Cost Factor)

| | Trauma Rehab/Chronic to Stoler Center (Build at DTC) | 65% Variable Cost Factor | | | Total | % of Current GBR |
|---------------------------------------|--|----------------------------|---------------------------------------|-----------------------|-----------------|------------------|
| | | Acute Relocated to DTC/MTC | Acute Care Shifted to Other Providers | Shift to Freestanding | | |
| UM Rehab GBR | \$40,430 | \$45,473 | \$24,814 | \$36,638 | \$147,355 | |
| Proposed Retention | 65% | 65% | 65% | 65% | | |
| Retained GBR @ UMMS | \$26,280 | \$29,557 | \$16,129 | \$23,815 | \$95,781 | 65% |
| Redistribution of UM Rehab GBR | | | | | | |
| Retained at UMMS | \$26,280 | \$29,557 | \$16,129 | \$23,815 | \$95,781 | 65% |
| Shift to Other Providers | - | - | 16,129 | 15,754 | 31,884 | 22% |
| System Savings | 14,151 | 15,915 | (7,444) | (2,931) | 19,691 | 13.4% |
| UM Rehab FY 2023 GBR | \$40,430 | \$45,473 | \$24,814 | \$36,638 | \$147,355 | 100% |

APPENDIX 2D: Potential Variable Cost Factors for UMROI Services Relocated to UMMS Facilities (50% Variable Cost Factor)

| | Trauma Rehab/Chronic to Stoler Center (Build at DTC) | 50% Variable Cost Factor | | | Total | % of Current GBR |
|---------------------------------------|--|----------------------------|---------------------------------------|-----------------------|-----------------|------------------|
| | | Acute Relocated to DTC/MTC | Acute Care Shifted to Other Providers | Shift to Freestanding | | |
| UM Rehab GBR | \$40,430 | \$45,473 | \$24,814 | \$36,638 | \$147,355 | |
| Proposed Retention | 50% | 50% | 50% | 50% | | |
| Retained GBR @ UMMS | \$20,215 | \$22,736 | \$12,407 | \$18,319 | \$73,677 | 50% |
| Redistribution of UM Rehab GBR | | | | | | |
| Retained at UMMS | \$20,215 | \$22,736 | \$12,407 | \$18,319 | \$73,677 | 50% |
| Shift to Other Providers | - | - | 12,407 | 15,754 | 28,161 | 19% |
| System Savings | 20,215 | 22,736 | - | 2,565 | 45,516 | 30.9% |
| UM Rehab FY 2023 GBR | \$40,430 | \$45,473 | \$24,814 | \$36,638 | \$147,355 | 100% |



maryland
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cost review commission

Draft Recommendation for the Maryland Hospital Acquired Conditions Program for Rate Year 2026

January 10, 2024

This document contains staff draft recommendations for the RY 2026 Maryland Hospital Acquired Conditions Program; comments are due by COB Wednesday, January 17, 2024 and may be submitted to hsrc.quality@maryland.gov.

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List of Abbreviations

| | |
|---------|--|
| AHRQ | Agency for Health Care Research and Quality |
| APR-DRG | All Patients Refined Diagnosis Related Groups |
| CMS | Centers for Medicare & Medicaid Services |
| CY | Calendar Year |
| DRG | Diagnosis-Related Group |
| FFY | Federal Fiscal Year |
| FY | State Fiscal Year |
| HAC | Hospital-Acquired Condition |
| HAI | Hospital Associated Infection |
| HSCRC | Health Services Cost Review Commission |
| ICD | International Statistical Classification of Diseases and Related Health Problems |
| MHAC | Maryland Hospital-Acquired Condition |
| NHSN | National Healthcare Safety Network |
| NQF | National Quality Forum |
| PMWG | Performance Measurement Work Group |
| POA | Present on Admission |
| PPC | Potentially Preventable Complication |
| PSI | Patient Safety Indicator |
| QBR | Quality-Based Reimbursement |
| RY | Rate Year |
| SIR | Standardized Infection Ratio |
| SOI | Severity of Illness |
| TCOC | Total Cost of Care |
| VBP | Value-Based Purchasing |
| YTD | Year to Date |

Key Methodology Concepts and Definitions

Potentially preventable complications (PPCs): 3M originally developed 65 PPC measures, which are defined as harmful events that develop after the patient is admitted to the hospital and may result from processes of care and treatment rather than from the natural progression of the underlying illness. PPCs, like national claims-based hospital-acquired condition measures, rely on **present-on-admission codes** to identify these post-admission complications.

At-risk discharge: Discharge that is eligible for a PPC based on the measure specifications

Diagnosis-Related Group (DRG): A system to classify hospital cases into categories that are similar clinically and in expected resource use. DRGs are based on a patient's primary diagnosis and the presence of other conditions.

All Patients Refined Diagnosis Related Groups (APR-DRG): Specific type of DRG assigned using 3M software that groups all diagnosis and procedure codes into one of 328 All-Patient Refined-Diagnosis Related Groups.

Severity of Illness (SOI): 4-level classification of minor, moderate, major, and extreme that can be used with APR-DRGs to assess the acuity of a discharge.

APR-DRG SOI: Combination of Diagnosis Related Groups with Severity of Illness levels, such that each admission can be classified into an APR-DRG SOI "cell" along with other admissions that have the same Diagnosis Related Group and Severity of Illness level.

Case-Mix Adjustment: Statewide rate for each PPC (i.e., normative value or "norm") is calculated for each diagnosis and severity level. These **statewide norms** are applied to each hospital's case-mix to determine the expected number of PPCs, a process known as **indirect standardization**.

Observed/Expected Ratio: PPC rates are calculated by dividing the observed number of PPCs by the expected number of PPCs. Expected PPCs are determined through case-mix adjustment.

Diagnostic Group-PPC Pairings: Complications are measured at the diagnosis and Severity of Illness level, of which there are approximately 1,200 combinations before one accounts for clinical logic and PPC variation.

Zero norms: Instances where no PPCs are expected because none were observed in the base period at the Diagnosis Related Group and Severity of Illness level.

Policy Overview

| Policy Objective | Policy Solution | Effect on Hospitals | Effect on Payers/Consumers | Effects on Health Equity |
|---|--|--|--|--|
| <p>The quality programs operated by the Health Services Cost Review Commission, including the Maryland Hospital Acquired Conditions (MHAC) program, are intended to ensure that any incentives to constrain hospital expenditures under the Total Cost of Care Model do not result in declining quality of care. Thus, HSCRC's quality programs reward quality improvements and achievements that reinforce the incentives of the Total Cost of Care Model, while guarding against unintended consequences and penalizing poor performance.</p> | <p>The MHAC program is one of several pay-for-performance quality initiatives that provide incentives for hospitals to improve and maintain high-quality patient care and value over time.</p> | <p>The MHAC policy currently holds 2 percent of inpatient hospital revenue at-risk for complications that may occur during a hospital stay as a result of treatment rather than the underlying progression of disease. Examples of the types of hospital acquired conditions included in the current payment program are respiratory failure, pulmonary embolisms, and surgical-site infections.</p> | <p>This policy affects a hospital's overall GBR and so affects the rates paid by payers at that particular hospital. The HSCRC quality programs are all-payer in nature and so improve quality for all patients that receive care at the hospital.</p> | <p>Historically the MHAC policy included the better of improvement and attainment, which incentivized hospitals to improve poor clinical outcomes that are often emblematic of disparities. The protection of improvement has since been phased out to ensure that poor clinical outcomes and the associated health disparities are not made permanent, which is especially important for a measure that is limited to in-hospital complications. In the future, the MHAC policy may provide direct hospital incentives for reducing disparities, similar to the approved readmission disparity gap improvement policy. Also for future consideration is inclusion of electronic Clinical Quality Measures to address areas such as maternal complications, which disproportionately impact lower income, minority patients.</p> |

Recommendations

The MHAC policy was redesigned in Rate Year (RY) 2021 to modernize the program for the new Total Cost of Care Model. This RY 2026 draft recommendation, in general, maintains the measures and methodology that were developed and approved for RYs 2022 through 2025.¹

These are the draft recommendations for the RY 2026 Maryland Hospital Acquired Conditions (MHAC) program:

1. Continue to use 3M Potentially Preventable Complications (PPCs) to assess hospital acquired complications.
 - a. Maintain a focused list of PPCs in the payment program that are clinically recommended and that generally have higher statewide rates and variation across hospitals.
 - b. Assess monitoring PPCs based on clinical recommendations, statistical characteristics, and recent trends to prioritize those for future consideration for updating the measures in the payment program.
 - c. Engage hospitals on specific PPC increases as indicated/appropriate to understand trends and discuss potential quality concerns.
2. Use more than one year of performance data for small hospitals (i.e., less than 21,500 at-risk discharges and/or 22 expected PPCs). The performance period for small hospitals will be CYs 2023 and 2024.
3. Continue to assess hospital performance on attainment only, with adjustment to performance standards for increased stability.
4. Continue to weight the PPCs in the payment program by 3M cost weights as a proxy for patient harm.
5. Maintain a prospective revenue adjustment scale with a maximum penalty at 2 percent and maximum reward at 2 percent and continuous linear scaling with a hold harmless zone between 60 and 70 percent.
6. Future Considerations:
 1. Assess options for streamlining (or simplifying) the quality programs overall, or for the hospital acquired complication measures that are currently included in both the QBR Safety Domain and the MHAC program.
 2. Assess digitally specified quality measures such as electronic Clinical Quality Measures (eCQMs) for future inclusion in quality programs.

¹ See the [RY 2021 policy](#) for detailed discussion of the MHAC redesign, rationale for decisions, and approved recommendations.

Introduction

Maryland hospitals are funded under a population-based revenue system with a fixed annual revenue cap set by the Maryland Health Services Cost Review Commission (HSCRC or Commission) under the All-Payer Model agreement with the Centers for Medicare & Medicaid Services (CMS) beginning in 2014, and continuing under the current Total Cost of Care (TCOC) Model agreement, which took effect in 2019. Under the global budget system, hospitals are incentivized to shift services to the most appropriate care setting and simultaneously have revenue at risk in Maryland's unique, all-payer, pay-for-performance quality programs; this allows hospitals to keep any savings they earn via better patient experiences, reduced hospital-acquired infections, or other improvements in care. Maryland systematically revises its quality and value-based payment programs to better achieve the state's overarching goals: more efficient, higher quality care, and improved population health. It is important that the Commission ensure that any incentives to constrain hospital expenditures do not result in declining quality of care. Thus, the Commission's quality programs reward quality improvements and achievements that reinforce the incentives of the global budget system, while guarding against unintended consequences and penalizing poor performance.

The Maryland Hospital Acquired Conditions (MHAC) program is one of several quality pay-for-performance initiatives that provide incentives for hospitals to improve and maintain high-quality patient care and value over time. The program currently holds 2 percent of hospital revenue at-risk for hospital acquired complications that may occur during a hospital stay as a result of treatment rather than the underlying progression of disease. Examples of the types of hospital acquired conditions included in the current payment program are respiratory failure, pulmonary embolisms, and surgical-site infections.

For MHAC, as well as the other State hospital quality programs, annual updates are vetted with stakeholders and approved by the Commission to ensure the programs remain aggressive and progressive with results that meet or surpass those of the national CMS analogous programs (from which Maryland must receive annual exemptions). For purposes of the RY 2026 MHAC Draft Policy, staff vetted the updated proposed recommendations in December with the Performance Measurement Workgroup (PMWG), the standing advisory group that meets monthly to discuss Quality policies.

Additionally, with the onset of the Total Cost of Care Model Agreement, each program was overhauled to ensure they support the goals of the Model. For the MHAC policy, the overhaul was completed during

2018, which entailed an extensive stakeholder engagement effort. The major accomplishments of the MHAC program redesign were focusing the payment incentives on a narrower list of clinically significant complications, moving to an attainment only system given Maryland's sustained improvement on complications, adjusting the scoring methodology to better differentiate hospital performance, and weighting complications by their associated cost weights as a proxy for patient harm. The redesign also assessed how hospital performance is converted to revenue adjustments, and ultimately recommended maintaining the use of a linear revenue adjustment scale with a hold harmless zone.

Following the MHAC program redesign, this RY 2026 MHAC policy draft proposes minimal changes to the program. The assessment section also includes an evaluation of PPCs in "Monitoring" status consistent with the approved recommendations for RY 2021 going forward, which includes identifying PPCs that should be considered for inclusion back into the MHAC payment program due to worsening performance. Based on this analysis and consideration of stakeholder input, the RY 2026 draft recommendation does not propose to move any complications from monitoring to payment.

Background

Exemption from Federal Hospital-Acquired Condition Programs

The Federal Government operates two hospital complications payment programs, the Deficit Reduction Act Hospital Acquired Condition program (DRA-HAC), which reduces reimbursement for hospitalizations with inpatient complications, and the HAC Reduction Program (HACRP), which penalizes hospitals with the highest rates of complications. Detailed information, including HACRP complication measures, may be found in Appendix I. Also, it should be noted that the CMS Value-Based Purchasing program and the analogous Quality Based Reimbursement program contain a safety domain that assess hospital acquired complication measures.

Because of the State's unique all-payer hospital model and its global budget system, Maryland does not directly participate in the federal pay-for-performance programs. Instead, the State administers the Maryland Hospital Acquired Conditions (MHAC) program, which relies on quality indicators validated for use with an all-payer inpatient population. However, the State must submit an annual report to CMS demonstrating that Maryland's MHAC program targets and results continue to be aggressive and progressive, i.e., that Maryland's performance meets or surpasses that of the nation. Specifically, the State must ensure that the improvements in complication rates observed under the All-Payer Model through 2018

are maintained throughout the TCOC model. Based on performance to date, CMS has granted Maryland exemptions from the federal pay-for-performance programs (including the HAC Reduction Program) each year through FFY 2024.

Overview of the MHAC Policy

The MHAC program, which was first implemented for RY 2011, is based on a system developed by 3M Health Information Systems (3M) to identify potentially preventable complications (PPCs) using the present-on-admission variable for eligible secondary diagnosis codes available in claims data. 3M originally developed specifications for 65 PPCs,² which are defined as harmful events that develop after the patient is admitted to the hospital and may result from processes of care and treatment rather than from the natural progression of the underlying illness. For example, the program holds hospitals accountable for venous thrombosis and sepsis that occur during inpatient stays. These complications can lead to 1) poor patient outcomes, including longer hospital stays, permanent harm, and death; and 2) increased costs. Thus, the MHAC program is designed to provide incentives to improve patient care by adjusting hospital budgets based on PPC performance.

MHAC Methodology

Figure 1 provides an overview of the three steps in the RY 2025 MHAC methodology (also see Appendix II) that converts hospital performance to standardized scores, and then payment adjustments, as outlined below:

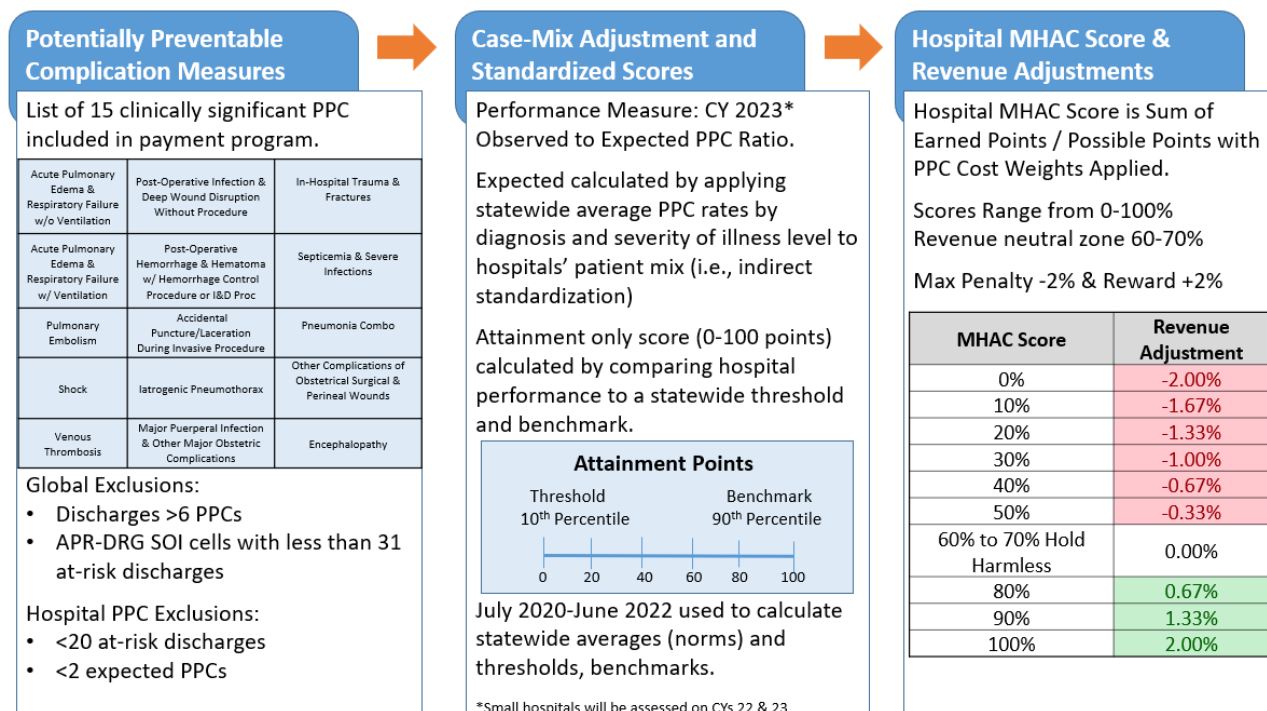
Step 1. For the PPCs identified for payment, clinically-determined global and PPC-specific exclusions, as well as volume based hospital-level exclusions are identified to ensure fairness in assignment of complications.

Step 2. Case-mix adjustment is used to calculate observed to expected ratios that are then converted to a standardized point based score (0-100 points) based on each hospital's attainment levels using a similar scoring methodology that is used for CMS Value-Based Purchasing and Maryland QBR program.

² In RY 2020, there were 45 PPCs or PPC combinations included in the program, from an initial 65 PPCs in the software, as 3M had discontinued some PPCs and others were deemed not suitable for a pay-for-performance program.

Step 3. Overall hospital scores are then calculated by taking the points for each PPC and multiplying by the 3M PPC cost weights, then summing numerator (points scored) and denominator (possible points) across the PPCs to calculate a percent score. A linear point scale set prospectively is then used to calculate the revenue adjustment percent. This prospective scaling approach differs from national programs that relatively rank hospitals after the performance period. Additionally, the HACRP differs in that it provides no opportunity for rewards and reduces payments by 1 percent for hospitals in the worst-performing quartile.

Figure 1. Overview Rate Year 2025 MHAC Methodology



Assessment

In order to develop the RY 2026 MHAC policy, staff solicited input from the PMWG and other stakeholders. In general, stakeholders support the staff's recommendation to not make major changes to the RY 2026 MHAC program. This section of the report provides an overview of the statewide PPC trends—for those used for payment, under monitoring, and overall—and updates related to 3M clinical logic and MHAC methodology.

Statewide PPC Performance Trends

Complications Included in Payment Program

Under the All-Payer Model, Maryland hospitals saw a dramatic decline in complications and, as a State, well exceeded the requirement of a 30 percent reduction by the end of CY 2018. These reductions were achieved through clinical quality improvement, as well as improvements in documentation and coding.

As mentioned previously, the MHAC redesign assessed which PPCs should be included in the pay-for-performance program based on criteria developed by the Clinical Adverse Events Measures (CAEM) subgroup that are outlined in the “Monitored Complications” section below.

Under the TCOC Model, Maryland must maintain these improvements by not exceeding the CY 2018 PPC rates for complications included in the payment program. Figure 2 below shows the statewide observed to expected (O/E) ratio from 2018 through June CY 2023.³ The O/E ratio presents the count of observed PPCs divided by the calculated number of expected PPCs (which is generated using statewide normative values applied to the case-mix of discharges a hospital experiences). An O/E Ratio of greater than 1 indicates that a hospital experienced more PPCs than expected, and conversely, an O/E Ratio less than one indicates that a hospital experienced fewer PPCs than expected. Figure 2 below also indicates how Maryland is performing relative to CY 2018, which is the time period that will be used to assess any backsliding on performance.⁴ Specifically, there has been a 27.5 percent decrease in the ratio based on the most recent data available (CY 2018 YTD O/E ratio = 1.09 and CY 2023 YTD O/E ratio = 0.79).

PPCs in the MHAC payment program include:

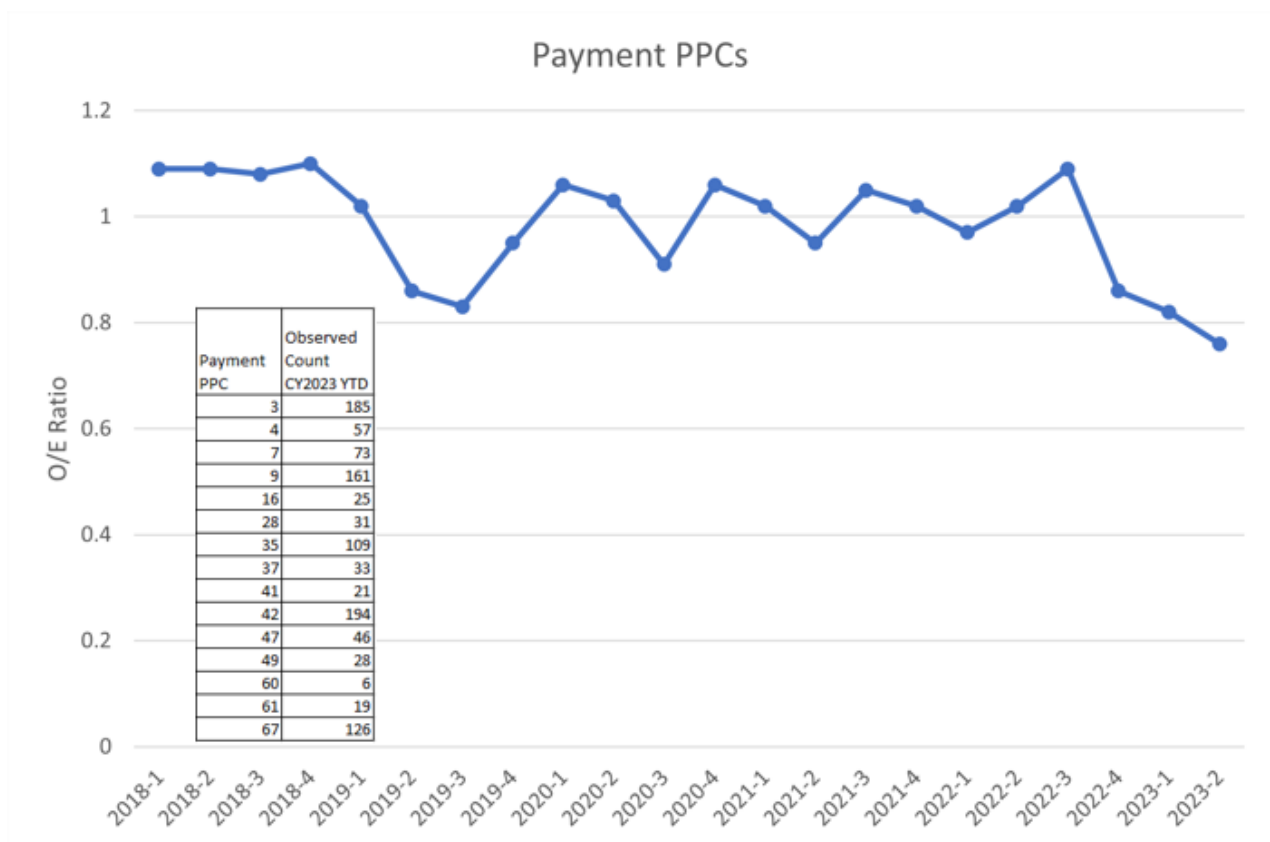
- 3 Acute Pulmonary Edema and Resp Failure w/o Ventilation
- 4 Acute Pulmonary Edema, Resp Failure w/ventilation
- 7 Pulmonary Embolism
- 9 Shock
- 16 Venous Thrombosis
- 28 In-Hospital Trauma and Fractures
- 35 Septicemia & Severe Infections
- 37 Post-Operative Infection & Deep Wound Disruption Without Procedure
- 41 Post-Operative Hemorrhage & Hematoma w/ Hemorrhage Control Procedure or I&D
- 42 Accidental Puncture/ Laceration During Invasive Procedure
- 47 Encephalopathy

³ Staff notes that, consistent with federal policies during the COVID Public Health Emergency, PPC data from January-June 2020 will not be used for assessing quality of care.

⁴Beginning in v38 of the 3M PPC grouper, COVID exclusions vary by PPC.

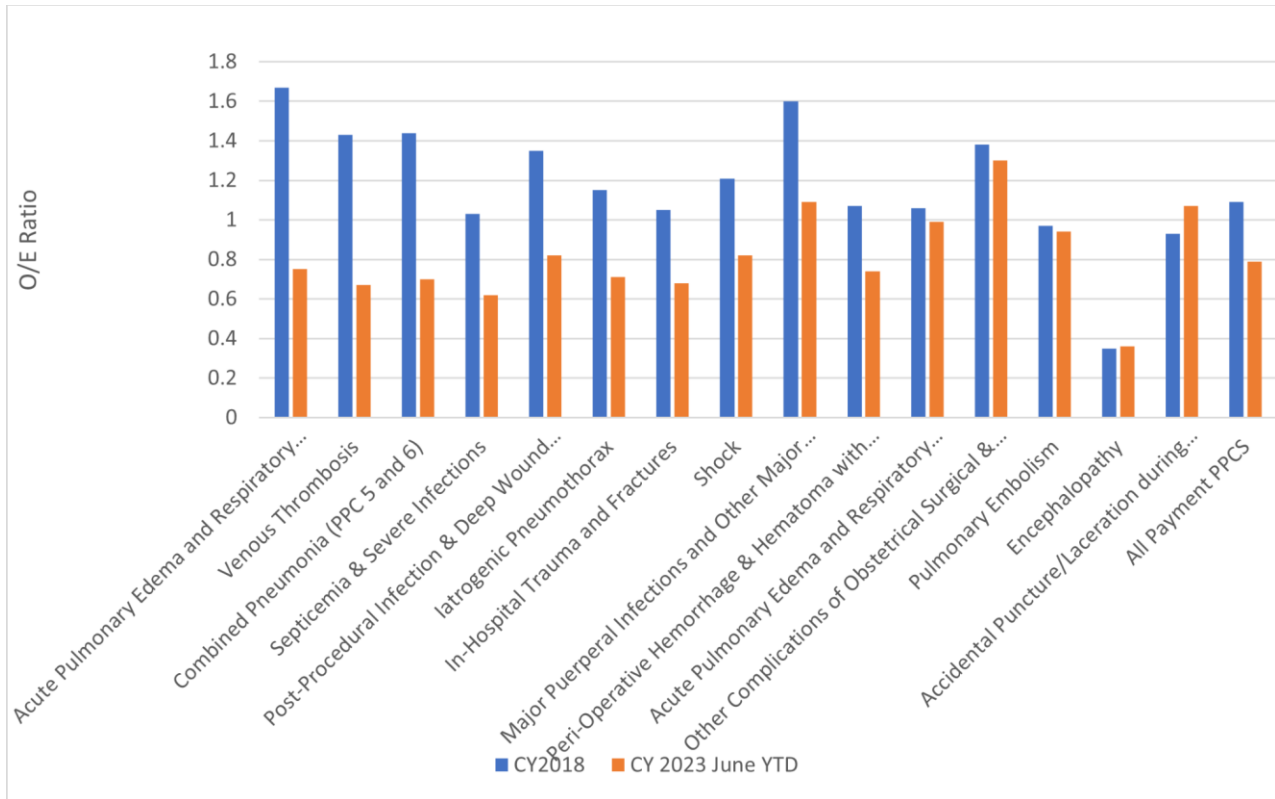
- 49 Iatrogenic Pneumothorax
- 60 Major Puerperal Infection and Other Major Obstetric Complications
- 61 Other Complications of Obstetrical Surgical & Perineal Wounds
- 67 Pneumonia Combo (with and without aspiration)

Figure 2. Payment Program PPCs Observed to Expected Ratios by Quarter CY 2018 to CY 2023 YTD Through June



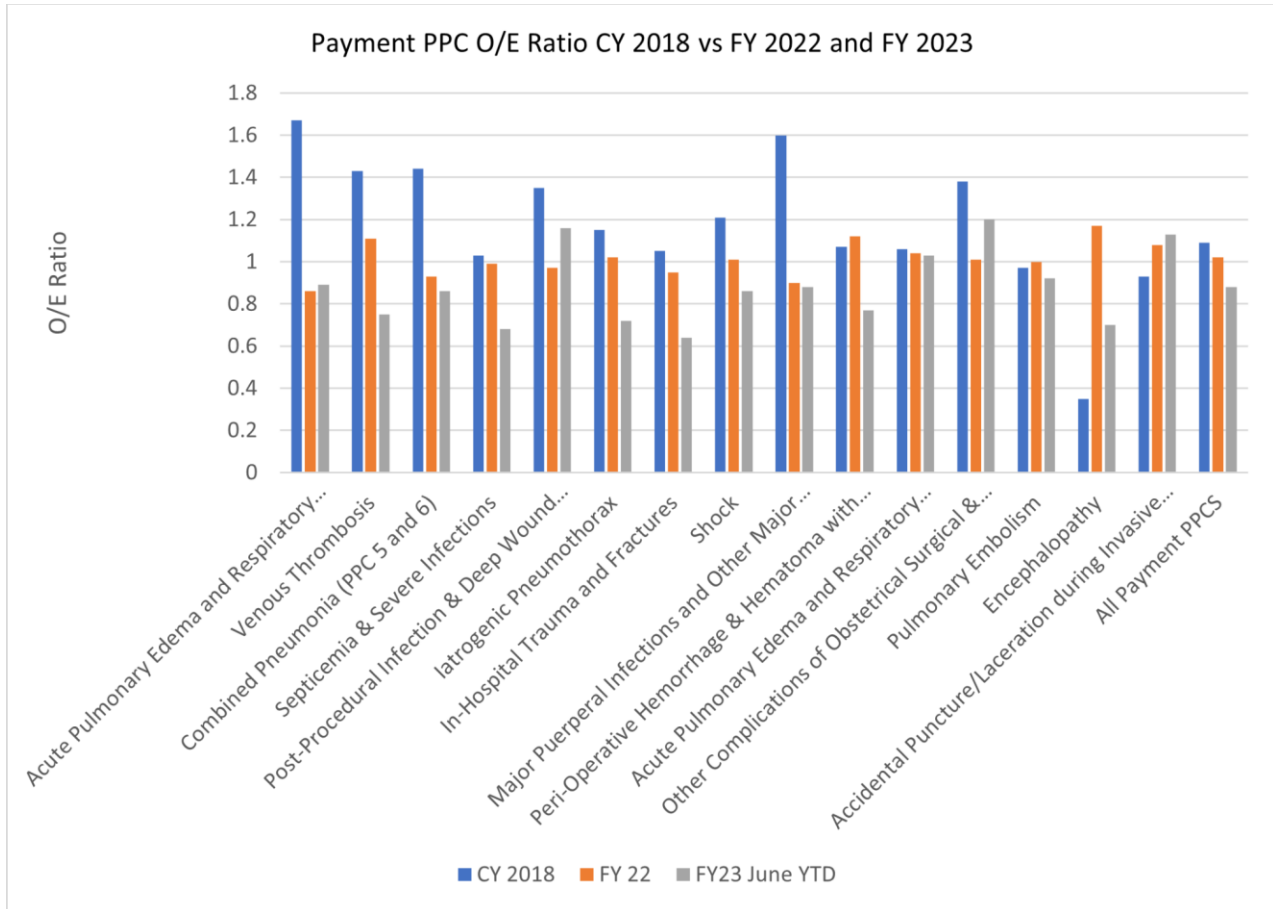
In terms of specific improvements among the 15 payment PPCs, Figure 3 shows the O/E ratios for CY 2018 and CY 2023 YTD, sorted from greatest percent decrease (on the left) to greatest percent increase (on the right). The two PPCs that worsened during this time period include PPC 47- Encephalopathy and PPC 42- Accidental Puncture/ Laceration During Invasive Procedure. The three PPCs with the greatest decreases (improvements) include PPC 4- Acute Pulmonary Edema and Respiratory Failure with Ventilation, PPC16- Venous Thrombosis, and PPC 67- Combined Pneumonia.

Figure 3. Payment Program PPC Observed to Expected Ratios CY 2018 and CY 2023 June YTD



Staff also analyzed payment PPC changes for FYs 2022 and 2023 compared to the base period of 2018 as illustrated in Figure 4 below. The overall PPC O/E ratios show a steadily declining trend across the three time period; from FY2022 to FY2023 there were 11 PPCs that showed a decrease in the O/E ratios (improvement), and 4 PPCs that showed a slight increase (worsening).

Figure 4. Payment Program PPC Observed to Expected Ratio Trends; CY 2018, FY 2022, and FY 2023

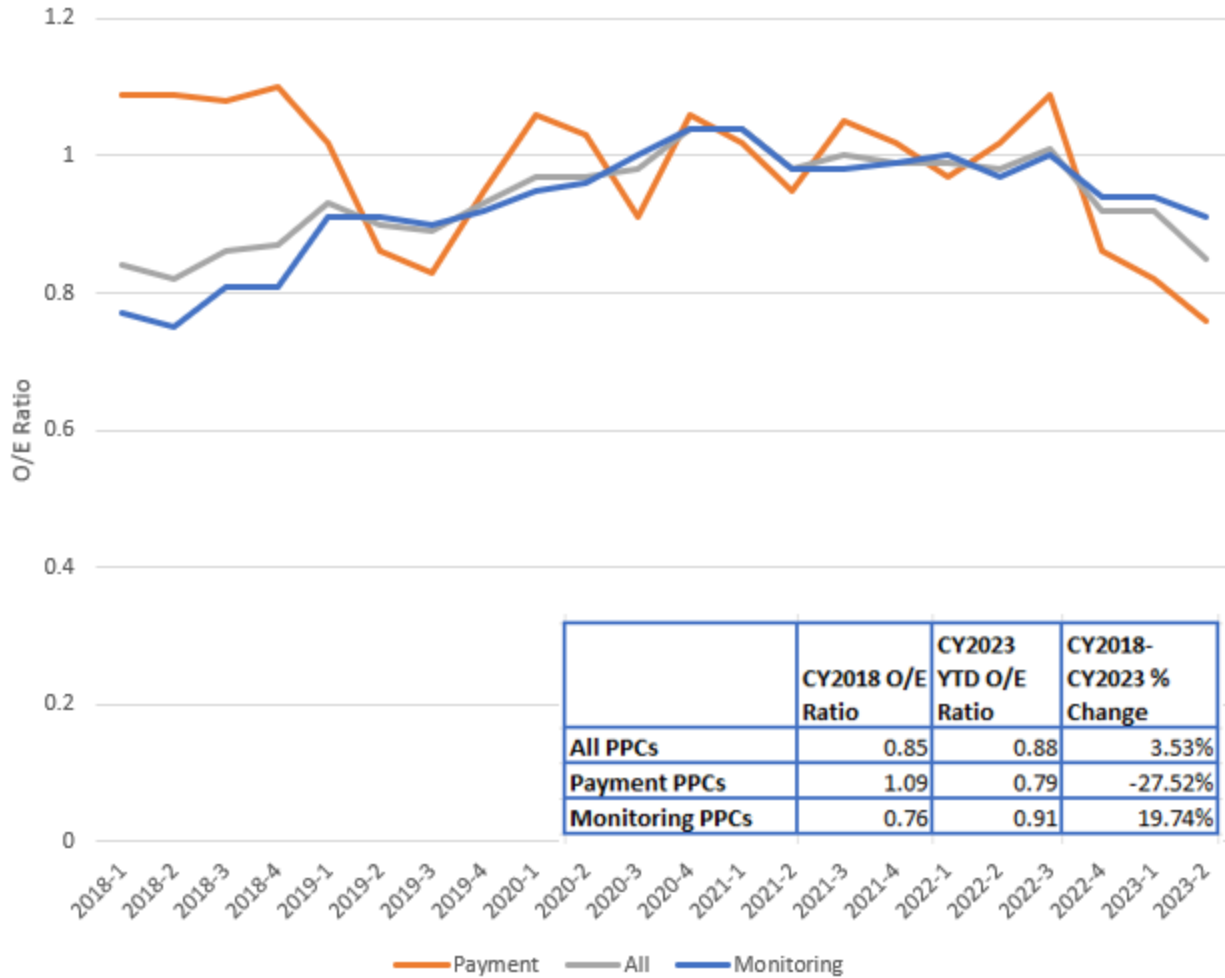


Monitored Complications

In addition to focusing on a narrowed list of PPCs for payment, as stated previously, the RY 2021 MHAC policy following the program redesign included a recommendation to monitor the remaining PPCs. Staff fulfills this recommendation by monitoring all PPCs that are still considered clinically valid by 3M, and distinguishing between “Monitoring” and “Payment” PPCs. The overall PPC trend across all 56 (payment and monitored) PPCs shows that there has been an increase in the overall statewide O/E ratio from 0.85 in CY 2018 to 0.88 in CY 2023 YTD through June; the worsening performance is driven primarily by increases in PPCs under monitoring status, and not increases in the payment program PPCs, as illustrated in Figure 5 below. As also illustrated, the monitored PPC trends have increased from 0.76 as of June YTD

2018 to 0.91 in YTD 2023 with the highest O/E ratios experienced from Q3 2020 to Q1 2021 during the COVID peak period.

Figure 5. PPC O/E Ratio Trends CY 2018 Qtr 1 Through CY 2023 Qtr 2



To provide additional context, the MHAC redesign process assessed which PPCs should be included in the pay-for-performance program based on criteria developed by the Clinical Adverse Events Measures (CAEM) subgroup. To support determining the monitored PPCs that are the best candidates for re-adopting into the payment program, staff and stakeholders are using the previously established criteria that include:

- PPC Data Analysis/Statistics
 - Greater than 50% increase in O/E ratio comparing 2022 to 2018
 - Rate per 1,000 generally 0.5 or above
 - Volume of observed events 100 or above (over two years)
 - Significant variation across hospitals O/E ratios less than .85 and greater than 1.15
 - At least half of the hospitals are eligible for the PPC
- Additional Considerations
 - PSI overlap
 - Clinical significance
 - Potential influence of coding practices/changes
 - Opportunity for improvement/actionability
 - All-payer

The monitored PPCs with the most significant increases in O/E ratios over time included the PPCs listed below. Staff notes, however, that these PPCs were identified as having limited actionability based on input from stakeholders during the program redesign process; therefore, staff is not recommending that these PPCs be moved into the payment program.

- PPC 8: Other Pulmonary Complications
- PPC 15: Peripheral Vascular Complications except Venous Thrombosis
- PPC 53: Infection, Inflammation and Clotting Complication of Peripheral Vascular and Infusions

Appendix III provides the statewide percentage changes in the O/E ratios for the monitored PPCs from 2018 to 2023 YTD through June sorted by the observed PPCs with the largest increases.

Calculating PPC Performance Standards

Since the RY2021 MHAC Redesign, the performance standards have been the O/E ratio at the 90th (threshold = start to earn points) and 10th (benchmark = full points) percentiles. However, staff are proposing for RY 2026 to modify the methodology slightly to make the performance standards less sensitive to potential outliers by averaging the worst and best performing hospitals (as opposed to taking a single value at a given percentile). This methodology is more in line with the CMS VBP program approach to setting the benchmark. Staff explored a couple of options and suggests averaging the 20 percent of O/E

ratios of the worst and best performing hospitals results, which results in similar benchmark and threshold values as compared to the current method but avoids the cliff effects of using a single percentile. See Appendix IV for additional explanation using the older version of the PPC Grouper and one year of data. Figure 6 shows the results under the current method and potential method using V41 of the PPC Grouper.⁵

Figure 6. Performance Standards Comparisons by Calculation Method

| Base FY22 and FY23 | | Current Method | | Proposed Method | |
|--------------------|--|----------------|-----------|-----------------|-----------|
| | | P90 | P10 | Avg P80 | Avg P20 |
| PPC Number | PPC Description | Threshold | Benchmark | Threshold | Benchmark |
| 3 | Acute Pulmonary Edema and Respiratory Failure without Ventilation | 1.4858 | 0.4248 | 1.9458 | 0.3844 |
| 4 | Acute Pulmonary Edema and Respiratory Failure with Ventilation | 1.4756 | 0.1441 | 2.0135 | 0.1378 |
| 7 | Pulmonary Embolism | 1.3432 | 0.1342 | 1.4736 | 0.2431 |
| 9 | Shock | 1.874 | 0.2989 | 1.8793 | 0.2747 |
| 16 | Venous Thrombosis | 1.8446 | 0.2157 | 1.9665 | 0.1621 |
| 28 | In-Hospital Trauma and Fractures | 1.6451 | 0.3822 | 1.6225 | 0.3183 |
| 35 | Septicemia & Severe Infections | 1.4583 | 0.3376 | 1.6904 | 0.3397 |
| 37 | Post-Operative Infection & Deep Wound Disruption Without Procedure | 1.4446 | 0.3896 | 1.4635 | 0.3125 |
| 41 | Post-Operative Hemorrhage & Hematoma with Hemorrhage Control Procedure or I&D Proc | 2.0363 | 0 | 2.2026 | 0.084 |
| 42 | Accidental Puncture/Laceration During Invasive Procedure | 1.6377 | 0.2539 | 1.6748 | 0.2746 |
| 47 | Encephalopathy | 1.9126 | 0.2282 | 1.9165 | 0.2327 |
| 49 | Iatrogenic Pneumothrax | 1.8791 | 0.4935 | 1.8856 | 0.397 |
| 60 | Major Puerperal Infection and Other Major Obstetric Complications | 1.4697 | 0.3485 | 1.4697 | 0.3485 |
| 61 | Other Complications of Obstetrical Surgical & Perineal Wounds | 1.8459 | 0 | 1.911 | 0.0784 |
| 67 | Combined Pneumonia (PPC 5 and 6) | 1.4979 | 0.1878 | 1.6807 | 0.191 |

Small Hospital Criteria

The current MHAC program handles small hospitals in two ways: 1) Hospitals are excluded from being assessed on a PPC if they do not meet the minimum criteria of 2 expected PPCs and 20 admissions at-risk for a PPC; and 2) Hospital performance is assessed using two years of data if across all 15 payment PPCs the hospital has less than 21,500 at-risk or 22 expected PPCs. For the sepsis PPC, one hospital raised a concern about Criteria 1 that requires a minimum of 2

⁵ These results were updated since the December Performance Measurement Workgroup to V41 of the PPC grouper and two years of “base” data.

expected PPCs for the hospital to be assessed on the PPC; this is described more fully in the section just below. Staff is not proposing any global changes to the small hospital criteria.

PPC Clinical Concerns

Over this past calendar year, hospitals have raised concerns about the small hospital PPC inclusion criteria with regard to the sepsis PPC as well as specific clinical concerns regarding some other PPCs on which they have provided input to 3M for consideration in the annual PPC Grouper updating process.

PPC 35 Septicemia & Severe Infections

One hospital expressed their concerns that they had in previous years been eligible for PPC 35 but had this past year seen their expected rate drop below 2, rendering them ineligible for inclusion of this PPC in their MHAC score. They noted further that the PPC was serious and highly amenable to interventions which they had identified and implemented; however, with the minimum expected criteria of 2, their performance is not counted or recognized in their score. Staff has vetted with the PMWG a proposal that the minimum criteria be waived for PPC 35 Sepsis in light of its seriousness and preventability. While staff are open to stakeholder input on this issue, our initial opinion is that PPCs with small numbers should be removed from the payment program for stability of measurement and that the hospitals still benefit from preventing these complications under the global budget. Stakeholder input on this issue will be summarized in the final policy.

PPC 42: Accidental Puncture or Laceration

Two clinical scenarios of concern were raised for this PPC during RY 2025. For patients with cerebral and spinal dural tissue tears during a surgical procedure when adhesions are present, hospitals provided input that cases with a code indicating adhesions are present should be excluded for this PPC. 3M has agreed with this input and added the code to the exclusion list for this PPC in the Grouper version 41 just released this October. Similarly, hospitals provided input that this PPC should be excluded for patients with abdominal adhesions that have abdominal surgical procedures. 3M is now considering this input and will make a determination to be addressed in Grouper version 42 scheduled for release in October 2024. Staff proposes to address the changes and remove the PPC42 cases of concern retrospectively for RYs 2025 and 2026 by rerunning the PPC data using Grouper version 41 for RY 2025 for PPC 42, and version 42 for RY 2026 if needed. Hospitals will then be given the better of the score for PPC 42 to reflect a clinical issue recognized by 3M during the performance period while not penalizing hospitals retrospectively.

PPC 07- Pulmonary Embolism

For this PPC, hospitals raised concerns that patients with codes indicating a deep vein thrombosis is present should be excluded from being assigned this PPC. 3M has agreed and has updated the exclusion code list for PPC 7 in Grouper version 41. Staff again proposes to address the changes retrospectively and remove the cases of concern from PPC 7 assignment for RY 2025 by rerunning the PPC data using Grouper version 41 and using the better of the scores for each hospital that qualifies for the PPC.

The MHAC final recommendation will provide preliminary analyses on the impact of using v41 of the Grouper for PPC 7 and PPC 42 for RY 2025.

Stability of Case-Mix Adjusted PPC Rates

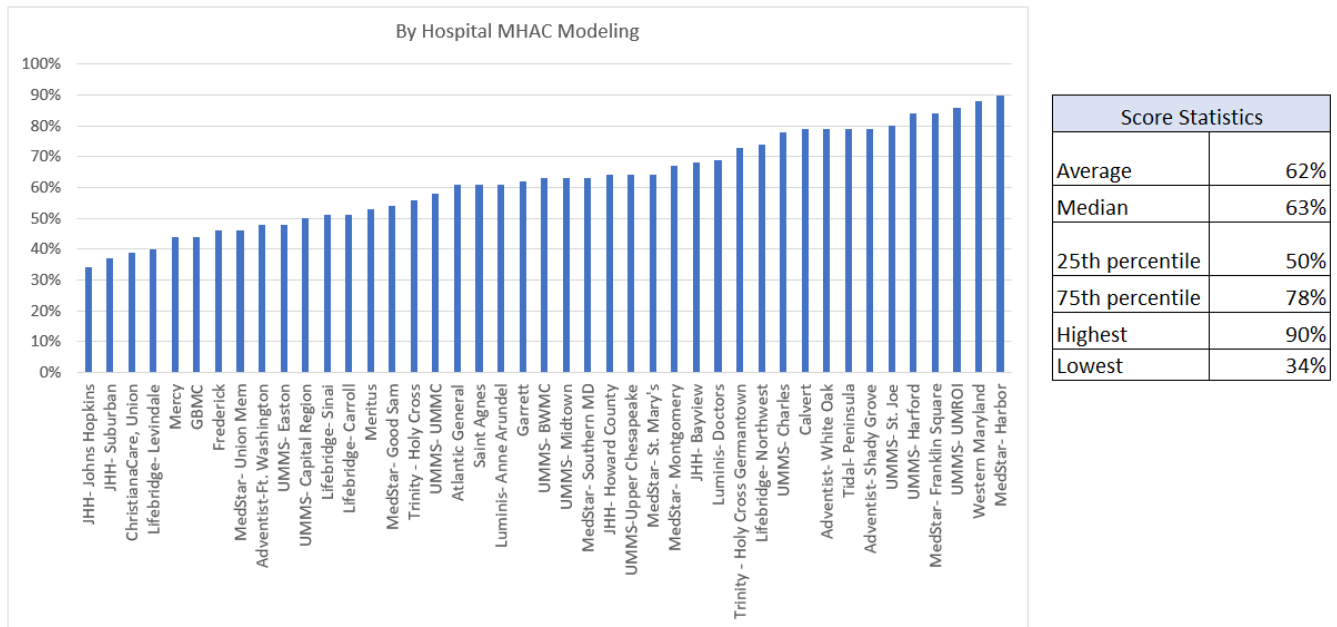
As Maryland hospitals continue to improve on payment PPCs, staff plan to pursue statistical methods that will better address small cell size issues and statistical reliability and validity. Thus, during CY 2023, staff has begun working with our contractor MPR to explore whether changes are needed to the program. The methods that will be considered are similar to methods used by CMS for the same concerns (i.e., Bayesian smoothing) and modeling has been initially presented to the PMWG during the RY 2026 policy development process. Initial concerns raised by stakeholders have included potential smoothing impact on small hospitals where rates would be driven more by statewide average than the hospitals performance. The HSCRC is exploring different options to address these concerns with our contractor MPR. Staff will continue to develop and model hospital scores with select options for smoothing and vet results with the PMWG during CY 2024 with potential for adoption for the RY 2027 MHAC policy.

Hospital Scores and Revenue Adjustments

The hospital scores are calculated across all payment PPCs and then converted to revenue adjustments using a prospectively determined revenue adjustment scale, which allows hospitals to track their progress throughout the performance period. Since the program redesign, the scale has remained the same—that is it ranges from 0 to 100 percent with a hold-harmless zone between 60 and 70 percent. Despite historical concerns regarding the lack of a continuous scale from some stakeholders, staff still believes that the hold

harmless zone is reasonable given the lack of national benchmarks for establishing a cut-point. Using data under v41 of the PPC grouper, staff modeled scores for hospitals using the two methods of setting performance standards. Overall the change in the approach for determining the performance standards results in equal or higher scores for all but one hospital (i.e., Garrett hospitals score went down by 1 percentage point), with the median increase in scores of 3 percentage points (range -1 to +7 percent). Figure 7 shows the distribution of hospital scores and statistics indicating, for example, that the median score was 63 percent. However, using the current RY 2025 scale, 17 hospitals would receive a penalty, 13 hospitals would be held harmless (i.e., no penalty or reward), and 13 hospitals would receive a reward. Given the average scores are within the hold harmless zone, staff does not recommend changing the current revenue adjustments scale for RY 2026.

Figure 7. Modeled MHAC Scores, SFYs 22-23 Base Period, CY 2023 YTD Through November Performance



Health Equity

Over the past two years, staff began to analyze the quality programs and measures for racial and sociodemographic disparities. Specifically for the MHAC program, the results for the payment PPCs were

stratified by race, payer and area deprivation index (ADI) and risk-adjusted for age, sex, Admit-DRG, and Severity of Illness level. Results of this analysis, displayed in Appendix V suggested that there are statistically insignificant differences between racial categories; however, there were statistically significant differences between payers and ADI categories. While statistically significant differences were found between payers and ADI categories, the odds ratios are relatively low and are, therefore, not an area of large concern for staff compared to the disparities uncovered in other quality measures, for example, Timely Follow-Up. Staff remains committed to addressing health equity, but at this time does not recommend including additional incentives for reducing disparities in PPC performance because of the overall low rates in PPCs and the relatively low odds ratios between payer and ADI categories. Over the next year, Staff will continue to monitor disparities in the quality programs' measures and develop disparity measure(s) and incentives that will drive improvement in disparities.

Recommendations

These are the draft recommendations for the RY 2026 Maryland Hospital Acquired Conditions (MHAC) program:

1. Continue to use 3M Potentially Preventable Complications (PPCs) to assess hospital acquired complications.
 - a. Maintain a focused list of PPCs in the payment program that are clinically recommended and that generally have higher statewide rates and variation across hospitals.
 - b. Assess monitoring PPCs based on clinical recommendations, statistical characteristics, and recent trends to prioritize those for future consideration for updating the measures in the payment program.
 - c. Engage hospitals on specific PPC increases as indicated/appropriate to understand trends and discuss potential quality concerns.
2. Use more than one year of performance data for small hospitals (i.e., less than 21,500 at-risk discharges and/or 22 expected PPCs). The performance period for small hospitals will be CYs 2023 and 2024.
3. Continue to assess hospital performance on attainment only, with adjustment to performance standards for increased stability.
4. Continue to weight the PPCs in the payment program by 3M cost weights as a proxy for patient harm.
5. Maintain a prospective revenue adjustment scale with a maximum penalty at 2 percent and

maximum reward at 2 percent and continuous linear scaling with a hold harmless zone between 60 and 70 percent.

6. Future Considerations:
 1. Assess options for streamlining (or simplifying) the quality programs overall, or for the hospital acquired complication measures that are currently included in both the QBR Safety Domain and the MHAC program.
 2. Assess digitally specified quality measures such as electronic Clinical Quality Measures (eCQMs) for future inclusion in quality programs.

Appendix I. Background on Federal Complication Programs

The Federal Government operates two hospital complications payment programs, the Deficit Reduction Act Hospital Acquired Condition program (DRA-HAC) and the HAC Reduction Program (HACRP), both of which are designed to penalize hospitals for post-admission complications.

Federal Deficit Reduction Act, the Hospital-Acquired Condition Present on Admission Program

Beginning in Federal Fiscal Year 2009 (FFY 2009), per the provisions of the Federal Deficit Reduction Act, the Hospital-Acquired Condition Present on Admission Program was implemented. Under the program, patients were no longer assigned to higher-paying Diagnosis Related Groups if certain conditions were acquired in the hospital and could have reasonably been prevented through the application of evidence-based guidelines.

Hospital-Acquired Condition Reduction Program

CMS expanded the use of hospital-acquired conditions in payment adjustments in FFY 2015 with a new program, entitled the Hospital-Acquired Condition Reduction Program, under the authority of the Affordable Care Act. That program focuses on a narrower list of complications and penalizes hospitals in the bottom quartile of performance. Of note, as detailed in Figure 1 below, all the measures in the Hospital-Acquired Condition Reduction Program are used in the CMS Value Based Purchasing program, and the National Healthcare Safety Network (NHSN) Healthcare-Associated Infection (HAI) measures are also used in the Maryland Quality Based Reimbursement (QBR) program.

Figure 1. CMS Hospital-Acquired Condition Reduction Program (HACRP) FFY 2024 Measures

| |
|---|
| <p>Recalibrated Patient Safety Indicator (PSI) measure:^</p> <ul style="list-style-type: none"> ● PSI 03 – Pressure Ulcer Rate ● PSI 06 – Iatrogenic Pneumothorax Rate ● PSI 08 – In-Hospital Fall with Hip Fracture Rate ● PSI 09 – Perioperative Hemorrhage or Hematoma Rate ● PSI 10 – Postoperative Acute Kidney Injury Requiring Dialysis Rate ● PSI 11 – Postoperative Respiratory Failure Rate ● PSI 12 – Perioperative Pulmonary Embolism or Deep Vein Thrombosis Rate ● PSI 13 – Postoperative Sepsis Rate ● PSI 14 – Postoperative Wound Dehiscence Rate ● PSI 15 – Unrecognized Abdominopelvic Accidental Puncture/Laceration Rate |
| Central Line-Associated Bloodstream Infection (CLABSI)^* |
| Catheter-Associated Urinary Tract Infection (CAUTI)^* |
| Surgical Site Infection (SSI) – colon and hysterectomy^* |
| Methicillin-resistant Staphylococcus aureus (MRSA) Bacteremia^* |
| Clostridium Difficile Infection (CDI)^* |

^Recalibrated PSI Composite Measures included in the CMS VBP Program beginning FFY 2023. * National Healthcare Safety Network (NHSN) Healthcare-Associated Infection (HAI) measures included in both the CMS VBP and Maryland QBR Programs

For more information on the DRA HAC program POA Indicator, please refer to:

<https://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/HospitalAcqCond/index>

For more information on the DRA HAC program, please refer to: <https://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/HospitalAcqCond/Downloads/FAQ-DRA-HAC-PSI.pdf>

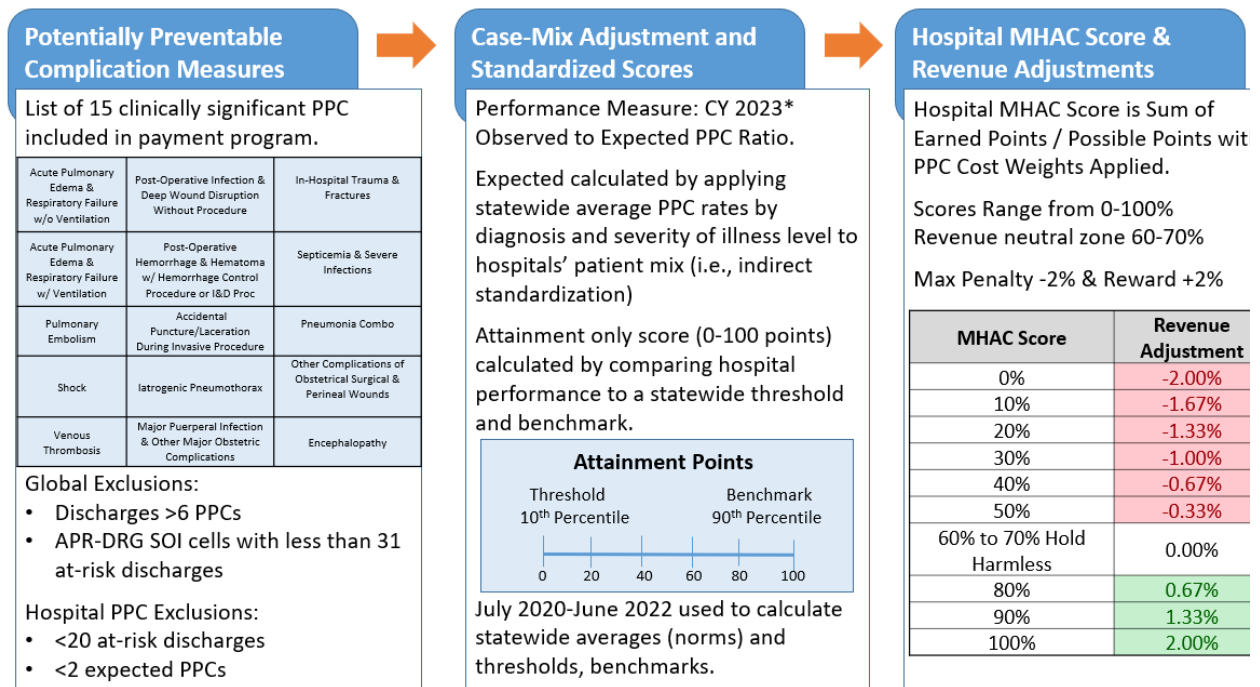
For more information on the HAC Reduction program, please refer to:

<https://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/AcuteInpatientPPS/HAC-Reduction-Program>

Appendix II: RY 2025 MHAC Program Methodology

Figure 1 below provides a summary overview of the approved RY 2025 MHAC methodology.

Figure 1. Overview of RY 2025 Approved MHAC Methodology



Performance Metric

The methodology for the MHAC program measures hospital performance using the Observed (O) /Expected (E) ratio for each PPC. Expected number of PPCs are calculated using historical data on statewide PPC rates by All Patient Refined Diagnosis Related Group and Severity of Illness Level (APR-DRG SOI). See below for details on how the expected number of PPCs are calculated for each hospital.

Observed and Expected PPC Values

The MHAC scores are calculated using the ratio of *Observed* : *Expected* PPC values.

Given a hospital's unique mix of patients, as defined by APR-DRG category and Severity of Illness (SOI) level, the HSCRC calculates the hospital's expected PPC value, which is the number of PPCs the hospital would have experienced if its PPC rate were identical to that experienced by a normative set of hospitals.

The expected number of PPCs is calculated using a technique called indirect standardization. For illustrative purposes, assume that every hospital discharge is considered “at-risk” for a PPC, meaning that all discharges would meet the criteria for inclusion in the MHAC program. All discharges will either have no PPCs, or will have one or more PPCs. In this example, each discharge either has at least one PPC, or does not have a PPC. The unadjusted PPC rate is the percent of discharges that have at least one PPC.

The rates of PPCs in the normative database are calculated for each diagnosis (APR-DRG) category and severity level by dividing the observed number of PPCs by the total number of admissions. The PPC norm for a single diagnosis and severity level is calculated as follows:

Let:

N = norm

P = Number of discharges with one or more PPCs

D = Number of “at-risk” discharges

i = A diagnosis category and severity level

$$N_i = \frac{P_i}{D_i}$$

In the example, each normative value is presented as PPCs per discharge to facilitate the calculations in the example. Most reports will display this number as a rate per one thousand discharges.

Once the normative expected values have been calculated, they can be applied to each hospital. In this example, the normative expected values are computed for one diagnosis category and its four severity levels.

Consider the following example in Figure 2 for an individual diagnosis category.

Figure 2. Expected Value Computation Example for one Diagnosis Category

| A Severity of illness Level | B At-risk Discharges | C Observed Discharges with PPCs | D PPCs per discharge (unadjusted PPC Rate) | E Normative PPCs per discharge | F Expected # of PPCs | G Observed: Expected Ratio |
|--------------------------------------|----------------------------|---|--|---|----------------------------|--|
| | | | = (C / B) | (Calculated from Normative Population) | = (B x E) | = (C / E) rounded to 4 decimal places |
| 1 | 200 | 10 | .05 | .07 | 14.0 | 0.7143 |
| 2 | 150 | 15 | .10 | .10 | 15.0 | 1.0000 |
| 3 | 100 | 10 | .10 | .15 | 15.0 | 0.6667 |
| 4 | 50 | 10 | .20 | .25 | 12.5 | 0.8000 |
| Total | 500 | 45 | .09 | | 56.5 | 0.7965 |

For the diagnosis category, the number of discharges with PPCs is 45, which is the sum of discharges with PPCs (column C). The overall rate of PPCs per discharge in column D, 0.09, is calculated by dividing the total number of discharges with PPCs (sum of column C) by the total number of discharges at risk for PPCs (sum of column B), i.e., $0.09 = 45/500$. From the normative population, the proportion of discharges with PPCs for each SOI level for that diagnosis category is displayed in column E. The expected number of PPCs for each severity level shown in column F is calculated by multiplying the number of at-risk discharges (column B) by the normative PPCs per discharge rate (column E). The total number of PPCs expected for this diagnosis category is the expected number of PPCs for the severity levels.

In this example, the expected number of PPCs for the APR DRG category is 56.5, which is then compared to the observed number of discharges with PPCs (45). Thus, the hospital had 11.5 fewer observed discharges with PPCs than were expected for 500 at-risk discharges in this APR DRG category. This difference can be expressed as a percentage difference as well.

All APR-DRG categories and their SOI levels are included in the computation of the observed and expected rates, except when the APR-DRG SOI level has less than 30 at-risk discharges statewide.

PPC Exclusions

Consistent with prior MHAC policies, the number of at-risk discharges is determined prior to the calculation of the normative values (hospitals with <10 at-risk discharges are excluded for a particular PPC) and the normative values are then re-calculated after removing PPCs with <2 complication expected. The following exclusions will also be applied:

For each hospital, discharges will be removed if:

- Discharge is in an APR-DRG SOI cell has less than 31 statewide discharges.
- Discharge has a diagnosis of palliative care (this exclusion may be removed in the future once POA status is available for palliative care for the data used to determine performance standards); and
- Discharge has more than 6 PPCs (i.e., a catastrophic case, for which complications are probably not preventable).

For each hospital, PPCs will be removed if during July 2020 to December 2021:

- The number of cases at-risk is less than 15; and
- The expected number of PPCs is less than 1.5.

The PPCs for which a hospital will be assessed are determined using the July 2020 to December 2021 data and not reassessed during the performance period. This is done so that scores can be reliably calculated during the performance period from a pre-determined set of PPCs. The MHAC summary workbooks provide the excluded PPCs for each hospital.

Combination PPCs

Based on clinical input and 3M recommendation, starting in RY 2021 two pneumonia (PPC 5 Pneumonia & Other Lung Infections & PPC 6 Aspiration Pneumonia) PPCs were combined into single pneumonia PPC and the 3M cost weight is a simple average of the two PPC cost weights.

Hospital Exclusions

Acute care hospitals that do not have sufficient volume to have at least 15 at-risk and 1.5 expected for any payment program PPC are excluded from the MHAC policy.

Benchmarks and Thresholds

For each PPC, a threshold and benchmark value are calculated using the determined base period data. In previous rate years when improvement was also assessed, the threshold was set at the statewide median of 1 and the benchmark was the O/E ratio for the top performing hospitals that accounted for 25% of discharges. For RY 2021 under an attainment only methodology, staff adapted the MHAC points system to allow for greater performance differentiation by moving the threshold to the value of the observed to expected ratio at the 10th percentile of hospital performance, moving the benchmark to the value of the observed to expected ratio at the 90th percentile of hospital performance, and assigning 0 to 100 points for each PPC between these two percentile values.

Attainment Points (possible points 0-100)

If the PPC ratio for the performance period is greater than the threshold, the hospital scores zero points for that PPC for attainment.

If the PPC ratio for the performance period is less than or equal to the benchmark, the hospital scores a full 100 points for that PPC for attainment.

If the PPC ratio is between the threshold and benchmark, the hospital scores partial points for attainment.

The formula to calculate the Attainment points is as follows:

- $\text{Attainment Points} = [99 * ((\text{Hospital's performance period score} - \text{Threshold}) / (\text{Benchmark} - \text{Threshold}))] + 0.5$

Calculation of Hospital Overall MHAC Score

To calculate the final score for each hospital, the attainment points earned by the hospital and the potential points (i.e., 100) for each PPC are multiplied by the 3M cost weights. Hospital scores across PPCs are calculated by summing the total weighted points earned by a hospital, divided by the total possible weighted points (100 per PPC * 3M cost weight).

RY 2025 Update: Small Hospital Methodology

Hospital-specific PPC inclusion requirements were updated for the RY 2025 policy, i.e., all hospitals are required to have at least 20 at-risk discharges and 2 expected PPCs in order for a particular PPC to be

included in the payment program. Because of the volatility in performance scores for smaller hospitals, the Commission also approved the following policy updates in RY 2025:

“Establish small hospital criteria for assessing performance under the MHAC policy based on the number of at-risk discharges and expected PPCs (i.e., small hospitals are those with less than 21,500 at-risk discharges and/or 22 expected PPCs across all payment program PPCs) as opposed to the number of PPC measure types, and for hospitals that meet small hospital criteria, increase reliability of score by using two years of performance data to assess hospital performance (i.e., for RY 2025 use CY 2022 and 2023). “

Appendix III: Monitoring PPCs

The table below shows the monitored PPCs' O/E ratios for CY 22 YTD (through June) and the percent changes in the observed-to-expected ratio from CY 2018.

| Monitoring PPC | 2018 O/E | 2023 YTD O/E | 2018-2023 % Change |
|---|----------|--------------|--------------------|
| 25: Renal Failure with Dialysis | 1.02 | 0.31 | -69.43% |
| 2: Extreme CNS Complications | 1.29 | 0.47 | -63.92 |
| 21: Clostridium Difficile Colitis | 1.2 | 0.64 | -47.03% |
| 10: Congestive Heart Failure | 0.68 | 0.55 | -18.65% |
| 39: Reopening Surgical Site | 1 | 0.88 | -11.93% |
| 65: Urinary Tract Infection without Catheter | 1.12 | 0.98 | -12.53% |
| 38: Post-Operative Wound Infection & Deep Wound Disruption with Procedure | 0.32 | 0.29 | -7.81% |
| 14: Ventricular Fibrillation/Cardiac Arrest | 0.74 | 0.71 | -3.51% |
| 11: Acute Myocardial Infarction | 0.88 | 0.85 | -2.58% |
| 33: Cellulitis | 0.89 | 0.95 | 6.08% |
| 40: Post-Operative Hemorrhage & Hematoma without Hemorrhage Control Procedure or I&D Proc | 0.8 | 0.89 | 11.65% |
| 24: Renal Failure without Dialysis | 0.78 | 0.94 | 21.09% |
| 34: Moderate Infections | 0.58 | 0.72 | 24.28% |
| 19: Major Liver Complications | 0.64 | 0.84 | 30.47% |
| 66: Catheter-Related Urinary Tract Infection | 0.99 | 1.3 | 31.50% |
| 20: Other Gastrointestinal Complications without Transfusion or Significant Bleeding | 0.65 | 0.86 | 32.06% |
| 1: Stroke & Intracranial Hemorrhage | 0.67 | 0.92 | 38.54% |
| 27: Post-Hemorrhagic & Other Acute Anemia with Transfusion | 0.74 | 1.08 | 45.23% |
| 8: Other Pulmonary Complications | 0.85 | 1.25 | 46.36% |
| 48: Other Complications of Medical Care | 0.6 | 0.88 | 46.79% |
| 45: Post-Procedure Foreign Bodies | 1.12 | 1.74 | 55.70% |
| 52: Inflammation & Other Complications of Devices, Implants or Grafts Except Vascular Infection | 0.7 | 1.13 | 60.65% |
| 17: Major Gastrointestinal Complications without Transfusion or Significant Bleeding | 0.62 | 1.01 | 63.86% |
| 50: Mechanical Complication of Device, Implant & Graft | 0.55 | 0.9 | 64.49% |
| 26: Diabetic Ketoacidosis & Coma | 0.48 | 0.8 | 67.05% |
| 29: Poisonings due to Anesthesia | 0.82 | 1.37 | 67.91% |
| 18: Major Gastrointestinal Complication with Transfusion or Significant Bleeding | 0.5 | 0.84 | 68.51% |
| 13: Other Cardiac Complications | 0.13 | 0.87 | 71.54% |

| Monitoring PPC | 2018 O/E | 2023 YTD O/E | 2018-2023 % Change |
|--|-------------|--------------|--------------------|
| 59: Medical & Anesthesia Obstetric Complications | 0.46 | 0.82 | 78.40% |
| 23: GU Complications Except UTI | 0.55 | 0.99 | 82.26% |
| 54: Infections due to Central Venous Catheters | 0.6 | 1.1 | 82.59% |
| 53: Infection, Inflammation & Clotting Complications of Peripheral Vascular Catheters & Infusions | 0.6 | 1.1 | 83.08% |
| 44: Other Surgical Complication- Mod | 0.49 | 0.92 | 88.42% |
| 15: Peripheral Vascular Complications Except Venous Thrombosis | 0.46 | 0.92 | 99.92% |
| 51: Gastrointestinal Ostomy Complications | 0.47 | 0.95 | 102.52% |
| 64: Other In-Hospital Adverse Events | 0.49 | 1.02 | 106.91% |
| 31: Decubitus Ulcer | 0.3 | 0.81 | 172.70% |
| 30: Poisonings due to Anesthesia | 0 observed | 0 Observed | |
| 32: Transfusion Incompatibility Reaction | 0 observed | 0 Observed | |

Appendix IV: Calculating Performance Standards

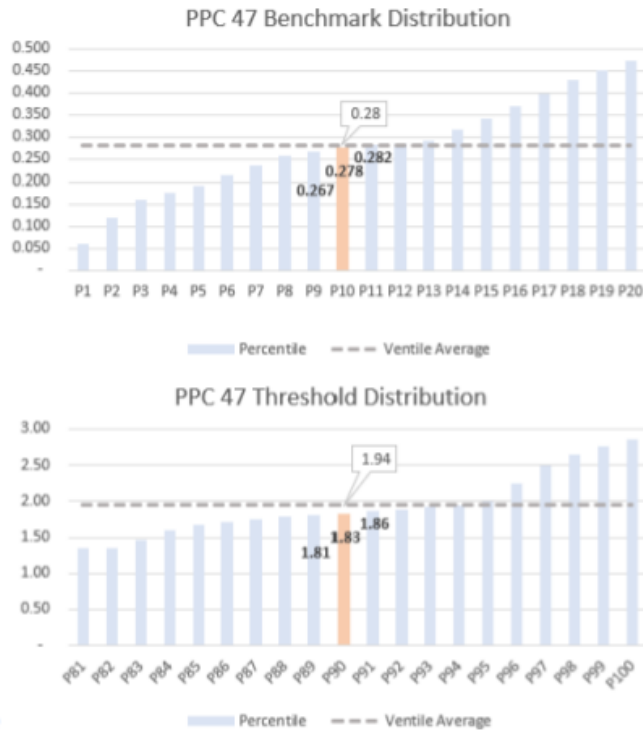
PPC Variation in Performance

- To understand if there's a need to move to an average approach, staff wanted to understand the variation around the cut points for rewards and penalties
 - Large variation would warrant moving to an average approach



Note: Staff calculations vary from SAS calculations due to rounding differences between SAS and Excel

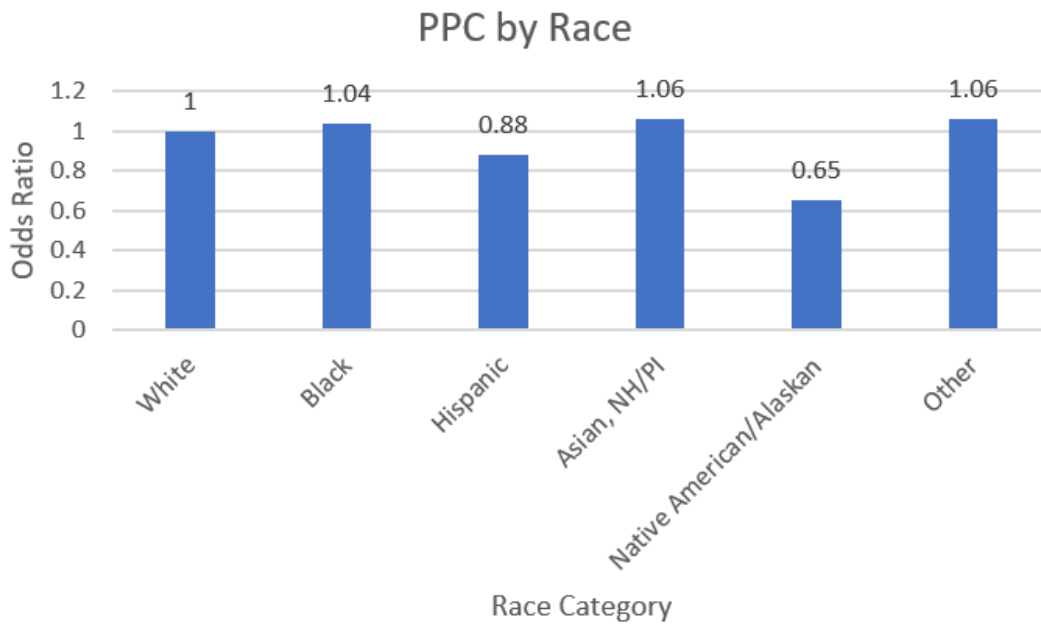
EX: PPC 47 Variation in Performance



- 10th percentile for benchmark determination appears reasonable
 - Delta between 9th, 10th, and 11th percentile is limited
 - Range between 1st percentile and 20th percentile is limited (~0.4)
 - Average of best ventile is similar to 10th percentile
- 90th percentile for threshold determination appears less reasonable
 - Delta between 89th, 90th, and 91st percentile is more significant
 - Range between 81st percentile and 100th percentile is substantial (~1.5)
 - Average of worst ventile is less similar to 90th percentile

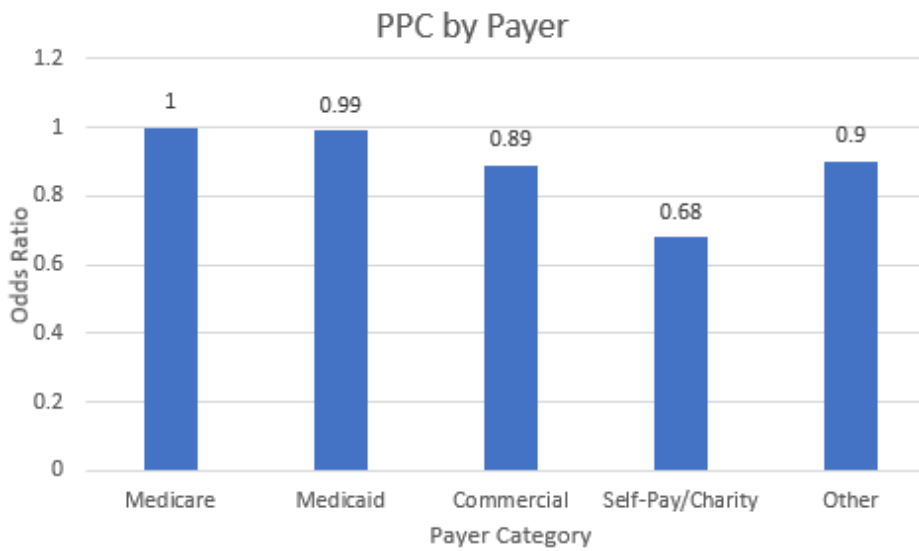
Appendix V: Disparities in PPCs

Below slides are presented by race, payer, and ADI categories that show the odds ratio of experiencing a PPC as well as tables that present the odds ratio, the p-value, and the confidence intervals by category.



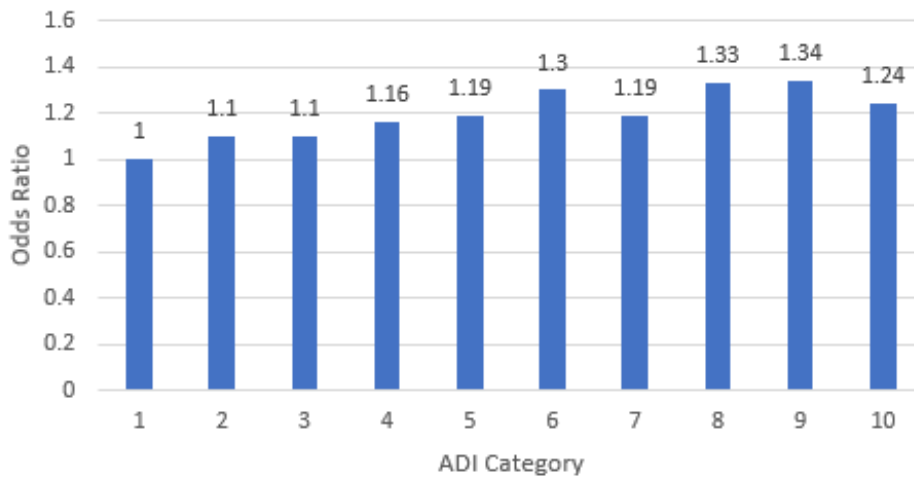
| PPCs | Odds Ratio Coefficient | P-Value | Confidence Intervals |
|-------------------|------------------------|---------|----------------------|
| White (reference) | | | |
| Black | 1.04 | 0.113 | .9913536 - 1.085907 |
| Hispanic | .88 | 0.027 | .7901786 .9856565 |

| PPCs | Odds Ratio Coefficient | P-Value | Confidence Intervals |
|--|------------------------|---------|----------------------|
| Asian | 1.06 | 0.425 | .924325 1.205196 |
| Native Am. | .65 | 0.151 | .3552198 1.173473 |
| Other | 1.06 | 0.341 | .9408 1.193 |
| Non-White | 1.02 | 0.312 | .9797004 1.066333 |
| Black | 1.04 | 0.123 | .9903417 1.084905 |
| Non-Black vs Black (Non-Black reference) | 1.04 | 0.066 | .9973128 1.089417 |



| PPCs | Coefficient | P-Value | CI |
|-------------------------|-------------|--------------|--------------------------|
| Medicare (reference) | | | |
| Medicaid | .99 | 0.836 | .916711 1.07284 |
| Commercial | .89 | 0.000 | .8295058 .9482376 |
| Self-Pay/Charity | .68 | 0.000 | .5441243 .8426922 |
| Other | .90 | 0.117 | .7809703 1.027758 |

PPC by ADI Decile



| PPCs | Coefficient | P-Value | CI |
|------------------|-------------|---------|-------------------|
| 1 (reference) | | | |
| 2 | 1.10 | 0.041 | 1.004006 1.209946 |
| 3 | 1.10 | 0.053 | .9987985 1.2043 |
| 4 | 1.16 | 0.002 | 1.054725 1.270863 |
| 5 | 1.19 | 0.001 | 1.078814 1.313731 |
| 6 | 1.30 | 0.000 | 1.170513 1.449902 |
| 7 | 1.19 | 0.003 | 1.063426 1.335627 |
| 8 | 1.33 | 0.000 | 1.176754 1.498999 |
| 9 | 1.34 | 0.000 | 1.182045 1.520293 |
| 10 | 1.24 | 0.001 | 1.088737 1.419777 |

Stakeholder Engagement in the implementation of the Hospital Medical Bill Reimbursement Law

The Fall 2023 Commission retreat included a discussion of Commission workgroups and stakeholder engagement. The purpose of this agenda item is to provide an update on the stakeholder engagement process for the implementation of Health General §19-214.4, which requires general acute care and chronic care hospitals to provide refunds to eligible patients who paid more than \$25 for hospital services received in any year between 2017 and 2021 and who were eligible, at the time of service, for free care from the hospital under Maryland's hospital financial assistance law. The patients who are eligible for free care have family incomes under 200% of the federal poverty level or are enrolled in the Supplemental Nutrition Assistance Program, the Maryland Energy Assistance Program, the Women and Infant Children's Program patients, or the free and reduced lunch program.

This law originally went into effect on July 1, 2022 (Ch 683, 2022). In 2022, the HSCRC worked with the Department of Human Services (DHS), the State Designated Exchange, the Office of the Comptroller, the Maryland Hospital Association (MHA), consumer advocates, hospital revenue cycle experts, and other stakeholders to develop possible processes for implementing the law and identify any barriers to the implementation of the law. The findings from that work are contained in a 2022 report, "[Free Hospital Care Refund Process: Required by Health General §19-214.4, MSAR #14289](#)". This report recommended statutory changes to resolve changes related to compliance with federal and State privacy and data security laws. In 2023, the legislature amended the law to address the legal barriers to implementation. The amendments went into effect in July 2023.

Under the 2023 amendments to the law, HSCRC is required to work with the Maryland Department of Health, the Department of Human Services, the Office of the Comptroller, the Maryland State Department of Education, the Health Education and Advocacy Unit of the Office of the Attorney General, and the Maryland Hospital Association to develop a process to use tax data and data from the Supplemental Nutrition Assistance Program, the Maryland Energy Assistance Program, and the Women and Infant Children's Program to identify potentially eligible hospital patients.

HSCRC has been working to develop the necessary policies and procedures to implement the amended law through three subject-specific workgroups: 1) Policy and Legal, 2) Consumer Support and Communications, and 3) Data Management and Use. These workgroups started in September 2023. These workgroups include State agency staff and hospital representatives. The hospital representatives were recruited by MHA. A recent memo to all hospitals solicited additional hospital members. Each of these workgroups has met at least 3 times since

September. The charter and membership documents for these workgroups are attached to this document.

The workgroups will be maintained for as long as is necessary to support the implementation of this law.

In addition to the workgroups, HSCRC staff provide periodic updates on the implementation of this law to the sponsor of the legislation, the relevant HGO subcommittee chair, and to consumer advocates. Staff also provided an overview of the law to all hospital CFOs at a MHA Technical Workgroup meeting in July.

In December 2023, staff sent a draft of the memorandum of understanding (MOU) and data sharing and nondisclosure agreement to hospital CEOs, CFOs, state agencies, and consumer advocates for review and comment. The draft MOU is also posted on HSCRC's website. Feedback is due by **February 7, 2024**.

HSCRC staff hope that the MOU will be finalized by Spring/Summer 2024 and data exchange to identify eligible patients will begin in the summer. The current expectation is that the first refunds will likely be sent to consumers late in 2024. HSCRC is required to submit a legislative report on the implementation of this law by October 1, 2024. The reimbursement process will continue through the sunset date of the law in mid-2025.

The media has shown interest in this project. HSCRC expects more media coverage when the patient refunds begin.¹

In addition to refunding patients, hospitals must compensate state agencies for time and resources spent on implementation of the law. HSCRC expects to invoice hospitals for these expenses in the third or fourth quarter of calendar year 2024 and again one year later. This means that the implementation of this law is budget neutral to the state agencies involved.

¹ Articles have appeared in the [Baltimore Banner](#), [WTOP](#), and [Becker's CFO Report](#).

Workgroup Charters and Membership

Consumer Support and Communications Workgroup

Workgroup Charge: The purpose of the consumer support and communications workgroup is to advise HSCRC on the development of policies, plans, and documents related to consumer support and consumer communications to support the requirements of Health General 19-214.4 (Ch. 310, 2023), the hospital medical bill reimbursement process.

Deliverables for review include:

- Content for messages to consumers on refunds
- Rules around methods and frequency of consumer contacts from hospitals
- Content & related rules for hospital webpages on the reimbursements
- Clarity on agency and hospital roles in consumer support in the scope of work document
- Outreach campaign (TBD)

Members

| Organization | Name |
|-------------------------------|-----------------|
| HEAU | Kim Cammarata |
| HEAU | Heather Forsyth |
| MDH | Jennifer Wilson |
| Comptroller | Justin Hayes |
| JHHS | Albert Galinn |
| Frederick Health | Shawn McCardell |
| GMBC | Anita Petri |
| GMBC | Greg Shaffer |
| Meritus | Patrick Teta |
| ChristianaCare Union Hospital | Jenifer Harris |
| ChristianaCare Union Hospital | Judy Riesen |
| ChristianaCare Union Hospital | Tracie Henry |
| Medstar | Mary Sonier |

| | |
|-------------------------------|-----------------|
| ChristianaCare Union Hospital | Chantel Moulton |
|-------------------------------|-----------------|

Policy and Legal Workgroup

Workgroup Charge: The purpose of the Policy and Legal workgroup is to advise HSCRC on the content of the MOU, DUA, and SOW and other policy and legal issues to support the implementation of Health General 19-214.4 (Ch. 310, 2023), the hospital medical bill reimbursement process.

Deliverables for review include:

- MOU
- DSNA
- SOW (attachment to MOU)
- Other policy documents (including details not included in the broad SOW)

Members

| Organization | Name |
|-------------------------------|-----------------|
| DHS | Ann Ware |
| Comptroller | Krista Sermon |
| HEAU | Kim Cammarata |
| HEAU | Heather Forsyth |
| HSCRC | Stan Lustman |
| HSCRC | Ari Elbaum |
| MDH | Jennifer Wilson |
| JHHS | Albert Galinn |
| Frederick Health | Shawn McCardell |
| GMBC | Anita Petri |
| GMBC | Lauren Klemm |
| ChristianaCare Union Hospital | Sarah Stowens |
| JHHS | Patricia Douge |

| | |
|-------------------------------|--------------|
| ChristianaCare Union Hospital | Judy Riesen |
| ChristianaCare Union Hospital | Tracie Henry |
| Medstar | Patrick Wall |



Data Workgroup

Workgroup Charge: The purpose of the data workgroup is to advise HSCRC on the creation of rules related to data management, secure transfer, matching methodology, and similar topics to support the requirements of Health General 19-214.4 (Ch. 310, 2023), the hospital medical bill reimbursement process.

Deliverables for review include:

- Data Fields (see data template below)
- Technical Documents
 - Data Template and Instructions
 - Format of data fields
 - Format of file naming convention (the file names may be used to indicate which state agency produced the file)
 - Data Matching Methodology for the Office of the Comptroller, DHS, and WIC/MDH
 - There will be separate methodologies for each agency based on their data availability.
 - How data will be transferred securely
 - Timeline/deadlines for each entity to complete their process steps
 - Data templates for summary data submission

Members

| Organization | Name |
|--------------|-------------------|
| DHS | Asnake Yeheyis |
| DHS | Maryann Maher |
| DHS | Meena Genjendiran |
| Comptroller | Brandy Richmond |
| Comptroller | Jeff Hill |
| HSCRC | Claudine Williams |
| WIC/MDH | Bryan Thompson |
| HSCRC | Oscar Ibarra |
| HSCRC | Kai-Ing Duh |

| | |
|-------------------------------|----------------------|
| HSCRC | Curtis Willis |
| JHHS | Albert Galinn |
| ChristianaCare Union Hospital | Mike Winiarz |
| Frederick Health | Aaron Clutter |
| Frederick Health | Shawn McCardell |
| GMBC | Lauren Klemm |
| GMBC | Jennifer Hillenbrand |
| Frederick Health | Prableen Singh |
| Medstar | Debbie Herron |
| ChristianaCare Union Hospital | Tracie Henry |
| ChristianaCare Union Hospital | Chantel Moulton |
| ChristianaCare Union Hospital | Magen Underwood |
| ChristianaCare Union Hospital | Kelli Tome |
| ChristianaCare Union Hospital | Judy Riesen |





TO: HSCRC Commissioners
FROM: HSCRC Staff
DATE: January 10, 2024
RE: Hearing and Meeting Schedule

Joshua Sharfstein, MD
Chairman

Joseph Antos, PhD
Vice-Chairman

James N. Elliott, MD

Ricardo R. Johnson

Maulik Joshi, DrPH

Adam Kane, Esq

Nicki McCann, JD

February 14, 2024 To be determined - GoTo Webinar

March 13, 2024 To be determined - GoTo Webinar

The Agenda for the Executive and Public Sessions will be available for your review on the Wednesday before the Commission meeting on the Commission's website at <http://hscrc.maryland.gov/Pages/commission-meetings.aspx>.

Post-meeting documents will be available on the Commission's website following the Commission meeting.

Jonathan Kromm, PhD
Executive Director

William Henderson
Director
Medical Economics & Data Analytics

Allan Pack
Director
Population-Based Methodologies

Gerard J. Schmith
Director
Revenue & Regulation Compliance

Claudine Williams
Director
Healthcare Data Management & Integrity