

### **NOTICE OF WRITTEN COMMENT PERIOD**

Notice is hereby given that the public and interested parties are invited to submit written comments to the Commission on the staff draft recommendation that will be presented at the October 16, 2019 Public Meeting:

- 1) Draft Recommendation on the Capital Policy
- 2) Draft Recommendation on the Regional Partnership Grant Program
- 3) Draft Recommendation on the Medicare Performance Adjustment for RY 2022

**WRITTEN COMMENTS ON THE AFOREMENTIONED STAFF DRAFT RECOMMENDATIONS ARE DUE IN THE COMMISSION'S OFFICES ON OR BEFORE OCTOBER 23, 2019, UNLESS OTHERWISE SPECIFIED IN THE RECOMMENDATION.**

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**Health Services Cost Review Commission**

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**565th MEETING OF THE HEALTH SERVICES COST REVIEW COMMISSION  
October 16, 2019**

**EXECUTIVE SESSION**

**11:30 a.m.**

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

- 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 SESSION**

**1:00 p.m.**

- 1. Review of the Minutes from the Public and Closed Meetings held on September 11, 2019**
- 2. Docket Status – Cases Closed**

2485A - Johns Hopkins Health System	2486A - Johns Hopkins Health System
2487A - Johns Hopkins Health System	2488A - Johns Hopkins Health System
2489A – MedStar Health	2491A – MedStar Health
2494A - Johns Hopkins Health System	2495A - Johns Hopkins Health System
2968A - Johns Hopkins Health System	
- 3. Docket Status – Cases Open**

2490R – Suburban Hospital	2492A - MedStar Health
2493A– Johns Hopkins Health System	2497N – UM Shore Emergency Center Queenstown
2498A – University of Maryland Medical Center	2499A – Maryland Physicians Care
2500A – University of Maryland Medical Center	
- 4. New Model Monitoring**
- 5. Final Recommendation on MPA Framework Policy**
- 6. Final Recommendation on Integrated Efficiency Policy for RY 2020**
- 7. Draft Recommendation on Capital Policy**
- 8. Draft Recommendation on Regional Partnership Grant Program**

**9. Draft Recommendation on Medicare Performance Adjustment for RY 2022**

**10. Policy Update and Discussion**

- a Medicare Advantage Environmental Scan**
- b Overhead and Management Costs**

**11. Legal Update**

**12. Hearing and Meeting Schedule**

## Cases Closed

The closed cases from last month are listed in the agenda



H.S.C.R.C's CURRENT LEGAL DOCKET STATUS (OPEN)

AS OF OCTOBER 9, 2019

A: PENDING LEGAL ACTION : NONE  
 B: AWAITING FURTHER COMMISSION ACTION: NONE  
 C: CURRENT CASES:

Docket Number	Hospital Name	Date Docketed	Decision Required by:	Rate Order Must be Issued by:	Purpose	Analyst's Initials	File Status
2490R	Suburban Hospital	8/13/2019	1/10/2020	1/10/2020	FULL RATE	GS	OPEN
2492A	MedStar Health	8/22/2019	N/A	N/A	ARM	DNP	OPEN
2493A	Johns Hopkins Health System	8/26/2019	N/A	N/A	ARM	DNP	OPEN
2497N	UM Shore Emergency Center Queenstown	9/11/2019	10/11/2019	2/10/2020	OBSERVATION	WH	OPEN
2498A	University of Maryland Medical Center	9/17/2019	N/A	N/A	ARM	DNP	OPEN
2499A	Maryland Physicians Care	9/17/2019	N/A	N/A	ARM	DNP	OPEN
2500A	University of Maryland Medical Center	9/27/2019	N/A	N/A	ARM	DNP	OPEN

PROCEEDINGS REQUIRING COMMISSION ACTION - NOT ON OPEN DOCKET

NONE

**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: 2019  
\* FOLIO: 2310  
\* PROCEEDING: 2500A**

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**Staff Recommendation**

**October 16, 2019**

## **I. INTRODUCTION**

The University of Maryland Medical Center (“Hospital”) filed an application with the HSCRC on September 27, 2019 requesting approval to continue its participation in a global rate arrangement with BlueCross and BlueShield Association Blue Distinction Centers for solid organ and blood and bone marrow transplant services for a period of one year beginning November 1, 2019.

## **II. OVERVIEW OF APPLICATION**

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

## **III. FEE DEVELOPMENT**

The hospital portion of the global rates was developed by calculating 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 UPI for all contracted and covered services. UPI 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 UPI and the Hospital holds the Hospital harmless from any shortfalls in payment from the global price contract.

## **V. STAFF EVALUATION**

The staff found that the experience under this arrangement for the prior year has been favorable.

## **VI. STAFF RECOMMENDATION**

The staff recommends that the Commission approve the Hospital’s application for an

alternative method of rate determination for blood and bone marrow transplant services, for a one year period commencing November 1, 2019. The Hospital will need to file a renewal application for review to be considered for continued participation.

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.

## New Model Monitoring Report

The Report will be distributed during the Commission Meeting

**Final Recommendation for the  
Medicare Performance Adjustment  
Framework**

October 16, 2019

Health Services Cost Review Commission  
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## SUMMARY

The following report includes a recommendation for an approach under which the Commission will use the MPA Framework to ensure that the State meets the Medicare savings targets in the Total Cost of Care (TCOC) Model Agreement, while also incentivizing hospitals to engage in Care Transformation Initiatives (CTIs). In order to accomplish these goals, the recommendation includes the potential use of both a positive Medicare Performance Adjustment (MPA) to reward hospitals that produce total cost of care savings through CTIs and negative MPA to (1) achieve the required Medicare savings under the TCOC Model and (2) offset the positive payments related to CTIs. The recommendation is updated from the Draft Recommendation dated March 13, 2019 to clarify the link between the MPA Framework and CTIs, further highlight the mechanics of the MPA Framework with other Commission policies including the Update Factor policy, and remove the proposed MPA reduction for RY2020 given the State's current Medicare Savings Run Rate.

## POLICY NAMING

This recommendation for the MPA Framework replaces the prior recommendation which referred to the MPA Efficiency adjustment. For clarity, the Commission is no longer using the term MPA efficiency or MPA Efficiency Component. Instead this policy will be referred to as the MPA Framework and within this framework there will be two components which will allow adjustments to Medicare rates:

- The MPA Reconciliation Component (MPA-RC): to be used to encourage Care Transformation Initiatives
- The MPA Savings Component (MPA-SC): to be used to help the State achieve its savings benchmarks by reducing hospital Medicare payments

The original Medicare Performance Adjustment policy will be referred to as the Traditional MPA. The Traditional MPA is not governed by this policy.

## RECOMMENDATIONS FOR THE RY2020 MPA FRAMEWORK POLICY

1. MPA-RC will be used to reward hospitals for Care Transformation savings (at up to 100% of savings) with reward payments offset across all hospitals.
2. Commission staff will continue to work with hospitals, providers, and other partners to develop Care Transformation Initiatives (CTIs). Qualifying CTIs will be made available to all hospitals to accelerate delivery system reform and encourage the sharing of best practices.
3. The Update Factor will be set to ensure that hospitals' Medicare payments do not exceed the Medicare total cost of care (TCOC) Guardrail, thereby constraining the growth of hospital costs for all payers in the system. No savings "cushion" will be provided to achieve Medicare savings, instead, the MPA-SC will be set to prospectively attain additional incremental savings necessary to achieve the \$300 million Medicare savings target by CY 2023, if needed.
4. There will be no MPA-SC adjustment to hospital rates effective January 1, 2020 due to the total cost of care savings achieved through CY 2018.



## INTRODUCTION

The Medicare Performance Adjustment Framework policy is designed to incentivize hospitals to engage with partners in Care Transformation Initiatives (CTIs) with a goal to reduce the Medicare TCOC across all care settings while ensuring that the State meets its Medicare savings targets in the TCOC Model Agreement.

## BACKGROUND

The Maryland All-Payer Model ended on December 31, 2018, after the State successfully met or exceeded its obligations to the federal government. To meet its financial savings obligation, the State targeted an annual growth rate for hospitals' Global Budget Revenue (GBR) to \$330 M of cumulative savings to Medicare. By limiting the growth of hospital GBRs, this savings approach created benefits to all payers. By allowing hospitals to keep savings associated with hospital utilization reductions, hospitals were encouraged to engage in care transformation activities and reduce unnecessary utilization. Combined, the All-Payer Model generated savings for all payers, improved quality of care, and incentivized the creation and expansion of successful care transformation programs.

The Maryland TCOC Model replaced the All-Payer Model in January 2019. Under the TCOC Model, the State committed to reach an annual Medicare total cost of care savings rate of \$300 million by 2023, inclusive of non-hospital costs. The new Model provides a flexible Medicare payment adjustment mechanism. The MPA Framework policy articulates an approach to using this new tool, which incentivizes hospitals to develop CTIs and reduce costs, as well as achieve the Medicare TCOC Savings. The CTI program, which started in 2019, rewards quantifiable care innovation that hospitals have invested in under the Model.

In short, the MPA Framework will allow hospitals to keep savings they produce from non-hospital costs through reconciliation payments (the MPA-RC). This is similar to the way that the GBR allows hospitals to keep hospital utilization savings. In addition, the MPA Framework can prospectively reduce hospital Medicare payments in order to meet the TCOC Medicare savings requirements, if required (the MPA-SC). Combined, the components of this policy will create savings to Medicare and incentivize the creation of successful CTIs that reduce the total cost of care in an intelligent fashion.

### A New Tool: The Medicare Performance Adjustment and the MPA Framework

The TCOC Model Agreement (Section 8.c.i.6) allows the State to apply an adjustment to hospital payments in order to reward or penalize hospitals based on their success at controlling Medicare total cost of care. The adjustment is effectuated through a change to the amount paid by the Centers for Medicare & Medicaid Services (CMS), to hospitals after a claim has been received by the Medicare Administrative Contractor (MAC). The State calculates the amount and passes that amount to CMS, which then reduces all claims paid to the hospital by the indicated percentage. This adjustment is additive with other adjustments, like the sequestration adjustment, and is applied by CMS prior to paying a claim. The change does not go into hospital HSCRC rates, does not affect hospitals' GBR calculations, and is not reflected in rate orders.

The TCOC Model Agreement also has a "traditional" MPA component (described in Section 8.c.i.5), which creates a TCOC per capita benchmark by attributing beneficiaries to hospitals and then rewarding or penalizing hospitals based on their performance around that benchmark (Traditional MPA).

A hospital's "net" adjustment is the sum of the Traditional, Reconciliation, and Savings Components. To begin, the State proposes adjusting hospital MPAs semi-annually, though has the authority from CMS to make changes as frequently as quarterly.

## **THE MPA-RC IN ACTION: REWARDING CARE TRANSFORMATION INITIATIVES**

Under the TCOC Model, in addition to producing savings to Medicare, the State committed to transforming care in a valuable and sustainable way. In order to demonstrate the continued value of the Maryland Model to CMS, the State must demonstrate care transformation across the entire delivery system and not simply reduce hospital unit costs. This approach is especially important as non-hospital costs are included in the Medicare TCOC test. Thus, developing a care transformation approach that also addresses non-hospital costs is necessary to ensure that the burden of producing TCOC savings is shared by the entire delivery system.

Currently, hospital GBRs do not capture utilization savings that occur outside of their GBR. While a hospital's success at reducing total cost of care helps the State meet the Medicare TCOC financial test the success of those initiatives do not benefit the hospitals themselves. Thus, without the MPA-RC there is relatively little incentive for hospitals to develop CTIs that target the total cost of care.

In order to strengthen hospital incentives for CTIs across care settings and partners, staff recommend the following principles:

1. Hospitals should keep the savings from their CTIs up to 100% to the extent feasible
2. Incentives should be structured to reward participation in CTIs and penalize non-participation
3. New and Existing CTIs that transform care across the entire delivery system should be supported

The MPA-RC is the mechanism by which CTI reconciliation payments are made to participating hospitals. For additional care transformation efforts, staff will use the MPA-RC as a vehicle for achieving principles 1 and 2.

### Incentives to Participate in Care Transformation

Incentives to participate in CTIs in the non-hospital setting are critical to Maryland's success. Incentive payments made based on CTIs will allow hospitals to keep the total cost of care savings they produce outside their GBR. For example, if a hospital produces \$5 million in savings under the Episode Care Improvement Program (ECIP, discussed later in this recommendation), they will receive a \$5 million incentive payment. However, if the MPA-RC is only used to pay out hospitals for ECIP success it will produce limited net savings (since the payments will offset the savings achieved). Therefore, the payments specific to a hospital will be offset with a pro-rata reduction to all hospitals, based on total Medicare payments so that net savings to Medicare still exist but the hospitals that achieved the savings receive the greatest benefit.

Including offsets to incentive payments from CTIs within the MPA Framework has two implications. First, it mitigates the possibility that these care transformation payments will result in a net increase in the TCOC run rate. Second, when a hospital captures the savings from their CTIs, the resulting increased costs will be spread as an offset across all hospitals resulting in non-participating hospitals being

penalized for their non-participation. An example of the MPA Reconciliation Component is shown in Table 1.

**Table 1.** Example MPA Reconciliation Component for 2020

	Hospital Experience Savings (Costs)		Medicare Experience (Savings) Costs
	Participating Hospitals (represent 33% of total Medicare Payments)	Non-Participating Hospitals (represent 67% of total Medicare Payments)	Savings to Medicare
<b>Non-Hospital Care Transformation savings achieved</b>			(\$6M)
<b>Reward payments to participating hospitals</b>	\$6M	\$0M	\$6M
<b>Offset of reward payment</b>	(\$2M)	(\$4M)	(\$6M)
<b>Net Savings</b>	<b>\$4M</b>	<b>(\$4M)</b>	<b>(\$6M)</b>

Allowing hospitals to capture the savings they produce through care transformation creates an additional incentive for hospitals to participate in CTIs. As some hospitals begin to succeed in care transformation, the MPA Reconciliation Component offset on all hospitals will increase. Hospitals that do not participate or have less successful CTIs will pay an increasing share of the required TCOC savings. Through this tradeoff, this policy will equally apply pressure for care transformation investment and prioritization. See Appendix 1 for a detailed example of how the MPA-RC will be applied to hospitals participating in CTIs.

### Supporting CTIs

Because hospital’s best path to earn back reductions made through the MPA-RC will be by addressing total cost of care costs through care transformation the staff recommend continuing to develop additional opportunities for hospitals to achieve and quantify total cost of care saving that will be eligible for offsets as discussed for above.

Under the GBR, hospitals have been engaging in care transformation but their efforts have not been systematically assessed. The CTI program was designed to quantify care innovation that hospitals have invested in under the Model to reduce non-hospital costs and achieve the Medicare TCOC Savings. Initiatives must have defined interventions and a trigger to identify a population based on claims data. The trigger can be limited in a way to restrict the population to those most likely to be impacted and should include an intervention window. With this information, HSCRC can measure the impact on TCOC once intervention effects are be observable. Appendix 2 provides additional details on the methodological steps used to assess CTIs. Staff will issue a detailed User Guide covering more information on the savings calculation.

In addition to the CTI, the Care Redesign Program (CRP), which began in 2017, was in part developed to create a new tool to improve alignment between hospitals and non-hospital providers. The CRP allows

hospitals to make incentive payments to non-hospital providers that participate in care transformation. The CRP began with two tracks, the Hospital Care Improvement Program (HCIP) and the Complex and Chronic Care Improvement Program (CCIP). While some savings from these tracks may accrue to Medicare, these tracks were primarily designed to align non-hospital providers with initiatives that produce savings within the hospital setting covered under the GBR.

At the start of 2019, the State implemented the first CTI, the Episode Care Improvement Program (ECIP). ECIP is a CRP track that is based on CMS’s Bundled Payment for Care Improvement Advanced (BPCI-A) model and rewards hospitals for post-acute care savings produced through better care management within 23 clinical inpatient episodes of care. If hospitals reduce the post-acute care costs in an episode by more than 3%, they earn a “reconciliation” payment on their Medicare hospital payments equal to the post-acute care savings generated beyond the 3% CMS Savings Discount. The MPA-RC provides a vehicle for making these payments. Because the Commission is offsetting CTI payments using the MPA-RC, staff recommend removing the 3% CMS Savings Discount within the ECIP reconciliation payments. ECIP has limitations — most prominently, it only covers 23 inpatient episodes and does not account for other initiatives and programs that hospitals may have already created to reduce the total cost of care.

## **THE MPA-SC IN ACTION: ACHIEVING TCOC SAVINGS REQUIREMENTS**

Under the previous All-Payer Model, the State included a “savings cushion” in the Update Factor Policy to ensure that the Medicare hospital costs grew less than national hospital costs. The savings cushion amount was set to ensure that the State produced the required \$330 million in cumulative five-year hospital Medicare savings required by the All-Payer Model. Under this approach savings targeted for Medicare were also applied to other payers.

The MPA-SC allows the Commission to further refine its Medicare savings approach with regards to the Update Factor Policy. Staff recommends the following principles in setting the annual Update Factor policy:

1. The Update Factor should ensure that the growth rate of Medicare total cost of care in Maryland grows less than national care growth
2. The Update Factor should ensure that hospital spending growth continues to grow less than the Gross State Product (GSP)
3. Remove the 0.5% savings cushion historically used to achieve the required Medicare savings

Importantly, as the TCOC Model’s main financial test is now assessed on the basis of the total cost of care, rather than just hospital spending, the Update Factor will need to ensure that excess non-hospital growth in Maryland is offset by slower growth in hospital costs.

Staff view these principles on the Update Factor as consistent with the Commission’s approach under the All-Payer Model. By continuing to constrain hospital spending, savings will be generated for all payers and health care costs will be constrained for Maryland citizens while hospitals will be allowed to keep the savings generated through reduced hospital utilization.

The TCOC Model also includes additional financial guardrails to ensure sustainable growth in health care expenditures. First, Medicare TCOC growth in Maryland cannot exceed the national growth rate by more than 1 percentage point in any given year. Second, Medicare TCOC growth in Maryland cannot exceed

national growth in any two consecutive years. By following the Update Factor principles above, the State should ensure that the growth rate of Medicare TCOC in Maryland remains less than national.

### Calculating the MPA Savings Component to Achieve Required Medicare Savings

Under the agreement with CMS, the State committed to produce an annual total cost of care savings of \$300 million by 2023. Prior to 2023, the State must meet incremental savings targets. The MPA-SC will be used on a prospective basis, as needed, to achieve these targets in place of the adjustment to the Update Factor used previously.

Based on current savings, HSCRC proposes that no Savings Component will be deducted from hospitals' Medicare payments for January to June 2020. There will be another assessment for the second half of the year in early 2020, but application of the MPA-SC is not anticipated.

Staff considered different options for allocating the MPA-SC to individual hospitals and supports a simple approach of allocating the MPA-SC to hospitals based on their share of statewide Medicare hospital payments. The Medicare Savings part of the MPA Savings Component could then be applied as the same flat percentage adjustment across all Maryland hospitals. For an example of how the MPA-SC will be applied to hospital Medicare payments, please see Appendix 1.

### Operations of the MPA Savings Component and Interactions with other Commission Policies

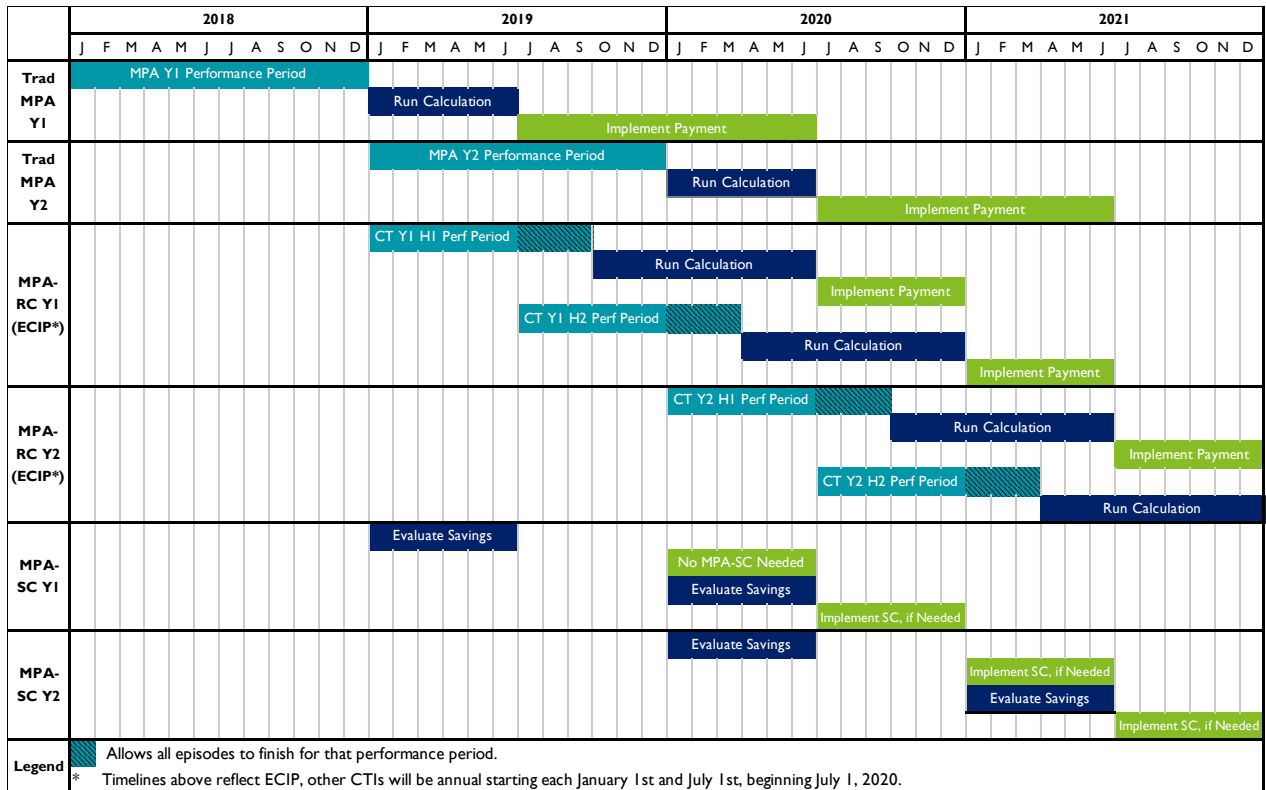
Staff intend to calculate savings run rates during the spring of each year to coincide with the annual Update Factor development and leverage existing stakeholder engagement forums (the Payment Models Work Group and the Total Cost of Care Work Group) to evaluate the need for a payment reduction. Staff believe that announcing both the MPA-SC savings reduction and the annual Update Factor simultaneously will reduce hospitals' uncertainty about their Medicare revenues during the upcoming rate year and increase transparency in the HSCRC rate-setting process.

Because the Medicare TCOC savings are assessed on a calendar year basis and the Update Factor operates on a fiscal year basis, estimating the incremental savings to target with the MPA Savings Component will require projecting, during the spring, the following calendar year's total cost of care run rate (see figure). In order to reduce the uncertainty associated with run-rate projections, as opposed to actuals, staff recommends a two-step process for setting the MPA-SC:

1. Once a full calendar year of Medicare data are available (including 3 months for claims run out) staff will be able to update Run Rate projections. Staff will then recommend an MPA-SC for the first six months of the next calendar year based on the current Medicare TCOC Run Rate; and
2. In the following spring, staff will recommend an update to the MPA-SC for the second six month period of that calendar year.
3. Should an MPA-SC adjustment related to achieving the savings target be determined to be necessary, the Commission will adopt specific policies specifying the adjustment amount.

Figure 1 shows the timing of the MPA Framework components in comparison to the timing of the Traditional MPA.

Figure 1: Timing of the MPA Framework and Traditional MPA



Staff considered either forecasting the total cost of care run rate for an annual MPA-SC or waiting until the end of the calendar year to set the MPA-SC using the actual run rate. However, both of these alternatives would have increased hospitals' uncertainty when estimating Medicare revenues through the annual Update Factor policy. Setting the MPA-SC in the spring of the preceding calendar year and then updating it in the spring of the current calendar year means that June 30 fiscal year hospitals will have insight into the MPA-SC for the entire next fiscal year during their budget process.

## RECOMMENDATION FOR RY 2020 MPA FRAMEWORK POLICY

1. MPA-RC will be used to reward hospitals for Care Transformation savings (at up to 100% of savings) with reward payments offset across all hospitals.
2. Commission staff will continue to work with hospitals, providers, and other partners to develop Care Transformation Initiatives (CTIs). Qualifying CTIs will be made available to all hospitals to accelerate delivery system reform and encourage the sharing of best practices.
3. The Update Factor will be set to ensure that hospitals' Medicare payments do not exceed the Medicare total cost of care (TCOC) Guardrail, thereby constraining the growth of hospital costs for all payers in the system. No savings "cushion" will be provided to achieve Medicare savings, instead, the MPA-SC will be set to prospectively attain additional incremental savings necessary to achieve the \$300 million Medicare savings target by CY 2023, if needed.
4. There will be no MPA-SC adjustment to hospital rates effective January 1, 2020 due to the total cost of care savings achieved through CY 2018.

**APPENDIX 1: EXAMPLE OF MPA FRAMEWORK’S IMPACT ON A HOSPITAL PARTICIPATING AND NOT PARTICIPATING IN CARE TRANSFORMATION**

**Hypothetical Participating Hospital:**

- Hospital represents 5% of total MC hospital payments in the state
- Hospital has achieved a Traditional MPA reward of 1%
- Hospital is participating in CTIs and achieved \$5M of savings out of a statewide total of \$30 M
- The Commission has adopted a policy implementing incremental savings of \$10M through the MPA-SC to ensure the State meets savings targets

Expected annual Medicare hospital payments	\$500M
Traditional MPA: Yields +1% adjustment	\$5.0M
MPA Framework Adjustment Allocation:	
MPA-SC Calculation: Allocation of Savings Share = 5% of \$10M	-\$0.5M
MPA-RC: Positive Reconciliation Payment through CTIs	+5.0M
MPA- RC: Allocation from Offset of statewide CTI payments = 5% of \$30 M	-1.5M
Total MPA Framework	\$3.0M
Result: Hospital A Medicare payments	\$508M

**Hypothetical Non-Participating Hospital:**

- Hospital represents 5% of total MC hospital payments in the state
- Hospital has achieved a Traditional MPA reward of 1%
- Hospital is not participating in CTIs and did not contribute to the statewide total of \$30 M
- The Commission has adopted a policy implementing incremental savings of \$10M through the MPA-SC to ensure the State meets savings targets

Expected annual Medicare hospital payments	\$500M
Traditional MPA: Yields +1% adjustment	\$5.0M
MPA Framework Adjustment Allocation:	
MPA-SC Calculation: Allocation of Savings Share = 5% of \$10M	-\$0.5M
MPA-RC: Positive Reconciliation Payment through CTIs	\$0.0M
MPA-RC: Allocation from Offset of statewide CTI payments = 5% of \$30 M	-\$1.5M
Total MPA Framework	-\$2.0M
Result: Hospital B Medicare payments	\$503M



## APPENDIX 2: CARE TRANSFORMATION INITIATIVE (CTI) METHODOLOGY

The following section walks through the high-level methodology to identify a CTI's target population, construct the episode, set the target price, and calculate the reconciliation payment.

### Part 1: Identifying the Target Population

Medicare claims data (Parts A and B) will be used to develop triggers that identify participants eligible for an intervention. This Intent-to-Treat analysis avoids only measuring those actually receiving the intervention, providing a way to avoid methodological limitations like selection bias. The trigger can include any combination of claims data elements - procedures received, hospital or ED admittance, diagnosed condition, basic patient demographic information, geographic residency, and select hospital(s) or provider(s) (NPI, TIN, etc.) delivering a service. Each CTI also identifies their intervention window (15, 30, 60, 90, 180, etc. days) in which the total cost of care will be measured.

### Part 2: Constructing the Episode

Depending on the episode, certain methods will be applied to ensure validity and consistency. First, items such as blood clotting factors and technology pass-through payments, along with beneficiaries receiving ESRD services or with a hospital stay lasting 60 days or more will be omitted from all episodes. When a beneficiary dies, they can also be excluded from the episode. Definitional overlap between similar CTIs will be avoided by changing population definitions, however, up to 15% of overlap will be tolerated for meaningfully different CTIs. If the overlap is greater than 15%, a beneficiary is assigned based on which trigger occurred first. Finally, if claims span beyond the episode period the claims will be prorated.

### Part 3: Setting the Target Price

Using the episode generated by Parts 1 and 2, the HSCRC will determine the target price. All payments assigned during the episode period will be summed to calculate the total episode spending. To determine the target spending for the Performance Period:

- The Base Period spending will be adjusted forward using the HSCRC update factor for inpatient and outpatient stays, the weighted average of anesthesia and physician update factors for the Physician Fee Schedule, and a ratio algorithm or the Medicare Economic Index (MEI) for other settings of care;
- Spending will be winsorized to limit extreme values at the 1<sup>st</sup> and 99<sup>th</sup> percentiles;
- Adjustments will be made for patient case mix using established mechanisms such as HCCs, APR-DRGs, Demographics, and Long-Term Institutional characteristics;

Episodes are then attributed to hospitals in the Baseline and Performance Periods, looking at the billing participant. Finally, the target price will be converted into a per episode amount, taking the adjusted base period spending and dividing by the number of episodes within the base period. For CTIs with small populations, the HSCRC will run a power calculation on the CTI population to set a savings threshold.

### Part 4: Calculating the Reconciliation Payment

With the target price and episode specifications, the HSCRC will determine the per episode costs in the Performance Period (divide the adjusted total cost of care for the Performance Period by the number of episodes) and compare them to the target price. The positive difference between the Performance Period per episode costs and the target price will be multiplied by the number of Performance Period episodes to develop the final Reconciliation Payment amount.





Maryland  
Hospital Association

September 18, 2019

Katie Wunderlich  
Executive Director  
Health Services Cost Review Commission  
4160 Patterson Avenue  
Baltimore, MD 21215

Dear Katie:

On behalf of Maryland's 61-member hospitals and health systems, the Maryland Hospital Association appreciates the opportunity to comment on the commission's proposed Medicare Performance Adjustment (MPA) framework.

**MHA supports the proposed MPA Savings Component (MPA-SC)**

Maryland's hospitals support establishing the MPA-SC. In our March 2019 comment [letter](#), we supported the originally proposed MPA Efficiency Component. As stated by several commissioners, adopting the MPA-SC will decouple the Medicare savings required under Maryland's Total Cost of Care (TCOC) contract from the annual update factor. The update factor should contribute to sustainable growth for all stakeholders—not set growth limits to achieve Medicare-only savings. The MPA Efficiency Component is a useful tool, available through the contract, which should serve as a safety valve if Medicare TCOC savings targets are not met in future years.

We agree with HSCRC staff's conclusion that the MPA-SC is not needed in 2020 because of Maryland's performance under the Medicare total cost of care guardrail. The latest figures reflect \$291 million in total cost of care savings—close to achieving our targeted savings. In [March](#), we noted that hospital leaders understood MPA-SC could be used to meet *annual* Medicare savings targets—and that it could also be used to *increase* payments to hospitals in the event of favorable performance. The commission should not increase Medicare payments in 2020 but ought to consider using the MPA-SC to increase Medicare payments if favorable performance continues.

**MHA supports the intent of recognizing savings from care transformation initiatives (CTI), but it is premature to finalize a mechanism to adjust Medicare payments**

The MPA Reconciliation Component (MPA-RC) would establish a methodology to reward hospitals for demonstrated Medicare savings from CTI. As proposed, the policy would increase Medicare payments for hospital-specific CTI savings and offset the total amount of savings proportionately across all Medicare hospital payments. Hospitals appreciate the importance of showing how we are changing care to produce per capita savings under the contract. We appreciate the commission staff's efforts to date and the proposed timing of future payment adjustments.

Hospitals agree we need to measure program savings, including CTI beyond the formal care redesign programs. Because the proposed MPA-RC affects hospital payments, we urge HSCRC staff to be deliberate in measuring CTI savings. We respectfully request that HSCRC staff **bring a separate CTI recommendation to the commissioners** before approving a methodology that would affect Medicare payment levels, even though the proposed impacts are several years away. This recommendation should include details on measuring CTI, accounting for costs associated with CTI, and rationale for how the HSCRC will prioritize the policy. For example, the traditional MPA places hospitals at risk for an entire attributed population, and the proposed MPA-RC would directly adjust payments for a subset of hospital interventions.

Hospitals have raised important considerations around the proposed measurement of CTI:

- The proposed CTI measurement period does not begin until July 2020, and therefore will not recognize previously achieved savings by high-return programs
- Consistent measurement of CTI savings among hospitals, given that hospitals may submit different types of programs
- The ability to isolate the impact of a single CTI using claims data that may not reflect socio-economic factors that drive service use
- Measurement of spending per beneficiary by comparing an intervention population to a control (non-intervention) population, rather than measuring a base versus current period change in payments through claims data
- Prioritizing CTI for data programming that could omit demonstrated, hospital specific savings, at the expense of funding total savings.

We appreciate that HSCRC staff is open to hospital feedback and working closely with stakeholders to address hospital considerations. The MPA-RC is an important policy to demonstrate how Maryland's hospitals are delivering care better. The CTI policy details are the foundation of the MPA-RC.

Thank you again for your careful consideration of these matters. If you have any questions, please contact me.

Sincerely,



Brett McCone  
Senior Vice President, Health Care Payment

cc: Nelson J. Sabatini, Chairman  
Joseph Antos, Ph.D., Vice Chairman  
Victoria W. Bayless  
Stacia Cohen, RN

John M. Colmers  
James N. Elliott, M.D.  
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September 18, 2019

Nelson J. Sabatini, Chairman  
Health Services Cost Review Commission  
4160 Patterson Avenue  
Baltimore, Maryland 21215

Dear Mr. Sabatini:

The purpose of this letter is to provide CareFirst's comments on the HSCRC Staff's "Draft Recommendation for the Medicare Performance Adjustment Framework."

CareFirst supports the Staff's draft recommendation and its 2 key components:

- 1. The MPA-RC (reconciliation component).** We believe this is a reasonable revenue neutral approach to encourage hospitals to participate in the Care Transformation Initiatives (CTIs) where hospitals will be allowed to retain up to 100% of their Medicare Total Cost of Care (TCOC) savings originating from their sponsored CTIs. Under the TCOC model, it is critical for all hospitals to participate in programs designed to improve population health and we support the Staff's efforts in developing a policy to both encourage and reward hospitals for their participation.
- 2. The MPA-SC (savings component).** As we have noted in previous correspondence, CareFirst had reservations regarding decoupling savings and allowing Medicare a direct payment offset. The Staff has addressed these concerns during this year's Update Factor process by incorporating conservative Update target limits. As a result, we support using this component as a mechanism to achieve TCOC model savings.

We anticipate we will have additional comments and questions as we participate in further work group discussions regarding the CTI program. In particular, we hope to gain a better understanding of how Staff will determine whether a hospital-initiated CTI has indeed generated TCOC savings and the calculations supporting these savings.

For instance, how would staff calculate the savings realized by one hospital establishing a clinic to treat diabetes patients? Such a program, while potentially effective in improving population health, will likely take many years to yield measurable results and it will likely be challenging to attribute these savings to a particular clinic. Or, if the HSCRC staff determined that a hospital participating in the Episode Care Improvement Program (ECIP) successfully reduced its Medicare cost per episode, relative to its pre-established per episode benchmark, how will Staff ensure that such savings were not offset by an increase in the number of episodes performed?

Thank you for this opportunity to comment on the MPA Framework policy. We look forward to working with Staff and the hospital industry to address these and other questions as we more fully develop the Care Transformation Initiative (CTI) program. We support this effort as it ultimately helps to encourage hospitals' more direct participation in improving the population health of the communities they serve.

Sincerely,

A handwritten signature in black ink, appearing to read "Michael J. Feldman". The signature is fluid and cursive, with a long horizontal stroke at the end.

Cc: Joseph Antos, Ph.D., Vice Chairman  
Victoria Bayless  
John Colmers  
James N. Elliott, M.D.  
Adam Kane  
Jack Keane  
Katie Wunderlich, Executive Director



**Kevin W. Sowers, MSN, RN, FAAN**

*President*

**Johns Hopkins Health System**

*Executive Vice President*

**Johns Hopkins Medicine**

September 18, 2019

Katie Wunderlich  
Executive Director  
Health Services Cost Review Commission  
4160 Patterson Avenue  
Baltimore, Maryland 21215

Dear Ms. Wunderlich,

On behalf of the Johns Hopkins Health System (JHHS), thank you for the opportunity to provide input on the draft recommendation for the Maryland Performance Adjustment (MPA) Framework. JHHS strongly supports the intent of the MPA Framework, which is to incentivize hospitals to develop Care Transformation Initiatives (CTIs) and reduce costs, as well as achieve the Medicare Total Cost of Care (TCOC) savings required under Maryland's TCOC Model. JHHS does however, have questions regarding some of details outlined in the draft recommendation and seek clarification as the policy moves forward. Before moving forward with the MPA Framework, it is critical that additional clarity be gained as to how this complex policy, with its many components, will be operationalized.

### **The MPA Framework**

The MPA Framework, as detailed in the draft recommendation, aims to ensure that the required \$330 million in cumulative savings are achieved through the MPA Savings Component (MPA-SC), while also rewarding hospitals for care transformation efforts through the MPA Reconciliation Component (MPA-RC).

Additionally, HSCRC staff, at various public meetings, have also described the MPA Framework as an opportunity to gain a better understanding of each hospital's efforts and success at reducing TCOC while also establishing an inventory of programs and initiatives that are effective at transforming care. Another principle outlined by staff is the ability to identify "free-rider" hospitals who may have limited efforts in care transformation but have benefited from the successful efforts of other hospitals.

Katie Wunderlich  
Response to MPA Framework  
September 18, 2019

JHHS supports the principles and aims outlined in the MPA Framework and believe these principles lay an appropriate foundation for achieving savings and capturing successful transformation efforts. Before the Commission approves the MPA Framework, it is our hope that additional clarity can be developed around the MPA-SC and MPA-RC.

#### **MPA-SC**

The MPA-SC will ensure that the statewide Medicare savings targets are met by prospectively reducing hospitals Medicare payments. This process will replace the 0.5% “savings cushion” included in the update factor that has historically been used to achieve the required Medicare savings under the All-Payer Model. The MPA-SC aims to reduce hospitals’ uncertainty about their Medicare revenues and increase transparency in the rate-setting process. These are worthy aims that should continue to serve as the foundation to all policies established by the HSCRC.

The current policy to unilaterally reduce each hospitals Medicare payments in order to achieve Medicare savings may have the unintended consequences of disproportionately impacting hospitals serving a higher proportion of Medicare. However, if the MPA-SC is implemented in conjunction with other policies that reward hospitals for being efficient, then perhaps this concern can be mitigated. We hope that should the MPA-SC move forward, that other policies are implemented that either reward hospitals for being efficient, or recognizes the disproportionate burden some hospitals experience in serving a Medicare patient population with more complex medical and social issues.

JHHS greatly appreciates the conservative approach the HSCRC has taken in the execution of the MPA-SC. Due to the Medicare savings achieved to date under the Model, the HSCRC did not deduct the MPA-SC from hospitals Medicare payments for January to June 2020. JHHS hopes that the HSCRC continues to exercise this same conservative approach towards the MPA-SC moving forward. Balancing the need to achieve savings, while not unnecessarily constraining hospitals’ ability to invest in care transformation is critical to the long-term success of the TCOC Model.

#### **MPA-RC**

The MPA-RC aims to recognize the efforts made by hospitals to transform care and improve TCOC that may be outside the structured programs established under the Care Redesign Program. JHHS recognizes that the MPA-RC was designed in light of requests from the hospital industry to recognize transformation efforts and we applaud the Commissioners and staff for incorporating hospital input into policy development. Continued dialogue between all stakeholders will hopefully result in a solid MPA Framework policy. Staff’s recommendation to delay CTI implementation until July 1, 2020 reflects the need for further policy development under the CTI proposal.

### Methodology

The current methodology to calculate savings is unclear. The draft recommendation notes that hospitals “that do not participate or have less successful CTIs will pay an increasing share of the required TCOC savings.” The policy is clear that hospitals that are successful in achieving savings through CTI will be “funded” by hospitals that are not successful or choose not to participate, however, currently there is no description of what benchmarks will be used to define success if all hospitals demonstrate some level of savings. How will the HSCRC determine the threshold for “less successful CTIs” or hospitals? We appreciate the examples provided by staff in the draft recommendation and public meetings, however these examples rely on the logic of non-participating hospitals, which will likely not be the reality. Additional and more diverse examples of how the policy will be implemented would be greatly appreciated.

The CTI methodology as proposed monitors an entire population eligible for CTI, without any determination or measure of whether patients actually received the intervention. This will likely not capture an accurate measure of the success of a CTI. Staff should consider whether CTIs will be prioritized on highest overall savings or highest per capita savings.

JHHS recognizes that there are advantages and disadvantages to the various approaches to analyze savings. The “intent to treat” analysis permits the assessment of potential cost savings for a population regardless of the intervention or set of interventions deployed. However this approach is limited in the ability to assess the effectiveness of an intervention. Staff should give additional consideration to the utilization of other methods of analysis such as a “difference in differences” approach which will offer insight as to which interventions have the biggest impact. Details around exclusion and outcomes criteria should also be discussed with the CTI Steering Committee. Consideration should be given to how patient deaths be addressed under the analysis as well as whether there will be criteria to ensure that CTIs are improving patient care, rather than simply reducing costs.

Considering the uncertainty and complexity around the CTI methodology, perhaps the HSCRC should consider monitoring performance under the CTI for a defined period of time before actually tying hospital performance to financial penalties and rewards. This would allow for adjustments to the MPA-RC, without improperly impacting the financial performance of any hospitals.

### Baseline

Staff have indicated that hospitals can identify the baseline period between 2016 and present for measurement of a successful CTI. JHHS greatly appreciates the flexibility of the HSCRC to allow hospitals to identify a baseline period, however there are some very successful care transformation efforts have been implemented well in advance of what would be captured with

Katie Wunderlich  
Response to MPA Framework  
September 18, 2019

a 2016 baseline period. Would the HSCRC consider allowing for a baseline measurement prior to 2016?

#### Thematic Areas

The September 6 Care Transformation Steering Committee spent significant time detailing the potential thematic areas for CTIs. Currently it is not clear whether hospitals will be limited to submitting CTIs related only to the thematic areas or whether any worthy program should be pursued as a CTI. The thematic categories may be distracting from hospital efforts to address the needs of defined population. We recommend that instead of focusing on categories or themes of interventions, hospitals should be permitted to focus on population segments, such as patients with congestive heart failure with three or more hospital admissions.

#### Medicare Population

Staff have indicated that the CTI process is currently intended for the Medicare fee-for-service population only, but that other payers will be included as data becomes available. While the All-Payer Model has evolved into the TCOC Model, the foundation for Maryland's Model is still an all-payer approach. Care transformation is best pursued through a payer agnostic approach. JHHS hopes that CTI participation from other payers will be included in the near future.

#### **Population Health**

Staff have been clear in their description of the MPA Framework and CTIs that this process is not intended to account for all population health investments, and that there will be development of other policies that will more accurately address population health. JHHS appreciates that the current CTI policy is intended to be a mechanism to measure the "short-term" impact of transformation efforts, however the assessment of true transformation will likely need a longitudinal view that evaluates savings over many years, perhaps even decades. JHHS looks forward to collaborating with the HSCRC in the development of future population health intervention policies. As noted in the draft recommendation, "the State committed to transforming care in a valuable and sustainable way." Valuable and sustainable transformation cannot be captured in six month or yearlong snapshots. The success of the TCOC Model in truly improving care for patients and populations is contingent on the ability to measure progress over an extended period of time.

Thank you for the efforts of the Commissioners and staff in the continued development of policies that contribute to the future success of the Total Cost of Care Model. We look forward to continued evolution of the MPA Framework. JHHS recommends that the MPA Framework be brought to the Commissioners for formal approval at a future Commission meeting. The MPA Framework is one of many HSCRC policies that are being developed by staff. It is critical that Commissioners and hospitals have a clear understanding of not only each individual policy, but also how all of these policies relate to overall hospital operations and



Katie Wunderlich  
Response to MPA Framework  
September 18, 2019

reimbursement. A formal approval process will result in greater transparency and stakeholder participation. JHHS welcomes continued collaboration with Maryland hospitals and the HSCRC to improve the MPA Framework.

Sincerely,

A handwritten signature in black ink, appearing to read "Kevin W. Sowers". The signature is fluid and cursive, with a long horizontal stroke extending to the right.

Kevin W. Sowers, M.S.N., R.N., F.A.A.N  
President, Johns Hopkins Health System  
Executive Vice President, Johns Hopkins Medicine

cc: Nelson Sabatini, Chairman  
Joseph Antos, Ph.D., Vice Chairman  
Victoria W. Bayless  
Stacia Cohen, RN

John M. Colmers  
James Elliott, MD  
Adam Kane

September 18, 2019

Chris Peterson  
Principle Deputy Director, Payment Reform and Provider Alignment  
Health Services Cost Review Commission  
4160 Patterson Avenue  
Baltimore, MD 21215

Dear Mr. Peterson:

On behalf of Anne Arundel Medical Center (AAMC), thank you for the opportunity to comment on the draft recommendation for the Medicare Performance Adjustment (MPA) Framework. We appreciate the Staff's commitment to meeting the goals of the Total Cost of Care Model and engaging hospitals in care transformation activities.

We support the use of a Medicare-only Savings Component as needed to meet the goals of the Total Cost of Care Model. Decoupling this tool from the Update Factor allows for continued hospital sustainability and investments in population health. We agree with the Staff's decision to not use the adjustment in rate year 2020, since Maryland hospitals have achieved substantial savings to date and are well positioned to meet the Model savings target.

We support the use of Care Transformation Initiatives (CTIs) to reward hospitals for their successful interventions. As the collection and measurement of CTIs evolve, we ask the Staff:

1. Consider establishing Savings Component guardrails to protect hospitals from massive adjustments to offset the uncapped Reconciliation Component adjustments
2. Provide transparent and timely communication so hospitals can appropriately budget for potential Reconciliation Component or Savings Component adjustments
3. Expand CTI measurement to include additional payer types and encourage interventions for all patients
4. Explore methodologies to capture initiatives that require a longer time period to realize savings
5. Ensure Staff capacity to provide timely support for the measuring and monitoring of CTIs

Thank you again for the opportunity to comment. Please let us know if we can be of assistance to you.

Sincerely,

Handwritten signature of Maulik Joshi in black ink.

Maulik Joshi, DrPH  
Executive Vice President of Integrated Care Delivery &  
Chief Operating Officer

Handwritten signature of Bob Reilly in black ink.

Bob Reilly  
Chief Financial Officer

Cc: Victoria Bayless, President & Chief Executive Officer, AAMC  
Nelson Sabatini, Chairman, HSCRC  
Katie Wunderlich, Executive Director, HSCRC



September 18, 2019

Katie Wunderlich  
Executive Director, Health Services Cost Review Commission  
4160 Patterson Avenue  
Baltimore, MD 21215

Dear Katie:

The University of Maryland Medical System (UMMS) appreciates the Health Services Cost Review Commission's (HSCRC) desire to determine the impact of hospital population health investments through the MPA Framework Policy. Understanding the impact of hospital population health investments is important and will allow hospitals to learn from the successes of others.

As such, UMMS is supportive of the premise of the MPA Framework Policy, but is concerned with the premature adoption of a payment methodology. UMMS has several concerns about the methodology and suggests that HSCRC implement the methodology to quantify the impact of the CTIs but delay the implementation of the payment policy.

Currently, several HSCRC payment methodologies exist to reward or penalize hospitals for Medicare total cost of care performance including RRIP, MHAC, PAUs, MPA-Traditional, and the MPA reconciliation component (MPA-RC) will create additional overlap between HSCRC policies. To avoid any potential unintended consequences, HSCRC should thoroughly analyze the extent of this overlap and ensure alignment where possible.

The proposed payment methodology also presents operational challenges that may inhibit adequately capturing the broader range of population health management activities that hospitals deliver. As outlined in the draft policy, hospitals are only eligible to receive reconciliation payments for CTIs that have a triggering event identifiable via claims data. This limitation is problematic because patient enrollment into any given care intervention relies on clinical decision points that are difficult to quantify through individual claims. Thus, the "true" enrolled population will not be reflected by HSCRC's current methodology, which will result in skewed measurements of actual cost savings. Additionally, interventions that address social determinants of health or target total population health rather than individualized interventions will not be recognized since they cannot be linked to claims data. UMMS recommends that the HSCRC explore additional methodologies that will more accurately capture the true population enrolled. This will lead to greater understanding of the population health investments necessary to address the multitude of factors that lead to unnecessary healthcare utilization and higher costs.

UMMS is concerned with HSCRC's proposal to offset savings. Hospitals that have Medicare populations with more complex needs or are implementing new initiatives may not be successful in generating savings immediately but will still be funding rewards at other hospitals. UMMS remains concerned that hospitals not participating in population health management activities will have offset payments similar to hospitals that are participating.

In addition, given the industry interest and investment in the success of quantifying the savings based on CTIs, we would encourage the HSCRC to allow for more extensive comment and discussion on appropriate thematic groupings, triggering events and episode durations prior to issuing a staff recommendation.

Thank you for the opportunity to provide comments on the draft MPA Framework Policy. If you have any questions or concerns regarding the considerations outlined, please contact me.

Sincerely,



Alicia Cunningham  
SVP, Corporate Finance and Revenue Advisory Services  
University of Maryland Medical System  
920 Elkridge Landing Road, Linthicum, MD 21090

Cc: Nelson Sabatini, Chairmen  
HSCRC Commissioners  
John Ashworth, UMMS CEO  
Michelle Lee, UMMS CFO

September 18, 2019

Katie Wunderlich  
Executive Director  
Health Services Cost Review Commission  
4160 Patterson Avenue  
Baltimore, MD 21215

Dear Ms. Wunderlich:

*Katie*

Comments - Draft Recommendation for Medicare Performance Adjustment Framework - Presented to HSCRC Commission 9-11-19

Incorporating hospital determined Care Transformation Initiative (CTI) into the Medicare Adjustment Performance Framework is innovative and substantive.

Regarding Figure 1 (page 9): Timing of MPA Framework and Traditional MPA

While the MPA timing is guided by the run rate calculations and hospital revenue cycles, CTI implementation coordination is complex and can require a run-in or ramp-up period. Major interventions can need a multi-month ramp-up.<sup>1</sup> In short, selected CTIs may not match up with the suggested timing.

Identifying a baseline beneficiary cohort and accumulating a sufficient number of intervention beneficiaries requires time and effort to assure reasonable cohort homogeneity. This homogeneity is necessary to detect a difference post intervention. Also, secular trends need identification and adjustment. There will be additional complexities should the CTI involve more than one hospital.

The Commission - desires "Qualifying CTIs" (page 9) to be shared with other hospitals. This, in turn, will require intervention fidelity, i.e., the CTI intervention is sufficiently detailed so that other hospitals can replicate the intervention. Fidelity is best defined in the ramp-up period before intervention initiation.

CTIs are a valuable addition to the MPA process. Implementation flexibility will yield dividends in the coming months and years.

Thank you,

*Dale*

Dale N. Schumacher  
President, Rockburn Institute

cc: Willem Daniel

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<sup>1</sup> Berkowitz SA, Parashuram S, Rowan K, et al. Association of Care Coordination Model With Health Care Costs and Utilization: The Johns Hopkins Community Health Partnership (J-CHIP). JAMA Netw Open. 2018 Nov 2;1(7):e184273. doi: 10.1001/jamanetworkopen.2018.4273.

**Final Recommendation on Integrated Efficiency Policy  
for RY 2020: Withholding Inflation for Relative  
Efficiency Outliers and Potential Global Budget Revenue  
Enhancements**

October 16, 2019

Health Services Cost Review Commission

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Baltimore, Maryland 21215  
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## Key Methodology Concepts and Definitions

1. Equivalent Casemix Adjusted Discharges (ECMADS) – Often referred to as casemix, ECMADS are a volume statistic that account for the relative costliness of different services and treatments, as not all admissions or visits require the same level of care and resources.
2. Inter-hospital Cost Comparison (ICC) Standard – Each hospital’s ICC revenue base is built up from a peer group standard cost, with adjustments for various social goods (e.g. trauma costs, residency costs, uncompensated care mark-up) and costs beyond a hospital’s control (e.g. differential labor market costs) that are not included in the peer group standard. The revenue base calculated through the ICC does not include profits. Average costs are reduced by a productivity factor ranging from 0 percent to 4.5 percent depending on the peer group. The term “Relative efficiency” is the difference between a hospital’s actual revenue base and the ICC calculated cost base]
3. Quality Adjusted Inter-hospital Cost Comparison (ICC) – A version of the ICC that incorporates hospitals’ Quality revenue adjustments, both negative and positive, to amend a hospital’s evaluated revenue and therefore the peer group cost standard as well as the hospital’s position relative to the ICC Cost Standard.
4. Volume Adjusted Inter-hospital Cost Comparison (ICC) - A version of the ICC that incorporates hospitals’ reduction in potentially avoidable utilization, as defined by the Potentially Avoidable Utilization Shared Savings Program and additional proxies for avoidable utilization. Volumes from this analysis, both negative and positive, amend a hospital’s final ICC calculated cost base – not the peer group cost standard - as well as the hospital’s position relative to the ICC Cost Standard.
5. Efficiency Matrix – A combined ranking of a hospital’s performance in the Inter-hospital Cost Comparison and Medicare Total Cost of Care growth rates. Both measures are weighting equally and hospitals are arrayed into quintiles to determine overall efficiency.



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## Recommendations

Since December of 2017, staff has been working with Commissioners and stakeholders to develop a formulaic and transparent methodology that identifies and addresses relative efficiency outliers in order to bring those outlier hospitals closer to peer average standards over time by measuring both cost per case and a per capita Medicare total cost of care growth performance. The purpose of this exercise is to update the HSCRC's efficiency measures to be in line with the per capita goals of Maryland's Total Cost of Care (TCOC) Model. Subsequently, in July 2019, a staff draft recommendation was brought before the Commission and for public comment that recommended the following policy components:

- Formally adopt policies to
  - a. Determine relative efficiency outliers;
  - b. Evaluate Global Budget Revenue enhancement requests
- Use the Inter-Hospital Cost Comparison, including its supporting methodologies to compare relative cost per case for the above evaluations;
- Use Total Cost of Care measures with a geographic attribution to evaluate per capita cost performance for the above evaluations;
- Withhold the Medicare portion of the Annual Update Factor for efficiency outlier hospitals based on criteria described herein, effective January 1, 2020; and
- Use set aside outlined in the Annual Update Factor (.1% in RY 2020) and funding secured from withhold from outlier hospitals to fund potential Global Budget Enhancement Requests.

However, during the course of review following the publication of the July draft recommendation, a number of outstanding concerns were identified by staff, Commissioners, and stakeholders regarding the casemix adjustment for rehabilitation cases, use of a growth calculation in lieu of a benchmark attainment analysis for total cost of care performance, and general concerns that the policy should identify larger amounts of retained revenue. In light of these concerns, staff is recommending delaying the implementation of this policy until RY 2021. Instead, staff will bring a revised final recommendation in Spring 2020 that would affect the Annual Update Factor for RY 2021, which will incorporate a new cost per case analysis based on updated data using the Inter-Hospital Cost Comparison tool and total cost of care benchmarks for both commercial and Medicare costs for a more comprehensive efficiency analysis.

## Introduction

In response to Commissioner directives to incorporate per capita efficiency measures into overall efficiency analyses in line with the TCOC Model, staff developed an integrated efficiency methodology that uses and equally weights Volume Adjusted Interhospital Cost Comparisons (ICC) and Medicare Total Cost of Care growth calculations, together referred to as the Efficiency Matrix. Incorporating the traditional cost per case analysis with total cost of care growth analyses ensures that the HSCRC still adheres to its statutory mandate to ensure that costs are reasonable and charges are reasonably related to costs, while at the same time incorporating

new population based measures of reasonable cost in line with the per capita tests of both the All-Payer Model initiated in 2014 and the successor Total Cost of Care Model initiated in 2019.

While much work has been done to improve the Commission's efficiency methodologies, staff has not deployed them in an integrated and formulaic fashion across all hospitals. To date, the HSCRC has addressed efficiency concerns that excess revenues were being inappropriately retained by hospitals by making \$80 million in adjustments for services that shifted to unregulated settings, including adjustments for oncology and infusion drugs shifted to unregulated settings. This figure also includes the first year of a negotiated revenue reduction plan for one outlier hospital, whose cost performance had been affected by service discontinuation and deregulation. Staff will continue to make adjustments for shifts to deregulated settings based on hospital disclosures and annual reviews. However, in order to expedite the process of adjusting revenues for high cost outlier hospitals, the HSCRC staff proposed a more formulaic approach to reduce excessive revenue by limiting rate updates for all cost efficiency outliers.

To implement formulaic revenue reductions, staff proposed, in the Draft Recommendation released in July 2019, to withhold the Medicare portion of the RY 2020 Update Factor, on the basis of the combined Volume Adjusted ICC cost-per-case results and Medicare Total Cost of Care growth performance, as evaluated through the Efficiency Matrix. Only Medicare fee-for-service data was to be used in this evaluation as equivalent total cost of care data is not currently available for other payers. In acknowledgement of this limitation, any impact from this policy was to be limited to the Medicare portion of a hospital's revenue, but the modification to a hospital's global revenue was to be shared among all payers. Staff would have also limited reductions only to hospitals that exceeded one standard deviation of average Volume Adjusted ICC performance (1.21 times the ICC cost standard), which is in keeping with the UMMC Midtown revenue reduction agreement put in place during RY 2019 that brought the hospital's revenue down to a level of approximately 1.2 times the ICC cost standard. Over time, this policy, which is envisioned to be implemented each year in concert with the Annual Update Factor Recommendation, would bring outlier hospitals to a level at or below 1.21 times the ICC cost standard.

Finally, in response to concerns about requests for GBR modifications, staff also proposed in the policy to outline the metrics by which GBR enhancement requests will be evaluated. Specifically, staff proposed to similarly utilize the Efficiency Matrix to identify hospitals that perform best in a combined evaluation of cost-per-case and Medicare total cost of care growth. Moreover, staff also proposed that hospitals will only be deemed eligible for potential GBR enhancements outside of a full rate review if they perform better than one standard deviation from average Volume Adjusted ICC performance (1.06 times the ICC Standard) and are in the best quintile of performance in the Efficiency Matrix. In this capacity, the HSCRC will create a symmetric policy that clearly and prospectively outlines the standards by which hospitals may potentially receive additional funding outside of a full rate review when deemed a positive performance outlier and guaranteed negative adjustments for poor performance.

This report outlines the changes to the ICC methodology and the proposed approach to expediting formulaic revenue reductions for outliers as well as identifying hospitals eligible for potential GBR enhancements. However, as noted in the Recommendation section, staff is recommending to delay implementation of this policy until RY 2021 when additional efficiency tools can be incorporated, including an improved casemix methodology for rehab cases and incorporation of total cost of care benchmarks for Medicare and commercial payers.

Future policy recommendations will address the processes for full and partial rate applications as well as the incorporation of additional efficiency tools.

## Background

### Efficiency Tools

In November 2015, full rate reviews were suspended to allow development of tools and methodologies consistent with the new All-Payer Model. Regulations were introduced at the September 2017 Commission meeting that updated filing requirements for full rate reviews and the moratorium on full rate reviews was lifted in November of 2017. At the November 2017 Commission meeting, staff put forward a final recommendation to the cost-per-case and per visit analysis - the Inter-hospital Cost Comparison (ICC) methodology, a tool that HSCRC staff proposes to continue using in evaluating hospitals' cost-per-case or per visit efficiency. At that time, staff recommended that the Commission defer formal adoption of an efficiency methodology because more work was required to develop additional efficiency tools, namely total cost of care analyses. Also, staff set out, with support of a technical workgroup, to refine the casemix methodology that serves as the basis for the volume statistic used in the ICC to evaluate cost-per-case efficiency, in accordance with Commission priorities.

While staff has utilized the ICC and various total cost of care growth analyses to support Commission proposals to modify hospitals' global revenues,<sup>1</sup> thereby implicitly approving these efficiency tools through adjudication, no formal policies are currently in place. It is important that formal policies reflective of all methodology enhancements are approved by the Commission to provide greater clarity to the industry and to allow for the Commission's methodologies to be more formulaic and uniform in their application.

In terms of the ICC, staff did not materially change the methodology from what was presented to the Commission in November of 2017. The ICC still places hospitals into peer groups based on geography/urbanicity and teaching status and then develops a peer group cost average, devoid of unique hospital cost drivers (e.g. labor market, casemix) and various social goods (e.g. residency programs), to ultimately build up hospital revenue for each hospital based on the calculated peer group cost average. The difference between a hospital's evaluated revenue and its revenue

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<sup>1</sup> Anne Arundel Medical Center, Garret Regional Medical Center, UMMC Midtown Hospital

calculated from the ICC cost standard is the measure of a hospital's relative cost-per-case efficiency.

As aforementioned, one of the principal changes to the ICC evaluation was the modification to the casemix methodology, a methodology that provides more weights to services that are greater in clinical intensity and serves as the basis for the volume statistic used in the ICC. Prior iterations of the HSCRC casemix methodology had two major problems in the development of outpatient weights. First, the methodology did not account for differences in hospital billing behavior, for example cycle billing once a month versus billing for each patient visit. This led to unreliable weights for services that had a higher proportion of recurring visits (oncology, clinic, rehabilitation). The second flaw was that emergency room visits were given the same weights as clinic visits, even though emergency room visits are more costly. As a result of these concerns, 12.75 percent of revenue statewide was excluded from the RY 2018 ICC evaluation – the range for individual hospitals was 0.6 percent to 24.6 percent.

During the course of the summer of 2018, staff engaged stakeholders to address both of these problems with the casemix methodology. Staff decided to parse out all outpatient visits and associated Current Procedural Terminology (CPT) codes, rather than continuing to bundle all of the services contained in each patient bill. By unbundling cycle billed claims into visits, the HSCRC moved away from bundling claims based on unique hospital billing practices in favor of standard fixed length episodes. Furthermore, staff created additional summary categories by which ubiquitous CPT's were evaluated and weighted, i.e., CPT's that occur in multiple settings were separated based both on rate center charges and 3M categories and were weighted independent of one another.<sup>2</sup> This ensured greater homogeneity of weight development. As a result of the improvements in the reliability of the casemix methodology, the excluded outpatient revenue was reduced from over 12.75 percent to 4.88 percent of total revenue - oncology drug revenue is still excluded statewide from the RY 2019 ICC evaluation. The range for individual hospitals is 0 percent to 11 percent.<sup>3</sup>

Additional modifications to the November 2017 ICC include creating a differential cost estimate for indirect medical education costs of major academic medical centers versus other residency programs, limiting the resident and intern cost strip to the state average cost per resident, updating the input values to reflect RY 2019 revenue and RY 2018 casemix volume, and adjusting the ICC for changes in Volume., all of which will be discussed in greater detail in the *ICC Calculation* section below.

In terms of Medicare total cost of care, staff currently has two established tools for analysis, total cost of care growth relative to 2013 (the base year for the All-Payer Model) based on a strictly geographic attribution and total cost of care growth relative to 2015 based on the attribution in the Medicare Performance Adjustment (MPA), which incorporates patient and physician matching. There are pros and cons to each of these approaches in definitively determining per

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<sup>2</sup> For more details on the revised casemix methodology see Appendix 1 and Appendix 2.

<sup>3</sup> Please note that due to a staff proposed modification to the ICC methodology to include drug overhead costs in the ICC permanent revenue, which is discussed in the *Overview of ICC Calculation* subsection, the percentage of revenue excluded declines to 2.8%.

capita hospital performance efficiency because both are dependent upon the date by which growth is evaluated, i.e., the base year. The geographic attribution does not fully take into account the unique provider relationships a patient, physician, and hospitals have regardless of geography, especially in dense, competitive hospitals markets. On the other hand, the MPA cannot effectively go back to the start of the All-Payer Model, which is important because reductions in utilization that are contributing to hospital cost efficiency may have occurred before the MPA was implemented. For these reasons, staff proposed using the matrix of Volume Adjusted ICC cost-per-case results together with Medicare Total Cost of Care growth performance from 2013, as measured by the geographic attribution methodology, and work to incorporate total cost of care “attainment” benchmarks calculations into final efficiency determinations. However, given the recommendation to delay implementation of this policy until RY 2021, staff will likely transition to using benchmarks in lieu of growth calculations for the Efficiency Matrix.

## Efficiency Implementation

### **Withholding Inflation from Outlier Hospitals**

In prior applications of the HSCRC efficiency methodologies, hospitals’ revenues were reduced under spend-down agreements if they were deemed to have cost-per-case beyond a set level. In another application of efficiency measures, hospitals with favorable hospital cost per case positions were given higher annual updates than those hospitals with poor relative costs per case. However, all of these prior iterations of efficiency analyses were based on fee-for-service mechanisms and did not have to account for relative cost efficiency in a per capita system. In a per capita system, a hospital aligned with the Total Cost of Care Model will reduce utilization by improving the health of the population, retain a portion of the revenue associated with the reduced utilization, and potentially appear to be less cost efficient in a cost per case analysis. Moreover, hospitals can confound this analysis in the global revenue era by reducing utilization through shifting services to non-hospital providers (referred to as deregulation), eliminating services outright, or by simply continuing to pursue additional volume growth beyond population and demographic driven changes. Despite these complexities, the HSCRC must still establish charges that are reasonably related to costs, which in turn should be reasonable, while also properly incentivizing hospitals to reduce unnecessary utilization and total cost of care.

For these reasons, staff cannot evaluate hospital cost per case or total cost of care analyses independently, and any combination of tools will not precisely identify hospitals’ efficiency ranking, especially near the mid-range of performance. Thus, staff will continue to focus on outliers in the revised future recommendation for the Integrated Efficiency Policy and recommended that high cost outliers have a portion of their Annual Update Factor withheld, based on a 50/50 weighting of a Volume adjusted cost per case and geographic Medicare and commercial total cost of care growth calculations. Based on updated analysis and recommendations, hospitals in the worst quintile of performance and in excess of one standard

deviation of average Volume Adjusted ICC performance or 1.21 times the ICC standard could be deemed outliers.

Staff notes that this policy would be the first incremental step towards creating a formulaic use of efficiency methodologies in the per capita and global revenue era. Over time this policy will bring outlier hospitals in line with 1.21 times the ICC standard cost-per-case maximum.

### **Global Budget Revenue Enhancements**

Staff's original efficiency outlier proposal was to limit the application of the policy to poor performing outlier hospitals. Positive revenue adjustments would be addressed through an additional policy on the evaluation of rate applications once total cost of care benchmarks were developed. However, concerns regarding GBR enhancement requests has prompted staff to also outline a methodology for evaluating excellent performing hospitals and describe a process by which additional revenue may be requested outside of a full rate application.

Specifically, staff proposed that all GBR revenue enhancements outside of a full rate application be limited to hospitals that are among the best performers in cost-per-case, as measured by a Volume Adjusted ICC, and Medicare total cost of care growth, as measured by a geographic attribution. This evaluation will mirror the analysis performed for determining poor performing outliers. For hospitals to receive a GBR enhancement outside of a full rate review, they must be in the best quintile of performance as evaluated in the Efficiency Matrix, they must be better than one standard deviation from average Volume Adjusted ICC performance (1.06 times the ICC standard) and they must submit a formal request to the HSCRC that outlines either: a) how a previous methodology disadvantaged the hospital; or b) a spending proposal that aligns with the aims of the Total Cost of Care Model. All revenue enhancements will be capped by the funding made available by the set aside in the Annual Update Factor approved by the Commission each year (.1% or ~\$17 million in RY 2020) and the funding derived from withholding inflation from poor performing outliers. While staff is proposing to delay the implementation of this policy until RY 2021, internally staff will use a similar approach for evaluating RY 2020 GBR enhancement requests.

This process and proposed budget cap does not restrict hospitals from submitting a formal rate application request, which will be evaluated at this time by using total cost care growth, as measured by a geographic attribution, and the ICC that does not adjust for volume performance. Future policy recommendations will outline more precisely the ways in which hospitals will be evaluated in a full rate application once work has concluded on developing per capita benchmarks. Until such a policy is formally adopted, staff will continue using the tools that have been implicitly approved through adjudication.

## Overview of Efficiency Calculations

### Overview of ICC Calculation

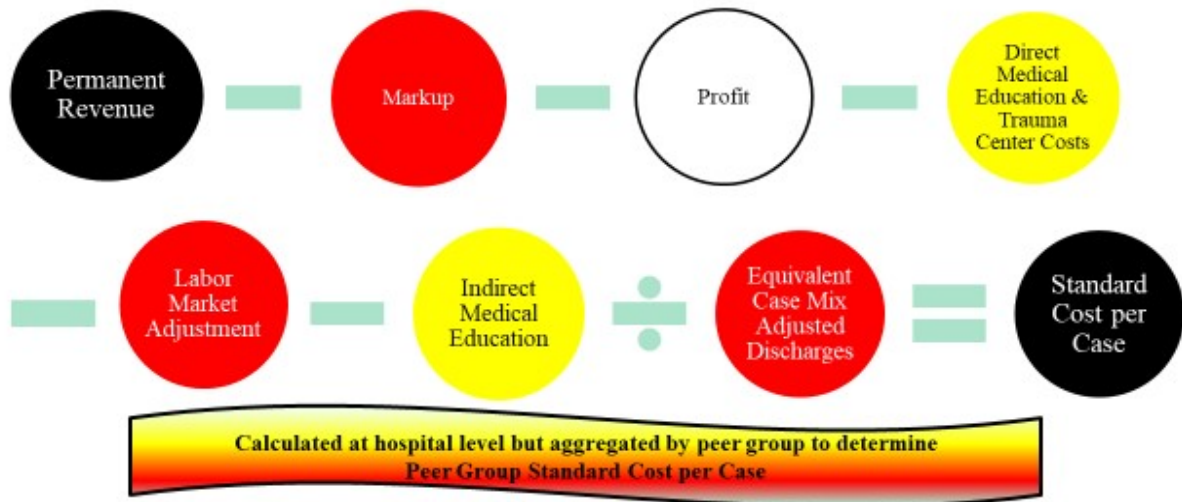
The general steps for the ICC calculation, consistent with prior practices, are as follows:

1. Calculate approved permanent revenue for included volume as measured by ECMADs that will be evaluated in the ICC methodology. This excludes the hospital revenues for one-time temporary adjustments and assessments for funding Medicaid expansion, Medicaid deficits and user fees, such as fees that support the operations of the HSCRC.
2. Permanent revenues are adjusted for social goods (e.g. medical education costs) and for costs that take into consideration factors beyond a hospital's control (e.g. labor market areas as well as markup on costs to cover uncompensated care and payer differential).
3. Hospitals are divided into peer groups for comparison, recognizing that specific adjustments may not fully account for cost differences. The adjusted revenue per ECMAD is compared to other hospitals within the peer group to assess relative adjusted charge levels. The peer groups are:
  - Peer Group 1 (Non-Urban Teaching)
  - Peer Group 3 (Suburban/Rural Non-Teaching)
  - Peer Group 4 (Urban Hospitals)
  - Peer Group 5 (Academic Medical Center Virtual, which overlaps with peer group 4)
4. There are two additional steps to convert revenues to cost. The first additional adjustment is to remove profits (profit strip throughout) from regulated services from the adjusted revenues. The second is to make a productivity adjustment to the costs. These two adjustments are made to allow for consideration of efficient costs for purposes of rate setting.
5. After applying the calculated peer group cost average to each hospital, all costs that were removed in Step 2 (social goods and factors beyond a hospital's control) are added back to each hospital to build revenue up to the ICC calculated value. The profit strip and productivity adjustment outlined in Step 4 are not added back to a hospital's revenue. The difference between the ICC calculated value and the revenue included in the ICC evaluation, as described in Step 1, is the measure of a hospital's relative efficiency in relation to the ICC Cost Standard.

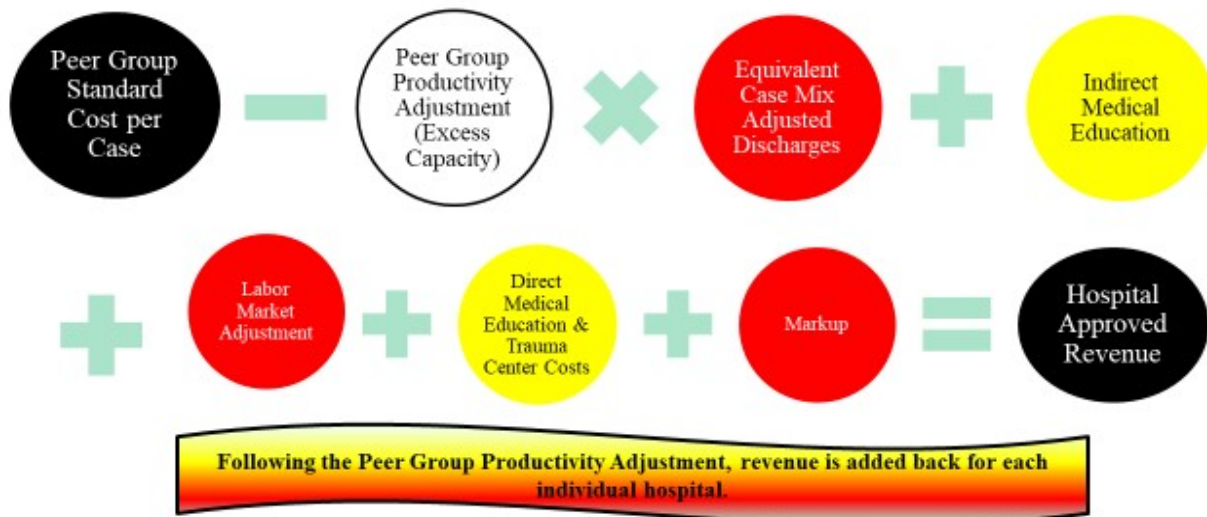
For a graphic outline of this process, please see Tables 1a and 1b.



**Table 1a: Overview of ICC Cost Comparison Calculation Determining Peer Group Cost per Case (Stripping Down)**



**Table 1b: Overview of ICC Cost Comparison Calculation Determining Total Revenue (Building Back Up)**



**Proposed Changes to ICC Methodology**

The staff will now discuss its considerations in proposing changes to the ICC relative to the methodology in effect in 2011.

## **Step 1- Calculate Permanent Revenue**

### **A. Outpatient Drug Overhead Adjustment**

As described in Appendix 1, staff has concluded its work in developing weights on outpatient cases, particularly cases that are subject to cycle billing and are ubiquitous across multiple outpatient settings. Staff did not develop usable weights for oncology and infusion drugs because these costs are highly variable by hospital due to various discounts that only certain hospitals receive, e.g., 340b discounts, and therefore do not offer a reliable efficiency comparison. As such, staff excluded oncology drugs from the cost-per case/visit comparisons but retained the charges/cost constituting drug overhead, especially since the magnitude of drug overhead allocations are not uniform across hospitals. In the HSCRC rate setting calculations, a significant portion of costs continues to be allocated based on “accumulated costs.” This process is allocating too much overhead to outpatient biological drugs, and staff has concluded that this allocation distorts cost comparisons.<sup>4</sup>

## **Step 2- Adjustments to Revenue**

Adjustments to revenue along with changes to each adjustment methodology are proposed by staff below:

### **A. Medical Education Costs**

Consistent with past practices, direct medical education costs, including nurse and other training as well as graduate medical education (GME) costs, are stripped from the permanent revenues using amounts reported in hospitals’ annual cost filings. HSCRC policies limited recognition of growth in residencies beginning in 2002, unless increases in residencies were approved through a rate setting process, consistent with Medicare policies that also limit recognition of growth in residencies. For the proposed ICC formulation, the staff is limiting the counts and costs used in the GME calculations based on the number of residents and interns that were included in the 2011 regression. Moreover, staff is capping direct medical education costs for hospitals to no more than the average direct cost per resident statewide, which in the RY 2018 annual filing was \$121, 771.

Over the years, the calculation of indirect medical education (“IME”) costs has been difficult. In 2011, the HSCRC reached a calculation after much debate of an IME allowance per resident of \$230,746. Staff believed this figure was too high for those hospitals that are not major academic medical centers with high ratios of residents per bed. As such, staff worked with a contractor to create a nationally calibrated two-peer-group model to determine major academic indirect

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<sup>4</sup> Medicare adds six percent to average sales price to pay for overhead on physician administered drugs that are not bundled into a visit cost, while non-governmental payers use a somewhat higher overhead figure on top of average sales price in their payment formulation. It is likely that HSCRC will need to change its overhead allocation and rate setting formulation for these biological and cancer drugs in the near term as costs continue to escalate. In the meantime, staff recommends retaining the overhead related revenues/costs in revenues evaluated under ICC charge-per case/visit comparisons.

medical education costs versus the IME costs per resident of other teaching hospitals.<sup>5</sup> The criteria staff used for defining these two peer groups were as follows:

**Table 2 Criteria used to define teaching intensity hospital peer groups**

Teaching intensity	Major AMC	Number of beds	IRB ratio
High	Yes	500 or more	0.60 or higher
Moderate to Low	No	Fewer than 500	0.03 to 0.60

Source: AAMC website and HCRIS, 2013-2015.

AAMC = American Association of Medical Colleges; AMC = academic medical center; HCRIS = Hospital Cost Reporting Information System

IRB ratio=Number of Interns and Residents/beds

Using the most recent three years of national hospital data (2013–2015) from the Hospital Cost Reporting Information System<sup>6</sup> and a regression that controlled for the other factors commonly associated with costs, such as hospitals’ average patient severity and indigent care burden<sup>7</sup>, it was determined that IME costs among high-teaching intensity hospitals are \$302,887 and \$110,875 for low- and moderate-teaching intensity hospitals combined. These values were inflated from the 2015 analysis to be equivalent to RY 2019 dollars.

**Table 3 Estimated IME costs, by hospital peer group, 2013–2015**

Teaching intensity	IME coefficient (\$)	Standard error	P-value	95 percent confidence interval	
All	230,675***	11,753	0.000	207,639	253,711
High <sup>a</sup>	192,012***	41,873	0.000	109,942	274,082
Moderate and low (omitted group)	110,875***	17,216	0.000	77,132	144,619

<sup>5</sup> Several studies also show that major teaching hospitals (sometimes, though not always, defined as academic medical centers or AMCs) have higher IME costs than non-major teaching hospitals. In its 2007 Report to Congress, MedPAC (2007) reported separate IME cost estimates for AMCs and other teaching hospitals. The results showed a stronger relationship to cost in AMCs than in other teaching hospitals. The IME cost estimate for major AMCs (2.6 percent) was nearly double the estimate for other teaching hospitals (1.5 percent). Nguyen and Sheingold (2011) also reported that the impact of teaching intensity on costs was higher among large urban hospitals than other hospitals. They found that costs per case for large urban hospitals increased 1.4 percent for every 10 percent increase in the ratio of residents to beds, compared with a 1.1 percent increase over all teaching hospitals.

<sup>6</sup> All Medicare-certified institutional providers are required to submit an annual cost report to a Medicare administrative contractor, which serves as the basis for the Hospital Cost Reporting Information System database. The cost report contains provider information such as facility characteristics, utilization data, cost and charges by cost center, in total and for Medicare.

<sup>7</sup> Several variables (including hospitals’ case-mix index, wage index, census region, and urban or rural designation) were derived from the IPPS Impact File, which CMS uses to estimate payment impacts of various policy changes in the IPPS proposed and final rules.

Sources: HCRIS, 2013–2015; IPPS Impact File, 2013–2015.

Notes: The results are based on 124 hospitals in the high-teaching intensity group, 510 hospitals in the moderate-teaching intensity group, and 1,006 hospitals in the low-teaching intensity group.

<sup>a</sup> To calculate the marginal effect for these groups, add the estimated IME coefficient with the estimated IME coefficient for the omitted group within a given model. Estimated IME costs for high-teaching intensity hospitals in the two-peer group model is \$302,887.

\*\*\*Significantly different from zero at the .01 level, two-tailed t-test.

HCRIS = Hospital Cost Reporting Information System; IPPS = inpatient prospective payment system.

## B. Labor Market Adjustment

In the prior ICC, the labor market adjustment was constructed using an HSCRC wage and salary survey that was based on two weeks of pay and included fringe benefits and contract labor. Each hospital was provided with a unique labor market adjustor that was more indicative of a hospital's ability or decision to pay salaries as opposed to the cost pressures hospitals face in various labor markets, and there were concerns about the consistency and accuracy of reported benefit levels and their impact on the measured wage levels. Staff suspended the wage and salary survey submission for 2017 and intends to replace this survey data with data that better accounts for labor costs hospitals cannot control. One potential solution is to utilize CMS's nationally reported data. Although this national CMS data is available historically, HSCRC staff has not had the opportunity to audit the data and there may be reporting errors. Staff and MHA have stressed the importance of accurate data in the 2017 reports to Medicare.

While staff will continue to use the HSCRC wage and salary survey in its formulation of the ICC until a new labor data source is available, it proposed in the 2018 ICC formulation to eliminate hospital specific adjustments for most hospitals. Specifically, the ICC will use two sets of hospital groupings, with the first set of grouping for Prince George's County and Montgomery County where wages are higher than Maryland's average, and a second grouping of all other hospitals, excluding various border hospitals located in isolated or rural areas.

## C. Capital Cost Adjustment

Previously, there was a capital cost adjustment for differences in capital costs, which was being phased out over time. The time has elapsed, and there is no longer an adjustment for capital cost differences.

## D. Disproportionate Share Hospital (DSH) Adjustment

In the 2011 analysis, staff made an adjustment to charges for patients considered to be poor, in consideration of the cost burden that those patients may place on hospitals with higher levels of poor patients. Prior calculations utilized the percentage of Medicaid, charity pay, and self-pay to determine this cost burden.

Medicaid expansion has dramatically increased the number of individuals with coverage. First, the expansion was extended to children, then was extended to childless adults and those with higher incomes through the ACA expansion, rendering the prior definitions of limited use.

Additionally, with increased payments available to physicians for hospital and community based services and reductions in hospitals' uncompensated care, the financial reasons for potentially continuing this policy are more limited. To evaluate the need for this adjustment, HSCRC staff compared the case-mix adjusted inpatient charges of potentially poor patients at each hospital (Medicaid, a new category of dually-eligible for Medicare and Medicaid, and self-pay and charity) to the case-mix adjusted charges of all other patients. A weighted comparison using the more sensitive severity adjusted APR-DRG's showed a small higher adjusted charge-per-case for Medicaid and dually-eligible persons and a lower charge-per-case for charity and self-pay patients. This leads staff to conclude that this adjustment is no longer needed, although staff does believe that the retention of peer groups helps to adjust for other costs that might not otherwise be well accounted for, such as security costs in inner city settings.

While Medicare has retained a DSH adjustment, it has been split into two parts. One part is for uncompensated care, which the HSCRC addresses through the uncompensated care pool. The other part of the adjustment may help Medicare continue to address a concentration of governmental payers, as Medicare and Medicaid typically reimburse hospitals at a reduced rate. Given Maryland's unique All-Payer Model, which eliminates the cross subsidization between governmental payers and private payers as seen in other states, there appears to be a limited need for a DSH adjustment, and the charge comparisons do not support it.

### **Step 3 Productivity and Cost Adjustments**

#### **A. Profits**

Staff has retained the same adjustment used to remove profits from the ICC costs, which has been used historically. Consistent with the statutory authority of HSCRC, the Commission does not regulate professional physician services. The adjustment removes profits for regulated services and does not incorporate subsidies or losses for professional physician services.

#### **B. Productivity Adjustment**

Staff recommends an alternative approach to calculate the productivity adjustment. In 2011, the methodology used a productivity adjustment of two percent that was applied across the board to all hospitals in all peer groups. Staff is recommending an excess capacity adjustment, which was formulated based on the declines in patient days (including observation cases >23 hours) from 2010 through 2018 in each peer group as well as the change in outpatient surgery days with a length of stay greater than 1 from 2013 to 2017. The adjustment varies by peer group.

- Peer Group 1 (Non-Urban Teaching) – 1.73 percent
- Peer Group 3 (Suburban/Rural Non-Teaching) – 2.94 percent
- Peer Group 4 (Urban Hospitals) – 4.46 percent
- Peer Group 5 (Academic Medical Center Virtual) – 0 percent

Due to concerns raised by stakeholders during the workgroup process, staff is modifying its original proposal such that all peer groups will be assessed a minimum threshold productivity adjustment of 2%. While staff still believes it is important to assess excess fixed costs in the system when determining hospital efficiency, thereby creating differentiation between desired levels of productivity improvement for each peer group, staff concurs that each peer group should have a minimum level of productivity improvement built into its ICC analysis. Thus, the productivity adjustment for Peer Group 1 will increase from 1.73% to 2% and Peer Group 5 from 0% to 2%.

#### **Step 4- Building Up a Hospital's Permanent Revenue**

##### **A. Volume Adjustment**

In iterations of the ICC that relatively rank hospitals for the purpose of identifying efficiency outliers, staff proposes to volume adjust the ICC. Specifically, growth rates for potentially avoidable utilization, as defined by the PAU Shared Savings program,<sup>8</sup> and various types of medical services that represent additional proxies for avoidable utilization and have not been deregulated or shifted through the Market Shift methodology,<sup>9</sup> will be assessed from CY 2013 to RY 2018. The inverse of PAU growth rates, both positive and negative, will be multiplied by a hospital's PAU ECMADS, thereby adding or subtracting volume used in the final calculation of a hospital's ICC approved revenue. That is, if a hospital reduced PAU over the course of the All-Payer Model, the volume will be added to its evaluation, thereby making the hospital appear more efficient in a cost per case analysis. Conversely, if a hospital increased PAU, volume will be removed from the ICC evaluation, thereby making the hospital less efficient.

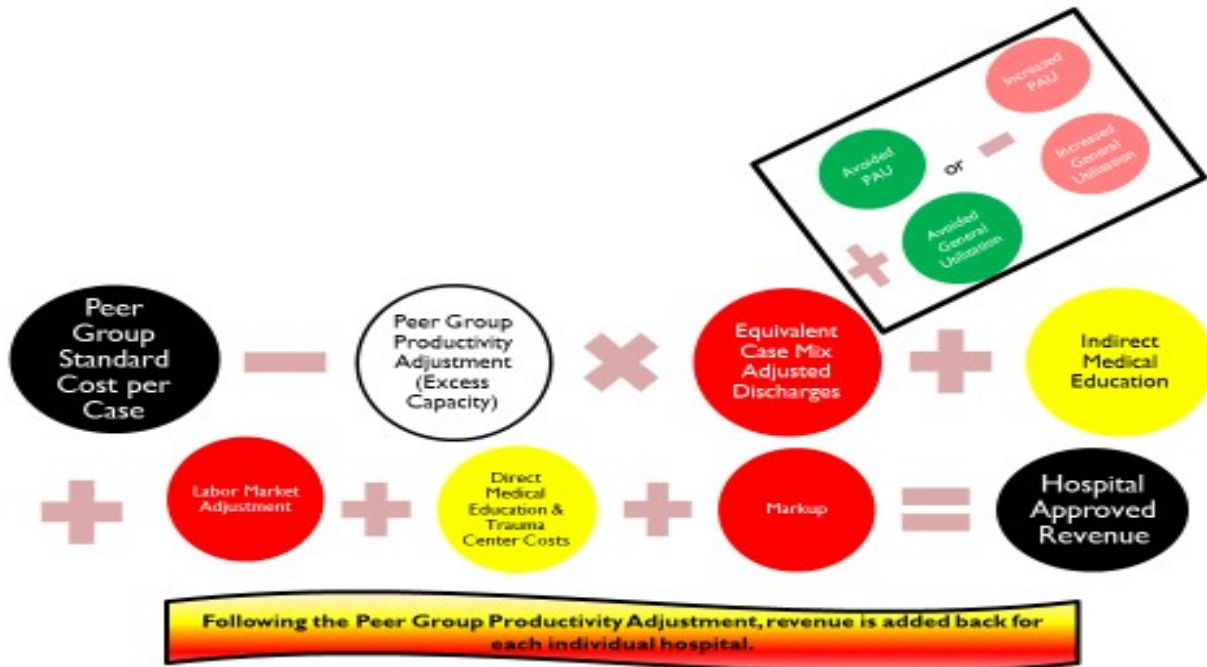
For volume not identified as PAU, staff will incorporate utilization changes from 2013 by enumerating the ECMADS not recognized by the Market Shift methodology and similarly adding or subtracting the volume from the ICC evaluation. For a visual display of this calculation see table 4:

#### **Table 4: Overview of ICC Cost Comparison Calculation Determining Total Revenue (Building Back Up) with Volume Adjustment**

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<sup>8</sup> In the PAU Shared Savings program, there are two volume measurements: readmissions that are specified as 30-day, all-payer, all-cause readmissions at the receiving hospital with exclusions for planned admissions; and hospitalizations for ambulatory-care sensitive conditions as determined by the Agency for Health Care Research and Quality's Prevention Quality Indicators (PQIs).

<sup>9</sup> Included in the analysis of potentially avoidable utilization not incorporated in the PAU Shared Savings program are the following service lines: Cardiology, Dental, Dermatology, Diabetes, ED, Endocrinology, Electrophysiology/Chronic Rhythm Management, Gastroenterology, General Medicine, Gynecology, Hematology, HIV, Infectious Disease, Nephrology, Neurology, Inpatient Oncology, Ophthalmology, Orthopedics, Otolaryngology, Pulmonary, Rheumatology, Substance Abuse, and Urology. One exception to this list is CY 2016 Gastroenterology volume, which experienced large utilization declines due to the conversion from ICD-9 to ICD-10 and therefore is not a good proxy for avoided utilization.



## Overview of Medicare Total Cost of Care Calculations

Currently, staff is proposing to use the Medicare Fee-for-Service (FFS) per capita total cost of care growth (TCOC Growth) of a hospital's geographic attributed beneficiaries from CY 2013 to CY 2018 as the measure of growth in the efficiency evaluation. However, in future revised policy recommendations for RY 21 and beyond, a different approach may be used for Medicare total cost of care performance calculation. Additionally, as commercial benchmarks are identified, calculation of commercial total cost of care will be evaluated as well.

Consistent with the Total Cost of Care (TCOC) Model, the cost used in this evaluation will include all types of medical costs (including both hospital and non-hospital services) with the exception of retail pharmacy.

Hospitals' TCOC growth will be ranked from least growth to most growth. The score from this ranking will be added to the ranking from the ICC. The worst performing quintile of hospitals will be subject to a revenue adjustment.

### Geographic Attribution Approach

For the purpose of this calculation, a hospital's attributed beneficiaries will be determined based on the PSA-Plus (PSAP) method used for the geographic attribution layer of the Medicare Performance Adjustment attribution approved by the Commission in November 2017. Under this approach, beneficiaries are attributed based on their zip code of residence. Zip codes are attributed to hospitals through three steps:

1. Costs and beneficiaries in zip codes listed as Primary Service Areas (PSAs) in the hospitals' GBR agreements are assigned to the corresponding hospitals. Costs and beneficiaries in zip codes claimed by more than one hospital are allocated according to the hospital's share on equivalent case-mix adjusted discharges (ECMADs) for inpatient and outpatient discharges among hospitals claiming that zip code. ECMADs are calculated from Medicare FFS claims for the Federal fiscal years 2014 and 2015.
2. Zip codes not claimed by any hospital are assigned to the hospital with the plurality of Medicare FFS ECMADs in that zip code, if it does not exceed 30 minutes' drive time from the hospital's PSA. Plurality is identified by the ECMAD of the hospital's inpatient and outpatient discharges during the attribution period.
3. Zip codes still unassigned will be attributed to the nearest hospital based on drive-time.

## Efficiency Assessment

### **Withholding Inflation from Outlier Hospitals**

In this section, staff provides the results of the Volume Adjusted ICC for RY 2019 permanent revenue as well as results for Medicare Total Cost of Care growth from 2013 to 2018 as measured by a geographic attribution. Using these two statistics and weighting each equally (50/50), hospitals are arrayed into quintiles such that hospitals in the bottom quintile will be considered to be the most costly relative to hospital peers. Staff will furthermore remove hospitals that have a ratio of less than 1.21 of revenue versus the ICC cost standard, as 1/3 of hospitals are in excess of this standard and any larger representation of hospitals may run afoul of the intended outlier intention of this proposed efficiency policy. Based on this analysis, staff ultimately recommended that the remaining hospitals that are in worst quintile of performance, as outlined above, and are in excess of the 1.21 times the ICC cost standard, should have their Medicare portion of the RY 2020 update factor withheld, effective January 1, 2020. However, given staff's recommendation to delay implementation of this policy until RY 2021, the results below are merely representative of current efficiency analyses.

### **Global Budget Revenue Enhancements**

In this section, the best performing quintile for Volume Adjusted ICC and Medicare Total Cost of Care growth from 2013 to 2018 are listed. Staff removed hospitals that are not better than one standard deviation from average Volume Adjusted ICC performance or 1.06 times the ICC Cost Standard. The remaining hospitals will be considered favorably when submitting requests for GBR enhancements.



## ICC Results

As aforementioned, the difference between the Quality and Volume Adjusted ICC evaluated revenue figure, the revenue that was actually inputted into the ICC methodology, and the Quality and Volume Adjusted ICC calculated value is a hospital's measure of efficiency relative to the ICC cost standard. Table 5 below demonstrates this measure of efficiency as both a dollar value and a percentage. The table is ranked in order of most favorable to least favorable.

**Table 5: RY 2019 Volume Adjusted ICC Efficiency Rankings (Percentage and Dollar)\***

	<u>Relative Efficiency to ICC Standard %</u>	<u>Relative Efficiency to ICC Standard \$</u>		<u>Relative Efficiency to ICC Standard %</u>	<u>Relative Efficiency to ICC Standard \$</u>
<b>Mercy Medical Center</b>	-2.19%	-\$11,288,883	<b>St. Joseph Medical Center</b>	-14.57%	-\$56,788,405
<b>Suburban Hospital</b>	-2.54%	-\$8,127,767	<b>Washington Adventist Hospital</b>	-15.22%	-\$41,302,814
<b>Harbor Hospital Center</b>	-3.70%	-\$6,825,228	<b>Frederick Memorial Hospital</b>	-16.80%	-\$57,988,040
<b>Atlantic General Hospital</b>	-4.24%	-\$4,358,123	<b>Upper Chesapeake Medical Center</b>	-17.36%	-\$57,211,574
<b>Union Memorial Hospital</b>	-4.87%	-\$20,661,344	<b>Harford Memorial Hospital</b>	-17.55%	-\$18,399,756
<b>Fort Washington Medical Center</b>	-5.57%	-\$2,797,648	<b>Good Samaritan Hospital</b>	-19.25%	-\$49,654,103
<b>Anne Arundel Medical Center</b>	-5.87%	-\$34,088,705	<b>Shore Medical Dorchester</b>	-19.85%	-\$9,253,880
<b>Holy Cross Hospitals</b>	-7.55%	-\$45,538,748	<b>Sinai Hospital</b>	-20.17%	-\$148,485,449
<b>Garrett County Memorial Hospital</b>	-7.95%	-\$4,724,540	<b>Carroll Hospital Center</b>	-21.07%	-\$47,838,037
<b>Johns Hopkins Hospital</b>	-9.59%	-\$209,049,933	<b>Western Maryland Regional Medical Center</b>	-21.21%	-\$65,948,381
<b>Meritus</b>	-10.12%	-\$33,371,254	<b>Doctors Community Hospital</b>	-21.65%	-\$53,538,054

<b>Bayview Medical Center</b>	-10.21%	-\$62,755,143	<b>Shore Medical Easton</b>	<b>-21.79%</b>	-\$44,137,936
<b>Howard County General Hospital</b>	-10.26%	-\$30,732,035	<b>Calvert Memorial Hospital</b>	<b>-22.19%</b>	-\$30,926,176
<b>Baltimore Washington Medical Center</b>	-10.46%	-\$43,082,040	<b>Montgomery General Hospital</b>	<b>-22.71%</b>	-\$38,439,675
<b>Charles Regional</b>	-11.04%	-\$16,846,026	<b>Southern Maryland Hospital Center</b>	<b>-23.15%</b>	-\$62,410,124
<b>Greater Baltimore Medical Center</b>	-12.13%	-\$53,363,143	<b>Chester River Hospital Center</b>	<b>-24.29%</b>	-\$12,792,890
<b>St. Agnes Hospital</b>	-12.39%	-\$51,601,147	<b>Northwest Hospital Center</b>	<b>-24.36%</b>	-\$62,863,446
<b>Peninsula Regional Medical Center</b>	-12.85%	-\$54,736,005	<b>Laurel Regional Hospital</b>	<b>-25.31%</b>	-\$22,939,071
<b>Shady Grove Adventist Hospital</b>	-12.88%	-\$49,843,375	<b>Bon Secours Hospital</b>	<b>-26.22%</b>	-\$28,484,930
<b>Prince Georges Hospital</b>	-13.06%	-\$38,568,811	<b>UMMC Midtown</b>	<b>-26.49%</b>	-\$54,623,493
<b>Franklin Square Hospital Center</b>	-13.54%	-\$68,187,882	<b>UMROI</b>	<b>-27.00%</b>	-\$27,746,448
<b>St. Mary's Hospital</b>	-13.68%	-\$24,242,314	<b>McCready Memorial Hospital</b>	<b>-27.27%</b>	-\$4,217,179
<b>University Medical Center</b>	-13.70%	-\$174,446,050	<b>Union of Cecil</b>	<b>-30.59%</b>	-\$48,083,592

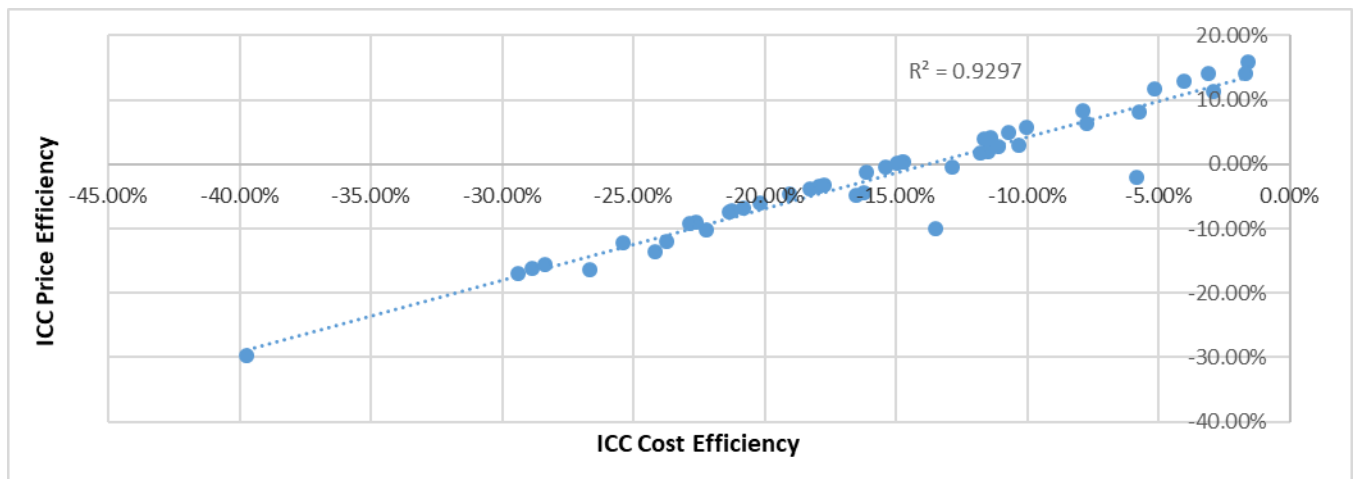
\*Highlighted values represent hospitals that have an ICC calculated value in excess of standard deviation of average performance.

As shown, no hospitals are deemed more efficient than the ICC cost standard, but it is important to note that this is because the ICC standard has become more difficult to attain, since hospital profits have improved under the All-Payer Model. This would not preclude the best performing hospitals from qualifying for a GBR enhancement.

While total profit margins are lower because of unregulated losses, most notably physician subsidies, staff has not made adjustments to the profits stripped from hospitals' revenue base to account for these losses. This is consistent with the statutory authority of HSCRC, as the Commission does not regulate professional physician services. Future work outlined in the *Future Policy Considerations* section below does indicate that staff will attempt in subsequent iterations of the ICC to credit unregulated losses that are in line with the incentives of the Total Cost of Care Model, but at this point staff will make no modifications.

Critics of the ICC have noted that not accounting for unregulated losses does not accurately portray the new costs associated with providing care in a population-based per capita model. Staff agrees with this concern but notes that this is why the implementation of the efficiency policy incorporates total cost of care performance and only addresses outliers. Regardless of any imprecision in the ICC methodology, hospital prices per case grew rapidly in the global revenue era as volumes have declined or not risen. This is an expected outcome similar to the rise in per diem payments when length-of-stay initially fell under the DRG system. To ensure that charges do not become too high, especially given the proliferation of high deductible plans that consumers face, staff recommends using the combination of cost-per-case analyses and total cost of care to identify outliers. Moreover, staff notes that there is a high degree of correlation between high priced hospitals and high cost hospitals, as determined by the ICC ( $R=0.96$ ,  $R^2=0.93$ ). This suggests that the hospitals identified in the outlier analysis are not just inefficient in costs relative to their peers, but that they are also receiving reimbursement commensurate with their higher costs (see Table 6 below for the correlation analysis).

**Table 6: Correlation between Hospital ICC Cost Efficiency and ICC Price Efficiency with no Productivity Adjustment**



### TCOC Growth Results

Using the geographic attribution described in the *Efficiency: Overview of Medicare Total Cost of Care Calculations* section, staff has determined that 20 hospitals had Medicare total cost of care growth from CY 2013 to CY 2018 less than or equal to the statewide average of 7.31%, and 26 hospitals had Medicare total cost of care growth in excess of this figure. Table 7 below shows the growth results for each performance year, compared to the base year of CY 2013. The final column showing the growth from CY 2013 to CY 2018 is used in the determination of efficiency cost outliers for RY 2020. Table 7 below shows the Medicare total cost of care growth attributed to each hospital, ranked from best to the worst total cost of care performance for CY 2018:

**Table 7: Hospital Attributed Total Cost of Care Growth Performance**

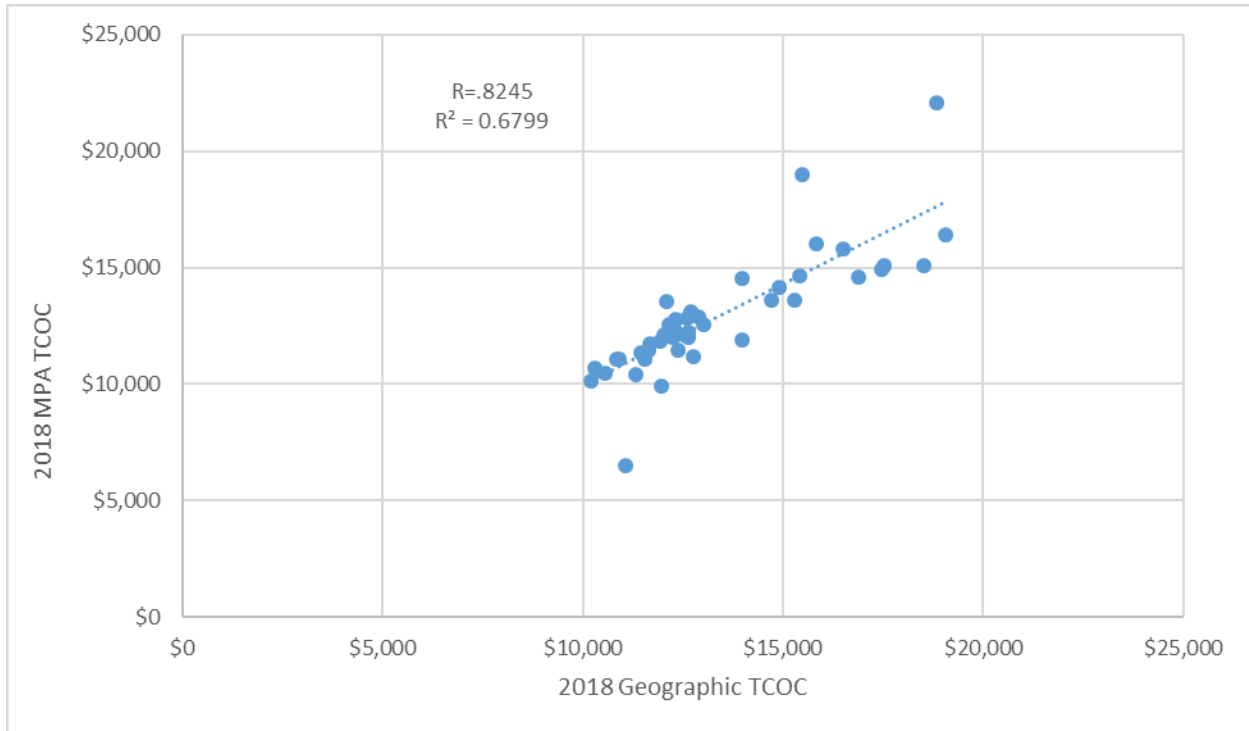
Hospital Name	2013 TCOC per Capita	2018 TCOC per Capita	14 vs 13	15 vs 13	16 vs 13	17 vs 13	18 vs 13
Greater Laurel Hospital	\$11,870	\$12,236	-4.09%	0.41%	-0.15%	6.62%	3.09%
Harford Memorial	\$12,201	\$12,621	-3.20%	-5.62%	0.04%	2.18%	3.44%
Anne Arundel Medical Center	\$10,173	\$10,533	-3.86%	0.12%	-1.55%	0.75%	3.53%
MedStar Southern Maryland	\$11,560	\$11,998	-0.85%	1.08%	0.35%	3.72%	3.79%
Johns Hopkins	\$16,842	\$17,483	-4.48%	-0.16%	-2.00%	2.24%	3.81%
Saint Agnes Hospital	\$13,418	\$13,968	-2.01%	-0.90%	0.55%	2.34%	4.10%
Washington Adventist	\$11,839	\$12,354	-1.47%	1.11%	1.18%	2.36%	4.35%
Doctors' Community Hospital	\$11,771	\$12,303	-3.29%	0.44%	3.55%	3.16%	4.52%
Atlantic General	\$10,805	\$11,346	-1.42%	-0.31%	-3.79%	3.81%	5.01%
UM Shore Medical Center at Easton	\$11,639	\$12,298	1.52%	2.22%	0.17%	2.70%	5.67%
UM Baltimore Washington Medical Center	\$11,885	\$12,596	0.04%	1.82%	1.59%	3.38%	5.98%
McCready	\$12,052	\$12,779	-8.28%	-4.48%	-4.04%	0.73%	6.03%
Johns Hopkins Bayview Acute Care	\$14,939	\$15,849	-1.18%	3.54%	3.76%	5.84%	6.09%
Meritus Medical Center	\$11,233	\$11,928	-4.03%	-1.09%	0.10%	3.38%	6.18%
Frederick Memorial	\$10,877	\$11,625	-2.35%	-0.20%	-0.49%	3.03%	6.88%
Western MD Health System	\$12,057	\$12,900	-2.54%	-0.56%	3.08%	3.68%	7.00%
Northwest Hospital	\$13,755	\$14,719	1.44%	2.33%	1.24%	6.10%	7.01%
Sinai Hospital	\$14,374	\$15,402	-0.07%	1.76%	1.49%	5.85%	7.15%
UM Shore Medical Center at Chestertown	\$11,668	\$12,504	5.22%	4.98%	2.52%	9.52%	7.16%
Levindale	\$14,242	\$15,283	-0.24%	1.42%	1.31%	5.63%	7.31%
Holy Cross Hospital	\$10,678	\$11,500	-0.51%	1.55%	1.26%	4.38%	7.69%
Calvert Memorial	\$10,763	\$11,607	-3.09%	2.40%	0.01%	2.74%	7.84%
Carroll County General	\$11,243	\$12,126	-2.50%	-0.58%	-1.75%	5.73%	7.85%
MedStar Franklin Square	\$13,827	\$14,917	-1.17%	0.87%	1.82%	6.17%	7.88%
Howard General Hospital	\$10,034	\$10,828	1.97%	0.49%	3.80%	4.49%	7.92%
Peninsula Regional	\$11,191	\$12,139	0.62%	1.09%	0.95%	7.68%	8.48%
MedStar Saint Mary's Hospital	\$11,028	\$12,008	-1.92%	0.99%	1.79%	6.81%	8.89%
Upper Chesapeake Medical Center	\$11,209	\$12,219	2.52%	2.99%	0.96%	6.40%	9.01%
Mercy Medical Center	\$16,046	\$17,526	-0.13%	2.31%	2.21%	7.42%	9.23%
MedStar Union Memorial	\$15,067	\$16,504	1.22%	7.46%	3.00%	9.32%	9.53%
Bon Secours	\$17,271	\$19,052	-2.89%	-2.62%	0.33%	4.50%	10.31%
Prince George's Hospital Center	\$12,624	\$13,937	4.64%	5.23%	7.14%	9.93%	10.40%
Fort Washington	\$10,788	\$11,911	7.30%	7.03%	7.07%	5.44%	10.42%
Shady Grove Adventist	\$9,833	\$10,887	-0.38%	4.77%	3.47%	5.92%	10.71%
Union of Cecil	\$11,467	\$12,722	3.95%	-0.28%	3.46%	10.02%	10.94%
University of Maryland	\$16,692	\$18,533	1.24%	0.77%	3.45%	6.93%	11.03%
Holy Cross Germantown Hospital	\$9,967	\$11,071	0.93%	7.45%	6.52%	5.98%	11.08%

<b>Greater Baltimore Medical Center</b>	\$11,417	\$12,691	-0.53%	3.98%	3.51%	8.86%	11.15%
<b>UM Saint Joseph Medical Center</b>	\$11,701	\$13,006	-0.56%	3.01%	3.36%	8.85%	11.16%
<b>UM Charles Regional Medical Center</b>	\$11,286	\$12,610	-4.10%	3.77%	3.79%	5.29%	11.72%
<b>Suburban Hospital</b>	\$9,131	\$10,260	0.84%	4.85%	2.00%	5.49%	12.37%
<b>MedStar Montgomery General</b>	\$10,149	\$11,425	1.98%	3.65%	3.15%	9.14%	12.57%
<b>UM Medical Center Midtown Campus</b>	\$16,708	\$18,820	3.19%	2.89%	4.79%	9.95%	12.64%
<b>MedStar Good Samaritan</b>	\$13,723	\$15,496	3.43%	6.62%	7.20%	12.75%	12.93%
<b>MedStar Harbor Hospital</b>	\$14,315	\$16,897	-1.11%	7.44%	10.00%	12.61%	18.04%
<b>Garrett County</b>	\$8,503	\$10,201	-1.60%	8.34%	5.33%	11.58%	19.96%
<b>Maryland Statewide</b>	\$11,767	\$12,627	-0.58%	1.84%	1.57%	5.02%	7.31%

As aforementioned, staff has concerns about the geographic attribution versus the provider driven attribution in the Medicare Performance Adjustment (MPA). However staff recommends using the geographic attribution because it is important to evaluate total cost of care growth relative to the beginning of the All-Payer Model. If hospital utilization from a hospital's primary service area was successfully avoided prior to the implementation of the MPA and was not substituted elsewhere, the use of total cost of care performance helps mitigate a hospital's perceived ICC cost inefficiency within the hospital.

Regardless, staff felt it was still important to test correlation between results in the MPA and the geographic attribution to assuage concerns that efficiency rankings could potentially be very different. As shown in Table 8, there is a strong relationship between CY 2018 total cost of care performance based on the MPA and geographic attributions, suggesting the attributions yields similar results:

**Table 8: Correlation between Total Cost of Care Attainment as measured by Geographic and MPA attributions**



Staff cannot run similar analyses to determine similarity between 2013 geographic and MPA attainment due to data limitations and, therefore, cannot definitively determine if the growth calculations are similar under both methodologies. However, staff notes the similarity in the 2018 results and supports the geographic attribution to enable the measurement of performance back to 2013. As previously noted, completion of attainment benchmarks will provide an important enhancement to total cost of care growth comparisons.

### Implementation of Efficiency Results

#### Withholding Inflation from Outlier Hospitals

Staff recognizes that any combination of cost-per-case and total cost of care tools does not precisely identify a hospital’s efficiency rank order, especially near the median of performance, and staff believes that implementation of an efficiency policy should align with historical HSCRC policies to focus on outliers. Moreover, a central limitation in these analyses is that the total cost of care tools are Medicare only.

Therefore, staffs recommends weighting equally the two rankings from the Volume Adjusted ICC and geographic total cost of care growth calculations to array hospitals into quintiles such that hospitals in the bottom quintile will be considered the least efficient and hospitals in the top quintile will be considered the most efficient relative to hospital peers. Staff furthermore recommends removing hospitals that have an index of revenue to the ICC cost standard of less

than 1.21 from the revenue reduction proposal, to ensure that the HSCRC limits revenue reductions to outliers. Finally, staff recommends that the remaining hospitals, deemed outliers as outlined above, should have the Medicare portion of their RY 2020 update factor withheld, because the total cost of care analyses were limited to Medicare. Over time this policy will bring hospitals in line within the standard proposed for the spend-down limit.

In looking at the array of hospitals according to a 50/50 ranking of Quality and Volume Adjusted ICC and geographic total cost of care growth ranking, staff identified nine hospitals that met the initial categorization of outliers. See Table 9 for results:<sup>10</sup>

**Table 9: Outlier Hospitals as Determined by ICC & Geographic TCOC Rankings – Efficiency Matrix**

Hospital Name	ICC Result	ICC Rank	2013-2018 TCOC per Capita Growth Rate	TCOC Rank	Total Rank Points (Low Score is Better)
University of Maryland Medical Center	-13.70%	23	11.03%	36	59
University of Maryland Shore Medical Center at Chestertown	-24.29%	39	7.16%	20	59
University of Maryland Rehabilitation & Orthopaedic Institute	-27.00%	44	11.03%	36	80
University of Maryland St. Joseph Medical Center	-14.57%	24	11.16%	39	63
MedStar Good Samaritan Hospital	-19.25%	29	12.93%	44	73
Bon Secours Hospital	-26.22%	42	10.31%	31	73
MedStar Montgomery Medical Center	-22.71%	37	12.57%	42	79
Union Hospital of Cecil County	-30.59%	46	10.94%	35	81
University of Maryland Medical Center Midtown Campus	-26.49%	43	12.64%	43	86

Of these hospitals, two were removed from consideration because they already have preexisting arrangements with the HSCRC to address their cost inefficiencies, University of Maryland Medical Center Midtown Campus and Bon Secours Hospital. Staff also removed University of

<sup>10</sup> For the complete array of hospitals based on ICC ranking and TCOC ranking, see Appendix 4

Maryland St. Joseph Medical Center, University of Maryland Medical Center, and MedStar Good Samaritan Hospital because these hospitals had an index of relative efficiency that was better than the 1.21 maximum level staff proposes for the application of formulaic revenue adjustments. Again, it is important to note that the ICC standard already removes 9 to 13 percent of revenue depending on the peer group.

Of the remaining hospitals, staff calculated that withholding the Medicare portion of the RY 2020 Update Factor, which is measured by multiplying a hospital’s Medicare fee for service share of total hospital revenue estimated for RY 2020, would remove \$7.1 million. In light of the recommended delay of this policy until RY 2021, this calculation is for illustrative purposes only.

**Table 10: RY 2020 Medicare Update Factor Withhold for Outlier Hospitals**

Hospital Name	RY 2019 Permanent Revenue	Utilized Medicare FFS %	Medicare Portion of RY 2019 Permanent Revenue Base	Update Factor	Potential Cap on Withhold per Efficiency Matrix	Mid-Year Implementation
<i>Algebra</i>	<i>A</i>	<i>B</i>	<i>C=A*B</i>	<i>D</i>	<i>E=D*C</i>	<i>F=E/2</i>
University of Maryland Shore Medical Center at Chestertown	\$53,535,766	54%	\$28,741,656	3.35%	\$962,845	\$481,423
University of Maryland Rehabilitation & Orthopedic Institute	\$120,383,835	32%	\$39,032,073	3.35%	\$1,307,574	\$653,787
Montgomery General Hospital	\$176,329,979	46%	\$81,160,559	3.35%	\$2,718,879	\$1,359,439
Union Hospital of Cecil County	\$160,537,054	39%	\$63,405,655	3.35%	\$2,124,089	\$1,062,045
<b>Total</b>	<b>\$510,786,634</b>	<b>42%</b>	<b>\$212,339,943</b>		<b>\$7,113,388</b>	<b>\$3,556,694</b>

### Global Budget Revenue Enhancements

As aforementioned, this recommendation also outlines the process by which hospitals will be evaluated when GBR enhancement requests are submitted to the HSCRC. Specifically, for a hospital to receive a GBR enhancement, it must be in the best quintile of performance as evaluated in the Efficiency Matrix, it must be better than one standard deviation from average Volume Adjusted ICC performance (1.06 times the ICC standard) and it must submit a formal request to the HSCRC that outlines either: a) how a previous methodology disadvantaged the hospital; or b) a spending proposal that aligns with the aims of the Total Cost of Care Model.



Because this proposal still requires hospitals to submit a formal proposal to the HSCRC in order to successfully receive a GBR enhancement, staff will not outline the exact amounts a hospital may receive under such a policy. However, in Table 11 below staff does outline the hospitals that currently would be eligible for a GBR enhancement:

**Table 11: Hospitals Eligible for a GBR Enhancement in RY 2020**

Hospital Name	ICC Result	ICC Rank	2013-2018 TCOC per Capita Growth Rate	TCOC Rank	Total Rank Points (Low Score is Better)
Anne Arundel Medical Center	-5.87%	7	3.53%	3	10
Atlantic General Hospital	-4.24%	4	5.01%	9	13
Mercy Medical Center	-2.19%	1	9.23%	29	30

### Future Policy Considerations

While staff believes the efficiency methodologies and implementation proposal are sound, staff acknowledges that more work is needed to refine the ICC and total cost of care analyses. Staff describes below various work streams to improve the efficiency methodologies.

For the ICC, staff will endeavor to modify the casemix methodology to better account for the differing acuity levels of rehab cases while also working to create a new labor market adjustment, which requires both methodological development work, as well as revised data submission and auditing protocols. Additionally, staff will work to include national analyses that were completed for inpatient efficiency evaluations of the State’s two major academic medical centers. Staff plans to complement these analyses by incorporating them into an outpatient-only ICC that will effectively evaluate the State’s two academics both on a national level for inpatient services and on a Maryland peer group level for outpatient services. Finally, staff will continue the work to quantify the investments hospitals are making in unregulated settings that are in line with the incentives of the Total Cost of Care Model, thereby providing a path for hospitals to acquire credit in the ICC evaluation when retained revenues are used to improve health outcomes.

In terms of total cost of care, staff will focus on completing total of care benchmarks. The enhanced total cost of care benchmark approach<sup>11</sup> will rely on three primary components.

<sup>11</sup> See Appendix 5 for more detail on Total Cost of Care Benchmark Calculations

Currently these components are all associated with Medicare fee-for-service costs only; results for other payers will be considered in the future. The components are:

- (1) Average per capita Medicare fee-for-service total cost of care growth for each hospital based on the beneficiaries attributed to that hospital by the MPA attribution approach approved by the Commission in November 2017. Under this approach, Medicare fee-for-service beneficiaries are attributed to hospitals in a tiered fashion with the higher tiers reflecting relationships established between beneficiaries and primary care providers and hospitals. These relationships are established via a mapping similar to that used by the Maryland Primary Care Program or via an ACO. Beneficiaries not assigned on this basis are assigned based on historical utilization patterns and for beneficiaries with limited or no historic utilization, based on geography.
- (2) Cost benchmarks established for each Maryland County, based on costs for demographically similar counties throughout the country. Similar counties were identified in two steps (1) narrowing possible benchmark counties for each Maryland county to those of a similar population size and density and (2) from the narrowed list selecting the counties with the closest match to the Maryland county in terms of four demographic characteristics: level of deep poverty, median income, price parities and clinical risk as measured by the CMS Hierarchical Condition Category Score (HCC). For the five largest Maryland counties, where there are less possible comparable counties, the benchmark cohort was made up of the 20 most similar national counties, for all other Maryland counties the benchmark cohort has 50 members.
- (3) Hospital relative total cost of care performance, which is the ratio of the Hospital's total cost of care for its MPA attributed beneficiaries to a risk-adjusted benchmark derived by blending the relevant county benchmarks in proportion to the counties of residence of the hospital's MPA attributed beneficiaries and then adjusting to normalize to the hospital's demographics.

## Responses to Stakeholder Comments

Staff received responses from the Maryland Hospital Association (MHA), Johns Hopkins Health System, (JHHS) University of Maryland Medical System (UMMS), MedStar Health, and CareFirst.

UMMS and MedStar offered support of MHA's comments along with a few additional technical comments. JHHS did not formally endorse MHA's comments but did echo many of the technical points made by MHA as well as larger conceptual arguments. CareFirst supported two of MHA's comments and offered several comments that were at odds with the hospital industry.

All comments and staff responses will be discussed herein.

## Unanimous Agreement

All stakeholder comment letters expressed support for making adjustments based on evaluations of efficiency, for adjusting efficiency analyses by improvement or lack thereof in Potentially Avoidable Utilization, and for maintaining revenue neutrality for efficiency adjustments, albeit for differing reasons:

- a) Hospital industry did not support scoring efficiency adjustments as savings to payers and asked that funding be made available to efficient hospitals
- b) CareFirst was concerned about the small size of the efficiency policy and that enhancement rewards could eclipse efficiency rate reductions

***Staff Response: Staff supports some redistribution as a means to allow efficient hospitals to obtain additional funding that would not require the rigor of a full rate application. Staff also supports employing a transparent process with clear incentives that would cease GBR adjustments made without analysis of efficiency. Finally, staff would note that all GBR enhancements would be capped by efficiency adjustments made through the Integrated Efficiency Policy and the annual set aside voted on by Commissioners in the Annual Update Factor Policy.***

### **Larger Conceptual Concerns**

All hospital stakeholder letters expressed concern about the lack of a stated goal and objective in the Draft Integrated Efficiency Policy. Comments also made mention of potential applications of the tools discussed in the Integrated Efficiency Policy, specifically scaling the update factor for efficiency, rate applications, GBR enhancements and negotiated spenddowns

***Staff Response: The principal aim of the Integrated Efficiency Policy is to formulaically penalize and reward hospital efficiency while 1) maintaining the Model's incentive to reduce avoidable utilization and 2) keeping fidelity to the Commission's statutory mandate to ensure costs are reasonable and charges are reasonably related to costs.***

***Specifically, staff incorporated the Inter-Hospital Cost Comparison (ICC) methodology because it ensures costs are reasonable by using peer groups average costs to determine a hospital's revenue base and it ensures hospital charges are reasonably related to costs, as profits are removed from the evaluation. There is no statutory mandate to ensure that there is more limited price variation in hospital charges and the Federal government no longer requires Maryland hospitals to maintain charges at a rate lower than national growth***

***Staff would also note that any cost or charge per case analysis is a counter incentive to reducing avoidable utilization further. By capping the extent of the ICC score to hospitals above one standard deviation from average performance, staff ensures that efficiency adjustments are only levied on "outliers."***

***As staff has mentioned in several workgroup meetings and in the Draft Integrated Efficiency Policy, this policy will only be used for identifying outliers. It will not be used for rate applications or negotiated spenddowns. Future policy recommendations will address these applications of the Efficiency tools.***

All hospitals also expressed a desire to maintain transparency and opportunities for further methodology review, including, additional review of indirect medical education cost calculations and the new casemix methodology, which requires patient identifiers.

**Staff Response:** *Over the past 20 months, public workgroups have met to discuss and develop the individual aspects of the efficiency methodologies and the larger conceptual framework (ICC, ECMAD, Efficiency Subgroups). Moving forward, staff will continue to convene efficiency workgroups to review and potentially refine methodologies, but notes that all the methodologies mentioned as issues for future review were discussed at length during these meetings.*

*For the casemix methodology, staff is working on creating a deidentified dataset so that industry can run the new methodology independent of the HSCRC. Expected delivery date- November 30, 2019.*

MHA asked staff to revisit unit rate compliance once an efficiency measure is in place.

**Staff Response:** *Staff is not supportive of this request. The Integrated Efficiency Policy is intended to penalize and reward efficiency outliers. Unit rate compliance, i.e. ensuring charges do not fluctuate with volume changes more than the standard amount of 5%, is assessed across all hospitals.*

CareFirst expressed concern over the small size of the revenue adjustments for poor performing outlier hospitals and posited that an alternative efficiency methodology could provide stronger incentives to hospitals to control TCOC.

**Staff Response:**

*Staff welcomes any suggestions to better improve the efficiency methodologies, which are attempting to navigate two competing policy goals of incentivizing further reductions in avoidable utilization and maintaining charges reasonably related to costs.*

*Also, staff believes it is important to consider the proposed efficiency methodologies in the context of the other efficiency adjustments and in terms of the revenue of the individual hospitals affected. See chart:*

**Table 11: RY 2020 Integrated Efficiency Policy Recommendation Sizing Comparisons**

Hospital Name	RY 2020 Staff Proposed Efficiency Adjustment	RY 2020 Annual PAU Reduction*	Regulated Profit Margin RY 2018	Staff Proposed Efficiency Adjustment as a Percentage of Regulated Profit Margin	Efficiency Adjustment with Full Year Implementation	Efficiency Adjustment with Full Year Implementation on All-Payer Basis	Efficiency Adjustment with Full Year Implementation on All-Payer Basis as a Percentage of Regulated Profit Margin
University of Maryland Shore Medical Center at Chestertown	\$481,423	\$101,718	\$10,412,434	5%	\$962,845	\$1,793,448	17%

University of Maryland Rehabilitation & Orthopedic Institute	\$653,787	\$0	\$4,643,810	14%	\$1,307,574	\$4,032,858	87%
Montgomery General Hospital	\$1,359,439	\$599,522	\$23,716,788	6%	\$2,718,879	\$5,907,054	25%
Union Hospital of Cecil County	\$1,062,045	\$497,665	\$8,625,180	12%	\$2,124,089	\$5,377,991	62%
<b>Total</b>	<b>\$3,556,694</b>	<b>\$1,198,905</b>	<b>\$47,398,212</b>	<b>8%</b>	<b>\$7,113,388</b>	<b>\$17,111,352</b>	<b>36%</b>
Bon Secours	\$591,340	\$541,365	\$16,704,617	4%	\$1,182,680	\$3,778,279	23%
Midtown Hospital	\$1,253,873	\$870,993	\$30,917,722	4%	\$2,507,745	\$7,481,604	24%
<b>Total with Hospitals not Exempted due to Prior Efficiency Arrangements</b>	<b>\$5,401,907</b>	<b>\$2,611,263</b>	<b>\$95,020,551</b>	<b>6%</b>	<b>\$10,803,814</b>	<b>\$28,371,236</b>	<b>30%</b>

*\*PAU Reduction is approximately \$50 million annually across the entire State.*

*Staff will continue to evaluate the appropriateness of the efficiency adjustment as it considers the incorporation of additional efficiency tools for the more comprehensive implementation of this policy in RY 2021.*

MHA and members of the hospital industry expressed a desire to eliminate the regulated profit strip in the Integrated Efficiency Policy and to utilize a total operating profit strip in a full rate application. CareFirst disagreed with inclusion of unregulated losses in HSCRC efficiency methodologies.

*Staff Response: There are no directives from the contract with the Federal Government nor from State statute to eliminate the profit strip when determining efficiency. Moreover, if a hospital follows the fundamental incentive of the Model to reduce avoidable utilization, which is a constant incentive across multiple policies (RRIP, PAU, Market Shift), then the charges of the hospital will increase. Penalizing hospitals for price inefficiency and not cost inefficiency is a direct counter incentive to the Model. The ICC, which does include a profit strip, does comport with State statute to ensure that charges are reasonably related to costs. Therefore, staff does not recommend eliminating the profit strip in the Integrated Efficiency Policy.*

*Staff is working on creating a mechanism by which unregulated losses in line with the Model earn credit in HSCRC efficiency methodologies. Credit will require proven return on investments and will be reported and audited through annual filings. Workgroups will have a chance to review and refine staff's proposal on this matter.*

### Technical Considerations

The hospital industry recommended eliminating Quality Adjustments in the ICC.

***Staff Response: Staff concurs with this request.***

The hospital industry with the exception of MedStar Health recommended eliminating general volume adjustment in the ICC.

***Staff Response: Staff believes it is important that all avoidable utilization is accounted for in the efficiency methodologies but recognizes that determining all inpatient Medical DRG's and emergency room utilization is potentially too broad. Staff will therefore work to include additional avoidable utilization in the PAU and ICC programs, most notably avoidable ED utilization, but in the interim will continue to use general utilization analyses to adjust the results of the ICC.***

The hospital industry recommended eliminating the productivity adjustment in the ICC for the Integrated Efficiency Policy.

***Staff Response: Staff understands the industry's argument but disagrees with its conclusion, as the productivity adjustment does not just have bearing on peers within a peer group. If a productivity adjustment for one peer group is larger than another peer group and all hospitals are then relatively ranked, it will have a material impact.***

The hospital industry expressed concern over the 2010 basis for the productivity adjustment or excess capacity calculation.

***Staff Response: Staff has made several adjustments to ensure that any substitution of lost volume/capacity from 2010 has been appropriately accounted for in its excess capacity calculation, including the growth of observation stays greater than 24 hours and outpatient surgery cases with a length of stay greater than 1. Staff therefore does not have concern about quantifying excess capacity from 2010, especially as there have been limited efficiency reductions since this time period.***

The hospital industry expressed a desire to revisit the peer groups in the ICC.

***Staff Response: Staff has reviewed the peer groups due to various questions raised in negotiations with hospitals and has found that the basis for the peer groups, i.e. to group hospitals with teaching costs, similar geographic costs, and similar patient populations, has remained relatively reliable. Moreover, the additional adjustments such as IME, DME, and casemix adjust for many of the concerns raised by industry. Staff does welcome the opportunity to review peer groups if Commissioners and stakeholders believe this to be a pressing priority.***

Industry expressed concern that Indirect Medical Education calculated costs are based off of 2015 data.

***Staff Response: Staff would note that the last time Medicare made an adjustment to IME payments was in 2008 and therefore believes its calculations is current.***

The hospital industry expressed a desire for staff to continue to study calculations for DSH. CareFirst supported staff's conclusion that there was not empirical evidence to support the need

for a DSH calculation, especially as the Commission has a refined all-payer casemix methodology and have retained peer groups.

***Staff Response: Staff will continue to consider DSH calculations.***

The hospital industry supports using Medicare wage data to improve the accuracy of the labor market adjustment but cautions about cliffs created by narrowly defined geographic labor markets.

***Staff Response: Staff concurs with this concern and will work with industry this upcoming year to refine the LMA with this concern in mind.***

MHA expressed a concern that the Commission strive for consistency in TCOC attribution and Johns Hopkins suggested it would appropriate to include TCOC attainment.

***Staff Response: Staff will try to maintain consistency but notes that the growth rate dating back to 2013 requires the primary service area attribution in lieu of the MPA attribution. Once staff completes the TCOC benchmark analyses, it is likely that the Integrated Efficiency Model could abandon the growth rate calculation and solely rely on attainment, which would remove the concern about consistency in attribution logic.***

## Recommendations

In light of concerns identified by staff, Commissioners, and stakeholders regarding the casemix adjustment for rehabilitation cases, use of a growth calculation in lieu of a benchmark attainment analysis for total cost of care performance, and general concerns that the policy should identify larger amounts of inappropriately retained revenue, staff is recommending delaying the implementation of this policy until RY 2021. Instead, staff will bring a revised final recommendation in Spring 2020 that would affect the Annual Update Factor for RY 2021, which will incorporate a new cost per case analysis based on updated data using the Inter-Hospital Cost Comparison tool and total cost of care benchmarks for both commercial and Medicare costs for a more comprehensive efficiency analysis.

## Appendix 1: Revised Casemix Methodology Discussion

Fundamental to a sound efficiency methodology is a reliable volume statistic that accounts for acuity and expected cost differences, as not all services require the same level of care and resources. The HSCRC historically has had a reliable inpatient casemix adjusted volume statistic that outputs relative weights to measure the relative cost or resources needed to treat a mix of patients at a given Maryland hospital using specific APR-DRG/severity of illness levels.<sup>12</sup>

The calculation of relative weights used by Maryland hospitals, which in many respects is just creating ratios based on average charges (adjusted for price differences among hospitals), has been the following since the adoption of the APR-DRG Grouper in 2004 for all hospitals:

- 1) Use the outlier trim methodology to adjust charges for outlier cases so that the maximum charge equals the trim limit
- 2) Calculate an average charge per case in each APR-DRG/severity category.
- 3) Calculate a statewide average charge per case (CPC).
- 4) Divide the cell average by the statewide average to generate the cell weight.
- 5) Calculate hospital-specific relative weights as follows:
  - a) For each hospital  $i$ , calculate the average charge per case-mix adjusted discharge:  $C(i)$ .
  - b) For the state as a whole, calculate the average charge per case-mix adjusted discharge:  $C$ .
  - c) For each hospital, calculate a standardizing factor:  $S(i) = C(i) / C$ .
  - d) For each hospital, adjust its charges to the state level by dividing by  $S(i)$ .
  - e) Recalculate the case-mix weights using the standardized charges.
  - f) Go back to step 6a and repeat until the changes in weights are minimal or non-existent.
- 7) Calculate the average weight per APR-DRG/severity category.
- 8) Adjust the weights in low volume cells (cells with less than 30 cases) by blending the average weight per APR-DRG/severity category in step 7 with the 3M National Relative Weights.
- 9) Adjust the weights to be monotonically increasing by severity of illness.

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<sup>12</sup> At a summary level the case-mix index (CMI), which is the average value of the relative weights for the patients at a given hospital, identifies how resource needs vary across groups of patients and hospitals.



10) Normalize the weights to a statewide CMI of 1.00.

Despite the general consensus that the inpatient casemix methodology is sufficient, the HSCRC historically has had a less reliable outpatient casemix methodology. The first reason for this is because of cycle billed claims where unique hospital billing practices created inconsistent data for determining relative weights across hospitals. Additionally, procedures that can occur in multiple outpatient settings and are different in service intensity<sup>13</sup> were not separated from one another in weight development, thereby creating weights not indicative of the intensity of resources that must be applied in an emergency room versus a clinic..

These concerns mattered less for the first few years of the All-Payer model because the principal use of outpatient weights in HSCRC methodologies was the Market Shift Adjustment, a methodology that evaluates growth. If the inconsistent measurement were present in both the base and performance period for the Market Shift, the issue was of less concern as long as the billing method did not change at a hospital. However, because efficiency methodologies evaluate a single period of time and inter-hospital comparisons, the concerns over inconsistent and unreliable outpatient weights became more pressing once the moratorium on rate reviews was lifted in November of 2017.

The Commission prioritized the need to develop a sufficient outpatient methodology for purposes of evaluating hospital cost efficiency and evaluating ongoing volume changes. Staff worked with industry and additional stakeholders to create a new outpatient weighting approach that utilized a similar methodology to the inpatients weighting system but also did the following:

- (1) All claims, including cycle-billed claims (i.e. accounts where patients are billed monthly) were parsed out into visits, which allows accurate and consistent visit weights to be applied to oncology services, clinics, outpatient psychiatry, and physical therapy;
- (2) Emergency room and clinic visits were given different weights, with higher weights allotted to emergency room patients, replacing an approach that used the same weight regardless of hospital site of service;
- (3) All coded claims lines (i.e. all claims lines with a CPT or HCPCS code) were used to ensure more accurate weight development, replacing an approach where only 45 claim lines were used in weight development and Enhanced Ambulatory Patient Grouping (“EAPG”)<sup>14</sup> assignment – possible because of enhanced computing power;

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<sup>13</sup> In the past, HSCRC applied special weighting differences on the coded severity levels 1 through 5 of an emergency room visits. However, multiple studies have documented coding variations and upcoding in the emergency room. As a result, HSCRC is using the standard method included in the outpatient grouper, which takes into account diagnoses and other coded information to assign emergency room cases to an EAPG. The EAPG grouper assigns medical cases based on diagnosis. In the most recent casemix iteration, HSCRC has separated emergency room and clinic cases to provide higher weights to emergency room cases given the higher resources that must be provided to patients presenting in the emergency room.

<sup>14</sup> EAPGs are a 3M product, which results from the assignment of encounters to clinically meaningful outpatient groupings, similar to inpatient DRG groupings.

(4) Outpatient services within 5 days of one another that had similar care profiles were repackaged into visit episodes to ensure that all charges associated with an episode of care (e.g. supply charges for surgery) were not weighted independently of one another.

(5) Oncology and infusion drugs were removed from the oncology services portion of the claim, allowing oncology services to be weighted independent of oncology drugs, thereby allowing oncology services to be evaluated through Market Shift and oncology and infusion drugs to continue be evaluated through the CDS-A process.<sup>15</sup>

During the process of assessing the construct validity of new casemix methodology, the HSCRC employed Mathematica Policy Research (MPR). MPR concluded that improvements to the casemix methodology resulted in better recognition of clinical severity, as evidenced by improved monotonicity and goodness of fit.

Specifically, to evaluate monotonicity, which means services of increasing complexity are assigned weights of increasing magnitude, MPR employed a clinical expert to conduct a review of the 564 EAPGs. The EAPGs were categorized and combined into 25 different clinically compatible service areas such as general medicine, gastroenterology, general surgery, and oncology. Within each service area, the EAPGs were then ranked by level of clinical complexity on a scale of 1 to 5, where 1 is least complex and 5 is most complex. For example, in the category of general medicine, a level one ranking includes vaccine administration and a level 5 ranking includes the treatment of AIDS. The rankings in each service area were then reviewed by another clinical expert to reach consensus.<sup>16</sup> Then using a fixed effects regression, MPR evaluated the weighting difference from level 5 to level 1. Table A below demonstrates that for each level the weight is significantly higher than the weight in the level below:<sup>17</sup>

**Table A. Regression results for association between procedure groups and severity levels of ECMADs on EAPG weight (all ECMADs)**

EAPG Weight	Number of EAPGs	Coefficient	Std Err	t	Difference	T of difference
Level 5 (omitted)	79	-	-	-	-	-
Level 4	110	-0.435*	0.133	3.27	-0.435*	3.27
Level 3	149	-0.936*	0.127	7.36	-0.501*	4.09
Level 2	179	-1.506*	0.125	12.02	-0.570*	4.66
Level 1	189	-1.873*	0.123	15.20	-0.367*	3.28

EAPG = enhanced ambulatory patient grouping; ECMAD = equivalent casemix adjusted discharge; Std Err = standard error; T = T-statistic

<sup>15</sup> The CDS-A accounts for usage changes in high cost oncology and infusion drugs, and provides a hospital specific adjustment based on 50 percent of estimated growth. The remainder of drug cost growth is provided through a targeted inflation adjustment. For additional detail on the new casemix methodology, please see Appendix 2.

<sup>16</sup> Please see Appendix 3 for clinical severity listings.

<sup>17</sup> MPR also estimated the proportion of EAPGs with weights within the range predicted by their severity level (1-5). The weight falls in the correct range when the ECMAD for a given EAPG is within the bounds of the predicted severity level. They found that 45.5 percent of EAPG high type combinations were within those bounds. They found that 70.7 percent were within the ECMAD range including EAPGs one level lower and one level higher.

\* Significantly different than 0,  $p < .05$

Finally, to evaluate goodness of fit or the predictive accuracy of the outpatient weights, MPR evaluated Winsorized charges, i.e. removing charges below the 5<sup>th</sup> percentile and above the 95<sup>th</sup> percentile, and determined that the R2 was .726, suggesting that the new weighting system had a very high degree of explanatory power.

## Appendix 2. Outpatient Casemix Methodology Steps

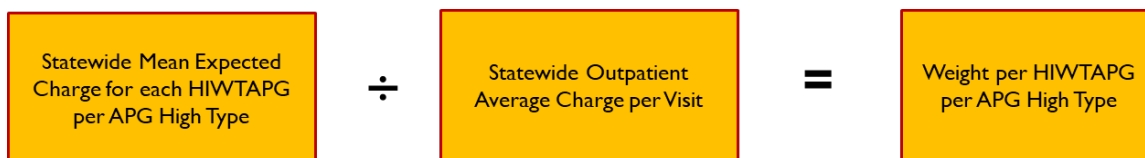
### A. Group and Assign Outpatient Records a Principal EAPG Type & APG High Type

- ▶ **Step 1: Group Data**
  - ▶ Outpatient data grouped using the EAPG grouper version 3.12 (change from the EAPG grouper version 3.8 previously used)
    - ▶ An EAPG is identified for every CPT that is coded in the record
    - ▶ Medical visits also use ICD-10 diagnosis codes for grouping
    - ▶ Each record can contain hundreds of EAPGs
  
- ▶ **Step 2: Exclude Observation Cases**
  - ▶ If the Observation Rate Center units in any outpatient visit record are greater than 23 hours, the entire record is excluded from the outpatient weight assignment calculation.
  - ▶ Future consideration may be given to maintaining outpatient visits greater than 23 hours in the outpatient data set when developing weights for purposes of the ICC
  
- ▶ **Step 3: Assign Principal Record Type**
  - ▶ A principal EAPG Type is assigned to all records
    - ▶ HSCRC applies a hierarchy based on EAPG Type
      - Each CPT code is linked to an EAPG, and each EAPG is linked to an EAPG Type
  - ▶ The records are categorized by APG High Type and assigned in hierarchy as follows:
    - ▶ Type 2: Oncology Related Services
    - ▶ Type 8: Oncology Drugs
    - ▶ Type 5: Rehab and Therapy
    - ▶ Type 6: Psychiatric Visits
    - ▶ Type 4: ED Visits
    - ▶ Type 1: Significant Procedures
    - ▶ Type 3: Non-ED Visits
    - ▶ Type 7: Other Visits
  
- ▶ **Step 4: Consolidating cases into records - for APG High Type Oncology Related Services (ORS)**
  - ▶ All aggregated outpatient records per APG High Type are unbundled and parsed out by service dates
    - ▶ Each identified EAPG within the APG High Type has its own service date
    - ▶ Visits with a length of stay (LOS) 5 days or less are assigned the same service date as their corresponding APG High Type
  - ▶ Consolidate into one record all EAPGs associated with ORS occurring on the same service date
  - ▶ Determine the EAPG with the highest weight within the record (Previously calculated weights are used as the preliminary weight for assigning the high weight)
  - ▶ The high weight EAPG is the High Weight EAPG (HIWTAPG)

- ▶ Consolidate into the record any ancillary EAPGs occurring on the same service date as the EAPG with the highest weight within the ORS
- ▶ Any ancillary EAPGs not occurring within the same service date as the high weight EAPG within the ORS is appended back into the outpatient records
- ▶ **Step 5: Calculate the total charge**
  - ▶ The sum of all EAPG charges in the ORS record
  - ▶ The HIWTAPG assumes all charges associated with that record i.e. the total charge
- ▶ **Step 6: Apply the Trim Logic to the APG High Type by HIWTAPG (Expected Charge)**
  - ▶ Trim logic = (the statewide average expected charge by HIWTAPG \* 2) or the (the statewide average expected charge by HIWTAPG + 10,000); whichever is greater
  - ▶ The expected charge is usually the total charge except where a trim is applied, then the trim charge becomes the expected charge
  - ▶ (Step 1-6 is repeated for each APG High Type)

B. Merge all datasets and Calculate expected charges to outpatient categories

- ▶ **Step 7: Merge all eight APG High Types and begin the iterative process of determining weights**
  - ▶ **Step a: Calculate the statewide average charge per visit**
    - ▶ The mean of all trimmed charges as determined by the trim logic
  - ▶ **Step b: Calculate the Mean Statewide Expected Charge by APG High Type and HIWTAPG**
    - ▶ The mean of expected charges across all hospitals by APG High Type and HIWTAPG
- ▶ **Step 8: Calculate initial weights for each APG High Type and HIWTAPG**



▶ **Step 9:**



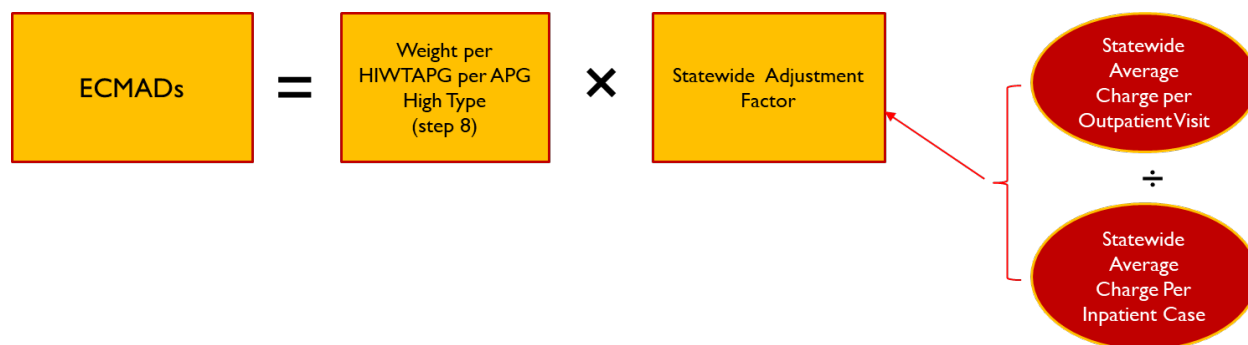
*Normalize the Hospital HIWTAPG Expected Charge about the Expected Charge Per Hospital*

*Mean*

- ▶ **Calculate Hospital Specific Average charge and casemix index (CMI) and hospital specific charge adjustment factor**
    - *Hospital Specific average charge divided by the hospital specific average CMI = Hospital specific expected charge*
    - *Hospital specific expected charge divided by the statewide average charge (as determined in step 7a) = Hospital Specific adjustment factor*
    - *Recalculate the total charge by dividing the initial trim charge by the hospital charge adjustment factor*
  - ▶ Perform 31 Iterations as shown above until convergence (hospital specific adjustment factor equals 1.00)
  - ▶ The final iteration determines the statewide expected charge (as described in step 7b) used for the **final weight calculation** (repeat step 8)
- ▶ **Step 10: Assign Principal Record Type by High Weighted EAPG**
- ▶ This overrides step number 3 because in many instances lower acuity services or ancillaries will garner all of the charges associated with that record, most notably within the Significant Procedures High Type.
  - ▶ Because weights are reassigned, they have to be checked again for monotonicity and normalized to 1.0.

### C. Calculate ECMAD

- ▶ **Step 11: Calculate the Statewide Adjustment Factor = Outpatient Charge per visit divided by Average charge per Inpatient case**
- ▶ ECMAD is defined as the normalized weight from Step 16 multiplied by the Statewide Charge Ratio Adjustment Factor



### Appendix 3: Clinical Severity Listings (EAPGs Service Type and Severity Classification)

Severity	EAPG	EAPG Description	Service	Service Description
1	315	COUNSELLING OR INDIVIDUAL BRIEF PSYCHOTHERAPY	1	Behavioral Health
1	322	MEDICATION ADMINISTRATION & OBSERVATION	1	Behavioral Health
1	323	MENTAL HYGIENE ASSESSMENT	1	Behavioral Health
1	324	MENTAL HEALTH SCREENING & BRIEF ASSESSMENT	1	Behavioral Health
1	825	ADJUSTMENT DISORDERS & NEUROSES EXCEPT DEPRESSIVE DIAGNOSES	1	Behavioral Health
2	320	CASE MANAGEMENT & TREATMENT PLAN DEVELOPMENT - MENTAL HEALTH OR SUBSTANCE ABUSE	1	Behavioral Health
2	426	PSYCHOTROPIC MEDICATION MANAGEMENT	1	Behavioral Health
2	820	SCHIZOPHRENIA	1	Behavioral Health
2	821	MAJOR DEPRESSIVE DIAGNOSES & OTHER/UNSPECIFIED PSYCHOSES	1	Behavioral Health
2	822	PERSONALITY & IMPULSE CONTROL DIAGNOSES	1	Behavioral Health
2	823	BIPOLAR DISORDERS	1	Behavioral Health
2	824	DEPRESSION EXCEPT MAJOR DEPRESSIVE DIAGNOSES	1	Behavioral Health
2	826	ACUTE ANXIETY & DELIRIUM STATES	1	Behavioral Health
2	827	ORGANIC MENTAL HEALTH DISTURBANCES	1	Behavioral Health
2	831	OTHER MENTAL HEALTH DIAGNOSES	1	Behavioral Health
2	829	CHILDHOOD BEHAVIORAL DIAGNOSES	1	Behavioral Health
2	840	OPIOID ABUSE & DEPENDENCE	1	Behavioral Health
2	841	COCAINE ABUSE & DEPENDENCE	1	Behavioral Health
2	842	ALCOHOL ABUSE & DEPENDENCE	1	Behavioral Health
2	843	OTHER DRUG ABUSE & DEPENDENCE	1	Behavioral Health
2	317	FAMILY PSYCHOTHERAPY	1	Behavioral Health
2	318	GROUP PSYCHOTHERAPY	1	Behavioral Health
3	316	INDIVIDUAL COMPREHENSIVE PSYCHOTHERAPY	1	Behavioral Health
3	319	ACTIVITY THERAPY	1	Behavioral Health
3	310	DEVELOPMENTAL & NEUROPSYCHOLOGICAL TESTING	1	Behavioral Health
3	828	MENTAL RETARDATION	1	Behavioral Health
4	321	CRISIS INTERVENTION	1	Behavioral Health
4	314	HALF DAY PARTIAL HOSPITALIZATION FOR MENTAL ILLNESS	1	Behavioral Health
4	328	DAY TREATMENT - HALF DAY	1	Behavioral Health
4	830	EATING DISORDERS	1	Behavioral Health
4	313	HALF DAY PARTIAL HOSPITALIZATION FOR SUBSTANCE ABUSE	1	Behavioral Health
5	312	FULL DAY PARTIAL HOSPITALIZATION FOR MENTAL ILLNESS	1	Behavioral Health
5	327	INTENSIVE OUTPATIENT TREATMENT	1	Behavioral Health
5	329	DAY TREATMENT - FULL DAY	1	Behavioral Health
5	311	FULL DAY PARTIAL HOSPITALIZATION FOR SUBSTANCE ABUSE	1	Behavioral Health
1	487	MINOR CARDIAC MONITORING	2	Cardiology
1	592	LEVEL I CARDIOVASCULAR DIAGNOSES	2	Cardiology
1	596	PERIPHERAL & OTHER VASCULAR DIAGNOSES	2	Cardiology
1	597	PHLEBITIS	2	Cardiology
1	598	ANGINA PECTORIS & CORONARY ATHEROSCLEROSIS	2	Cardiology
1	599	HYPERTENSION	2	Cardiology
1	600	CARDIAC STRUCTURAL & VALVULAR DIAGNOSES	2	Cardiology
1	601	LEVEL I CARDIAC ARRHYTHMIA & CONDUCTION DIAGNOSES	2	Cardiology

Severity	EAPG	EAPG Description	Service	Service Description
2	593	LEVEL II CARDIOVASCULAR DIAGNOSES	2	Cardiology
2	602	ATRIAL FIBRILLATION	2	Cardiology
2	603	LEVEL II CARDIAC ARRHYTHMIA & CONDUCTION DIAGNOSES	2	Cardiology
2	418	MINOR CARDIAC AND VASCULAR TESTS	2	Cardiology
2	413	CARDIOGRAM	2	Cardiology
3	80	EXERCISE TOLERANCE TESTS	2	Cardiology
3	81	ECHOCARDIOGRAPHY	2	Cardiology
3	604	CHEST PAIN	2	Cardiology
3	605	SYNCOPE & COLLAPSE	2	Cardiology
4	93	CARDIOVERSION	2	Cardiology
4	420	PACEMAKER AND OTHER ELECTRONIC ANALYSIS	2	Cardiology
4	594	HEART FAILURE	2	Cardiology
5	82	CARDIAC ELECTROPHYSIOLOGIC TESTS AND MONITORING	2	Cardiology
5	591	ACUTE MYOCARDIAL INFARCTION	2	Cardiology
5	595	CARDIAC ARREST OR OTHER CAUSES OF MORTALITY	2	Cardiology
1	435	CLASS I PHARMACOTHERAPY	3	Chemoinfusion
1	436	CLASS II PHARMACOTHERAPY	3	Chemoinfusion
1	496	MINOR PHARMACOTHERAPY	3	Chemoinfusion
1	430	CLASS I CHEMOTHERAPY DRUGS	3	Chemoinfusion
1	495	MINOR CHEMOTHERAPY DRUGS	3	Chemoinfusion
1	117	HOME INFUSION	3	Chemoinfusion
1	1090	USER CUSTOMIZABLE 340B DRUGS	3	Chemoinfusion
2	431	CLASS II CHEMOTHERAPY DRUGS	3	Chemoinfusion
2	437	CLASS III PHARMACOTHERAPY	3	Chemoinfusion
2	438	CLASS IV PHARMACOTHERAPY	3	Chemoinfusion
2	432	CLASS III CHEMOTHERAPY DRUGS	3	Chemoinfusion
3	433	CLASS IV CHEMOTHERAPY DRUGS	3	Chemoinfusion
3	439	CLASS V PHARMACOTHERAPY	3	Chemoinfusion
3	434	CLASS V CHEMOTHERAPY DRUGS	3	Chemoinfusion
3	111	PHARMACOTHERAPY EXCEPT BY EXTENDED INFUSION	3	Chemoinfusion
3	110	PHARMACOTHERAPY BY EXTENDED INFUSION	3	Chemoinfusion
4	440	CLASS VI PHARMACOTHERAPY	3	Chemoinfusion
4	441	CLASS VI CHEMOTHERAPY DRUGS	3	Chemoinfusion
4	444	CLASS VII PHARMACOTHERAPY	3	Chemoinfusion
4	443	CLASS VII CHEMOTHERAPY	3	Chemoinfusion
5	460	CLASS VIII - COMBINED CHEMOTHERAPY AND PHARMACOTHERAPY	3	Chemoinfusion
5	461	CLASS IX COMBINED CHEMOTHERAPY AND PHARMACOTHERAPY	3	Chemoinfusion
5	462	CLASS X COMBINED CHEMOTHERAPY AND PHARMACOTHERAPY	3	Chemoinfusion
5	463	CLASS XI COMBINED CHEMOTHERAPY AND PHARMACOTHERAPY	3	Chemoinfusion
5	464	CLASS XII COMBINED CHEMOTHERAPY AND PHARMACOTHERAPY	3	Chemoinfusion
5	465	CLASS XIII COMBINED CHEMOTHERAPY AND PHARMACOTHERAPY	3	Chemoinfusion
1	350	LEVEL I ADJUNCTIVE GENERAL DENTAL SERVICES	4	Dental
1	351	LEVEL II ADJUNCTIVE GENERAL DENTAL SERVICES	4	Dental
1	371	LEVEL I ORTHODONTICS	4	Dental
1	372	SEALANT	4	Dental
1	373	LEVEL I DENTAL FILM	4	Dental
1	376	DIAGNOSTIC DENTAL PROCEDURES	4	Dental
1	377	PREVENTIVE DENTAL PROCEDURES	4	Dental
2	352	LEVEL I PERIODONTICS	4	Dental



Severity	EAPG	EAPG Description	Service	Service Description
2	374	LEVEL II DENTAL FILM	4	Dental
2	379	LEVEL II ORTHODONTICS	4	Dental
2	353	LEVEL I PROSTHODONTICS, FIXED	4	Dental
2	356	LEVEL I PROSTHODONTICS, REMOVABLE	4	Dental
3	359	LEVEL I MAXILLOFACIAL PROSTHETICS	4	Dental
3	361	LEVEL I DENTAL RESTORATIONS	4	Dental
3	364	LEVEL I ENDODONTICS	4	Dental
3	375	DENTAL ANESTHESIA	4	Dental
3	378	LEVEL II PERIODONTICS	4	Dental
3	354	LEVEL II PROSTHODONTICS, FIXED	4	Dental
3	357	LEVEL II PROSTHODONTICS, REMOVABLE	4	Dental
4	360	LEVEL II MAXILLOFACIAL PROSTHETICS	4	Dental
4	362	LEVEL II DENTAL RESTORATIONS	4	Dental
4	365	LEVEL II ENDODONTICS	4	Dental
4	366	LEVEL III ENDODONTICS	4	Dental
4	367	LEVEL I ORAL AND MAXILLOFACIAL SURGERY	4	Dental
4	368	LEVEL II ORAL AND MAXILLOFACIAL SURGERY	4	Dental
4	381	LEVEL I DENTAL IMPLANTS	4	Dental
4	382	LEVEL II DENTAL IMPLANTS	4	Dental
4	355	LEVEL III PROSTHODONTICS, FIXED	4	Dental
4	358	LEVEL III PROSTHODONTICS, REMOVABLE	4	Dental
5	363	LEVEL III DENTAL RESTORATION	4	Dental
5	369	LEVEL III ORAL AND MAXILLOFACIAL SURGERY	4	Dental
5	370	LEVEL IV ORAL AND MAXILLOFACIAL SURGERY	4	Dental
1	674	CONTUSION, OPEN WOUND & OTHER TRAUMA TO SKIN & SUBCUTANEOUS TISSUE	5	Dermatology
2	1	PHOTOCHEMOTHERAPY	5	Dermatology
3	670	SKIN ULCERS	5	Dermatology
4	671	MAJOR SKIN DIAGNOSES	5	Dermatology
4	861	PARTIAL THICKNESS BURNS W OR W/O SKIN GRAFT	5	Dermatology
5	676	DECUBITUS ULCER	5	Dermatology
5	860	EXTENSIVE 3RD DEGREE OR FULL THICKNESS BURNS W/O SKIN GRAFT	5	Dermatology
1	452	DIABETES SUPPLIES	6	DME
1	453	MOTORIZED WHEELCHAIR	6	DME
1	456	MOTORIZED WHEELCHAIR ACCESSORIES	6	DME
1	1001	DURABLE MEDICAL EQUIPMENT AND SUPPLIES - LEVEL 1	6	DME
1	1002	DURABLE MEDICAL EQUIPMENT AND SUPPLIES - LEVEL 2	6	DME
1	1003	DURABLE MEDICAL EQUIPMENT AND SUPPLIES - LEVEL 3	6	DME
1	1004	DURABLE MEDICAL EQUIPMENT - LEVEL 4	6	DME
1	1005	DURABLE MEDICAL EQUIPMENT - LEVEL 5	6	DME
1	1006	DURABLE MEDICAL EQUIPMENT - LEVEL 6	6	DME
1	1007	DURABLE MEDICAL EQUIPMENT - LEVEL 7	6	DME
1	1008	DURABLE MEDICAL EQUIPMENT - LEVEL 8	6	DME
1	1009	DURABLE MEDICAL EQUIPMENT - LEVEL 9	6	DME
2	1010	DURABLE MEDICAL EQUIPMENT - LEVEL 10	6	DME
2	1011	DURABLE MEDICAL EQUIPMENT - LEVEL 11	6	DME
2	1012	DURABLE MEDICAL EQUIPMENT - LEVEL 12	6	DME
2	1013	DURABLE MEDICAL EQUIPMENT - LEVEL 13	6	DME
2	1014	DURABLE MEDICAL EQUIPMENT - LEVEL 14	6	DME
2	1015	DURABLE MEDICAL EQUIPMENT - LEVEL 15	6	DME
2	1016	DURABLE MEDICAL EQUIPMENT - LEVEL 16	6	DME
2	1017	DURABLE MEDICAL EQUIPMENT - LEVEL 17	6	DME
2	1018	DURABLE MEDICAL EQUIPMENT - LEVEL 18	6	DME
2	1019	DURABLE MEDICAL EQUIPMENT - LEVEL 19	6	DME

Severity	EAPG	EAPG Description	Service	Service Description
2	1020	DURABLE MEDICAL EQUIPMENT - LEVEL 20	6	DME
3	454	TPN FORMULAE	6	DME
3	498	PEN FORMULAE	6	DME
1	560	EAR, NOSE, MOUTH, THROAT, CRANIAL/FACIAL MALIGNANCIES	7	Otolaryngology
1	562	INFECTIONS OF UPPER RESPIRATORY TRACT & OTITIS MEDIA	7	Otolaryngology
1	563	DENTAL & ORAL DIAGNOSES & INJURIES	7	Otolaryngology
1	564	LEVEL I OTHER EAR, NOSE, MOUTH, THROAT & CRANIAL/FACIAL DIAGNOSES	7	Otolaryngology
2	561	VERTIGINOUS DIAGNOSES EXCEPT FOR BENIGN VERTIGO	7	Otolaryngology
2	251	OTORHINOLARYNGOLOGIC FUNCTION TESTS	7	Otolaryngology
2	565	LEVEL II OTHER EAR, NOSE, MOUTH, THROAT & CRANIAL/FACIAL DIAGNOSES	7	Otolaryngology
2	252	LEVEL I FACIAL AND ENT PROCEDURES	7	Otolaryngology
2	257	AUDIOMETRY	7	Otolaryngology
3	62	LEVEL I ENDOSCOPY OF THE UPPER AIRWAY	7	Otolaryngology
3	253	LEVEL II FACIAL AND ENT PROCEDURES	7	Otolaryngology
3	256	TONSIL AND ADENOID PROCEDURES	7	Otolaryngology
4	63	LEVEL II ENDOSCOPY OF THE UPPER AIRWAY	7	Otolaryngology
4	254	LEVEL III FACIAL AND ENT PROCEDURES	7	Otolaryngology
5	255	LEVEL IV FACIAL AND ENT PROCEDURES	7	Otolaryngology
5	250	COCHLEAR DEVICE IMPLANTATION	7	Otolaryngology
1	624	LEVEL I GASTROINTESTINAL DIAGNOSES	8	Gastroenterology
1	639	LEVEL I HEPATOBILIARY DIAGNOSES	8	Gastroenterology
2	621	PEPTIC ULCER & GASTRITIS	8	Gastroenterology
2	623	ESOPHAGITIS	8	Gastroenterology
2	625	LEVEL II GASTROINTESTINAL DIAGNOSES	8	Gastroenterology
2	630	CONSTIPATION	8	Gastroenterology
2	631	HERNIA	8	Gastroenterology
2	627	NON-BACTERIAL GASTROENTERITIS, NAUSEA & VOMITING	8	Gastroenterology
3	637	GALLBLADDER & BILIARY TRACT DIAGNOSES	8	Gastroenterology
3	640	LEVEL II HEPATOBILIARY DIAGNOSES	8	Gastroenterology
3	632	IRRITABLE BOWEL SYNDROME	8	Gastroenterology
3	628	ABDOMINAL PAIN	8	Gastroenterology
3	633	ALCOHOLIC LIVER DISEASE	8	Gastroenterology
3	130	ALIMENTARY TESTS AND SIMPLE TUBE PLACEMENT	8	Gastroenterology
3	131	ESOPHAGEAL DILATION WITHOUT ENDOSCOPY	8	Gastroenterology
3	132	ANOSCOPY WITH BIOPSY AND DIAGNOSTIC PROCTOSIGMOIDOSCOPY	8	Gastroenterology
3	133	PROCTOSIGMOIDOSCOPY WITH EXCISION OR BIOPSY	8	Gastroenterology
3	626	INFLAMMATORY BOWEL DISEASE	8	Gastroenterology
3	629	MALFUNCTION, REACTION & COMPLICATION OF GI DEVICE OR PROCEDURE	8	Gastroenterology
3	638	CHOLECYSTITIS	8	Gastroenterology
4	134	DIAGNOSTIC UPPER GI ENDOSCOPY OR INTUBATION	8	Gastroenterology
4	136	DIAGNOSTIC LOWER GASTROINTESTINAL ENDOSCOPY	8	Gastroenterology
4	620	DIGESTIVE MALIGNANCY	8	Gastroenterology
4	635	PANCREAS DIAGNOSES EXCEPT MALIGNANCY	8	Gastroenterology
4	636	HEPATITIS WITHOUT COMA	8	Gastroenterology
5	149	SCREENING COLORECTAL SERVICES	8	Gastroenterology
5	135	THERAPEUTIC UPPER GI ENDOSCOPY OR INTUBATION	8	Gastroenterology

Severity	EAPG	EAPG Description	Service	Service Description
5	137	THERAPEUTIC COLONOSCOPY	8	Gastroenterology
5	138	ERCP AND MISCELLANEOUS GI ENDOSCOPY PROCEDURES	8	Gastroenterology
5	634	MALIGNANCY OF HEPATOBILIARY SYSTEM & PANCREAS	8	Gastroenterology
1	695	OBESITY	9	Endocrinology
2	713	DIABETES WITHOUT COMPLICATIONS	9	Endocrinology
2	692	LEVEL I ENDOCRINE DIAGNOSES	9	Endocrinology
3	693	LEVEL II ENDOCRINE DIAGNOSES	9	Endocrinology
3	691	INBORN ERRORS OF METABOLISM	9	Endocrinology
4	711	DIABETES WITH OTHER MANIFESTATIONS & COMPLICATIONS	9	Endocrinology
4	710	DIABETES WITH OPHTHALMIC MANIFESTATIONS	9	Endocrinology
4	712	DIABETES WITH NEUROLOGIC MANIFESTATIONS	9	Endocrinology
4	714	DIABETES WITH RENAL MANIFESTATIONS	9	Endocrinology
5	690	MALNUTRITION, FAILURE TO THRIVE & OTHER NUTRITIONAL DIAGNOSES	9	Endocrinology
5	694	ELECTROLYTE DISORDERS	9	Endocrinology
1	425	LEVEL I OTHER MISCELLANEOUS ANCILLARY PROCEDURES	10	General Medicine
1	427	BIOFEEDBACK AND OTHER TRAINING	10	General Medicine
1	449	ADDITIONAL UNDIFFERENTIATED MEDICAL VISIT/SERVICES	10	General Medicine
1	457	VENIPUNCTURE	10	General Medicine
1	458	ALLERGY THERAPY	10	General Medicine
1	459	VACCINE ADMINISTRATION	10	General Medicine
1	490	INCIDENTAL TO MEDICAL VISIT OR SIGNIFICANT PROCEDURE	10	General Medicine
1	491	MEDICAL VISIT INDICATOR	10	General Medicine
1	497	TELEHEALTH FACILITATION	10	General Medicine
1	663	PAIN	10	General Medicine
1	411	BLOOD AND URINE DIPSTICK TESTS	10	General Medicine
1	414	LEVEL I IMMUNIZATION	10	General Medicine
1	415	LEVEL II IMMUNIZATION	10	General Medicine
1	429	PATIENT EDUCATION, GROUP	10	General Medicine
1	809	OTHER INFECTIOUS & PARASITIC DISEASES	10	General Medicine
1	810	H. PYLORI INFECTION	10	General Medicine
2	808	VIRAL ILLNESS	10	General Medicine
2	488	MINOR DEVICE EVALUATION & ELECTRONIC ANALYSIS	10	General Medicine
2	116	ALLERGY TESTS	10	General Medicine
2	424	DRESSINGS AND OTHER MINOR PROCEDURES	10	General Medicine
4	489	LEVEL II OTHER MISCELLANEOUS ANCILLARY PROCEDURES	10	General Medicine
2	675	OTHER SKIN, SUBCUTANEOUS TISSUE & BREAST DIAGNOSES	10	General Medicine
2	392	PAP SMEARS	10	General Medicine
2	416	LEVEL III IMMUNIZATION	10	General Medicine
2	428	PATIENT EDUCATION, INDIVIDUAL	10	General Medicine
2	451	SMOKING CESSATION TREATMENT	10	General Medicine
3	807	FEVER	10	General Medicine
3	417	MINOR REPRODUCTIVE PROCEDURES	10	General Medicine
3	421	TUBE CHANGE	10	General Medicine
3	118	NUTRITION THERAPY	10	General Medicine
3	673	CELLULITIS & OTHER BACTERIAL SKIN INFECTIONS	10	General Medicine
3	875	CONTRACEPTIVE MANAGEMENT	10	General Medicine
3	806	POST-OPERATIVE, POST-TRAUMATIC, OTHER DEVICE INFECTIONS	10	General Medicine
3	852	OTHER COMPLICATIONS OF TREATMENT	10	General Medicine

Severity	EAPG	EAPG Description	Service	Service Description
4	510	MAJOR SIGNS, SYMPTOMS AND FINDINGS	10	General Medicine
4	423	INTRODUCTION OF NEEDLE AND CATHETER	10	General Medicine
4	448	EXPANDED HOURS ACCESS	10	General Medicine
4	450	OBSERVATION	10	General Medicine
4	853	OTHER INJURY, POISONING & TOXIC EFFECT DIAGNOSES	10	General Medicine
4	854	TOXIC EFFECTS OF NON-MEDICINAL SUBSTANCES	10	General Medicine
4	876	ADULT PREVENTIVE MEDICINE	10	General Medicine
4	877	CHILD PREVENTIVE MEDICINE	10	General Medicine
4	878	GYNECOLOGICAL PREVENTIVE MEDICINE	10	General Medicine
4	879	PREVENTIVE OR SCREENING ENCOUNTERS	10	General Medicine
4	882	GENETIC COUNSELING	10	General Medicine
4	880	HIV INFECTION	10	General Medicine
5	850	ALLERGIC REACTIONS	10	General Medicine
5	92	RESUSCITATION	10	General Medicine
5	672	MALIGNANT BREAST DIAGNOSES	10	General Medicine
5	851	POISONING OF MEDICINAL AGENTS	10	General Medicine
5	805	SEPTICEMIA & DISSEMINATED INFECTIONS	10	General Medicine
5	881	AIDS	10	General Medicine
1	3	LEVEL I SKIN INCISION AND DRAINAGE	11	General Surgery
1	5	NAIL PROCEDURES	11	General Surgery
1	6	LEVEL I SKIN DEBRIDEMENT AND DESTRUCTION	11	General Surgery
1	9	LEVEL I EXCISION AND BIOPSY OF SKIN AND SOFT TISSUE	11	General Surgery
1	12	LEVEL I SKIN REPAIR	11	General Surgery
1	90	SECONDARY VARICOSE VEINS AND VASCULAR INJECTION	11	General Surgery
1	455	IMPLANTED TISSUE OF ANY TYPE	11	General Surgery
2	61	NEEDLE AND CATHETER BIOPSY, ASPIRATION, LAVAGE AND INTUBATION	11	General Surgery
2	2	SUPERFICIAL NEEDLE BIOPSY AND ASPIRATION	11	General Surgery
2	4	LEVEL II SKIN INCISION AND DRAINAGE	11	General Surgery
2	7	LEVEL II SKIN DEBRIDEMENT AND DESTRUCTION	11	General Surgery
2	13	LEVEL II SKIN REPAIR	11	General Surgery
2	30	LEVEL I MUSCULOSKELETAL PROCEDURES EXCLUDING HAND AND FOOT	11	General Surgery
3	380	ANESTHESIA	11	General Surgery
3	10	LEVEL II EXCISION AND BIOPSY OF SKIN AND SOFT TISSUE	11	General Surgery
3	145	LEVEL I LAPAROSCOPY	11	General Surgery
3	20	LEVEL I BREAST PROCEDURES	11	General Surgery
3	8	LEVEL III SKIN DEBRIDEMENT AND DESTRUCTION	11	General Surgery
3	11	LEVEL III EXCISION AND BIOPSY OF SKIN AND SOFT TISSUE	11	General Surgery
3	14	LEVEL III SKIN REPAIR	11	General Surgery
3	91	VASCULAR LIGATION AND RECONSTRUCTION	11	General Surgery
3	141	LEVEL I ANAL AND RECTAL PROCEDURES	11	General Surgery
4	15	LEVEL IV SKIN REPAIR	11	General Surgery
4	21	LEVEL II BREAST PROCEDURES	11	General Surgery
4	115	DEEP LYMPH STRUCTURE AND THYROID PROCEDURES	11	General Surgery
4	139	LEVEL I HERNIA REPAIR	11	General Surgery
4	142	LEVEL II ANAL AND RECTAL PROCEDURES	11	General Surgery
4	143	LEVEL I GASTROINTESTINAL PROCEDURES	11	General Surgery
4	146	LEVEL II LAPAROSCOPY	11	General Surgery
5	147	LEVEL III LAPAROSCOPY	11	General Surgery
5	22	LEVEL III BREAST PROCEDURES	11	General Surgery
5	140	LEVEL II HERNIA REPAIR	11	General Surgery
5	144	LEVEL II GASTROINTESTINAL PROCEDURES	11	General Surgery

Severity	EAPG	EAPG Description	Service	Service Description
5	148	LEVEL IV LAPAROSCOPY	11	General Surgery
1	780	OTHER HEMATOLOGICAL DIAGNOSES	12	Hematology
1	785	ANEMIA EXCEPT FOR IRON DEFICIENCY ANEMIA AND SICKLE CELL ANEMIA	12	Hematology
1	786	IRON DEFICIENCY ANEMIA	12	Hematology
2	781	COAGULATION & PLATELET DIAGNOSES	12	Hematology
2	782	CONGENITAL FACTOR DEFICIENCIES	12	Hematology
2	784	SICKLE CELL ANEMIA	12	Hematology
3	112	PHLEBOTOMY	12	Hematology
4	113	LEVEL I BLOOD AND BLOOD PRODUCT EXCHANGE	12	Hematology
4	783	SICKLE CELL ANEMIA CRISIS	12	Hematology
5	114	LEVEL II BLOOD AND BLOOD PRODUCT EXCHANGE	12	Hematology
1	83	PLACEMENT OF TRANSVENOUS CATHETERS	13	Interventional Cardiology
1	95	THROMBOLYSIS	13	Interventional Cardiology
2	88	LEVEL I CARDIOTHORACIC PROCEDURES	13	Interventional Cardiology
3	89	LEVEL II CARDIOTHORACIC PROCEDURES	13	Interventional Cardiology
3	84	DIAGNOSTIC CARDIAC CATHETERIZATION	13	Interventional Cardiology
4	86	PACEMAKER INSERTION AND REPLACEMENT	13	Interventional Cardiology
4	87	REMOVAL AND REVISION OF PACEMAKER AND VASCULAR DEVICE	13	Interventional Cardiology
4	85	PERIPHERAL TRANSCATHETER AND REVASCULARIZATION PROCEDURES	13	Interventional Cardiology
4	96	ATRIAL AND VENTRICULAR RECORDING AND PACING	13	Interventional Cardiology
4	99	CORONARY ANGIOPLASTY	13	Interventional Cardiology
5	97	AICD IMPLANT	13	Interventional Cardiology
1	394	LEVEL I IMMUNOLOGY TESTS	14	Laboratory
1	396	LEVEL I MICROBIOLOGY TESTS	14	Laboratory
1	398	LEVEL I ENDOCRINOLOGY TESTS	14	Laboratory
1	400	LEVEL I CHEMISTRY TESTS	14	Laboratory
1	402	BASIC CHEMISTRY TESTS	14	Laboratory
1	404	TOXICOLOGY TESTS	14	Laboratory
1	406	LEVEL I CLOTTING TESTS	14	Laboratory
1	408	LEVEL I HEMATOLOGY TESTS	14	Laboratory
1	410	URINALYSIS	14	Laboratory
1	390	LEVEL I PATHOLOGY	14	Laboratory
2	385	LEVEL I MOLECULAR PATHOLOGY AND GENETIC TESTS	14	Laboratory
2	395	LEVEL II IMMUNOLOGY TESTS	14	Laboratory
2	397	LEVEL II MICROBIOLOGY TESTS	14	Laboratory
2	399	LEVEL II ENDOCRINOLOGY TESTS	14	Laboratory
2	401	LEVEL II CHEMISTRY TESTS	14	Laboratory
2	403	ORGAN OR DISEASE ORIENTED PANELS	14	Laboratory
2	405	THERAPEUTIC DRUG MONITORING	14	Laboratory
2	407	LEVEL II CLOTTING TESTS	14	Laboratory
2	409	LEVEL II HEMATOLOGY TESTS	14	Laboratory
2	486	BASIC BLOOD TYPING	14	Laboratory
2	393	BLOOD AND TISSUE TYPING	14	Laboratory
3	386	LEVEL II MOLECULAR PATHOLOGY AND GENETIC TESTS	14	Laboratory
3	391	LEVEL II PATHOLOGY	14	Laboratory

Severity	EAPG	EAPG Description	Service	Service Description
4	387	LEVEL III MOLECULAR PATHOLOGY AND GENETIC TESTS	14	Laboratory
1	770	NORMAL NEONATE	15	Neonatology
2	771	LEVEL I NEONATAL DIAGNOSES	15	Neonatology
2	873	NEONATAL AFTERCARE	15	Neonatology
3	772	LEVEL II NEONATAL DIAGNOSES	15	Neonatology
1	520	SPINAL DIAGNOSES & INJURIES	16	Neurology
1	524	LEVEL I CNS DIAGNOSES	16	Neurology
1	526	TRANSIENT ISCHEMIA	16	Neurology
1	527	PERIPHERAL NERVE DIAGNOSES	16	Neurology
1	530	HEADACHES OTHER THAN MIGRAINE	16	Neurology
1	531	MIGRAINE	16	Neurology
1	533	AFTEREFFECTS OF CEREBROVASCULAR ACCIDENT	16	Neurology
1	534	NONSPECIFIC CVA & PRECEREBRAL OCCLUSION W/O INFARC	16	Neurology
1	522	DEGENERATIVE NERVOUS SYSTEM DIAGNOSES EXC MULT SCLEROSIS	16	Neurology
2	525	LEVEL II CNS DIAGNOSES	16	Neurology
2	211	ELECTROENCEPHALOGRAM	16	Neurology
2	212	ELECTROCONVULSIVE THERAPY	16	Neurology
2	213	NERVE AND MUSCLE TESTS	16	Neurology
2	214	LEVEL I NERVOUS SYSTEM INJECTIONS, STIMULATIONS OR CRANIAL TAP	16	Neurology
2	521	NERVOUS SYSTEM MALIGNANCY	16	Neurology
2	529	SEIZURE	16	Neurology
2	532	HEAD TRAUMA	16	Neurology
2	536	CEREBRAL PALSY	16	Neurology
3	523	MULTIPLE SCLEROSIS & OTHER DEMYELINATING DISEASES	16	Neurology
3	219	SPINAL TAP	16	Neurology
3	210	EXTENDED EEG STUDIES	16	Neurology
3	222	SLEEP STUDIES	16	Neurology
3	220	LEVEL II NERVOUS SYSTEM INJECTIONS, STIMULATIONS OR CRANIAL TAP	16	Neurology
3	215	LEVEL I REVISION OR REMOVAL OF NEUROLOGICAL DEVICE	16	Neurology
3	216	LEVEL II REVISION OR REMOVAL OF NEUROLOGICAL DEVICE	16	Neurology
4	528	NONTRAUMATIC STUPOR & COMA	16	Neurology
4	535	CVA & PRECEREBRAL OCCLUSION W INFARCT	16	Neurology
4	217	LEVEL I NERVE PROCEDURES	16	Neurology
4	218	LEVEL II NERVE PROCEDURES	16	Neurology
5	221	LAMINOTOMY AND LAMINECTOMY	16	Neurology
5	223	LEVEL III NERVE PROCEDURES	16	Neurology
5	224	LEVEL IV NERVE PROCEDURES	16	Neurology
1	761	POSTPARTUM & POST ABORTION DIAGNOSES W/O PROCEDURE	17	Obstetrics and Gynecology
1	764	FALSE LABOR	17	Obstetrics and Gynecology
1	765	OTHER ANTEPARTUM DIAGNOSES	17	Obstetrics and Gynecology
1	766	ROUTINE PRENATAL CARE	17	Obstetrics and Gynecology
1	752	LEVEL I MENSTRUAL AND OTHER FEMALE DIAGNOSES	17	Obstetrics and Gynecology
2	191	LEVEL I FETAL PROCEDURES	17	Obstetrics and Gynecology
2	762	THREATENED ABORTION	17	Obstetrics and



Severity	EAPG	EAPG Description	Service	Service Description
				Gynecology
2	763	ABORTION W/O D&C, ASPIRATION CURETTAGE OR HYSTEROTOMY	17	Obstetrics and Gynecology
2	751		17	Obstetrics and Gynecology
		FEMALE REPRODUCTIVE SYSTEM INFECTIONS		
2	753	LEVEL II MENSTRUAL AND OTHER FEMALE DIAGNOSES	17	Obstetrics and Gynecology
3	190		17	Obstetrics and Gynecology
		ARTIFICIAL FERTILIZATION		
3	192		17	Obstetrics and Gynecology
		LEVEL II FETAL PROCEDURES		
3	750		17	Obstetrics and Gynecology
		FEMALE REPRODUCTIVE SYSTEM MALIGNANCY		
3	196		17	Obstetrics and Gynecology
		LEVEL I FEMALE REPRODUCTIVE PROCEDURES		
3	201		17	Obstetrics and Gynecology
		COLPOSCOPY		
3	760		17	Obstetrics and Gynecology
		VAGINAL DELIVERY		
4	193		17	Obstetrics and Gynecology
		TREATMENT OF INCOMPLETE ABORTION		
4	194		17	Obstetrics and Gynecology
		THERAPEUTIC ABORTION		
4	197		17	Obstetrics and Gynecology
		LEVEL II FEMALE REPRODUCTIVE PROCEDURES		
4	199		17	Obstetrics and Gynecology
		DILATION AND CURETTAGE		
4	200		17	Obstetrics and Gynecology
		HYSTEROSCOPY		
5	195		17	Obstetrics and Gynecology
		VAGINAL DELIVERY		
5	198		17	Obstetrics and Gynecology
		LEVEL III FEMALE REPRODUCTIVE PROCEDURES		
1	483	RADIATION THERAPY MANAGEMENT	18	Oncology
1	484	THERAPEUTIC RADIOLOGY TREATMENT PLANNING	18	Oncology
1	800	ACUTE LEUKEMIA	18	Oncology
1	801	LYMPHOMA, MYELOMA & NON-ACUTE LEUKEMIA	18	Oncology
1	804	LYMPHATIC & OTHER MALIGNANCIES & NEOPLASMS OF UNCERTAIN BEHAVIOR	18	Oncology
2	347	HIGH ENERGY NEUTRON RADIATION TREATMENT DELIVERY	18	Oncology
2	476	LEVEL I THERAPEUTIC RADIATION TREATMENT PREPARATION	18	Oncology
2	478	MEDICAL RADIATION PHYSICS	18	Oncology
2	480	TELETHERAPY/BRACHYTHERAPY CALCULATION	18	Oncology
3	343	RADIATION TREATMENT DELIVERY	18	Oncology
3	344	INSTILLATION OF RADIOELEMENT SOLUTIONS	18	Oncology
3	341	RADIATION THERAPY AND HYPERTHERMIA	18	Oncology
3	477	LEVEL II THERAPEUTIC RADIATION TREATMENT PREPARATION	18	Oncology
3	479	TREATMENT DEVICE DESIGN AND CONSTRUCTION	18	Oncology
3	481	THERAPEUTIC RADIOLOGY SIMULATION FIELD SETTING	18	Oncology
3	802	RADIOTHERAPY	18	Oncology
3	803	CHEMOTHERAPY	18	Oncology
4	342	AFTERLOADING BRACHYTHERAPY	18	Oncology
4	345	HYPERTHERMIC THERAPIES	18	Oncology
5	346	RADIOSURGERY	18	Oncology
5	348	PROTON TREATMENT DELIVERY	18	Oncology

Severity	EAPG	EAPG Description	Service	Service Description
5	349	LEVEL II AFTERLOADING BRACHYTHERAPY	18	Oncology
5	482	RADIOELEMENT APPLICATION	18	Oncology
1	231	FITTING OF CONTACT LENSES	19	Ophthalmology
1	422	PROVISION OF VISION AIDS	19	Ophthalmology
1	550	ACUTE MAJOR EYE INFECTIONS	19	Ophthalmology
1	551	CATARACTS	19	Ophthalmology
1	552	GLAUCOMA	19	Ophthalmology
1	553	LEVEL I OTHER OPHTHALMIC DIAGNOSES	19	Ophthalmology
1	555	CONJUNCTIVITIS	19	Ophthalmology
2	230	MINOR OPHTHALMOLOGICAL TESTS AND PROCEDURES	19	Ophthalmology
2	419	MINOR OPHTHALMOLOGICAL INJECTION, SCRAPING AND TESTS	19	Ophthalmology
2	554	LEVEL II OTHER OPHTHALMIC DIAGNOSES	19	Ophthalmology
3	485	CORNEAL TISSUE PROCESSING	19	Ophthalmology
3	232	LASER EYE PROCEDURES	19	Ophthalmology
4	233	CATARACT PROCEDURES	19	Ophthalmology
4	234	LEVEL I ANTERIOR SEGMENT EYE PROCEDURES	19	Ophthalmology
4	237	LEVEL I POSTERIOR SEGMENT EYE PROCEDURES	19	Ophthalmology
4	240	LEVEL I REPAIR AND PLASTIC PROCEDURES OF EYE	19	Ophthalmology
5	235	LEVEL II ANTERIOR SEGMENT EYE PROCEDURES	19	Ophthalmology
5	236	LEVEL III ANTERIOR SEGMENT EYE PROCEDURES	19	Ophthalmology
5	238	LEVEL II POSTERIOR SEGMENT EYE PROCEDURES	19	Ophthalmology
5	239	STRABISMUS AND MUSCLE EYE PROCEDURES	19	Ophthalmology
5	241	LEVEL II REPAIR AND PLASTIC PROCEDURES OF EYE	19	Ophthalmology
1	650	FRACTURE OF FEMUR	20	Orthopedics
1	652	FRACTURES & DISLOCATIONS EXCEPT FEMUR, PELVIS & BACK	20	Orthopedics
1	655	CONNECTIVE TISSUE DIAGNOSES	20	Orthopedics
1	656	BACK & NECK DIAGNOSES EXCEPT LUMBAR DISC DIAGNOSES	20	Orthopedics
1	657	LUMBAR DISC DIAGNOSES	20	Orthopedics
1	660	LEVEL I OTHER MUSCULOSKELETAL SYSTEM & CONNECTIVE TISSUE DIAGNOSES	20	Orthopedics
1	662	OSTEOPOROSIS	20	Orthopedics
1	658	LUMBAR DISC DIAGNOSES WITH SCIATICA	20	Orthopedics
1	39	REPLACEMENT OF CAST	20	Orthopedics
1	40	SPLINT, STRAPPING AND CAST REMOVAL	20	Orthopedics
2	49	ARTHROCENTESIS AND LIGAMENT OR TENDON INJECTION	20	Orthopedics
2	651	FRACTURE OF PELVIS OR DISLOCATION OF HIP	20	Orthopedics
2	653	MUSCULOSKELETAL MALIGNANCY & PATHOLOGICAL FRACTURES	20	Orthopedics
2	654	OSTEOMYELITIS, SEPTIC ARTHRITIS & OTHER MUSCULOSKELETAL INFECTIONS	20	Orthopedics
2	659	MALFUNCTION, REACTION, COMPLIC OF ORTHOPEDIC DEVICE OR PROCEDURE	20	Orthopedics
2	661	LEVEL II OTHER MUSCULOSKELETAL SYSTEM & CONNECTIVE TISSUE DIAGNOSES	20	Orthopedics
3	41	CLOSED TREATMENT FX & DISLOCATION OF FINGER, TOE & TRUNK	20	Orthopedics
3	42	CLOSED TREATMENT FX & DISLOCATION EXC FINGER, TOE & TRUNK	20	Orthopedics
3	33	LEVEL I HAND PROCEDURES	20	Orthopedics
3	35	LEVEL I FOOT PROCEDURES	20	Orthopedics
3	37	LEVEL I ARTHROSCOPY	20	Orthopedics
4	48	HAND AND FOOT TENOTOMY	20	Orthopedics



Severity	EAPG	EAPG Description	Service	Service Description
4	32	LEVEL III MUSCULOSKELETAL PROCEDURES EXCLUDING HAND AND FOOT	20	Orthopedics
4	34	LEVEL II HAND PROCEDURES	20	Orthopedics
4	36	LEVEL II FOOT PROCEDURES	20	Orthopedics
4	38	LEVEL II ARTHROSCOPY	20	Orthopedics
4	45	BUNION PROCEDURES	20	Orthopedics
4	46	LEVEL I ARTHROPLASTY	20	Orthopedics
5	31	LEVEL II MUSCULOSKELETAL PROCEDURES EXCLUDING HAND AND FOOT	20	Orthopedics
5	43	OPEN OR PERCUTANEOUS TREATMENT OF FRACTURES	20	Orthopedics
5	44	BONE OR JOINT MANIPULATION UNDER ANESTHESIA	20	Orthopedics
5	47	LEVEL II ARTHROPLASTY	20	Orthopedics
1	575	ASTHMA	21	Pulmonary
1	578	PNEUMONIA EXCEPT FOR COMMUNITY ACQUIRED PNEUMONIA	21	Pulmonary
1	412	SIMPLE PULMONARY FUNCTION TESTS	21	Pulmonary
1	576	LEVEL I OTHER RESPIRATORY DIAGNOSES	21	Pulmonary
2	572	BRONCHIOLITIS & RSV PNEUMONIA	21	Pulmonary
2	573	COMMUNITY ACQUIRED PNEUMONIA	21	Pulmonary
2	574	CHRONIC OBSTRUCTIVE PULMONARY DISEASE	21	Pulmonary
2	571	RESPIRATORY MALIGNANCY	21	Pulmonary
2	570	CYSTIC FIBROSIS - PULMONARY DISEASE	21	Pulmonary
2	577	LEVEL II OTHER RESPIRATORY DIAGNOSES	21	Pulmonary
3	60	PULMONARY TESTS	21	Pulmonary
3	65	RESPIRATORY THERAPY	21	Pulmonary
4	64	ENDOSCOPY OF THE LOWER AIRWAY	21	Pulmonary
5	579	STATUS ASTHMATICUS	21	Pulmonary
5	67	VENTILATION ASSISTANCE AND MANAGEMENT	21	Pulmonary
1	470	OBSTETRICAL ULTRASOUND	22	Radiology and Nuclear Medicine
1	471	PLAIN FILM	22	Radiology and Nuclear Medicine
1	472	ULTRASOUND GUIDANCE	22	Radiology and Nuclear Medicine
1	473	CT GUIDANCE	22	Radiology and Nuclear Medicine
1	286	MAMMOGRAPHY & OTHER RELATED PROCEDURES	22	Radiology and Nuclear Medicine
2	475	MRI GUIDANCE	22	Radiology and Nuclear Medicine
2	283	MAGNETIC RESONANCE ANGIOGRAPHY - OTHER SITES	22	Radiology and Nuclear Medicine
2	285	MISCELLANEOUS RADIOLOGICAL PROCEDURES WITH CONTRAST	22	Radiology and Nuclear Medicine
2	287	DIGESTIVE RADIOLOGY	22	Radiology and Nuclear Medicine
2	288	DIAGNOSTIC ULTRASOUND EXCEPT OBSTETRICAL AND VASCULAR OF LOWER EXTREMITIES	22	Radiology and Nuclear Medicine
2	289	VASCULAR DIAGNOSTIC ULTRASOUND OF LOWER EXTREMITIES	22	Radiology and Nuclear Medicine
2	291	BONE DENSITOMETRY	22	Radiology and Nuclear Medicine
2	293	MRI- JOINTS	22	Radiology and Nuclear Medicine
2	296	MRI- OTHER	22	Radiology and Nuclear Medicine
2	298	CAT SCAN BACK	22	Radiology and

Severity	EAPG	EAPG Description	Service	Service Description
				Nuclear Medicine
2	301	CAT SCAN - OTHER	22	Radiology and Nuclear Medicine
3	281	MAGNETIC RESONANCE ANGIOGRAPHY - HEAD AND/OR NECK	22	Radiology and Nuclear Medicine
3	282	MAGNETIC RESONANCE ANGIOGRAPHY - CHEST	22	Radiology and Nuclear Medicine
3	292	MRI- ABDOMEN	22	Radiology and Nuclear Medicine
3	294	MRI- BACK	22	Radiology and Nuclear Medicine
3	295	MRI- CHEST	22	Radiology and Nuclear Medicine
3	297	MRI BRAIN AND MAGNETOENCEPHALOGRAPHY	22	Radiology and Nuclear Medicine
3	299	CAT SCAN - BRAIN	22	Radiology and Nuclear Medicine
3	300	CAT SCAN - ABDOMEN	22	Radiology and Nuclear Medicine
3	330	LEVEL I DIAGNOSTIC NUCLEAR MEDICINE	22	Radiology and Nuclear Medicine
4	474	RADIOLOGICAL GUIDANCE FOR THERAPEUTIC OR DIAGNOSTIC PROCEDURES	22	Radiology and Nuclear Medicine
4	302	ANGIOGRAPHY, OTHER	22	Radiology and Nuclear Medicine
4	303	ANGIOGRAPHY, CEREBRAL	22	Radiology and Nuclear Medicine
4	331	LEVEL II DIAGNOSTIC NUCLEAR MEDICINE	22	Radiology and Nuclear Medicine
4	340	THERAPEUTIC NUCLEAR MEDICINE	22	Radiology and Nuclear Medicine
4	290	PET SCANS	22	Radiology and Nuclear Medicine
5	284	MYELOGRAPHY	22	Radiology and Nuclear Medicine
5	280	VASCULAR RADIOLOGY EXCEPT VENOGRAPHY OF EXTREMITY	22	Radiology and Nuclear Medicine
5	332	LEVEL III DIAGNOSTIC NUCLEAR MEDICINE	22	Radiology and Nuclear Medicine
1	871	SIGNS, SYMPTOMS & OTHER FACTORS INFLUENCING HEALTH STATUS	23	Rehabilitation
1	874	JOINT REPLACEMENT	23	Rehabilitation
2	275	SPEECH THERAPY & EVALUATION, GROUP	23	Rehabilitation
2	274	OCCUPATIONAL/PHYSICAL THERAPY, GROUP	23	Rehabilitation
3	872	OTHER AFTERCARE & CONVALESCENCE	23	Rehabilitation
3	273	MANIPULATION THERAPY	23	Rehabilitation
3	870	REHABILITATION	23	Rehabilitation
4	270	OCCUPATIONAL THERAPY	23	Rehabilitation
4	271	PHYSICAL THERAPY	23	Rehabilitation
4	272	SPEECH THERAPY AND EVALUATION	23	Rehabilitation
5	66	PULMONARY REHABILITATION	23	Rehabilitation
5	94	CARDIAC REHABILITATION	23	Rehabilitation
5	993	INPATIENT ONLY PROCEDURES	24	Unassigned
5	994	USER CUSTOMIZABLE INPATIENT PROCEDURES	24	Unassigned
1	999	UNASSIGNED	24	Unassigned
1	727		25	Urology and Nephrology
1	741	ACUTE LOWER URINARY TRACT INFECTIONS MALE REPRODUCTIVE SYSTEM DIAGNOSES EXCEPT MALIGNANCY	25	Urology and Nephrology

Severity	EAPG	EAPG Description	Service	Service Description
1	743	PROSTATITIS	25	Urology and Nephrology
1	744	MALE REPRODUCTIVE INFECTIONS	25	Urology and Nephrology
1	726	OTHER KIDNEY & URINARY TRACT DIAGNOSES, SIGNS & SYMPTOMS	25	Urology and Nephrology
2	181	CIRCUMCISION	25	Urology and Nephrology
2	161	URINARY STUDIES AND PROCEDURES	25	Urology and Nephrology
2	742	NEOPLASMS OF THE MALE REPRODUCTIVE SYSTEM	25	Urology and Nephrology
2	724	URINARY STONES & ACQUIRED UPPER URINARY TRACT OBSTRUCTION	25	Urology and Nephrology
2	166	LEVEL I URETHRA AND PROSTATE PROCEDURES	25	Urology and Nephrology
3	180	TESTICULAR AND EPIDIDYMAL PROCEDURES	25	Urology and Nephrology
3	164	LEVEL II BLADDER AND KIDNEY PROCEDURES	25	Urology and Nephrology
3	185	PROSTATE NEEDLE AND PUNCH BIOPSY	25	Urology and Nephrology
3	162	URINARY DILATATION	25	Urology and Nephrology
3	163	LEVEL I BLADDER AND KIDNEY PROCEDURES	25	Urology and Nephrology
3	740	MALIGNANCY, MALE REPRODUCTIVE SYSTEM	25	Urology and Nephrology
3	723	KIDNEY AND CHRONIC URINARY TRACT INFECTIONS	25	Urology and Nephrology
3	725	MALFUNCTION, REACTION, COMPLIC OF GENITOURINARY DEVICE OR PROC	25	Urology and Nephrology
3	720	RENAL FAILURE	25	Urology and Nephrology
3	721	KIDNEY & URINARY TRACT MALIGNANCY	25	Urology and Nephrology
3	722	NEPHRITIS & NEPHROSIS	25	Urology and Nephrology
3	167	LEVEL II URETHRA AND PROSTATE PROCEDURES	25	Urology and Nephrology
4	165	LEVEL III BLADDER AND KIDNEY PROCEDURES	25	Urology and Nephrology
4	160	EXTRACORPOREAL SHOCK WAVE LITHOTRIPSY	25	Urology and Nephrology
4	183	OTHER PENILE PROCEDURES	25	Urology and Nephrology
4	184	DESTRUCTION OR RESECTION OF PROSTATE	25	Urology and Nephrology
4	168	HEMODIALYSIS	25	Urology and Nephrology
4	169	PERITONEAL DIALYSIS	25	Urology and Nephrology
5	182	INSERTION OF PENILE PROSTHESIS	25	Urology and Nephrology

## Appendix 4. ICC and Geographic TCOC Growth Rankings

Hospital Name	ICC Result	ICC Rank	2013-2018 TCOC per Capita Growth Rate	TCOC Rank	Total Rank Points (Low Score is Better)
Anne Arundel Medical Center	-5.87%	7	3.53%	3	10
Atlantic General Hospital	-4.24%	4	5.01%	9	13
Johns Hopkins Hospital	-9.59%	10	3.81%	5	15
St. Agnes Hospital	-12.39%	17	4.10%	6	23
Johns Hopkins Bayview Medical Center	-10.21%	12	6.09%	14	26
University of Maryland Baltimore Washington Medical Center	-10.46%	14	5.98%	12	26
Meritus Medical Center	-10.12%	11	6.18%	15	26
Holy Cross Hospitals	-7.55%	8	7.69%	21	29
Mercy Medical Center	-2.19%	1	9.23%	29	30
Harford Memorial Hospital	-17.55%	28	3.44%	2	30
Washington Adventist Hospital	-15.22%	25	4.35%	7	32
MedStar Union Memorial Hospital	-4.87%	5	9.53%	30	35
Howard County General Hospital	-10.26%	13	7.92%	25	38
Fort Washington Medical Center	-5.57%	6	10.42%	33	39
Laurel Regional Hospital	-25.31%	41	3.09%	1	42
University of Maryland Shore Medical Center at Dorchester	-19.85%	30	5.67%	11	41
Frederick Memorial Hospital	-16.80%	26	6.88%	16	42
MedStar Southern Maryland Hospital Center	-23.15%	38	3.79%	4	42
Suburban Hospital	-2.54%	2	12.37%	41	43
Peninsula Regional Medical Center	-12.85%	18	8.48%	26	44
University of Maryland Shore Medical Center at Easton	-21.79%	35	5.67%	10	45
Doctors Community Hospital	-21.65%	34	4.52%	8	42

MedStar Franklin Square Hospital Center	-13.54%	21	7.88%	24	45
MedStar Harbor Hospital Center	-3.70%	3	18.04%	45	48
MedStar St. Mary's Hospital	-13.68%	22	8.89%	27	49
Sinai Hospital	-20.17%	31	7.15%	19	50
Western Maryland Regional Medical Center	-21.21%	33	7.00%	17	50
Prince Georges Hospital Center	-13.06%	20	10.40%	32	52
Shady Grove Adventist Hospital	-12.88%	19	10.71%	34	53
Greater Baltimore Medical Center	-12.13%	16	11.15%	38	54
Garrett County Memorial Hospital	-7.95%	9	19.96%	46	55
University of Maryland Charles Regional Medical Center	-11.04%	15	11.72%	40	55
Upper Chesapeake Medical Center	-17.36%	27	9.01%	28	55
Carroll Hospital Center	-21.07%	32	7.85%	23	55
McCready Memorial Hospital	-27.27%	45	6.03%	13	58
University of Maryland Medical Center	-13.70%	23	11.03%	36	59
Calvert Memorial Hospital	-22.19%	36	7.84%	22	58
Northwest Hospital Center	-24.36%	40	7.01%	18	58
University of Maryland Shore Medical Center at Chestertown	-24.29%	39	7.16%	20	59
University of Maryland Rehabilitation & Orthopaedic Institute	-27.00%	44	11.03%	36	80
University of Maryland St. Joseph Medical Center	-14.57%	24	11.16%	39	63
MedStar Good Samaritan Hospital	-19.25%	29	12.93%	44	73
Bon Secours Hospital	-26.22%	42	10.31%	31	73
MedStar Montgomery Medical Center	-22.71%	37	12.57%	42	79
Union Hospital of Cecil County	-30.59%	46	10.94%	35	81
University of Maryland Medical Center Midtown Campus	-26.49%	43	12.64%	43	86

## Appendix 5: Preliminary Overview of Total Cost of Care Benchmark Calculations

Staff is proposing to calculate a hospital's Benchmark Score as the ratio of the Medicare FFS average per capita cost of care for their attributed beneficiaries for CY2018 to that of a benchmark group. A score above 1 will indicate total cost of care above the benchmark, a score below 1 will indicate cost below the benchmark. For this purpose total cost of care for each Maryland hospital will be calculated leveraging the MPA policies with the only revision being that the categorical exclusions and the elimination of beneficiary costs above the 99<sup>th</sup> percentile will not be applied.<sup>18</sup>

### **Benchmark Overview**

The benchmark for a hospital will be developed in a three step process. Step 1 is to identify benchmark groups for each Maryland County. Step 2 is to translate the county benchmarks into a benchmark for each hospital. Step 3 is to complete the cost comparison.

#### Step 1 Establish Benchmark Counties

Staff has established and shared a list of benchmark counties for each Maryland County (collectively for each Maryland County the Benchmark Cohort). The Benchmark Cohort was identified in two steps (1) narrowing possible benchmark counties for each Maryland County to those of a similar population size and density and (2) from the narrowed list selecting the counties with the closest match to the Maryland County in terms of four demographic characteristics.

##### A. Step 1, Part 1 – Narrowing the Potential Benchmark Cohort

Initially the Benchmark Cohort for a county was limited to counties with the same Rural-Urban Continuum code (RU Code) as the Maryland County. RU Codes are assigned to each US County by the Department of Agriculture and reflect factors such as population, degree of urbanization and adjacency to a metro area.<sup>19</sup>

The potential Benchmark Cohort was further narrowed based on the population size and density. Under this approach the most urban counties were subdivided into a 4x4 matrix based on the population size and density quartiles. The potential Benchmark Cohort was then narrowed to only those national counties in the same cell as the Maryland County. In this process, some cells were combined due to small size.

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<sup>18</sup> These adjustments are removed due to the technical complexity of applying them to the national benchmark data. Staff believes that given that the outcomes of the benchmarking are being used to broadly group hospitals rather than measure at a detail level, the removal of the exclusions is not material.

<sup>19</sup> The codes range from 1 (most urban) to 9 (least urban). For Maryland counties with RU Codes 2-8 all national counties with the same RU Code were included in the potential Benchmark Cohort. However, RU Code 1 reflects a large variation in county size, in order to better match Maryland's five large urban counties to an appropriate peer group (Baltimore City and County, Anne Arundel, Prince George's and Montgomery) a refinement was added for all RU 1 Maryland counties.

## B. Step 1, Part 2 – Selecting the Benchmark Cohort

The specific members of the Benchmark Cohort for each Maryland County were selected as the most “similar” to the Maryland County across four dimensions:

Income – **Median Income** (Source: American Community Survey 2013 to 2017)

Cost – **Regional Price Parities (RPP)**, price levels across the US (Source: Bureau of Economic Analysis, 2018)

Socio-Economic Status – **% Deep Poverty**, % of individuals below 50% of the poverty level (Source: American Community Survey, 2013 to 2017)

Disease Burden – **Hierarchical Condition Category (HCC)**, measure of healthcare cost risk in a population (Source: CMS, 2017)

Staff considered an extensive list of metrics on which to define similarity. Staff settled on a short list of metrics in order to simplify the process and maximize data availability. These specific metrics that were selected represent various factors that drive healthcare need in a community. Staff specifically avoided metrics that reflect the historic nature of the healthcare system in a community like academic presence, physician supply or payor mix.

The values from each metric for each county were then converted to standard deviations from the mean to create a common scale and then blended together with equal weight given to each metric.<sup>20</sup> Each national county’s similarity to each Maryland County was then calculated based on comparing the blended score of the Maryland County with that of the national county. The Benchmark Cohort for a Maryland County is made up of the national counties with the smallest difference from the Maryland County (from within the pools determined in Step 1 Part 1).

For the five large urban counties the Benchmark Cohort consists of the 20 most similar national counties. For the remaining counties the 50 most similar were used. The number of counties in the Benchmark Cohort was selected to balance a number of factors. The need to evaluate the Maryland County against a range of peers for this and other policies and the greater stability of larger samples indicated a larger cohort size. However, increasing the sample size reduces the average similarity and tends towards the maximum potential matches for the largest counties. The cohort sizes were selected to balance these factors, with a larger cohort used for smaller counties with more potential matches and greater risk of data instability (see discussion of 5% sample below).

### Step 2 – Translate County Benchmarks into Hospital Benchmarks

Once a Benchmark Cohort was selected average total cost of care was calculated for each member and a cohort average was calculated based on a straight average (Benchmark TCOC). A straight average was used as staff did not feel that different county sizes were relevant once a county was placed in the Benchmark Cohort.

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<sup>20</sup> Data for all the metrics except RPP are available at a county level. RPP is available at an MSA level. Staff felt it was appropriate to map from an MSA level to a county level for this metric due to the regional nature of prices.

Data for national costs was pulled from the Medicare 5% sample provided by CMS in its data warehouse referred to as the Chronic Condition Warehouse or CCW.<sup>21</sup> The 100% sample was used for Maryland because of the greater stability. Testing showed that for smaller counties the 5% sample can be unstable, at a county level, from year to year. However, given the size of the cohort used for small counties (50 counties), staff believes using the 5% sample for the Benchmark Cohorts is a reliable approach.

Once benchmark costs had been established at a county level they were translated to a hospital level based on the residence of a hospital’s MPA attributed beneficiaries, which was calculated for each hospital in each county. Counties with less than 2% of the hospital’s total population were then dropped as reflecting noise in the data. A percentage of total MPA attributed beneficiaries reflected in the benchmark was then calculated as 1 – Sum of the percentage reflected by the dropped counties to ensure that the sum of the weights equals 100. For most hospitals, the percent of MPA beneficiaries in dropped counties is less than 10%.

Each Hospital’s Unadjusted Benchmark was then calculated as

$$\frac{\sum \text{MD County \% of Hospital attributed beneficiaries} \times \text{MD County Benchmark TCOC}}{\% \text{ of Hospital's total MPA attributed beneficiaries reflected}}$$

To better match on healthcare risk the Unadjusted Benchmark was then converted to an Adjusted Benchmark by dividing the Unadjusted Benchmark by the average HCC score for the Benchmark Cohort and multiplying it by the HCC score for the Hospital MPA attributed beneficiaries.

Staff is continuing to evaluate methods that will further normalize the Adjusted Benchmark for differences between the demographics of the Hospital’s attributed population and the benchmark demographics that are not accounted for in the HCC score.

### Step 3 – Complete the cost comparison

Each hospital’s Benchmark Score is calculated as the ratio of the average total cost per capita of the Hospital’s attributed beneficiaries to the Adjusted Benchmark. Hospitals below their Adjusted Benchmark will have scores below 1.0, those above their adjusted benchmark will have scores above 1.0.

The Benchmark Scores are then ranked from lowest to highest and the bottom quartile flagged for potential adjustment under this efficiency approach.

<sup>21</sup> Whereas under the MPA attribution costs for Maryland counties are pulled from the 100% sample for Maryland provided by CMS in CCW. Staff compared results for Maryland between the two samples and determined they were comparable.





August 16, 2019

Katie Wunderlich  
Executive Director  
Health Services Cost Review Commission  
4160 Patterson Avenue  
Baltimore, MD 21215

**RE: HSCRC Proposed Integrated Efficiency Policy**

Dear Ms. Wunderlich:

On behalf of the University of Maryland Medical System (UMMS), representing 15 acute care hospitals and health care facilities, we are submitting comments in response to the Health Services Cost Review Commission's (HSCRC) Draft Recommendation for the Integrated Efficiency Policy.

We support the Staff's proposal to implement a standardized approach for evaluating hospital efficiency and adjusting hospital revenue. An efficiency policy is necessary to ensure that hospital costs remain reasonable and health care is affordable in the state of Maryland. The Inter-hospital Cost Comparison (ICC) and Total Cost of Care (TCOC) growth are appropriate measures of efficiency. The addition of a per capita measure aligns with the goals of the Total Cost of Care model.

While the foundation of the efficiency measure is well developed, we support the points raised in MHA's comment letter and feel further exploration and refinement of the policy and methodology is warranted, as it is the basis of what can amount to significant adjustments for hospitals over a multi-year period.

In addition to the comments made by MHA, we would further voice a concern regarding the identification of smaller facilities (e.g. UM Rehab, Union of Cecil and Chestertown) being identified as outliers. These facilities often face unique challenges due to circumstances such as size, type of services and/or location. Often a 'one size fits all' approach within a methodology is not necessarily appropriate. We recommend the HSCRC staff evaluate the circumstances contributing to the outlier status of these small facilities and consider making adjustments to recognize their unique nature and circumstances.

Thank you for the opportunity to provide feedback. If you have any questions, please do not hesitate to contact me.

Sincerely,

A handwritten signature in blue ink that reads "Alicia Cunningham".

Alicia Cunningham  
Senior Vice President

Corporate Finance & Revenue Advisory Services

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Katie Wunderlich  
August 16, 2019

cc: Nelson Sabatini, Chairman  
HSCRC Commissioners  
John Ashworth, UMMS CEO  
Michelle Lee, UMMS CFO



Maryland  
Hospital Association

August 16, 2019

Katie Wunderlich  
Executive Director  
Health Services Cost Review Commission  
4160 Patterson Avenue  
Baltimore, MD 21215

Dear Ms. Wunderlich:

On behalf of Maryland's 61-member hospitals and health systems, the Maryland Hospital Association (MHA) appreciates the opportunity to comment on the Health Services Cost Review Commission's (HSCRC) proposed integrated efficiency policy.

**MHA supports the proposal to adjust hospital revenues for efficiency.**

The Inter-hospital Cost Comparison (ICC) and Total Cost of Care (TCOC) growth are appropriate measures of efficiency. Measuring efficiency in a fixed revenue environment is difficult, and we appreciate the HSCRC staff's approach to balance unit price efficiency with hospital specific, per capita attribution. Global budgets create powerful incentives to reduce utilization, that by design, can lead to price inefficiency. This is an important consideration that requires a thoughtful approach in all HSCRC policies to avoid competing incentives.

**The efficiency policy should be revenue neutral on a statewide basis.**

If any high cost hospitals' revenues are reduced, the full sum of this reduction should be available to be redistributed within the system. No portion should be withheld. We appreciate the HSCRC staff's consideration that allows low cost outliers to apply for increases and other proposed uses of savings, including capital funding, etc.

**The profit strip should not apply when determining high- or low-cost outliers for revenue adjustments but may apply when using the methodology for a full rate application.**

In today's TCOC environment, it is impractical to remove only regulated profits from the calculation when hospitals are asked by HSCRC to invest in activities to transform care. Many, if not most, care transformation activities and investments occur in settings not regulated by HSCRC. We appreciate that staff does not regulate professional physician services, the major component of unregulated losses, and we are not advocating that the HSCRC should do so. However, hospitals believe that removing total operating profit – regulated and unregulated – does not violate the HSCRC's statute, particularly as the other efficiency measure, TCOC, includes physician services when determining hospital revenue adjustments. Removing total operating profit gives a much clearer and cleaner picture of actual cost incurred as hospitals move to reduce TCOC.

**Policy Goals and Objectives, and Methodology Application**

HSCRC should describe clear policy goals and objectives for the efficiency policy. The HSCRC staff's document introduces the measure, but no section clearly articulates the policy's aims.

HSCRC staff propose to use methodology results to withhold the Medicare portion of the annual payment update for those hospitals determined to be high cost. HSCRC staff also propose to use the methodology results to evaluate global budgeted revenue (GBR) enhancement requests. We agree that a single methodology should be used to measure performance that can be applied to revenue adjustments.

While not explicit in the recommendation, MHA expects this methodology would be used in the full rate application process. We note that once the methodology is developed it may be used in several ways to directly or indirectly adjust revenues, and it will likely remain in place for several years. As noted in the ICC Methodology section below, MHA suggests applying adjustments differently in a full rate application, rather than the methodology used to determine outliers.

HSCRC staff should consider the efficiency measure as a threshold to apply a revenue reduction. Historically, hospitals above a certain threshold were identified as high cost hospitals, subject to a spenddown – agreed to by hospital and HSCRC staff. Hospitals appreciate the need to adopt clear policies with stated results. The methodology would still identify high cost outliers with required revenue adjustments but allow hospitals some flexibility to negotiate with staff over terms and amounts. Under this approach, the terms of the agreement should be a public document, reviewed and approved by commissioners at a public meeting.

Hospital revenue reductions from the efficiency measure should be net of other adjustments applied by HSCRC staff. Hospitals are concerned that the efficiency policy could double count revenue reductions previously applied, including deregulation or other GBR adjustments.

### **ICC and Rate Efficiency Methodology (REM)**

The ICC methodology is the first pillar of the efficiency policy. As a reminder, the ICC methodology is largely “fixed.” Hospitals have very little, if any, control over the results because revenues per unit of measure and the adjustment factors are pre-determined.

*Hospitals have identified several matters for staff to consider:*

#### Identifying High- and Low-Cost Outliers versus Settling Full Rate Applications

The efficiency measure uses the historical full rate setting approach, establishing a peer group average less profit and productivity, then comparing each hospital’s result to its unadjusted charge per unit. Under the proposed approach, all hospitals appear inefficient because all hospitals appear to receive a revenue reduction. To identify high-and low-cost outliers, hospitals should be compared to the peer group standard using the REM, without adjustments to remove regulated profit or productivity (excess capacity). If the intended goal is to measure price efficiency rather than cost efficiency, profit and productivity should not be removed. These changes should not materially alter the overall results, but profits and productivity should only be applied in a full rate setting.

The full rate application standard, though based on the same framework, should use the ICC and may include adjustments for profit and productivity. The standard to receive additional funding through a full rate application was always more stringent than a hospital efficiency comparison.

#### Adjustments for Quality Measures

HSCRC staff propose to adjust the methodology for quality performance. Maryland's hospitals are steadfastly committed to raising quality. However, we respectfully request HSCRC staff eliminate this adjustment. There are already ample adjustments for quality in the rate setting system, both direct – readmissions, complications, etc. – and indirect – Medicare Performance Adjustment, etc.

#### Volume Adjustment

HSCRC staff propose to volume adjust the methodology to reward hospitals that reduced utilization and penalize hospitals that increased utilization. Hospitals generally agree that some adjustment should be made because unit prices are a function of fixed revenues and changing units. Hospitals experiencing a decline in units will appear inefficient if the decline is caused by reductions in avoidable utilization, aligning with GBR and system incentives. Hospitals should receive credit for reducing potentially avoidable utilization (PAU) and there should be no adjustment for general utilization declines. This adjustment is one area where hospitals can affect the ICC results because reducing avoidable utilization will affect the outcome.

This adjustment is applied during the build-up phase of the ICC calculation. The adjustment to recognize PAU must be changed because of MHA's recommended change to measure outliers using the REM and not the ICC.

#### Productivity Adjustment

Like the profit strip, the productivity adjustment should only apply when using the methodology for a full rate application. Hospitals understand the productivity adjustment will vary by peer group. This adjustment will not apply in MHA's proposed approach to measuring outliers, but because it affects all hospitals in the peer group equally, it should have no impact on any hospital's position.

HSCRC staff recommend an excess capacity adjustment that measures the decline in patient days from 2010 through 2018. Hospital GBRs were constructed using the 2013 base period and negotiated into 2014. Some amount of fixed cost was built into the GBR. If the productivity adjustment measurement period begins in 2010, the methodology will not account for some fixed costs that were included in the initial GBR rate setting.

#### Peer Groups

HSCRC staff have historically used peer groups to account for unmeasured difference in hospital costs. HSCRC staff are not proposing to evaluate peer groups. We suggest HSCRC assess peer groups because they are an integral part of the core ICC methodology.

#### Medical Education, Disproportionate Share (DSH) and Other Direct Strips

Hospitals agree it is appropriate to adjust for costs unique to each hospital. The indirect medical education (IME) adjustment was revised during the initial ICC proposal in 2018. MHA and HSCRC staff did not address the IME adjustment during that period. Hospitals note the adjustment was last calculated based on 2015 data.

The revised ICC does not reflect an adjustment for DSH. DSH generally refers to unmeasured cost differences for treating an underserved population, which is different from measuring patient complexity. We appreciate HSCRC staff's conclusion that expanding Medicaid has led to a reduction



in uninsured patients and that comparing case mix adjusted charges for a poor population compared to all other populations did not yield a significant variance. However, many hospitals believe HSCRC staff should continue to study this issue.

The revised labor market adjustor (LMA) splits the state into three categories: Prince George's plus Montgomery counties, all other Maryland, and three outlier hospitals. HSCRC staff previously indicated a desire to use Medicare Wage Index data in the future. MHA supports using Medicare wage data to improve the accuracy of the information. However, as staff pursues this approach, we urge careful consideration of replacing the existing methodology that blends labor markets throughout the state with one that could create "cliffs" by using a defined geographical area.

### **Total Cost of Care Growth Measure**

The second pillar of the efficiency policy measures Medicare TCOC growth – hospital and non-hospital spending per beneficiary – as assigned to a specific hospital. MHA agrees this is an important measure in the efficiency policy because the system incentives are population based.

HSCRC's approach uses the Primary Service Areas-Plus (PSA-P) method to assign beneficiaries to hospitals. We note that this methodology is different than the methodology used to measure the Medicare Performance Adjustment (MPA). We understand HSCRC staff's intent to measure TCOC performance since 2013 and we agree it is not possible using the MPA attribution.

Hospitals acknowledge and agree that any logic attributing beneficiaries to hospitals will be imperfect. Hospital Medicare payments are directly adjusted based on MPA performance. However, we also note that HSCRC staff's statistical analysis reflected a strong correlation between the 2018 MPA results and the 2018 PSA-P. With additional time to review the policy, HSCRC should strive for consistency in its approach to attribution.

### **Implications for Other HSCRC Policies**

Once an efficiency measure is in place, we respectfully ask HSCRC staff to revisit its unit rate compliance policy. Measuring monthly rate compliance and adjusting unit rates, with the process of requesting adjustments outside certain corridors, creates a heavy burden on hospital reimbursement staff, with very little net value. HSCRC staff have previously indicated a willingness to revisit this issue after an efficiency measure has been adopted. We appreciate the need to hold hospitals accountable to revenue targets.

### **Methodology Validation and Stakeholder Input**

MHA recognizes the methodologies and underlying data used to manage the rate setting system have evolved over time. Combining inpatient and outpatient measures, and measuring total cost of care, involve new data sets and unique patient identifiers. One of the hallmarks of Maryland's rate setting system has been the ability to replicate and validate calculations. Allowing unfettered access to patient identifiable data may not be practical, but we would appreciate HSCRC staff's consideration of this important process set. In cases where data can be made available, we urge staff to err on the side of transparency and share the data for all to validate.

Katie Wunderlich  
August 16, 2019  
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We strongly encourage HSCRC to maintain an open and transparent process for stakeholders to share feedback on policies, including underlying methodologies. A regular review process will allow all stakeholders to provide feedback to HSCRC staff and will ultimately support the recommendation process.

Thank you again for your careful consideration of these matters. If you have any questions, please contact me.

Sincerely,



Brett McCone  
Senior Vice President, Health Care Payment

cc: Nelson J. Sabatini, Chairman  
Joseph Antos, Ph.D., Vice Chairman  
Victoria W. Bayless  
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**Susan K. Nelson**  
Executive Vice President and  
Chief Financial Officer

August 16, 2019

Katie Wunderlich  
Executive Director  
Health Services Cost Review Commission  
4160 Patterson Avenue  
Baltimore, MD 21215

Dear Katie:

On behalf of MedStar Health, Inc. and our Maryland hospitals, we are submitting additional comments on the Health Services Cost Review Commission's ("HSCRC") Draft Recommendation on Integrated Efficiency Policy as a supplement to the Maryland Hospital Association's ("MHA") letter for the hospital industry.

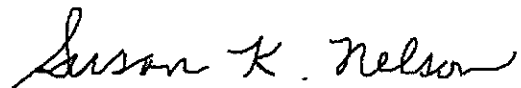
- We support the positive adjustments to the methodology that recognize utilization declines due to population health initiatives and appreciate the HSCRC staff recognizing the importance of encouraging these efforts.
- Impact of rate increases related to significant capital expenditures

Holy Cross received significant capital funding to build a new hospital in Germantown and the HSCRC made related adjustments to the update factor in prior years. The location of the hospital created both utilization changes/shifts and impacted TCOC for all hospitals in these overlapping service areas. We request the HSCRC study the impact of the funding of the new hospital and adjust appropriately any unintended consequences on hospitals' efficiency performance. We believe this study may also provide valuable insights on the impact of potential new capital funding policies.



Thank you for the opportunity to comment and we look forward to continued discussion as this proposal is finalized.

Sincerely,

A handwritten signature in cursive script that reads "Susan K. Nelson".

Susan K. Nelson  
Executive Vice President and Chief Financial Officer  
MedStar Health

cc: Nelson Sabatini, Chairman  
Joseph Antos, Ph.D., Vice Chairman  
Adam Kane  
Victoria W. Bayless  
James Elliott, M.D.  
Stacia Cohen, RN  
John M. Colmers  
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August 16, 2019

Katie Wunderlich  
Executive Director  
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4160 Patterson Avenue  
Baltimore, MD 21215

Dear Ms. Wunderlich:

On behalf of the Johns Hopkins Health System (JHHS), we appreciate the opportunity to comment on the commission's Draft Recommendation on Integrated Efficiency Policy.

JHHS supports the proposal to adjust hospital revenues for efficiency. We also believe that it is appropriate to have both a Price Efficiency metric as well as a Total Cost of Care (TCOC) metric included as part of the methodology. Measuring efficiency in a fixed revenue environment is challenging, and we appreciate the HSCRC staff's approach to balance price efficiency with hospital specific, per capita TCOC performance.

JHHS also believes that the efficiency policy should be revenue neutral on a statewide basis. If high cost hospital's revenues are reduced, the full sum of this reduction should be available within the system and no portion should be withheld. We appreciate the HSCRC staff's consideration that allows low cost outliers to apply for increases and other proposed uses of savings.

#### **Policy Goals and Objectives, and Methodology Application**

JHHS believes that HSCRC staff should include clear policy goals and objectives for the efficiency policy.

HSCRC staff propose to use methodology results to withhold the Medicare portion of the annual payment update for those hospitals determined to be high cost. HSCRC staff also propose to use the methodology results to evaluate global budgeted revenue (GBR) enhancement requests. We agree that a single methodology should be used to measure performance that can be applied to revenue adjustments.

HSCRC staff should consider the efficiency measure as a threshold to apply a revenue reduction. Historically, hospitals above a certain threshold were identified as high cost hospitals, subject to a spenddown – agreed to by the hospital and HSCRC staff. Hospitals appreciate the need to adopt clear policies with stated results. The methodology would still identify high cost outliers with required revenue adjustments but have some flexibility to negotiate with staff over terms and amounts. Under this approach, the terms of the agreement should be a public document, reviewed and approved by commissioners, at a public meeting.

Hospital revenue reductions from the efficiency measure should be net of other adjustments applied by HSCRC staff. Hospitals are concerned that the efficiency policy could "double count" revenue reductions previously applied, such as deregulation or other global budget revenue adjustments.

## **ICC Methodology**

The ICC methodology is the first pillar of the efficiency policy. JHHS has identified several matters for staff to consider and these are listed below. As a reminder, the ICC methodology is largely “fixed.” Hospitals have very little, if any, control over the results because revenues per unit of measure and the adjustment factors are pre-determined.

### Identifying High- and Low-Cost Outliers versus Settling a Full Rate Application

The proposed ICC logic follows the HSCRC’s historic approach of developing a peer group standard. There has always been a difference between the efficiency measurement and the full rate setting methodology as they serve two similar but different purposes. Historically, hospitals were compared to the peer group standard to measure if they were efficient or inefficient, which would result in a revenue adjustment via a spenddown or adjustment to the annual payment update. This was a simple way to compare hospitals and apply a revenue adjustment.

In a full rate setting, the peer group standard was reduced to remove regulated profit and to adjust for productivity. The resulting standard was then “built up” using the target hospital’s factors to compare its “new” price per unit to its existing price per unit. The standard to receive additional funding through a full rate application was always more stringent than a hospital efficiency comparison.

The efficiency measure uses the full rate setting approach, comparing each hospital to itself after profit, productivity and other adjustments. Under this approach, all hospitals appear inefficient because all-hospitals appear to receive a revenue reduction. For purposes of identifying high and low-cost outliers, hospitals should be compared to the peer group standard, without adjustments to remove regulated profit or productivity (excess capacity). If the intended goal is to measure price efficiency rather than cost efficiency, then profit and productivity should not be removed.

### Adjustments for Quality Measures

While we appreciate the intent to magnify the rewards and penalties for quality, we feel that this adjustment should be eliminated from the efficiency measurement. The efficiency methodology measures a hospital’s permanent rate base. The quality adjustments are made on a one time basis. By incorporating the quality adjustments into the efficiency measurement you would be in fact making the impact on a hospital’s rate base permanent, which should not be the intent of this policy.

### Volume Adjustment

HSCRC staff propose to volume adjust the methodology to reward hospitals that have reduced utilization and penalize hospitals that increased utilization. We agree that some adjustment should be made because unit prices are a function of fixed revenues and changing units. Hospitals with a decline in units will appear inefficient, though if the decline is caused by reductions in Potentially Avoidable Utilization (PAU), the outcome aligns the GBR and system incentives. Hospitals should receive credit for reducing PAU but there should not be an adjustment for general utilization.

### Profit Strip in a Full Rate Setting

As stated earlier, the profit strip should not apply when determining high- or low-cost outliers for revenue adjustments but should apply when using the methodology for a full rate application. In today’s total cost of care environment, it is impractical to remove only regulated profits when hospitals are asked by HSCRC to invest in activities to transform care. Many, if not most care transformation activities and investments are unregulated.

### Productivity Adjustment

Like the profit strip, the productivity adjustment should only apply when using the methodology for a full rate application.

HSCRC staff recommends an excess capacity adjustment that measures the decline in patient days from 2010 through 2018. Hospital GBRs were constructed using the 2013 base period and negotiated into 2014. Some amount of fixed cost was built into the GBR. If the productivity adjustment measurement period begins in 2010, the methodology will not account for some fixed costs that were include in the initial GBR rate setting.

Medical Education and Disproportionate Share (DSH)

JHHS agrees that it is appropriate to adjust for costs unique to each hospital. The Indirect Medical Education (IME) adjustment was revised during the initial ICC proposal in 2018. We feel that changes to this methodology should follow a review process similar to other changes in HSCRC methodologies. Historically, each of these adjustments was addressed as individual policy discussion to assure that all parties were at the table.

The revised ICC does not reflect an adjustment for DSH. DSH generally refers to unmeasured cost differences for treating an underserved population which is different from measuring patient complexity. We appreciate HSCRC staff's conclusion that expanding Medicaid has led to a reduction in uninsured patients and that comparing case mix adjusted charges for a poor population compared to all other populations did not yield a significant variance. However, we believe that HSCRC staff should continue to study this issue and possibly consider a way to utilize an Area Deprivation Index (ADI) to account for health disparities.

Other Considerations

JHHS appreciates the need to compare hospitals to like peers in the state, however the current peer groups were initially developed almost 20 years ago. Many hospitals have changed since the initial creation of these groups. We would ask that HSCRC staff revisit the peer grouping logic and revise the groups appropriately if necessary.

**Total Cost of Care**

The second component of the efficiency policy measures Medicare Total Cost of Care (TCOC) growth per beneficiary by hospital. JHHS agrees that this is an important measure in the efficiency policy because the system incentives are population based however only measuring growth could disadvantage hospitals with very low TCOC relative to others in the state which may have a difficult time improving that position over time. We believe that it would be appropriate to also include some attainment threshold which would give credit to hospitals whose TCOC are among the lowest in the state.

Finally, we believe that this and all methodologies need to be reviewed and revisited on a regular basis to assure that the underlying methodologies are keeping in sync with the goals of the new model and to provide refinements where needed.

Thank you again for your consideration of these matters. If you have any questions, please feel free to contact me.

Sincerely,



Ed Beranek  
Vice President, Revenue Management and Reimbursement

cc: Nelson J. Sabatini, Chairman  
Joseph Antos, Ph.D., Vice Chairman  
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August 16, 2019

Nelson J. Sabatini, Chairman  
Health Services Cost Review Commission  
4160 Patterson Avenue  
Baltimore, Maryland 21215

Dear Mr. Sabatini:

The purpose of this letter is to provide CareFirst's comments on the HSCRC staff's Draft Recommendation on the Integrated Efficiency Policy (i.e., Draft ICC Efficiency Policy) dated July 10, 2019 and presented at the July public meeting of the HSCRC.

CareFirst strongly supports the intent and objectives of policies that identify "high-cost" hospitals and reduce excess hospital revenues associated with relative operating inefficiency or due to shifts of services from hospitals to non-hospital providers. The Commission staff has achieved success in this regard through the implementation of the recent Spenddown agreement with University of Maryland Midtown Hospital and the removal of excess revenues in other hospital Global Budget Rate (GBR) arrangements associated with shifts of services to unregulated settings. The current Draft ICC Efficiency Policy is intended to further these policy objectives by establishing a more formulaic approach to remove excessive revenues from hospital GBRs by limiting rate updates for hospitals the HSCRC determines to be high-cost. While we strongly support the intended purpose of the ICC Efficiency Policy, we offer the following observations and suggestions.

#### **The Revenue Impact Should be Revenue Neutral**

CareFirst strongly supports rate policies that focus revenue increases to the most efficient hospitals. While we recognize the significant time and effort applied in the development of this policy, overall it will have an extremely small impact on hospital revenues (approximately \$7 million in rate reductions applicable to four hospitals or about 0.04% of annual system revenue). This is before considering enhancement awards for efficient hospitals which could very likely exceed the \$7M in reductions. We suggest making this policy revenue neutral so that the overall intent is to reapportion revenue from less efficient to more efficient hospitals. As a result, we suggest the staff modify the criteria it uses to identify the worst performing hospitals by targeting the bottom quartile of hospitals and/or lowering the 1.21 times the ICC cost standard limitation to expand the group of targeted hospitals. This will allow more revenue to support efficient operations, incent hospitals to focus on improving efficiency levels, and allow the system to remain in balance from a revenue perspective.

#### **The Need for a National Peer Group to Evaluate the Relative Efficiency of the AMCs**

In CY 2018, the HSCRC commissioned an analysis performed by Navigant Consulting, which compared Johns Hopkins Hospital's (JHH) adjusted cost per case to the average adjusted cost per case of 35 comparable Academic Medical Centers (AMCs) across the U.S. The Navigant study determined that JHH was 6-8% less efficient than the average inpatient costs of the national AMC peer group. Despite the results of this study the current ICC Efficiency methodology would exempt JHH from rate reductions and may well put the hospital in a position to request further rate increases from the HSCRC in the future. Fortunately, staff has acknowledged the need to make use of the methodology used in the Navigant study to evaluate the relative efficiency of inpatient services of the State's two large AMCs (Johns Hopkins Hospital and University of Maryland Medical Center). We would encourage the staff to finalize this analysis and also investigate the potential of extending this type of national comparison to the State's other two large teaching hospitals, Johns Hopkins Bay View Medical Center and LifeBridge's Sinai Hospital.

## **Observations regarding Other Provisions of the Proposed Methodology**

DSH Adjustment: The analysis performed by staff clearly shows that Medicaid charge per Case Mix Adjusted Discharges (CMAD) does not differ significantly from the charge per CMAD of other major payer groups. Accordingly, we agree with the staff conclusion that there is no empirical evidence to support the use of a DSH adjustment in the ICC component of the Efficiency Matrix.

ICC Volume Adjustment: The current proposed ICC Efficiency policy now includes an adjustment that reflects hospitals' reduction in Potentially Avoidable Utilization (PAU), as defined by the PAU Shared Savings Program, plus additional proxies for avoidable utilization. These additional proxies include selected medical DRGs and ED volumes. Volumes from this analysis, both negative and positive, amend a hospital's final ICC calculated cost base as well as the hospital's position relative to the ICC Cost Standard (i.e., hospitals with reductions in these categories of cases will benefit in the relative ICC comparison and those with increases in these volume categories will fair less favorably). However, the staff has decided not to include certain classes of surgical cases in this adjustment.

While we support the use of the proposed Volume Adjustment in the ICC, we would note that PAU is defined by the Commission to apply almost exclusively to inpatient medical admissions (such as Heart Failure) that are frequently outside the control of the hospital, but leave aside the arguably more important avoidable admissions for complex surgeries, such as many over-used cardio-thoracic and orthopedic procedures. These types of procedures generate excess cost and also place patients at risk. We would therefore respectfully request that the staff make use of the literature it has assembled on avoidable utilization with an eye toward the inclusion of the most over-used surgeries and procedures in the ICC Volume adjustment. We would be happy to assist the staff in identifying candidates for inclusion in the Volume Adjustment from our own experience and review of the literature on this topic.

Credit for Losses on Investments that are "in-line" with the Purpose of the Demonstration: In subsequent iterations of the ICC the staff intends to develop a methodology that will provide hospitals credit for investments they are making in unregulated settings that are "in line" with the incentives of the Total Cost of Care Model.

First, we believe that the adoption of such a policy would require a change to the HSCRC statute which currently provides the HSCRC with regulatory authority over inpatient services and outpatient services provided "at the hospital." Based on current law, the HSCRC cannot devise methodologies that affect hospital rates based on the profitability or unprofitability of unregulated services.

Second, even if the HSCRC or a court determined that adjustments to regulated rates could be allowed in this circumstance, identifying investments that are "in-line" with the purpose of the Demonstration will likely be a highly subjective exercise open to broad interpretation. We fail to see how the HSCRC will be able to definitively determine whether a particular hospital investment is supportive of the objectives of population-health or the investment is primarily intended to expand the hospital's realm of influence over the delivery system, with little or no positive impact on the health of the community it serves.

Most importantly, we believe that through the GBR, hospitals are already being paid sufficient amounts (either through its billings to payers for its new unregulated services and through amounts retained in the particular hospital's GBR related to services now moved out of the hospitals) to cover any such losses. In this case, providing hospitals with additional "credit" in the ICC would be inappropriate.

The Need to Link the ICC Efficiency Policy more Strongly to the Key Waiver Tests: The current Demonstration has several Waiver Tests that are framed in terms of the rate of increase of Medicare TCOC (per beneficiary) in Maryland versus the U.S. This means that the central purpose of the ICC Efficiency methodology should be to provide hospitals with clear and meaningful incentives to meet these Waiver Tests and to do so by applying criteria to hospital Global Budget increases that will limit the Medicare TCOC growth in the hospital's service area (the "TCOC Standard").

However, the ICC Efficiency Policy applies two standards of efficiency (the ICC per case standard and the TCOC per beneficiary standard) that work at cross purposes to one another. If a hospital responds to the TCOC Standard, they will reduce their volumes of service, especially for Medicare. Under the fixed GBR target budgets this reduction in a hospital's caseload will increase its cost per case and it will perform less favorably on the ICC per case standard.

In addition, the calculation of the hospital's TCOC increase for Medicare beneficiaries depends on a "geographically-based" algorithm for attributing beneficiaries to hospitals which, in most cases, attributes beneficiaries to multiple hospitals making the coordinated clinical management of the attributed beneficiaries nearly impossible.<sup>1</sup> For these two reasons, the proposed methodology is largely a consolidation of two efficiency standards but does little to further the key objectives of the Demonstration.

To address these weaknesses, we suggest that in the future that the staff consider modifying the ICC Efficiency Policy so that the methodology provides stronger incentives for the hospitals to control TCOC for their Medicare patients. We have conceived of an approach that would accomplish this goal and provide a more efficacious system for attributing Medicare beneficiaries to hospitals. Such an attribution system should not (for the most part) be done on a hospital-specific basis.<sup>2</sup> We look forward sharing our perspective on this issue (and other observations about the ICC Efficiency Policy) with staff at their earliest convenience.

As always, thank you for this opportunity to provide our comments on the staff's Draft Recommendation. We look forward to discussing these and other observations and suggestions with you and all of the Commissioners at the next public meeting of the HSCRC.

Sincerely,



Cc: Joseph Antos, Ph.D., Vice Chairman  
Victoria Bayless  
John Colmers  
James N. Elliott, M.D.  
Adam Kane  
Stacia Cohen  
Katie Wunderlich, Executive Director

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<sup>1</sup> A key tenant of the ACO attribution methodologies is that the methodology assigns beneficiaries to groups of providers (the ACO in question) such that these providers can both identify these beneficiaries and effectively coordinate and manage their care, in order to achieve the cost control goals of the ACO program. The ability of a hospital to identify and manage beneficiaries attributed to them through the HSCRC's Geographic Attribution methodology is severely limited by allocation of beneficiaries to multiple hospitals.

<sup>2</sup> Note - a number of Maryland hospitals are sole community providers in a particular county. For these hospitals a hospital-specific attribution methodology may be appropriately applied.



# Draft Recommendations for a Capital Financing Policy

October 16, 2019

Health Services Cost Review Commission  
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This is a draft recommendation. Public comments will be accepted from October 9, 2019 – November 6, 2019. Comments should be submitted to [hsrc.financial-methodologies@maryland.gov](mailto:hsrc.financial-methodologies@maryland.gov).



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## INTRODUCTION

Since 2014, the State has operated under a per capita constraint imposed by the Centers for Medicare and Medicaid (CMS) as a condition of the All-Payer Model and the Total Cost of Care (TCOC) Model. The Commission has set the Global Budget Revenue (GBR) for hospitals and the annual update factor to manage the per capita growth rate. The GBR limits a hospital's incentive to grow volume unnecessarily. However, volume growth combined with HSCRC rate support were historically used to finance new capital projects, creating an inherent tension between the incentives of the TCOC Model and the ability to generate sufficient revenue to replace aging facilities.

Stakeholders have thus expressed concern that there is no defined or predictable route for hospitals to receive additional money for new capital projects under the GBR methodology. This recommendation establishes a policy to provide predictable rate updates for new capital projects, while also taking into account increased excess capacity produced by volume declines over the past 5 years and the inefficient use of fixed costs. Therefore, Staff recommend that the rate updates for capital financing be scaled by the hospital's efficiency and excess capacity.

### Capital Funding under a Total Revenue Constraint

Predictability in capital funding is important not just for hospitals but also for the Commission to manage the various total revenue constraints incorporated in the Total Cost of Care Model, as capital projects could increase costs suddenly when they come online. If a very large project or several simultaneous projects come online, the increase in costs could endanger the State's annual total cost of care guardrail test as well as its annual total cost of care savings rate test. Staff, therefore, considered limiting the amount of capital funding that could be distributed in any given year, which would require hospitals to potentially wait until the system could afford capital funding.

Stakeholders from the hospital industry indicated that certainty in financing was critical given the project size and timing, and therefore have advocated that the financing not be withheld, but rather automatically available to hospitals when capital projects are approved and come on line. Hospitals furthermore indicated that that whatever capital funding is distributed be subtracted for the inflation portion of the update factor, i.e. capital financing for select hospitals could potentially reduce inflation for all Maryland hospitals. Staff therefore recommend that whatever capital funding is distributed in a given year be subtracted from the update factor regardless of guardrail constraints rather than being considered a separate add-on.

In order to avoid potentially large growth in capital costs and to ensure that hospitals utilize retained revenues related to avoided utilization to finance smaller projects, staff recommend that a rate update be limited to projects whose value exceeds 35 percent of the hospital's annual GBR or \$50 million, whichever is greater. Staff believe this will limit applications for capital funding for large projects that could not be financed without rate support. Smaller projects should be financed out of existing revenues as hospitals currently receive funding for capital projects in the annual update factor and hospitals retain the interest and depreciation costs on all their previous capital projects, even after those projects have completed their useful life.

Additionally, staff recommend establishing a policy for when partial rate applications can be considered. When applying for a Certificate of Need for a capital project, a hospital must indicate whether they are seeking a rate update to cover a portion of the costs. A hospital is not required to seek a rate update

and may delay doing so until a later date. However, Staff are recommending a financing formula based on the ICC and Medicare total cost of care (TCOC) growth, both of which may change overtime. In the event that a hospital delays applying for a rate increase to cover the capital costs, staff recommends that the amount of capital funding they can receive be equal to the lesser of the calculation when the hospital certificate of need was approved and when the hospital actually applies for the capital funding.

### Algorithm to Determine Capital Financing

Staff recommend a three-step algorithm to calculate the rate increase that a hospital can receive in order to finance a capital project. The three steps are:

1. First, determine the amount of a capital project that will be supported through rates.
2. Second, scale the amount of funding that a particular hospital will receive for its capital project by determining its relative capital efficiency as well as that hospital's ICC and TCOC efficiency.
3. Third, credit/penalize hospitals based on their potentially avoidable utilization (PAU) and excess capacity in order to ensure that efficient hospitals are funded while inefficient hospitals finance new capital through other cost reductions.

### STEP 1: DETERMINE THE HOSPITAL'S ELIGIBLE FUNDING

Staff will calculate the depreciation costs of the hospital's project using the straight line method with the hospital's estimate of the project's useful lifetime. Staff will also calculate cumulative interest on 70 percent of the project's value. By financing only 70 percent of the project's value, the staff expects that at least 30 percent of the project be paid by the hospital either through cash, philanthropy, or other sources of funding that are not direct rate support. Staff will calculate the hospital's estimated annual interest payments at the effective annual rate at which the project is expected to be financed.

### STEP 2: APPLY AN SCALING FACTOR BASED ON EFFICIENCY

Step 1 above determines the amount of capital funding that the hospital could receive on a project, however, staff recommends that a hospital be eligible to receive only portion of that amount, depending on its relative efficiency. The Staff recommends using two measures of efficiency: the hospital's capital efficiency and the hospital's integrated cost per case and total cost of care efficiency.

The hospital's relative capital intensity is taken into account by taking the portion of total costs the hospital spends on capital and comparing it to its peer group. The hospital is only eligible to receive the average of its capital costs (inclusive of the new project) and its peer group average. Comparing a hospital to its peer group will discourage hospitals that may be already more capital intensive than their peers from building additional capital projects. Alternatively, this process will provide credit to hospitals that are further in the capital cycle and therefore have greater need for a capital replacement project.

To measure integrated cost per case and total cost of care efficiency, staff employs the ICC and a Medicare total cost of care growth calculation. The ICC measures the efficiency of the hospital's cost per case relative to its peer group and in the case of capital evaluations does not include productivity adjustments, per historical practice. The ICC's productivity adjustment was intended to eliminate costs related to excess capacity. Staff believe it is critical to address excess costs when financing capital in order to avoid rebuilding or increasing excess capacity with a new project. Therefore, staff recommends that excess capacity costs be addressed directly rather than through the ICC's productivity adjustment and subsequent relative ranking. The excess capacity adjustment is described in Step 3.

The ICC is an important consideration for capital financing for two reasons. First, it ensures that hospitals that are using existing fixed costs efficiently receive more financing than hospitals that are using fixed costs less efficiently. Second, it ensures that hospitals with lower profit margins and more efficient costs receive more financing than hospitals with more significant profit margins that could more easily fund capital projects with existing rate structures.

In terms of total cost of care, staff is currently employing Medicare total cost of care growth using a geographic attribution relative to a 2013 base. It is important to use a 2013 base because growth calculations are more statistically reliable with multiple years of data and because the incentives of the Models since 2013 were to reduce total cost of care in line with the annual total cost of care guardrail tests. Because staff believes it is necessary to use growth relative to a 2013 base, the geographic attribution is necessary. That said, staff will consider supplanting the growth calculations with attainment analyses relative to nationally selected benchmarks once this work is complete.

### Step 2A: Compare the Hospital's Requested Capital Costs with its Peer Group

Staff will adjust the amount of funding that the hospital can receive based on the average capital intensity of the hospital's peer group. The adjustment is necessary to ensure that hospital's that are already more capital intensive than their peers do not become more so and also to ensure that hospitals that have not recapitalized in some time have the opportunity to do so.

The adjustment is calculated as follows.

- First, staff will calculate the percent of the hospital's costs that will be spent on capital<sup>1</sup> (Hospital Pro Forma Capital Ratio) if the hospital received the full amount of its eligible funding. That is, the staff will take the hospital's current capital costs and add the amount of funding the hospital is eligible for after applying the efficiency scaling from Step 2B and divide the sum by the hospital's cost structure inclusive of the new capital request.
- Second, staff will calculate the percent of current capital costs for the hospital's peer group as a percent of revenue (Peer Group Capital Ratio). Staff will then deduct the current capital costs ratio from the average from the hospital's Pro Forma Capital Ratio and the Peer Group Capital Ratio. Finally, to denote the value as charges instead of costs, staff will multiply the prior step by the GBR.

### Step 2B: Scale the Hospitals Eligible Funding based on its Capital ICC Score

The Staff will determine the hospital's relative rank on both the ICC and Medicare TCOC growth. Staff will equally weight the ICC and the Medicare TCOC growth rate by summing of the hospital's rank on each of the two scores. This Total Rank will be used to scale the amount of capital funding that the hospital can receive.

Staff will calculate a scaling factor based on the hospital's total ranking relative to other hospitals in the State through a two-step process.

- First, a hospital receives a base efficiency factor depending on the quintile in which the hospital falls. The most efficient quintile (lowest score) receive a base efficiency adjustment of 80 percent and the least efficient quintile receives a base efficiency adjustment of 0 percent.

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<sup>1</sup>The sum of interest costs, amortized depreciation

- Second, the hospital receives an adjustment based on the variation in efficiency within its quintile.

The adjustment within the quintile is calculated by dividing 20 percent by the number of hospitals within the quintile and then multiplying by the hospitals within quintile rank. The adjustment within the quintile is necessary because the number of hospitals within each quintiles vary and because without such a calculation the policy can run afoul of adverse cliff effects. For example, there are 10 hospitals in the first quintile and so each rank is worth 2 percentage points; there are 9 hospitals in the second quintile so each rank is worth 2.2 percentage points. Without an adjustment within the quintile the 10<sup>th</sup> hospital in the quintile and the 1<sup>st</sup> hospital in the second quintile would have a difference of 20% for efficiency scaling as opposed to .2%. The following table summarizes the calculation:

Quintile	Base Adjustment	Within Quintile Adjustment
Q1	80%	+ (20% / # hospitals within quintile) x hospitals rank within quintile
Q2	60%	
Q3	40%	
Q4	20%	
Q5	00%	

Once the scaling factor has been calculated, it is multiplied by the amount of funding that the project is eligible for following capital efficiency scaling, as calculated in Step 2a. For example, the most efficient hospital in the third quintile would could receive up to 60 percent of the eligible amount of its capital project.

*Table 1: Efficiency Adjustment by Hospital based on FY2020*

Hospital	Efficiency Adjustment	Hospital	Efficiency Adjustment
Anne Arundel	100%	MedStar Union Hospital	73%
Atlantic General Hospital	98%	Mercy Medical Center	84%
Bon Secours Hospital	11%	Meritus Medical Center	91%
Calvert Memorial Hospital	42%	Northwest Hospital Center	24%
Carroll Hospital Center	36%	Peninsula Regional	64%
Doctors Community Hospital	67%	Prince Georges	62%
Fort Washington	73%	Shady Grove Adventist	32%
Frederick Memorial Hospital	78%	Sinai Hospital	40%
Garrett County Memorial	49%	St. Agnes Hospital	78%
GBMC	24%	Suburban Hospital	60%
Harford Memorial Hospital	89%	Union Hospital of Cecil County	9%
Holy Cross Hospital	82%	UM Baltimore Washington	89%
Howard County General	80%	UM Charles Regional	32%
Johns Hopkins Bayview	93%	UM Medical Center	18%
Johns Hopkins Hospital	96%	UM Midtown Campus	2%
Laurel Regional Hospital	73%	UMROI	13%
McCready Memorial Hospital	24%	UM Chestertown	18%
MedStar Franklin Square	44%	UM Dorchester	60%
MedStar Good Samaritan	4%	UM Easton	56%
MedStar Harbor Hospital	24%	UM St Joseph	20%
Montgomery Medical Center	7%	Upper Chesapeake	42%
MedStar Southern Maryland	53%	Washington Adventist	82%
MedStar St. Mary's Hospital	49%	W. Maryland Regional	51%

### **STEP 3: ADJUST FOR PAU AND EXCESS CAPACITY**

Staff recommend modifying the amount of capital funding the hospital can receive, as calculated by Step 2B, to account for potentially avoidable utilization and excess capacity. The dollar value of these two credits will be added or subtracted from the amount of capital spending calculated in Step 2B in determining the final amount that a hospital is eligible to receive.

The PAU adjustment reflects the hospitals “opportunity” to reduce unnecessary utilization. Historically, hospitals financed a portion of their capital project through volume growth. That strategy is not viable under the GBR. Instead hospitals are expected to reduce unnecessary utilization (e.g. PAU) and reinvest the savings into capital and population health activities. However, hospitals that do not have as much PAU do not have as much opportunity to save money by reducing PAU. Therefore, staff recommend providing them with a credit for their capital projects.

The excess capacity adjustment reflects the decline in volume that has occurred in the hospital. The GBR allows hospitals to retain revenue as volume declines. Hospitals are expected to reinvest that revenue in capital or population health activities. A hospital that has experienced volume declines should be able to finance a portion of its capital project by eliminating the fixed costs that are no longer necessary to support a higher volume. Therefore, staff recommend subtracting the excess capacity costs from the amount of funding that a hospital can receive for a new capital project.

#### **Step 3A: Potentially Avoidable Utilization (PAU) Adjustment**

PAU is a measure of 30 day readmissions with various exclusions and avoidable hospitalizations for ambulatory sensitive conditions, as measured by Agency for Healthcare Research and Quality Prevention Quality Indicators (PQIs). The PAU adjustment is intended to make financing capital projects easier for hospitals that cannot use new projects to induce new demand and grow volume but also lack the opportunity to reduce potentially avoidable utilization as an alternative. Staff recommends basing the PAU adjustment on the ratio of the hospital’s percent of revenue that is PAU to the statewide average percent of PAU revenue. The denominator for this statistic is inpatient revenue and observation greater than 24 hours, as PAU is not assessed in outpatient care.

This statistic and proposed adjustment reflects the hospital’s opportunity to finance capital through reductions in potentially avoidable utilization relative to other hospitals. For example, a hospital with only 50 percent of the statewide average of revenue coming from PAU would have to reduce their rate of PAU utilization by twice as much in order to finance the same share of a capital project. Therefore, these facilities should receive favorable treatment in this policy.

The PAU adjustment is calculated in three steps.

- First, staff will calculate the statewide mean (18.44 percent) and standard deviation (6.55 percent) of revenue that comes from PAU across all hospitals. Any hospital whose PAU share of revenue exceeds the mean, does not receive a credit. Any hospital whose PAU share of revenue is less than the mean, receives a credit but it is capped at one standard deviation, i.e. 6.55 percent.
- Second, staff will calculate the difference between the hospital’s rate of PAU and the statewide average rate of PAU and give credit equal to that difference.

- Third, staff will multiply that value by the efficiency scaling factor in Step 2A and multiply by the 50 percent Variable Cost Factor.

**Table 2: PAU Credit Given by Hospital**

Hospital	PAU% / State Avg	PAU Credit	Hospital	PAU% / State Avg	PAU Credit
Anne Arundel	96%	\$1,172,968	MedStar Union Hospital	110%	\$0
Atlantic General Hospital	133%	\$0	Mercy Medical Center	71%	\$5,484,507
Bon Secours Hospital	164%	\$0	Meritus Medical Center	117%	\$0
Calvert Memorial Hospital	120%	\$0	Northwest Hospital Center	159%	\$0
Carroll Hospital Center	141%	\$0	Peninsula Regional	103%	\$0
Doctors Community Hospital	146%	\$0	Prince Georges	105%	\$0
Fort Washington	176%	\$0	Shady Grove Adventist	85%	\$1,260,398
Frederick Memorial Hospital	107%	\$0	Sinai Hospital	90%	\$1,562,551
Garrett County Memorial	112%	\$0	St. Agnes Hospital	139%	\$0
GBMC	92%	\$425,974	Suburban Hospital	81%	\$2,342,323
Harford Memorial Hospital	154%	\$0	Union Hospital of Cecil County	133%	\$0
Holy Cross Hospital	82%	\$5,920,797	UM Baltimore Washington	124%	\$0
Howard County General	103%	\$0	UM Charles Regional	123%	\$0
Johns Hopkins Bayview	115%	\$0	UM Medical Center	64%	\$6,959,709
Johns Hopkins Hospital	81%	\$25,639,623	UM Midtown Campus	149%	\$0
Laurel Regional Hospital	114%	\$0	UMROI	1%	\$327,125
McCready Memorial Hospital	223%	\$0	UM Chestertown	104%	\$0
MedStar Franklin Square	133%	\$0	UM Dorchester	141%	\$0
MedStar Good Samaritan	165%	\$0	UM Easton	76%	\$1,377,575
MedStar Harbor Hospital	131%	\$0	UM St Joseph	68%	\$1,536,990
Montgomery Medical Center	121%	\$0	Upper Chesapeake	130%	\$0
MedStar Southern Maryland	129%	\$0	Washington Adventist	105%	\$0
MedStar St. Mary's Hospital	138%	\$0	W. Maryland Regional	105%	\$0

### Step 3B: Excess Capacity Adjustment

Staff recommends removing the fixed costs associated with volume declines from the amount of capital funding that the hospital can receive for two reasons. First, excess and empty beds should not be rebuilt. And second, the savings from eliminating those excess costs are retained at the hospital and could be repurposed to finance new capital projects. The excess capacity adjustment is calculated in two steps:

- First, Staff will calculate the difference between the 2010 patient days plus the 2013 OP surgery visits with a length of stay greater than 1<sup>2</sup> and current patient days, OP surgery visits with a length of stay greater than 1, and observation stays with a length of stay greater than 1.
- Second, Staff have estimated the statewide fixed cost per bed day to be \$1,201 dollars. The excess capacity adjustment is equal to \$1,201 times the result of the prior step. Future iterations of this policy will recalculate this value.

<sup>2</sup> Data on OP surgery visits only became available in 2013.



The dollar values of the excess capacity adjustment will be subtracted from the cost of whatever capital funding the hospital would otherwise be eligible to receive. No adjustment is given to a hospital whose volume has remained the same or grown.

**Table 3: Excess Capacity Adjustment by Hospital**

Hospital	Change from 2010	Excess Capacity Adj.	Hospital	Change from 2010	Excess Capacity Adj.
Anne Arundel	7652	\$0	MedStar Union Hospital	-19341	-\$23,236,327
Atlantic General Hospital	-2384	-\$2,864,144	Mercy Medical Center	-12517	-\$15,037,956
Bon Secours Hospital	-17420	-\$20,928,433	Meritus Medical Center	-4057	-\$4,874,090
Calvert Memorial Hospital	-5818	-\$6,989,760	Northwest Hospital Center	-3917	-\$4,705,894
Carroll Hospital Center	-8213	-\$9,867,119	Peninsula Regional	-17516	-\$21,043,767
Doctors Community Hospital	540	\$0	Prince Georges	-8313	-\$9,987,259
Fort Washington	-3043	-\$3,655,868	Shady Grove Adventist	-20086	-\$24,131,372
Frederick Memorial Hospital	-1421	-\$1,707,193	Sinai Hospital	-17953	-\$21,568,780
Garrett County Memorial	-307	-\$368,831	St. Agnes Hospital	-14317	-\$17,200,480
GBMC	-7678	-\$9,224,369	Suburban Hospital	5986	\$0
Harford Memorial Hospital	-2299	-\$2,762,024	Union Hospital of Cecil County	-9771	-\$11,738,904
Holy Cross Hospital	-1024	-\$1,230,236	UM Baltimore Washington	-9525	-\$11,443,359
Howard County General	3033	\$0	UM Charles Regional	-4557	-\$5,474,791
Johns Hopkins Bayview	-6370	-\$7,652,934	UM Medical Center	11025	\$0
Johns Hopkins Hospital	37174	\$0	UM Midtown Campus	-14959	-\$17,971,781
Laurel Regional Hospital	-5288	-\$6,353,017	UMROI	-1103	-\$1,325,147
McCready Memorial Hospital	-1290	-\$1,549,809	UM Chestertown	-7037	-\$8,454,270
MedStar Franklin Square	-2027	-\$2,435,243	UM Dorchester	-3105	-\$3,730,355
MedStar Good Samaritan	-25685	-\$30,858,025	UM Easton	-3887	-\$4,669,852
MedStar Harbor Hospital	-15431	-\$18,538,843	UM St Joseph	-13805	-\$16,585,362
Montgomery Medical Center	-10183	-\$12,233,882	Upper Chesapeake	-1507	-\$1,810,514
MedStar Southern Maryland	-10847	-\$13,031,614	Washington Adventist	-24083	-\$28,933,378
MedStar St. Mary's Hospital	2506	\$0	W. Maryland Regional	-13010	-\$15,630,247

## RECOMMENDATIONS

Staff recommend that rate support be limited to capital projects that exceed 35 percent of the hospital annual GBR or \$50 million, whichever is greater, and that the amount of funding that a hospital's capital project could receive be determined through the three-step algorithm:

- Determine the Hospital's eligible funding based on the proposed project
- Apply a scaling factor based on efficiency
- Adjust for PAU and excess capacity

Staff further recommends that the amount determined by the algorithm be added to the hospitals permanent revenue beginning in the year in which a capital project comes online. In that year, staff will recommend that the amount of the capital project be subtracted from the inflation portion of the update factor regardless of guardrail constraints.

Finally, if a hospital applies for a rate increase for a project that has already come online, staff recommends that the amount of funding they receive should be equal to the lesser of the algorithm when the hospital submits a rate request and the year that the project was approved through the Certificate of Need process.



# **Draft Recommendations for Competitive Regional Partnership Catalyst Grants**

October 16, 2019

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This is a draft recommendation. Public comments will be accepted from October 9, 2019 – October 23, 2019. Comments should be submitted to [hsrc.rfp-implement@maryland.gov](mailto:hsrc.rfp-implement@maryland.gov).

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## OVERVIEW

The Maryland Health Services Cost Review Commission (“HSCRC,” or “Commission”) staff have prepared the following draft recommendation to reauthorize the funding and to establish an updated approach for the Regional Partnership Transformation Grant Program. Funding for the current program is set to expire on June 30, 2020. Given this, the HSCRC staff have outlined a new design for the grant program to support the goals of the Total Cost of Care Model. Under the proposed new grant program, hospitals and their partners would collaborate on interventions and infrastructure investments to support statewide population health priorities. If approved, the new grant program referred to herein as the *Regional Partnership Catalyst Grant Program*, would become effective July 1, 2020.

## BACKGROUND

The Commission authorized the Regional Partnership Transformation Grant program in June 2015. This four-year competitive grant-based program was designed to create and fund hospital-led multidisciplinary teams that work across statewide geographic regions to develop interventions for high-risk and high-utilizing Medicare beneficiaries, who often present at hospitals with multiple complex and chronic conditions. As part of the program, hospitals partnered with neighboring hospitals and/or diverse community organizations including local health departments, provider organizations, community health workers, and behavioral health resources to develop interventions that were intended to result in more efficient care delivery under the metrics of the All-Payer Model.

There are 14 hospital-led partnerships created and funded through the grant program that include 41 of Maryland’s acute care hospitals (Appendix A) and serve both rural and urban areas across the State. The most common interventions performed by Regional Partnerships include behavioral health integration, care transitions, home-based care, mobile health, and patient engagement/education strategies and have focused primarily on reducing potentially avoidable utilization for high-need and high-risk Medicare patients.

The funding model for the Regional Partnership Transformation Grant program was approved by the Commission in June 2015 and authorized up to 0.25 percent of FY 2016 total statewide all-payer hospital revenue to be distributed to grant applicants under a competitive bidding process. Based on this, the HSCRC released a “Request for Proposals” (RFP) and subsequently awarded hospitals \$37 million in FY 2017 to implement the regional programs. Awards were reduced annually in an effort to prepare hospitals to develop financial alternatives for sustaining programs. An annual ten percent hospital cost sharing requirement was established each year through the final year of funding (FY2020).

- FY 2017 = \$37.0M
- FY 2018 = \$33.3M (10% Cost Share)
- FY 2019 = \$29.6M (20% Cost Share)
- FY 2020 = \$25.9M (30% Cost Share)

The grants limited the maximum award to 0.50 percent of a hospital's FY 2016 global budget for each approved application. Funding was issued via HSCRC-approved rate increases for hospitals who participated in Regional Partnerships. The grants are scheduled to expire on June 30, 2020.

## REGIONAL PARTNERSHIP CATALYST GRANTS

Given the scheduled expiration of the Regional Partnership Transformation Grant program, the HSCRC staff recommends a new competitive grant program be established effective July 1, 2020. The new *Regional Partnership Catalyst Grant Program* will build upon the original vision of this grant program and enable hospitals to continue working with community resources to build infrastructure needed to sustainably support the population health goals of the Total Cost of Care Model.

### The HSCRC Grant Philosophy

The new Regional Partnership Catalyst Grant Program will be based on the HSCRC grant philosophy that the funding is designed to a) foster collaboration between hospitals and community partners and b) to enable the creation of infrastructure to disseminate evidence-based interventions. The following core principles will apply to the new Regional Partnership Catalyst Grant Program:

- *Eliminate duplication* – Given Maryland's shift from the All-Payer Model to the Total Cost of Care Model, care must be taken to ensure both interventions and grant funds are not duplicative with other new elements of the Model.
- *Ensure alignment with State priorities* – Funded interventions must support the goals of the Total Cost of Care Model and priority conditions identified under the Statewide Integrated Health Improvement Strategy.
- *Ensure broad collaboration* – There must be widespread engagement of local resources with a common agenda and mutually reinforcing activities to more effectively implement interventions.
- *Leverage evidence-based practices* – Funded interventions should be based on evidence that a model being proposed will achieve success.
- *Identify impact* – As a condition of funding, impact will be measured through the achievement of scale targets and progress goals, health improvement, and/or return on investment (ROI).
- *Ensure sustainability* – Funded interventions must have a plan for sustainability that includes both a plan to integrate successful interventions into hospital operations and a financial plan to ensure there is a permanent source of funding to continue the intervention after the grant expires.
- *Revamp grant oversight* – The HSCRC will leverage grant-making best practices and will provide additional oversight resources to ensure there is visibility, shared learning opportunities, and compliance with the intended purpose of the grant program.
- *Communicate & collaborate with stakeholders* – The HSCRC will continue the culture of collaboration with grantees to ensure information is clear, sensitive to concerns, and timely.

## Structure of the New Recommended Grant Program

The new Regional Partnership Catalyst Grant program would require hospitals to competitively bid for funding that would begin July 1, 2020. The HSCRC staff proposes that funding be narrowly focused to support interventions that align with goals of the Total Cost of Care Model and support the Memorandum of Understanding that Maryland is establishing with the Centers for Medicare & Medicaid Services (CMS) for a Statewide Integrated Health Improvement Strategy (SIHIS). The Regional Partnership Catalyst Grant Program will include allocations of funds called “funding streams” that are designed to encourage focus on the key state priorities. The three recommended funding streams are as follows:

- **Funding Stream I: “Diabetes Prevention & Management Programs”** – This funding stream would award grants to Regional Partnerships to support the implementation of the Centers for Disease Control (CDC) approved diabetes prevention and American Diabetes Association (ADA) recommended diabetes management programs.
- **Funding Stream II: “Behavioral Health Crisis Programs”** – This funding stream would award grants to Regional Partnerships to support the implementation and expansion of behavioral health crisis management models that improve access to crisis intervention, stabilization, and treatment referral programs.
- **Funding Stream III: “Population Health Priority Area #3”** – This funding stream would award grants to Regional Partnerships to support the third population health priority area that will be defined for Maryland by December 31, 2020.

The approach to the Regional Partnership Catalyst Grants would be a departure from the legacy program format, which allowed more flexibility for regional partnerships to develop their own models and interventions. The HSCRC staff believes a more structured approach around key population health priority areas will ensure Regional Partnership efforts align and contribute to State efforts to maximize impact under the Total Cost of Care Model goals, while still allowing for regional customization. While the grant program will be designed to focus on infrastructure in these areas, the HSCRC will encourage Regional Partnerships to also work with communities to develop additional interventions that address upstream factors related to diabetes and behavioral health prevention and supplement the HSCRC grant funded programs.

### *Funding Stream I: Diabetes Prevention & Management Programs*

Under the Total Cost of Care Model, Maryland has identified diabetes as one of two population health priority areas to be included in its Statewide Integrated Health Improvement Strategy. Diabetes is a highly prevalent and devastating chronic condition that is impacting Marylanders. The costs of treating diabetes and ensuring good health outcomes for patients living with diabetes can be addressed by focusing on the prevention of new diabetic cases and more effective management of current populations with diabetes.

The diabetes funding stream will award grants to Regional Partnerships that choose to support and implement the Centers for Disease Prevention & Control (CDC) recommended National Diabetes

Prevention Program (DPP). Across the country, diabetes education and self-management programs have a robust evidence base. National DPP is designed to prevent or delay the onset of Type II diabetes, and has shown long-term success in helping to prevent the onset of diabetes and promote weight-loss for those with pre-diabetes. Implementing more education and lifestyle change support has been shown to improve outcomes and spending for those living with diabetes. As a component of this funding stream, the HSCRC will promote and specifically track the development of the Medicare Diabetes Prevention Program (MDPP), a CMMI Model demonstration which enables Medicare reimbursement for National DPP provision to Medicare beneficiaries. HSCRC staff will set scale targets and measure progress of this funding through measuring MDPP claims in Medicare data.

As an additional component of the diabetes funding stream, the HSCRC will also promote and track development of Medicare Diabetes Self-Management Training (DSMT) and Medical Nutrition Therapy (MNT). These services provide training, lifestyle change help and diabetes management curriculum to Medicare beneficiaries to help better control their Type II diabetes. Organizations must receive American Diabetes Association (ADA) accreditation for their DSMT programs. The goals of DSMT are to increase knowledge and skills of persons with diabetes to manage the disease. MNT is provided by registered dietitians as an intensive, focused and comprehensive nutrition therapy service. Through MNT dietitians work with diabetic patients to establish goals, a care plan, and interventions based on in-depth individual nutrition assessments. If delivered concurrently, DSMT and MNT have been shown more effective in helping patients manage diabetes. Medicare reimburses for both of these services and therefore scale and progress of this funding will be measured from Medicare claims.

Maryland needs significantly more diabetes prevention and management resources in order to provide the service to all Marylanders in need. Based on modeling performed by HSCRC staff, Maryland would need 227 National DPP suppliers to manage the estimated pre-diabetic population aged 55 and up in Maryland. There are currently 49 in the State and only three participating in the Medicare DPP Model demonstration. Given this shortage, the goals of this funding stream are to build a more adequate National DPP supplier capacity within Maryland that becomes available for the entire health system to utilize and encourage MDPP participation specifically to support the Medicare population. By choosing to support this approach, the HSCRC believes that Regional Partnerships can help to disseminate an evidence-based intervention that will not only aid in more effective prevention and management of diabetes among Marylanders, but also contribute to existing statewide efforts for maximal impact.

In addition to the robust evidence base for these prevention and management programs, the HSCRC also selected these approaches because they provide Regional Partnerships with a pathway to sustainable reimbursement through Medicare and Medicaid after the expiration of grant funding. Medicare billing for these services is available for certified suppliers. However, to be eligible for Medicare diabetes related billing, potential MDPP, DSMT and MNT suppliers must make substantial investments in certification, training, and administration before reimbursement is possible. The HSCRC anticipates that through the Regional Partnership Catalyst Grant funding, Regional Partnerships can help build the infrastructure and address any startup costs – recruitment, training, and certification of diabetes prevention and management support services – and be fully self-sustaining after four years.

### ***Funding Stream II: Behavioral Health Crisis Services***

Under the Total Cost of Care Model, Maryland has also identified opioid use disorder as the second population health priority area to be included in its Statewide Integrated Health Improvement Strategy. Across the State, hospitals cite both opioid use disorder and acute mental health treatment access issues as factors that contribute significantly to emergency department (ED) overcrowding. Under the TCOC Model, Maryland has clear incentives to reduce unnecessary ED and hospital utilization. Currently though, Maryland lacks adequate behavioral health infrastructure and services to divert the volume of crisis needs from EDs and inpatient services to more appropriate care settings in the community.

Improving crisis resources necessitates system-wide investment and collaboration. However, economies of scale often make it financially infeasible for a single hospital to invest resources. Further exacerbating this situation, community-based organizations that currently provide many of these services for the State do not receive reimbursement for all of their crisis management services and often struggle to provide the volume of support needed.

Access to crisis services is a key component to developing sustainable health spending and ensuring appropriate utilization of the health system. The Regional Partnership Catalyst Grant Program will include a funding stream for behavioral health crisis services. Specifically, grants will be awarded to focus on developing and expanding infrastructure for comprehensive crisis management services that enable Marylanders to receive care in settings other than traditional hospital EDs. Similar to the diabetes funding stream, this funding will be tied to specific scale targets set to measure progress. Regional Partnerships will also be expected to form a financial sustainability plan, which HSCRC staff will review and vet prior to awarding funds. The HSCRC will consider proposals that include interventions and programs supported in the “Crisis now: Transforming Services is Within Our Reach” action plan developed by the National Action Alliance for Suicide Prevention. These may include one or more of the following:

- Crisis Call Center & “Air Traffic Control” Services
- Community-Based Mobile Crisis Teams
- Short-term, “sub-acute” residential crisis stabilization programs
- Other evidence-based programs and services

### ***Funding Stream III: Reserve Fund***

Under the SIHIS Memorandum of Understanding with CMS, Maryland has the ability to identify a third population health priority area by December 31, 2020. The HSCRC is working with State agency partners to make decisions on this. In preparation for this potential additional focus area, the HSCRC staff proposes reserving twenty percent of the Regional Partnership Catalyst Grant funding to support the third priority area when it is defined. If approved by the Commission, this fund would become available for grant applications in FY 2022. By creating a third funding stream, the HSCRC will be able to help Regional Partnerships engage in activities to support State effort.



## Collaboration Requirements

Regional Partnership Catalyst Grant applicants will need to demonstrate that widespread collaboration will be part of their proposed model. Partnerships must include a variety of resources that have the ability to influence population health including but not limited to Local Health Improvement Coalitions, Local Health Departments, community-based organizations, local behavioral health authorities, social service organizations, provider organizations, etc. Where needed, the HSCRC staff will collaborate with the Maryland Community Health Resources Commission (CHRC), the Maryland Department of Health (MDH), and other subject matter expert organizations and individuals as necessary to assist hospitals with identifying interested community-based organizations and other healthcare resources that can increase effectiveness of Regional Partnerships.

## Impact Measurement

Under the Total Cost of Care Model, the State must systematically work to reduce the cost of care for Medicare beneficiaries while also improving statewide population health for all Marylanders. Regional Partnership Catalyst Grants will be designed to help the system develop infrastructure for long term achievement of these goals. The Regional Partnership funds remain important mechanisms to foster partnerships across the State and to mobilize diverse community resources under a unified agenda with mutually reinforcing activities. This collaboration should contribute to the State's progress toward Total Cost of Care Model long-term population health goals. The HSCRC staff proposes two approaches to measuring the impact and effectiveness of interventions performed by Regional Partnerships.

### *Scale Targets*

Quantifying and explaining the impact that Regional Partnership activities have is important to justify continued grant funding in Maryland's health system. The HSCRC understands that improving infrastructure and resources for diabetes prevention and management and behavioral health crisis services will produce long-term positive impact for the health system. Even so, ROI will only be measurable after the appropriate infrastructure is developed to support interventions. In the interim, the HSCRC has developed *scale targets* to ensure progress is made toward the infrastructure needed to support long-term ROI. Scale targets are pre-determined targets that Regional Partnerships will need to achieve during the grant period in order to receive continued funding. The targets will be set from HSCRC data, such as claims, so that progress can be independently verifiable and objectively measured between Regional Partnerships. Regional Partnerships will *not* be accountable for a specific total cost of care savings goal for the diabetes funding stream, but instead will be held accountable to achieve scale targets during the grant period.

### *ROI Methodology*

As Regional Partnerships make progress toward scale targets, the HSCRC may also use a defined methodology for measuring ROI that uses Medicare claims to identify total cost of care savings. The HSCRC staff recognizes that long-term sustainability may not be fully achieved through claims reimbursement for behavioral health crisis services. As a result, grant funded behavioral health



interventions may be required to achieve both scale targets *and* produce a measurable ROI in order to be eligible for post-grant financing through hospital global budget modifications, Care Transformation Initiative (CTI) reconciliation payments, or other mechanisms. HSCRC staff will evaluate behavioral health crisis management ideas on a case-by-case basis to establish scale targets and ROI expectations for these programs.

It is important to note that interventions should be designed to positively impact all Marylanders regardless of payer source. To start, the HSCRC will measure ROI impact based on data available (Medicare claims and other CRISP-based reporting). As additional data sources (Medicaid, commercial, etc.) are obtained, the HSCRC will broaden its ROI measurement approach.

The funding streams will include scale targets and ROI requirements as follows:

Diabetes Prevention Impact Measurement	Diabetes Management Impact Measurement
<p>Awardees must be able to demonstrate successful completion of Scale Targets for Medicare Diabetes Prevention Program (MDPP) billing:</p> <ul style="list-style-type: none"> <li>Year 1 – Referred Medicare Beneficiaries</li> <li>Year 2 – Enrolled Medicare Beneficiaries</li> <li>Year 3 – Completed Medicare Beneficiaries</li> <li>Year 4 – Medicare Beneficiaries who achieve 5% bodyweight loss</li> </ul>	<p>Awardees must be able to demonstrate successful completion of Scale Targets for billing Diabetes Self-Management Training (DSMT) and Medical Nutritional Therapy (MNT) for beneficiaries with diabetes</p>

Behavioral Health Impact Measurement
<ul style="list-style-type: none"> <li>• Scale Targets will be established by the HSCRC specific to Regional Partnership interventions</li> <li>• Will need to be independently verifiable and evidence-based</li> <li>• May include components of the HSCRC ROI policy (i.e., defining a Target Population)</li> </ul>

## Financial Budget

The HSCRC recommends that the new Regional Partnership Catalyst Grant Program have an annual investment of 0.25 percent of statewide all-payer hospital revenue, consistent with prior investments. Given the time needed to sufficiently build partnerships and infrastructure, including workforce and implementation of interventions, the staff recommends the grant period run for five years (FY 2021 through the end of FY 2025). Upon approval by the Commission, the HSCRC staff will launch a competitive bidding process for grants that would be effective July 1, 2020. The grant amounts would be added to hospital annual rates as temporary adjustments for the following five year period:

- Year 1: FY2021 (July 1, 2020 – June 30, 2021)

- Year 2: FY2022 (July 1, 2021 – June 30, 2022)
- Year 3: FY2023 (July 1, 2022 – June 30, 2023)
- Year 4: FY2024 (July 1, 2023 – June 30, 2024)
- Year 5: FY2025 (July 1, 2024 – June 30, 2025)
- Grants will expire on June 30, 2025

## Competitive Bid Process

The HSCRC recommends establishing a competitive bidding process for the Regional Partnership Catalyst Grant Program that would require the submission of new applications to be eligible for funding effective for July 1, 2020. Proposed evaluation criteria would include consideration of the following elements:

- Alignment with Total Cost of Care Model Goals
- Infrastructure/ROI Plan
- Widespread Engagement & Collaboration
- Evidence-Based Approach
- Efficacy of Previous Funding
- Governance & Operational Planning
- Innovation
- Sustainability Plan

The HSCRC will form an unbiased evaluation committee to review the grant applications and make recommendations on scoring. Additionally, the HSCRC will engage key subject matter experts with diabetes prevention/management and behavioral health crisis management expertise to assist in the review and evaluation of grant applications.

## Oversight & Auditing

The HSCRC staff will establish new requirements to ensure conditions of the Regional Partnership Catalyst Grants are clearly defined and agreed to before acceptance of the award. Each hospital CEO/CFO will be required to sign the award acceptance to ensure mutual understanding of the timeframe of the grant and to ensure there is planning for long-term sustainability. HSCRC grant oversight procedures will include:

- *Biannual Progress/Performance Reports* – Regional Partnerships will provide program performance reporting as defined by HSCRC. Reporting will include information on activities performed to achieve scale targets.
- *CRISP Monitoring Reports* – The HSCRC will work with CRISP to design new reporting tools to measure the achievement of scale targets and total cost of care savings. These reports will be readily available and accessible to both the State and Regional Partnership teams.
- *Financial Auditing* – The HSCRC will continue to perform at least annual audits for every Regional Partnership that is funded. The audit procedures will ensure grant funding is used in compliance with awarded proposals.

- *Site Visits* – The HSCRC will conduct site visits regularly with all grantees to understand more about the activities being performed, progress to date, and the levels of success that Regional Partnerships are achieving toward the goals of the program.
- *Additional Oversight & Program Administration* – The HSCRC intends to allocate additional staff resources to the oversight of the Regional Partnership Catalyst Grant program. Additionally, upon approval from the Commission, HSCRC staff intends to procure a grants management consultant to assist with post-award program administration.

Regional Partnership grantees will also be required to increase visibility of programmatic activities through update presentations to Commissioners, information sharing within communities, and participation in a State-supported learning collaborative.

## LEGACY GRANTS SUNSET PROCESS

The existing Regional Partnership Transformation Grant funding is scheduled to end on June 30, 2020. The HSCRC recognizes that some Regional Partnerships have promising interventions that have not had time to fully mature and consequently no sustainability plan has been identified. For some qualifying Regional Partnerships, additional time may be needed to transition to an alternative source of funding. The HSCRC will design a transition approach in order to support existing Regional Partnerships who need the additional financial support. Even so, Regional Partnerships must still identify a plan for long-term sustainability through alternative funding. The HSCRC encourages Regional Partnerships to explore the below options:

- Care Transformation Initiative (CTI) - Under this program, Regional Partnerships (or individual hospital members of partnerships) may submit a request for a reconciliation payment if the intervention formerly supported by the grant program has resulted in a reduction in the total cost of care.
- Global Budget Revenue Modification – Hospitals participating in Regional Partnerships may opt to request funding through a global budget revenue modification request.

For funding eligibility through the HSCRC CTI Program or GBR Modification, an intervention must demonstrate the ability to reduce total cost of care using the HSCRC ROI methodology. Additionally, hospitals participating in Regional Partnerships should also consider leveraging existing community benefit funding as a means to financially sustain interventions.

## CONCLUSION

The HSCRC staff believes a newly designed Regional Partnership Catalyst Grant program can make a positive contribution to the State under the Total Cost of Care Model. While the new program will include an overhaul of requirements and administration procedures, the recommendation is to maintain the same historical 0.25 percent of statewide all-payer hospital revenue for budgeting purposes. The staff recommendation includes a number of fundamental changes to ensure the funding impact and effectiveness of the interventions are maximized. To start, grants will be competitively rebid to ensure all activities comply with the new grant model. Grants would be used to fund initiatives directly linked to Maryland's two population health priority areas. This will ensure

hospital efforts align with other statewide activities to maximize impact. Additionally, the recommendation includes an emphasis on widespread collaboration with community health resources. Regional Partnerships must tap into community resources that extend and supplement existing capabilities and efforts. Another element of the recommendation is to establish a pre-defined approach for measuring the impact of investment dollars through HSCRC created scale targets and/or ROI methodology. Finally, the HSCRC will improve its oversight functions to ensure that there is regular reporting, auditing, and best practice sharing about Regional Partnership activities. By incorporating all of the new elements articulated in this draft recommendation, the HSCRC staff believes the grant program can be a highly successful component of the Total Cost of Care Model.

## RECOMMENDATION SUMMARY

The HSCRC staff recommendation includes the following components:

- Allocate 0.25 percent of annual statewide all-payer hospital revenue for the following five year period:
  - Year 1: FY2021 (July 1, 2020 – June 30, 2021)
  - Year 2: FY2022 (July 1, 2021 – June 30, 2022)
  - Year 3: FY2023 (July 1, 2022 – June 30, 2023)
  - Year 4: FY2024 (July 1, 2023 – June 30, 2024)
  - Year 5: FY2025 (July 1, 2024 – June 30, 2025)
  - Grants will expire on June 30, 2025;
- Create three grant funding streams that align with statewide population health priorities as identified under the MOU with CMS;
- Require hospitals to collaborate with community partners;
- Use the HSCRC impact measurement approach that establishes scale targets and/or ROI methodology;
- Issue an RFP to competitively bid grant funds;
- Require each participating hospital CEO & CFO to agree to sustain successful interventions through other funding sources at the end of the grant period;
- Establish accountability and oversight as described in this document; and
- Design a transition approach in order to support qualifying existing Regional Partnerships for a limited time.

**APPENDIX A: CURRENT REGIONAL PARTNERSHIPS**

<b>Regional Partnership</b>	<b>Member Hospital(s)</b>
Bay Area Transformation Partnership	1. Anne Arundel Medical Center 2. UM-Baltimore Washington Medical Center
Calvert Memorial - It Takes a Village	1. Calvert Memorial Hospital
Community Health Partnership of Baltimore	1. Johns Hopkins Hospital 2. Johns Hopkins - Bayview Medical Center 3. MedStar - Franklin Square 4. MedStar - Harbor Hospital 5. Mercy Medical Center 6. Sinai Hospital
GBMC	1. GBMC
Howard Health Partnership	1. Howard County Regional Hospital
LifeBridge	1. Carroll Hospital Center 2. Northwest Hospital 3. Sinai Hospital
MedStar House Call Program	1. MedStar - Good Samaritan 2. MedStar - Union Memorial
Nexus Montgomery	1. Holy Cross Hospital 2. Holy Cross - Germantown 3. MedStar - Montgomery General 4. Shady Grove Adventist Hospital 5. Suburban Hospital 6. Washington Adventist Hospital
Peninsula Regional	1. Atlantic General Hospital 2. McCready Hospital 3. Peninsula Regional Medical Center

Draft Recommendations for Competitive Regional Partnership Catalyst Grants

Totally Linking Care - Southern MD	<ol style="list-style-type: none"> <li>1. Calvert Memorial Hospital</li> <li>2. Doctor's Community Hospital</li> <li>3. Fort Washington Medical Center</li> <li>4. UM - Laurel Regional Medical Center</li> <li>5. MedStar - Southern MD</li> <li>6. MedStar - St. Mary's Hospital</li> <li>7. UM - Prince George's Hospital</li> </ol>
Trivergent Health Alliance	<ol style="list-style-type: none"> <li>1. Frederick Memorial Hospital</li> <li>2. Meritus Medical Center</li> <li>3. Western Maryland Medical Center</li> </ol>
UM-St Joseph	<ol style="list-style-type: none"> <li>1. UM - St. Joseph</li> </ol>
UMUCH-UHCC	<ol style="list-style-type: none"> <li>1. UM - Harford Memorial Hospital</li> <li>2. Union Hospital of Cecil County</li> <li>3. UM - Upper Chesapeake Hospital</li> </ol>
West Baltimore Collaborative	<ol style="list-style-type: none"> <li>1. Bon Secours Hospital</li> <li>2. St. Agnes Hospital</li> <li>3. University of Maryland Medical Center</li> <li>4. UM-Midtown</li> </ol>

Additional information about the programs of these grantees may be found on the HSCRC website at:  
<https://hscrc.maryland.gov/Pages/regional-partnerships.aspx>

# **Draft Recommendation for the Medicare Performance Adjustment (MPA) Policy for Rate Year 2022**

October 16, 2019

Health Services Cost Review Commission  
4160 Patterson Avenue  
Baltimore, Maryland 21215  
Front Desk: (410) 764-2605  
Fax: (410) 358-6217

This is a draft recommendation. Public comments will be accepted from October 9, 2019 – October 23, 2019. Comments should be submitted to [hsrc.tcoc@maryland.gov](mailto:hsrc.tcoc@maryland.gov).

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## DRAFT RECOMMENDATIONS FOR RY 2022 MPA POLICY

- 1) Continue measuring Medicare Total Cost of Care (TCOC) by attributing Medicare fee-for-service beneficiaries to non-hospital providers, primarily based on use of primary care services, and then linking providers to hospitals based on existing relationships. Implement only minor changes from the RY 2021 approach.
- 2) Maintain the maximum penalty at 1.0% and the maximum reward at 1.0% of federal Medicare revenue with maximum performance threshold of  $\pm 3\%$ .
- 3) Set the TCOC benchmark as each hospital's risk-adjusted (demographics only) TCOC from 2019, updated with a Trend Factor of 0.33% below the national Medicare FFS growth rate for CY 2020. Consistent with the road map laid out in last year's policy, exclude MDPCP Performance-based Incentive Payments, but include Care Management Fees and Comprehensive Primary Care Payments for Track 2 practices in both the base and performance period.
- 4) Continue to assess performance on each hospital's own improvement in its attributed population's per capita TCOC.
  - a) Adjust for year-over-year changes in the demographic characteristics of the hospital's attributed population.
  - b) For future years, continue to explore incorporating attainment and further risk adjustment into the MPA's performance assessment.
- 5) Include the MPA as part of the aggregate revenue at risk under HSCRC quality programs.
- 6) Focus TCOC Work Group on more comprehensive review of the MPA policy for Rate Year 2023 (Performance in calendar year 2021), including but not limited to revisiting the fundamental attribution method, coordinating with the CTI process, adding attainment with benchmarking, and considering changes to amount at risk.
- 7) Provide national Medicare growth rate estimates relative to Maryland throughout the year to help hospitals monitor their progress.
- 8) Continue to work with CMS and CRISP to provide information to hospitals so they can more effectively engage in care coordination and quality improvement activities, assess their performance, and better manage the TCOC by working in alignment with both independent and affiliated providers whose beneficiaries they serve.

## INTRODUCTION

The State implemented a value-based payment adjustment, referred to as the Medicare Performance Adjustment (MPA), with performance beginning in Calendar Year (CY) 2018. The MPA brings direct financial accountability to individual hospitals based on the total cost of care (TCOC) of Medicare fee-for-service (FFS) beneficiaries attributed to them. This policy addresses updates for Rate Year 2022. Staff are proposing limited changes in this policy because of many other areas of change at the HSCRC (Efficiency Policy, Capital Policy, MPA Framework, etc.) and a desire to allow a longer term view of performance by minimizing attribution changes.

Throughout this policy, the periods involved will be referred to as follows:

- Year 1: Rate Year 2020, Performance Year 2018, Base Year 2017
- Year 2: Rate Year 2021, Performance Year 2019, Base Year 2018
- Year 3: Rate Year 2022, Performance Year 2020, Base Year 2019

## MEDICARE PERFORMANCE ADJUSTMENT MECHANICS

To calculate the MPA percentage adjustment to each hospital's federal Medicare payments (limited beginning in Year Two to a positive or negative adjustment of no more than 1.0%), the policy must determine the following: an algorithm for attributing Maryland Medicare beneficiaries and their TCOC to one or more hospitals without double-counting; a methodology for assessing hospitals' TCOC performance based on the beneficiaries and TCOC attributed to them; and a methodology for determining a hospital's MPA based on its TCOC performance.

The HSCRC explored potential changes to the MPA based on feedback from the industry and other stakeholders via its Total Cost of Care Workgroup and other meetings. This recommendation reflects valuable insights provided by the work group—which has held regular public meetings over the past three years—as well as analyses by HSCRC contractors LD Consulting and Mathematica Policy Research (MPR), and other communications and meetings with stakeholders.

### Total Cost of Care Attribution Algorithm

For Year 1 of the MPA, a multi-step prospective attribution method assigned beneficiaries and their costs to Maryland hospitals based primarily on beneficiaries' treatment relationship with a primary care provider (PCP) and that PCP's relationship to a hospital. Based on the Total Cost of Care Work Group's input and discussion, as well as Year 1 and 2 experience, HSCRC staff recommends keeping the main elements of the existing algorithm for Year 3, with some minor adjustments. A separate technical guide will be released by HSCRC staff describing the attribution algorithm for Year 3 and updates from the Year 2 Policy. The proposed updates make small changes to the way low volume physicians are handled and implement the treatment of all

employed providers of a hospital as a single group within the attribution (as opposed to individuals).

### **Review period**

Staff will continue to implement an official algorithm review period, as in Year 2. As the initial running of the attribution algorithm for Year 3 is completed, hospitals will have the opportunity to raise concerns about the attribution algorithm output. This period is intended to ensure the attribution algorithm is performing as expected, not as an opportunity to revisit the core elements of the algorithm.

The review period is intended to serve two purposes: (1) identify and correct mechanical errors (e.g., incorrect data submissions); and (2) address specific cases of unintended and misaligned linkages that do not reflect the intent of the MPA policy. For example, in some scenarios, a provider may have significant relationships with more than one hospital. In this case, the hospitals involved may propose to have joint accountability for the total cost of care. In practice, this could result in a portion of the total cost of care attributed to one hospital and the other portion to another hospital. In evaluating any such proposals, HSCRC staff will consider whether the request is reasonable based on the situation and can be implemented into MPA monitoring reports without significant burden. HSCRC staff will work with the TCOC Work Group to determine guidelines associated with review period proposals.

### **Performance Assessment**

For Year 3, hospital performance on Medicare TCOC per capita in the performance year (CY 2020) will be compared against the TCOC Benchmark. The TCOC Benchmark will be the hospital's prior (CY 2019) TCOC per capita, updated by (1) a TCOC Trend Factor determined by the Commission, as described in greater detail below and (2) adjusted for changes in the hospital's risk score over time. This approach is a year-over-year comparison, based on each hospital's own improvement. In the case that external events impact hospitals' Medicare TCOC (e.g., changes to the differential or reductions to hospital rates), the HSCRC reserves the right to adjust base year performance to capture those changes and better reflect a hospital's improvement.

The attribution of Medicare beneficiaries to hospitals will continue to be performed prospectively. Specifically, beneficiaries' connection to hospitals is determined based on the two federal fiscal years preceding the performance year, so that hospitals can know in advance the providers for whom they will be assuming responsibility in the coming performance year. For attribution for Performance Year 2020, data for the two years ending September 30, 2019 will be

used. For attribution for Base Year 2019, data for the two years ending September 30, 2018 will be used.<sup>1</sup>

The risk adjustment methodology based on Medicare New Enrollee Demographics Risk Score adopted in the Year 2 policy will continue to be used in Year 3.

This policy for RY 2022 represents a continuation of an improvement-only methodology. HSCRC staff is not recommending adopting an attainment policy at this time. An attainment policy for the MPA requires consideration of a number of complex issues, such as an appropriate attainment benchmark, intrinsic differences between hospital payment rates (such as labor market differences, Graduate Medical Education payments, etc.), and an appropriate risk adjustment methodology. The Total Cost of Care Work Group will continue to discuss attainment as part of its work plan to assess future policy changes.

### ***TCOC Trend Factor***

The MPA for Year 3, which begins July 2021, will be based on hospital performance on Medicare TCOC per capita in the performance year (CY 2020) compared to its TCOC Benchmark. The TCOC Benchmark will be the hospital's prior (CY 2019) TCOC per capita, updated by the TCOC Trend Factor. Final Medicare TCOC data for the State and the nation for calculating the MPA will be available in May 2021.

Consistent with the RY 2020 and 2021 policy, HSCRC staff proposes that the TCOC Trend Factor for RY 2022 remains set at 0.33% below the national Medicare FFS growth rate. Even after being approved by the Commission and CMS, however, the TCOC Trend Factor may be adjusted by the Commission and CMS if necessary to meet Medicare financial tests.

### ***Accounting for Maryland Primary Care Program (MDPCP) Expenditures***

The Maryland Primary Care Program is designed to provide additional funding, flexibility, and tools to primary care practices to invest in care management, population health, and other high value services. In the Year 2 recommendation the Commission approved gradually incorporating MDPCP expenditures into the MPA performance assessment. Consistent with this prior recommendation, staff propose the following for Year 3:

- Include Care Management Fees (CMF)
- Include Comprehensive Primary Care Payments (CPCP) paid quarterly to Track 2 MDPCP practices (approximately 10% of practices that applied), along with the sum of their reduced fee-for-service revenue

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<sup>1</sup> For Base Year 2019 and Performance Year 2020, the algorithm will rely on 2020 ACO lists, MDPCP lists, and employment lists. As a result, each hospital's TCOC performance as assessed for 2019 as the base year will differ from that calculated for 2019 as the performance year, which is based on 2019 ACO lists.

- Exclude Performance-based Incentive Payments (PBIP)

Beginning with the Year 4 (RY 2023) policy, staff intend to include PBIP in both the base year and the performance year.

### **Special Approaches to Increasing Hospital Accountability**

The University of Maryland Rehabilitation and Orthopedic Institute (UMROI) provides specialized stroke rehabilitation services along with other rehabilitation services to patients from across Maryland. Recognizing UMROI as a unique State resource and the challenges with operationalizing the MPA for UMROI, the HSCRC piloted an episode-based approach to increase the financial and quality accountability for Medicare beneficiaries receiving services at UMROI in CY 2019. This pilot will continue in CY 2020 with any changes implemented during next year's policy review.

Once again, hospitals also have the opportunity to collectively address TCOC by opting to have multiple hospitals treated as a single hospital for MPA purposes. Such a combination of hospitals must be agreed to by all the hospitals, must include a regional component, and serve a purpose that is enhanced by the combination. Hospitals should submit their request before the Performance Year and cannot be changed once the current Performance Year has begun, except as agreed to by HSCRC.

### **Medicare Performance Adjustment Methodology**

For each hospital, its TCOC Performance compared to the TCOC Benchmark, as well as an adjustment for quality, will be used to determine the MPA's scaled rewards and penalties. For Year 3, the agreement with CMS requires the maximum penalty be set at 1.0% and the maximum reward at 1.0% of hospital federal Medicare revenue. However, the HSCRC will be reviewing the reward/penalty maximum in the MPA next year, as CMS has indicated interest in increasing the amount at risk.

The agreement with CMS also requires that the Maximum Performance Threshold (that is, the percentage above or below the TCOC Benchmark at which the Maximum Revenue at Risk is attained) be set at 3% for Year 3. Before reaching the Year 3 Maximum Revenue at Risk of  $\pm 1.0\%$ , the Maximum Performance Threshold results in a scaled result — a reward or penalty equal to one-third of the percentage by which the hospital's TCOC differs from its TCOC target.

In addition, the agreement with CMS requires that a quality adjustment be applied that includes the measures in the HSCRC's Readmission Reduction Incentive Program (RRIP) and Maryland Hospital-Acquired Conditions (MHAC). For Year 3, staff proposes to continue to use the existing RRIP and MHAC all-payer revenue adjustments to determine these quality adjustments; however, staff recognizes that the Commission may choose to add to the programs used for the quality adjustments over time, to increase the alignment between hospitals and other providers to improve coordination, transitions, and effective and efficient care. Both MHAC and RRIP

quality programs have maximum penalties of 2% and maximum rewards of 1%. The sum of the hospital's quality adjustments will be multiplied by the scaled adjustment. Regardless of the quality adjustment, the maximum reward and penalty of  $\pm 1.0\%$  will not be exceeded. The MPA reward or penalty will be incorporated in the following year through adjusted Medicare hospital payments on Maryland Medicare FFS beneficiaries.

With the maximum  $\pm 1.0\%$  Medicare FFS hospital adjustment, staff continues to recommend that the MPA be included in the HSCRC's portfolio of value-based programs and be counted as part of the aggregate revenue at risk for HSCRC quality programs.

## **DRAFT RECOMMENDATIONS FOR RY 2022 MPA POLICY**

Based on the assessment above, staff recommends the following for RY 2022 (with details as described above).

- 1) Continue measuring Medicare Total Cost of Care (TCOC) by attributing Medicare fee-for-service beneficiaries to non-hospital providers, primarily based on use of primary care services, and then linking providers to hospitals based on existing relationships. Implement only minor changes from the RY 2021 approach.
- 2) Maintain the maximum penalty at 1.0% and the maximum reward at 1.0% of federal Medicare revenue with maximum performance threshold of  $\pm 3\%$ .
- 3) Set the TCOC benchmark as each hospital's risk-adjusted (demographics only) TCOC from 2019, updated with a Trend Factor of 0.33% below the national Medicare FFS growth rate for CY 2020. Consistent with the road map laid out in last year's policy, exclude MDPCP Performance-based Incentive Payments, but include Care Management Fees and Comprehensive Primary Care Payments for Track 2 practices in both the base and performance period.
- 4) Continue to assess performance on each hospital's own improvement in its attributed population's per capita TCOC.
  - a) Adjust for year-over-year changes in the demographic characteristics of the hospital's attributed population.
  - b) For future years, continue to explore incorporating attainment and further risk adjustment into the MPA's performance assessment.
- 5) Include the MPA as part of the aggregate revenue at risk under HSCRC quality programs.
- 6) Focus TCOC Work Group on more comprehensive review of the MPA policy for Rate Year 2023 (Performance in calendar year 2021), including but not limited to revisiting the fundamental attribution method, coordinating with the CTI process, adding attainment with benchmarking, and considering changes to amount at risk.

- 7) Provide national Medicare growth rate estimates relative to Maryland throughout the year to help hospitals monitor their progress.
- 8) Continue to work with CMS and CRISP to provide information to hospitals so they can more effectively engage in care coordination and quality improvement activities, assess their performance, and better manage the TCOC by working in alignment with both independent and affiliated providers whose beneficiaries they serve.

## LIST OF ABBREVIATIONS

AAPM	Advanced Alternative Payment Model
ACO	Accountable Care Organization
CMF	Care Management Fees
CMS	Centers for Medicare & Medicaid Services
CPCP	Comprehensive Primary Care Payments
CTO	Care Transformation Organization
CY	Calendar Year
E&M	Evaluation and Management Codes
ECMAD	Equivalent case-mix adjusted discharge
FFS	Medicare Fee-For-Service
FFY	Federal Fiscal Year
FY	Fiscal Year
GBR	Global Budget Revenue
HSCRC	Health Services Cost Review Commission
MACRA	Medicare Access and CHIP Reauthorization Act of 2015
MHAC	Maryland Hospital-Acquired Conditions Program
MPA	Medicare Performance Adjustment
MDPCP	Maryland Primary Care Program
NPI	National Provider Identification
PBIP	Performance-based Incentive Payments
PCP	Primary Care Provider
PSA	Primary Service Area
RRIP	Readmission Reduction Incentive Program
RY	Rate Year
TCOC	Medicare Total Cost of Care
TIN	Tax Identification Number



## APPENDIX I. BACKGROUND

The Maryland Health Services Cost Review Commission (HSCRC) is a State agency with unique regulatory authority: for all acute-care hospitals in Maryland, HSCRC sets the amount that each hospital will be reimbursed by all payers. The federal government has granted Maryland the authority for HSCRC to set hospital payment rates for Medicare as part of its all-payer hospital rate-setting system. This all-payer rate-setting approach, which has been in place since 1977, eliminates cost-shifting among payers.

Since 2014, the State and CMS have operated Maryland's unique all-payer rate-setting system for hospital services to adopt new and innovative policies aimed at reducing per capita hospital expenditures and TCOC spending, while improving health care quality, patient outcomes, and population health. Under this initiative, hospital-level global budgets are established, so that each hospital's total annual revenue is known at the beginning of each fiscal year. Annual revenue is determined from a historical base period that is adjusted to account for inflation updates, infrastructure requirements, population-driven volume increases, performance in quality-based or efficiency-based programs, changes in payer mix, and changes in levels of uncompensated care. Annual revenue may also be modified for changes in services levels, market share shifts, or shifts of services to unregulated settings.

The MPA provides a mechanism to further support aligned efforts of hospitals with other providers. This includes the opportunity for physicians who partner with hospitals under Maryland's Care Redesign Programs (i.e., Hospital Care Improvement Program (HCIP), Complex and Chronic Care Improvement Program (CCIP), and Episode Care Improvement Program (ECIP)) to be eligible for bonuses and increased payment rates under the federal MACRA law.

Although outside the scope of the MPA attribution algorithm and other aspects described in this document, the State also has the flexibility to apply an MPA Framework to adjust hospitals' Medicare payments for other purposes. There are two primary use cases for the MPA Framework. First, the MPA Framework can permit the flow of Medicare funds to hospitals based on their performance in other programs (the MPA Reconciliation Component (MPA-RC)). For example, Medicare payments to qualifying hospitals under ECIP will occur through an MPA-RC separate from the MPA's adjustment based on the hospital's performance on its attributed population. In addition, the MPA Framework may also be used to reduce hospital payments if necessary to meet Medicare financial targets that are not approved on an all-payer basis (the MPA Savings Component (MPA-SC)).

## APPENDIX II. ESTIMATED TIMELINE AND HOSPITAL SUBMISSION

Estimated Timing	Action
December 2019	<ul style="list-style-type: none"> <li>• <i>Required for ACOs:</i> Hospitals provide HSCRC with ACO Participant List for Performance Year 2020 (also used for Base Year 2019)</li> <li>• <i>Voluntary:</i> Hospitals participating in multi-hospital ACOs designate which ACO providers should be linked with which ACO hospital</li> <li>• <i>Voluntary:</i> Hospitals provide HSCRC with a list of full-time, fully employed providers</li> <li>• <i>Voluntary:</i> Hospitals wanting to be treated as a combination under the MPA submit a joint request to HSCRC</li> </ul>
January 2020	<ul style="list-style-type: none"> <li>• Performance year begins</li> <li>• HSCRC combines hospital lists and identifies potential overlaps</li> <li>• HSCRC runs attribution algorithm for Base Year 2019 and Performance Year 2020, and provides hospitals with preliminary provider-attribution lists</li> </ul>
February 2020	<ul style="list-style-type: none"> <li>• Official review period for hospitals of 2 weeks following preliminary provider-attribution lists</li> <li>• HSCRC reruns attribution algorithm for implementation</li> </ul>

## **Policy Update Report and Discussion**

Staff will present materials at the Commission Meeting.

## **Legal Report Placeholder**

Staff will present materials at the Commission meeting.

State of Maryland  
Department of Health



Nelson J. Sabatini  
Chairman

Joseph Antos, PhD  
Vice-Chairman

Victoria W. Bayless

Stacia Cohen

John M. Colmers

James N. Elliott, M.D.

Adam Kane

Katie Wunderlich  
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Population Based  
Methodologies

Chris Peterson, Director  
Payment Reform &  
Provider Alignment

Gerard J. Schmith, Director  
Revenue & Regulation  
Compliance

William Henderson, Director  
Medical Economics &  
Data Analytics

**Health Services Cost Review Commission**

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**TO: Commissioners**

**FROM: HSCRC Staff**

**DATE: September 11, 2019**

**RE: Hearing and Meeting Schedule**

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October 10, 2019 To be determined - 4160 Patterson Avenue  
HSCRC/MHCC Conference Room  
\*\*Please note this is a THURSDAY\*\*

November 13, 2019 To be determined – 4160 Patterson Avenue  
HSCRC/MHCC Conference Room

Please note that Commissioner's binders will be available in the Commission's office at 11:15 a.m.

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

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