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# Final Recommendation on Full Rate Application Policy

January 13, 2021

This document contains the final staff recommendations for Full Rate Application Policy.

**P:** 410.764.2605 ● 4160 Patterson Avenue | Baltimore, MD 21215 ● hscrc.maryland.gov

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## Key Methodology Concepts and Definitions

1. Equivalent Casemix Adjusted Discharges (ECMADS) – 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 hospitals 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 of 2 percent. The term "Relative efficiency" is the difference between a hospital's actual revenue base and the ICC calculated cost base.

3. Total Cost of Care (TCOC) Benchmark Performance – TCOC, an assessment of part A and B Medicare expenditures and all commercial expenditures excluding retail pharmacy, is measured by comparing the per capita cost of care in a hospital's service area to matched national Medicare and Commercial benchmarks on a risk, benefit (commercial only) and demographic adjusted basis

4. Total Cost of Care (TCOC) Savings Tests - The TCOC Model has two principal TCOC tests the State must adhere to and address through the Annual Update Factor Policy, which provides inflation and volume funding in line with population growth to all HSCRC regulated facilities. These tests require the State to achieve prescribed annual TCOC savings, culminating in $300 million in annual savings relative to 2013 by 2023, and they require the State to not exceed national Medicare growth by 1% in any one year and to not exceed national Medicare growth in consecutive years.

## Policy Overview

| Policy Objective | Policy Solution | Effect on Hospitals | Effect on Payers/Consumers | Effect on Disparities in Healthcare |
|---|---|---|---|---|
| Per statute, the Commission is required to establish rates for a hospital that are reasonably related to reasonable costs. These determinations are to be done within 150 days of hospitals filing of full rate application and in the TCOC Model should assess a hospitals performance in TCOC. | This policy develops objective standards for determining a rate structure in line with hospital's current service delivery and hospital's bearing on TCOC for its surrounding region. | Staff envisions that this policy will only be utilized to provide revenue commensurate with reasonable cost levels to hospitals that file a full rate application. | By establishing objective standards by which hospitals may quality for additional revenue in a full rate application, this policy ensures that rate enhancements are not provided arbitrarily or needlessly and therefore, along with other Commission efficiency policies, protects consumers from excessive charge levels. | Staff does not anticipate this policy to have any demonstrable effect on disparities in healthcare and notes that many of the risk adjustments in the policy normalize the difference between serving an affluent population and a more impoverished population, e.g. risk adjustments for higher levels of uncompensated care and governmental payer mix in the ICC and risk adjustments for |

| | | | | |
|---|---|---|---|---|
| | | | | deep poverty and purchasing power parity in the TCOC benchmark analyses. |

## Recommendations

1. Formally adopt policies described herein to assess cost per case efficiency and total cost of care efficiency to determine the rate structure for hospitals[1] should:
    a. A hospital request a full rate application; or
    b. HSCRC open a full rate review on a hospital;
2. Use the Inter-Hospital Cost Comparison, including its supporting methodologies to compare cost-per-case for the above evaluations;
    a. Removal of the 2 percent productivity adjustment is temporary and staff will report back to the Commission with a proposed substitute for that temporary removal no later than July of 2023.
3. Use Total Cost of Care measures with a geographic attribution to evaluate per capita cost performance for the above evaluations;
4. Allow staff to include in full rate application recommendations the following:
    a. Implementation date for global budget enhancement that considers and comports with the State's TCOC savings tests
    b. Staff will come forward with a recommendation with regard to a proposed change in COMAR 10.37.10.03 within 60 days.

## Introduction

Historically, the HSCRC has had a full rate application methodology to assess hospitals' efficiency. The methodology allowed staff to review a hospital's entire regulated rate structure and was employed:

- When a hospital submitted a full rate application for an increased rate structure; or
- When HSCRC staff identified a hospital with high cost inefficiency in order to reduce the hospital's rate structure.

Full rate application assessments have historically been based on a hospital's cost per case efficiency relative to a peer group standard, i.e. a hospitals' revenue base compared to average peer group cost per

[1] Total Cost of Care Assessments relative to attainment and growth standards performed by payer will be used to modify a hospital's cost per case efficiency analysis.

case with profit removed PLUS a productivity adjustment. However, given the incentives of the TCOC Model and the broader cost accountability hospitals now face, Commissioners directed staff to develop total cost of care metrics that would complement the Commission's cost review methodology in a TCOC Model, and yet still adhere to its statutory mandate, per Maryland HEALTH-GENERAL Article, An. Code Ann. § 19-219(a), to assure each purchaser of hospital services that:

**(1)** The total costs of all hospital services offered by or through a facility are reasonable;
**(2)** The aggregate rates of the facility are related reasonably to the aggregate costs of the facility; and
**(3)** The rates are set equitably among all purchasers or classes of purchasers without undue discrimination or preference.

In response to Commissioner directives to incorporate per capita efficiency measures into overall efficiency analyses in line with the TCOC Model, staff have developed an approach that incorporates TCOC performance relative to national benchmarks into the Interhospital Cost Comparison (ICC) methodology. Specifically, staff uses a TCOC algorithm that assesses TCOC performance relative to attainment and growth standards that then modifies a hospital's ICC result, but the extent of this modification is limited to the responsibility or influence hospitals have on TCOC on a statewide basis. Unlike the Integrated Efficiency Policy, which also incorporates TCOC benchmark performance for the purpose of scaling annual inflation, the Full Rate Application Policy does not relatively rank hospitals on a combination of the ICC and TCOC. This is because full rate assessments have always been analyses relative to an absolute standard so that the Commission may reset a hospital's rate structure to be in line with its current services.

This report outlines the ICC and TCOC methodology to be used in the Full Rate Application Policy and the proposed approach to incorporate TCOC metrics into a hospital cost analysis. This report also outlines recommended procedures for administering global budget revenue enhancements secured through the full rate application process.

Future iterations of the Full Rate Application policy will address potential modifications to the current efficiency tools, most notably potential changes in the ICC for peer groupings, incorporation of national inpatient analyses for academic medical center efficiency, and changes to allowed medical residents costs, all of which may have an effect on hospitals' current efficiency standing.

# 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 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 certain hospitals' global revenues,[2] 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 calculated from the ICC cost standard is the measure of a hospital's cost-per-case efficiency.

Staff has also developed total cost of care "attainment" benchmarks calculations into the final efficiency determinations, inclusive of Commercial performance, that will be discussed in the Overview of the *Total Cost of Care Calculation* section.

## Efficiency Implementation

### Full Rate Application Process

The current process for full rate applications is outlined in Maryland statute (Health-General Article §19-222 and COMAR 10.37.10.03 et seq). It allows hospitals to a file for a change in its rate schedule that will be effective based on the date that the rate application notice specifies, which must be at least 30 days after the date on which the notice is filed.

The Commission, upon receiving the full rate application, must review and act on the rate application within 150 days after the notice is filed, unless both parties agree to postpone this deadline. If the Commission decides to hold a public hearing, the Commission must set a place and time for the hearing within 65 days of the filing notice. In the event of a hearing, the Commission may suspend the effective date of any

[2] Anne Arundel Medical Center, Garret Regional Medical Center, UMMC Midtown Hospital, Bayview Hospital

proposed change until 30 days after the hearing. Finally, if the Commission fails to complete the review of the rate application within 150 days, the change in rate structure will be effective to the date provided on the rate application notice.

Due to the alacrity with which rate determinations must be made, there are two concerns this policy would like to address, namely the implications rate enhancements have on TCOC savings tests and staff resources. For the former, staff would note three important contextual points:

1) The TCOC contract does not allow for the State to exceed its required TCOC savings tests due to global budget revenue enhancements provided to hospitals that have successfully filed a full rate application.
2) Currently, the only time in which global budget revenue on a statewide basis is considered for the State's annual TCOC savings tests is the Annual Update Factor Policy, which provides inflation and volume funding in line with population growth on a State fiscal year basis to comport with the State's various TCOC tests.
3) Staff has to provide a full rate application recommendation for each filed rate application that is not withdrawn, which offers an opportunity for staff to speak to the impact a global budget enhancement will have on TCOC.

In this context, staff recommends the following options for administering a global budget enhancement should Commissioners approve one through the full rate application process:

1) **Provide the revenue increase immediately because there are no potential concerns about total cost of care performance.**
2) **Provide revenue increase immediately but concurrently reduce inflation across the board for all hospitals due to total cost of care performance.**
3) **Provide a portion of revenue increase immediately and provide remaining revenue at semi-annual milestone (Jan or July 1st) when total cost of care can be accounted for.**
4) **Delay revenue increase to semi-annual milestone (Jan or July 1st) when total cost of care can be accounted for.**

For the approaches outlined in numbers 3 and 4 to be implemented, the Commission would need to seek a change in statute and COMAR or would need to create an expectation or norm in the hospital industry that if delay of a revenue enhancement is not mutually agreed upon by the Commission and the requesting party, the Commission will pursue option 2. At this time, staff recommend not pursuing a change to statute and COMAR. Thus, if there is a concern that implementation of a global budget revenue enhancement allowed under a full rate review recommendation would negatively impact total cost of care performance and the requesting party does not agree to a delay in funding, staff proposes that option 2 be utilized, thereby adhering to statute and COMAR.

Staff are also concerned about the extent of staff resources in reviewing hospitals entire rate structure within 150 days, especially when multiple rate applications are filed in one year, and staff believe there are many opportunities for hospitals to improve solvency in the TCOC Model that do not require a full rate application methodology, e.g., reduce avoidable utilization, improve cost efficiency, and seek less laborious revenue enhancements through the proposed Integrated Efficiency policy. As such, it is anticipated that each full rate application recommendation specifically address the length of time the subject hospital is precluded from filing another full rate application, which will need to be mutually agreed upon. Expected suspensions for an individual hospital will be 2-3 years.

### Spend Down Process

The HSCRC have also historically used the full rate application methodology to enter into spend down arrangements with hospitals, whereby the Commission opens a rate review and reduces an inefficient hospital's rate structure over a period of years. The modern analog would be to reduce a hospital's permanent global budget revenue base. Because staff is using the proposed Integrated Efficiency Policy to address inefficient outliers, at this time staff do not recommend employing the full rate application methodology to open a review on a hospital in order to reduce a hospital's permanent revenue base.

## 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)

**Future development work may result in different peer groups.**

4. There are two additional steps to convert revenues to cost. The first additional adjustment is to remove profits from regulated services from the adjusted revenues (profit strip henceforth). 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 Exhibits 1a and 1b.

**Exhibit 1a: Overview of ICC Cost Comparison Calculation Determining Peer Group Cost-per-case (Stripping Down)**

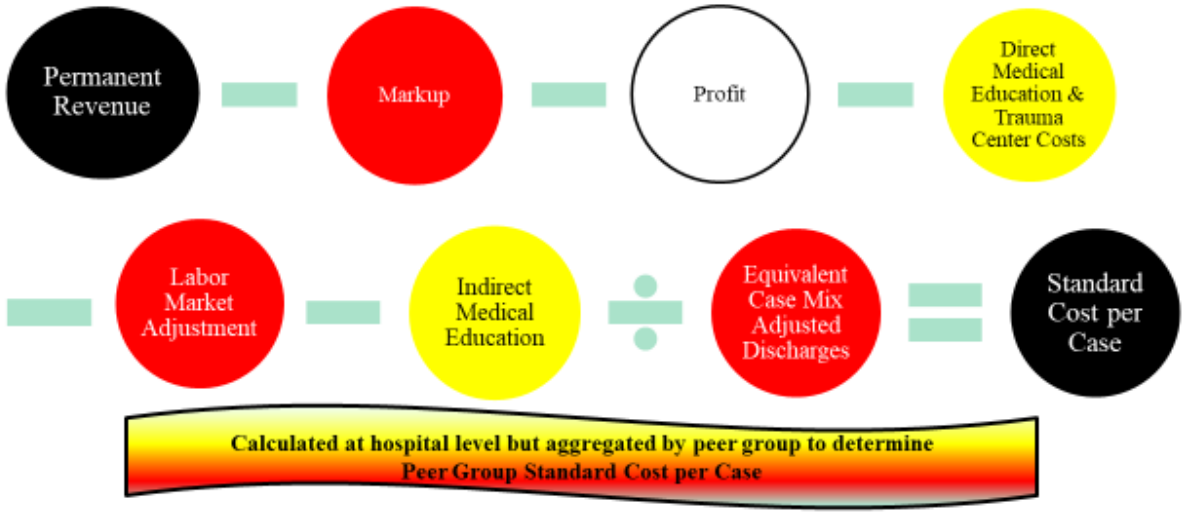
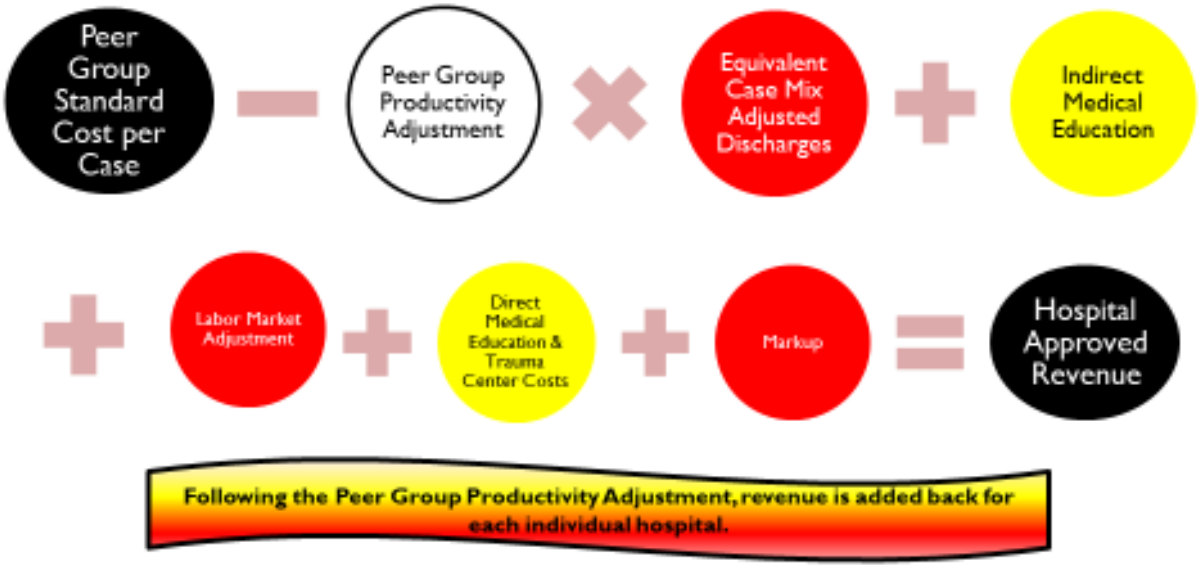


**Exhibit 1b: Overview of ICC Cost Comparison Calculation Determining Total Revenue (Building Back Up)**




## 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.[3]

**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 2019 annual filing was $132,803.

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 medical education costs versus the IME costs per resident of other teaching hospitals.[4] The criteria staff used for defining these two peer groups were as follows:

[3] 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.

[4] 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.

**Exhibit 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[5] and a regression that controlled for the other factors commonly associated with costs, such as hospitals' average patient severity and indigent care burden[6], 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 2020 dollars.

**Future development work may result in different allowed resident counts, but the methodologies for determining the cost per resident for direct and indirect medical education will remain the same.**

**Exhibit 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[a] | 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 |
| | | | | | |

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.

[5] 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.
[6] 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.

[a] 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 hospitals 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.

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; it was then 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, 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. Staff also conducted various correlation analyses and found very limited relationships between ICC performance (before and after peer groupings) and various deprivation statistics, e.g. average Area Deprivation Index and share of services attributable to Medicaid, self-pay and charity care, and dual eligible. This leads staff to conclude that this adjustment is no longer needed, although staff does believe that the retention of peer groups may help to adjust for other costs that might not otherwise be well accounted for, such as security costs in inner city settings.

**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

In prior iterations of the ICC tool, staff recommended using an alternative approach to calculate the productivity adjustment. The 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, produced varying levels of required increased productivity for each peer group that staff believed was a methodological improvement to the historical 2 percent productivity adjustment employed across the board. However, given further review based on the final promulgation of the Major Capital Financing policy that also uses this calculation on a hospital specific basis, staff has determined that the excess capacity calculation should not be used to determine a peer group productivity adjustment due to the 85 percent variable cost factor in place from 2010 to 2014, which made the calculation overestimate the level of productivity expected of each peer group. Thus, staff recommending returning to the historical 2 percent productivity adjustment. **However, given stakeholder comment letters, staff have proposed**

**suspending the productivity adjustment to recognize the investments needed to control the total cost of care and improve quality and outcomes at both hospital and non-hospital sites of care and the ensuing responsibilities that hospitals have under the TCOC Model. Staff recommends this serve as a temporary adjustment until additional reporting can be established to quantify the expenses incurred by hospitals to improve cost, quality and health outcomes under the TCOC Model.**

**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 proposed to volume adjust the ICC because there exists an inverse correlation of (.53), whereby reductions in potentially avoidable utilization result in worse ICC performance. For purposes of the Full Rate Application Policy, staff do not support putting forward a volume adjustment for reductions in potentially avoidable utilization, as this policy is intended to establish a rate structure commensurate with current services that are delivered at a reasonable cost level. Since this policy should only be utilized by hospitals that seek a full rate review and will not be applied to all hospitals each year for the purposes of realigning global budget revenue, staff does not believe this recommendation to use current services is at odds with the incentives of the TCOC Model.

## Overview of Medicare Total Cost of Care Calculations

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.

### 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 such zip code 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.

With these modifications the PSAP methodology attributes 100% of Maryland's population to a hospital.

### Medicare and Commercial Benchmark Methodologies

A Medicare and a Commercial benchmark was calculated for each hospital. Each benchmark was developed in a three-step process. Step 1 was to identify benchmark groups for each Maryland geography. Step 2 was to translate the geographic benchmarks into hospital-level benchmarks. Step 3 was to complete the cost comparison adjusting for beneficiary risk and demographics.

Detailed methodologies and for each payer and additional data files related to the benchmarking process can be found in the Resources section of the Total Cost of Care Workgroup page on the HSCRC's website. The following is an abbreviated overview of these materials.

Step 1: Identify Benchmark Groups for each Maryland Geography

For Medicare benchmarking the geographic unit was a county. Due to limitations of the commercially available national data the benchmark geographic unit was a Metropolitan Statistical Area. (MSA) However, in Maryland where more granular data is available through the Maryland Health Care Commission's Medical Claims Database (MCDB), Maryland counties were reorganized into a group of MSA-like cohorts such that all Maryland counties were included and no non-MD counties were included (this is not the case with standard MSAs).

Potential comparison geographies for each Maryland geography were narrowed based on population density and size. Various demographic factors were then calculated for every geographic unit within this narrowed selection. The demographic values used were intended to capture the health needs and economic situation of the geography. Factors related to health system design like physician supply or provider concentration were explicitly excluded to avoid creating results that were biased by the nature of the delivery system.

A benchmark cohort was then developed for each Maryland geographic units (1 for Medicare and 1 for Commercial). The cohort was established based on selecting the 20 or 50 most statistically similar national geographies for each Maryland geography. The cohort include 20 members for all Commercial areas and for 5 large Maryland counties for Medicare. (Anne Arundel, Baltimore City, Baltimore County, Montgomery

County and Prince George's County). 50 member cohorts were used for Medicare for the remaining Maryland counties.

The cohort sizes were selected to balance the relative similarity of the included national geographies against the need for stable results over time. Medicare and Commercial benchmark cohorts are not identical as the same geographic unit was not used, but there is substantial overlap and the selection metrics were identical except that payer mix was used in the Commercial selection but not in the Medicare selection.

Step 2: Translate Geographic Benchmarks into Hospital benchmarks

As the policy requires measuring performance at a hospital level it was necessary to develop a hospital specific benchmark. This was done in three steps:

A. Calculate Maryland per capital total cost of care for each Maryland hospital based on their Primary Service Area Plus (PSAP).

B. Calculate the benchmark by blending the relevant geographic benchmarks based on the distribution of the beneficiaries within the hospital's PSAP. For example, a hospital with 60% of its beneficiaries in geographic unit A and 40% in geographic unit B has a benchmark per capita total cost of care equal to 60% A and 40% B.

C. Adjust the Maryland and benchmark values using the adjustments described in Step 3 below to adjust for differences between the Hospital's PSAP demographics and those in the geographic units in its benchmark.

Step 3: Complete the Cost Comparison adjusting for Beneficiary Risk and Demographics

Per Capital total cost of care is calculated for each Maryland hospital and its benchmark. For Medicare the paid amounts are used and for Commercial the allowed amount was used. For Medicare paid was utilized as that is the amount for which Maryland is accountable under the Total Cost of Care Model. For Commercial allowed was utilized to remove the impact of varying cost sharing amounts across different commercial populations. The raw amounts are then adjusted as follows:

A. Medical Education costs were stripped from all values. Medical Education was removed so that Maryland hospitals would not be harmed or helped versus their benchmark cohort based on the level of medical education provided.

B. Risk adjustment is applied. Medicare risk adjustment is applied using Medicare Hierarchical Conditioning Categories (HCCs). Commercial risk adjustment is applied using HHS-HCC Platinum Risk Scores. Both these methodologies are publicly available validated risk adjustment methodologies. Age and sex is incorporated in these methodologies and therefore was not separately addressed.

C. (Commercial Only) Benefit adjustment is applied. While the use of allowed amounts removes the cost impact of member cost shares it does not remove the utilization impact of varying cost shares. Generally, a plan with richer benefits will result in higher utilization. The benefit adjustment is intended to eliminate this impact from the comparison, so Maryland is not harmed or helped because its commercial health plans having poorer or richer benefits. The adjustment resulted in a scaled index for each MSA reflecting the relative richness of benefits. This value is then used to remove the impact of benefit differential from the per capita total cost of care.

D. Demographic Adjustment was applied. A demographic adjustment was developed to better standardize for demographic factors beyond the control of the health system that impact cost of care. The adjustment was calculated separately for Medicare and Commercial but in both cases was based on a regression of the risk and benefit adjusted total per capita cost of care against Median Income and Deep Poverty as reported by zip code in census data. The resulting regression coefficients were used to create a predicted value for each county and the ratio of the actual value to the predicted value was used to adjust the risk and benefit-adjusted per capita total cost of care.

The values calculated can then be used to compare each hospital's per capita total cost of care to their peer average (or other comparison points derived from the benchmark cohort, e.g. 75$^{th}$ percentile) while removing the impact of medical education, beneficiary risk, benefits and demographics from the comparison.

## Overview of Total Cost of Care Algorithm

A very important component of the modernization of the full rate application methodology is to incorporate TCOC performance into the overall efficiency assessment in recognition of a hospital's TCOC responsibility. While Maryland hospitals are collectively held accountable for all TCOC through the Update Factor Policy and through the broader TCOC Model, they are not currently directly responsible for all TCOC. Hospital services for all Maryland Medicare FFS beneficiaries represent 54 percent of TCOC spend, and hospital services for all Maryland Commercial Enrollees represent 30 percent of TCOC spend. However, even in the absence of direct individual responsibility a full rate application methodology must account for the most important efficiency outcome in the Model, namely TCOC performance, but restricting a full rate application methodology to TCOC performance fails to recognize the cost and price per case concerns that underlie the State's reimbursement system, which still requires purchasers to pay per service administered at the hospital.

In the future through a potential hospital-centered capitated model, whereby all lives in a given region are attributed to a hospital to determine its global budget revenue, hospitals could be directly responsible for all TCOC, but in the interim staff had to wrestle with incorporating TCOC performance to reflect hospital's

accountability but not broad scale responsibility. The approach staff is putting forward uses various TCOC attainment and growth standards in a multi-step algorithm, which is expressed in terms of absolute attributed TCOC dollars and weighted by a hospital's statewide share of TCOC responsibility by payer. The output of this algorithm is then used to modify a hospital's ICC cost-per-case efficiency assessed revenue, i.e. the revenue level the ICC methodology yields for an efficient and effective hospital to remain solvent.

Each hospital has a different TCOC standard because each hospital has a slightly different group of national peers, although significant overlap does exist since the TCOC benchmark assessments are based on demography as opposed to hospital comparisons. While the comparison peers for each hospital are different, the standard relative to each hospital's peer group is consistent in the proposed methodology. The exhibit below outlines the standards that affect a hospital's ICC cost-per-case efficiency assessed revenue:

**Exhibit 4 TCOC Standards Influence on Rate Application**

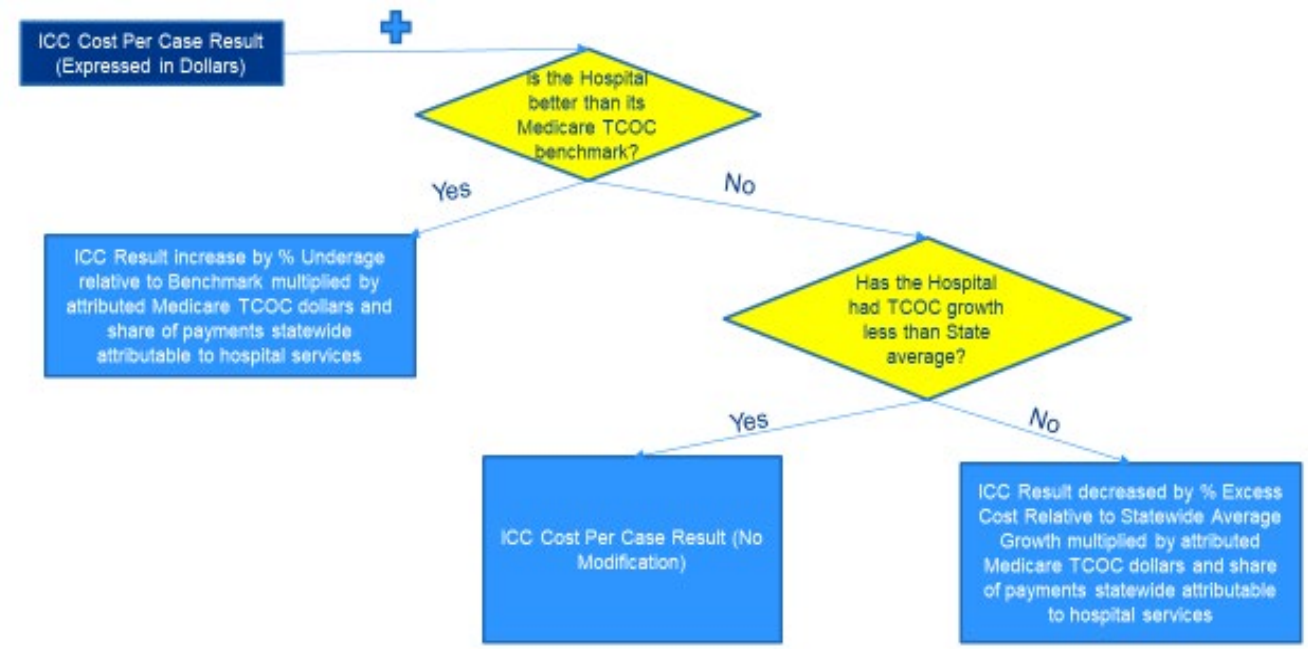
| TCOC Performance | Reward/Penalty Modification to ICC |
|---|---|
| Better than Medicare Benchmark | Reward |
| Better than Medicare Benchmark AND Average of Top Half of Commercial Performance | Additional Reward |
| Worse than Medicare Benchmark but better than average State TCOC growth | No action |
| Worse than Medicare benchmark and worse than average State TCOC growth | Penalty |
| Worse than Commercial Benchmark | Additional Penalty |
| All Rewards Capped so that a Hospital Does not Exceed Medicare Benchmark | |

Unlike the proposed Integrated Efficiency Policy, which expresses cost-per-case and TCOC efficiency in terms of a percentage relative to a standard and in so doing does not consider the size of TCOC attributed dollars (nor the size of the hospital budget), the Full Rate Application Policy directly acknowledges the extent of TCOC attributed dollars by modifying a hospitals' ICC cost-per-case efficiency assessed revenue by a hospital's performance in TCOC expressed in absolute dollars. In effect, the more care for which a hospital is accountable the greater the size of the reward they can earn.

It is important to note, however, that all additional rewards and penalties are first weighted by Maryland hospital's share of statewide TCOC responsibility, 54 percent for Medicare and 30 percent for commercial. Thus, there is a limit to how much risk a hospital can be rewarded or penalized for. Moreover, TCOC

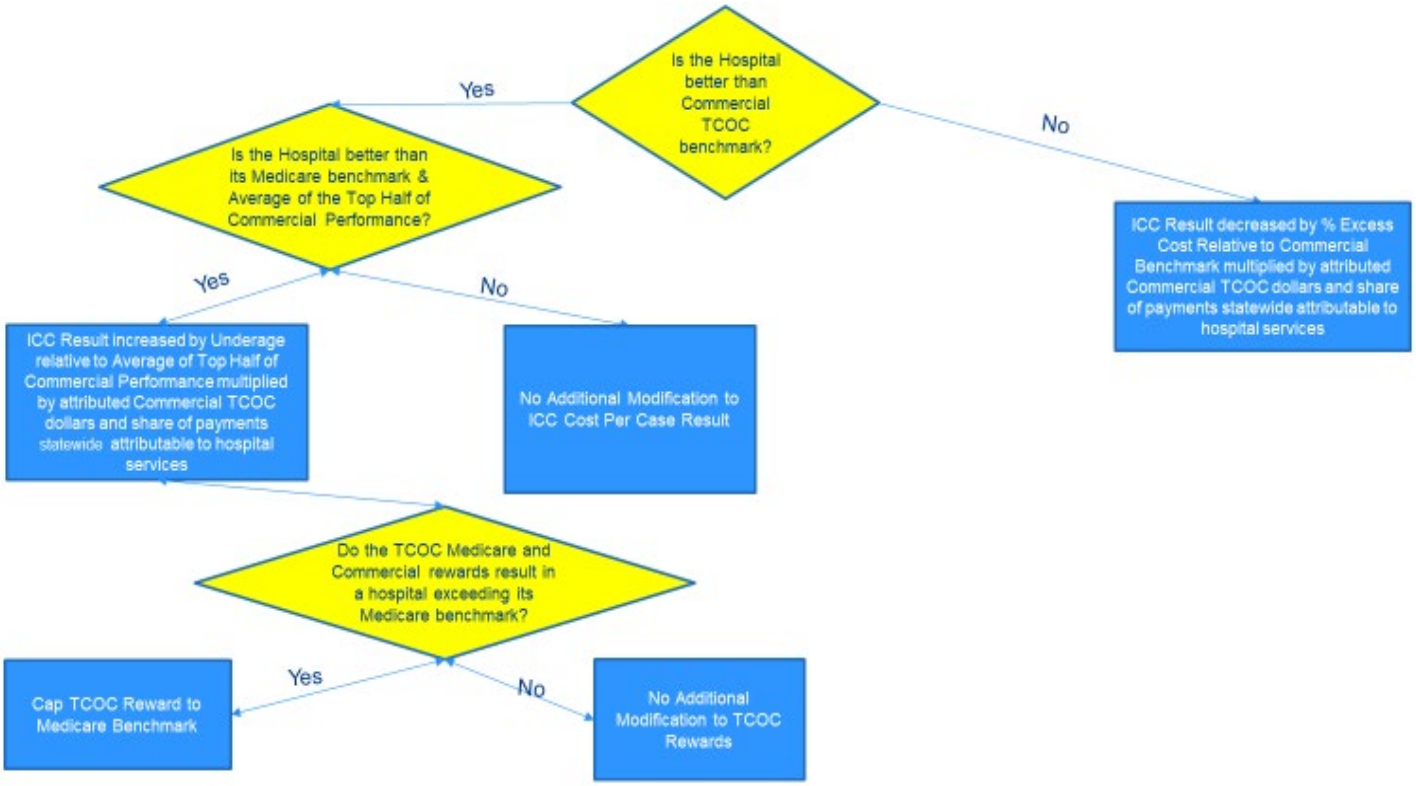
rewards that may modify a hospital's ICC cost-per-case efficiency assessed revenue are capped such that a hospital does not exceed its Medicare benchmark. , which staff proposes is not a desirable outcome in a TCOC Model that seeks to retain higher governmental hospital reimbursement in exchange for better TCOC performance.[7] For a complete review of the proposed ICC algorithm, see exhibit 5a + b below:

**Exhibit 5a Visual Representation of Efficiency Algorithm (Phase 1 – Medicare)**




[7] If a hospital is efficient such that it qualifies for a revenue enhancement solely through the ICC and there are no TCOC penalties associated with its assessment in the Full Rate Application methodology, the hospital will not have its available funding capped by its relationship to the Medicare benchmark.

**Exhibit 5b Visual Representation of Efficiency Algorithm (Phase 2 - Commercial)**




# Efficiency Assessment

## Examples of TCOC Modifications

To better understand how TCOC affects a hospital rate application, Exhibit 6 displays examples that cover most of the variations in which TCOC may influence a full rate application determination:

**Exhibit 6 Examples of TCOC Influence on Rate Application**

| ICC and TCOC Scenario | ICC Performance Relative to Standard | 2018 Share of Medicare TCOC Spend Attributable to Hospital Services Statewide | 2018 Medicare FFS Attributed Dollars (Part A and Part B) | 2018 Medicare TCOC Relative to Benchmark | Medicare TCOC Attainment Credit | 2013-2018 Medicare TCOC Growth (State Avg = 7.31%) | Excess Medicare TCOC Growth Penalty | 2018 Share of Commercial TCOC Spend Attributable to Hospital Services Statewide | 2018 Commercial Attributed Dollars | 2018 Commercial TCOC Relative to Benchmark | Commercial TCOC Attainment Penalty | 2018 Commercial Average of Top Half | Commercial TCOC Attainment Credit | Total TCOC Credit / Penalty | Full Rate Application Recommendation |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A | B | C | D | E | F=C*D*E*-1 | G | H=(G-7.31%)*C*D*-1 | I | J | K | L=I*J*K*-1 | M | N=I*J*M*-1 | O = Lessor of (F+H+L+N) and E | P($)=B($)+O |
| Did not meet ICC Standard but better on Medicare & Commercial Benchmark | -4.92% (Reduction of $16.9 M) | 53.82% | $379.6 M | -10.14% ($38.5 M under benchmark) | $20.7 M | 12.37% | NA | 29.90% | $608 M | -36.06% | NA | -29.72% | $54 million | $38.5 M | 6.30% (Increase of $21.6 M resulting in $364.8 M) |
| Met ICC Standard but excess Medicare TCOC growth | 4.23% (Increase of $23.7 M) | 53.82% | $189.9 M | 17.56% ($33.4 M over benchmark) | NA | 9.23% | -$1.9 M | 29.90% | $180.2 M | -19.96% | NA | -14.15% | NA | -$1.9 M | 3.88% (Increase of $21.7 M resulting in $581 M) |
| Met ICC Standard but excess Medicare TCOC Growth and Poor Commercial TCOC Performance | 7.08% (Increase of $4.4 M) | 53.82% | $49.8 M | 7.79% ($3.8 M over benchmark) | NA | 19.96% | -$3.4 M | 29.90% | $56.1 M | 3.01% | -$0.5 M | 13.62% | NA | -$3.9 M | 0.87% (Increase of of $0.5 M resulting in $63.3 M) |

## Results

In the proposed full rate application methodology, there are two hospitals that qualify for a revenue enhancement by strictly looking at the ICC cost-per-case efficiency assessed revenue. These two hospitals, Garrett County Memorial Hospital and Mercy Medical Center, would qualify for a 7.08 percent and 4.23 percent revenue enhancement, respectively. Once TCOC performance is factored into the assessment, these same two hospitals would still qualify for a revenue enhancement, albeit reduced from the ICC evaluation (0.87 percent and 3.88 percent revenue enhancement, respectively), and two additional hospitals (Suburban Hospital and Fort Washington Medical Center) would also qualify (6.30 percent and 1.99 percent revenue enhancement respectively). This would mean a little over 9 percent of the hospitals

evaluated in the proposed Full Rate Application Policy (4 out of 43) would qualify for additional revenue. Please note these results may change based on future development work to assess the validity of peer groups and the number of allowed medical residents in the ICC methodology. For a list of current results of the proposed methodology, which would only be employed if a hospital filed a rate application, see exhibit 7 below:

**Exhibit 7 Results of Full Rate Application Methodology[8]**

| | 2% Productivity Adjustment | | No Productivity Adjustment | |
|---|---|---|---|---|
| Hospital Name | Full Rate Application Recommendation ($) | Full Rate Application Recommendation (%) | Full Rate Application Recommendation ($) | Full Rate Application Recommendation (%) |
| Suburban Hospital | 21,976,492 | 6.40% | 28,531,522 | 8.31% |
| Mercy Medical Center | 13,152,665 | 2.35% | 24,187,879 | 4.32% |
| Fort Washington Medical Center | 1,168,428 | 2.23% | 2,200,044 | 4.20% |
| Garrett County Memorial Hospital | 711,755 | 1.13% | 2,066,488 | 3.29% |
| Anne Arundel Medical Center | (9,170,536) | -1.42% | 2,938,213 | 0.45% |
| Howard County General Hospital | (5,269,115) | -1.70% | 767,471 | 0.25% |
| Atlantic General Hospital | (2,217,411) | -1.97% | (34,345) | -0.03% |
| Johns Hopkins Hospital | (119,451,299) | -4.68% | (84,031,835) | -3.30% |
| Holy Cross Hospitals | (29,884,450) | -4.70% | (17,596,402) | -2.76% |
| Johns Hopkins Bayview Medical Center | (39,405,139) | -5.59% | (27,817,689) | -3.94% |
| MedStar Union Memorial Hospital | (25,160,227) | -5.88% | (17,267,838) | -4.04% |
| Greater Baltimore Medical Center | (33,399,984) | -6.89% | (24,957,520) | -5.15% |
| University of Maryland Baltimore Washington Medical Center | (34,858,317) | -7.68% | (26,372,910) | -5.81% |
| Peninsula Regional Medical Center | (38,289,258) | -8.32% | (29,792,923) | -6.47% |
| Meritus Medical Center | (32,527,523) | -8.46% | (25,741,352) | -6.69% |
| Doctors Community Hospital | (22,090,031) | -8.49% | (17,501,345) | -6.73% |
| MedStar Harbor Hospital Center | (16,528,213) | -8.58% | (13,043,196) | -6.77% |
| University of Maryland Medical Center | (163,676,439) | -10.13% | (143,928,596) | -8.91% |
| MedStar St. Mary's Hospital | (19,703,982) | -10.25% | (16,340,985) | -8.50% |
| Upper Chesapeake Medical Center | (34,681,540) | -10.75% | (28,731,179) | -8.91% |
| Frederick Memorial Hospital | (40,998,182) | -11.36% | (34,481,732) | -9.55% |
| Western Maryland Regional Medical Center | (41,397,715) | -12.26% | (35,730,809) | -10.58% |
| University of Maryland St. Joseph Medical Center | (50,197,103) | -12.84% | (43,107,860) | -11.03% |
| Sinai Hospital | (127,293,696) | -15.02% | (115,354,728) | -13.61% |
| Prince Georges Hospital Center | (54,939,361) | -15.78% | (49,335,358) | -14.17% |
| MedStar Franklin Square Hospital Center | (90,976,174) | -15.98% | (82,231,335) | -14.45% |
| University of Maryland Charles Regional Medical Center | (25,974,289) | -16.54% | (23,205,308) | -14.78% |
| Shady Grove Adventist Hospital | (80,409,975) | -17.16% | (72,694,610) | -15.51% |
| Carroll Hospital Center | (43,340,017) | -18.33% | (39,378,130) | -16.65% |
| St. Agnes Hospital | (79,470,128) | -18.54% | (72,819,948) | -16.99% |
| Calvert Memorial Hospital | (28,334,791) | -18.55% | (25,913,790) | -16.96% |
| Harford Memorial Hospital | (20,921,342) | -19.33% | (19,139,779) | -17.68% |
| Washington Adventist Hospital | (59,172,716) | -19.66% | (54,248,865) | -18.02% |
| MedStar Southern Maryland Hospital Center | (56,211,837) | -20.06% | (52,037,452) | -18.57% |
| University of Maryland Shore Medical Center at Easton | (48,639,396) | -21.39% | (45,209,411) | -19.89% |
| University of Maryland Shore Medical Center at Dorchester | (10,003,063) | -21.66% | (9,267,430) | -20.07% |
| Northwest Hospital Center | (62,383,958) | -22.82% | (58,189,525) | -21.28% |
| University of Maryland Rehabilitation & Orthopaedic Institute | (29,418,804) | -23.07% | (27,783,412) | -21.79% |
| MedStar Good Samaritan Hospital | (64,340,168) | -23.71% | (60,194,601) | -22.18% |
| University of Maryland Medical Center Midtown Campus | (54,737,824) | -24.39% | (51,712,115) | -23.04% |
| Union Hospital of Cecil County | (42,919,589) | -25.47% | (40,377,887) | -23.96% |
| MedStar Montgomery Medical Center | (47,110,649) | -26.04% | (44,398,197) | -24.55% |
| University of Maryland Shore Medical Center at Chestertown | (17,877,317) | -33.72% | (17,183,046) | -32.41% |

[8] Results reflect removal of 2% Productivity Adjustment and differs from the Draft Recommendation because $54 million was removed from Sinai Hospital's ICC analysis to recognize the Bon Secours merger and its associated volume that had not yet occurred in the performance period.

## Future Policy Considerations

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

1) Short term - Staff is engaging an outside contractor to review the validity of its ICC peer groups to consider potential modifications and to also consider using a statewide regression analysis to account for additional cost variation that the peer groups ostensibly address, namely costs associated with teaching, urbanicity, and rurality, the latter of which is not currently addressed in the ICC. This task should be completed in January 2021 and can be accounted for in future full rate application recommendations.

2) Short term – Staff is also engaging an outside contractor to review the adequacy of current physician supply by specialty by region. This analysis will incorporate out-year demand projections, inclusive of Maryland's role as a net exporter of medical professionals, and will be used to determine the allowed residents in the ICC analysis. This task should be completed in January 2021 and can be accounted for in future full rate application recommendations.

3) Short term – Staff is also engaging in a process to review the benchmarking methodology with stakeholders in an effort to increase understanding and transparency of the methodology. Should any inconsistencies or inaccuracies be uncovered during this review, staff would make the appropriate changes and account for those changes in a future full rate application recommendation.

4) Medium term - 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. Completion of this task is contingent upon submission from Johns Hopkins Hospital and University of Maryland Medical Center, per the agreement put forward in the Innovation Policy and prior Update Factor recommendations. This task should be completed in the Summer of 2021.

5) Long term - 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 maintaining the total cost of care analyses and updating them each year with new data. Additionally, staff will explore developing Medicaid benchmark analyses, but it should be noted that data nationally on Medicaid total cost of care is far less robust than Medicare and commercial data.

## Stakeholder Comments

Staff received comment letters from four stakeholders and several verbal comments from Commissioners. Most comments were focused on the following topics and will be discussed together:

- TCOC Benchmarking (Appropriate Vetting, Proprietary Information, Value in Rate Review Process )
- Expanding scope of TCOC Improvement
- ICC Cost Allowances (Productivity Adjustment, Profits, Population Health Investments)
- Value of proposed rate application process
- Future Refinement

| Topic | Maryland Hospital Association | Johns Hopkins Health System | CareFirst | Luminis Health |
|---|---|---|---|---|
| Appropriate Vetting | The benchmarking logic is proposed in the efficiency policy, the full rate application policy, and the MPA. Though it is very technical, the decision to compare spending attributed to Maryland hospitals with non-Maryland hospitals is a major policy step. Historically, core methodologies of this magnitude would be vetted before the commission. | JHHS believes that the benchmarking methodology needs further evaluation by the hospital industry and Commissioners. | | |
| Proprietary Information | The ability to replicate methods and calculations, from start to finish, has always been a cornerstone of Maryland's rate setting system. The commercial benchmarking data is proprietary and much be purchased | | | |
| Value of TCOC Assessment | MHA appreciates HSCRC staff's intent to measure total spending per capita because it is a key incentive of the Model. They pledge to work with the staff as the COVID 19 surge concludes to review and refine the methodology. | JHHS believe that it is appropriate to have both a price efficiency component as well as a Total Cost of Care (TCOC) component included as part of the methodology | CareFirst supports the hybrid framework presented in this recommendation to implement a new full rate application process and methodology | It is not clear that the use of TCOC benchmarks fits directly with the full rate review process. The full rate review process is designed to address the adequacy of an applicant hospital's rate structure – if the rates are sufficient for an efficient and effective hospital to operate successfully. While the TCOC benchmarks are an important policy tool for managing the Model, they do not clearly address that fundamental question which is at the heart of the full rate review process. |

**Staff Response:** Staff recognized that the release of the final benchmarks was delayed as part of the slowdown due to the COVID crisis. However, the fundamental process has been discussed for almost 2 years and peer groups and preliminary results were released in late 2019. Peer groups have not changed,

and results were similar to those in the final version, which was released August 31st including extensive supporting data.

In the months since the data release, no specific technical issues have been raised, and the HSCRC did not receive any comments on peer groups or the approach used following data shared in late 2019. Staff would also note that due to the delay in Integrated Efficiency policy, per Commissioners' directive, across the board revenue adjustments based on this methodology will be made in July of 2021, giving hospitals sufficient time to understand the payment implications of the benchmarking.

In terms of proprietary information, driving to an analysis of all-payer TCOC requires use of a commercial data set. The source of the national commercial TCOC data is Milliman, who is an industry leader. The hospitals have free access to extensive detail behind the commercial benchmarks.

Finally, staff disagrees with the assertion in the Luminis letter that it is not clear if the use of TCOC benchmarks fits in with the full rate process and concurs with all other stakeholder letters that recognize the importance of assessing TCOC performance in a full rate application. Staff also notes that failure to evaluate TCOC performance during a full rate application in a TCOC Model, thereby solely focusing on hospital cost/price efficiency, could lead to a very undesirable cost outcome and potentially an incentive to increase hospital volume in order to improve cost per case efficiency.

**Staff Response:** Staff remains concerned about the reliability of TCOC improvement statistics to determine relative efficiency for the following reasons:

| Topic | Maryland Hospital Association |
|---|---|
| Greater Emphasis on TCOC Improvement | Given the uncertainty of comparing service area spend per capita in benchmarking methodology, HSCRC might consider expanding the inclusion of growth performance. Comparing spending per capita in different service areas is difficult without applying multiple adjustment factors to address different conditions. Comparing spending growth per capita assigned to a hospital, provided the assignment or service area is unchanged from the base, could be a more stable option. |

- Hospitals with smaller attributed TCOC dollars have very unstable growth statistics;
- Improvement fails to recognize the initial low cost of hospital service areas;
- Greater emphasis on improvement advantages hospitals with initial higher cost service areas that have greater opportunity to improve TCOC performance since 2014;
- Rewarding hospitals for TCOC improvement will already be recognized in TCOC attainment assessments; and
- Staff does not currently have the ability to account for commercial TCOC growth prior to the baseline year of 2017

Because of all these reasons and because staff has included a Medicare TCOC growth assessment into the full rate application methodology (downside risk only), staff believes the full rate application algorithm is correctly balanced

In the future staff will work to include commercial TCOC assessments in a similar fashion to the Medicare evaluation.

| Topic | Maryland Hospital Association | Johns Hopkins Health System | Luminis Health |
|---|---|---|---|
| Productivity Adjustment | | | The Commission's cost-less-productivity standard anticipated that a hospital would generate margins with expanded volume. In the era of global budgets, however, that avenue for generating margins is not available We would encourage the Commission to consider a standard that reflects the new realities of the global budget world, and consider an elimination of the 2% productivity adjustment. |
| Profit | Historically, HSCRC regulated prices, not revenue. When determining fair prices, 100% of regulated profit was removed from a hospital's cost base with the implicit understanding hospitals would retain marginal income from marginal volume growth. Beginning in 2014, volume growth incentives were replaced by lowering avoidable use to generate savings. Absent marginal volume growth, a small, reasonable margin must be included in the hospital's revenue base.. | Historically the ICC methodology has included both a productivity adjustment as well as a profit strip. These adjustments were both made when the system was still principally a fee-for-service based system. As we have now transitioned to a TCOC based system with a capped revenue model, these adjustments essentially set the hospital rates back to a breakeven amount, assuming the productivity can be achieved. We would request that staff consider adding back a reasonable level of profit to the hospital rates as part of the full rate setting methodology, consistent with the financial targets in the industry. | The Commission's cost-less-productivity standard anticipated that a hospital would generate margins with expanded volume. In the era of global budgets, however, that avenue for generating margins is not available. We would encourage the Commission to consider a standard that reflects the new realities of the global budget world, and consider an allowance for profits. |
| Population Health Investments | Maryland's Model has strong incentives to invest in services beyond those regulated by HSCRC. Hospitals must invest in population health initiatives, extensive care coordination, and services in the community. These activities are crucial to the success of the Model but are not regulated by HSCRC as hospital services. Removing all regulated profit in rate setting would render hospitals unable to reinvest in services beyond hospital walls and thus sustain both hospital savings and total cost of care savings. | | To meet the Model's goals, successful hospitals must invest in healthcare activities outside the hospital walls to prevent unnecessary hospital utilization and to improve population health. Yet these costs are not recognized in the ICC methodology. |

**Staff Response:** All three stakeholder comment letters on this subject requested adding back a level of profit to the ICC methodology to recognize that in the global budget system there is limited opportunity to generate a profit. Luminis also used this argument to support the elimination of the historical 2% productivity adjustment.

Staff notes that the statute does not require the Commission to establish hospital rates that guarantee profits, but rather a revenue structure that allows an effective and efficient hospital to operate on a solvent basis. Thus, staff does not support including an allotment for profits in the ICC methodology, as this would run counter to statute and would likely be arbitrary in nature.

Staff would also note that regulated hospital margins have increased by approximately 150% since the start of the All-Payer Model and total hospital margins have remained flat, because reducing avoidable utilization has replaced the margin generating practice of growing volume, albeit with greater variation in opportunity.

Staff does recognize, however, that hospitals are responsible for total cost of care under the Model and some investment is required to successfully contain costs and improve quality at hospital and non-hospital sites of care. Thus, staff recommends establishing an efficiency standard that does not include a 2% productivity adjustment to recognize those investments and the associated responsibilities that hospitals have under the TCOC Model. Staff recommends this serve as a temporary adjustment until additional reporting can be established to quantify:

- Physician costs intrinsic to the operation of acute care facility (as opposed to allowing all physician losses); and
- Population health investments.

| Topic | CareFirst | Luminis |
|---|---|---|
| Rate Application Process | CareFirst supports the flexibility provided in the recommendation to ensure that increases authorized under the methodology do not adversely impact the State's TCOC savings tests. CareFirst also believes that it is in the best interest of all stakeholders that the Total Cost of Care Model continues in Maryland and that staff's proposed rate application process is a prudent approach to ensure that approved rate increases do not negatively impact the TCOC goals. | The timing of increases from full reviews as discussed in the policy recommendation, seems to imply that the increases are difficult to manage and unpredictable. Under the general ICC formula, however, the staff should be able to predict the likely increases available to hospitals under the policy, and adjust annual update factors to reflect the likely increases from rate reviews each year. If a truly unexpected increase occurred, then the Commission could elect to phase in the revenue increase to protect TCOC growth under the Model's requirements as needed. This should be rare, however.<br><br>The recommendation also advocates voluntary agreements that would place time limits on hospitals in returning for further relief. A limit of 2 to 3 years for an additional request is arbitrary and may shut off relief for a hospital under unforeseen circumstances. |

**Staff Response:** Staff appreciates CareFirst's comments that the proposal for the rate application process is a prudent approach that ensures the policy does not negatively impact the TCOC goals of the Model.

While staff agrees with Luminis' general sentiment that rate increases will not be as unpredictable when a full rate application methodology is approved, staff notes that hospitals still have the ability to submit full rate applications with proposed revisions to their cost assessment, otherwise known as Phase 2 negotiations, and this can result in larger than anticipated rate increases that could imperil the Model's TCOC goals if not properly administered.

Staff appreciates Luminis' other comment that voluntary agreements between the Commission and hospitals arbitrarily limits how frequently a hospital may request a rate increase, but staff would note that:

- These agreements are mutually agreed upon;

- There are not many examples of unforeseen circumstances that would require more than one rate enhancement in a 2-3 year period and hospitals would not be prevented from requesting relief should such an event occur;
- Hospitals have historically agreed to these agreements when receiving rate enhancements; and
- Efficient hospitals can still avail themselves of the funding allotted in the Integrated Efficiency Policy.

**Staff Response:** Staff is committed to the constant review and refinement of HSCRC methodologies and welcomes the opportunity to collaborate with stakeholders to improve Commission policies. However, staff respectfully disagrees with the Luminis proposal that the Commission fund teaching costs for new residency programs equal to the highest class count in the fifth year of the teaching program, in line with CMS policy, because the policy fails to recognize the actual physician supply and demand in Maryland, both in total as well as by region and specialty, and may result in unnecessary specialty programs. In fact, The American Academy of Family Physicians notes that: "As an "entitlement" system an urban community with no GME can build a very large multihospital GME system with a high cap fully funded by Medicare. The specialty mix of that system may have nothing to do with state/local needs for physicians. This is happening particularly in urban communities with new medical schools."[9] Moreover, Maryland does not have the same physician or residency shortage issues that other states experience and therefore new residency slots are not prima facie required.[10] Because this assessment may not hold at the county level, staff is engaging a contractor

[9] https://www.aafp.org/dam/AAFP/documents/events/rps_pdw/handouts/res18-80-medicare-gme-payments-background-and-basics.pdf
[10] https://dfsnow.github.io/ama_viz/exploratory_plots.html; https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3951373/figure/F1/

| Topic | Maryland Hospital Association | Johns Hopkins Health System | CareFirst | Luminis |
|---|---|---|---|---|
| Future Refinement | The benchmarking methodology needs further assessment | JHHS support the continued refinement of the full rate setting methodology as set out in the Future Policy Considerations section of the recommendation and are committed to working with HSCRC staff and the industry to continue to improve the existing rate setting methodologies. JHHS believes 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. | CareFirst are very encouraged by the fact that Staff has been able to come forth with a reasonable approach to assessing hospital efficiency on both cost per case and TCOC, and acknowledge that change may be necessary over time to refine the methodology. | As a system with a newly established teaching program, Lumnis asks the Commission to consider alignment with CMS guidelines for new teaching programs. This approach would provide an established methodology to provide credit to the limited number of hospitals that could establish new teaching programs in the State. Under the methodology, the teaching program cap would be established after 5 years of initial operation. |

to examine physician supply and demand by specialty and will develop a separate recommendation on residency caps in 2021.

## Recommendations

1 Formally adopt policies described herein to assess cost per case efficiency and total cost of care efficiency to determine the rate structure for hospitals[11] should:
   a. A hospital request a full rate application; or
   b. HSCRC open a full rate review on a hospital;

2 Use the Inter-Hospital Cost Comparison, including its supporting methodologies to compare cost-per-case for the above evaluations;
   a. Removal of the 2 percent productivity adjustment is temporary and staff will report back to the Commission with a proposed substitute for that temporary removal no later than July of 2023.

3 Use Total Cost of Care measures with a geographic attribution to evaluate per capita cost performance for the above evaluations;

4 Allow staff to include in full rate application recommendations the following:
   a. Implementation date for global budget enhancement that considers and comports with the State's TCOC savings tests

[11] Total Cost of Care Assessments relative to attainment and growth standards performed by payer will be used to modify a hospital's cost per case efficiency analysis.

b. Staff will come forward with a recommendation with regard to a proposed change in COMAR 10.37.10.03 within 60 days.