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 any or all of the following staff draft recommendations that will be presented at the Commission May 9, 2018 Public Meeting:

1) Update Factor
2) Maryland Patient Safety Center
3) PAU Savings
4) Relative Value Units for Respiratory Therapy
5) Nurse Support Program II

WRITTEN COMMENTS ON THE AFOREMENTIONED STAFF DRAFT RECOMMENDATIONS ARE THE COMMISSION'S OFFICES ON OR BEFORE MAY 17, 2018 UNLESS OTHERWISE SPECIFIED IN THE RECOMMENDATION.

Health Services Cost Review Commission
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551st MEETING OF THE HEALTH SERVICES COST REVIEW COMMISSION
May 9, 2018

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 Contract and Modeling of the All-payer Model vis-a-vis the All-Payer Model Contract – Administration of Model Moving into Phase II - Authority General Provisions Article, §3-103 and §3-104**

PUBLIC SESSION
1:00 p.m.

1. **Review of the Minutes from the Public Meeting and Executive Session on April 11, 2018**

2. **New Model Monitoring**

3. **Docket Status – Cases Closed**

4. **Docket Status – Cases Open**

   2429R – Garrett Regional Medical Center **2432R – University of Maryland Medical Center**
   2435R – Baltimore Washington Medical Center **2436R – Calvert Health Medical Center**

5. **Recommendation for Revenue Increase for Johns Hopkins Hospital**

6. **Draft Recommendation on the Update Factor for FY 2019**

7. **Draft Recommendation on Continued Support of the Maryland Patient Safety Center for FY 2019**

8. **Draft Recommendation on PAU Savings for RY 2019**

9. **Draft Recommendation on Changes to the Relative Value Units Scale on Respiratory Therapy**

10. **Draft Recommendation for Nurse Support Program II**

11. **Policy Update Report and Discussion**

12. **Hearing and Meeting Schedule**

Additional Reports for Review

1. **Fiscal Year 2017 Community Benefits Report**

New Model Monitoring Report

The Report will be distributed during the Commission Meeting

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 MAY 2, 2018

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
2429R	Garrett Regional Medical Center	2/1/2018	7/3/2018	7/3/2018	Full Rate	GS	OPEN
2432R	University of Maryland Medical Center	3/19/2018	4/18/2018	8/16/2018	Cancer Clinics	GS	OPEN
2435R	Baltimore Washington Medical Center	4/17/2018	5/17/2018	9/14/2018	DEF/MSG	CK	OPEN
2436R	Calvert Health Medical Center	4/27/2018	5/27/2018	9/24/2018	PED/MSG	CK	OPEN

PROCEEDINGS REQUIRING COMMISSION ACTION - NOT ON OPEN DOCKET

NONE

IN RE: THE PARTIAL RATE	*****	**BEFORE THE HEALTH SERVICES**
APPLICATION OF THE	*****	**COST REVIEW COMMISSION**
UNIVERSITY OF MARYLAND	*****	**DOCKET: 2018**
BALTIMORE WASHINGTON	*****	**FOLIO: 2245**
MEDICAL CENTER	*****	
GLEN BURNIE, MARYLAND	*****	**PROCEEDING: 2435R**

Staff Recommendation

May 9, 2018

I. **Introduction**

On April 17, 2018, University of Maryland Baltimore Washington Medical Center (the "Hospital"), a member of the University of Maryland Medical System, submitted a partial rate application to the Commission pursuant to COMAR 10.37.10.03-1. The Hospital requests that its July 1, 2081 Definitive Observation (DEF) and Medical Surgical Acute (MSG) rates be combined effective July 1, 2018, utilizing FY 2019 approved volumes and revenues.

II. **Staff Evaluation**

This rate request is revenue neutral and will not result in any additional revenue for the Hospital as it only involves the combining of two revenue centers. The Hospital wishes to combine these two centers because the majority of the services provided relate to medical/surgical acute care versus definitive observation and will allow for a more efficient charging to all patients receiving the service; the patients have similar staffing needs; and the nursing-to-patient staffing ratios for both patient populations are very similar. The Hospital's currently approved rates are as follows:

	Current Rate	Budgeted Volume	Approved Revenue
Medical Surgical Acute	$1,117.50	32,057	$35,824,161
Definitive Observation	$1,168.16	31,474	$36,767,020
Combined Rate	$1,142.61	63,531	$72,591,181

III. **Recommendation**

After reviewing the Hospital's application, the staff recommends as follows:

1. That the Hospital be allowed to consolidate its DEF rate into its MSG rate effective July 1, 2018;

2. That FY 2019 approved volume and revenue will be utilized to calculate the combined rate; and

3. That no change be made to the Hospital's Global Budget Revenue.

HSCRC Report and Recommendations for Resolution of Rate Related Issues with The Johns Hopkins Hospital

May 9, 2018

Health Services Cost Review Commission
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I. OVERVIEW

This report provides recommendations for revenue adjustments and performance requirements for The Johns Hopkins Hospital (JHH) to address various issues that have been of concern to JHH and the HSCRC. The recommendations include a permanent adjustment to the JHH revenue base of $40 million in Rate Year 2018 and a further one percent intensity adjustment for Rate Year (RY) 2019. The recommendations also include the following related requirements to be placed on JHH: JHH must reduce its operating expenses by an amount equivalent to at least the amount of rate relief that is being provided by the Health Services Cost Review Commission (HSCRC) over the next three years; JHH must work with the HSCRC to develop Total Cost of Care benchmarks for the JHH primary service area; and JHH must enhance its efforts to achieve substantial reductions in potentially unnecessary and avoidable utilization and meet other requirements that are discussed in the remainder of these recommendations. As a key provision of these recommendations, JHH will not be permitted to request additional GBR modifications or to file a full rate review for three years as described below.

II. BACKGROUND

Over the past several years, JHH informed the HSCRC staff about the cost and service delivery challenges it faced, including some that are driven by its role as a nationally and internationally renowned academic medical center, which, it was contended, may not be sufficiently or appropriately recognized under its Global Budget. Although the HSCRC made multiple adjustments to JHH's Global Budget Revenue (GBR) agreement, including modifications for out-of-state patients, transplants, experimental cancer cases and drugs, JHH continued to believe that the GBR needed additional modifications to make it work for a major academic medical center such as JHH. In particular, JHH informed the HSCRC staff that it was facing significant difficulties in staff retention and recruitment in addition to cost control, especially in the area of high cost drugs and volume related cost increases, and that these factors and others have imposed significant financial strains on JHH.

At the same time, the Health Services Cost Review Commission (HSCRC) staff became increasingly concerned about multiple problems regarding the accuracy of JHH data submissions, the reliability of its charging practices, and its compliance with HSCRC rate orders and regulations. Despite numerous discussions, the JHH and HSCRC staffs were unable to satisfactorily resolve these data and charge issues.

The HSCRC has a statutory mandate to keep informed as to whether a hospital has sufficient resources to meets its reasonable financial requirements and to find solutions to any identified resource and solvency problems in the form of greater efficiency and/or modified rate levels.

In May 2017, the Commission, in consultation with the staff, Chairman Sabatini, and Commissioner Keane, entered into a Review Agreement with JHH that specified that JHH would work cooperatively with the HSCRC and an independent review entity to address data and charge practices and compliance issues, benchmark JHH's efficiency levels, and identify appropriate methodological changes that would address issues and concerns raised by JHH regarding the GBR model in ways consistent with the constraints of the All-Payer Model and the legitimate interests of other hospitals, purchasers, and consumers. The Commission also entered

into a "Supplement" to the Review Agreement that provided JHH with an approved $75 million of temporary rate relief in the form of a one-time, temporary, non-permanent rate adjustment that was referred to as an "advance with payback." This $75 million in rate relief was provided during Rate Year 2017 and was accompanied by a payback schedule. Specifically, JHH was required to pay back the rate adjustment through a rate reduction of $35 million by 12/31/2017; an additional payback of $25 million by 12/31/2018; and a final payback of $15 million by 12/31/2019 (for a total payback of $75 million).

Since July 2017, the HSCRC staff and Commissioner Keane have worked with the appointed independent review entity and senior JHH leaders to conduct a series of cost, revenue, volume and profitability analyses. The HSCRC staff has also conducted additional related analyses of revenues and costs, improved compliance monitoring, and has made additional changes to payment approaches for high cost drugs.

This report proposes a pathway to resolution of the various issues and concerns that have been described above.

III. INDEPENDENT REVIEW ANALYSIS AND FINDINGS

In July 2017, Navigant Consulting, Inc. was engaged by the HSCRC to conduct an independent review of data integrity, costs, revenue, productivity, and strategic financial and operational issues at JHH. This review took place over the course of the following eight months. The results of these analyses and changes are presented in this section of the report.

A. Key Findings of the Navigant Independent Review of JHH

The key findings include:

1. Data Reporting and Integrity

In its review of JHH's data integrity and reporting, Navigant did not find indications of structural data integrity issues at the rate center level. Navigant identified four key drivers of data reporting variances, including EPIC implementation code shifts, rate center reclassifications, volume shifts (some to unregulated settings), and the HSCRC's lack of standardization of units of service that capture volume levels within hospital departments such as clinics. This lack of standardization contributes to different volume reporting among hospitals.

Based on HSCRC input, Navigant did not address rate order compliance concerns. JHH and HSCRC staff have worked to iron out these difficulties during the past year through increased monitoring and communication.

Navigant recommended and the HSCRC staff agrees that communications between JHH and HSCRC staff should be improved to prevent future disagreements. In addition, the HSCRC staff will focus on standardizing units for services provided within hospital departments that have been a significant source of reporting issues. Standardization has already begun over the past two years, and it will need to expand to encompass clinics and other key outpatient services.

2. Revenue, Cost, and Financial Analysis

The Navigant review provided five key findings related to JHH's financial and cost performance:

- JHH's reported operating margins were higher than the national benchmark used by Navigant;
- After making several adjustments aimed at standardizing reporting for expenses such as pension costs and interest rate swaps, JHH's adjusted operating margins were lower than the national benchmark and were trending negatively;
- JHH's growth in revenues and expenses was below the national growth rate for academic medical centers;
- Expense trends outpaced revenue growth and resulted in margin deterioration;
- Navigant analyzed JHH's inpatient costs by comparing them, on an overall basis and by APR DRG, to the costs of a set of thirty-five academic medical centers that were mutually selected by JHH and the HSCRC. Navigant found, based on this analysis, that JHH has a "net" inpatient cost improvement opportunity of approximately $79 million per year, consisting of $129 million of APR DRGs where JHH costs were higher, net of $50 million where JHH costs were lower, relative to the costs of the national set of comparable hospitals. A regional comparison of seven of the thirty-five academic medical centers found that JHH was $15 million less costly on a net basis, consisting of $94 million of APR DRGs where JHH costs were higher, net of $109 million where JHH costs were lower. The comparisons were performed on both a "top down" basis, to compare the inpatient costs to the benchmarks, and they were also performed on a "bottom up" basis that involved detailed examinations at the APR DRG level to identify specific actionable cost improvement opportunities and the factors driving them. Navigant did not benchmark JHH's outpatient costs.
- While Navigant noted that JHH demonstrates many leading practices in care coordination, Navigant found that JHH's readiness for the Total Cost of Care Model will require additional prioritization and JHH investment including the building of risk stratification algorithms to identify patients who would benefit from additional supports, implementing interventions to support high needs patients, and increasing alignment with JHH's physicians to improve episodes and reduce unnecessary care. These are examples of the types of activities that will help JHH succeed under a Total Cost of Care Model.

In addition, Navigant provided two key findings relative to statewide and JHH revenues:

- Maryland's overall per capita hospital spend is in line with national norms, which indicates that there is sufficient overall hospital revenue in the statewide system.
- In a pro-forma fee-for-service analysis, Navigant re-priced JHH's volume and payer mix across the Metropolitan Statistical Areas occupied by the set of thirty-five academic medical centers that were used for the inpatient cost comparisons. Navigant determined that Medicare and Medicaid rates in Maryland, under the All-Payer model, are higher and commercial payment rates are lower than in the other markets. Navigant found that if JHH were to be reimbursed at the rates that exist for Medicare, Medicaid, and commercial payers in these other markets, JHH would receive less total revenue in most other markets. (As discussed in the Section 5.C. of this report, HSCRC needs to consider

Total Cost of Care per capita benchmarks as it moves to the future, and those benchmarks will vary from fee-for-service findings)..

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3. Volume Changes

Navigant examined the inpatient and volume increases that occurred at JHH during the FY 2014 – FY 2017 period. It found that JHH had inpatient volume increases over this period, which amounted to a compound annual growth rate of approximately 0.5 percent over the period. JHH also had outpatient increases, which amounted to a compound annual growth rate of approximately 2.5 percent over the same period. Inpatient and outpatient volume trends reflected a shift of lower acuity services from inpatient to outpatient settings at JHH. As discussed later in this report, JHH volume growth outpaced the overall growth rate for the Maryland hospitals during this timeframe.

B. Recommendations Made by Navigant

At the conclusion of its review, Navigant offered the following recommendations in its Summary report:

- JHH and the HSCRC should agree on permanent funding that is predictable and sufficient.
- JHH should commit to a multi-year cost reduction program. (HSCRC staff notes the significance of this recommendation in that it recognizes that JHH, like other hospitals, has cost reduction opportunities, and that by seizing on those opportunities, JHH can contribute directly to addressing its need for margin improvement and funding of innovation.)
- JHH should commit to fund additional innovation and population health programs in alignment with the Total Cost of Care All-Payer Model. Several examples of these types of investments are provided above.

IV. HSCRC STAFF ANALYSIS AND FINDINGS

A. HSCRC Staff Analysis of JHH Funding and Costs

In order to evaluate the changes in hospitals' operations since the inception of global revenue caps under the All-Payer Model, the HSCRC staff accumulated revenue, volumes, cost, uncompensated care, profitability data and other information from hospitals' annual cost reports from 2013 through 2017. The HSCRC staff compared JHH's performance to the performance of the rest of the hospitals in the State by evaluating the differences between the statewide and JHH performance in compounded annual growth rates of revenues and expenses from 2017 versus 2013.

In performing this analysis, the HSCRC staff looked at changes in direct patient care costs and overhead costs. Staff calculated differences in volume and cost changes for nursing intensive services and cost changes in outpatient services. Staff also looked at capital cost changes,

denials, uncompensated care, and other factors that affect regulated margins. The key findings from this analysis are summarized below. In the following findings, the reported compound annual growth rate (CAGR) is for the period from 2013 through 2017.

- JHH had an adjusted CAGR in gross revenue of 3.3 percent, while all other Maryland hospitals in the aggregate experienced a CAGR of 2.4 percent. This additional growth of 0.9 percent in gross revenue provided JHH with an additional growth of $83.7 million over the FY 2014 – FY 2017 period.
- During the same period, JHH's operating expenses grew at a CAGR of 3.6 percent, while all other hospitals in the aggregate experienced an operating expense CAGR of 2.4 percent. As a result of this 1.2 percent higher expense growth per year, JHH's expenses increased $91.8 million more over the period than they would have grown had its expenses grown at the statewide rate.
- The most significant factors that drove these different trends in revenue and expenses were the following:
    - There were increases in nursing costs associated with volume growth in inpatient and observation related services at JHH, while there was a decline in the level of those services in the aggregate at other hospitals statewide. This difference accounted for about $34.4 million or 37.5 percent (i.e., $34.4 million/$91.8 million) of the higher cost growth at JHH.
    - Drug and supply costs increased at a faster pace at JHH than at other hospitals in the State and accounted for an additional $35.8 million or 39.0% (i.e., $35.8 million/$91.8 million) of the cost increase.
- The higher revenue growth provided to JHH fell short of its cost growth by $8.1 million (i.e., $83.7 million - $91.8 million)).
- However, rising levels of revenue reductions contributed to a deteriorating margin at JHH on an absolute basis and relative to the statewide experience. The result was a reduction in the level of net revenue at JHH by $45.7 million over the FY 2014 – FY 2017 period. Approximately half of this $45.7 reduction was caused by increases in Medicaid payment denials, some of which were associated with the failure of JHH to obtain required pre-authorization approvals. The other half is attributable to changes in uncompensated care funding and to the levels of reported uncompensated care at JHH. Although most hospitals, including JHH, had declines in uncompensated care that resulted from the Medicaid and other beneficiary coverage expansions under the Affordable Care Act, the HSCRC made changes in its uncompensated care funding formula that affected JHH differently. Under the prior funding formula, JHH was funded above its actual level of uncompensated care, and this gap was reduced by the new formula. Additionally, JHH recorded uncompensated care increases in FY 2017 while hospitals statewide recorded continuing improvements in reducing uncompensated care.
- It is difficult, when evaluating the regulated operating margins of JHH and University of Maryland Medical Center, to evaluate performance compared to other hospitals. JHH and UMMC report nearly all of their physician costs as regulated costs, while most other hospitals report significant unregulated losses due to growing subsidies to physicians and other clinicians. Hospitals statewide reported a 7.3 percent CAGR in unregulated physician subsidies or costs, for a growth of $228 million or 1.8 percent of total net revenues. JHH reports that it generates operating profits from unregulated services

whereas most other hospitals report large unregulated losses. The difference in the reporting of physician subsidies accounts for a large portion of the difference when comparing regulated margins between JHH and other hospitals.

In summary, the negative $8.1 million gap between JHH's revenue and cost growth, and the increase in revenue deductions of $45.7 million, generated a degradation of $53.8 million in JHH's financial performance. In addition, when comparing margins between academic medical centers and other hospitals, JHH and University of Maryland Medical Center report physician costs are included in regulated operating costs, whereas other hospitals report physician subsidies as part of unregulated services.

V. ACTIONS UNDERTAKEN BY THE HSCRC TO ADDRESS ISSUES RAISED BY JHH

HSCRC is working to evaluate its policies and methodologies to address some of the concerns JHH has raised throughout this process. HSCRC has made modifications to drug funding that addressed some of JHH's concerns regarding the funding of certain outpatient drugs. Staff is also addressing some of the volume measurement concerns that have been raised.

A. Drug Cost Increases

During the last two years, the HSCRC staff has taken steps to address the concerns raised by JHH. In particular, the HSCRC staff made a presentation to the Commission regarding drug cost funding at the February 2018 Commission meeting. Significant changes have been made to address complaints registered by JHH (and some other hospitals) regarding underfunding of drugs, including reallocation of the Update Factor to account for differences in the levels of drugs among hospitals, and a volume adjustment for high-cost oncology and infusion drugs. These changes have generally reduced the differences between drug costs and funding levels although some cumulative discrepancies remain at specific hospitals. The HSCRC staff is continuing to evaluate outpatient drug costs and will update its report to the Commission at a future public meeting.

In order for these improved drug funding methods to be established, the quality of data submitted by hospitals regarding drugs will need to improve, and the charging approach used for drugs will need to change. The HSCRC staff will address these concerns and needs in an upcoming Commission meeting.

At the January Commission meeting, JHH and the University of Maryland Medical Center made a presentation regarding new and expensive inpatient therapies for cancer and spinal muscular atrophy. The HSCRC staff will address the proposed funding mechanism for these and other therapies applicable for JHH in this report. Staff is still working on a mechanism for UMMC.

B. Other Volume Measurement and Revenue Issues

Volume measurements, and related analyses, have been made more difficult by the large number of changes that have taken place since 2013, including the new All-Payer Model and global revenue caps, the expansion of Medicaid and changes in private insurance under the Affordable Care Act, the conversion from ICD-9 to ICD-10, the conversion of the billing and electronic medical records systems, and the shifts to unregulated settings, among other changes. JHH and other hospitals have raised concerns about the reliability of outpatient case-mix measurement and volume growth. The outpatient volume measurements are not new issues. The HSCRC has attempted to improve these calculations for more than a decade. With renewed effort and more expansive computing capabilities, HSCRC staff is prepared to work with the industry to improve these volume measures and charge structures.

1. Cycle-Billed Services

One of the most significant concerns raised by JHH and other hospitals is the measurement of volume for services that are billed on a "cycle-billed" basis (i.e., those services in which visits are billed together for a period of time instead of on a per visit basis). The HSCRC staff is working with a sub-group of the Inter-Hospital Cost Comparison Workgroup to address volume measurement problems with cycle-billed cases. The resolution of these problems will go a long way toward improving the ability to measure and monitor changes in outpatient volume levels and to compare costs among hospitals and with community based practices.

2. Clinic Services

Progress is being made in accurately measuring clinic volumes, and these improvements will permit more appropriate recognition of revenue needs and efficiency comparisons for these patients at JHH and at other hospitals.

3. Ambulatory Surgery, Extended Recovery Stays, Etc.

The shifts of inpatient surgical patients to the outpatient setting are resulting in increases in the complexity of outpatient surgical cases, their resource needs and their use of extended recovery stays. Currently, the volume and case-mix measurement tools available to the HSCRC may not fully capture these changes. This problem exists nationally, because the case-mix groupers that have been developed handle inpatient and outpatient cases differently. The Inter-hospital Cost Comparison subgroup discussed this concern at a recent meeting. A representative of 3M, the company that develops and maintains the inpatient and outpatient case-mix groupers used by HSCRC, reported that 3M is working on a combined grouper. While HSCRC cannot develop its own grouping approach, it can evaluate the charging mechanism for its existing Same Day Surgery revenue center. HSCRC staff will work with the Inter-hospital Cost Comparison subgroup to see if the Same Day Surgery revenue center can be adjusted to address some of the concerns, but a more comprehensive grouper solution will be needed to more comprehensively address this concern.

C. Policy Updates

In conjunction with the implementation of the Total Cost of Care Model, the HSCRC intends to refine and develop policies to achieve its goals. For example, new or modified policies will need to address how to measure efficiency in a per capita context, pay for better outcomes, take into account unnecessary and avoidable utilization, and evaluate costs across settings. Policies will need to address how to fund new technologies and population health activities, while also addressing the funding of population and demographic changes and shifts of services among providers.

While work is already underway to address these and other related volume measurement and policy issues raised by JHH and other hospitals, it will take some time to make the needed changes, and JHH will need to contribute to the work effort.

VI. RECOMMENDATIONS

The following recommendations are offered for consideration by the Commission to address the concerns raised and the analysis findings; (In this section Rate Year or "RY" refers to the period from July 1 through June 30)

1. JHH will receive a $40 million increase in its permanent revenue base for the year ending June 30, 2018. Prior to July 1, 2018, any Spinraza[1] or Car-T cases will be reimbursed at the actual cost of drugs and with a 50 percent variable factor applied to the volumes of services provided to these inpatients in conjunction with these treatments.

2. JHH will receive a one percent increase in its permanent revenues beginning July 1, 2018 (for RY 2019). This revenue will be used to fund increases in high cost inpatient drugs and procedures such as Spinraza and Car-T and other service intensity growth drivers that are concentrated or exclusively performed at major academic medical centers. (Note: This increase and a similar proposed intensity increase for University of Maryland Medical Center are shown as part of the RY 2019 draft update recommendation.) The funding provided during RY 2018 for Spinraza and CAR-T will not be added to the permanent revenue base of JHH.

3. JHH will be permitted to defer up to $15 million of the advance with payback that it received during Rate Year 2017 that was due to be repaid by June 30, 2018 so long as any deferment is repaid by December 31, 2018.

4. The independent review that was carried out by Navigant, with the assistance of JHH and the HSCRC, has shown that JHH has large opportunities to supplement the resources that are needed to fund the costs of new drugs, innovative therapies and other program developments, and to build its financial margins, by increasing its operational efficiency.

[1] Spinraza patients are frequently hospitalized and the HSCRC does not intend to provide additional payment for services already being provided for these patients. Any additional payment will be limited to the infusion treatments.

5. Continuation of the recommended increase of $40 million in the RY 2018 permanent rate base of JHH, and the recommended intensity adjustment will be subject to the following conditions:

    a. JHH will execute an agreement with HSCRC by June 30, 2018.

    b. The agreement will include the following terms and provisions:

        i. JHH will agree not to submit a rate application or requests for GBR modifications for three years (i.e., RY 2019, RY 2020 or RY 2021). If, after two years (RY 2019 and RY 2020) the HSCRC has not developed and implemented methodologies to fund new and emerging technologies at the academic medical centers consistent with the constraints imposed by the Total Cost of Care Model, then JHH will be permitted to file a rate request for those resources.

        ii. Each dollar of new funding provided to JHH by the HSCRC, including the proposed permanent base adjustment of $40 million, the partial pass through for high cost drugs and therapies applicable to RY 2018, and the supplemental one percent intensity adjustment to be provided to JHH for RY 2019, must be matched by JHH with independently verified cost reductions. The purpose of this requirement is to ensure that JHH's ability to meet the cost pressures of new drugs, technologies and other innovative programs, and its need to generate satisfactory margins, will be supported and enhanced not only by the permanent base adjustment, and the intensity adjustment, but also by increased efficiency levels. The agreement will provide additional specificity regarding the nature and timing of the cost reductions, the reporting requirements and the independent verification process. Initial reports will be due July 1, 2018 and JHH and the Commission will specify intervals of ongoing report submissions and verification processes.

        iii. JHH will work with the HSCRC and Medicaid staffs to develop Medicaid and Medicare Total Cost of Care targets for its East Baltimore primary service area. JHH and HSCRC will also prepare "well-managed" benchmarks for utilization and cost for this primary service area. JHH will be expected to make timely and substantial progress toward these benchmarks and to report its results in formats specified by the HSCRC.

        iv. JHH will track and flag data for the Commission to document the utilization, costs and revenue adjustments related to the partial pass through for Spinraza and CAR-T in FY 2018. JHH will also track and flag agreed upon data for the Commission related to the intensity adjustment. The data reported to the HSCRC will detail expenditures for new and expensive procedures and drugs unique to academic medical centers. Supplemental charge reporting for the applicable cases will include itemized billing information including the HCPCS and CPT codes

utilized to create the charges and the related HSCRC RVUs. The accuracy, reliability and comprehensiveness of the data reported for these services and the associated itemized bills will be subject to a special procedures audit.

v. There will be periodic meetings between JHH leadership and board representatives and Commissioners and HSCRC staff.

vi. JHH must submit regular reports on financial performance, cost reductions, unnecessary and avoidable use reductions, and services shifted to unregulated settings, as specified by the HSCRC.

vii. JHH will work with the HSCRC to make appropriate global revenue cap adjustments for services shifted to unregulated settings. In particular, JHH will work with the HSCRC staff to determine the adjustments to the JHH global revenue cap that should be made related to and in advance of the opening of the new JHH Ambulatory Surgery facility at Greenspring Station, the movement of outpatient drugs to unregulated settings, and other relocation of services to unregulated settings.

Draft Recommendations on the Update Factors for FY 2019

May 9, 2018

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This document reflects the Draft Recommendation on the Update Factors for FY 2019. Please send all written comments to hscrc.payment@maryland.gov no later than May 25, 2018.

Table of Contents

LIST OF ABBREVIATIONS

ACA	Affordable Care Act
ACO	Accountable Care Organization
CAGR	Compound Annual Growth Rate
CMS	Centers for Medicare & Medicaid Services
CY	Calendar year
DBM	Department of Budget Management
DSH	Disproportionate Share Hospital
FFS	Fee-for-service
FFY	Federal fiscal year, refers to the period of October 1 through September 30
FY	Fiscal year
GBR	Global budget revenue
HSCRC	Health Services Cost Review Commission
MACRA	Medicare Access and CHIP Reauthorization Act
MHA	The Maryland Hospital Association
PAU	Potentially avoidable utilization
QBR	Quality Based Reimbursement
RY	Rate year, which is July1 through June 30 of each year
UCC	Uncompensated care

INTRODUCTION AND BACKGROUND

The Maryland Health Services Cost Review Commission (HSCRC or Commission) has been setting hospital payment rates for all payers since 1977. As part of this process, the HSCRC updates hospitals' rates and approved revenues on July 1 of each year to account for factors such as inflation, policy related adjustments, other adjustments related to performance, and settlements from the prior year.

On January 1, 2014, the Centers for Medicare & Medicaid Services (CMS) approved the implementation of a new All-Payer Model in Maryland. The All-Payer Model aims to promote better care, better health, and lower costs for all Maryland patients. In contrast to Maryland's previous Medicare waiver that focused on controlling increases in Medicare inpatient payments per case, the All-Payer Model (Model) focuses on controlling increases in total hospital revenue per capita. The Model established a cumulative annual limit on per capita revenue growth of 3.58 percent and a Medicare savings target of $330 million over the initial five-year period of the Model.

In order to meet the requirements of the All-Payer Model and assure that the annual update will not result in a revenue increase beyond the 3.58 percent limit, the update process needs to account for all sources of hospital revenue that will contribute to the growth of total Maryland hospital revenues for Maryland residents. In addition, the HSCRC needs to consider the effects of the update on the Model's $330 million Medicare savings requirement and the total hospital revenue that is set at risk for quality-based programs. While rates and global budgets are approved on a fiscal year basis, the All-Payer Model revenue limits and Medicare savings are determined on a calendar year basis. Therefore, the HSCRC must account for both calendar year and fiscal year revenues in establishing the updates for the fiscal year.

It is important to note that the proposed update incorporates both price and volume adjustments for revenues under global budgets. Thus, the proposed update should not be compared to a rate update that does not control for volume changes. It is also important to view the revenue updates in the framework of gross and net revenue. Specially, beginning in calendar year 2014, the expansion of Medicaid and other Affordable Care Act enrollment has reduced uncompensated care and the State has reduced several related hospital assessments. The revenue reductions for uncompensated care and associated assessment reductions implemented by HSCRC decrease gross revenues, but they do not decrease net revenues. Therefore, the net revenue increases are higher than gross revenue increases during these periods.

For rate year (RY) 2019, there are two categories of hospital revenue:

1. Hospitals under Global Budget Revenues, which are under the HSCRC's full rate-setting authority.

2. Hospital revenues for which the HSCRC sets the rates paid by non-governmental payers and purchasers, but where CMS has not waived Medicare's rate-setting authority to

Maryland and thus Medicare does not pay on the basis of those rates. This includes psychiatric hospitals and Mount Washington Pediatric Hospital.

The purpose of this report is to present analyses and make recommendations for the update factors for RY 2019 for global revenues and non-global revenues.

ASSESSMENT

Overview of Preliminary Update Factors Recommendations

As described in detail below, for RY 2019, HSCRC staff is proposing a preliminary update of 1.82 percent per capita for global revenues and a preliminary update of 1.77 percent for non-global revenues.

Calculation of the Inflation/Trend Adjustment for Global and Non-Global Revenues

The calculation of the inflation/trend adjustment Global Revenues and Non-Global Revenues, including psychiatric hospitals and Mt. Washington Pediatrics, starts by using the gross blended statistic of 2.57 percent growth[1], which was derived from combining 91.20 percent of Global Insight's Fourth Quarter 2017 market basket growth of 2.70 percent with 8.80 percent of the capital growth estimate of 1.20 percent, which calculates to 2.57 percent. The proposed inflation/trend adjustment follows:

Table 1. RY 2019 Proposed Inflation/Trend Adjustment

	Global Revenues	Psych & Mt. Washington
Proposed Base Update (Gross Inflation)	2.57%	2.57%
Productivity Adjustment		-0.80%
Proposed Update	2.57%	1.77%

For psychiatric hospitals and Mt. Washington Pediatric Hospital, staff proposes using a productivity adjustment of 0.80 percent. This results in a proposed update of 1.77 percent. The proposed rule for FY 2019 Inpatient Psychiatric Facilities applies a 0.80 percent reduction for productivity and a 0.75 percent reduction for ACA savings mandate to a market basket update of 2.80 percent resulting in a proposed payment update of 1.25 percent. Additionally, these hospitals get a volume adjustment, rather than a population adjustment. HSCRC staff is currently working on implementing quality measures for these hospitals for future rate years.

[1] Any inflation increase published in Global Insights 2018 First Quarter data will have a forecasting error applied.

Summary of Other Policies Impacting RY 2019 Revenues

The inflation/trend adjustment is just one component of the adjustments to hospital global budgets for RY 2019. In considering the system-wide update for the hospital global budgets under the All-Payer Model, HSCRC staff sought to achieve balance among the following conditions: 1) meeting the requirements of the All-Payer Model agreement; 2) providing hospitals with the necessary resources to keep pace with changes in inflation and demographic changes; 3) ensuring that hospitals have adequate resources to invest in the care coordination and population health strategies necessary for long-term success under the All-Payer Model; and 4) incorporating quality performance programs.

Table 2 summarizes the net impact of the HSCRC staff's current proposals for inflation, volume, Potentially Avoidable Utilization (PAU) savings, uncompensated care, and other adjustments on global revenues. The proposed adjustments provide for an estimated net revenue growth of 2.81 percent and per capita growth of 2.33 percent for RY 2019, before accounting for reductions in UCC and assessments. After accounting for those factors, the revenue growth is estimated at 2.29 percent with a corresponding per capita growth of 1.82 percent for RY 2019. Descriptions of each step and the associated policy considerations are explained in the text following the table:

Table 2. Net Impact of Adjustments on Hospital Global Revenues, RY 2019

Balanced Update Model for Discussion			
Components of Revenue Change Linked to Hospital Cost Drivers/Performance			
			Weighted Allowance
Adjustment for Inflation (this includes 2.4% for wages)			2.33%
- Total Drug Cost Inflation for All Hospitals*			0.24%
Gross Inflation Allowance	**A**		**2.57%**
Care Coordination			
-Rising Risk With Community Based Providers			
-Complex Patients With Regional Partnerships & Community Partners			
-Long Term Care & Post Acute			
	B		
Adjustment for volume	**C**		**0.46%**
-Demographic Adjustment (0.46%)			
-Transfers			
-Drug Population/Utilization			
Other adjustments (positive and negative)			
- Set Aside for Unknown Adjustments	D		0.25%
- Categoricals (net amount for Hopkins/UMMS: 0.23%)	E		0.23%
Net Other Adjustments	**F =**	**Sum of D thru E**	**0.48%**
-Reversal of one-time adjustments for drugs	G		0.00%
-Reverse prior year's PAU savings reduction	H		1.45%
-PAU Savings	I		-1.75%
-Reversal of prior year quality incentives -QBR, MHAC, Readmissions	J		-0.25%
-Positive incentives & Negative scaling adjustments	K		-0.15%
Adjustments in Second Half of Fiscal Year 19	L		
-QBR, Oncology Drug Adjustment			
Net Quality and PAU Savings	**M =**	**Sum of G thru L**	**-0.70%**
Net increase attributable to hospitals	N =	Sum of A + B + C + F + M	**2.81%**
Per Capita	O =	(1+N)/(1+0.46%)	**2.33%**
Components of Revenue Offsets with Neutral Impact on Hospital Finanical Statements			
-Uncompensated care reduction, net of differential	P		-0.32%
-Deficit Assessment	Q		-0.19%
Net decreases	**R =**	**P+ Q**	**-0.51%**
Revenue growth, net of offsets	S=	M + Q	**2.29%**
Per capita revenue growth	T =	(1+S)/(1+0.46%)	**1.82%**

* Provided Based on proportion of drug cost to total cost (drug index 4.5% X 5.4% national weight)

Beginning in RY 2017, the HSCRC split the approved revenue for the year into two targets, a mid-year target and a year-end target. Through this process, the HSCRC deferred a portion of the update from one calendar year to the next. This deferral was meant to address a particularly low federal Medicare update for FFY 2017, and also better matched the historic volume patterns incurred by hospitals, with higher volumes through the winter months of January through March. Because this revenue split matched historical volumes better, the HSCRC staff plans to continue this split. The staff will apply 49.73 percent of the Total Approved Revenue to determine the mid-year target and the remainder of revenue will be applied to the year-end target. Of note, there are a few hospitals that do not follow this seasonal pattern, particularly Atlantic General Hospital. Thus, HSCRC staff will adjust the revenue split to accommodate their normal seasonality.

Central Components of Revenue Change Linked to Hospital Cost Drivers/Performance

HSCRC staff accounted for a number of factors that are central provisions to the update process and are linked to hospital costs and performance. These include:

- **Adjustment for Inflation:** As described above the inflation factor uses the gross blended statistic of 2.57 percent. The gross inflation allowance is calculated using Fourth Quarter 2017 market basket growth of 2.70 percent with 8.80 percent of the capital growth estimate of 1.20 percent. A portion of the 2.57 inflation allowance (0.24 percent) will be allocated to hospitals based on each hospital's proportion of drug costs to total costs to more accurately provide revenues for increases in drug prices.
- **Adjustments for Volume**: Staff proposes a 0.46 percent adjustment that is equal to the Maryland Department of Planning's estimate of population growth for CY 2018[2]. Hospital-specific adjustments will vary based on changes in the demographics of each hospital's service area. In the past, a portion of the adjustment was set aside to account for growth in highly specialized services at Johns Hopkins Hospital (JHH) and University of Maryland Medical Center (UMMC). Several workgroup members suggested that these increases be funded through avoidable utilization reductions rather than the demographic adjustment. For RY 2019, the staff is proposing to recognize the full value of the 0.46 percent growth for the demographic adjustment to hospitals and to account for the cost of categoricals separately in the formulation of the revenue increase. The demographic adjustment has been criticized for providing revenue increases to hospitals that are experiencing volume decreases. The HSCRC staff are working to analyze alternative approaches, but the analysis will take time and require stakeholder and Commissioner input. There is a need for improved outpatient volume measures for cycle billed services as well as expanded measures for avoidable and unnecessary utilization. The HSCRC staff are actively working on improving outpatient volume measures. HSCRC staff has also identified a need for better drug case-mix data submissions from hospitals to improve the accuracy in recognizing

[2] See http://planning.maryland.gov/msdc/.

volume changes of drugs utilized. These core improvements in measurement are building blocks that are required to improve policy analysis and changes in the demographic adjustment as well as improving efficiency comparisons among hospitals and to other delivery settings. Also, with ICD-10 conversion and electronic medical record conversions mostly complete, case-mix and volume measurement should become more stable.

- **Rising Cost of New Outpatient Drugs**: The rising cost of drugs, particularly of new physician-administered drugs in the outpatient setting, continues to be a growing concern among hospitals, payers, and consumers. Not all hospitals provide these services and some hospitals have a much larger proportion of costs devoted to these services. To address this situation, staff recommends earmarking 0.24 percent of the inflation allowance to fund increases in the cost of drugs and provide this allowance based on the portion of total hospital costs that were comprised of drug costs in FY 2017.

  In RY 2017, HSCRC initiated a volume adjustment for growth in high cost oncology drugs. The adjustment for growth between RY 2015 and RY 2016 was made utilizing information provided in a supplemental report provided by the hospitals for the top 80 percent of these outpatient medications. Half of the estimated cost changes due to volume were recognized as a one-time adjustment and half were recognized as a permanent adjustment. On July 1, hospitals were provided a prospective estimate to account for potential volume changes in RY 2017 over RY 2016 while awaiting the supplemental reporting results. A true up of the estimate is underway based on the supplemental reports provided by hospitals.

  For RY 2019, staff plans to eliminate the prospective volume estimate for these high cost drug volumes, as a result of its experience in adjusting the estimates to the actual reports. Staff is also proposing to accelerate the due date for the supplemental drug report and it is meeting with industry representatives and experts to evaluate the potential for just-in-time adjustments for emerging drugs. As a result, staff will make the outpatient high-cost drug volume adjustment for RY 2018 over RY 2017 at the mid-year.

  In the current update recommendation, there is no allowance for growth in high cost outpatient drugs. However, industry briefs suggest that there will be substantial increases in RY 2019. After additional consultations, staff will provide an allowance in the second half of RY 2019 for increases in costs related to net volume growth of high cost oncology medications for RY 2018 over RY 2017, as well as a potential adjustment for emerging medications, if warranted. Staff will provide further updates to the Commission on these matters at the June commission meeting. (For further discussion, see Supplemental Report Information).

- **Categoricals:** At the January commission meeting, JHH and UMMC made a presentation regarding new and expensive inpatient therapies for cancer and spinal

muscular atrophy. The HSCRC staff has been working to develop an approach to provide a revenue adjustment for these expensive therapies together with adjustments for existing categorical cases (transplants, cancer research cases). HSCRC staff has been provided a wide range of potential volume estimates for these services. To create a fixed pool of funds for these services, staff has proposed a set aside of a one percent revenue adjustment for these two academic medical centers for RY 2019. While this adjustment will increase the permanent base revenue of these two institutions for RY 2019 and beyond, the Commission will need to deliberate how to fund these types of services in the future. This approach applies only to RY 2019, and there are certain conditions that must be met to receive this funding. Staff has proposed a set of conditions for JHH, which are presented in a separate report. Discussions with UMMC are still underway.

- **QBR Adjustment:** Because the Quality Based Reimbursement (QBR) adjustment data comes from CMS, there is a delay in the calculation of this adjustment. This adjustment is expected to be negative, based on the changes in Commission policy and preliminary modeling. The HSCRC staff will provide an estimate of this adjustment, which will be made in the second half of Rate Year 2019, at the June meeting, along with an estimated drug adjustment.
- **Set-Aside for Unforeseen Adjustments**: Staff recommends a 0.25 percent set-aside to fund unforeseen adjustments during the year. This figure is reduced from the amount provided in RY 2015 through RY 2017. Although this adjustment was fully utilized in RY 2018, staff's estimate of the high cost drug volume adjustment was excessive and, as a result, revenue growth is expect to be lower. As a reminder, in its final regulations, CMS lowered its update by approximately 0.60 percent for the federal fiscal year that began in October 2017 relative to its initial proposal. HSCRC did not lower hospitals' revenue budgets when this occurred. Fortunately, drug volume increases came in lower and, as a result, helped to offset the lower federal inflation provision.
- **Reversal of the Prior Year's PAU Savings Reduction and Quality Incentives**: The total RY 2018 PAU savings and quality adjustments are restored to the base for RY 2019, with new adjustments to reflect the PAU savings reduction and quality incentives for RY 2018.
- **PAU Savings Reduction and Quality Scaling Adjustments**: The RY 2019 PAU savings will be continued, and an additional 0.30 percent savings is modeled for RY 2019. Staff have provided preliminary estimates for both positive and negative quality incentive programs.

Central Components of Revenue Offsets with Neutral Impact on Hospital Financial Statements

In addition to the central provisions that are linked to hospital costs and performance, HSCRC staff also considered revenue offsets with neutral impact on hospital financial statements. These include:

- **Uncompensated Care (UCC) Reductions**: The proposed uncompensated care reduction for FY 2019 will be -0.32 percent. The amount in rates was 4.51 percent in RY 2018, and the proposed amount for RY 2019 is 4.19 percent.
- **Deficit Assessment**: The legislature reduced the deficit assessment by 30 million dollars in RY 2019, as a result, this line item is -0.19 percent.

Additional Revenue Variables

In addition to these central provisions, there are additional variables that the HSCRC considers, as mentioned in Table 2. These additional variables include one-time adjustments, as well as revenue and rate compliance adjustments and price leveling of revenue adjustments to account for annualization of rate and revenue changes made in the prior year.

Shifts to Unregulated

A growing focus continues to be on total cost of care. Hospitals must notify the HSCRC in writing when services are moved to unregulated settings at least 30 days in advance, or at the earliest time thereafter. In addition to notifying the HSCRC in advance, hospitals must submit annual disclosures (Appendix F & G to the GBR Agreement) regarding changes in provided services within their service areas. These disclosures are due 30 days after the end of each fiscal year. Global budgets must be adjusted for shifts from regulated to unregulated settings to prevent double payment for the services and dis-savings. Adjustments related to shifts, whether to related or unrelated entities, must be made in a timely manner. In order to ensure better reporting and facilitate disclosure, staff is proposing to withhold 0.50 percent of a hospital's total update if the hospital fails to submit a properly executed disclosure.

Consideration of All-Payer Model Agreement Requirements

As described above, the staff proposal increases the resources available to hospitals to account for rising inflation, population changes, and other factors, while providing adjustments for performance under quality programs. Additionally, based on the staff calculations to date, the proposed update falls within the financial parameters of the All-Payer Model agreement requirements. The staff's considerations in regards to the All-Payer Model agreement requirements are described in detail below.

All-Payer Financial Test

The proposed balanced update keeps Maryland within the constraints of the Model's all-payer revenue test. Maryland's agreement with CMS limits the annual growth rate for all-payer per capita revenues for Maryland residents at 3.58 percent. Compliance with this test is measured by comparing the cumulative growth in revenues from the CY 2013 base period to a ceiling calculated assuming an annual per capita growth of 3.58 percent. To evaluate the impact of the recommended update factor on the State's compliance with the all-payer revenue test, staff calculated the maximum cumulative growth that is allowable through the end of CY 2019. As shown in Table 3, cumulative growth of 23.50 percent is permitted through CY 2019.

Table 3. Calculation of the Cumulative Allowable Growth in All-Payer per Capita Revenue for Maryland Residents

	CY 2014 A	CY 2015 B	CY 2016 C	CY 2017 D	CY 2018 E	CY 2019 F	Cumulative Growth G = (1+A)*(1+B)*(1+C)*(1+D)*(1+E)*(1+F)
Calculation of Revenue Cap	3.58%	3.58%	3.58%	3.58%	3.58%	3.58%	23.50%

Table 4 below shows the allowed all-payer growth in gross revenues. Staff has removed adjustments due to reductions in uncompensated care (UCC) and assessments that do not affect the hospitals' bottom lines. Staff projects that the actual cumulative growth, excluding changes in uncompensated care and assessments, through FY 2019 is 18.07 percent. The actual and proposed revenue growth is well below the maximum levels.

Table 4. Evaluation of the Proposed Update's Projected Growth and Compliance with the All-Payer Gross Revenue Test

	CY 2014 A	CY 2015 B	CY 2016 C	CY 2017 D	CY 2018 E	CY 2019 F	Cumulative Growth G = (1+A)*(1+B)*(1+C)*(1+D)*(1+E)*(1+F)
Maximum Gross Revenue Growth Allowance	**2.13%**	**4.21%**	**4.06%**	**3.95%**	**4.06%**	**4.06%**	**24.66%**
Revenue Growth for Period	0.90%	2.51%	2.47%	2.20%	2.62%	2.29%	13.71%
Savings from UCC & Assessment Declines that do not Adversely Impact Hospital Bottom Line		1.09%	1.40%	0.69%	0.18%	0.51%	3.93%
Revenue Growth with UCC & Assessment Savings Removed	0.90%	3.60%	3.87%	2.89%	2.80%	2.81%	**18.07%**
Revenue Difference from Growth Limit							**6.59%**

"Maximum Gross Revenue Growth Allowance" includes the following population estimates: FY17/CY16 = 0.36%; FY18/CY17 = 0.46%

Medicare Financial Test

The proposed balanced update also keeps Maryland within the constraints of the Model's Medicare savings test. This second test requires the Model to generate $330 million in Medicare fee-for-service (FFS) savings in hospital expenditures over five years. The savings for the five-year period were calculated assuming that Medicare FFS hospital costs per Maryland beneficiary would grow about 0.50 percent per year slower than the Medicare FFS costs per beneficiary nationally after the first performance year (CY 2014).

Performance years one through three (CY 2014, CY 2015, and CY 2016) of the Model generated approximately $586 million in Medicare savings. Performance year four (CY 2017) savings have not yet been audited, but current staff projections show an estimated savings of $330 million, bringing the four-year cumulative savings to over $916 million. Under these calculations, the cumulative savings are ahead of the required savings of $330 million.

However, there continues to be a shift toward greater utilization of non-hospital services in the state, relative to national rates of growth. When calculating savings relative to total cost of care, the four-year (CY 2014-CY2017) cumulative savings estimate is $599 million, still well above the required savings level. Maryland's All-Payer Model Agreement with CMS contains requirements relative to the total cost of care, which includes non-hospital cost increases. The purpose is to ensure that cost increases outside of the hospital setting do not undermine the Medicare hospital savings that result from the Model implementation. If Maryland exceeds the national total cost of care growth rate by more than 1.00 percent in any year, or exceeds the national total cost of care growth rate in two consecutive years, Maryland is required to provide an explanation of the increase and potentially provide steps for corrective action.

While cumulative savings are above the required level, staff has estimated that the year over year total cost of care growth is above the national growth rate for Medicare for CY 2017 over CY 2016. This annual excess growth was caused by increases in Maryland's non-hospital Part B services, which were not offset by sufficient hospital savings. As a result, Maryland must set out ensure that growth does not exceed the national Total Cost of Care growth for Medicare in CY 2018.

A commitment to continue the success of the first four years is critical to building long-term support for Maryland's Model. At this point, staff recommends maintaining the goal used in the RYs 2015, 2016, 2017 and 2018 updates; for RY 2019 account for growth of Maryland hospital costs per beneficiary at 0.50 percent slower than the nation. Attainment of this goal will help achieve total cost of care savings, as well as provide evidence of the Model's continued success. However, this goal must be balanced with the overall goals of the update.

Consideration of National Cost Figures

Medicare's Proposed National Rate Update for FFY 2019

CMS published proposed updates to the federal Medicare inpatient rates for FFY 2019 in the Federal Register in late-April 2018.[3] These updates are summarized in the table below. These updates will not be finalized for several months and are subject to change. In the proposed rule, CMS would increase rates by approximately 3.05 percent in FFY 2019 compared to FFY 2018, after accounting for inflation, a disproportionate share increase, and other adjustments required by law. The proposed rule includes an initial market basket update of 2.80 percent for those hospitals that were meaningful users of electronic health records and for those hospitals that submitted data on quality measures, less a productivity cut of 0.80 percent and an additional market basket cut of 0.75 percent, as mandated by the Affordable Care Act (ACA). This proposed update also reflects a proposed 0.50 percentage point increase for documentation and coding required by the American Taxpayer Relief Act of 2012. Disproportionate share payment changes resulted in an increase of approximately 1.30 percent from FFY 2018.

Table 5. Medicare's Proposed Rate Updates for FFY 2019

	Inpatient	Outpatient
Base Update		
Market Basket	2.80%	2.80%
Productivity	-0.80%	-0.80%
ACA	-0.75%	-0.75%
Coding	0.50%	
	1.75%	1.25%
Other Changes		
DSH	1.30%	0.00%
Outlier Adjustment	0.00%	0.00%
	1.30%	0.00%
	3.05%	1.25%

Applying the inpatient assumptions about market basket, productivity, and mandatory ACA outpatient savings, staff estimates a 1.30 percent Medicare outpatient update effective January

[3] See httpshttps://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/AcuteInpatientPPS/FY2019-IPPS-Proposed-Rule-Home-Page.html.

2019. This estimate is pending any adjustments that may be made when the final update to the federal Medicare outpatient rates is published.

Meeting Medicare Savings Requirements and Total Cost of Care Guardrails

For the past four updates, Maryland obtained calendar year Medicare fee-for-service growth estimates from the CMS Office of the Actuary. Staff then compared Medicare growth estimates to the all-payer spending limits. During CY 2014-CY 2017, all-payer growth outpaced Medicare growth on a per capita basis and in the updates staff adjusted the all-payer growth limit using the difference in Medicare and all-payer per capita growth to estimate the implied limit for Medicare. Staff also incorporated a targeted Medicare savings of 0.50 percent in hospital payment growth relative to the national growth rate, designed to provide at least $330 million in cumulative savings over a five-year period. According to the CMS Office of the Actuary, the projected national Medicare fee-for-service per capita hospital spending will increase by 2.10 percent in CY 2018 and by 2.00 percent for total cost of care (Parts A and B). The updates provided by the Office of the Actuary did not include a provision for DSH in the amount of 1.30 percent that is included in the federal update and begins on October 1. Due the federal update beginning with three months left in the calendar year, staff has added 25 percent of the DSH cost to the CY 2018 projections. This was calculated by taking 25 percent of the 1.30 percent and multiplying that by the inpatient percentage of total hospital payments, approximately 71 percent. This calculation results in a revised increase of 2.32 percent for hospital spending. Staff also calculated a revised increase for total cost of care by taking the 0.23 percent increase from the hospital projection and multiplying that by the hospital percentage of total cost of care of approximately 50 percent. This calculation produced a 0.12 percent increase which was added to the total cost of care projection resulting in a revised estimate of 2.13 percent. These revised spending projections were used by staff to estimate desired CY 2018 Medicare savings (Table 6A and 6B).

For the purposes of evaluating the maximum all-payer spending growth that will allow Maryland to meet the per capita Medicare FFS target, the Medicare target must be translated to an all-payer growth limit. There are several ways to calculate the difference between Medicare FFS and all-payer growth rates using recent data trends. A consultant to CareFirst developed a “conservative difference statistic’ that reflected the historical increase in Medicare per capita spending in Maryland relative to all-payer per capita spending growth. CareFirst has updated this statistic each year using data provided by HSCRC staff. For the FY 2019 update CareFirst and HSCRC staff calculated a difference of 0.86 percent, which used a four-year average difference between Maryland Medicare and all-payer claims reduced by the average annual absolute variance.

A feature of the current hospital Model that will continue in the Total Cost of Care All-Payer Model is that Maryland Medicare total cost of care cannot exceed national Medicare total cost of care growth by 1 percent in any single year and cannot exceed the one percent limit in two consecutive years; these are known as “total cost of care guardrails.” Maryland is projected to be above Medicare national growth in CY 2017. In an effort to ensure Maryland that does not exceed the national Medicare growth rate in CY 2018, staff is proposing an adjustment for non-hospital excess growth. This will assess Medicare growth in unregulated settings and factor this

excess growth into allowable hospital rate increases for RY 2019. This is calculated by taking a four-year average of non-hospital excess costs for Medicare Parts A and B and converting that amount to an all-payer figure. This adjustment will be offset against the difference statistic seen below in Tables 6A and 6B.

Staff calculated two different scenarios, using the conservative difference statistic and non-hospital excess cost growth calculations, to evaluate how the Maryland RY 2019 all-payer update factor will affect the State's ability to stay within the total cost of care guardrail. Under the first scenario (Table 6A), the maximum all-payer per capita growth rate that will allow the State to realize a 0.50 percent FY 2019 Medicare savings is 2.67 percent. The second scenario (Table 6B) shows a maximum all-payer per capita growth rate of 3.17 percent and does not build in the savings goal for 0.50 percent. Both scenarios are pictured below. The expected calendar year growth for CY 2018 of 2.69 percent is represented in the below tables as well as any potential savings associated with this growth.

Table 6A. Scenario 1 Maximum All-Payer Increase that will still produce the Desired FY 2019 Medicare Savings

Maximum Increase that Can Produce Medicare Savings				
Medicare				
Medicare Growth (CY 2018 2.32%)	A	2.32%		
Savings Goal for FY 2019	B	-0.50%		
Maximum growth rate that will achieve savings (A+B)	C	1.82%		
Conversion to All-Payer				
Actual statistic between Medicare and All-Payer		0.86%	**Recommendation:**	**Savings:**
Excess Growth for Non-Hospital Cost Relative to the Nation		-0.49%		
Net Difference Statistic Related to Total Cost of Care	D	0.37%		
Conversion to All-Payer growth per resident (1+C)*(1+D)-1	E	**2.20%**	**2.22%**	**-0.02%**
Conversion to total All-Payer revenue growth (1+E)*(1+0.46%)-1	F	**2.67%**	**2.69%**	**-0.02%**

Table 6B. Scenario 2 Maximum All-Payer Increase that will still produce the Desired FY 2019 Medicare Savings (without 0.50% savings goal)

Maximum Increase that Can Produce Medicare Savings				
Medicare				
Medicare Growth (CY 2018 2.32%)	A	2.32%		
Savings Goal for FY 2019	B	0.00%		
Maximum growth rate that will achieve savings (A+B)	C	2.32%		
Conversion to All-Payer				
Actual statistic between Medicare and All-Payer		0.86%	**Recommendation:**	**Savings:**
Excess Growth for Non-Hospital Cost Relative to the Nation		-0.49%		
Net Difference Statistic Related to Total Cost of Care	D	0.37%		
Conversion to All-Payer growth per resident (1+C)*(1+D)-1	E	**2.70%**	**2.22%**	**0.48%**
Conversion to total All-Payer revenue growth (1+E)*(1+0.46%)-1	F	**3.17%**	**2.69%**	**0.48%**

Staff is also evaluating CY 2018 growth and its likely impact on guardrails. Table 7 below shows the current revenue projections for CY 2018 and FY 2019 to assist in estimating Maryland's position on future growth and savings.

Table 7. Estimated Position on Medicare Target

Estimated Position on Medicare Target		
Step 1:		
Approved GBR FY 2018		17,183,983,214
Actual Revenue 7/1/17-12/31/17		8,421,055,533
Projected Revenue 1/1/18-6/30/18	**A**	**8,762,927,681**
Step 2:		
Estimated Approved GBR FY 2019		17,578,009,012
Permanent Update		2.29%
Step 3:		
Estimated Revenue 7/1/18-12/31/18 (after 49.73% & seasonality)		8,741,543,882
Change in Hopkins Payback		10,000,000
	B	**8,751,543,882**
Step 4:		
Estimated Revenue CY 2018	**A+B**	**17,514,471,563**
Increase over CY 2017 Revenue		2.69%

Steps to explain Table 7 are described as below:

- Step 1: The table begins with the approved global revenue for FY 2018 and actual revenue for the last six months for CY 2017 to calculate the projected revenue for the first six months of CY 2018. (i.e. the last six months of FY2018).
- Step 2: This step shows the estimated FY 2019 global budget revenue based on the information that staff has available to date. The permanent update over FY 2018 shows 2.29 percent, as shown in Table 2.
- Step 3: For this step, to determine the calendar year revenues, staff estimates the revenue for the first half of FY 2019 by applying the recommended mid-year split percentage of 49.73 percent to the estimated approved revenue for FY 2019 and hospital specific seasonality adjustments. An adjustment for the temporary rate adjustment for Johns Hopkins Hospital is added to revenues.

- Step 4: This step shows the resulting estimated revenue for CY 2018 and then calculates the increase over CY 2017 Revenue.

Stakeholder Input

HSCRC staff worked with the Payment Models Workgroup to review and provide input on the proposed FY 2019 updates.

RECOMMENDATIONS

Based on the currently available data and the staff's analyses to date, the HSCRC staff is providing the following preliminary draft recommendations for the FY 2019 update factors.

For Global Revenues:

a) Provide an overall increase of 2.29 percent for revenue (net of uncompensated care offset) and 1.82 percent per capita for hospitals under Global Budgets, as shown in Table 2. In addition, staff is proposing to split the approved revenue into two targets, a mid-year target and a year-end target. Staff will apply 49.73 percent of the Total Approved Revenue to determine the mid-year target and the remainder of revenue will be applied to the year-end target. Staff is aware that there are a few hospitals that do not follow this pattern of seasonality and will adjust the split accordingly.

b) Allocate 0.24 percent of the total inflation allowance based on each hospital's proportion of drug cost to total cost to more equitably adjust hospitals' revenue budgets for increases in drug prices and high cost drugs. Continue to adjust for volume changes of high cost oncology drugs at the mid-year data point for RY 2018 over RY 2017.

c) The Commission should continue to closely monitor performance targets for Medicare, including Medicare's growth in total cost of care and hospital care costs per beneficiary during the performance year. As always, the Commission has the authority to adjust rates as it deems necessary.

d) Hospitals should submit, 30 days after the fiscal year, their annual disclosures of their GBR Agreements to disclose any shifts from regulated to unregulated and unregulated to regulated (Appendix F); as well as changes in financial interest, ownership, or control of hospital or non-hospital services within the service area (Appendix G). Failure to submit these disclosures will result in a holdback of 0.50 percent of a hospital's update for RY 2019.

e) Continued refinements should be made to adjust revenues for volume changes in high-cost drugs. Hospitals must report shifts to unregulated settings to avoid duplicate billing. Data collection should be expedited and improved and external resources consulted in order to improve the timeliness and ease of adjustments.

Non-Global Revenues including psychiatric hospitals and Mt. Washington Pediatric Hospital:

a) Provide an overall update of 1.77 percent by using a productivity adjustment of 0.80 percent from the inflation factor of 2.57 percent.

b) Continue to focus on implementation of quality measures and value based programs for psychiatric facilities.

APPENDIX I. SUPPLEMENTAL INFORMATION ON RISING COST OF HOSPITAL DRUGS

Staff completed, separate from this recommendation, an analysis that focused on the rising cost of hospital drugs. The purpose of this analysis was to aid staff, the Commission, and stakeholders in assessing funding levels and future policymaking decisions. Currently, hospitals are provided drug funding through two avenues: 1) drug cost inflation distributed using each hospital's drug cost in proportion to total drug costs and 2) changes in volume for the top 80 percent spend of high cost oncology drugs (providing 50 percent of the growth as a permanent adjustment and 50 percent of the growth as a one-time adjustment).

The drug cost analysis showed that drug costs increased faster than total hospital costs since 2014 in every year, except 2017, and that outpatient cost growth is the primary cost driver. Academic medical centers and hospitals with large outpatient programs were the largest proportion of this growth. Since 2014, there has been a statewide excess in funding provided in rates and funding in total appears to be adequate, although the analysis also found a variation by hospital in funding levels versus cost growth.

There have been some shifts of drugs to unregulated settings. As a result of specialization, some hospitals may be affected more by new drug introductions than others. The staff will continue to focus on making adjustments for changes in volumes of high cost drugs to address these and other dynamics. Staff is working to remove oncology drugs from the hospital market shift to avoid overlaps in adjustments and to more accurately measure changes in volumes of cycle-billed services such as clinics.

Inflation rates appear to be high enough to pick up the costs for much of the drug funding. However, funding for new oncology and biological drug costs continue to be a growing concern. Staff is continuing to refine the methodologies used to provide adjustments for changes in drug costs.

Staff will provide additional information regarding drugs at the June Commission meeting.

Draft Recommendations on Continued Financial Support for the Maryland Patient Safety Center for FY 2019

May 9, 2018

Health Services Cost Review Commission
4160 Patterson Avenue
Baltimore, Maryland 21215
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LIST OF ABREVIATIONS

Delmarva	Delmarva Foundation for Medical Care
FY	Fiscal Year
HQI	Hospital Quality Initiative
HSCRC	Health Services Cost Review Commission
MAPSO	Mid-Atlantic Patient Safety Organization
MDH	Maryland Department of Health
MHA	Maryland Hospital Association
MHCC	Maryland Health Care Commission
MPSC	Maryland Patient Safety Center
NAS	Neonatal Abstinence Syndrome
RFP	Request for Proposals
TCOC	Total Cost of Care

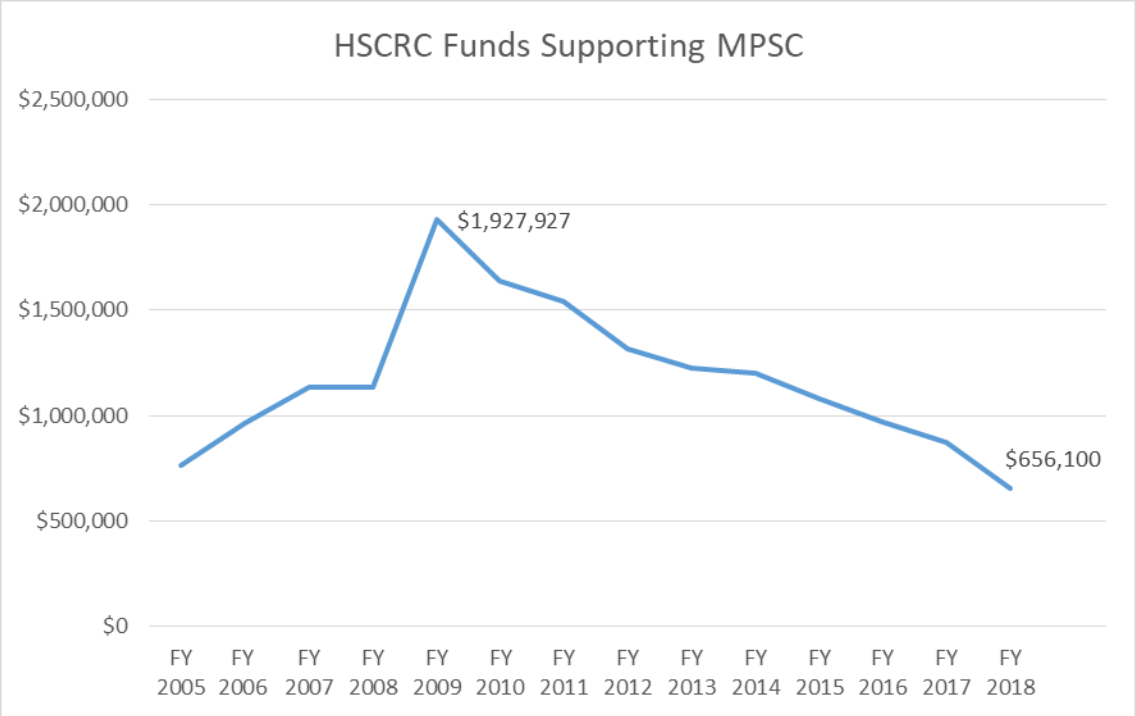
INTRODUCTION

In 2004, the Maryland Health Services Cost Review Commission (HSCRC or Commission) adopted recommendations to provide seed funding for the Maryland Patient Safety Center (MPSC) through hospital rates. The initial recommendations funded 50 percent of the reasonable budgeted costs of the MPSC. In FY 2018, HSCRC-dedicated funds accounted for 37 percent of its total budget. The proposed support for MPSC in FY 2019 represents 28 percent of the total budget. The HSCRC collaborates with MPSC on projects as appropriate, receives an annual briefing and documentation on the progress of the MPSC in meeting its goals, as well as an estimate of expected expenditures and revenues for the upcoming fiscal year. Based on the annual budget item information provided by the MPSC and staff experience, staff makes recommendations to the Commission regarding the continued financial support of the MPSC.

As the State moves toward a Total Cost of Care All-Payer Model (TCOC Model), it is increasingly important that safety and quality is improved across all care settings. The key stakeholders that are involved with the MPSC include hospitals, patients, physicians, long-term care and post-acute providers, ambulatory care providers, and pharmacy – all groups that are critical to the success of the All-Payer Model and the future TCOC Model. The MPSC is in a unique position in the State to develop and share best practices among these key stakeholders. It is also favorably positioned to act as a convener for hospital and non-hospital providers in Maryland to disseminate data that will help them succeed under the TCOC Model.

Over the past 14 years, the HSCRC included an adjustment to the rates of eight Maryland hospitals to provide funding to cover the costs of the MPSC. Funds are transferred biannually, by October 31 and March 31 of each year. Although funding increased between FY 2005 and FY 2009, the level of HSCRC support has declined each year since FY 2009, consistent with the original intent to scale back State-funded support. **Figure 1** below shows the funding level the HSCRC's in support of the MPSC.

Figure 1. HSCRC funds supporting MPSC FY2005-FY2018



In April 2018, the HSCRC received the MPSC program plan update for FYs 2018 and 2019 (see Appendix I). The MPSC is requesting a total of $492,075 in funding support from the HSCRC for FY 2019, a 25 percent decrease over the previous year that is consistent with the Commission's intent to reduce State funds over time and encourage a sustainable business model for the MPSC.

BACKGROUND

The 2001 General Assembly passed the Patients' Safety Act of 2001,[1] charging the Maryland Health Care Commission (MHCC)—in consultation with the Maryland Department of Health (MDH)—with studying the feasibility of developing a system for reducing the number of preventable adverse medical events in Maryland, including a system of reporting such incidences. The MHCC subsequently recommended the establishment of the MPSC to improve patient safety in Maryland.

[1] Chapter 318, 2001 Md. Laws.

In 2003, the General Assembly endorsed this concept by including a provision in legislation to allow the MPSC to have medical review committee status, thereby making the proceedings, records, and files of the MPSC confidential and not discoverable or admissible as evidence in any civil action.[2]

The MHCC selected the Maryland Hospital Association (MHA) and the Delmarva Foundation for Medical Care (Delmarva) through the State's Request for Proposals (RFP) procurement process to establish and operate the MPSC in 2004, with an agreement that the two organizations would collaborate in their efforts. MHA and Delmarva jointly operated the MPSC from 2004 to 2009. The MPSC was then reorganized as an independent entity and was re-designated by the MHCC as the state's patient safety center starting in 2010 for two additional five-year periods. The MPSC's current designation extends through December 2019.

ASSESSMENT

Strategic Priorities and Partnerships

The MPSC's vision is to be a center of patient safety innovation, convening health care providers to accelerate understanding of, and implement evidence-based solutions for preventing avoidable harm. Its mission is to make healthcare in Maryland the safest in the nation.

The MPSC's goals are to:

- Eliminate preventable harm for every patient, with every touch, every time;
- Develop a shared culture of safety among patient care providers; and,
- Be a model for safety innovation in other states.

To accomplish its vision, mission, and goals, the MPSC established and continues to build new strategic partnerships with an array of key private and public organizations. The organizations represent a broad array of interests and expertise, including policymakers and providers across the continuum of healthcare quality, safety, and learning and education.

MPSC Members and Partnerships

- The MPSC has membership agreements with 44 member hospitals, representing $400,000 in annual dues.
- The Mid-Atlantic Patient Safety Organization (MAPSO), a component of the MPSC, includes 42 members representing hospitals, long-term care facilities, and

[2] MD. **CODE**. ANN., Health-Gen. § 1-401(b)(14);(d)(1).

ambulatory care facilities. The primary activities of the MAPSO are to improve patient safety and healthcare quality by collecting adverse event reports, and holding educational events for members.

- The MPSC included 12 strategic partners.

Educational Programs and Conferences

- Customized educational programs for MPSC members driven by changing needs of members and the healthcare industry
- Expanded the reach of the MPSC and increased participation levels of member hospitals through educational opportunities
- Convened the Annual Maryland Patient Safety Center Conference, which is the MPSC's signature event providing awareness, education, and information regarding best practice solutions
- Convened the Annual Medication Safety Conference, which concentrates on the prevention of medication errors

Maryland Patient Safety Center Activities, Accomplishments, and Outcomes

As shown in Appendix 1, ongoing MPSC initiatives have engaged providers in hospitals, long-term care facilities, and ambulatory care facilities, as well as patients and consumers. MPSC uses a collaborative model to bring together providers from across the care spectrum to learn best practices to improve care and outcomes. MPSC is now using the Berkley Research Group to verify and analyze data collected from hospitals and other providers participating in MPSC initiatives.

Highlights from the data analyzed by MPSC include:

- Neonatal Abstinence Syndrome – The number of newborns with NAS that need to be transferred to a higher level nursery and specialty hospital has decreased from 17.1 percent to 10.4 percent. Length of stay for newborns has decreased from 15.6 days to 14.2 days, resulting in a cost avoidance of $1.8 million in 2017.
- Reducing First Time C-Sections – Hospitals participating in the collaborative experienced a reduction of 743 first time C-sections, resulting in projected savings of $1.4 million in 2017.
- Improving Sepsis Survival – Both cohorts of hospitals show a decrease in overall sepsis mortality, severe sepsis mortality, and septic shock mortality during the collaborative.

FY 2019 Quality and Safety Initiatives

The MPSC has a number of ongoing multi-year quality and safety initiatives, as well as new initiatives that will commence in FY 2019. At the suggestion of the Commission, the

initiatives more closely track the quality goals required by the All-Payer Model and future TCOC Model. New programming that address quality and safety issues in FY 2019 include:

- **Care Alerts –** MPSC is working with CRISP to expand and improve hospital Care Alerts by conducting onsite training and recruitment at Maryland hospitals. The Care Alert Sprint, initiated by the Maryland Hospital Association, resulted in initial hospital engagement to enter care alert information for high-needs Medicare patients. However, continued work is needed to improve the quality of data included in the care alert as well as improve integration of the care alert in clinical care practice.
- **Improving Emergency Department Throughput:** The MPSC is exploring ways that it can help facilities reduce unnecessary Emergency Department volume, lower length of stay, improve patient satisfaction, and improve patient care by developing an advisory council. The council will examine initiatives currently underway nationally and locally to identify ways to decrease wait times and patient flow at Maryland hospitals.
- **Opioid Education for Consumers –** In response to the statewide opioid addiction epidemic, the MPSC has partnered with MHA and MedChi to propose a patient-centered statewide public awareness campaign aimed at educating consumers on opioid use. Topics include reasonable pain management expectations, the pros and cons of opioid use, opioid prescription storage and disposal, and important questions to ask when being prescribed an opioid medication. MPSC has conducted eleven presentations in FY 2018 and have scheduled an additional 25 in FY 2019 that aim to educate consumers about prescription opioid use and misuse.

Ongoing initiatives that will continue in FY 2019:

- **Improving Sepsis Survival Collaborative:** This initiative is designed to reduce sepsis mortality at Maryland hospitals by working with participating hospitals to share successes, challenges, experiences, and ideas through facilitated meetings, calls, and webinars. The goal of the collaborative is to reduce sepsis mortality by ten percent at participating hospitals, with an ultimate goal of sharing best practices to reduce sepsis mortality statewide. Currently, 21 hospitals participate in two cohorts (Cohort I contains ten hospitals and Cohort II contains eleven hospitals). The hospitals self-report monthly mortality data for patients with severe sepsis and septic shock and submit a quarterly status report.
- **Clean Collaborative:** In order to reduce healthcare associated infections, the MPSC contracted with CleanHealth Environmental to lead the Clean Collaborative initiative. Teams from hospitals, long-term care facilities, and ambulatory surgical centers are provided with both in-person and virtual opportunities to convene panels of experts to share best management practices for cleaning and disinfecting facility-wide surface areas, as well as opportunities to facilitate team collaboration. Phase 1 includes 18 hospitals, three long-term care

facilities, and five ambulatory surgical centers that participate in the collaborative. All participating healthcare facilities utilize clean validation technology at no cost. Participating facilities submit monthly sample results from targeted patient care and public areas. To date, MPSC reports a reduction in C-Diff cases of 14.2 percent in participating facilities resulting in a cost savings of nearly $2.0 million.

- **Neonatal Abstinence Syndrome (NAS) Collaborative:** The MPSC continued its second year of this collaborative to improve the care of infants with NAS, which contributes to a significant amount of health care costs and resources and is increasing with the opioid epidemic. Participants include 31 birthing hospitals in Maryland, as well as the Mt. Washington Pediatric Hospital. The NAS Collaborative aims to standardize care for infants with NAS by providing hospitals with evidence-based best practices and education. Ultimately, the goal of the collaborative is to reduce length of stay, 30-day readmissions, and transfers to higher levels of care for infants with NAS. Results of the collaborative are included in Appendix 1.
- **Reducing Primary Cesareans and Supporting Intended Vaginal Births:** Since July 2016, the MPSC has partnered with the Alliance for Innovation in Maternal Health (AIM) to conduct the Reducing Primary Cesareans and Supporting Intended Vaginal Births initiative. The initiative uses emerging scientific, clinical, and patient safety advances to reduce primary (first time) cesarean rates in singleton, vertex term deliveries by ten percent. MPSC has submitted a grant application to the National Institutes of Health to continue this collaborative.
- **Adverse Event Reporting:** Initiated in July 2016, the Adverse Event Reporting initiative identifies trending patient safety issues, such as medication errors, at select Maryland hospitals. Data collected on adverse events help to determine future programming and educational needs for Maryland hospitals.
- **Medication Reconciliation**: A multi-disciplinary study group will explore potential opportunities to improve the process of medication reconciliation to improve patient safety.
- **Diagnostic Errors**: A study group will explore the role that the MPSC could take in the emerging work on diagnostic errors.
- **Caring for the Caregiver –** MPSC implemented Caring for the Caregiver program in three Maryland hospitals, as well as hospitals in South Carolina and Texas. Anticipated implementation is expected in hospitals in California and Georgia.

FY 2019 Projected Budget

The MPSC continued to work with its partners to secure program-specific funding for FY 2019 and estimated the amounts it will secure for FY 2019 in the proposed budget outlined in Figure 2 below, including potential funds from the HSCRC. Consistent with FY 2018, the majority of the revenue anticipated in FY 2019 are derived from

membership dues and conference revenue. In FY 2018, HSCRC funding accounted for 37 percent of its operating expenses. If approved, the FY 2019 HSCRC funding will account for approximately 28 percent of the total MPSC expenses.

The MPSC is working on bolstering other revenue streams, such as the training and licensing of the Caring for the Caregiver program. Diversifying the revenue stream for MPSC is crucial to the long-term sustainability of the Center in order to create stability in fiscal planning and to move away from the reliance on rate setting funds.

Figure 2. Proposed MPSC Revenue and Expenses

	FY 2018 Total Budget	FY 2019 Total Budget
Restricted Fund Beginning Balance as of 7/1/2017	11,625	0
Restricted/Temp Restricted Grant Revenue	200,000	227,600
Net Assets Released from Restriction	(200,000)	(227,600)
Change in Restricted/Temp Restricted Net Assets	0	0
Ending Restricted/Temp Restricted Fund Balance	11,625	0
Unrestricted Fund Beginning Balance as of 7/1/2017		
Board Designated Operating Reserve	174,344	174,344
Unrestricted Net Assets	1,614,963	1,614,963
Total	1,789,307	1,789,307
Unrestricted Revenue		
HSCRC Payor Contributions	656,100	492,075
Membership Dues	375,000	375,000
Education Session Revenue	9,000	22,000
Annual Patient Safety Conference Revenue	200,000	210,000
Medsafe Revenue	2,000	4,000
Program Sales - Caring for HC	60,000	137,750
Program Sales - Certification Program	25,000	125,000
Program Sales - Team STEPPS	0	25,000
Other Grants & Contributions	50,000	50,000
Net Assets Released from Restriction	200,000	227,600
Total Unrestricted Revenue	1,577,100	1,668,425
Unrestricted Expenses		
Administration	518,726	387,800
Education Sessions	65,000	35,250
Annual Patient Safety Conference	289,500	315,500
Medsafe Medication Safety Initiative	19,250	22,750
Caring for HC	65,890	110,888
Patient Safety Certification	46,500	81,500
Adverse Event Reporting System	41,700	34,500
Perinatal/Neonatal Patient Safety Collaboratives	218,156	205,082
CRISP Care Alerts	0	27,600
Clean Environment	107,600	80,000
Medication Reconciliation	33,600	24,500
Diagnosis Errors	44,400	48,500
Opioid Misuse	123,000	131,400
Joy & Meaning	0	50,700
Emergency Department	0	88,500
Total Unrestricted Expenses	1,633,282	1,644,470
Change in Unrestricted Net Assets	(56,182)	23,956

MPSC Return on Investment

As noted in the last several Commission recommendations, the All-Payer Model provides funding for the MPSC with the expectation that there will be both short- and long-term reductions in Maryland healthcare costs, particularly related to such outcomes as reduced mortality rates, lengths of stay, patient acuity, and malpractice insurance costs. The MPSC must continue to collect data on its programs in order to show quantifiable improvements in patient safety and outcomes and share best practices.

Additional data on all of the MPSC's programs is needed to ensure that the limited dollars available for MPSC funding creates meaningful improvements in quality and outcomes at facilities in Maryland – particularly outcomes that are consistent with the requirements under the All-Payer Model. Beginning in FY 2018, MPSC engaged the work of the Berkley Research Group to collect and analyze data from hospitals participating in MPSC programs or initiatives. The MPSC should continue to report results from its initiatives to HSCRC staff.

RECOMMENDATIONS

Quality and safety improvements are the primary drivers to achieve the goals of reduced potentially avoidable utilization and reduced complications in acute care settings as required by the State's All-Payer Model and future TCOC Model. For these reasons, it is important to continue to support hospitals in identifying and sharing best practices to improve patient quality and outcomes. While individual hospitals across the State are experimenting with strategies to improve care coordination, enhance processes for better care, and advance systems and data sharing to maximize the efficiency and effectiveness of care, the MPSC is in a unique position to convene healthcare providers and share best practices that have been identified through multi-provider collaborative testing and change. The key stakeholders that are involved with the MPSC include hospitals, patients, physicians, long-term care and post-acute providers, ambulatory care providers, and pharmacy – all groups that are critical to the success of the All-Payer Model. The MPSC is in a favorable position in the State to develop and share best practices among this group of key stakeholders.

In light of the information presented above, HSCRC staff provides the following recommendations for the MPSC funding support policy for FY 2019:

1. Consistent with the approval of the Commission last year, the HSCRC should reduce the amount of funding support for the MPSC in FY 2019 by 25 percent. The result is an adjustment to hospital rates in the amount of $492,075 in FY 2019, a 25 percent reduction from FY 2018.
2. In order to receive future funding from the hospital rate setting system, the MPSC should continue to report quarterly on data that it has collected from hospitals and other facilities that participate in its quality and safety initiatives and demonstrate, to the extent possible, the ways in which MPSC initiatives are producing measurable gains in quality and safety at participating facilities.

3. Going forward, the HSCRC should decrease the amount of support by 25 percent per year, contingent upon:
    a. How well the MPSC initiatives align with a broader statewide plan and activities for patient safety; and
    b. Whether new MPSC revenues offset HSCRC funding support.
4. The MPSC should continue to pursue strategies to achieve long-term sustainability through other sources of revenue, including identifying other provider groups that benefit from MPSC programs.

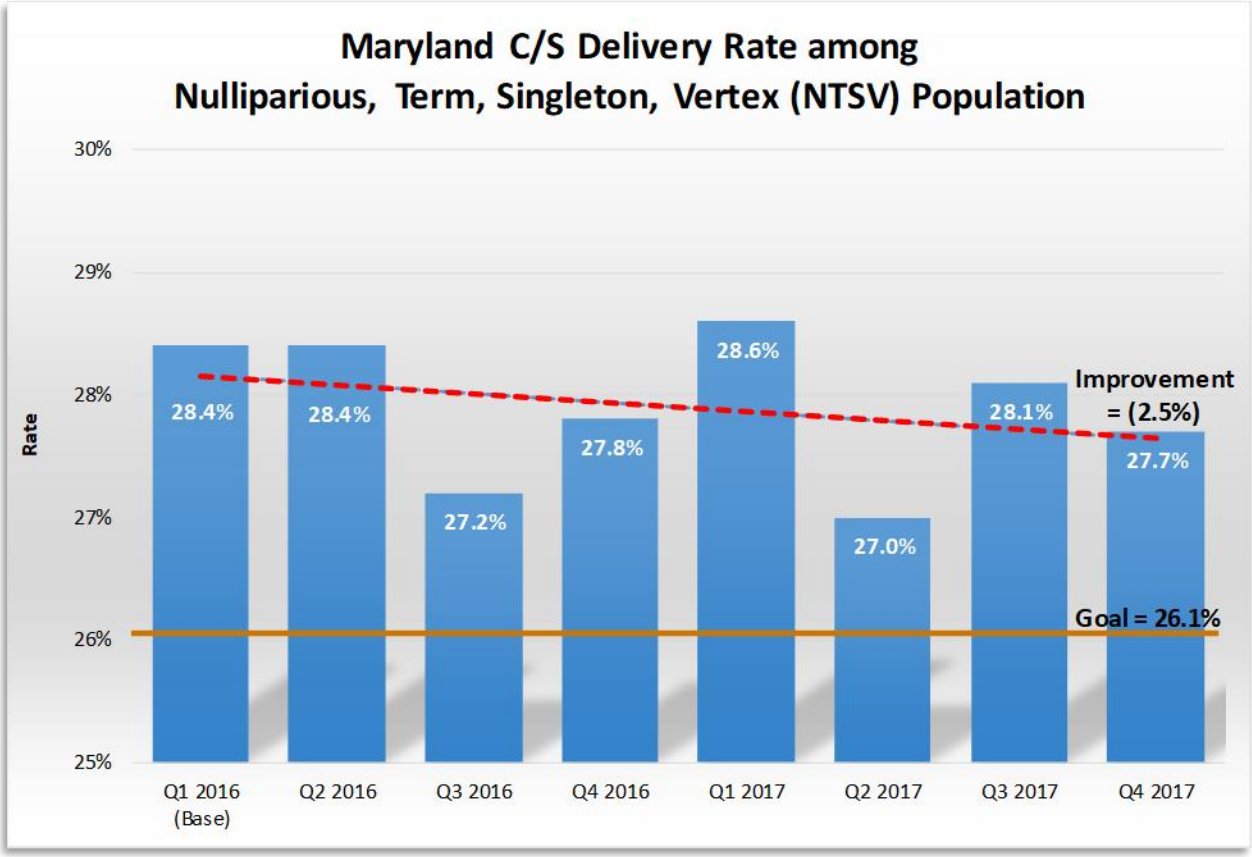
APPENDIX 1.

Reducing First-Time C-Sections Collaborative

NTSV C-Section Rates, Q1 2016 – Q4 2017

Base Period: January – March 2016

Measure Period: June 2016 – June 2018



Source: Preliminary Vital Statistics data; Maryland Collaborative-wide Rates

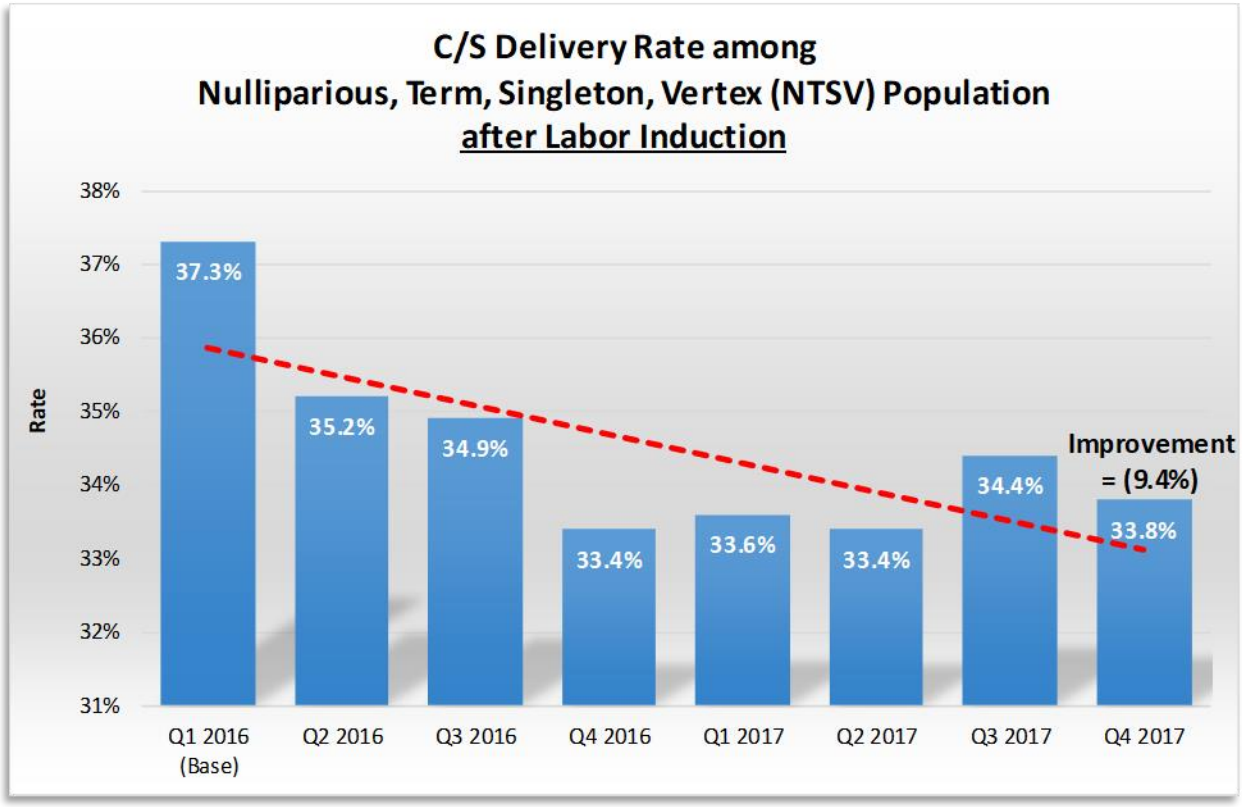
CY 2017 change vs. 12-month base period (Q2 2015 – Q1 2016): (5.2%) Improvement

NTSV C-Section Rates <u>After Labor Induction</u>,

Q1 2016 – Q4 2017

Base Period: January 2016 – March 2016

Measure Period: June 2016 – June 2018



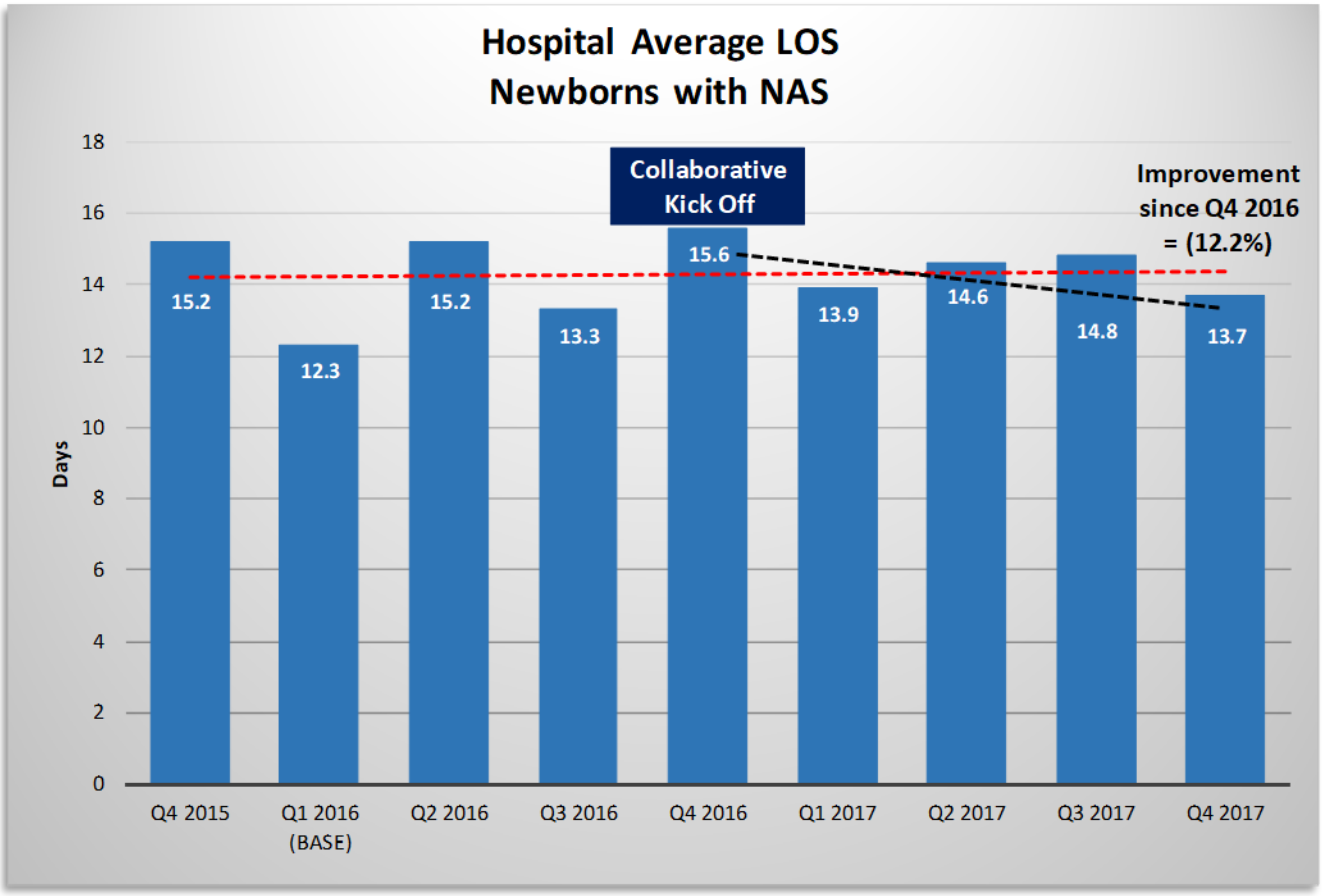
Source: Preliminary Vital Statistics data; Maryland Collaborative-wide Rates

CY 2017 change vs. 12-month base period (Q2 2015 – Q1 2016): (9.1%) Improvement

NAS Average Length of Stay, Q4 2015 – Q4 2017

Base Period: January – March 2016

Measure Period: October 2016 – September 2018

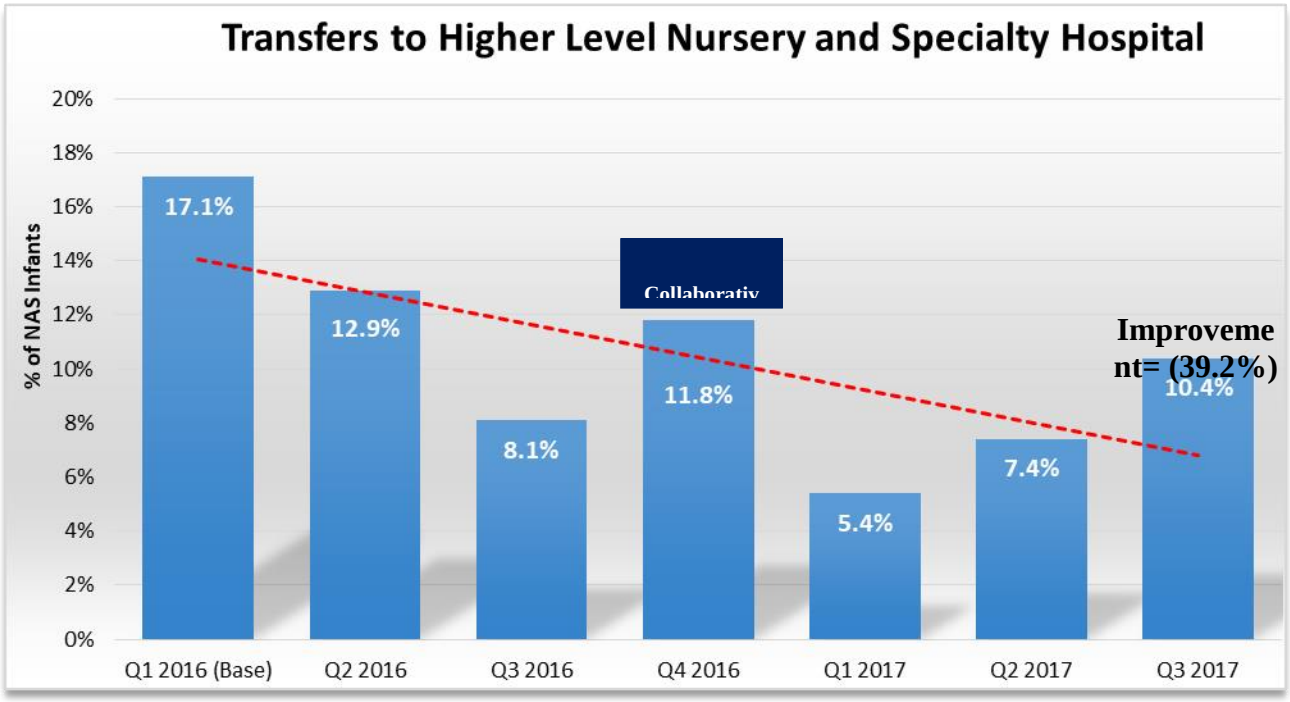


CY 2017 change vs. collaborative start date (Q4 2016): (8.9%) Improvement

NAS Transfers to Higher Level Nursery & Specialty Hospitals, Q1 2016 – Q3 2017

Base Period: January – March 2016

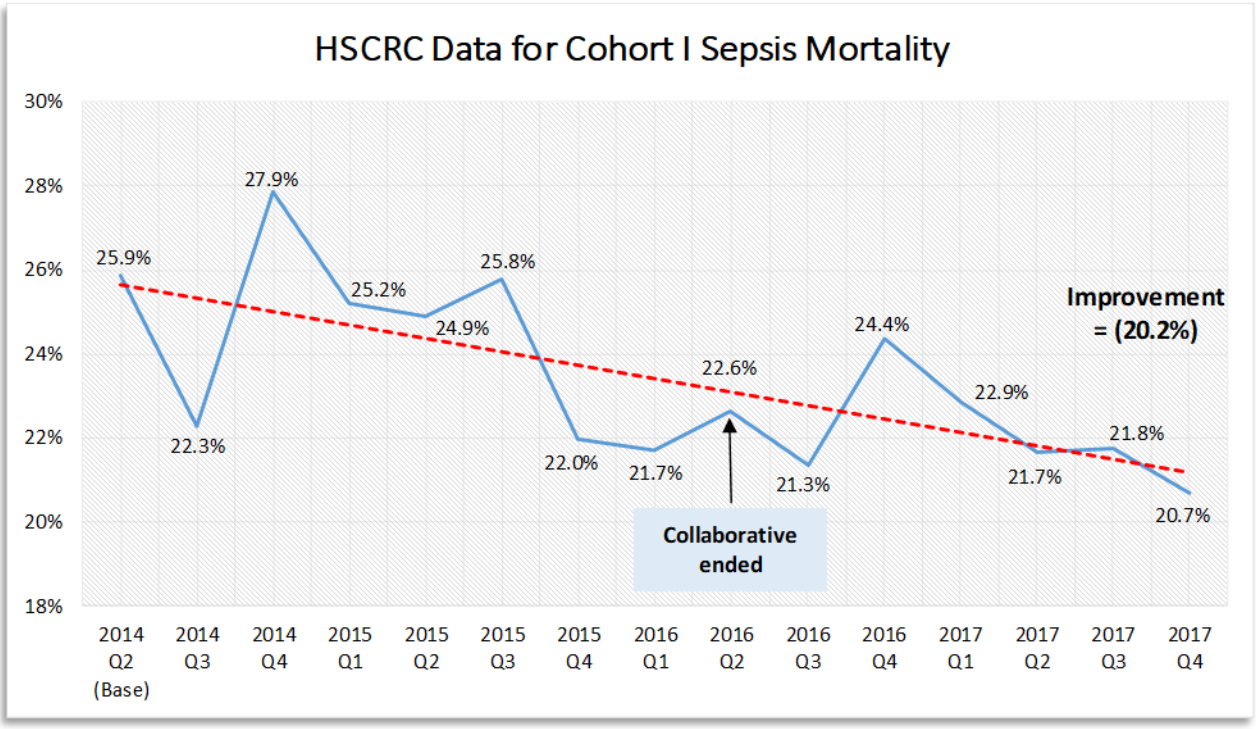
Measure Period: October 2016 – September 2018



Sepsis Mortality Rate – Cohort I, Q2 2014 – Q4 2017

Base Period: April – June 2014

Measure Period: July 2014 – June 2016



Cohort I: N = 10

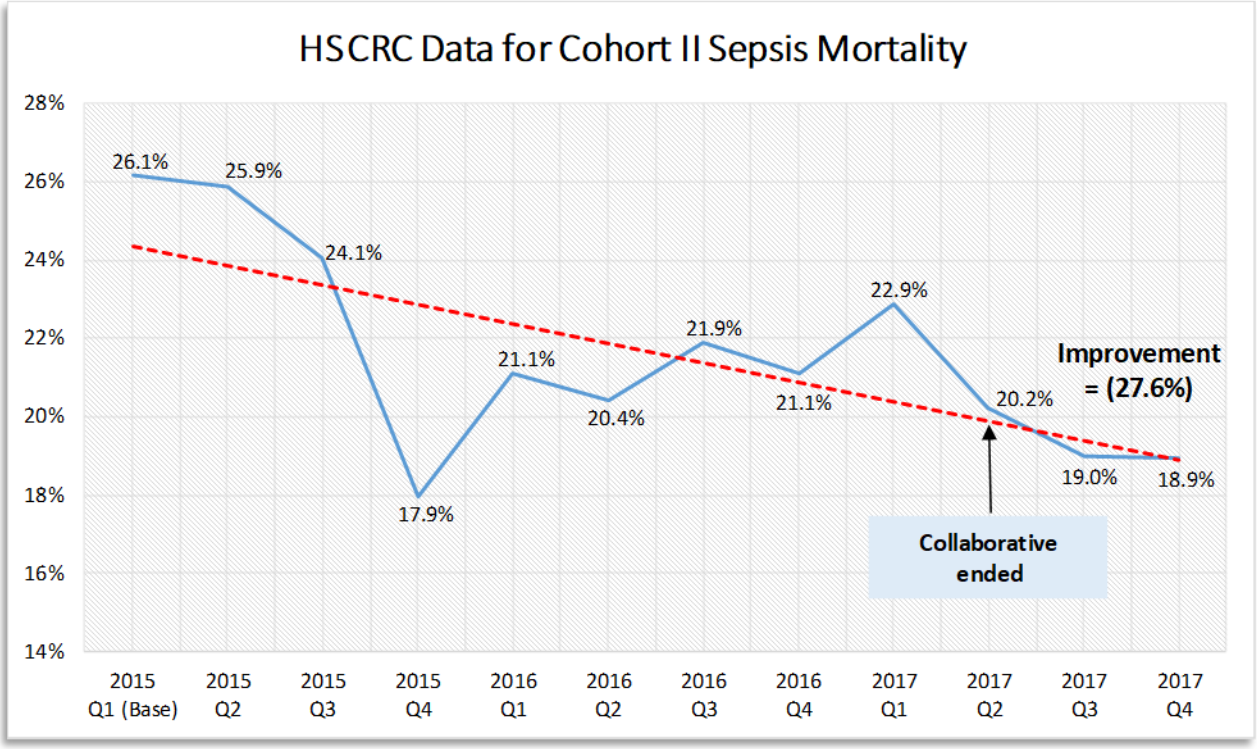
Sepsis Mortality Rate (%) = [Number of patients who expired with ICD-10 codes R6520 (severe sepsis) + R6521 (septic shock) / Total number of patients with those ICD-10 codes]*100

CY 2017 change vs. 12-month base period (Q3 2013 – Q2 2014): (17.7%) Improvement

Sepsis Mortality Rate – Cohort II, Q1 2015 – Q4 2017

Base Period: January – March 2015

Measure Period: April 2015 – April 2017



Cohort II: N = 11

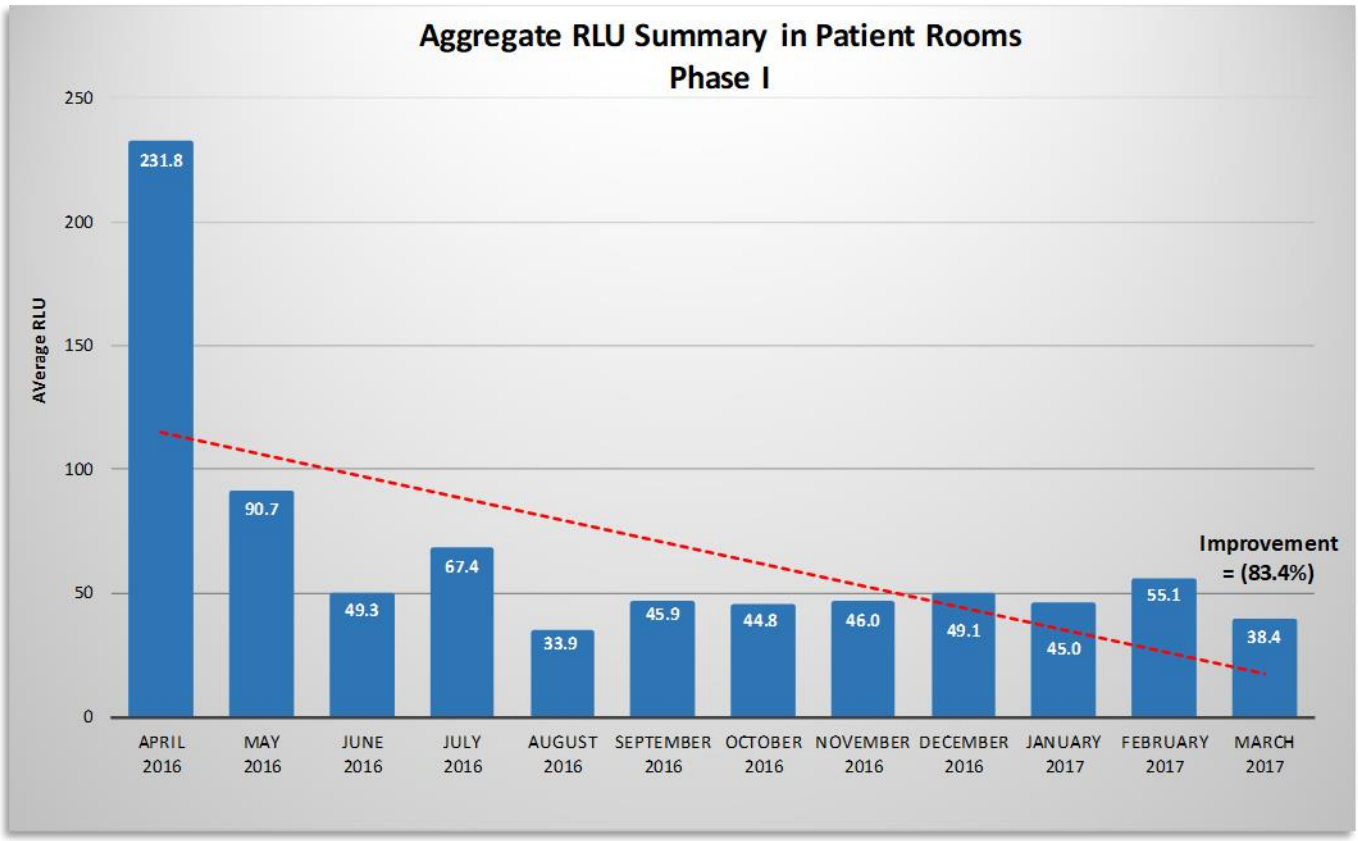
Sepsis Mortality Rate (%) = [Number of patients who expired with ICD-10 codes R6520 (severe sepsis) + R6521 (septic shock) / Total number of patients with those ICD-10 codes]*100

CY 2017 change vs. 12-month base period (Q2 2014 – Q1 2015): (18.4%) Improvement

RLUs in Patient Rooms

Base Period: N/A

Measure Period: April 2016 – March 2017



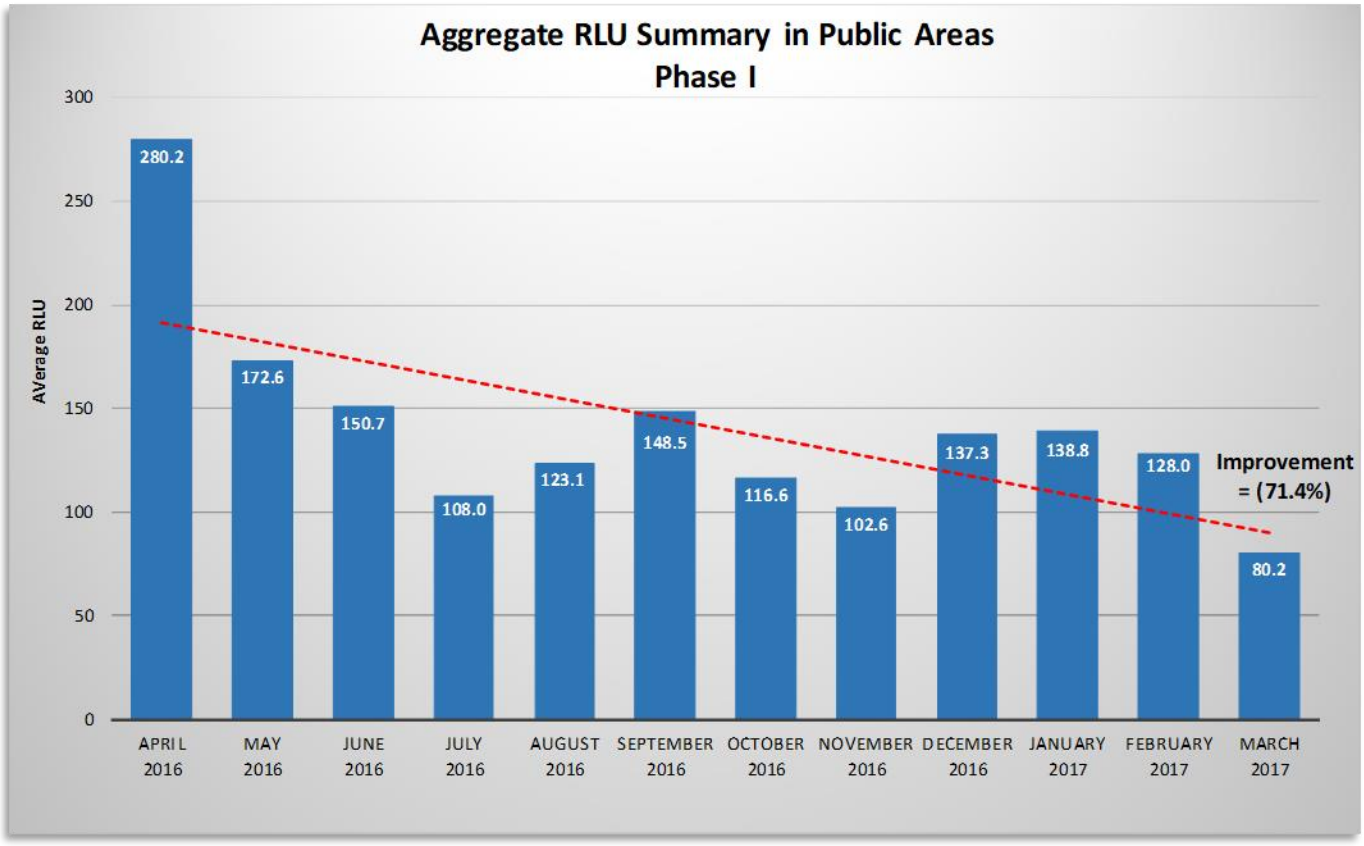
Source: Clean Collaborative Portal; submitted by participants

Measure Definition: RLU (Relative Light Units); lower Average RLUs are better.

RLUs in Public Areas

Base Period: N/A

Measure Period: April 2016 – March 2017



Source: Clean Collaborative Portal; submitted by participants

Measure Definition: RLU (Relative Light Units); lower Average RLUs are better.

Draft Recommendation for the Potentially Avoidable Utilization Savings Policy for Rate Year 2019

May 9, 2018

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This document contains the draft staff recommendations for updating the Potentially Avoidable Utilization (PAU) Savings Policy for RY 2019. Please submit comments on this draft to the Commission by Wednesday, May 16, 2018, via email to hscrc.quality@maryland.gov.

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RECOMMENDATIONS

Staff recommends the following for the Potentially Avoidable Utilization (PAU) Savings policy for RY 2019:

1. Increase the net PAU reduction by a range of 0.20% to 0.40%, which would be a cumulative PAU reduction of 1.65% to 1.85%. Staff has modeled a reduction of 1.75% of total permanent revenue in the state, which is an increased net reduction of 0.30% compared to the 1.45% reduction in RY 2018.
2. Cap the PAU Savings reduction for hospitals with higher socioeconomic burden at the statewide average reduction; however, solicit input on phasing out or adjusting for subsequent years.
3. Evaluate expansion and refinement of the PAU measure to incorporate additional categories of potentially avoidable admissions and potentially low-value care.

INTRODUCTION

The Maryland Health Services Cost Review Commission (HSCRC or Commission) operates a Potentially Avoidable Utilization (PAU) savings policy as part of its portfolio of value-based payment policies. The PAU Savings policy is an important tool to maintain hospitals' focus on improving patient care and health through reducing potentially avoidable utilization and its associated costs. While hospitals have achieved significant progress to date in transforming the delivery system, the State must maintain continued emphasis on care management, quality of care, and care coordination, especially for complex and high-needs patients. The PAU Savings policy is also important for maintaining Maryland's exemption from the Centers for Medicare & Medicaid Services (CMS) quality-based payment programs, which is pivotal, as this autonomy allows the State to operate its own programs on an all-payer basis.

The PAU Savings Policy prospectively reduces hospital global budget revenues in anticipation of volume reductions due to care transformation efforts (refer to Appendix I for a description of the current PAU measures, and Appendix II for a background and history of the HSCRC Shared Savings Programs). All hospitals contribute to statewide PAU Savings; however, each hospital's reduction is proportional to their percentage of PAU revenue. In contrast to HSCRC's other quality programs, which reward or penalize hospitals based on performance, the PAU Savings policy does not offer opportunity for reward, as it is intentionally designed to assure savings to payers and reduce costs for consumers.

The purpose of the sections that follow is to present supporting analyses for the PAU Savings draft recommendation for rate year (RY) 2019. Additional information about the future expansion of the PAU measure, as well as other considerations regarding avoidable utilization, is available in the enclosed Supplemental Report on Efforts to Modernize PAU Measurement and Adjustment in Future Years.

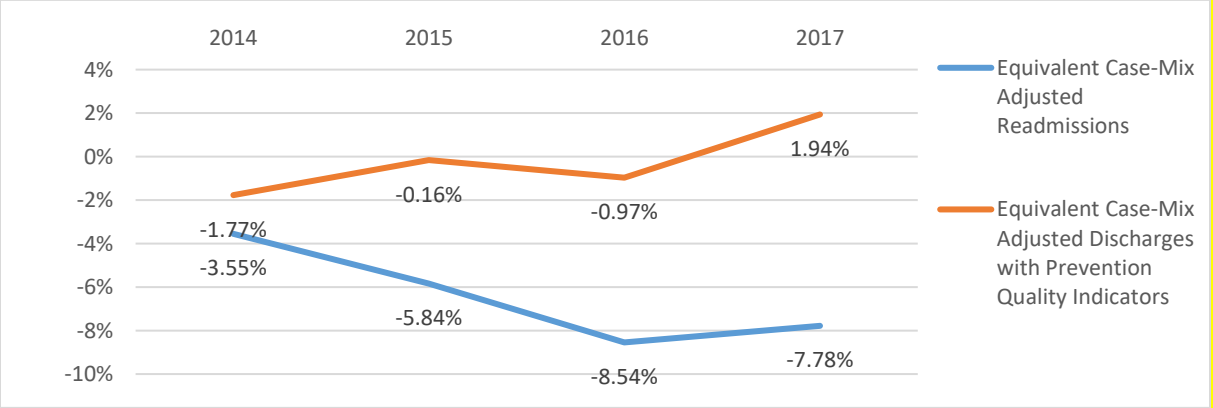
ASSESSMENT

Potentially Avoidable Utilization Performance

Potentially Avoidable Utilization (PAU) may be defined as "hospital care that is unplanned and can be prevented through improved care coordination, effective primary care and improved population health."[1] In RY 2019, HSCRC continues to determine PAU savings based on hospital performance from the prior calendar year, i.e. CY 2017, and PAU continues to be defined as: a) readmissions, assessed at the receiving hospital, and b) Prevention Quality Indicators (PQIs).[2]

Figure 1 below shows trends in equivalent case-mix adjusted discharges for readmissions and Prevention Quality Indicators since calendar year (CY) 2013. Compared to CY 2013, the all-payer equivalent case-mix adjusted discharges that were readmissions declined 7.8% through CY2017; however this is slightly less of a reduction than had been experienced through CY2016 (-8.54%).[3] This reduction in discharges is different than the reduction in the case-mix adjusted readmission rates presented in the Readmission Reduction Improvement Program (RRIP). In contrast, equivalent case-mix adjusted discharges with PQIs increased by 1.94% in CY2017 compared to CY2013.[4] However, some readmission reductions may impact PQI discharges; for example, an ambulatory-care sensitive discharge within 30 days of an index admission would be considered a readmission, but if that discharge is prevented until day 31, it is considered a PQI. In addition, these numbers represent the change in discharges, not a rate per population, and thus are not equivalent to other PQI rates presented with the population as the denominator. (See Future Measurement section for more discussion). Appendix III provides more detailed information on specific PQI trends.

Figure 1. Percent Change in Readmissions and PQIs compared to CY 2013



[1] http://www.qualityindicators.ahrq.gov/modules/pqi_overview.aspx.
[2] PQIs measure inpatient admissions and observation stays greater than 23 hours for ambulatory care sensitive conditions. See Appendix II
[3] These numbers may differ from those in previous year reports due to data and grouper updates.
[4] Trends in PQIs between 2015 and 2016 should be interpreted with caution due to the implementation of ICD-10.

Proposed Revenue Reduction

Each year, the State reviews total cost of care and hospital savings trends, in conjunction with trends in calculated avoidable utilization, to determine the statewide PAU savings reduction for the upcoming rate year. In RY 2018, the HSCRC approved an additional statewide reduction of 0.20%, which resulted in a cumulative reduction of 1.45%.

In RY 2019, HSCRC staff proposes, pending additional information regarding CY 2018 total cost of care performance, to set the annual savings reduction between 0.20% and 0.40%. For ease of review in the RY2019 PAU Savings Draft Recommendation, staff has modeled a 0.30% reduction, which will result in a statewide PAU savings reduction of 1.75% of total hospital revenue. Figure 2 shows the total and net revenue reduction associated with a PAU reduction of 1.75%. Of particular note, the modeled 1.75% reduction in budgets reflects approximately 16.4% of statewide experienced PAU under the current definition, which suggests that 84.6% of PAU is still funded in the Global Budget Revenue Model and hospitals with larger PAU reductions can retain the savings under the global budgets.

Figure 2. Proposed RY 2019 Statewide Savings*

Statewide Results	**Formula**	**Value**		
RY 2018 Total Approved Permanent Revenue	A	$16.3 billion		
Total CY17 PAU $ % (Observed)	B	11.00%		
Total CY17 PAU $	C	$1.8 billion		
Statewide Total Calculations	**Formula**	**Total**	**RY 2018****	**Net Adjustment**
Proposed RY19 Revenue Adjustment %	D	-1.75%	-1.45%	-0.30%
Proposed RY19 Revenue Adjustment $	E=A*D	-$285 million	-$228 million	-$56 million
Proposed RY19 Revenue Adjustment % of Total PAU $	F=C/E	15.9%		

*Figures may not add due to rounding

**-1.45% of RY 2018 Total Approved Permanent Revenue is -$237 million; however, the figure cited (-$228 million) is provided because this was -1.45% of RY 2017 Total Approved Permanent Revenue and therefore better reflects the actual proposed net dollar reduction to RY 2019 (-$56 million).

Hospital Protections

The Commission and stakeholders aim to ensure that hospitals that treat a higher proportion of disadvantaged patients have the needed resources for care delivery and improvement, while continuing to encourage improvements in the quality of care or care coordination for these patients. Due to these concerns, a protection policy was first approved in RY 2016. Under the RY 2018 PAU Savings Policy, the PAU payment reductions are capped at the state average for hospital that serve a high proportion of disadvantaged populations.[5] For future years, HSCRC staff is discussing adjusting or even phasing out this protection. However, given the potential revenue impact for affected hospitals and to allow time for further feedback, staff is recommending to continue the RY 2018 protection methodology for RY 2019. (For more information on staff and stakeholder considerations regarding protection under the PAU Savings

[5] The measure includes the percentage of Medicaid, Self-pay and Charity equivalent case-mix adjusted readmission discharges for inpatient and observation cases with 23 hours or longer stays, with protection provided to those hospitals in the top quartile.

policy, please refer to the Supplemental Report on Efforts to Modernize PAU Measurement and Adjustment in Future Years).

Appendix V provides the resulting revenue adjustments of the PAU Savings policy based on the modeled 0.30 percent annual reduction (1.75 percent total) in total hospital revenue with and without these protections.

Future Expansion of PAU

HSCRC staff recommends evaluating expansion of PAU to incorporate additional categories of avoidable utilization, such as additional potentially avoidable admissions and/or low-value care. Over the next 8 months, staff will work to expand PAU and develop processes for continued expansion under the updated measure, while minimizing hospital measurement burden. Staff is also exploring the potential opportunity for hospitals to propose their own definitions and measurements of Potentially Avoidable Utilization, while noting the reporting burden and validation challenges that would be associated with such an effort. (For more information on staff and stakeholder considerations regarding expansion of the PAU measure in future years, please refer to the Supplemental Report on Efforts to Modernize PAU Measurement and Adjustment in Future Years).

RECOMMENDATIONS

Staff recommends the following for the Potentially Avoidable Utilization (PAU) Savings policy for RY 2019:

1. Increase the net PAU reduction by a range of 0.20% to 0.40%, which would be a cumulative PAU reduction of 1.65% to 1.85%. Staff has modeled a reduction of 1.75% of total permanent revenue in the state, which is an increased net reduction of 0.30% compared to the 1.45% reduction in RY 2018.
2. Cap the PAU Savings reduction at the statewide average reduction for hospitals with higher socioeconomic burden; however, solicit input on phasing out or adjusting for subsequent years
3. Evaluate expansion and refinement of the PAU measure to incorporate additional categories of potentially avoidable admissions and potentially low-value care.

LIST OF ABBREVIATIONS

ARR	Admission-Readmission Revenue Program
CMS	Centers for Medicare & Medicaid Services
CY	Calendar year
ECMAD	Equivalent case-mix adjusted discharge
GBR	Global budget revenue
HRRP	Hospital Readmissions Reduction Program
HSCRC	Health Services Cost Review Commission
PAU	Potentially avoidable utilization
PQI	Prevention quality indicators
PSA-Plus	Primary Service Area-Plus
RRIP	Readmissions Reduction Incentive Program
RY	Rate year
TPR	Total patient revenue

APPENDIX I. PAU MEASURE SPECIFICATION

The measure of potentially avoidable utilization (PAU) used in the PAU Savings Policy is calculated as the percentage of total hospital inpatient and outpatient revenue attributed to PAU at each hospital. The PAU measure is comprised of the revenue from readmissions and Prevention Quality Indicators (PQIs). Under the PAU logic, readmissions are calculated first, followed by PQIs, so the revenue from a hospitalization flagged as both a readmission and a PQI would only be counted once in PAU.

Readmissions are admissions to a hospital (defined as inpatient admission or observation stay greater than 23 hours) within a specified time period after a discharge from the same or another hospital. In the PAU measure, readmissions are specified as 30-day, all-payer, all-cause readmissions at the receiving hospital with exclusions for planned admissions. The PAU methodology calculates the percentage of revenue associated with readmissions that occur at the hospital receiving the readmission, regardless of where the original (index) admission occurred.

Hospitalizations for ambulatory-care sensitive conditions are measured by the Agency for Health Care Research and Quality's Prevention Quality Indicators (PQIs). In the PAU measure, PQIs are measured on inpatient admissions and observation stays greater than 23 hours for ambulatory care sensitive conditions. For more information on these measures, see http://www.qualityindicators.ahrq.gov/modules/pqi_overview.aspx.

APPENDIX II. BACKGROUND AND HISTORY OF PAU SAVINGS POLICY

I. Importance of measuring potentially avoidable utilization

The United States ranks behind most countries on many measures of health outcomes, quality, and efficiency. Physicians may face particular difficulties in receiving timely information, coordinating care, and dealing with administrative burden. Enhancements in chronic care— with a focus on prevention and treatment in the office, home, and long-term care settings—are essential to improving indicators of healthy lives and health equity. As a consequence of inadequate chronic care and care coordination, the healthcare system currently experiences an unacceptably high rate of preventable hospital admissions and readmissions.

II. Potentially Avoidable Utilization in the All-Payer Model

Under the Maryland All-Payer Model, the State aims to demonstrate that an all-payer system with accountability for the total cost of hospital care is an effective model for advancing better care, better health, and reduced costs. A central focus of the All-Payer Model is the reduction of PAU through improved care coordination and enhanced community-based care. While hospitals have achieved significant progress in transforming the delivery system to date, there needs to be continued emphasis on care coordination, improving quality of care, and providing care management, especially for complex and high-needs patients.

A central tenet of the Maryland All-Payer Model is that hospitals are funded under Global Budget Revenue (GBR), which are flexible annual revenue caps. The GBR system assumes that hospitals will reduce potentially avoidable utilization in line with the GBR incentive that allows hospitals to retain a portion of revenue while reducing unnecessary utilization/cost. The PAU Policy prospectively reduces hospital GBRs in anticipation of those cost reductions. All hospitals contribute to the statewide potentially avoidable utilization savings; however, each hospital's reduction is proportional to their percent of potentially avoidable utilization revenue. In contrast to HSCRC's other quality programs that reward or penalize hospitals based on performance, the PAU Savings policy is intentionally designed to assure savings to payers and reduce costs for consumers.

It is also important to note that under the Maryland All-Payer Model, Maryland is exempt from the federal Medicare quality-based payment programs if the aggregate amount of revenue at-risk in Maryland performance-based payment programs is equal to or greater than the aggregate amount of revenue at-risk in the CMS Medicare quality programs. The PAU savings adjustment is one of the performance-based programs used for this comparison.

III. History of the Potentially Avoidable Utilization (PAU) Savings Program

Under the state's previous Medicare waiver, the Commission approved a savings policy on May 1, 2013, which reduced hospital revenues based on case-mix adjusted readmission rates using

specifications from HSCRC's Admission-Readmission Revenue (ARR) Program.[6] Most hospitals in the state participated in the ARR program, which incorporated 30-day readmissions into a hospital episode rate per case, or in the Total Patient Revenue (TPR) system, a global budget for more rural hospital settings. With the implementation of ARR and the advent of global budgets, HSCRC created a policy to ensure payers received similar savings to those that would have been expected from the federal Medicare Hospital Readmissions Reduction Program (HRRP). Unlike the federal program, which provides savings to payers by avoiding readmissions, Maryland requires a separate policy, as global budgets "lock in" savings into hospital budgets. Under the All-Payer Model, the Commission continues to use the savings adjustment to ensure a focus on reducing readmissions, ensure savings to purchasers, and meet exemption requirements for revenue at-risk under Maryland's value-based programs.

For RY14 and RY15, HSCRC calculated hospital-specific case-mix adjusted readmission rates based on ARR specifications for the previous CY.[7] The statewide savings percentage was converted to a required reduction in readmission rates, and each hospital's contribution to savings was determined by its case-mix adjusted readmission rates. Based on a 0.20 percent increase in annual savings, the reduction percentage was 0.40 percent of total revenue in RY15.

In RY16, HSCRC updated the savings reduction methodology to use the case-mix adjusted readmission rate based on Readmissions Reduction Incentive Program (RRIP) specifications.[8] The total reduction percentage was 0.60 percent of total revenue in RY16. The Commission also added a protection capping the revenue reduction at the statewide average for hospitals above the 75th percentile on the percentage of adult Medicaid discharges.

For RY17, the Commission expanded the savings policy to align the measure with the potentially avoidable utilization (PAU) definition, incorporating both readmissions and admissions for ambulatory care sensitive conditions as measured by the Agency for Health Care Research and Quality's Prevention Quality Indicators (PQIs). (See Appendix II for specifications) Aligning the measure with the PAU definition changed the focus of the readmissions measure from "sending" hospitals to "receiving" hospitals. In other words, the updated methodology calculated the percentage of hospital revenue associated with readmissions, regardless of where the original (index) admission occurred. Assigning readmissions to the receiving hospital should incentivize hospitals to work within their service areas to reduce readmissions, regardless of where the index stay took place. Additionally, hospital savings from reducing readmissions will accrue to the receiving hospital. Finally, aligning the readmission measure with the PAU definition enabled the measure to include observation stays above 23 hours in the calculation of readmissions and PQIs. In RY17, the Commission increased the reduction percentage to 1.25% of total revenue.

In RY 2018, the Commission continued the RY17 methodology and increased the amount of the reduction to 1.45% of total revenue.

[6] A readmission is an admission to a hospital within a specified time period after a discharge from the same or another hospital.
[7] Only same-hospital readmissions were counted, and stays of one day or less and planned admissions were excluded.
[8] This measures 30-day all-cause, all hospital readmissions with planned admission and other exclusions.

APPENDIX III. ANALYSIS OF PQI TRENDS

PQIs—developed by the Agency for Healthcare Research and Quality—measure inpatient admissions for ambulatory care sensitive conditions. The following figure presents an analysis of the change in PQI discharges between CYs 2016 and 2017 using version 7 of the PQI software for both years.[9] The numbers presented below do not include discharges that were also flagged as a 30-day readmission. From 2016 to 2017, there were improvements in the overall PQI composite (PQI 90) and acute composite (PQI 91), but increases in the chronic composite (PQI 92). Large reductions in community-acquired pneumonia (PQI 11) appear to be driving the acute composite improvement. The diabetes composite (PQI 93) experienced increases, while individual diabetes-related PQIs (PQIs 1, 3, 14, 16) appear to have large fluctuations, suggesting that changes in individual diabetes-related PQIs may reflect coding differences for patients with diabetes rather than a change in admissions.

Appendix III. Figure 1. PQI Trends, CY 2016-CY 2017

PQI Admission Rate	CY16 PQIs	CY17 PQIs	CY16-17 % Change	CY16-17 PQI	CY17 % CONTRIBUTION
	A	B	C=B/A-1	D=B-A	
PQI 90 Overall Composite (Unduplicated)	63505	62328	-1.9%	-1177	100.00%
PQI 91 Acute Composite (PQIs 2, 10, 11, 12)	24310	20857	-14.2%	-3453	33.46%
PQI 92 Chronic Composite (PQIs 1,3,5,7,8,14,15,16)	39197	41475	5.8%	2278	66.54%
PQI 93 Diabetes composites (PQIs 1,3,14,16)	8028	8590	7.0%	562	13.78%
PQI 01 Diabetes Short-Term Complications	2997	1766	-41.1%	-1231	2.83%
PQI 02 Perforated Appendix	1209	1202	-0.6%	-7	1.93%
PQI 03 Diabetes Long-Term Complications	3536	4316	22.1%	780	6.92%
PQI 05 COPD or Asthma in Older Adults	12909	14041	8.8%	1132	22.53%
PQI 07 Hypertension	2320	3206	38.2%	886	5.14%
PQI 08 Heart Failure	15014	14734	-1.9%	-280	23.64%
PQI 10 Dehydration	7372	7022	-4.7%	-350	11.27%
PQI 11 Community-Acquired Pneumonia	9207	6845	-25.7%	-2362	10.98%
PQI 12 Urinary Tract Infection	7731	6990	-9.6%	-741	11.21%
PQI 14 Uncontrolled Diabetes	2196	2048	-6.7%	-148	3.29%
PQI 15 Asthma in Younger Adults	928	905	-2.5%	-23	1.45%
PQI 16 Lower-Extremity Amputation among Patients w/ Diabetes	859	1006	17.1%	147	1.61%

[9] AHRQ updated to PQI software version 7 in October 2017. The major changes in version 7 include a correction to an incorrect decrease in PQI 07 (Hypertension) under ICD-10.

APPENDIX IV. PERCENT OF REVENUE IN PAU BY HOSPITAL

The following figure presents the preliminary total non-PAU revenue for each hospital, total PAU revenue by PAU category (PQI, readmissions, and total), total hospital revenue, and PAU as a percentage of total hospital revenue for CY 2017. Overall, PAU revenue comprised 11.00 percent of total statewide hospital revenue.

Appendix IV. Figure 1. PAU Percentage of Total Revenue by Hospital, CY 2017

Hosp ID	Hospital Name	Non-PAU Revenue A	Readmission Revenue B	PQI Revenue C	Total PAU Revenue D=B+C	Total Hospital Revenue E=A+D	% Readmission F=B/E	% PQI G=C/E	% PAU H=F+G
210001	Meritus	$285,635,783	$25,133,325	$19,360,795	$44,494,120	$330,129,902	7.61%	5.86%	13.48%
210002	UMMC	$1,508,208,262	$105,633,803	$32,837,109	$138,470,912	$1,646,679,175	6.41%	1.99%	8.41%
210003	UM-PGHC	$257,166,795	$26,032,263	$15,523,672	$41,555,934	$298,722,730	8.71%	5.20%	13.91%
210004	Holy Cross	$456,540,898	$37,974,537	$17,771,656	$55,746,193	$512,287,091	7.41%	3.47%	10.88%
210005	Frederick	$301,668,381	$26,139,960	$23,078,215	$49,218,175	$350,886,556	7.45%	6.58%	14.03%
210006	UM-Harford	$88,978,098	$10,527,917	$7,108,832	$17,636,749	$106,614,847	9.87%	6.67%	16.54%
210008	Mercy	$502,751,428	$18,289,611	$9,991,886	$28,281,497	$531,032,925	3.44%	1.88%	5.33%
210009	Johns Hopkins	$2,204,647,494	$168,753,132	$47,311,261	$216,064,393	$2,420,711,887	6.97%	1.95%	8.93%
210010	UM-Dorchester	$41,315,427	$4,373,241	$3,726,824	$8,100,065	$49,415,493	8.85%	7.54%	16.39%
210011	St Agnes	$368,998,271	$35,227,134	$28,156,897	$63,384,031	$432,382,302	8.15%	6.51%	14.66%
210012	Sinai	$708,583,403	$42,755,341	$26,496,911	$69,252,252	$777,835,655	5.50%	3.41%	8.90%
210013	Bon Secours	$86,290,727	$15,222,821	$6,306,890	$21,529,711	$107,820,438	14.12%	5.85%	19.97%
210015	MedStar Fr Sq	$446,053,268	$44,458,713	$31,801,020	$76,259,733	$522,313,001	8.51%	6.09%	14.60%
210016	Wash Adventist	$235,717,043	$21,274,073	$15,251,230	$36,525,303	$272,242,346	7.81%	5.60%	13.42%
210017	Garrett	$50,771,448	$1,441,521	$2,951,096	$4,392,618	$55,164,066	2.61%	5.35%	7.96%
210018	MedStar Mont	$158,627,803	$13,161,523	$8,562,915	$21,724,438	$180,352,241	7.30%	4.75%	12.05%
210019	Peninsula	$400,062,315	$28,311,939	$18,732,668	$47,044,607	$447,106,921	6.33%	4.19%	10.52%
210022	Suburban	$284,225,507	$19,974,015	$11,474,076	$31,448,091	$315,673,599	6.33%	3.63%	9.96%
210023	Anne Arundel	$563,963,503	$28,055,312	$25,670,593	$53,725,904	$617,689,407	4.54%	4.16%	8.70%

Hosp ID	Hospital Name	Non-PAU Revenue A	Readmission Revenue B	PQI Revenue C	Total PAU Revenue D=B+C	Total Hospital Revenue E=A+D	% Readmission F=B/E	% PQI G=C/E	% PAU H=F+G
210024	MedStar Union	$386,130,697	$29,198,790	$21,958,089	$51,156,878	$437,287,575	6.68%	5.02%	11.70%
210027	Western MD	$293,906,629	$21,467,836	$15,943,973	$37,411,809	$331,318,439	6.48%	4.81%	11.29%
210028	MedStar St Mary's	$169,323,830	$10,878,237	$12,607,911	$23,486,148	$192,809,978	5.64%	6.54%	12.18%
210029	JH Bayview	$577,888,000	$48,978,507	$27,988,007	$76,966,514	$654,854,514	7.48%	4.27%	11.75%
210030	UM-Chestertown	$50,476,187	$3,770,763	$2,959,617	$6,730,380	$57,206,567	6.59%	5.17%	11.77%
210032	Union of Cecil	$142,783,495	$9,029,343	$9,869,614	$18,898,957	$161,682,452	5.58%	6.10%	11.69%
210033	Carroll	$196,283,058	$19,719,790	$19,221,881	$38,941,671	$235,224,728	8.38%	8.17%	16.56%
210034	MedStar Harbor	$166,678,135	$18,508,974	$11,866,820	$30,375,794	$197,053,929	9.39%	6.02%	15.41%
210035	UM-Charles	$132,285,309	$10,199,409	$8,876,416	$19,075,825	$151,361,134	6.74%	5.86%	12.60%
210037	UM-Easton	$187,936,924	$11,959,083	$7,130,502	$19,089,585	$207,026,509	5.78%	3.44%	9.22%
210038	UMMC Midtown	$205,010,123	$22,137,629	$12,508,789	$34,646,418	$239,656,541	9.24%	5.22%	14.46%
210039	Calvert	$131,851,278	$7,432,032	$9,381,184	$16,813,217	$148,664,495	5.00%	6.31%	11.31%
210040	Northwest	$220,634,165	$20,973,251	$20,983,989	$41,957,240	$262,591,404	7.99%	7.99%	15.98%
210043	UM-BWMC	$359,937,624	$35,289,232	$25,385,675	$60,674,906	$420,612,531	8.39%	6.04%	14.43%
210044	GBMC.	$436,186,478	$21,761,845	$14,941,737	$36,703,582	$472,890,060	4.60%	3.16%	7.76%
210045	McCready	$16,060,388	$395,109	$1,007,695	$1,402,804	$17,463,192	2.26%	5.77%	8.03%
210048	Howard County	$269,141,884	$23,253,196	$15,978,249	$39,231,445	$308,373,330	7.54%	5.18%	12.72%
210049	UM-UCH	$306,611,923	$21,116,740	$16,547,776	$37,664,516	$344,276,439	6.13%	4.81%	10.94%
210051	Doctors	$196,035,947	$22,818,963	$18,452,713	$41,271,676	$237,307,623	9.62%	7.78%	17.39%
210055	UM-Laurel	$90,514,175	$6,139,260	$4,720,686	$10,859,945	$101,374,120	6.06%	4.66%	10.71%
210056	MedStar Good Sam	$247,584,496	$28,568,836	$22,314,062	$50,882,898	$298,467,394	9.57%	7.48%	17.05%
210057	Shady Grove	$359,105,683	$27,052,951	$15,010,190	$42,063,140	$401,168,823	6.74%	3.74%	10.49%
210058	UMROI	$125,099,231	$124,314		$124,314	$125,223,545	0.10%	0.00%	0.10%
210060	Ft. Washington	$41,616,978	$2,492,557	$4,544,704	$7,037,260	$48,654,238	5.12%	9.34%	14.46%
210061	Atlantic General	$98,901,133	$4,484,808	$5,473,522	$9,958,330	$108,859,464	4.12%	5.03%	9.15%

Hosp ID	Hospital Name	Non-PAU Revenue A	Readmission Revenue B	PQI Revenue C	Total PAU Revenue D=B+C	Total Hospital Revenue E=A+D	% Readmission F=B/E	% PQI G=C/E	% PAU H=F+G
210062	MedStar Southern	$226,782,753	$24,750,327	$20,738,341	$45,488,667	$272,271,421	9.09%	7.62%	16.71%
210063	UM-St. Joseph	$384,002,900	$20,708,579	$11,795,139	$32,503,718	$416,506,618	4.97%	2.83%	7.80%
210064	Levindale	$54,110,621	$4,174,995		$4,174,995	$58,285,616	7.16%	0.00%	7.16%
210065	HC-Germantown	$84,357,920	$7,153,030	$5,277,822	$12,430,852	$96,788,772	7.39%	5.45%	12.84%
	STATEWIDE	**$15,149,341,051**	**$1,157,278,565**	**$715,599,646**	**$1,872,878,211**	**$17,022,219,263**	6.80%	4.20%	11.00%

*Holy Cross Germantown is combined with Holy Cross Hospital for PAU Savings calculations.

APPENDIX V. Modeling Results Proposed PAU Savings Policy Reductions for RY 2019

The following figure presents the proposed PAU savings adjustments for each hospital for RY 2019. The hospital's CY17 PAU percent (column B) is multiplied by the statewide required percent revenue adjustment (statewide proposed revenue reduction divided by the statewide CY17 PAU %) to calculate the RY19 PAU Savings Adjustment before protections (columns C and D). If hospitals are in the top quartile of hospitals with equivalent case-mix adjusted discharges of Medicaid, Self-Pay, and Charity (column E), the adjustment is capped at the statewide average reduction. The RY19 PAU Savings Adjustments after protections (columns F and G) are then adjusted to account for the additional revenue reductions necessary to match the statewide revenue reduction (columns H and I). Because last year's revenue reductions are reversed (column J) and the new PAU adjustments are entered into the update factor, the difference between the RY19 and RY18 revenue adjustments represent the net revenue impact to the RY19 update factor. (Columns K and L). For some hospitals, the net RY19 revenue adjustment may not be negative when the RY18 adjustment is reversed and the RY19 adjustment is included.

Appendix V. Figure 1. Proposed PAU Savings Policy Reductions for RY 2019, by Hospital

Hosp ID	Hospital Name	RY18 Permanent Total Revenue ($)	CY17 PAU %	RY19 PAU Savings Adj.	RY19 PAU Savings Adj. Before Protections	CY17 % ECMAD IP Medicaid/ Self-Pay Charity	RY19 PAU Adj. w/ Protection (%)	RY19 PAU Adj. w/ Protections Revenue ($)	RY19 PAU Adj. w/ Protections Revenue ($) normalized to statewide average	RY19 PAU Adj. w/ Protection (%)	RY18 PAU Savings Adj. w/ Protection ($)	Net RY19 Revenue Impact (%)	Net RY19 Revenue Impact ($)
		A	B	C=B* -15.91[10]	D = A*C	E	F	G = A*F	H=G + (0.06%*A)[11]	I=H/A	J	K = (H-G)/A	L=K*C
210001	Meritus	$321,955,560	13.48%	-2.14%	-$6,901,737	19.00%	-2.14%	-$6,901,737	-$7,084,294	-2.20%	-$5,520,664	-0.49%	-$1,563,738
210002	UMMC	$1,399,559,924	8.41%	-1.34%	-$18,719,134	30.59%	-1.34%	-$18,719,134	-$19,512,718	-1.39%	-$13,498,782	-0.43%	-$6,013,909
210003	UM-PGHC	$287,707,710	13.91%	-2.21%	-$6,365,917	43.10%	-1.75%	-$5,034,885	-$5,198,022	-1.81%	-$4,324,396	-0.30%	-$873,768
210004	Holy Cross	$489,724,686	11.19%	-1.78%	-$8,718,936	22.46%	-1.78%	-$8,718,936	-$8,996,622	-1.84%	-$7,893,731	-0.23%	-$1,102,860
210005	Frederick	$338,085,918	14.03%	-2.23%	-$7,542,765	7.41%	-2.23%	-$7,542,765	-$7,734,468	-2.29%	-$5,067,592	-0.79%	-$2,666,822
210006	UM-Harford	$102,314,327	16.54%	-2.63%	-$2,692,043	18.38%	-2.63%	-$2,692,043	-$2,750,058	-2.69%	-$2,524,681	-0.22%	-$225,398
210008	Mercy	$516,410,170	5.33%	-0.85%	-$4,374,419	24.93%	-0.85%	-$4,374,419	-$4,667,236	-0.90%	-$3,663,552	-0.19%	-$1,003,901
210009	Hopkins	$2,352,963,223	8.93%	-1.42%	-$33,404,112	23.40%	-1.42%	-$33,404,112	-$34,738,299	-1.48%	-$26,672,300	-0.34%	-$8,065,958
210010	Dorchester	$49,226,292	16.39%	-2.61%	-$1,283,415	25.53%	-1.75%	-$861,460	-$889,372	-1.81%	-$725,744	-0.33%	-$163,628

[10] Required % revenue adjustment in PAU revenue= Savings (-1.75%) / % PAU (11.00%) = -15.91%

[11] Adjustment to ensure statewide reduction after protection = -1.75 – -1.69% = -0.06%

Hosp ID	Hospital Name	RY18 Permanent Total Revenue ($)	CY17 PAU %	RY19 PAU Savings Adj.	RY19 PAU Savings Adj. Before Protections	CY17 % ECMAD IP Medicaid/ Self-Pay Charity	RY19 PAU Adj. w/ Protection (%)	RY19 PAU Adj. w/ Protections Revenue ($)	RY19 PAU Adj. w/ Protections Revenue ($) normalized to statewide average	RY19 PAU Adj. w/ Protection (%)	RY18 PAU Savings Adj. w/ Protection ($)	Net RY19 Revenue Impact (%)	Net RY19 Revenue Impact ($)
		A	B	C=B* -15.91[10]	D = A*C	E	F	G = A*F	H=G + (0.06%*A)[11]	I=H/A	J	K = (H-G)/A	L=K*C
210011	St Agnes	$422,820,202	14.66%	-2.33%	-$9,858,535	23.66%	-2.33%	-$9,858,535	-$10,098,284	-2.39%	-$8,072,607	-0.48%	-$2,025,732
210012	Sinai	$752,409,746	8.90%	-1.42%	-$10,654,796	24.29%	-1.42%	-$10,654,796	-$11,081,431	-1.47%	-$9,124,538	-0.26%	-$1,957,018
210013	Bon Secours	$115,902,722	19.97%	-3.18%	-$3,681,081	60.30%	-1.75%	-$2,028,298	-$2,094,018	-1.81%	-$1,723,772	-0.32%	-$370,193
210015	Franklin Sq	$522,059,009	14.60%	-2.32%	-$12,123,520	27.09%	-1.75%	-$9,136,033	-$9,432,053	-1.81%	-$7,430,356	-0.38%	-$2,001,574
210016	Wash Adventist	$265,729,172	13.42%	-2.13%	-$5,670,509	30.89%	-1.75%	-$4,650,261	-$4,800,936	-1.81%	-$3,898,038	-0.34%	-$902,948
210017	Garrett	$54,328,266	7.96%	-1.27%	-$688,078	16.09%	-1.27%	-$688,078	-$718,883	-1.32%	-$605,944	-0.21%	-$112,948
210018	Montgomery	$172,101,071	12.05%	-1.92%	-$3,297,276	15.60%	-1.92%	-$3,297,276	-$3,394,861	-1.97%	-$2,812,121	-0.34%	-$582,734
210019	Peninsula	$431,713,670	10.52%	-1.67%	-$7,225,018	18.08%	-1.67%	-$7,225,018	-$7,469,810	-1.73%	-$6,792,718	-0.16%	-$676,927
210022	Suburban	$313,631,832	9.96%	-1.58%	-$4,969,593	8.62%	-1.58%	-$4,969,593	-$5,147,430	-1.64%	-$4,484,669	-0.21%	-$662,704
210023	Anne Arundel	$609,013,273	8.70%	-1.38%	-$8,425,293	12.05%	-1.38%	-$8,425,293	-$8,770,618	-1.44%	-$6,881,944	-0.31%	-$1,888,550
210024	Union Mem	$421,547,476	11.70%	-1.86%	-$7,843,828	19.08%	-1.86%	-$7,843,828	-$8,082,856	-1.92%	-$5,756,652	-0.55%	-$2,326,099
210027	Western MD	$320,642,519	11.29%	-1.80%	-$5,758,759	14.49%	-1.80%	-$5,758,759	-$5,940,571	-1.85%	-$4,712,416	-0.38%	-$1,228,061
210028	St Mary's	$177,161,733	12.18%	-1.94%	-$3,432,392	19.88%	-1.94%	-$3,432,392	-$3,532,847	-1.99%	-$2,736,037	-0.45%	-$796,873
210029	JH Bayview	$647,476,458	11.75%	-1.87%	-$12,103,909	29.09%	-1.75%	-$11,330,838	-$11,697,973	-1.81%	-$9,362,447	-0.36%	-$2,335,448
210030	Chestertown	$55,473,722	11.77%	-1.87%	-$1,038,068	12.42%	-1.87%	-$1,038,068	-$1,069,523	-1.93%	-$1,117,206	0.09%	$47,707
210032	Union Cecil	$158,683,870	11.69%	-1.86%	-$2,950,207	26.69%	-1.75%	-$2,776,968	-$2,866,946	-1.81%	-$2,359,447	-0.32%	-$507,471
210033	Carroll	$225,263,359	16.56%	-2.63%	-$5,931,532	13.86%	-2.63%	-$5,931,532	-$6,059,262	-2.69%	-$4,341,595	-0.76%	-$1,717,633
210034	Harbor	$186,978,444	15.41%	-2.45%	-$4,584,361	32.62%	-1.75%	-$3,272,123	-$3,378,144	-1.81%	-$2,874,192	-0.27%	-$503,907
210035	UM-Charles	$148,909,451	12.60%	-2.00%	-$2,984,942	18.01%	-2.00%	-$2,984,942	-$3,069,377	-2.06%	-$2,803,843	-0.18%	-$265,506
210037	UM-Easton	$202,561,563	9.22%	-1.47%	-$2,970,792	17.31%	-1.47%	-$2,970,792	-$3,085,649	-1.52%	-$3,096,495	0.01%	$10,938
210038	UMMC Midtown	$234,227,770	14.46%	-2.30%	-$5,385,824	42.17%	-1.75%	-$4,098,986	-$4,231,799	-1.81%	-$3,442,404	-0.34%	-$789,348

Hosp ID	Hospital Name	RY18 Permanent Total Revenue ($)	CY17 PAU %	RY19 PAU Savings Adj.	RY19 PAU Savings Adj. Before Protections	CY17 % ECMAD IP Medicaid/ Self-Pay Charity	RY19 PAU Adj. w/ Protection (%)	RY19 PAU Adj. w/ Protections Revenue ($)	RY19 PAU Adj. w/ Protections Revenue ($) normalized to statewide average	RY19 PAU Adj. w/ Protection (%)	RY18 PAU Savings Adj. w/ Protection ($)	Net RY19 Revenue Impact (%)	Net RY19 Revenue Impact ($)
		A	B	C=B* -15.91[10]	D = A*C	E	F	G = A*F	H=G + (0.06%*A)[11]	I=H/A	J	K = (H-G)/A	L=K*C
210039	Calvert	$143,263,199	11.31%	-1.80%	-$2,577,050	16.67%	-1.80%	-$2,577,050	-$2,658,284	-1.86%	-$2,244,537	-0.29%	-$413,744
210040	Northwest	$255,493,814	15.98%	-2.54%	-$6,493,091	21.66%	-2.54%	-$6,493,091	-$6,637,962	-2.60%	-$5,594,125	-0.41%	-$1,043,948
210043	UM-BWMC	$409,703,662	14.43%	-2.29%	-$9,400,294	17.57%	-2.29%	-$9,400,294	-$9,632,606	-2.35%	-$8,105,616	-0.37%	-$1,526,966
210044	GBMC.	$442,204,396	7.76%	-1.23%	-$5,459,037	10.41%	-1.23%	-$5,459,037	-$5,709,778	-1.29%	-$5,312,059	-0.09%	-$397,542
210045	McCready	$15,618,329	8.03%	-1.28%	-$199,550	14.76%	-1.28%	-$199,550	-$208,406	-1.33%	-$208,250	0.00%	-$156
210048	Howard	$298,460,107	12.72%	-2.02%	-$6,039,326	15.65%	-2.02%	-$6,039,326	-$6,208,560	-2.08%	-$5,035,913	-0.39%	-$1,172,650
210049	UM-UCH	$334,751,759	10.94%	-1.74%	-$5,824,956	11.51%	-1.74%	-$5,824,956	-$6,014,768	-1.80%	-$4,909,071	-0.33%	-$1,105,685
210051	Doctors	$239,227,750	17.39%	-2.77%	-$6,617,541	18.97%	-2.77%	-$6,617,541	-$6,753,189	-2.82%	-$5,306,892	-0.60%	-$1,446,371
210055	UM-Laurel	$99,871,376	10.71%	-1.70%	-$1,701,713	29.71%	-1.70%	-$1,701,713	-$1,758,342	-1.76%	-$1,484,000	-0.27%	-$274,347
210056	Good Sam	$264,597,392	17.05%	-2.71%	-$7,174,724	20.41%	-2.71%	-$7,174,724	-$7,324,757	-2.77%	-$5,845,659	-0.56%	-$1,479,099
210057	Shady Grove	$387,674,359	10.49%	-1.67%	-$6,465,264	19.52%	-1.67%	-$6,465,264	-$6,685,085	-1.72%	-$5,160,898	-0.39%	-$1,524,336
210058	UMROI	$120,638,692	0.10%	-0.02%	-$3,048	24.39%	-0.02%	-$19,049	-$87,454	-0.07%	-$8,357	-0.07%	-$79,139
210060	Ft. Wash	$48,244,588	14.46%	-2.30%	-$1,109,881	18.55%	-2.30%	-$1,109,881	-$1,137,237	-2.36%	-$1,010,796	-0.26%	-$126,449
210061	AGH	$105,151,502	9.15%	-1.46%	-$1,529,962	12.85%	-1.46%	-$1,529,962	-$1,589,585	-1.51%	-$1,180,344	-0.39%	-$409,250
210062	Southern MD	$271,260,318	16.71%	-2.66%	-$7,208,288	21.35%	-2.66%	-$7,208,288	-$7,362,099	-2.71%	-$5,817,602	-0.57%	-$1,544,556
210063	UM-St. Joes	$398,711,781	7.80%	-1.24%	-$4,948,971	11.49%	-1.24%	-$4,948,971	-$5,175,050	-1.30%	-$4,623,341	-0.14%	-$551,817
210064	Levindale	$58,867,710	7.16%	-1.14%	-$670,682	5.70%	-1.14%	-$670,682	-$704,061	-1.20%	-$611,430	-0.16%	-$92,658
210065	HC-German	$102,303,760	11.19%	-1.78%	-$1,821,391	22.10%	-1.78%	-$1,821,391	-$1,879,400	-1.84%	-$1,649,332	-0.22%	-$230,081
Total	**Total**	**16,292,627,632**	**11.00%**	**-1.75%**	**-285,120,984**	**21.05%**	**-1.69%**	**-275,882,670**	**-285,120,984**	**-1.75%**	**-28,429,107**	**-0.35%**	**-56,698,344**
					Top Quartile=	24.53%							

Rehab and Ortho Revenue is adjusted to 16% of total RY 18 Permanent Inpatient Revenue.

Percentages have been rounded for display but full numbers may be used in calculations. Final scaling percentages are rounded to two decimal places.

A combined PAU percent is used for Holy Cross and Holy Cross Germantown for savings but results are presented separately for reference

Supplemental Report on Efforts to Modernize PAU Measurement and Adjustment in Future Years

This supplemental report will provide additional context on three main areas of concern as staff works to modernize the PAU measurement and adjustment in future years: A) HSCRC Expansion/Refinement of PAU Measure; B) Hospital-defined PAU; and C) Savings Protections for individual hospitals

Future Expansion and Refinement of PAU

Future Expansion and Refinement of PAU

The Potentially Avoidable Utilization (PAU) measure is an indicator of hospital spending and services that may be avoidable with high-value care throughout the healthcare system. To date, the PAU measure has focused on the specific outcomes that may result from the underuse of high-value primary care and community health, as measured through preventable admissions (Prevention Quality Indicators (PQIs)) and readmissions. While the current PAU methodology quantifies about 11% of hospital revenue as associated with potentially avoidable utilization, research estimates indicate as much as 25-30% of total medical care spending is unnecessary or wasteful.[12] Although hospital care is a smaller subset of total medical care, this research indicates there are significant domains of hospital spending that remain unmeasured in the current PAU measure, including overuse of potentially low value care and additional outcomes of underuse of high value care.[13] Given this literature and stakeholder feedback, HSCRC staff plans to explore the measurement of PAU to capture a larger, more comprehensive amount of use/revenue.

In addition to expanding PAU, it is important to reassess and refine the existing measures and revenue captured in PAU. PQIs and readmissions encompass $1.8 billion in hospital revenue annually in Maryland, and reflect the outcomes of care fragmentation and lack of coordination between hospitals and community providers. Improvements and alignment in care delivery between these historically separate groups are crucial for reducing this potentially preventable utilization and for success in the All-Payer Model. While hospitals have achieved significant progress in transforming the delivery system to date, there must be a continued emphasis on readmissions and PQIs ensures focus on care coordination, improving quality of care, and providing care management for complex and high-needs patients. For these reasons, staff has continued to recommend the use of PQIs and readmissions in PAU as measures of coordination between hospitals, primary care, and communities. However, as part of the PAU expansion efforts, HSCRC staff plans to explore stakeholder concerns around how PQIs are implemented in PAU Savings and potentially refine the measure use.

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[12] Berwick DM, Hackbarth AD. Eliminating Waste in US Health Care. *JAMA.* 2012;307(14):1513–1516.
[13] Mafi, John N., et al. "Association of primary care practice location and ownership with the provision of low-value care in the United States." *JAMA internal medicine* 177.6 (2017): 838-845.

Initial Considerations, Research, and Outreach

Staff has solicited initial input on PAU expansion from the Performance Measurement Workgroup, Consumer Standing Advisory Committee, measurement experts, and others. Based on those initial conversations, as well as other items mentioned in the Commissioner white paper,[14] a number of initial important principles have emerged for future measurement of PAU. An updated PAU measure should:

- Continue to be measured on an all-payer basis
- Be nationally recognized or used in other programs/states
- Be supported by clinical recommendations, consumer advocacy groups, and the medical and economic literature.
- Incorporate a significant amount of revenue
- Consider how PAU is used in multiple Commission policies. Not all measures that may be under consideration for PAU can be directly linked to revenue.
- Prioritize aligning measures with outcomes of existing or planned hospital avoidable use initiatives, rather than requiring new programs to target the measure

Potential Domains of PAU Measurement

Low Value Care. Broadening the PAU measure to encompass potentially low value care emphasizes reducing medical care that may have little or no net benefit (or even potentially cause harm),[15] rather than on the upstream prevention of clinical need. Harms can include inappropriate treatment, false positives, clinical risks, and unnecessary consumer and delivery system cost. While doctors and clinical specialties have begun to identify potentially low value services through the Choosing Wisely initiatives, potentially low value care is still a significant component of cost in the overall healthcare system, estimated to be around $340 billion in 2009.[16] Consumer groups generally support measurement of low value, but there is also a recognition that the definition of "value" may vary from individual to individual and what is inappropriate for one patient may be appropriate for another.[17,18] Because of these concerns, it may make sense to focus first on well-defined measures that are shown to have little or no clinical value and that the global budget system already incentivizes hospitals to reduce. This approach could allow the Commission to identify problematic patterns of low value care while

[14] http://www.hscrc.maryland.gov/Documents/December%202017%20Post%20Meeting%20Materials.pdf
[15] IOM (Institute of Medicine). *Crossing the Quality Chasm: a New Health System for the 21st Century*. Washington, D.C.: National Academy Press; 2001.
[16] Institute of Medicine. 2013. *Best Care at Lower Cost: the Path to Continuously Learning Health Care in America*. Washington, D.C.: National Academies Press; 2013.
[17] Schlesinger M, Grob R. Treating, Fast and Slow: Americans' Understanding of and Responses to Low-Value Care. *The Milbank Quarterly*. 2017;95(1):70-116. doi:10.1111/1468-0009.12246.
[18] Brownlee, S. and Berman, A. Defining Value in Health Care Resource Utilization: Articulating the Role of the Patient. John T Harford Foundation; 2016.

limiting unintended consequences.[19] It also may be more appropriate to measure potentially low value care as rates or as a global measure of overuse, which may not directly link to revenue.[20] As part of this process, HSCRC plans to explore existing composite tools, such as the Johns Hopkins Overuse Index[21] and the MedInsight Health Waste Calculator.[22] The measures selected should represent a significant amount of potentially avoidable spending, regardless of whether the measurement is based on performance rates or revenue.

High Value Care. Enhancements in chronic care— with a focus on prevention and treatment in the office, home, and long-term care settings—are essential to improving indicators of healthy lives and health equity. Success in the global budget setting relies on patients receiving care in the appropriate settings; therefore, a central focus of the All-Payer Model is the reduction of hospital utilization through improved care coordination and enhanced community-based care. The current measure of PAU focuses on preventing the need for hospitalizations through improved management in the community, but it does not comprehensively cover all populations or settings of care. For example, measures could be added to reflect innovative community-hospital partnerships for specific populations, such as physician rounding to prevent hospitalizations from nursing home or long-term care patients. For settings of care, Maryland hospitals may be investing in emergency department navigator programs to connect patients with primary care providers, but prevention quality indicators may not capture all of the avoided revenue from these efforts.

Refinements to current measure

While HSCRC continues to recommend the use of PQIs and readmissions, staff plans to examine PAU measurement in future years to address stakeholder measurement concerns, in particular relating to the use of PQIs. As originally specified by the Agency for Healthcare Research and Quality, PQIs were intended to capture population-level differences in care quality per 100,000 residents. The PAU Savings Policy uses the same logic and code to identify PQIs; however, the policy compares the hospital revenue associated with these admissions with total hospital revenue. Stakeholders have noted that it may not be appropriate to use hospital revenue as the comparison, given that effective efforts to reduce PQIs may actually lead to less hospital

[19] Bhatia RS, Levinson W, Shortt S, et al. Measuring the effect of Choosing Wisely: an integrated framework to assess campaign impact on low-value care. *BMJ Quality & Safety*. 2015;24(8):523-531. doi:10.1136/bmjqs-2015-004070.
[20] Segal JB, Nassery N, Chang HY, Chang E, Chan K, Bridges JF. An index for measuring overuse of health care resources with Medicare claims. *Med Care*. 2015 Mar;53(3):230-6.
[21] Ibid.
[22] MedInsight calculator was used in all payers claims databases in both Washington and Virginia to assess the cost of unnecessary services.
Washington: Washington Health Alliance. First Do No Harm: Calculating Health Care Waste in Washington State. Feb 2018. Available at https://www.wacommunitycheckup.org/media/47156/2018-first-do-no-harm.pdf.
Virginia: Mafi JN, Russell K, Bortz BA, Dachary M, Hazel WA Jr, Fendrick AM. Low-Cost, High-Volume Health Services Contribute The Most To Unnecessary Health Spending. Health Aff (Millwood). 2017 Oct 1;36(10):1701-1704.

spending, i.e., a reduced denominator. This issue is somewhat mitigated in Maryland by the fact that the state operates in a GBR hospital system.

However, staff acknowledges measurement issues may remain and some issues that initially prevented a population-based approach may now be surmountable. In the time since PQIs were initially implemented, the Total Cost of Care Workgroup has developed a method of attributing responsibility for Maryland residents' utilization and spending to hospitals based on geographic attribution, known as Primary Service Area-Plus (PSA-Plus). PSA-plus is based on hospital primary service areas as indicated in global budget revenue agreements plus enhancements to ensure full geographic coverage for the state. The Commission can explore using this geographic method in PAU as a population-level denominator for readmissions and PQIs. However, this change might require a shift from a revenue-based measure to a discharge-per capita measure, which would require additional steps to translate to revenue. If discharge approach is used for PAU savings, a different PAU measures may be needed for the Market Shift adjustment, as this relies on actual revenue changes.

Next Steps

As presented to the Performance Measurement Work Group in the March and April meetings, HSCRC staff plans to implement any additional measurement of PAU for the calendar year 2019 performance period, effective for payment adjustments in RY2021. This timeline allows for development and testing additional measures before the performance period in which those measures would be applied.

In May and June, staff expects to receive additional comments on PAU expansion from the Commission and stakeholders through the draft and final submission of the RY2019 PAU Savings Policy. Staff plans to perform analyses and solicit continual input on RY2021 specific measures and their feasibility throughout the summer and fall, and staff intends to start reporting measures for potential use in Fall 2018. This will allow stakeholders to become familiar with and help refine the measures prior to the CY 2019 performance period. Ongoing stakeholder engagement is crucial to effective expansion and refinement of PAU, with collaboration and input from consumers, hospitals, clinicians, and payers through HSCRC workgroups as well as formal and informal presentations and comment periods.

Hospital-defined PAU Measurement

Hospital defined PAU measurement

As an element of alignment with hospitals, the Commissioner White Paper from November 2017 proposed that hospitals be allowed to submit their own measurement of PAU. Under this approach, hospitals could submit proposals for PAU programs as an alternative to the standard PAU Savings Policy. The proposals would need to be approved by HSCRC and would be required to meet guidelines set out by the HSCRC, which could include elements such as being

grounded in the medical and economic literature and demonstrate strong physician leadership. In addition, hospitals would need to present an implementation plan to achieve expected reductions in PAU.

Initial Considerations, Outreach, and Research

HSCRC staff has requested preliminary input on hospital-defined PAU approaches and incorporated many of the guidelines outlined in the White Paper in the considerations for PAU Expansion. With input from hospitals and other stakeholders, the collaborative process around PAU expansion should better reflect hospital efforts to reduce PAU and lessen the need for unique hospital-defined PAU. Staff believes that this approach, or alternatives using the guidelines outlined in the White Paper in a different way, such as necessary criteria for hospitals to request rate reviews, may achieve similar purposes as hospital-defined PAU with less burden for both hospitals and Commission staff.

Staff has summarized some practical concerns around implementing the suggested hospital-specific PAU in the PAU Savings Program below:

- The Commission may also want to consider the potential feasibility of evaluating unique proposals for all Maryland acute hospitals. Monitoring changes and updates to measure specifications for the HSCRC statewide programs already takes up a significant amount of staff resources. Even if hospitals submitted their own measure monitoring and proposed updates, staff would be required to evaluate each measure change to ensure it was valid, or not allow any measure updates throughout the year, which would not be appropriate in many cases.
- As currently structured, the PAU Savings Policy uses relative ranking of hospitals to determine hospital-specific scaling of the PAU Savings adjustment. Therefore, it would be necessary to redesign the PAU Savings Policy to allow hospitals to opt out of the standard policy.
- Staff is concerned about the potential for approving adjustments based on hospital-sourced data that cannot be independently verified by the Commission, and without non-hospital stakeholder input.
- Given current efforts to redesign the Maryland Hospital-Acquired Conditions program, staff may not have sufficient bandwidth to also redesign PAU Savings.

Next Steps

As presented to the Performance Measurement Work Group in the March and April meetings, HSCRC staff plans to implement any additional measurement of PAU for the calendar year 2019 performance period, effective for payment adjustments in RY2021 (i.e., RY 2020 will use

readmissions and PQIs unless stakeholders waive requirement to preview measures for one year). Although hospital-defined PAU may not affect all hospitals in terms of measurement, hospitals opting out of the standard PAU Savings program will affect other hospitals due to the relative ranking used in PAU Savings. This timeline aims to allow development and testing of the impact of opt-outs on other hospitals before the performance period begins.

In May and June, staff expects to receive additional comments on hospital-defined PAU from the Commission and stakeholders through the draft and final submission of the RY2019 PAU Savings Policy. Given the burden of separate reporting and measurement for each hospital in PAU Savings, staff plans to explore alternative approaches to hospital-defined PAU, such as in rate reviews. Staff plans to perform analyses and solicit input and feasibility on RY2021 hospital-defined PAU throughout the summer and fall.

Discussion on PAU Savings Hospital Protections

PAU Savings Protections

As detailed in the recommended Draft RY2019 PAU Savings Policy, staff is recommending that the PAU savings reductions continue to be capped at the state average if a hospital serves a high proportion of disadvantaged populations.[23] In the RY2019 Policy, this criterion was defined as hospitals in the top quartile in Maryland in terms of the percentage of their total inpatient equivalent case-mix adjusted discharges that are Medicaid/Self-Pay/Charity. This policy was initially adopted because hospitals serving areas with higher socioeconomic burden may face additional challenges in reducing PAU, such as issues with transportation, family and community resources, or health literacy barriers.

These hospitals may have more room for improvement due to historically high rates of PAU, but it may be more difficult for them to reach statewide attainment targets. Because, unlike other HSCRC performance-based programs, the PAU Savings Program does not credit hospitals for improvement, the PAU Savings Protection policy aims to ensure that these hospitals have the needed resources to serve their communities, while still incentivizing them to reduce their PAU percentage below the statewide level to receive a lower reduction. On the other hand, the Commission does not want to excuse poor quality of care or inadequate care coordination for patients in disadvantaged communities. In light of these issues, further attention will be given to modifying or eliminating this protection in future years.

[23] The measure includes the percentage of Medicaid and Self-pay or Charity equivalent case-mix adjusted discharges for inpatient and observation cases with 23 hours or longer stays, with protection provided to those hospitals in the top quartile.

Initial Considerations

Staff continues to discuss the issue with stakeholders, including consumers, payers, and hospitals, and is exploring methods of risk adjustment. At this time, staff has presented these concerns and potential strategies to the Consumer Standing Advisory Committee and the Performance Measurement Work Group. Feedback has been broad, and staff continues to solicit additional feedback to understand how best to proceed. For example, members of the Consumer Standing Advisory Committee suggested scaling the protection based on improvement.

Next Steps

HSCRC is seeking input on the protections under the policy to ensure that the policy remains appropriate and valid for the goals of the PAU Savings Program. In particular, staff is considering adjusting the protection for other factors or phasing out the protection over time. For potential inclusion in future RY policies, staff will model the impact of phasing out the protection and potential ways to scale the protection for improvement by Fall 2018, which will be just before the next performance year (CY 2019, RY 2021). Again, staff intends to alter or phase out the PAU protection in future years, so feedback on how to most responsibly proceed is of utmost importance.

Draft Staff Recommendation

MAY 9, 2018

The Commission staff recommends for review and public comment revisions to the Relative Value Unit (RVU) Scale for Respiratory Therapy and Pulmonary Function Testing services. The revisions are specific to the Chart of Accounts and Appendix D of the Accounting and Budget Manual. These revised RVUs were developed by a workgroup established by the Health Services Cost Review Commission, and membership included representatives of many of the Maryland hospitals. The RVU scale was updated to reflect the revisions to the Current Procedural Terminology (CPT) codes mandated by the American Medical Association. At your direction, the staff will send the revisions to all Maryland hospitals for their review and comment.

APPENDIX D
STANDARD UNIT OF MEASURE REFERENCES
RESPIRATORY THERAPY & PULMONARY FUNCTION TESTING

ACCOUNT NUMBER	COST CENTER TITLE
~~7240~~ 7420	Respiratory Therapy
7440	Pulmonary Function Testing

~~The~~ Respiratory Therapy and Pulmonary Function Testing ~~rate centers~~ encompass services that ~~various members of the health care team may~~ respiratory care practitioners and specially trained pulmonary function teams provide. In keeping with the principles in the Medicare Hospital Manual §210.10, when a respiratory therapist or pulmonary function technologist provides these services, they are reportable as respiratory or pulmonary services, ~~and~~ in accordance with the Code of Maryland Regulations (COMAR) for scope of service. ~~However, if~~ If a nurse or other health care team member provides the services, they are considered a component of the patient day or visit ~~charge~~, and they are not separately reportable. ~~When services are provided on an inpatient basis, no CPT (Current Procedural Terminology) code is associated with the individual service on the patient bill. When providing services to outpatients, a CPT code must be associated with each service.~~

~~In an attempt to standardize the reporting of respiratory and pulmonary services, the most appropriate code(s) are listed in this appendix. These CPT codes are based on the 2018 AMA (American Medical Association) CPT manual. CPT codes are updated annually; therefore, these codes may change from year to year. As CPT is a physician based code set, it has a limited number and variety of CPT codes representing the services generally performed by respiratory therapists. A number of procedures did not have a matching CPT code; therefore, 94799 was used. It is recognized that the prevalence of the nonspecific 94799 code might be cause for concern to some institutions. However, in order to code the procedure appropriately, using 94799 was the best code available in many instances. It is understood that, as a nonspecific code, 94799 may not be accepted by some payers on an outpatient basis.~~

~~Each institution is expected to abide by CPT coding tenets and modifier use when assigning CPT codes to individual respiratory and pulmonary procedures.~~

Approach

Respiratory Therapy (RES) and Pulmonary Function (PUL) Relative Value Units (RVUs) were developed with the aid of an industry task force under the auspices of and approved by the Health Services Cost Review Commission. The descriptions of codes in this section of Appendix D were obtained from the 2018 edition of the Current Procedural Terminology (CPT) manual and the 2018 edition of the Healthcare Common Procedure Coding System (HCPCS). In addition, for those services requiring usage of an "unlisted" CPT code, the task force developed a description for the service. In assigning RVUs, the task force used the procedure minutes established in the 2012 AARC Uniform Reporting Manual as a reference with a ratio of 1 minute = 1 RVU. RVUs were then assigned using the following protocol ("RVU Assignment Protocol").

RVU Assignment Protocol

The AARC Uniform Reporting Manual has established minutes for respiratory therapy services. The AARC established minutes based on the mean and median time to perform the service within patient

[1] For service descriptions and RVU explanations refer to the Appended D Preface for RES/PUL services

categories of Adult, Pediatric and Neonatal. The median number of minutes in the Adult category ~~will be~~ has been used as the basis for RVUs as adults are the majority patient population that receives respiratory therapy and pulmonary function services. All exceptions have been noted.

1. CPT codes that were not assigned in accordance with the AARC median:
    a. CPT 33946 [Extracorporeal membrane oxygenation {ECMO/extracorporeal life support (ECLS)} provided by physician; initiation, veno-venous] and CPT 33947 [Extracorporeal membrane oxygenation {ECMO/extracorporeal life support (ECLS)} provided by physician; initiation, veno-arterial] do not have any associated AARC minutes. These services require 1,820 minutes of staff time per initial day on average per the task force. 1,820 RVUs have been assigned.
    b. CPT 33948 [Extracorporeal membrane oxygenation {ECMO/extracorporeal life support (ECLS)} provided by physician; daily management, each day, veno-venous] and CPT 33949 [Extracorporeal membrane oxygenation {ECMO/extracorporeal life support (ECLS)} provided by physician; daily management, each day, veno-arterial] do not have any associated AARC minutes. These services require 1,440 minutes of staff time per subsequent day on average per the task force. 1,440 RVUs have been assigned.
    c. CPT 36410 [Venipuncture, age 3 years or older] is assigned 15 minutes by the AARC. However, this procedure is typically "packaged" by Medicare and will be assigned zero (0) RVUs.
    d. CPT 36416 [Collection of capillary blood specimen (eg, finger, heel, ear stick)] has a median of 17.5 AARC minutes. However, as this is a lab service, RVUs will not be assigned. The code will remain in Appendix D and will be referenced as a lab service. The task force also noted that Medicare requests hospitals not separately report this service.
    e. CPT 92950 [Cardiopulmonary resuscitation (eg, in cardiac arrest)] has a median of 40 AARC minutes. This service typically involves includes two (2) respiratory therapists. Therefore, the task force agreed the AARC minutes would be doubled and 80 RVUs would be assigned.
    f. CPT 93463 [Pharmacologic agent administration (eg, inhaled nitric oxide, intravenous infusion of nitroprusside, dobutamine, milrinone, or other agent) including assessing hemodynamic measurements before, during, after, and repeat pharmacologic agent administration, when performed (list separately in addition to code for primary procedure)] has a median of 15.5 AARC minutes for Nitric Oxide Delivery- System Calibration and 30 AARC minutes for Nitric Oxide Delivery- Set up. The task force agreed that the minutes would be combined and 46 RVUs would be assigned. This code is sometimes referred to as a "Vaso-active challenge" test and is only used when support is provided by a respiratory therapist in the Cath Lab. This service is bundled into Inhaled Nitric Oxide Therapy, code 94799, daily reportable service, is used when provided in non-Cath lab, typically intensive care settings.
    g. CPT 93503 [Insertion and placement of flow directed catheter (eg, Swan-Ganz) for monitoring purposes] does not have any associated AARC minutes. The task force indicated that this service is currently not performed in Maryland and is a physician service. Therefore zero (0) RVUs will be assigned.

[1] For service descriptions and RVU explanations refer to the Appended D Preface for RES/PUL services

h. CPT 94002 [Ventilation assist and management, initiation of pressure or volume preset ventilators for assisted or controlled breathing; hospital inpatient/observation, initial day] has a median of 30 AARC minutes. This service has many component services within the AARC listing. The task force agreed to assign 250 RVUs for adults and 300 RVUs for neonates based on the combined amount of time spent on direct and indirect ventilator activities/support for patients. This service bundles all services provided to ventilator patients including but not limited to mobility, transports, spontaneous mechanics, patient assessments and system checks, etc. into a once daily reportable service.

i. CPT 94003 [Ventilation assist and management, initiation of pressure or volume preset ventilators for assisted or controlled breathing; hospital inpatient/observation, subsequent day] has a median 15 AARC minutes. This service has many component services within the AARC listing. The task force agreed to assign 250 RVUs for adults and 300 RVUs for neonates based on the combined amount of time spent on direct and indirect ventilator activities/support for patients. This service bundles all services provided to ventilator patients including but not limited to mobility, transports, spontaneous mechanics, patient assessments and system checks, etc., into a once daily reportable service.

j. CPT 94004 [Ventilation assist and management, initiation of pressure or volume preset ventilators for assisted or controlled breathing; nursing facility, per day] did not have assigned AARC minutes. This service is specific to a nursing facility. Therefore, zero (0) RVUs will be assigned.

k. CPT 94005 [Home ventilator management care plan oversight of a patient (patient not present) in home, domiciliary or rest home (eg, assisted living) requiring review of status, review of laboratories and other studies and revision of orders and respiratory care plan (as appropriate), within a calendar month, 30 minutes or more] did not have assigned AARC minutes. This service is performed on patients at home or a rest home. Therefore, zero (0) RVUs will be assigned.

l. CPT 94014 [Patient-initiated spirometric recording per 30-day period of time; includes reinforced education, transmission of spirometric tracing, data capture, analysis of transmitted data, period recalibration and review and interpretation by a physician or other qualified health care professional] and 94015 [Patient-initiated spirometric recording per 30-day period of time; recording (includes hook-up, reinforced education, data transmission, data capture, trend analysis, and periodic recalibration] did not have assigned AARC minutes. These services are rarely performed currently, therefore, the task force agreed these codes should be reported as "By Report."

m. CPT 94016 [Patient-initiated spirometric recording per 30-day period of time; review and interpretation only by a physician or other qualified health care professional] did not have assigned AARC minutes. This is a physician only service, therefore zero (0) RVUs will be assigned.

n. CPT 94150 [Vital capacity, total (separate procedure)] did not have assigned AARC minutes. The task force briefly discussed this code and agreed that the current 18 RVUs per Appendix D are still valid. Therefore, 18 RVUs will be assigned to this code. See note regarding SEPARATE PROCEDURES.

o. CPT 94250 [Expired gas collection, quantitative, single procedure (separate procedure)] did not have assigned AARC minutes. This code is similar in time and resources to CPT

[1] For service descriptions and RVU explanations refer to the Appended D Preface for RES/PUL services

94400. Therefore, 30 RVUs will be assigned. See note regarding SEPARATE PROCEDURES.

p. CPT 94375 [Respiratory flow volume loop] did not have assigned AARC minutes. This procedure is bundled into spirometry therefore zero (0) RVUs will be assigned.

q. CPT 94450 [Breathing response to hypoxia (hypoxia response curve)] has 60 AARC minutes. This code will be assigned 30 RVUs as it is more similar to CPT 94400 [Breathing response to CO2, CO2 response curve].

r. CPT 94453 [High altitude simulation test (HAST), with interpretation and report by a physician or other qualified health care professional; with supplemental oxygen titration] did not have assigned AARC minutes. This service is similar to CPT 94452 (45 RVUs) and therefore will be assigned 45 RVUs.

s. CPT 94617 [Exercise test for bronchospasm, including pre-and post-spirometry, electrocardiographic recording(s), and pulse oximetry] did not have assigned AARC minutes. This service is similar to deleted CPT 94620 [Exercise-Induced Bronchospasm Challenge] with median minutes of 71 therefore, 71 RVUs will be assigned.

t. CPT 94618 [Pulmonary stress testing (eg, 6-minute walk test), including measurement of heart rate, oximetry, and oxygen titration, when performed] did not have assigned AARC minutes. This code was similar to deleted CPT 94620 [Shuttle Walk Test] with median minutes of 30 therefore, 30 RVUs will be assigned.

u. CPT 94621 [Pulmonary stress testing; complex (including measurements of CO2 production, O2 uptake, and electrocardiographic recordings] has 30 AARC minutes. This code will be assigned 90 minutes as complex pulmonary stress testing should be higher than the simple pulmonary stress testing RVUs.

v. CPT 94640 [Pressurized or nonpressurized inhalation treatment for acute airway obstruction for therapeutic purposes and/or for diagnostic purposes such as sputum induction with an aerosol generator, nebulizer, metered dose inhaler or intermittent positive pressure breathing (IPPB) device] is reportable once per encounter. An encounter starts when the patient enters the facility and ends when the patient leaves the facility. The time involved with this service varies with each patient and is considerably different between an inpatient and outpatient; as such, there is a different RVU based upon patient classification. An inpatient may receive on average of 6 treatments per day with each treatment requiring 20 minutes of clinical care time. An average stay for these patients may be 4 days. Calculation: 6 treatments x 20 minutes per treatment x 4 days = 480 minutes. An outpatient receives on average 2 treatments per day with each treatment requiring 20 minutes of clinical care time. Calculation: 2 treatments x 20 minutes per treatment = 40 minutes/RVUs.

w. CPT 94642 [Aerosol inhalation of Pentamidine for pneumocystis carinii pneumonia treatment or prophylaxis] did not have AARC minutes. This procedure is about 60 minutes in duration. Therefore, 60 RVUs will be assigned.

~~x.~~ CPT 94660 [Continuous positive airway pressure ventilation (CPAP), initiation and management] did not have AARC minutes. This service requires an average of six separate respiratory therapist visits per day with an average of 20 minutes each. Therefore, 120 RVUs will be assigned to this code. This service is inclusive of

[1] For service descriptions and RVU explanations refer to the Appended D Preface for RES/PUL services

respiratory therapist time. Home equipment used only in the absence of respiratory therapist time is not reportable.

y. CPT 94662 [Continuous negative pressure ventilation (CNP), initiation and management] did not have AARC minutes. This service requires an average of six separate respiratory therapist visits per day with an average of 20 minutes each. Therefore, 120 RVUs will be assigned to this code.

z. CPT 94669 [Mechanical chest wall oscillation to facilitate lung function, per session] did not have AARC minutes. This procedure is approximately 30 minutes in duration. Therefore, the task force agreed to assign 30 RVUs to this code. This is not to be reported with CPT 94667 [Manipulation chest wall; Initial demonstration] and CPT 94668 [Manipulation chest wall; Subsequent demonstration].

aa. CPT 94680 [Oxygen uptake, expired gas analysis; rest and exercise, direct, simple] did not have AARC minutes. This procedure is approximately 75 minutes in length. Therefore, 75 RVUs will be assigned to this code.

bb. CPT 94681 [Oxygen update, expired gas analysis; including CO2 output, percentage oxygen extracted] did not have AARC minutes. This procedure is similar to CPT 94621 [Pulmonary Stress Testing, complex…] in time and resources, which is assigned 90 RVUs. Therefore, 90 RVUs will be assigned to this code.

cc. CPT 94727 [Gas dilution or washout for determination of lung volumes and, when performed, distribution of ventilation and closing volumes] did not have AARC minutes. This procedure is similar to CPT 94726 (Plethysmography for determination of lung volumes and when performed, airway resistance) in time and resources, which is assigned 19 RVUs. Therefore, 19 RVUs will be assigned to this code.

dd. CPT 94750 [Pulmonary compliance study (eg, plethysmography, volume and pressure measurements] did not have AARC minutes. This procedure is approximately 30 minutes in length. Therefore, 30 RVUs will be assigned to this code.

ee. CPT 94761 [Noninvasive ear or pulse oximetry for oxygen saturation; multiple determinations (eg, during exercise)] has a median of 20 AARC minutes. The task force agreed that 20 RVUs was not sufficient for this procedure as this typically takes 30 minutes. Therefore 30 RVUs will be assigned to this code.

ff. CPT 94762 [Noninvasive ear or pulse oximetry for oxygen saturation; by continuous overnight monitoring (separate procedure)] has a median of 20 AARC minutes. The task force agreed that 20 RVUs was not sufficient for this procedure as this typically takes 30 minutes as it is a separate procedure that includes downloading and reporting. Therefore 30 RVUs will be assigned to this code. See note regarding SEPARATE PROCEDURES.

gg. CPT 94770 [Carbon dioxide, expired gas determination by infrared analyzer] has a median of 7 AARC minutes. The task force referenced applicable to bedside end tidal CO2 procedures, and agreed that 7 RVU was not sufficient for this procedure it typically takes 40 minutes. Therefore, 40 RVUs will be assigned to this code.

hh. CPT 94774 [Pediatric home apnea monitoring event recording including respiratory rate, pattern and heart rate per 30-day period of time; includes monitor attachment, download of data, review, interpretation, and preparation of a report by a physician or other

[1] For service descriptions and RVU explanations refer to the Appended D Preface for RES/PUL services

qualified health care professional]did not have AARC minutes. This code will be assigned zero (0) RVUs as this is a global CPT not to be used by hospitals.

ii. CPT 94775 [Pediatric home apnea monitoring event recording including respiratory rate, patter and heart rate per 30-day period of time; monitor attachment only (includes hook-up, initiation of recording and disconnection)] did not have AARC minutes. This service is currently not being reported. The task force agreed that this should remain in Appendix D for future reporting and RVUs should be established "By Report."

jj. CPT 94776 [Pediatric home apnea monitoring event recording including respiratory rate, patter and heart rate per 30-day period of time; monitoring, download of information, receipt of transmission(s) and analyses by computer only] did not have AARC minutes. This code will be assigned zero (0) RVUs as the patient is not present at the hospital.

kk. CPT 94777 [Pediatric home apnea monitoring event recording including respiratory rate, patter and heart rate per 30-day period of time; review, interpretation and preparation of report only by a physician or other qualified health care professional] did not have AARC minutes. This code will be assigned zero (0) RVUs as this is a physician service.

ll. CPT 9780 [Car seat/bed testing for airway integrity, neonate, with continual nursing observation and continuous recording of pulse oximetry, heart rate and respiratory rate, with interpretation and report; 60 minutes] did not have AARC minutes. Per the AMA description, this procedure is 60 minutes. Therefore, 60 RVUs will be assigned.

mm. CPT 94781 [Car seat/bed testing for airway integrity, neonate, with continual nursing observation and continuous recording of pulse oximetry, heart rate and respiratory rate, with interpretation and report each additional full 30 minutes (List separately in addition to code for primary procedure)] did not have AARC minutes. Per the AMA description, this procedure is 30 minutes. Therefore, 30 RVUs will be assigned.

nn. CPT 99406 [Smoking and tobacco use cessation counseling visit; intermediate, greater than 3 minutes up to 10 minutes] did not have AARC minutes. Per the AMA description, this service is up to 10 minutes. Therefore, 10 RVUs will be assigned.

oo. CPT 99407 [Smoking and tobacco use cessation counseling visit; intensive, greater than 10 minutes] did not have AARC minutes. Per the AMA description, this service is 10 minutes or greater. Based on discussion from clinical staff, the task force agreed that this service is approximately 20 minutes. Therefore, 20 RVUs will be assigned.

pp. CPT 99464 [Attendance at delivery (when requested by the delivering physician or other qualified health care professional) and initial stabilization of newborn] has a median of 35 AARC minutes. The task force referenced applicable time and support and agreed that 35 minutes was not sufficient. After discussion, the task force agreed that this procedure requires approximately 60 minutes. Therefore, 60 RVUs will be assigned.

qq. HCPCS G0237 [Therapeutic procedures to increase strength or endurance of respiratory muscles, face to face, one on one, each 15 minutes (includes monitoring)] did not have AARC minutes. Per the AMA description, this service is each 15 minutes. Therefore, 15 RVUs, for each 15 minutes, will be assigned.

rr. HCPCS G0238 [Therapeutic procedures to improve respiratory function, other than described by G0237, one on one, face to face, per 15 minutes (includes monitoring)] did not have AARC minutes. Per the AMA description, this service is each 15 minutes. Therefore, 15 RVUs, for each 15 minutes, will be assigned.

[1] For service descriptions and RVU explanations refer to the Appended D Preface for RES/PUL services

ss. HCPCS G0239 [Therapeutic procedures to improve respiratory function or increase strength or endurance of respiratory muscles, two or more individuals (includes monitoring)] did not have AARC minutes. The ratio of care team provider to patient is ~~often~~ generally 1:4 and sessions last one hour. Therefore, 15 RVUs (60 minutes/4 patients) will be assigned.

tt. HCPCS G0424 [Pulmonary rehabilitation, including exercise (includes monitoring), one hour, per session, up to two sessions per day] did not have AARC minutes. The ratio of care team provider to patient is often 1:4 and sessions last one hour. The first and last sessions typically requires one-on-one time. Therefore, 18 RVUs (60 minutes/4 patients plus additional time to account for the first and last sessions) will be assigned.

SERVICES WITHOUT AN ASSIGNED CPT CODE

Various respiratory services do not have assigned CPT codes. These services will be included in Appendix D under CPT 94799. For all other usage of 94799, the RVU is "by report" and will require development based on minutes of staff time required.

a. Aerosol Therapy-

   a. Continuous aerosol mist= 30 RVUs/day. Note: Daily oxygen is bundled with this service.

   b. Continuous nebulization- non-bronchodilator= 250 RVUs/day. Used for continuous nebulization of non-bronchodilator medications, includes pulmonary vasodilator medications, antibiotics, or any non-bronchodilator nebulized medication administered.

   Patients receiving more than one of the types of aerosol therapies listed above report the highest complexity service Ie) Cont Aerosol mist + Cont Neb-BD: Report ONLY Cont Neb-BD; Ie) Cont Neb-BD + Cont Neb-Non BD: Report ONLY Cont Neb-Non BD. A second less complex aerosol therapy is bundled into the highest complexity service.

b. Arterial blood sampling via indwelling catheter – This service is bundled with other services and not to be reported separately.

c. Gas Therapies –

   a. High Flow Oxygen – This procedure requires an average of six ~~checks~~ patient visits per day with an average of 20 minutes per check. Therefore, 120 RVUs/day will be assigned to this code.

   b. Inhaled Nitric Oxide – Therapeutic gas administration for the treatment of Pulmonary Hypertension and other related conditions in patients who have this condition or related disease processes primarily in newborns and adults who exhibit signs of Pulmonary Hypertension. May also be used to treat reperfusion injury as in patients who have received heart and/or lung transplants. The task force agreed this service is similar in time and resources to CPT 94002 [Ventilation assist and management] therefore 250 RVUs/day will be assigned.

   c. Alternative Gases- The administration of gases or mixtures of gases other than the traditional administration of oxygen or medical air. Administration requires procuring special equipment, special expertise, and additional time in providing this gas and systems to patients. Examples of these gases are Helium, Helium oxygen measures, Carbon dioxide and mixtures, and Nitrogen gas mixtures excluding Nitric Oxide. The

[1] For service descriptions and RVU explanations refer to the Appended D Preface for RES/PUL services

task force agreed this service is similar in time and resources as High Flow Oxygen therefore 120 RVUs/day will be assigned.

d. Oxygen – This is all-inclusive rate for oxygen that is not high flow nasal cannula oxygen. The task force assigned 20 RVUs per day based on the average amount of minutes required for this service. This service may not be reported with CPT 94799 [Aerosol Therapy]. Daily care and cleaning of transtracheal oxygen catheter is not to be separately reported.

d. Bedside pulmonary mechanics – Non-vent- Used only for spontaneous breathing, non-ventilator patients, as a diagnostic measure of respiratory muscle strength, volumes, and capacities. Includes, not limited to, negative inspiratory force, tidal volume, and minute volumes. This must be performed stand-alone to be reported. The task force recommended using the AARC median minutes of 15. Therefore 15 RVUs will be assigned.

e. Generation of Non-Emergent NIV patient compliance study – The task force recommended using the AARC median minutes of 15. Therefore 15 RVUs will be assigned.

f. Incentive spirometry – This service is not to be reported separately; generally is performed by nursing and it does not meet the requirements of the spirometry CPT 94010. This is assigned zero (0) RVUs.

g. Comprehensive Patient Assessment- The process of gathering and evaluating data from a complete medical record, consultations, physiologic monitors, that does not lead to the immediate administration of another respiratory service/treatment. This service is not intended to be used for routine Respiratory Assess and Treat order and must be specifically ordered and provided stand alone. There is a maximum of once/day allowed. This service is approximately 20 minutes in duration, therefore, 20 RVUs will be assigned.

h. Manual ventilation – This cannot be reported with ventilator or rapid response service. The task force recommended keeping this service weighted at 15 RVUs per quarter hour.

i. Nasopharyngeal airway- This service is bundled with other services and not separately reportable. This is assigned zero (0) RVUs.

j. Peak flow/spirometry monitoring – This service is bundled with other services and not separately reportable. This is assigned zero (0) RVUs.

k. Mini broncho alveolar lavage (BAL) – This is for stand-alone usage only and would not be ~~charged~~ reported in addition to other bedside procedural assist. The task force recommended ~~used~~ using the AARC median minutes of 30. Therefore 30 RVUs will be assigned.

This activity describes the collection of a non-bronchoscopic bronchoalveolar lavage to obtain fluid specimen for the diagnosis of ventilator associated pneumonia.

l. Bedside Procedural Assistance – This is used when respiratory therapists assist physicians or other authorized providers with complex bedside procedures including but not limited to bedside bronchoscopy, laryngoscopy, endoscopy, lung biopsy, chest tube insertion, percutaneous tracheostomy, A-line insertion, peripherally inserted central catheter (PICC), thoracentesis, cricothyrotomy, central line insertion pulmonary artery catheter setup, and hemodynamic monitoring/measurements. The task force assigned 30 minutes for this service based on the average amount of support time. Therefore 30 RVUs will be assigned.

[1] For service descriptions and RVU explanations refer to the Appended D Preface for RES/PUL services

m. Rapid response –This service is reportable once per rapid response event and may not be used in combination with Cardiopulmonary Resuscitation. These events typically require an average of 30 minutes of support. Therefore 30 RVUs will be assigned.

n. Bedside Sleep Apnea Screening- The application of an Impedance Monitoring system to assess a patient's ventilatory pattern with periodic evaluation of patient. When in hospital bedside sleep apnea screenings are performed by inpatient respiratory therapists as a separate service, average amount of support time 30 minutes. Therefore 30 RVUs will be assigned.

o. Speech Services-The task force agreed certain services are reportable via the Speech Therapy rate center/assigned zero (0) RVUs

   a. Placement/Removal of Assistive Speech Value

   b. Transdiaphragmatic pressure

p. Subsequent Patient Assessment- Limited patient assessments are bundled with associated procedures and therefore zero (0) RVUs will be assigned.

q. Tracheostomy Tube Care- This service cannot be charged with ventilator daily charges. For non-vent patients, the task force agreed this procedure is approximately 20 minutes. Therefore 20 RVUs will be assigned. Initial placement, daily care, and removal of tracheostomy button are bundled with this service.

~~r.~~ Transcutaneous Monitoring- Transcutaneous (existing, applied, or measured across the depth of the skin) oxygen/carbon dioxide monitoring. A method of measuring the oxygen/carbon dioxide in the blood by attaching electrodes to the skin which contain heating coils to raise the skin temperature and increase blood flow at the surface. This is similar in support time to 94770 [end tidal CO2 procedure] assigned 40 RVUs. Therefore 40 RVUs will be assigned.

s. Ventilator services- The following services are considered a component of ventilator services and not separately reportable/assigned zero (0) RVUs and are bundled into the daily vent management service.

   a. Ambulation

   b. Endotracheal tube re-stabilization and positioning

   c. Extubation of Airway

   d. FRC determination during mechanical ventilation

   e. Maximal inspiratory and expiratory pressure (also bundled with Pulmonary Function Testing)

   f. Monitor cuff pressure/care

   g. Placement or change of in-line suction catheter

   h. Prone positioning

   i. Spontaneous breathing trial and/or screen

   j. Static pressure/volume loop (also bundled with Pulmonary Function Testing)

   k. Therapeutic ventilator maneuver (recruitment maneuver)

   l. Transport/MRI ventilator use during – invasive Mechanical Ventilation

   m. Ventilator circuit change – invasive mechanical ventilation

[1] For service descriptions and RVU explanations refer to the Appended D Preface for RES/PUL services

n. Work of breathing

CPT Codes with Bundled Procedures

CPT codes from 2018 with a surgical component have been assigned a zero (0) RVU value. If a RES or PUL CPT becomes bundled with a surgical code or replaced with a surgical code, these procedures should be charged as Interventional Radiology/Cardiovascular (IRC) and the associated costs of the procedure/service are to be reclassified to the IRC cost center. (This is minimal for Respiratory/Pulmonary Services.)

CPT Codes without an Assigned RVU Value

RVUs for new codes developed and reported by CMS after the 2018 reporting, must be developed "By Report". When assigning RVUs to these new codes, hospitals should use the RVU Assignment Protocol described above, where possible, using the most current AARC Uniform Reporting Manual. For codes that are not listed in the AARC Uniform Reporting Manual, hospitals should assign RVUs based on time and resource intensity of the services provided compared to like services in the department. Documentation of descriptions and the assignment of RVUs to codes not listed in Appendix D should always be maintained by the hospital.

Separate Procedures

These are codes that include the parenthetical statement "separate procedure". The inclusion of this statement indicates that the procedure can only be reported when it is performed stand-alone. A "separate procedure" should not be reported when performed along with another procedure in an anatomically related region through the same skin incision or orifice, or approach.

General Guidelines

The AMA CPT Code will be used as the identifier throughout the system. Assigned RVUs will be strictly tied to the CPT Code.

All RVUs are per CPT unless otherwise stated.

Standard supplies and other medical equipment are part of hospital room and board and are not separately reportable and should not be assigned separately.

Drugs are NOT a routine part of any Resp/Pulm examination. These drugs should NOT be included in the RVU of the exam and are to be ~~billed~~ reported separately through the pharmacy. Drugs should not be assigned an RVU.

CPT	Description	RVU [1]
31500	INTUBATION, ENDOTRACHEAL, EMERGENCY PROCEDURE	25
31502	TRACHEOTOMY TUBE CHANGE PRIOR TO ESTABLISHMENT OF FISTULA TRACT	22
31505	LARYNGOSCOPY, INDIRECT, DIAGNOSTIC (SEPARATE PROCEDURE)	0 See Procedure Assist
31720	CATHETER ASPIRATION (SEPARATE PROCEDURE); NASOTRACHEAL	15

[1] For service descriptions and RVU explanations refer to the Appended D Preface for RES/PUL services

APPENDIX D
STANDARD UNIT OF MEASURE REFERENCES
RESPIRATORY THERAPY & PULMONARY FUNCTION TESTING

CPT	Description	RVU [1]
33946	EXTRACORPOREAL MEMBRANE OXYGENATION (ECMO)/EXTRACORPOREAL LIFE SUPPORT (ECLS) PROVIDED BY PHYSICIAN; INITIATION, VENO-VENOUS	1820/day
33947	EXTRACORPOREAL MEMBRANE OXYGENATION (ECMO)/EXTRACORPOREAL LIFE SUPPORT (ECLS) PROVIDED BY PHYSICIAN; INITIATION, VENO-ARTERIAL	1820/day
33948	EXTRACORPOREAL MEMBRANE OXYGENATION (ECMO)/EXTRACORPOREAL LIFE SUPPORT (ECLS) PROVIDED BY PHYSICIAN; DAILY MANAGEMENT, EACH DAY, VENO-VENOUS	1440/day
33949	EXTRACORPOREAL MEMBRANE OXYGENATION (ECMO)/EXTRACORPOREAL LIFE SUPPORT (ECLS) PROVIDED BY PHYSICIAN; DAILY MANAGEMENT, EACH DAY, VENO-ARTERIAL	1440/day
36410	VENIPUNCTURE, AGE 3 YEARS OR OLDER, NECESSITATING THE SKILL OF A PHYSICIAN OR OTHER QUALIFIED HEALTH CARE PROFESSIONAL (SEPARATEPROCEDURE), FOR DIAGNOSTIC OR THERAPEUTIC PURPOSES (NOT TO BE USED FORROUTINE VENIPUNCTURE)	Report via Lab
36416	COLLECTION OF CAPILLARY BLOOD SPECIMEN (EG, FINGER, HEEL, EAR STICK)	Report via Lab
36600	ARTERIAL PUNCTURE, WITHDRAWAL OF BLOOD FOR DIAGNOSIS	15
36620	ARTERIAL CATHETERIZATION OR CANNULATION FOR SAMPLING, MONITORING OR TRANSFUSION (SEPARATE PROCEDURE); PERCUTANEOUS	30
92950	CARDIOPULMONARY RESUSCITATION (EG, IN CARDIAC ARREST)	80/ session
93463	PHARMACOLOGIC AGENT ADMINISTRATION (EG, INHALED NITRIC OXIDE,INTRAVENOUS INFUSION OF NITROPRUSSIDE, DOBUTAMINE, MILRINONE, OR OTHERAGENT) INCLUDING ASSESSING HEMODYNAMIC MEASUREMENTS BEFORE, DURING,AFTER AND REPEAT PHARMACOLOGIC AGENT ADMINISTRATION, WHEN PERFORMED(LIST SEPARATELY IN ADDITION TO CODE FOR PRIMARY PROCEDURE) NOTE: CATH LAB ONLY	46
93503	INSERTION AND PLACEMENT OF FLOW DIRECTED CATHETER (EG, SWAN-GANZ) FOR MONITORING PURPOSES	0 See Procedural Assistance

[1] For service descriptions and RVU explanations refer to the Appended D Preface for RES/PUL services

APPENDIX D
STANDARD UNIT OF MEASURE REFERENCES
RESPIRATORY THERAPY & PULMONARY FUNCTION TESTING

CPT	Description	RVU [1]
94002	VENTILATION ASSIST AND MANAGEMENT, INITIATION OF PRESSURE OR VOLUMEPRESET VENTILATORS FOR ASSISTED OR CONTROLLED BREATHING; HOSPITAL INPATIENT/OBSERVATION, INITIAL DAY [This service includes all services provided to ventilator patients including but not limited to mobility, transport, spontaneous mechanics, patient/system checks, etc.]	250/day-adult, 300/day-Neonates
94003	VENTILATION ASSIST AND MANAGEMENT, INITIATION OF PRESSURE OR VOLUME PRESET VENTILATORS FOR ASSISTED OR CONTROLLED BREATHING; HOSPITAL INPATIENT/OBSERVATION, EACH SUBSEQUENT DAY [This service includes all services provided to ventilator patients including but not limited to mobility, transport, spontaneous mechanics, patient/system checks, etc.]	250/day-adult, 300/day-Neonates
94004	VENTILATION ASSIST AND MANAGEMENT, INITIATION OF PRESSURE OR VOLUME PRESET VENTILATORS FOR ASSISTED OR CONTROLLED BREATHING; NURSINGFACILITY, PER DAY	0
94005	HOME VENTILATOR MANAGEMENT CARE PLAN OVERSIGHT OF A PATIENT (PATIENTNOT PRESENT) IN HOME, DOMICILIARY OR REST HOME (EG, ASSISTED LIVING)REQUIRING REVIEW OF STATUS, REVIEW OF LABORATORIES AND OTHER STUDIES AND REVISION OF ORDERS AND RESPIRATORY CARE PLAN (AS APPROPRIATE),WITHIN A CALENDAR MONTH, 30 MINUTES OR MORE	0
94010	SPIROMETRY, INCLUDING GRAPHIC RECORD, TOTAL AND TIMED VITAL CAPACITY,EXPIRATORY FLOW RATE MEASUREMENT(S), WITH OR WITHOUT MAXIMAL VOLUNTARY VENTILATION	25
94011	MEASUREMENT OF SPIROMETRIC FORCED EXPIRATORY FLOWS IN AN INFANT OR CHILD THROUGH 2 YEARS OF AGE	30
94012	MEASUREMENT OF SPIROMETRIC FORCED EXPIRATORY FLOWS, BEFORE AND AFTER BRONCHODILATOR, IN AN INFANT OR CHILD THROUGH 2 YEARS OF AGE	38

[1] For service descriptions and RVU explanations refer to the Appended D Preface for RES/PUL services

APPENDIX D
STANDARD UNIT OF MEASURE REFERENCES
RESPIRATORY THERAPY & PULMONARY FUNCTION TESTING

CPT	Description	RVU [1]
94013	MEASUREMENT OF LUNG VOLUMES (IE, FUNCTIONAL RESIDUAL CAPACITY [FRC],FORCED VITAL CAPACITY [FVC], AND EXPIRATORY RESERVE VOLUME [ERV]) IN AN INFANT OR CHILD THROUGH 2 YEARS OF AGE	33
94014	PATIENT-INITIATED SPIROMETRIC RECORDING PER 30-DAY PERIOD OF TIME;INCLUDES REINFORCED EDUCATION, TRANSMISSION OF SPIROMETRIC TRACING,DATA CAPTURE, ANALYSIS OF TRANSMITTED DATA, PERIODIC RECALIBRATION AND REVIEW AND INTERPRETATION BY A PHYSICIAN OR OTHER QUALIFIED HEALTHCARE PROFESSIONAL	BY REPORT
94015	PATIENT-INITIATED SPIROMETRIC RECORDING PER 30-DAY PERIOD OF TIME;RECORDING (INCLUDES HOOK-UP, REINFORCED EDUCATION, DATA TRANSMISSION,DATA CAPTURE, TREND ANALYSIS, AND PERIODIC RECALIBRATION)	BY REPORT
94016	PATIENT-INITIATED SPIROMETRIC RECORDING PER 30-DAY PERIOD OF TIME;REVIEW AND INTERPRETATION ONLY BY A PHYSICIAN OR OTHER QUALIFIED HEALTH CARE PROFESSIONAL	0
94060	BRONCHODILATION RESPONSIVENESS, SPIROMETRY AS IN 94010, PRE- AND POST-BRONCHODILATOR ADMINISTRATION	37
94070	BRONCHOSPASM PROVOCATION EVALUATION, MULTIPLE SPIROMETRIC DETERMINATIONS AS IN 94010, WITH ADMINISTERED AGENTS (EG, ANTIGEN[S],COLD AIR, METHACHOLINE)	84
94150	VITAL CAPACITY, TOTAL (SEPARATE PROCEDURE)	18
94200	MAXIMUM BREATHING CAPACITY, MAXIMAL VOLUNTARY VENTILATION	12
94250	EXPIRED GAS COLLECTION, QUANTITATIVE, SINGLE PROCEDURE (SEPARATE PROCEDURE)	30
94375	RESPIRATORY FLOW VOLUME LOOP	0
94400	BREATHING RESPONSE TO CO2 (CO2 RESPONSE CURVE)	30
94450	BREATHING RESPONSE TO HYPOXIA (HYPOXIA RESPONSE CURVE)	30

[1] For service descriptions and RVU explanations refer to the Appended D Preface for RES/PUL services

APPENDIX D
STANDARD UNIT OF MEASURE REFERENCES
RESPIRATORY THERAPY & PULMONARY FUNCTION TESTING

CPT	Description	RVU [1]
94452	HIGH ALTITUDE SIMULATION TEST (HAST), WITH INTERPRETATION AND REPORT BY A PHYSICIAN OR OTHER QUALIFIED HEALTH CARE PROFESSIONAL;	45
94453	HIGH ALTITUDE SIMULATION TEST (HAST), WITH INTERPRETATION AND REPORT BY A PHYSICIAN OR OTHER QUALIFIED HEALTH CARE PROFESSIONAL; WITH SUPPLEMENTAL OXYGEN TITRATION	45
94610	INTRAPULMONARY SURFACTANT ADMINISTRATION BY A PHYSICIAN OR OTHER QUALIFIED HEALTH CARE PROFESSIONAL THROUGH ENDOTRACHEAL TUBE	30
94617	EXERCISE TEST FOR BRONCHOSPASM, INCLUDING PRE- AND POST-SPIROMETRY, ELECTROCARDIOGRAPHIC RECORDING(S), AND PULSE OXIMETRY	71
94618	PULMONARY STRESS TESTING (EG, 6-MINUTE WALK TEST), INCLUDING MEASUREMENT OF HEART RATE, OXIMETRY, AND OXYGEN TITRATION, WHEN PERFORMED	30
94621	PULMONARY STRESS TESTING; COMPLEX (INCLUDING MEASUREMENTS OF CO2 PRODUCTION, O2 UPTAKE, AND ELECTROCARDIOGRAPHIC RECORDINGS)	90
94640	PRESSURIZED OR NONPRESSURIZED INHALATION TREATMENT FOR ACUTE AIRWAY OBSTRUCTION FOR THERAPEUTIC PURPOSES AND/OR FOR DIAGNOSTIC PURPOSES SUCH AS SPUTUM INDUCTION WITH AN AEROSOL GENERATOR, NEBULIZER, METERED DOSE INHALER OR INTERMITTENT POSITIVE PRESSURE BREATHING (IPPB) DEVICE	480 per inpatient admission 40 per outpatient admission
94642	AEROSOL INHALATION OF PENTAMIDINE FOR PNEUMOCYSTIS CARINII PNEUMONIATREATMENT OR PROPHYLAXIS	60
94644	CONTINUOUS INHALATION TREATMENT WITH AEROSOL MEDICATION FOR ACUTE AIRWAY OBSTRUCTION; FIRST HOUR	34

[1] For service descriptions and RVU explanations refer to the Appended D Preface for RES/PUL services

APPENDIX D
STANDARD UNIT OF MEASURE REFERENCES
RESPIRATORY THERAPY & PULMONARY FUNCTION TESTING

CPT	Description	RVU [1]
94645	CONTINUOUS INHALATION TREATMENT WITH AEROSOL MEDICATION FOR ACUTE AIRWAY OBSTRUCTION; EACH ADDITIONAL HOUR (LIST SEPARATELY IN ADDITION TO CODE FOR PRIMARY PROCEDURE) MAX 4	28
94660	CONTINUOUS POSITIVE AIRWAY PRESSURE VENTILATION (CPAP), INITIATION AND MANAGEMENT	120/day
94662	CONTINUOUS NEGATIVE PRESSURE VENTILATION (CNP), INITIATION AND MANAGEMENT	120/day
94664	DEMONSTRATION AND/OR EVALUATION OF PATIENT UTILIZATION OF AN AEROSOL GENERATOR, NEBULIZER, METERED DOSE INHALER OR IPPB DEVICE	15/day
94667	MANIPULATION CHEST WALL, SUCH AS CUPPING, PERCUSSING, AND VIBRATION TO FACILITATE LUNG FUNCTION; INITIAL DEMONSTRATION AND/OR EVALUATION	30
94668	MANIPULATION CHEST WALL, SUCH AS CUPPING, PERCUSSING, AND VIBRATION TO FACILITATE LUNG FUNCTION; SUBSEQUENT [This includes services provided by the Inexsufflator – Cough Assist and other products providing the same function.]	25
94669	MECHANICAL CHEST WALL OSCILLATION TO FACILITATE LUNG FUNCTION, PER SESSION	30
94680	OXYGEN UPTAKE, EXPIRED GAS ANALYSIS; REST AND EXERCISE, DIRECT, SIMPLE	75
94681	OXYGEN UPTAKE, EXPIRED GAS ANALYSIS; INCLUDING CO2 OUTPUT, PERCENTAGE OXYGEN EXTRACTED	90
94690	OXYGEN UPTAKE, EXPIRED GAS ANALYSIS; REST, INDIRECT (SEPARATE PROCEDURE)	60
94726	PLETHYSMOGRAPHY FOR DETERMINATION OF LUNG VOLUMES AND, WHEN PERFORMED,AIRWAY RESISTANCE	19
94727	GAS DILUTION OR WASHOUT FOR DETERMINATION OF LUNG VOLUMES AND, WHEN PERFORMED, DISTRIBUTION OF VENTILATION AND CLOSING VOLUMES	19
94728	AIRWAY RESISTANCE BY IMPULSE OSCILLOMETRY	15

[1] For service descriptions and RVU explanations refer to the Appended D Preface for RES/PUL services

APPENDIX D
STANDARD UNIT OF MEASURE REFERENCES
RESPIRATORY THERAPY & PULMONARY FUNCTION TESTING

CPT	Description	RVU [1]
94729	DIFFUSING CAPACITY (EG, CARBON MONOXIDE, MEMBRANE) (LIST SEPARATELY IN ADDITION TO CODE FOR PRIMARY PROCEDURE)	20
94750	PULMONARY COMPLIANCE STUDY (EG, PLETHYSMOGRAPHY, VOLUME AND PRESSURE MEASUREMENTS)	30
94760	NONINVASIVE EAR OR PULSE OXIMETRY FOR OXYGEN SATURATION; SINGLE DETERMINATION	8
94761	NONINVASIVE EAR OR PULSE OXIMETRY FOR OXYGEN SATURATION; MULTIPLE DETERMINATIONS (EG, DURING EXERCISE)	30
94762	NONINVASIVE EAR OR PULSE OXIMETRY FOR OXYGEN SATURATION; BY CONTINUOUS OVERNIGHT MONITORING (SEPARATE PROCEDURE)	30
94770	CARBON DIOXIDE, EXPIRED GAS DETERMINATION BY INFRARED ANALYZER	40/day
94772	CIRCADIAN RESPIRATORY PATTERN RECORDING (PEDIATRIC PNEUMOGRAM), 12-24HOUR CONTINUOUS RECORDING, INFANT	34
94774	PEDIATRIC HOME APNEA MONITORING EVENT RECORDING INCLUDING RESPIRATORYRATE, PATTERN AND HEART RATE PER 30-DAY PERIOD OF TIME; INCLUDES MONITOR ATTACHMENT, DOWNLOAD OF DATA, REVIEW, INTERPRETATION, ANDPREPARATION OF A REPORT BY A PHYSICIAN OR OTHER QUALIFIED HEALTH CARE PROFESSIONAL	0
94775	PEDIATRIC HOME APNEA MONITORING EVENT RECORDING INCLUDING RESPIRATORY RATE, PATTERN AND HEART RATE PER 30-DAY PERIOD OF TIME; MONITORATTACHMENT ONLY (INCLUDES HOOK-UP, INITIATION OF RECORDING AND DISCONNECTION)	By Report
94776	PEDIATRIC HOME APNEA MONITORING EVENT RECORDING INCLUDING RESPIRATORY RATE, PATTERN AND HEART RATE PER 30-DAY PERIOD OF TIME; MONITORING,DOWNLOAD OF INFORMATION, RECEIPT OF TRANSMISSION(S) AND ANALYSES BY COMPUTER ONLY	0

[1] For service descriptions and RVU explanations refer to the Appended D Preface for RES/PUL services

APPENDIX D
STANDARD UNIT OF MEASURE REFERENCES
RESPIRATORY THERAPY & PULMONARY FUNCTION TESTING

CPT	Description	RVU [1]
94777	PEDIATRIC HOME APNEA MONITORING EVENT RECORDING INCLUDING RESPIRATORY RATE, PATTERN AND HEART RATE PER 30-DAY PERIOD OF TIME; REVIEW,INTERPRETATION AND PREPARATION OF REPORT ONLY BY A PHYSICIAN OR OTHER QUALIFIED HEALTH CARE PROFESSIONAL	0
94780	CAR SEAT/BED TESTING FOR AIRWAY INTEGRITY, NEONATE, WITH CONTINUAL NURSING OBSERVATION AND CONTINUOUS RECORDING OF PULSE OXIMETRY, HEART RATE AND RESPIRATORY RATE, WITH INTERPRETATION AND REPORT; 60 MINUTES	60
94781	CAR SEAT/BED TESTING FOR AIRWAY INTEGRITY, NEONATE, WITH CONTINUAL NURSING OBSERVATION AND CONTINUOUS RECORDING OF PULSE OXIMETRY, HEARTRATE AND RESPIRATORY RATE, WITH INTERPRETATION AND REPORT; EACH ADDITIONAL FULL 30 MINUTES (LIST SEPARATELY IN ADDITION TO CODE FOR PRIMARY PROCEDURE)	30
94799	ALTERNATIVE GAS THERAPY The administration of gases or mixtures of gases other than the traditional administration of oxygen or medical air. Administration requires procuring special equipment, special expertise, and additional time in providing this gas and systems to patients. Examples of these gases are Helium, Helium oxygen measures, Carbon dioxide and mixtures, and Nitrogen gas mixtures excluding Nitric Oxide.	120/day
94799	BEDSIDE PULMONARY MECHANICS Used for spontaneously breathing, non-vented patients, as a diagnostic measurement of respiratory muscle strength, volumes, and capacities. Includes, not limited to negative inspiratory force, tidal volume, and minute volumes. May have more than one session per day; each session may include multiple different measurements.	15
94799	CONTINUOUS NEBULIZATION-NON-BRONCHODILATOR Used for continuous nebulization of non-bronchodilator medications, includes pulmonary vasodilator medications, antibiotics, or any non-bronchodilator nebulized medication administered.	250/day

[1] For service descriptions and RVU explanations refer to the Appended D Preface for RES/PUL services

APPENDIX D
STANDARD UNIT OF MEASURE REFERENCES
RESPIRATORY THERAPY & PULMONARY FUNCTION TESTING

CPT	Description	RVU [1]
94799	CONTINUOUS AEROSOL MIST W/ OR W/OUT OXYGEN The initial application of equipment to supply and maintain a continuous aerosol mist, with or without increased oxygen concentration (FIO2), to a patient, using a face mask, tracheostomy mask, T-piece, hood, or other device. Includes the periodic evaluation of the system supplying and maintaining a continuous aerosol mist with or without increased oxygen (FIO2) to a patient. The aerosol may be heated or cool. Daily oxygen is bundled into this service.	30/day
94799	GENERATION OF NON-EMERGENT NIV PATIENT COMPLIANCE STUDY This activity describes the evaluation, application, and monitoring of a patient, using a non-invasive portable ventilator, as a means in determining oxygenation/ventilation requirements during resting, ambulation, and walking/exercise to quantify the required ventilation needs with daily life activities.	15
94799	HIGH FLOW OXYGEN THERAPY Heated, humidified high flow nasal cannula (HFNC, aka: HFO, HFT) that can deliver up to 100% heated and humidified oxygen at a flow rate that meets or exceeds patient demand	120/day
94799	INHALED NITRIC OXIDE Therapeutic gas administration for the treatment of Pulmonary Hypertension and other related conditions in patients who have this condition or related disease processes primarily in newborns and adults who exhibit signs of Pulmonary Hypertension. May also be used to treat reperfusion injury as in patients who have received heart and/or lung transplants	250/day
94799	COMPREHENSIVE PATIENT ASSESSMENT The process of gathering and evaluating data from a patient's complete medical record, consultations, physiological monitors and bedside observations (that does not lead to the immediate administration of a treatment). This must be specifically ordered and may only be charged once per day.	20/day
94799	MANUAL VENTILATION Intermittent manual compression of a gas-filled reservoir bag to force gases into a patient's lungs to maintain and support oxygenation and carbon dioxide elimination during apnea or hypoventilation. Can't be reported with ventilator and rapid response.	15/qtr hr
94799	MINI BRONCHO ALVEOLAR LAVAGE (BAL) This activity describes the collection of a non-bronchoscopic bronchoalveolar lavage to obtain fluid specimen for the diagnosis of ventilator associated pneumonia.	30

[1] For service descriptions and RVU explanations refer to the Appended D Preface for RES/PUL services

APPENDIX D
STANDARD UNIT OF MEASURE REFERENCES
RESPIRATORY THERAPY & PULMONARY FUNCTION TESTING

CPT	Description	RVU [1]
94799	NASOPHARNGEAL TUBE CARE A curved flexible endotracheal tube to be slotted down one nostril to open a channel between the nostril and nasopharynx, to sit behind the tongue, that can be used in an emergency (eg, unconscious patient), or for long-term purposes to create a patient airway.	10
94799	OXYGEN THERAPY The initial application and periodic monitoring of equipment supplying and maintaining continuous increased oxygen concentration (FIO2) to a patient using a cannula, simple oxygen mask, non-rebreather mask or enturi-type mask. This excludes high flow oxygen therapy and cannot be reported with Continuous Aerosol therapy.	20/day
94799	RAPID RESPONSE Used when respiratory therapy is part of a multidisciplinary team of clinicians who bring critical care expertise and interventions directly to patients with early signs of deterioration. Use ONCE per rapid response event. DO NOT USE in combination with Cardiopulmonary Resuscitation. Regardless of number of therapists present	30
94799	TRACH TUBE CARE The routine care of a tracheostomy tube and tracheostomy site. Not reportable for ventilator patients.	20
94799	TRANSCUTANEOUS MONITORING Transcutaneous (existing, applied, or measured across the depth of the skin) oxygen/carbon dioxide monitoring. A method of measuring the oxygen/carbon dioxide in the blood by attaching electrodes to the skin which contain heating coils to raise the skin temperature and increase blood flow at the surface	40/day
94799	Bedside Sleep Apnea Screening The application of an Impedance Monitoring system to assess a patient's ventilatory pattern with periodic evaluation of patient	30
94799	Nasopharyngeal airway	0
94799	UNLISTED PULMONARY SERVICE OR PROCEDURE	BY REPORT
94799	Bedside Procedure Assist- Used for assistance during separate complex bedside procedures performed by authorized prescribers (physicians, PAs, NPs). Examples include, not limited to, bedside laryngoscopy/bronchoscopy/ endoscopy/ lung biopsy, chest tube insertion, bedside percutaneous trach, A-line insertion, peripherally inserted central catheter (PICC), thoracentesis, cricothyrotomy, central line insertion, hemodynamic monitoring/measurements; or other invasive diagnostic or therapeutic, or emergency procedure.	30
95012	NITRIC OXIDE EXPIRED GAS DETERMINATION	15

[1] For service descriptions and RVU explanations refer to the Appended D Preface for RES/PUL services

APPENDIX D
STANDARD UNIT OF MEASURE REFERENCES
RESPIRATORY THERAPY & PULMONARY FUNCTION TESTING

CPT	Description	RVU [1]
99406	SMOKING AND TOBACCO USE CESSATION COUNSELING VISIT; INTERMEDIATE,GREATER THAN 3 MINUTES UP TO 10 MINUTES	10
99407	SMOKING AND TOBACCO USE CESSATION COUNSELING VISIT; INTENSIVE, GREATER THAN 10 MINUTES	20
99464	ATTENDANCE AT DELIVERY (WHEN REQUESTED BY THE DELIVERING PHYSICIAN OR OTHER QUALIFIED HEALTH CARE PROFESSIONAL) AND INITIAL STABILIZATION OF NEWBORN	60
G0237	THERAPEUTIC PROCEDURES TO INCREASE STRENGTH OR ENDURANCE OF RESPIRATORY MUSCLES, FACE TO FACE, ONE ON ONE, EACH 15 MINUTES (INCLUDES MONITORING)	15
G0238	THERAPEUTIC PROCEDURES TO IMPROVE RESPIRATORY FUNCTION, OTHER THAN DESCRIBED BY G0237, ONE ON ONE, FACE TO FACE, PER 15 MINUTES (INCLUDES MONITORING)	15
G0239	THERAPEUTIC PROCEDURES TO IMPROVE RESPIRATORY FUNCTION OR INCREASE STRENGTH OR ENDURANCE OF RESPIRATORY MUSCLES, TWO OR MORE INDIVIDUALS (INCLUDES MONITORING)	15
G0424	PULMONARY REHABILITATION, INCLUDING EXERCISE (INCLUDES MONITORING), ONE HOUR, PER SESSION, UP TO TWO SESSIONS PER DAY	18

[1] For service descriptions and RVU explanations refer to the Appended D Preface for RES/PUL services

7440 PULMONARY FUNCTION TESTING

Function

~~This cost center~~ Pulmonary Function Testing services tests patients through measurement of inhaled and exhaled gases and analysis of blood, and evaluation of the patient's ability to exchange oxygen and other gases under the order of a qualified healthcare provider (QHCP). This function is performed by specially trained personnel who initiate, monitor and evaluate patient performance, cooperation, and ability during testing procedures.

Description

This cost center contains all the direct expenses incurred in the ~~performance of patient and laboratory~~ testing necessary for ~~diagnostic~~ diagnosis and treatment of disorders affecting the cardio-pulmonary system ~~pulmonary disorders~~. Included as direct expenses are: salaries and wages, employee benefits, ~~professional fees (non-physician),~~ supplies, purchased services, other direct expenses, and transfers.

Standard Unit of Measure: Relative Value Units

Relative Value Units as determined by the Health Services Cost Review Commission (see Appendix D of this manual).

Data Source

The number of Relative Value Units shall be an actual count maintained by the Pulmonary Function Testing cost center.

Reporting Schedule

Schedule D - Line D37

SECTION 200
CHART OF ACCOUNTS

7420 RESPIRATORY THERAPY

Respiratory ~~Care~~ Therapy is the medical ~~services~~ service that maintains or improves the function of the respiratory system including the administration of oxygen and ~~certain potent drugs through inflation of positive pressure~~ other pharmaceuticals and other forms of ~~rehabilitative~~ therapy as prescribed by physicians or other qualified healthcare professionals (QHCP). This function is performed by Respiratory Care Practitioners ~~Professionals~~ (RCP), specially trained personnel who initiate, monitor, and evaluate patient performance, cooperation and ability during testing procedures. These procedures and services provided by the RCPs are found in https://www.mbp.state.md.us/licensure_ahapp_resp.aspx. ~~Additional~~ Examples of these activities include, but are not limited, to the following:

> ~~Assisting physician QHCPs in performance of emergency care; reviving~~ Reviving and maintaining patients' vital life signs; maintaining open airways, breathing and blood circulation; maintaining aseptic conditions; transporting equipment to patients' bedsides; observing and instructing patients during therapy; visiting all assigned patients to ensure that ~~physicians'~~ QHCP's orders are being carried out; inspecting and testing equipment; enforcing safety rules; and calculating and interpreting test results and all aspects of the Maryland ~~RT~~ Respiratory Care Scope of Practice.

Description

This cost center contains ~~the~~ all direct expenses incurred in the administration of respiratory ~~care~~ therapy ~~oxygen and other forms of therapy through inhalation~~. Included as direct expenses are: salaries and wages, employee benefits, ~~professional fees (non-physician)~~, supplies, purchased services, other direct expenses, and transfers.

Standard Unit of Measure: Relative Value Units

Relative Value Units as determined by the Health Services Cost Review Commission (see Appendix D of this manual).

Data Source

The number of Relative Value Units shall be the actual count maintained by the Respiratory Therapy cost center.

Reporting Schedule

Schedule D- Line D36

Nurse Support Program II

Competitive Institutional Grants Program

Review Panel Recommendations for FY 2019

Health Services Cost Review Commission

4160 Patterson Avenue, Baltimore, Maryland 21215

(410) 764-2605
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DRAFT

May 9, 2018

This is a draft recommendation for Commission consideration at the May 9, 2018 Public Commission Meeting. Please submit comments on this draft to the Commission by Wednesday, May 17, 2018, via hard copy mail or email to Oscar.Ibarra@maryland.gov.

INTRODUCTION

This report presents recommendations for the Nurse Support Program II (NSP II) Competitive Institutional Grant Review Panel for Fiscal Year (FY) 2019. The FY 2019 Recommendations align with both NSP II and national nursing initiatives. This report and recommendations are jointly submitted by the staff of the Maryland Higher Education Commission (MHEC) and the Maryland Health Services Cost Review Commission (HSCRC or Commission).

BACKGROUND

The HSCRC has funded programs to address the cyclical nursing workforce shortages since 1985. In July 2001, the HSCRC implemented the hospital-based Nurse Support Program I (NSP I) to address the nursing shortage impacting Maryland hospitals. Since that time, the NSP I completed three program evaluation cycles at five year intervals. The most recent renewal was approved on July 12, 2017 to extend the funding until June 30, 2022.

The HSCRC implemented the NSP II program in May 2005 to respond to the faculty shortage and other limitations in nursing educational capacity underlying the nursing shortage. The Commission approved an increase of up to 0.1 percent of regulated gross hospital revenue to increase the number of nurses in the state by increasing the capacity of nursing programs through institutional and nursing faculty interventions. MHEC was selected by the HSCRC to administer the NSP II programs, as the coordinating board for all Maryland institutions of higher education. On March 7, 2012, the HSCRC approved modifications to NSP II to include increased doctoral education support for greater development of new and existing nursing faculty.

At the conclusion of the first ten years of funding on January 14, 2015, the HSCRC renewed funding for FY 2016 through June 30, 2020. In 2016, the Maryland General Assembly revised the NSP II statute to meet Maryland's changing health care delivery models to recognize all registered nurses (RNs) are needed to ensure a strong nursing workforce.

ADVANCING NURSE FACULTY

There are three faculty-focused programs provided by NSP II. They include the Hal and Jo Cohen Graduate Nurse Faculty Scholarship (GNF), the New Nurse Faculty Fellowship (NNFF) and the Nurse Educator Doctoral Grants for Practice and Dissertation Research (NEDG).

Hal and Jo Cohen Graduate Nurse Faculty Scholarship (GNF)

NSP II urges leaders of nursing programs and hospital education departments to enhance recruitment of current full time faculty, part-time adjunct faculty, clinical instructors, professional development specialist and hospital educators into the nursing graduate degree programs in the State. Utilizing the tuition support of the Hal and Jo Cohen Graduate Nurse Faculty Scholarship, nurses are provided funds for graduate education in return for faculty positions in Maryland nursing program.

New Nurse Faculty Fellowship (NNFF)

The most recent evaluation of the NNFF program demonstrated an 87.8 percent retention rate for nurse faculty with three years of continuous employment. In alignment with the NSP II statute, results showed a high proportion of minorities (40%, *n*=28) were represented in the NNFF group. The largest group (38%, *n*=26) were older nurses who expected to work less than 10 years. The smallest NNFF group were younger (born after 1982). Strategies are needed to address the gap between entering a faculty career path at an earlier point and an aging faculty workforce (Daw, Mills & Ibarra, 2018).

Nurse Educator Doctoral Grants for Practice and Dissertation Research (NEDG)

In 2017, an evaluation of the Nurse Educator Doctoral Grants for Practice and Dissertation Research (NEDG) was completed. To date, 13 universities and 10 community colleges in Maryland have accessed these funds to support existing faculty to complete doctoral degrees. Over 6 years, 98 nurse faculty were awarded over $2.35 million. The nurse faculty retention rate is on average 88.8 percent over six years. (Table 1).

Table 1. Nurse Educator Doctoral Grants Distribution and Retention FY 2013-FY 2018

Fiscal Year	NEDG Recipients	Funding	# Left Cohort	% Retention Rate
2013	16	$330,000	3	81%
2014	10	$270,000	3	70%
2015	25	$655,000	5	80%
2016	15	$350,000	0	100%
2017	19	$440,000	0	100%
2018	13	$305,000	0	100%
Total	98	**$2,350,000**	11	88.78%

Source: Maryland Higher Education Commission, Nurse Educator Doctoral Grants for Practice and Dissertation Research (NEDG), program review completed December 8, 2017.

Nurse Certifications

One indicator of nursing education excellence is certification. In 2018, two National League for Nursing (NLN) Certified Nurse Educator (CNE) Workshops were sponsored by NSP II. There were approximately 120 nurse faculty attendees seeking to prepare for the examination and complete the credential of Certified Nurse Educator. In a 2017 review of data submitted with proposals and annual reports, approximately 12 percent of faculty in Maryland colleges and universities held the CNE credential. By 2020, the goal across the State's nursing programs is to double the number of full-time faculty with this specialty certification for nurse educators. It is a demonstration of excellence in education and faculty commitment to the highest standards in teaching. NSP II supports faculty through a variety of mechanisms to advance their expertise through professional development and advanced degree completion.

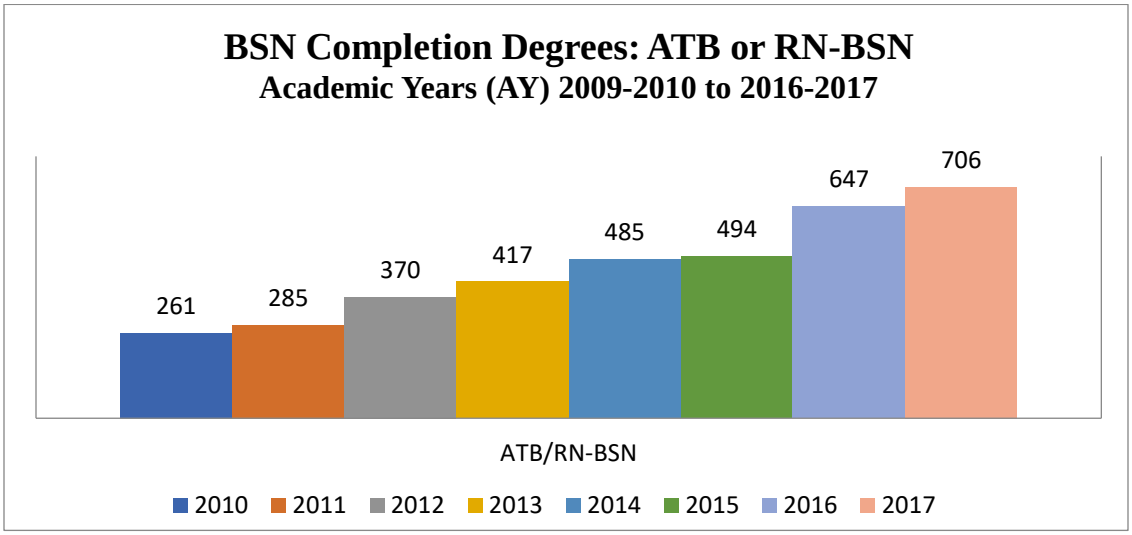
ACADEMIC PROGRESSION IN NURSING

One of the major recommendations from the Institute of Medicine's *Future of Nursing Report (2010)* was to increase the percentage of RNs with BSN degrees to 80 percent by 2020. The partnerships between community colleges and universities have grown to allow students the opportunity for dual enrollment to complete the associate and bachelor's in nursing in as little as three years. This minimizes educational costs and reduces the time needed to complete the BSN.

The *Maryland Nursing Articulation Education Agreement (1985, 1998, 2017)* for seamless academic progression for Licensed Practical Nursing to Associate Degree Nursing to BSNs was evaluated, revised and submitted to MHEC by the Maryland Council of Deans and Directors of Nursing Programs (MCDDNP). Dr. James D. Fielder, Secretary of MHEC responded with a letter of commendation "for this clear and outstanding agreement" and thanked the council and entire nursing education community "for this forward thinking and impactful step for nursing articulation on a statewide basis for Maryland nursing education." This update of the articulation agreement was a priority to move seamless progression efforts forward. It is the result nursing education leaders collaborating over the last two years to reach unanimous agreement across all nursing programs. The current agreement provides guidance to Maryland nursing programs to better align with the latest academic progression in nursing (APIN) initiatives. For more information, see NSP links of interest at www.nursesupport.org.

The options for Associate to Bachelor's (ATB) degree completion through dual enrollment or sequential RN to BSN programs have expanded at community colleges and universities. The data MHEC collected demonstrates a steady increase in BSN completions. (Table 2)

Table 2. Associate to Bachelor's or RN to Bachelor's Completion Degrees 2010-2017



Source: Maryland Higher Education Commission and Maryland Deans/Directors of Nursing

PRE-LICENSURE NURSE GRADUATES

Overall, the number of new registered nurse graduates have held fairly steady, considering the changes in transition to practice and the educational environment of today's nursing students. These graduates begin their nursing career by completing the Associate of Science in Nursing Degree (ADN), Bachelor of Science in Nursing Degree (BSN) or Masters of Science in Nursing (MSN) entry degree programs. Nursing programs are responding to student and health care employer demands; making programmatic changes across the state to meet the needs of the hospitals, health care systems and the nursing profession.

Graduates prepared for the initial licensure through the National Council Licensure Examination for Registered Nurses (NCLEX-RN) are educated in three different types of programs. As noted in Table 3, there are more students already with an Associate Degree entering nursing programs for initial licensure. Second degree students are highly motivated with a wealth of life experiences. The most recent Maryland Board of Nursing first time nursing licensure examination results confirm the highest pass rates were posted for direct entry MSN programs at 92 percent compared to all Maryland programs at 85.6 percent (MBON, 2017).

Table 3. Pre-Licensure Nursing Degree Trends (excluding RN-BSN graduates)

Degree	AY 2010	AY 2017
Associate Degree in Nursing	1,443	1,458
Bachelor of Science in Nursing	964	960
Master of Science Entry	84	197
Total	**2,491**	**2,615**

Graduates of direct entry MSN nursing programs enter practice as novice nurses equipped with graduate level education in quality and safety, the application of research to practice, global health, health systems management, ethics and health policy. This type of program allows graduates to advance more rapidly toward positions as expert clinicians, leaders and managers in hospital health systems as they progress in their career. The pipeline for doctoral completions addresses the national and state shortage of nurses prepared to serve as nursing faculty members.

The MHEC data for BSN graduates includes baccalaureate completion (RN-BSN) graduates. For example, of the 1,666 BSN nursing graduates in Academic Year (AY) 2017, 706 were already working as registered nurses and continuing their education to complete the bachelor's degree as part of a hospital employment agreement or personal professional development. To determine the true number of graduates of pre-licensure programs eligible to sit for the NCLEX-RN licensure examination, ATB and RN-BSN completion degrees verified with each program and manual removed from the data displayed in Table 3.

Although the NSP II provides resources to Maryland's deans and directors of nursing programs to recruit and retain faculty through scholarships for graduate degrees, new nurse faculty

fellowships and doctoral grant support, Maryland nursing programs will need to increase enrollments, graduate additional RNs, and respond to market forces to meet the continuing demands of the nursing workforce. Lack of qualified nursing faculty and clinical space remain as barriers to increasing enrollments across undergraduate and graduate programs. Strategies to address these barriers include hiring more part-time faculty, increasing use of simulation and recruitment of Maryland nurses in graduate programs to education careers.

ADVANCING HIGHER EDUCATION

Nursing education is dynamic and changing rapidly to respond to the health care demands of the 21st century. The undergraduate preparation is moving the needle steadily to the goal of 80 percent BSN prepared registered nurses, while a growing cadre of Master's entry nurse graduates are joining the ranks of newly registered nurses. Ensuring the opportunity for academic progression and life-long learning are two of the NSP II goals. All four Doctor of Nursing Practice (DNP) degree programs in the state have moved all advanced practice degrees to the doctoral level in alignment with other professional practice degrees across health care disciplines. The profession's national and state goals are mirrored in the NSP II goal: to double the number of doctoral prepared nurses and nurse faculty. Both the PhD research degree and DNP practice doctorate are needed; they are interrelated and together they collaborate to expand the body of knowledge through research for rapid translation of science into evidence-based practice for improved patient outcomes. Data from MHEC shows a 33 percent increase in the number of PhD and DNP nurse graduates between AY 2009/2010 and 2016/2017 (Table 4).

Table 4: Number of Doctor of Philosophy in Nursing (PhD) and Doctor of Nursing Practice (DNP) Graduates, AY 2009/2010-2016/2017

Degree	AY 2009/2010	AY 2010/2011	AY 2011/2012	AY 2012/2013	AY 2013/2014	AY 2014/2015	AY 2015/2016	AY 2016/2017
PhD	11	12	14	22	8	14	10	17
DNP	53	44	36	34	27	57	45	68
Total	64	56	50	56	35	71	55	85

Source: Maryland Higher Education Commission

DISSEMINATION OF NSP II RESULTS

The NSP II project directors are required to report on their grant-supported work annually through publications in peer-reviewed journals, presentations at conferences or in formal venues with their colleagues in Maryland. Presentations may be through organizations such as the Maryland Action Coalition, the Maryland Organization for Nurse Leaders, the Maryland Nurse's Association, national professional nursing conferences or NSP II project director meetings. In April, 2018, NSP II project directors representing Salisbury University, Harford Community College, Towson University and Morgan State University made podium and poster presentations at the *Nursing Education Research Conference* in Washington, D.C., sponsored by Sigma Theta Tau International Honor Society of Nursing and the National League for Nursing.

FY 2019 COMPETITIVE GRANT PROCESS

In response to the FY 2019 request for applications (RFA), the NSP II Competitive Institutional Grant Review Panel received a total of 29 requests for funding, including 25 new competitive grants proposals, 3 resource grant requests, and 1 continuation grant recommendation. The nine-member review panel, comprised of former NSP II grant project directors, retired nurse faculty, hospital educators, licensure and policy leaders, MHEC and HSCRC staff, reviewed the proposals. All new proposals received by the deadline were scored by the panel according to the rubric outlined in the FY 2019 RFA. The review panel convened and developed consensus around the most highly recommended proposals. As a result, the review panel recommends funding for 16 of the 29 total proposals. There were many deserving proposals, and the Panel encouraged those not funded this year to resubmit next year.

The recommended proposals include one-year planning grants, three-year full implementation grants, continuation grants, and nursing program resource grants for a total just under $9.6 million. The proposals that received the highest ratings for funding focused on nursing graduate outcomes with partnerships across community colleges, universities and hospital health systems. Table 5 lists the recommended proposals for FY 2019 funding.

Table 5. Final Recommendations for Funding for FY 2019

Grant #	Institution	Grant Title	Proposed Funding
19-106	Harford Community College	Harford Community College/Towson University Collaborative	$850,631
19-107	Hood College	Increasing Capacity for Pre-licensure Graduates	$689,235
19-109	Johns Hopkins University	Preceptor Education for Vulnerable Populations	$569,344
19-113	Montgomery College	Montgomery College Resources for Educators	$45,850
19-114	Morgan State University	Nursing Dual Enrollment: Pipeline for HS Students	$139,686
19-116	Notre Dame of Maryland University	Accelerated Second Degree BSN	$965,927
19-117	Notre Dame of Maryland University	PARSystem Testing Resources	$34,010
19-118	Stevenson University	Increasing Numbers of BS prepared Nurses	$976,452
19-119	Towson University	Increasing the Supply of Qualified Nurse Faculty	$902,000
19-120	Towson University	Online Option for Degree Completion	$1,050,062
19-121	Towson University	Graduate Program Planning and Revision	$146,570
19-123	University of Maryland	PTECH at Dunbar HS for Health Professions with Baltimore City Community College	$629,919

Grant #	Institution	Grant Title	Proposed Funding
19-124	University of Maryland	Establishing the Maryland Nursing Workforce Center	$265,467
19-125	University of Maryland	Advancing Implementation Science Education (ADvISE) Project	$698,995
19-128	University of Maryland	Continuation of Preceptor Modules for APRNs	$359,21
19-129	Montgomery College	MCSRC Simulation Resources	$1,266,050
Total			**$9,589,409**

RECOMMENDATIONS

HSCRC and MHEC staff recommend the 16 proposals presented above in Table 5 for the FY 2019 NSP II Competitive Institutional Grants Program. The recommended proposals represent the NSP II's commitment to increasing nursing degree completions and academic practice partnerships across Maryland. The most highly recommended proposals include:

- Supporting additional nursing undergraduate degree completions at Hood College, Stevenson University and Towson University with the following hospital partners:
    - Frederick Memorial,
    - Lifebridge Health Centers (Northwest Hospital, Levindale and Sinai Hospital Center),
    - Medstar Union Memorial and Good Samaritan,
    - Howard County Hospital and Johns Hopkins Hospital,
    - UMMS St. Joseph's Medical Center and University of Maryland Medical Center
- Implementing an accelerated second-degree BSN program at Notre Dame of Maryland University;
- Awarding a planning grant for dual enrollment with Morgan State University to work with the Vivien T. Thomas Medical Arts Academy, a public high school in Baltimore;
- Establishing a Maryland Nursing Workforce Center for improved data infrastructure;
- Implementing a new preceptor education program for vulnerable populations at Johns Hopkins University;
- Developing an academic progression partnership with increased pre-licensure graduates in dual enrollment ATB programs at Harford Community College and Towson University;
- Continuing the Advanced Practice Nurse Preceptor online modules with an in-person simulation component developed through an earlier grant at the University of Maryland with participants from University of Maryland Medical Center, Johns Hopkins Hospital, Upper Chesapeake Health, MedStar Franklin Square and St. Agnes Hospital, scheduled for expansion of access to all APRN programs across the State; and
- Strengthening all Maryland nursing programs through the MCSRC's benchmarking assessments with targeted awards to ensure all schools have adequate and equitable clinical simulation opportunities with additional resources for Washington Adventist University, Johns Hopkins University, Anne Arundel Community College, Carroll Community College,

Hood College, Salisbury University, Morgan State University, Towson University, Community College of Baltimore County at Catonsville and Essex.

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Maryland Board of Nursing, National Council Licensure Examination 1st time Candidate Performance for Maryland Schools, FY 2017: July 1, 2016 – June 30, 2017. Accessed 4/11/18 http://mbon.maryland.gov/Documents/nclex_rn_stats_fy17.pdf .

Nurse Support Program I and II, www.nursesupport.org

Policy Update Report and Discussion

Staff will present materials at the Commission Meeting.

Health Services Cost Review Commission
4160 Patterson Avenue, Baltimore, Maryland 21215
Phone: 410-764-2605 · Fax: 410-358-6217
Toll Free: 1-888-287-3229
hscrc.maryland.gov

TO: **Commissioners**

FROM: **HSCRC Staff**

DATE: **May 9, 2018**

RE: **Hearing and Meeting Schedule**

June 13, 2018	To be determined - 4160 Patterson Avenue HSCRC/MHCC Conference Room
July 11, 2018	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://hscrc.maryland.gov/Pages/commission-meetings.aspx.

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

Maryland Hospital Community Benefit Report: FY 2017

May 1, 2018

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

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LIST OF ABBREVIATIONS

ACA	Affordable Care Act
CBR	Community Benefit Report
CBSA	Community Benefit Service Area
CHNA	Community Health Needs Assessment
DME	Direct Medical Education
FPL	Federal Poverty Level
FY	Fiscal Year
HSCRC	Health Services Cost Review Commission
IRC	Internal Revenue Code
IRS	Internal Revenue Service
LHIC	Local Health Improvement Coalition
MHA	Maryland Hospital Association
NSPI	Nurse Support Program I
SHIP	State Health Improvement Plan
VHA	Voluntary Hospitals of America

INTRODUCTION

Community benefit refers to initiatives, activities, and investments undertaken by tax-exempt hospitals to improve the health of the communities they serve. Maryland law defines community benefit as an activity that intends to address community needs and priorities primarily through disease prevention and improvement of health status.[1] Activities can include:

- Health services provided to vulnerable or underserved populations such as Medicaid, Medicare, or Maryland Children's Health Program participants
- Financial or in-kind support of public health programs
- Donations of funds, property, or other resources that contribute to a community priority
- Health care cost containment activities
- Health education, screening, and prevention services
- Financial or in-kind support of the Maryland Behavioral Health Crisis Response System

In 2001, the Maryland General Assembly passed House Bill 15,[2] which required the Maryland Health Services Cost Review Commission (HSCRC) to collect community benefit information from individual hospitals to compile into a statewide, publicly available Community Benefit Report (CBR). In response to this legislative mandate, the HSCRC initiated a community benefit reporting system for Maryland's nonprofit hospitals that included two components. The first component is the *Community Benefit Collection Tool*, a spreadsheet that inventories community benefit expenses in specific categories defined by the HSCRC's *Community Benefit Reporting Guidelines and Standard Definitions*. These categories are similar—but not identical—to the federal community benefit reporting categories found in Part I of IRS Form 990, Schedule H.[3] The second component of Maryland's reporting system is the CBR narrative report. The HSCRC developed the *Community Benefit Narrative Reporting Instructions* to guide hospitals' preparation of these reports, which strengthen and supplement the quantitative community benefit data that hospitals report in their inventory spreadsheets.

This summary report provides background information on hospital community benefits and the history of CBRs in Maryland. It is followed by summaries of the community benefit narrative and financial reports for fiscal year (FY) 2017 and concludes with a summary of data reports from the past 14 years.

[1] MD. CODE. ANN., Health-Gen. § 19-303(a)(3).
[2] H.B. 15, 2001 Gen. Assem., 415th Sess. (Md. 2001).
[3] https://www.irs.gov/pub/irs-pdf/f990sh.pdf

BACKGROUND

Section 501(c)(3) of the Internal Revenue Code (IRC) identifies tax-exempt organizations as those that are organized and operated exclusively for specific purposes, including religious, charitable, scientific, and educational purposes.[4] Nonprofit hospitals receive many benefits from their tax-exempt status. They are generally exempt from federal income and unemployment taxes, as well as state and local income, property, and sales taxes. In addition, nonprofit hospitals may raise funds through tax-deductible donations and tax-exempt bond financing.

Originally, the Internal Revenue Service (IRS) considered hospitals to be "charitable" if they provided charity care to the extent of their financial ability to do so.[5] However, in 1969, the IRS issued Revenue Ruling 69-545, which modified the "charitable" standard to focus on "community benefits" rather than "charity care."[6] Under this IRS ruling, nonprofit hospitals must provide benefits to the community in order to be considered charitable. This created the "community benefit standard," which is necessary for hospitals to satisfy in order to qualify for tax-exempt status.

The Affordable Care Act (ACA) created additional requirements for hospitals to maintain tax-exempt status. Every §501(c)(3) hospital, whether independent or part of a hospital system, must conduct a community health needs assessment (CHNA) at least once every three years in order to maintain its tax-exempt status and avoid an annual penalty of up to $50,000.[7] The first CHNA was due by the end of FY 2013. CHNAs must incorporate input from individuals who represent the broad interests of the communities served, including those with special knowledge or expertise in public health, and they must be made widely available to the public.[8] CHNAs must include an implementation strategy that describes how the hospital plans to meet the community's health needs, as well as a description of what the hospital has historically done to address its community's needs.[9] Further, the hospital must identify any needs that have not been met by the hospital and explain why they have not been addressed. Tax-exempt hospitals must report this information on Schedule H of IRS Form 990.

The IRS defines a CHNA as a written document developed for a hospital facility that includes a description of the community served; the process used to conduct the assessment, including how the hospital accounted for input from community members and public health experts; identification of any persons with whom the hospital has worked on the assessment; and the health needs identified through the assessment process. In order to meet the requirement of the CHNA for any taxable year, the hospital facility must make the CHNA widely available to the public and adopt an implementation strategy to meet the health needs identified by the CHNA by the end of the same taxable year. The implementation strategy must be approved by an authorized governing body of the hospital organization and either describe how the hospital

[4] 26 U.S.C. §501(c)(3).
[5] Rev. Ruling 56-185, 1956-1 C.B. 202.
[6] Rev. Ruling 69-545, 1969-2 C.B. 117.
[7] 26 U.S.C. §501(r)(3); 26 U.S.C. §4959.
[8] 26 U.S.C. §501(r)(3)(B).
[9] 26 U.S.C. §501(r)(3)(A).

facility plans to meet the health need(s) identified in the CHNA or explain why it does not intend to meet the health need(s) identified in the CHNA.

The Maryland General Assembly adopted the Maryland CBR process in 2001,[10] and the first data collection period was FY 2004. Under Maryland law, CBRs must include the hospital's mission statement, a list of the hospital's initiatives, the cost of each community benefit initiative, the objectives of each community benefit initiative, a description of efforts taken to evaluate the effectiveness of initiatives, a description of gaps in the availability of specialist providers, and a description of the hospital's efforts to track and reduce health disparities in the community.[11]

The HSCRC worked with the Maryland Hospital Association (MHA), interested hospitals, local health departments, and health policy organizations and associations to establish the details and format of the CBR. In developing the format for data collection, the group relied heavily on the experience of the Voluntary Hospitals of America (VHA) community benefit process. At the time, the VHA possessed more than ten years of voluntary hospital community benefit reporting experience across many states. The resulting data reporting spreadsheet and instructions were used by Maryland hospitals to submit their FY 2004 data to the HSCRC in January 2005. The HSCRC's first CBR was published in July 2005. The HSCRC continues to work with the MHA, public health officials, individual hospitals, and other stakeholders to further improve the reporting process and refine the definitions and periodically convenes a Community Benefit Work Group. The data collection process offers an opportunity for each Maryland nonprofit hospital to critically review and report the activities it has designed to benefit the community. This FY 2017 report represents the HSCRC's fourteenth year of reporting on Maryland hospital community benefit data.

NARRATIVE REPORTS

This section of the document summarizes the findings of the narrative reports.

Hospitals Submitting Reports

The HSCRC received a total of 49 CBRs from all 52 hospitals in FY 2017. Please note that the University of Maryland Health System submits a single CBR for three of its hospitals on the Eastern Shore and another CBR for two of its hospitals in Harford County. These reports sometimes break out individual metrics for each of the three hospitals and sometimes combine responses. Therefore, the denominator for hospital response rates varies between 49 and 52 throughout the remainder of this document. Table 1 summarizes the hospitals submitting CBRs by hospital system.

[10] MD. CODE. ANN., Health-Gen. §19-303.
[11] MD. CODE. ANN., Health-Gen. §19-303(c)(2).

Table 1. List of Hospitals Submitting CBRs in FY 2017, by System

Independent Hospitals	**Johns Hopkins Medicine:**
1. Anne Arundel Medical Center	25. Howard County General Hospital
2. Atlantic General Hospital	26. Johns Hopkins Bayview Medical Center
3. Bon Secours Baltimore Health System	27. Johns Hopkins Hospital
4. CalvertHealth Medical Center	28. Suburban Hospital
5. Doctors Community Hospital	**Lifebridge Health:**
6. Fort Washington Medical Center	29. Carroll Hospital
7. Frederick Memorial Hospital	30. Levindale Hebrew Geriatric Center and Hospital of Baltimore, Inc.
8. Garrett Regional Medical Center	
9. Greater Baltimore Medical Center	31. Northwest Hospital
10. McCready Health	32. Sinai Hospital
11. Mercy Medical Center	**MedStar Health:**
12. Meritus Medical Center	33. MedStar Franklin Square Medical Center
13. Peninsula Regional Medical Center	34. MedStar Good Samaritan Hospital
14. Saint Agnes Hospital	35. MedStar Harbor Hospital
15. Sheppard Pratt Health System	36. MedStar Montgomery Medical Center
16. Union Hospital of Cecil County	37. MedStar Southern Maryland Hospital Center
17. Western Maryland Regional Medical Center	38. MedStar St. Mary's Hospital
Jointly Owned Hospitals:	39. MedStar Union Memorial Hospital
18. Mt. Washington Pediatric Hospital*	**University of Maryland:**
Adventist HealthCare:	40. Baltimore Washington Medical Center
19. Adventist HealthCare Behavioral Health & Wellness Services	41. Charles Regional Medical Center
	42. Laurel Regional Medical Center
20. Adventist Healthcare Rehabilitation	43. University of Maryland Medical Center
21. Adventist HealthCare Shady Grove Medical Center	44. UMMC Midtown Campus
	45. Prince George's Hospital Center
22. Washington Adventist Hospital	46. UM Rehabilitation & Orthopaedic Institute
Holy Cross Health	47. Shore Regional Health**
23. Holy Cross Germantown Hospital	48. St. Joseph Medical Center
24. Holy Cross Hospital	49. Upper Chesapeake Health***

* Mt. Washington Pediatric is jointly owned by University of Maryland Medical System and Johns Hopkins Medicine
** One narrative report includes three hospitals: Easton, Chester River, and Dorchester
*** One narrative report includes two hospitals: Upper Chesapeake Medical Center and Harford Memorial Hospital

Section I. General Hospital Demographics and Characteristics

Hospital-Specific Demographics

The first section of the CBR narrative requires hospitals to report on demographic and utilization statistics, as summarized in Table 2 below. Overall, the hospitals reported having 11,869 beds and 611,594 inpatient admissions. The reported percentage of hospital patients who are uninsured ranged from 0 to 35 percent. The reported percentage of patients enrolled in Medicaid ranged from 2 to 81 percent. The reported percentage of patients enrolled in Medicare ranged

from 0 to 77 percent. Please note that some of the figures reported by the hospitals differ from those published by other sources.

Table 2. Hospital Bed Designation, Inpatient Admissions, and Patient Insurance Status, FY 2017

Hospital Name	Bed Designation	Inpatient Admissions	Percentage of Patients who are Uninsured	Percentage of Patients in Medicaid	Percentage of Patients in Medicare
Independent Hospitals					
Anne Arundel Medical Center	410	26,321	***	12.0%	43.0%
Atlantic General Hospital	62	3,281	2.9%	16.9%	48.2%
Bon Secours Baltimore Health System	69	3,696	4.0%	43.0%	29.0%
CalvertHealth Medical Center	130	6,173	2.6%	14.3%	41.7%
Doctors Community Hospital	190	9,977	***	18.0%	45.8%
Fort Washington Medical Center	32	2,257	15.4%	24.4%	22.3%
Frederick Memorial Hospital	239	18,709	1.8%	19.4%	35.1%
Garrett Regional Medical Center	49	2,364	1.8%	19.0%	51.2%
Greater Baltimore Medical Center	349	20,603	2.5%	2.0%	36.3%
McCready Health	3	286	***	11.5%	72.4%
Mercy Medical Center	183	13,238	***	***	***
Meritus Medical Center	227	17,569	4.1%	28.4%	32.1%
Peninsula Regional Medical Center	309	19,148	***	***	***
Saint Agnes Hospital	287	17,616	***	***	***
Sheppard Pratt Health System	414	8,674	2.0%	43.0%	13.0%
Union Hospital of Cecil County	84	5,445	1.7%	27.2%	51.4%
Western Maryland Regional Medical Center	231	12,471	1.3%	17.1%	57.4%
Jointly Owned Hospitals					
Mt. Washington Pediatric Hospital	102	636	0.0%	81.0%	0.0%
Adventist HealthCare					
Adventist HealthCare Behavioral Health & Wellness Services	107	3,176	2.3%	36.0%	14.1%
Adventist HealthCare Rehabilitation	87	1,862	0.5%	8.8%	50.1%
Adventist HealthCare Shady Grove Medical Center	305	21,878	7.6%	21.5%	18.5%
Washington Adventist Hospital	232	11,838	17.5%	27.7%	22.0%
Holy Cross Health					
Holy Cross Germantown Hospital	118	5,802	21.0%	23.0%	17.0%
Holy Cross Hospital	568	35,977	35.0%	21.0%	17.0%
Johns Hopkins Medicine					
Howard County General Hospital	264	17,121	1.5%	14.2%	34.9%
Johns Hopkins Bayview Medical Center	440	19,451	2.1%	34.0%	39.8%
Suburban Hospital	222	13,794	***	7.5%	47.6%

Hospital Name	Bed Designation	Inpatient Admissions	Percentage of Patients who are Uninsured	Percentage of Patients in Medicaid	Percentage of Patients in Medicare
The Johns Hopkins Hospital	1,131	47,403	0.6%	29.9%	28.3%
Lifebridge Health					
Carroll Hospital	143	9,937	4.6%	15.4%	31.1%
Levindale Hebrew Geriatric Center and Hospital of Baltimore, Inc.	330	2,238	5.0%	13.0%	72.0%
Northwest Hospital	221	11,360	0.4%	25.0%	56.4%
Sinai Hospital	480	18,750	0.4%	29.4%	42.4%
MedStar Health					
MedStar Franklin Square Medical Center	353	23,875	1.3%	22.2%	42.1%
Medstar Good Samaritan Hospital	206	9,185	10.7%	25.9%	30.7%
Medstar Harbor Hospital	107	8,488	1.0%	22.6%	34.4%
MedStar Montgomery Medical Center	114	7,745	4.1%	16.2%	32.2%
MedStar Southern Maryland Hospital Center	216	11,726	1.6%	26.5%	41.9%
MedStar St. Mary's Hospital	103	8,611	2.0%	12.1%	38.1%
MedStar Union Memorial Hospital	192	11,004	0.8%	20.9%	56.3%
University of Maryland					
Baltimore Washington Medical Center	293	17,813	6.3%	23.0%	39.0%
Charles Regional Medical Center	109	7,529	5.3%	21.3%	43.6%
Laurel Regional Medical Center	134	3,677	5.4%	23.6%	41.3%
University of Maryland Medical Center	767	28,727	0.7%	36.9%	31.5%
UMMC Midtown Campus	170	4,526	0.6%	45.7%	43.3%
Prince George's Hospital Center	233	12,315	19.0%	37.0%	no response
UM Rehabilitation & Orthopaedic Institute	137	2,623	1.0%	21.6%	44.5%
Shore Regional Health – Easton	112	8,222	0.5%	23.7%	54.4%
Shore Regional Health – Dorchester	46	1,939	0.7%	26.8%	59.9%
Shore Regional Health – Chester River	26	1,360	0.2%	11.0%	77.0%
St. Joseph Medical Center	224	17,392	1.1%	15.1%	42.2%
Upper Chesapeake Health – Upper Chesapeake Medical Center	171	11,357	***	***	***
Upper Chesapeake Health – Harford Memorial Hospital	86	4,429	***	***	***
Total	**11,869**	**611,594**			

*** Hospital supplied this data by county rather than as a percentage of their entire patient population and can be found in Table 3.

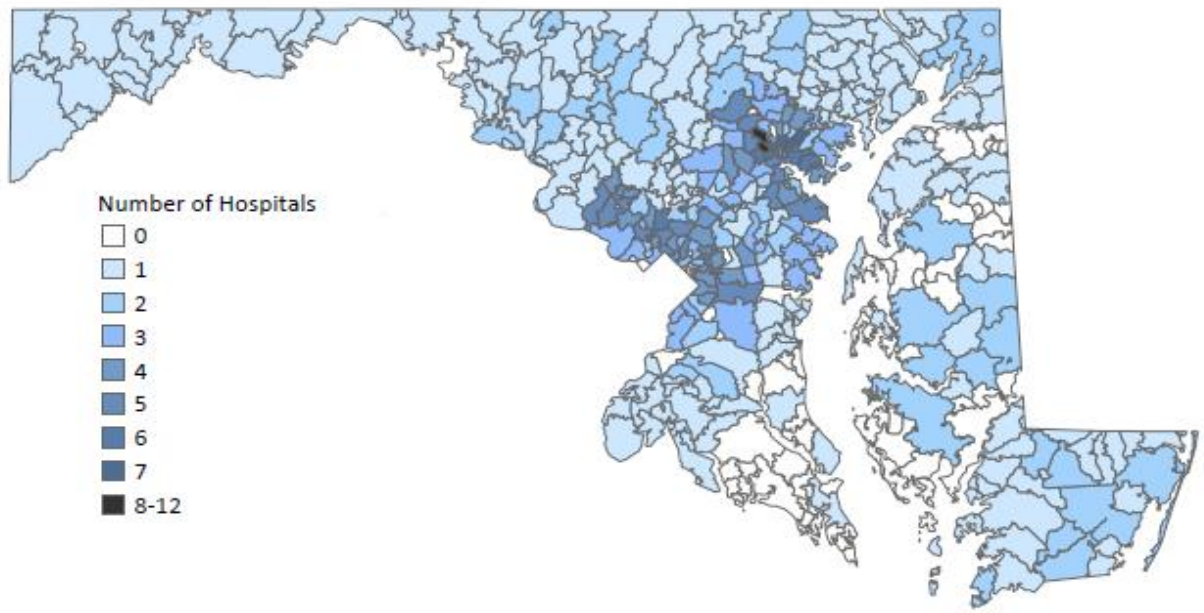
Community Benefit Service Area

The CBR collects the ZIP codes included in each hospital's community benefit service area (CBSA), and all hospitals responded to this question. Each hospital defines its own CBSA and must disclose the methodology behind this definition in both their CBRs and their federally mandated CHNAs.[12] While the methodology for determining the CBSA varied, hospitals reported three overarching approaches:

- Geography – areas with physical proximity to the hospital.
- Measures of service utilization – areas with threshold percentages of hospital discharges, emergency department visits, and other utilization.
- Measures of population health and social determinants of health – areas with certain health indicators, such as income, unemployment rates, insurance status, life expectancy, educational attainment, racial/ethnic disparities, and chronic disease risk factors/burden.

Figure 1 displays a map of Maryland's ZIP codes. Each ZIP code has a color indicating how many hospitals claim that area in its CBSA. One hospital reports its CBSA at the Community Statistical Area-level. For purposes of creating the map below, these were converted to ZIP codes. A total of 106 ZIP codes, those that appear white on the map, are not a part of any hospital's CBSA. This shows an improvement over FY 2016, which identified over 200 ZIP codes that were not covered. Two ZIP codes in Baltimore City, those that appear black on the map, are part of eight or more hospitals' CBSAs. See Appendix A for the list of ZIP codes and associated counties.

Figure 1. Number of Hospitals Claiming the ZIP Code in its CBSA, FY 2017



[12] 26 CFR § 1.501(r)-3(b).

Other Demographic Characteristics of Service Areas

Hospitals are required to submit details about the communities in their CBSA. Because most of the required measures in this section of the report are not available at the ZIP code level, they are reported at the county level instead. Table 3 displays examples of the county-level demographic measures required in the CBR. Because hospitals varied in their approaches and completeness in providing the metrics for this section of the report, the data in Table 3 were retrieved independently. See Appendix B for other community health measures reported by the hospitals.

The following measures were prepared using the five-year (2012-2016) average estimates from the U.S. Census Bureau's American Community Survey: median household income, percentage of families below the federal poverty level (FPL), percentage uninsured, percentage of the civilian non-institutionalized population with public health insurance, mean travel time to work, percentage that speak a language other than English at home, percentage by race categories, and percentage by ethnicity categories. The life expectancy three-year average (2014-2016) and the crude death rate (2016) measures are from the Maryland Department Health's Vital Statistics Administration.

Table 3. Community Statistics by County

County	# of Hospitals w/ CBSAs in that County	Median Household Income	% Below FPL	% Uninsured	% Public Health Insurance	% Medicaid	Mean Travel Time to Work (mins)	% Speak Language Other than English at Home	Race: % White	Race: % Black	Ethnicity: % Hispanic or Latino	Life Expectancy	Crude Death Rate (per 100,000)
Maryland		**76,067**	**6.8**	**8.1**	**29.8**	**23.0**	**32.4**	**17.6**	**59.7**	**31.4**	**9.2**	**79.5**	**812.5**
Allegany	1	41,559	11.2	6.8	43.7	29.8	20.6	4.6	90.2	9.4	1.7	76.4	1303.2
Anne Arundel	7	91,918	3.9	6.0	26	16.3	29.9	10.7	77.5	17.8	7.0	79.6	770.7
Baltimore	16	68,989	6.1	7.4	30.4	30.9	29.3	13.9	65.0	29.0	4.9	78.7	1015.1
Baltimore City	20	44,262	18.3	9.0	44.6	31.6	30.5	9.3	31.9	64.4	4.8	73.4	1089.9
Calvert	2	96,808	3.4	6.0	25.2	15.7	41.4	4.6	85.2	14.4	3.4	79.7	789.0
Caroline	2	50,830	13.2	10.1	44.0	36.2	30.6	6.5	83.5	15.2	6.4	76.1	1022.8
Carroll	3	87,060	3.4	4.4	24.9	13.9	35.4	5.1	94.1	4.3	3	79.1	953.7
Cecil	2	67,938	7.3	7.0	32.4	25.9	28.5	5	90.6	7.9	4	76.8	919.1
Charles	2	91,373	5.8	4.4	25.6	20.1	42.9	7.7	51.4	46.4	5.1	79.2	688.0
Dorchester	2	47,907	12.8	6.5	47.9	39.4	25.4	5.7	68.5	29.5	4.7	76.8	1267.9
Frederick	4	85,715	4.8	6.1	23.6	16.2	34.8	12.6	83.9	10.8	8.4	80.2	791.2
Garrett	2	46,277	9	8.9	41.2	29.5	23.6	3.1	98.8	1.6	1.0	78.9	1128.3
Harford	2	81,052	5.8	4.6	28.2	17.5	31.6	6.9	82.1	14.9	4.1	79.4	872.4
Howard	8	113,800	3.5	5.1	20.3	14.3	30.3	24.1	62.7	20.1	6.4	83.3	500.3
Kent	1	55,028	6.6	6.6	43.5	25.2	25.6	5.1	83.6	16	4.4	79.6	1,322.9
Montgomery	9	100,352	4.7	9.3	24.2	17.8	34.5	39.8	58.5	19.6	18.6	84.9	553.9
Prince George's	11	75,925	6.9	12.9	29.0	24.5	36.7	23.3	21.3	65.4	16.7	79.6	681.1
Queen Anne's	3	85,891	4.4	5.0	29.3	17.6	35.3	5.2	90.8	7.9	3.4	79.4	878.8
Saint Mary's	1	86,810	5.4	6.0	26.1	87.0	30.4	7.4	82.1	15.8	4.6	76.3	995.1
Somerset	2	35,886	20.6	9.1	47.1	7.9	24.0	7.3	55.2	43.4	3.6	79.5	677.7
Talbot	2	61,395	6.9	6.9	41.3	22.0	26.6	7.2	85.4	12.3	6.1	81.1	1062.3

County	# of Hospitals w/ CBSAs in that County	Median Household Income	% Below FPL	% Uninsured	% Public Health Insurance	% Medicaid	Mean Travel Time to Work (mins)	% Speak Language Other than English at Home	Race: % White	Race: % Black	Ethnicity: % Hispanic or Latino	Life Expectancy	Crude Death Rate (per 100,000)
Washington	1	56,316	9.7	7.9	37.6	28.9	29.2	7.3	86.8	12.8	4.2	77.5	1018.0
Wicomico	2	53,508	10.5	9.1	37.3	33.3	21.7	10.9	70.7	26.7	4.9	76.9	992.4
Worcester	2	57,227	7.7	7.8	43.7	26.1	24.5	5.2	84.2	14.6	3.4	78.5	1255.7
Source	[13]	[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]	[23]	[24]	[25]

[13] As reported by hospitals in their FY 2017 Community Benefit Narrative Reports
[14] American Community Survey 5-Year Estimates 2012 – 2016, Selected Economic Characteristics, Median Household Income (Dollars), https://factfinder.census.gov/faces/nav/jsf/pages/searchresults.xhtml?refresh=t
[15] American Community Survey 5-Year Estimates 2012 – 2016, Selected Economic Characteristics, Percentage of Families and People Whose Income in the Past 12 Months is Below the Federal Poverty Level – All Families
[16] American Community Survey 5-Year Estimates 2012 – 2016, Selected Economic Characteristics, Health Insurance Coverage (Civilian Noninstitutionalized Population) – No Health Insurance Coverage
[17] American Community Survey 5-Year Estimates 2012 – 2016, Selected Economic Characteristics, Health Insurance Coverage (Civilian Noninstitutionalized Population) – With Public Coverage
[18] American Community Survey 5-Year Estimates, 2012–2016 (denominator) and The Hilltop Institute (numerator)
[19] American Community Survey 5-Year Estimates 2012 – 2016, Selected Economic Characteristics, Commuting to Work – Mean Travel Time to Work (Minutes)
[20] American Community Survey 5-Year Estimates 2012 – 2016, Language Spoken at Home, Speak a Language Other Than English
[21] American Community Survey 5-Year Estimates 2012 – 2016, ACS Demographic and Housing Estimates, Race - Race alone or in combination with one or more other races - Total Population - White
[22] American Community Survey 5-Year Estimates 2012 – 2016, ACS Demographic and Housing Estimates, Race - Race alone or in combination with one or more other races - Total Population – Black or African American
[23] American Community Survey 5-Year Estimates 2012 – 2016, ACS Demographic and Housing Estimates, Hispanic or Latino and race - Total Population - Hispanic or Latino (of any race)
[24] Maryland Department of Health and Mental Hygiene Vital Statistics Report: 2016, Table 7. Life Expectancy at Birth by Race, Region, and Political Subdivision, Maryland, 2014 – 2016.
[25] Maryland Department of Health and Mental Hygiene Vital Statistics Report: 2016, Table 39A. Crude Death Rates by Race, Hispanic Origin, Region, and Political Subdivision, Maryland, 2016.

Section II. Community Health Needs Assessment

Section II of the narrative CBR asks hospitals whether they conducted a CHNA, when they last conducted it, and whether they adopted an implementation strategy. All hospitals reported conducting a CHNA that conforms to the IRS definition within the past three fiscal years and adopting an implementation strategy. See Appendix C for the dates in which hospitals conducted their last CHNAs. These dates ranged from October 2014 to November 2017.

Section III. Community Benefit Administration

This section of the narrative CBR requires hospitals to report on the process of "determining which needs in the community would be addressed through community benefits activities." Hospitals must provide details of the planning, staffing, and oversight of their community benefit efforts.

Community Benefit Planning in Strategic Plan

This section of the CBR asks hospitals about the involvement of community benefit in strategic planning. All but one hospital indicated that their strategic plan includes community benefit considerations. Hospital narrative responses often mentioned that community benefit strengthens the hospital's culture and capabilities, and thereby strengthening community ties. For example, one hospital wrote that their "community health and community benefit initiatives and tactics are organized under the Evolving Care Delivery Model domain, with recognition of health disparities and an aim to integrate community health initiatives into the interdisciplinary model of care."

Stakeholders

This section of the CBR asks hospitals to indicate the stakeholders involved in the implementation and delivery of community benefit activities. Table 4 summarizes responses to this question across all 49 hospitals. The most common staff member involved in community benefit activities is the chief executive officer, reported by 47 of the 49 hospitals. The least common community benefit stakeholder across hospitals, with 9 out of 49, is a Community Benefit Task Force. Of note, the number of hospitals reporting a population health vice president or equivalent increased from 29 hospitals in FY 2016 to 37 hospitals in FY 2017.

Table 4. Hospital Stakeholders Involved in Community Benefit Process

	Number of Hospitals		
Stakeholders	**Yes**	**No**	**Did not Provide**
Senior Leadership			
CEO	47 (95.9%)	2 (4.1%)	0
CFO	41 (83.7%)	8 (16.3%)	0
Other	45 (91.8%)	4 (8.2%)	0
Clinical Leadership			
Physician	45 (91.8%)	4 (8.2%)	0
Nurse	43 (87.8%)	6 (12.2%)	0
Social Worker	22 (44.9%)	27 (55.1%)	0
Other	29 (59.2%)	20 (40.8%)	0
Population Health Leadership and Staff			
Population Health VP or Equivalent	37 (75.5%)	11 (22.4%)	1 (2.0%)
Other Population Health Staff	29 (59.2%)	19 (38.8%)	1 (2.0%)
Community Benefit Operations			
Individual	28 (57.1%)	21 (42.9%)	0
Committee	29 (59.2%)	20 (40.8%)	0
Department	23 (47.0%)	26 (53.1%)	0
Task Force	9 (18.4%)	40 (81.6%)	0

Stakeholders	Number of Hospitals		
	Yes	No	Did not Provide
Other	19 (38.8%)	30 (61.2%)	0

Senior leadership provided varying roles in the community benefit process. In general, most hospitals indicated that senior leadership had a role in defining the organization's population health objectives and creating the infrastructure that delivers health services to targeted populations. Some hospitals reported that senior leadership plays an active role in community benefit activities through a structured committee process with formal, regular meetings. Other hospitals reported senior leadership's role as providing the support and guidance necessary to develop the strategic framework underlying the community benefit activities. Often, senior leaders take an active role in annual organizational strategic planning that incorporates and aligns goals and initiatives, including those based on community health needs and the prior year's outcomes.

Clinical leadership appears to play an active role at most hospitals, with many hospitals reporting that clinical leaders provide community benefit implementation oversight. They provide input into each initiative as it relates to their area of expertise. Population health leaders and staff have varying amounts of responsibility among the hospitals, with some hospitals having dedicated population health personnel, teams, and/or departments.

Internal Audit and Board Review

This section asks whether the hospital conducts an internal audit of the CBR financial spreadsheet and narrative. All hospitals responded to this question. Table 5 shows that 45 out of 49 hospitals conduct an internal audit of the financial spreadsheet, and 42 conduct an internal audit of the narrative report. This section also asks hospitals to describe their internal audit process. Of the 45 hospitals that completed an internal audit, all but one reported that the CBRs are reviewed by senior leadership. Most hospitals also had their community benefit team review the CBR. Senior leaders involved in the report review included the chief financial officer, the government and regulatory affairs department, the community/population health department, and the clinical integration department.

Table 5. Hospital Internal Audit of the CBR

Internal Audit	Number of Hospitals	
	Yes	No
Spreadsheet	45 (91.8%)	4 (8.2%)
Narrative	42 (85.7%)	7 (14.3%)

This section also asks whether the hospital board reviews and approves the CBR spreadsheet and narrative. All hospitals responded to this question. Table 6 shows that most hospital boards review and approve the CBR. Of the hospitals that reported that they did not submit their reports for board review, their reasons were largely timing issues or that the board had delegated this authority to executive staff. For example, several hospitals reported that their board meets only twice per year and did not have the opportunity to review before the report deadline.

Table 6. Hospital Board Review of the CBR

	Number of Hospitals	
Board Review	**Yes**	**No**
Spreadsheet	42 (85.7%)	7 (14.3%)
Narrative	42 (85.7%)	7 (14.3%)

This section also asks if community benefit investments are incorporated into the major strategies of the Hospital Strategic Transformation Plan. Table 7 shows that nearly all hospitals indicated that community benefit investments are a part of their Strategic Transformation Plan. While those hospitals who answered "no" to this question were not required to provide an explanation, several chose to do so. In some cases, the hospital indicated that they do not have a Strategic Transformation Plan, while one hospital indicated that their Strategic Transformation Plan is under development.

Table 7. Community Benefit Investments in Hospital Strategic Transformation Plan

Community Benefit Investments in Strategic Transformation Plan	Number of Hospitals
Yes	41 (83.7%)
No	7 (14.3%)
No response	1 (2.0%)

Section IV. Community Benefit External Collaboration

The CBR requires Maryland hospitals to describe their engagement with external partners as follows.

> *"External collaborations are highly structured and effective partnerships with relevant community stakeholders aimed at collectively solving the complex health and social problems that result in health inequities. Maryland hospital organizations should demonstrate that they are engaging partners to move toward specific and rigorous*

processes aimed at generating improved population health. Collaborations of this nature have specific conditions that together lead to meaningful results, including: a common agenda that addresses shared priorities, a shared defined target population, shared processes and outcomes, measurement, mutually reinforcing evidence based activities, continuous communication and quality improvement, and a backbone organization designated to engage and coordinate partners."

All hospitals indicated the categories of external partners with whom they collaborated. The results of this question are presented in Table 8. Faith-based community organizations were the most common type of external partners, with 48 out of 49 hospitals reporting such partnerships. The least common external partner category is post-acute care organizations, with 26 out of 49 hospitals reporting such partnerships. Please note that the post-acute care category is newly added for the FY 2017 report, and staff will track improvement in this area going forward.

Table 8. Hospital External Collaboration with Partners

	Number of Hospitals	
Partners	**Yes**	**No**
Faith-based Community Organizations	48 (98.0%)	1 (2.0%)
Local Health Department	47 (95.9%)	2 (4.1%)
Social Service Organizations	47 (95.9%)	2 (4.1%)
Other Hospital Organizations	46 (39.9%)	3 (6.1%)
Schools	46 (39.9%)	3 (6.1%)
Local Health Improvement Coalitions	43 (87.8%)	6 (12.2%)
Behavioral Health Organizations	42 (85.7%)	7 (14.3%)
Post-Acute Service Organizations	26 (53.1%)	23 (47.0%)

Hospitals were also asked whether their staff participate on their Local Health Improvement Coalition (LHIC). All hospitals responded to this question, and the results are presented in Table 9. Of the 49 hospitals submitting reports, 45 indicated that their staff participate on the LHIC. Of those, 15 hospitals reported that their staff member(s) co-chair the LHIC for their area.

Table 9. Hospital External Collaboration with LHICs

	Number of Hospitals	
Question	**Yes**	**No**
Is there a member of the hospital organization that is co-chairing the LHIC in the jurisdictions where the hospital organization is targeting community benefit dollars?	15 (28.8%)	37 (71.2%)
Is there a member of the hospital organization that attends or is a member of the LHIC in the jurisdictions where the hospital organization is targeting community benefit dollars?	45 (86.5%)	7 (13.5%)

Hospitals were asked to describe the collaborative activities with their partners. Hospitals provided varying levels of detail about these activities. Many hospitals reported hosting and co-hosting community events, community focus groups, and health education programs. Many also reported that partners assisted in the CHNA process.

Section V. Hospital Community Benefit Program and Initiatives

Primary Needs Identified Through the CHNA Process

This section of the CBR collects details about the community benefit initiatives the hospitals undertook during the fiscal year. These initiatives must target the community health needs identified through the CHNA process. Hospitals are asked to highlight the details of select initiatives; they are not asked to report on all initiatives. All but two hospitals provided complete responses to these questions. Table 10 shows the number of hospitals that reported targeting initiatives at a number of community health needs. The most common CHNA-identified need targeted by hospitals' initiatives was outreach and education, with 41 hospitals. The least common need, targeted by one hospital, was education as a social determinant of health.

Table 10. Community Health Needs Targeted by Maryland Hospitals' Community Benefit Initiatives, FY 2017

Community Health Needs	Number of Hospitals Reporting CB Initiatives Targeting the Need
Multicultural Outreach & Community Integration/Health Education & Literacy	41
Cardiovascular Health (Includes Heart Disease, Hypertension, Stroke)	30
Obesity, Overweight, Nutrition, Exercise	25
Access to Care – Overall/Comprehensive/Specialty	22
Behavioral Health (Includes Mental Health and Substance Use Disorder)	21
Diabetes Prevention & Management	21
Access to Care – Primary & Preventive	14
Cancer Diagnosis and Treatment	14
Maternal and Child Health (Includes Infant Mortality)	12
Other – Overall	12
Violence Prevention - Youth, Street, Domestic	8
Healthy Economy (Includes Employment, Job Training, etc.)	6
Senior Health	6
Provider Shortages	5
Access to Safe, Affordable Housing	4
Other – Somatic Clinical Interventions	4
Access to Care – Dental	3
Respiratory Health (Includes Asthma, Smoking)	3
Education (Graduation Rate, Access, etc.)	1

Cardiovascular Health

Hospitals took varying approaches to meet the goal of improving cardiovascular health in the community. Many hospitals viewed this issue through the lens of unhealthy behaviors, recognizing that many people with multiple chronic conditions experience disproportionate rates of heart disease. Awareness was a key objective. Hospitals reported providing community education opportunities in locations such as community centers, schools, and in collaboration with faith-based partners. Reduction in comorbidities was also a focus through programs that educate the public on fitness, nutrition, and chronic disease self-management.

Diabetes Prevention and Management

According to the CDC National Center for Health Statistics, national data trends for people with diabetes show a significant rise in diagnoses. In the U.S., diabetes is becoming more common. Diagnoses from 1980 – 2014 increased from 5.5 million to 22 million.[26] Many hospitals reported initiatives that decrease the incidence of diabetes in the community through clinical screening, support groups, and diabetes education. Some hospitals also run diabetes chronic illness self-management programs in the community.

Obesity, Overweight, Nutrition, Exercise

Many hospitals emphasized obesity and the risk for chronic health problems, such as heart disease, type 2 diabetes, cancer, stroke, asthma, and arthritis. Community benefit activities included public education and outreach on a variety of obesity-related health risks and prevention activities. Activities also included wellness exams, physicals, and exercise programs. Several hospitals described initiatives related to healthy food and produce including bringing healthy cooking programs to schools and doctors prescribing fruits and vegetables to patients.

Behavioral Health

Hospitals had varying approaches to addressing behavioral health needs in their communities. Some reported engaging in education and outreach activities. Other hospitals undertook activities to address gaps in mental health professional availability by providing training and continued learning opportunities for such individuals as students, mental health professionals, and individuals such as guidance counselors and corrections officers who may not be mental health professionals, but who may often interact with individuals with mental health needs. Some hospitals with patients in rural areas have initiatives that provide telepsychiatry to underserved areas, including the Eastern Shore and Garrett County.

[26] 2013-2015 National Health Interview Survey (NHIS), National Center for Health Statistics, Centers for Disease Control and Prevention.

Primary Community Health Needs Not Addressed

The CBR asks hospitals about community health needs identified through the CHNA process that were not addressed. Forty-two hospitals reported that one or more primary community health needs were not addressed; seven reported that all were being addressed; and three hospitals did not respond to the question. Of the hospitals that reported that one or more primary community health needs were not addressed, the most frequently reported reason was inadequate resources to address all of the needs. For example, some hospitals reported that they are not currently focusing on top health concerns identified by the CHNA due to the lack of available resources necessary to make the most impactful changes in these areas. The needs were incorporated into the strategic plan, where appropriate. Specific needs not addressed by other hospitals included oral health, injury and violence prevention, affordable housing, alcohol abuse, and HIV/AIDS.

Community Benefit Operations/Activities Related to State Initiatives

Hospitals were asked how their community benefit operations/activities work toward the state's initiatives for improvement in population health, as identified by the State Health Improvement Process (SHIP) and the Community Health Resources Commission. These include efforts to integrate medical care with community-based resources, a framework and measures (with targets) in distinct focus areas to continue to promote optimal health for all Maryland residents, promoting programs that enhance patient care and population health, and efforts to expand access to health care in underserved communities. In the context of the state's All-Payer Model, hospitals are tasked with improving quality, including decreasing readmissions and hospital-acquired conditions. Three hospitals did not respond to this question. Hospital responses varied from improving access to primary care, discharge planning, dedication to professional education, engagement with community-based organizations to provide resources at no cost, supporting tobacco cessation efforts in the hospital and in the community, flu vaccination programs, and utilizing electronic medical records for better patient tracking and to achieve health outcomes.

Highlighted Initiatives

Bon Secours

Provides a whole spectrum of initiatives to address social determinants of health, including housing, employment, financial, and behavioral health services

Lifebridge Sinai

Kujichagulia Center provides service coordination and social services for patients admitted to the hospital for violence-related injuries

Sheppard Pratt

Provides a number of initiatives offering telepsychiatry to underserved areas, including the Eastern Shore and Garrett County

Section VI. Physicians

Gaps in Availability

Under Maryland law, hospitals are required to provide a written description of gaps in the availability of specialist providers to serve the uninsured cared for by the hospital.[27] All hospitals responded to this question. Table 11 shows the gaps in availability that were submitted and the number of hospitals reporting each gap. The most frequently reported gap was mental health/psychiatry (reported by 24 hospitals), and the least frequently reported gaps, each reported by one hospital, were allergy and immunology, diagnostic radiology, geriatrics, medication assistance, nephrology, pediatrics, urology, and wound care. Thirteen hospitals reported no gaps.

Table 11. Gaps in Availability

Physician Specialty Gap	Number of Hospitals
Mental Health/Psychiatry	24
Primary Care	14
Neurosurgery/Neurology	10
Dental/Oral/Maxillofacial Surgery	11
Dermatology	7
Substance Abuse/Detoxification	7
Obstetrics/Gynecology	6
Oncology	5
Pulmonary	5
Cardiology	4
Endocrinology	4
General Surgery	4
Hematology	4
Otolaryngology (ENT)	4
Vascular Surgery	4
Other/Unspecified	4
Gastroenterology	3
Infectious Diseases	3
Orthopedic Specialties	3
Physical/Occupational Therapy	3
Anesthesiology	2
Cardiac/Thoracic Surgery	4
ED Coverage	2

[27] MD. CODE. ANN., Health-Gen. § 19-303(c)(2)(vi).

Physician Specialty Gap	Number of Hospitals
Inpatient and Outpatient Care Provider Shortage	2
Intensive Care	2
Rheumatology	2
Allergy & Immunology	1
Diagnostic Radiology	1
Geriatrics	1
Medication Assistance	1
Nephrology	1
Pediatrics	1
Urology	1
Wound Care	1

Physician Subsidies

Hospitals that report physician subsidies as a community benefit category are required to further explain why the services would not otherwise be available to meet patient demand. The physician subsidy categories include: hospital-based physicians with whom the hospital has an exclusive contract; non-resident house staff and hospitalists; coverage of emergency department call; physician provision of financial assistance to encourage alignment with the hospital financial assistance policies; and physician recruitment to meet community need. Forty-two hospitals listed at least one category of subsidy.

Section VII. Appendices

The CBR also requires the hospitals to submit two categories of appendices: financial assistance policies and their mission, vision, and values statements. All hospitals submitted copies of their mission, vision, and values statements.

Financial Assistance Policies

The CBR requires hospitals to submit four documents related to financial assistance policies:

- A description of the policy (submitted by all hospitals)
- A description of how the policy changed since the enactment of the coverage expansions under the Affordable Care Act (submitted by all but two hospitals)
- A copy of the financial assistance policy (submitted by all hospitals)
- A copy of the patient information sheet provided to patients in accordance with Health-General §19-214.1(e) (submitted all hospitals)

Maryland law established the requirements for hospitals to provide free or reduced cost care as part of their financial assistance policies.[28] State statute sets the family income threshold for free medically necessary care at or below 150 percent of the FPL; however, the statute allows the HSCRC to create higher income thresholds through regulation.[29] The HSCRC published regulations requiring that patients with family income at or below 200 percent of the FPL qualify for free, medically necessary care.[30] In FY 2017, 40 hospitals reported that they provide free care at the threshold required in regulation, 6 hospitals reported a higher/more generous threshold, 1 hospital reported a threshold lower than the regulatory requirement (150 percent of the FPL), and 5 hospitals did not include their thresholds in the policies.

Regulations also require hospitals to provide reduced-cost, medically necessary care to patients with family income between 200 and 300 percent of the FPL.[31] Twenty-four hospitals report providing reduced cost care at this threshold, 22 hospitals reported a more generous threshold (as high as 600 percent of the FPL), and 6 hospitals did not provide this information.

Hospitals must also provide for reduced-cost, medically necessary care to patients with family income below 500 percent of the FPL who have a financial hardship; some hospitals call this the financial hardship policy.[32] In order to have a financial hardship, the medical debt incurred by a family over a 12-month period must exceed 25 percent of family income.[33] Thirty-two hospitals reported having policies at this threshold. Two hospitals reported a more generous policy, allowing for reduced-cost care at 500 percent of the FPL when debt exceeds 20 percent of family income. Eight hospitals did not state the FPL threshold, but indicated that the policy applies to debt exceeding 25 percent of family income; one hospital stated only ten percent of family income. One hospital allowed for reduced cost care at 400 percent of the FPL and one at 500 percent of the FPL, but neither stated the percentage of family income in which the debt must exceed. Finally, seven hospitals did not provide this information

[28] MD. CODE. ANN., Health-Gen. §19-214.1; COMAR 10.37.10.26.
[29] MD. CODE. ANN., Health-Gen. §19-214.1(b).
[30] COMAR 10.37.10.26(A-2)(2)(a)(i).
[31] COMAR 10.37.10.26(A-2)(2)(a)(ii).
[32] COMAR 10.37.10.26(A-2)(3).
[33] COMAR 10.37.10.26(A-2)(1)(b)(i).

FINANCIAL REPORTS

The financial reports collect information about staff hours, the number of encounters, and direct and indirect costs for community benefits, categorized by type of community benefit activity. The reporting period for these financial data is July 1, 2016, through June 30, 2017. Hospitals submitted their individual CBRs to the HSCRC by December 2017. Audited financial statements were used to calculate the cost of each of the community benefit categories contained in the data reports. Fifty-two hospitals submitted individual data reports.

FY 2017 Financial Reporting Highlights

Table 12 presents a statewide summary of community benefit expenditures for FY 2017. Maryland hospitals provided roughly $1.56 billion in total community benefit activities in FY 2017—a total that is slightly higher than FY 2016 ($1.52 billion). The FY 2017 total comprises net community benefit expenses of $531.7 million in mission-driven health care services (subsidized health services), $485.3 million in health professions education, $287.4 million in charity care, $117.4 million in community health services, $70.7 million in unreimbursed Medicaid costs, $29.1 million in community building activities, $15.5 million in financial contributions, $14.3 million in community benefit operations, $9.2 million in research activities, and $1.8 million in foundation-funded community benefits. These totals include hospital-reported indirect costs, which vary by hospital and by category from a fixed dollar amount to a calculated percentage of the hospital's reported direct costs.

Table 12. Total Community Benefits, FY 2017

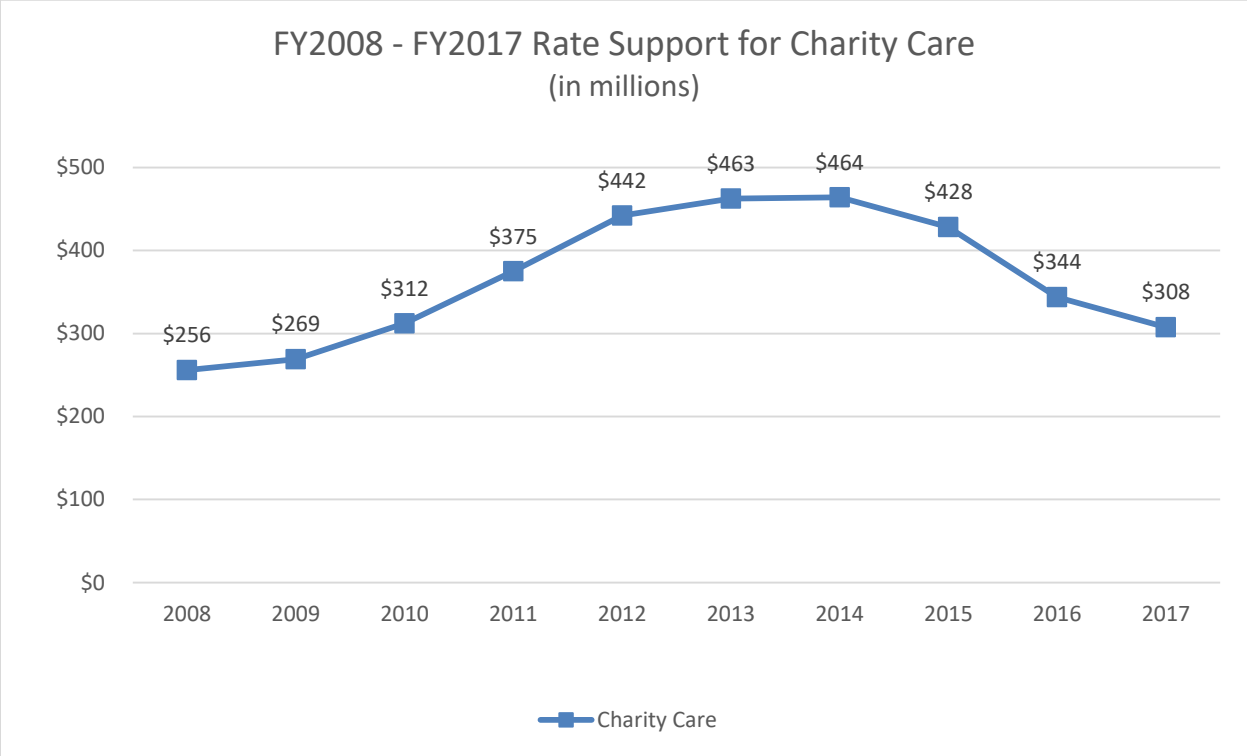
Community Benefit Category	Number of Staff Hours	Number of Encounters	Net Community Benefit Expense	% of Total Community Benefit Expenditures	Net Community Benefit Expense Less: Rate Support	% of Total Community Benefit Expenditures w/o Rate Support
Unreimbursed Medicaid Cost	N/A	N/A	$70,698,325	4.52%	$70,698,325	7.89%
Community Health Services	1,160,675	4,285,789	$117,440,236	7.52%	$117,440,236	13.11%
Health Professions Education	5,184,061	174,420	$485,272,453	31.06%	$126,284,803	14.10%
Mission Driven Health Services	3,460,700	1,486,387	$531,672,125	34.03%	$531,672,125	59.34%
Research	131,883	5,795	$9,199,240	0.59%	$9,199,240	1.03%
Financial Contributions	62,729	135,731	$15,552,359	1.00%	$15,552,359	1.74%
Community Building	288,299	208,517	$29,108,751	1.86%	$29,108,751	3.25%
Community Benefit Operations	128,480	12,902	$14,310,941	0.92%	$14,310,941	1.60%
Foundation	73,282	23,868	$1,809,380	0.12%	$1,809,380	0.20%
Charity Care	0	0	$287,451,403	18.40%	$(20,127,697)	-2.25%
	10,490,110	**6,333,409**	**$1,562,515,212**	**100%**	**$ 896,948,462**	**100%**

In Maryland, the costs of uncompensated care (including charity care and bad debt) and graduate medical education are built into the rates for which hospitals are reimbursed by all payers,

including Medicare and Medicaid. Additionally, the HSCRC rates include amounts for nurse support programs provided at Maryland hospitals. These costs are essentially "passed-through" to the purchasers and payers of hospital care. To comply with IRS Form 990 and avoid accounting confusion among programs that are not funded by hospital rate setting, the HSCRC requests that hospitals exclude from their reports all revenue that is included in rates as offsetting revenue on the CBR worksheet. Appendix D details the amounts that were included in rates and funded by all payers for charity care, direct graduate medical education, and nurse support programs in FY 2017.

As noted above, the HSCRC includes a provision in hospital rates for uncompensated care—which includes charity care—because it is considered to be a community benefit. It also includes bad debt, which is not considered a community benefit. Figure 2 shows the rate support for charity care from FY 2008 through FY 2017. The rate support for charity care continuously increased from FY 2008 through FY 2014 and then has decreased each year since then due to implementation of the ACA. See Appendix D for more details.

Figure 2. Rate Support for Charity Care, FY 2008 through FY 2017



Another social cost funded through Maryland's rate-setting system is the cost of graduate medical education, generally for interns and residents who are trained in Maryland hospitals. Included in graduate medical education costs are the direct costs (i.e., direct medical education, or DME), which include the residents' and interns' wages and benefits, faculty supervisory expenses, and allocated overhead. The HSCRC's annual cost report quantifies the DME costs of physician training programs at Maryland hospitals. In FY 2017, DME costs totaled $342.8 million.

The HSCRC's Nurse Support Program I (NSP I) is aimed at addressing the short- and long-term nursing shortage affecting Maryland hospitals. In FY 2017, $16.2 million was provided in hospital rate adjustments for the NSPI. See Appendix D for detailed information about funding provided to specific hospitals.

When the reported community benefit costs for Maryland hospitals were offset by rate support, the net community benefits provided in FY 2017 totaled $896 million, or 6.8 percent of total hospital operating expenses. This is an increase from the $827.7 million in net benefits provided in FY 2016, which totaled 5.07 percent of hospital operating expenses. See Appendix E: FY 2017 Community Benefit Analysis for additional detail.

Table 13 presents staff hours, the number of encounters, and expenditures for health professional education by activity. The education of physicians and medical students makes up the majority of expenses in the category of health professions education, totaling $429.5 million. The second highest category is the education of nurses and nursing students, totaling $30.6 million. The education of other health professionals totaled $17.3 million.

Table 13. Health Professions Education Activities and Costs, FY 2017

Health Professions Education	Number of Staff Hours	Number of Encounters	Net Community Benefit with Indirect Cost
Physicians and Medical Students	4,135,304	49,285	$429,519,347
Nurses and Nursing Students	590,411	43,527	$30,632,556
Other Health Professionals	320,096	52,811	$17,305,829
Other	134,270	26,990	$4,495,355
Scholarships and Funding for Professional Education	3,981	1,807	$3,319,365
Total	**5,184,061**	**174,420**	**$485,272,453**

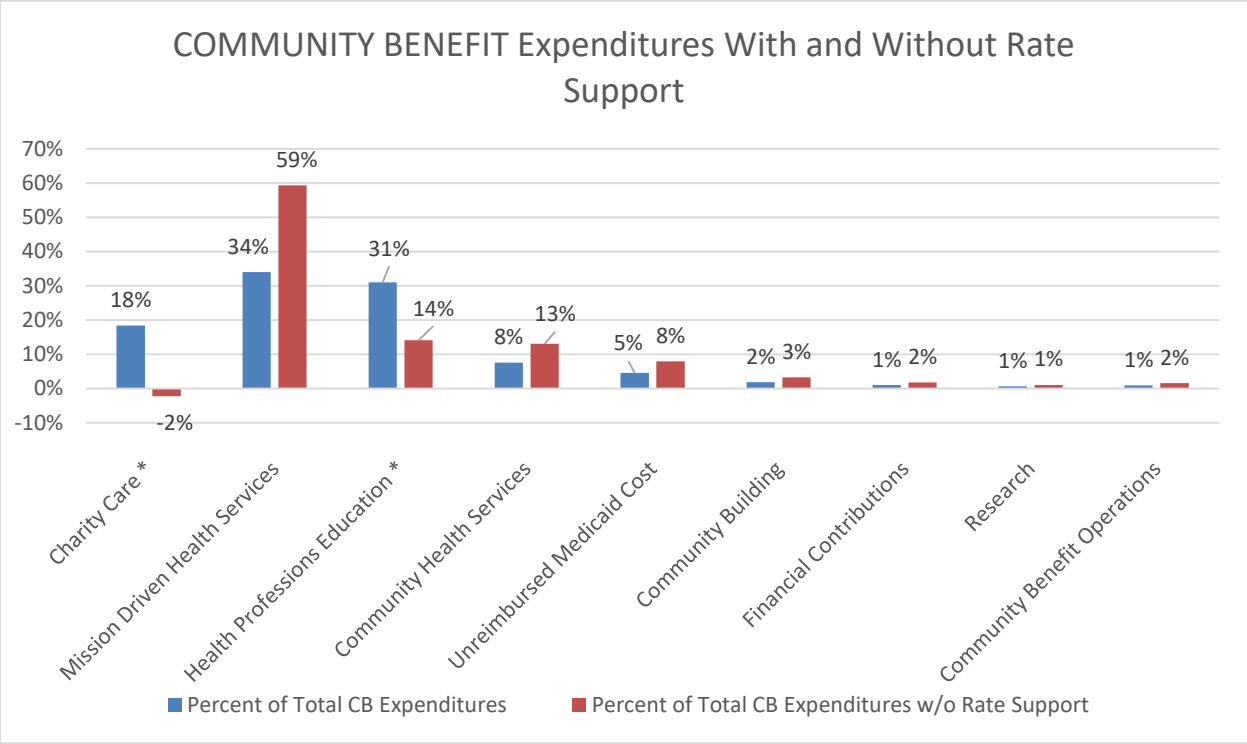
Table 14 presents staff hours, the number of encounters, and expenditures for community health services by activity. Health care support services comprise the largest portion of expenses in the category of community health services, totaling $51.5 million. Community health education is the second highest category, totaling $23.5 million, and community-based clinical services is the third highest, totaling $17.4 million. For additional detail, see Appendix F FY 2017 Hospital Community Benefit Aggregate Data.

Table 14. Community Health Services Activities and Costs, FY 2017

Community Health Services	Number of Staff Hours	Number of Encounters	Net Community Benefit with Indirect Cost
Health Care Support Services	342,205	267,167	$51,528,656
Community Health Education	245,856	2,926,907	$23,499,448
Community-Based Clinical Services	334,088	479,045	$17,445,334
Other	80,037	116,593	9,957,113
Free Clinics	16,034	20,890	$6,178,788
Screenings	40,387	171,433	$4,032,266
Support Groups	28,471	43,317	$1,984,408
Self-Help	29,923	196,273	$1,707,131
Mobile Units	36,316	15,000	$588,348
One-Time/Occasionally Held Clinics	7,356	49,164	$518,744
Total	**1,160,675**	**4,285,789**	**$117,440,236**

Rate offsetting significantly affects the distribution of expenses by category. Figure 3 shows expenditures in each community benefit category as a percentage of total expenditures. Charity care, health professions education, and mission-driven health services represent the majority of the expenses, at 18 percent, 34 percent, and 31 percent, respectively. Figure 3 also shows the percentage of expenditures by category without rate support, which changes the configuration significantly: Mission-driven health services becomes the category with the highest percentage of expenditures, at 59 percent. Health professions education follows, with 14 percent of expenditures, and community health services accounts for 13 percent of expenditures.

Figure 3. Percentage of Community Benefit Expenditures by Category with and without Rate Support, FY 2017



Appendix E compares hospitals on the total amount of community benefits reported, the amount of community benefits recovered through HSCRC-approved rate supports (i.e., charity care, direct medical education, and nurse support), and the number of staff and staff hours dedicated to community benefit operations. On average, in FY 2017, 2,471 staff hours were dedicated to community benefit operations, an increase of 13 percent from 2,189 staff hours in FY 2016. Three hospitals reported zero staff hours dedicated to community benefit operations, which is lower than FY 2016. The HSCRC continues to encourage hospitals to incorporate community benefit operations into their overall strategic planning.

The total amount of community benefit expenditures as a percentage of total operating expenses ranged from 3.0 percent to 18.8 percent, with an average of 9.9 percent, slightly higher than FY 2016. Twenty hospitals reported providing benefits in excess of 10 percent of their operating expenses, compared with 19 hospitals in FY 2016.

FY 2004 – FY 2017 14-Year Summary

FY 2017 marks the 14th year since the inception of the CBR. In FY 2004, community benefit expenses represented $586.5 million, or 6.9 percent of operating expenses. In FY 2017, these expenses represented roughly $1.56 billion, or 9.9 percent of operating expenses. As Maryland hospitals have increasingly focused on implementation of cost- and quality-improvement

strategies, an increasing percentage of operating expenses has been directed toward community benefit initiatives.

The reporting requirement for revenue offsets and rate support has changed since the inception of the CBR in FY 2004. For consistency purposes, the following figures illustrate community benefit expenses from FY 2008 through FY 2017. Figures 4 and 5 show the trend of community benefit expenses with and without rate support. On average, approximately 50 percent of expenses were reimbursed through the rate-setting system.

Figure 4. FY 2008 – FY 2017 Community Benefit Expenses with and without Rate Support

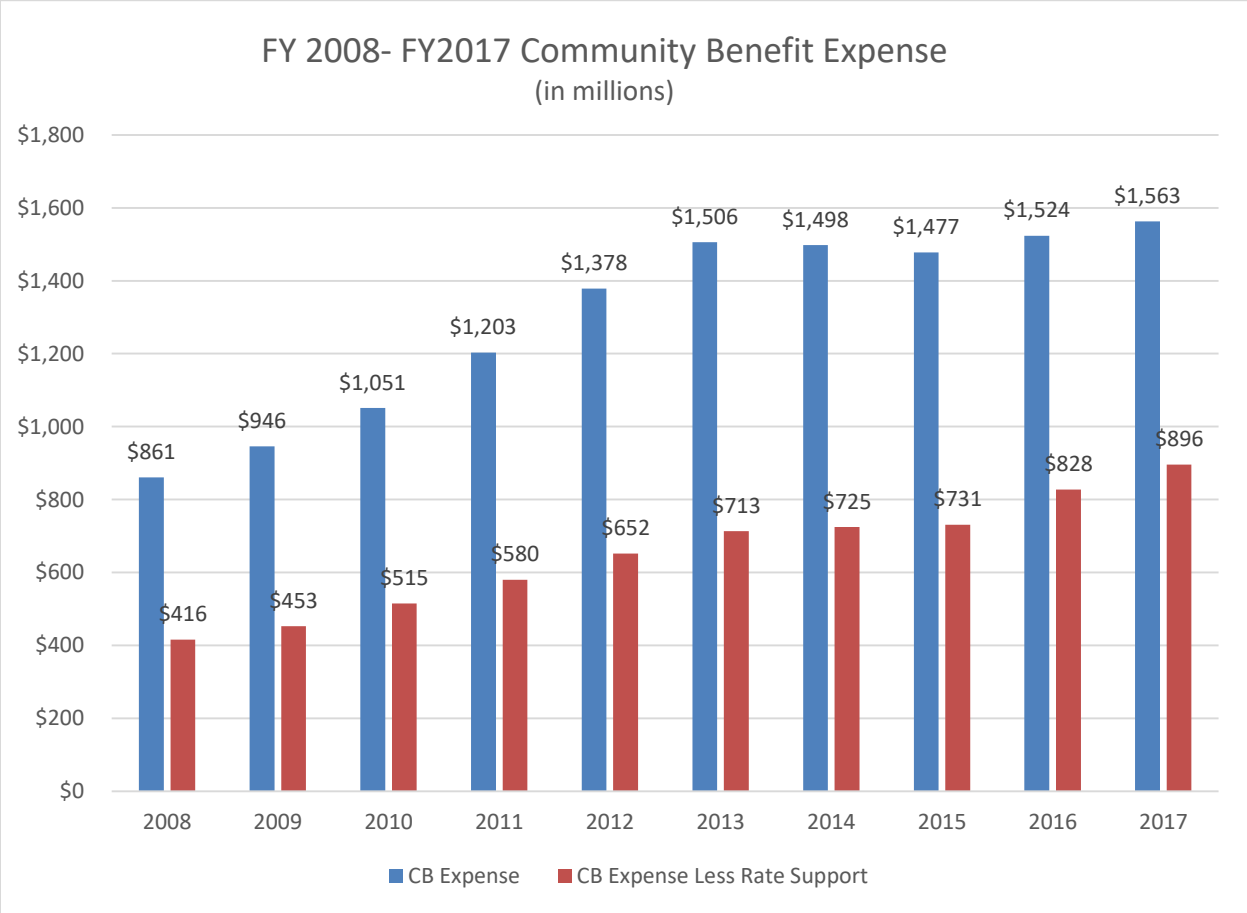
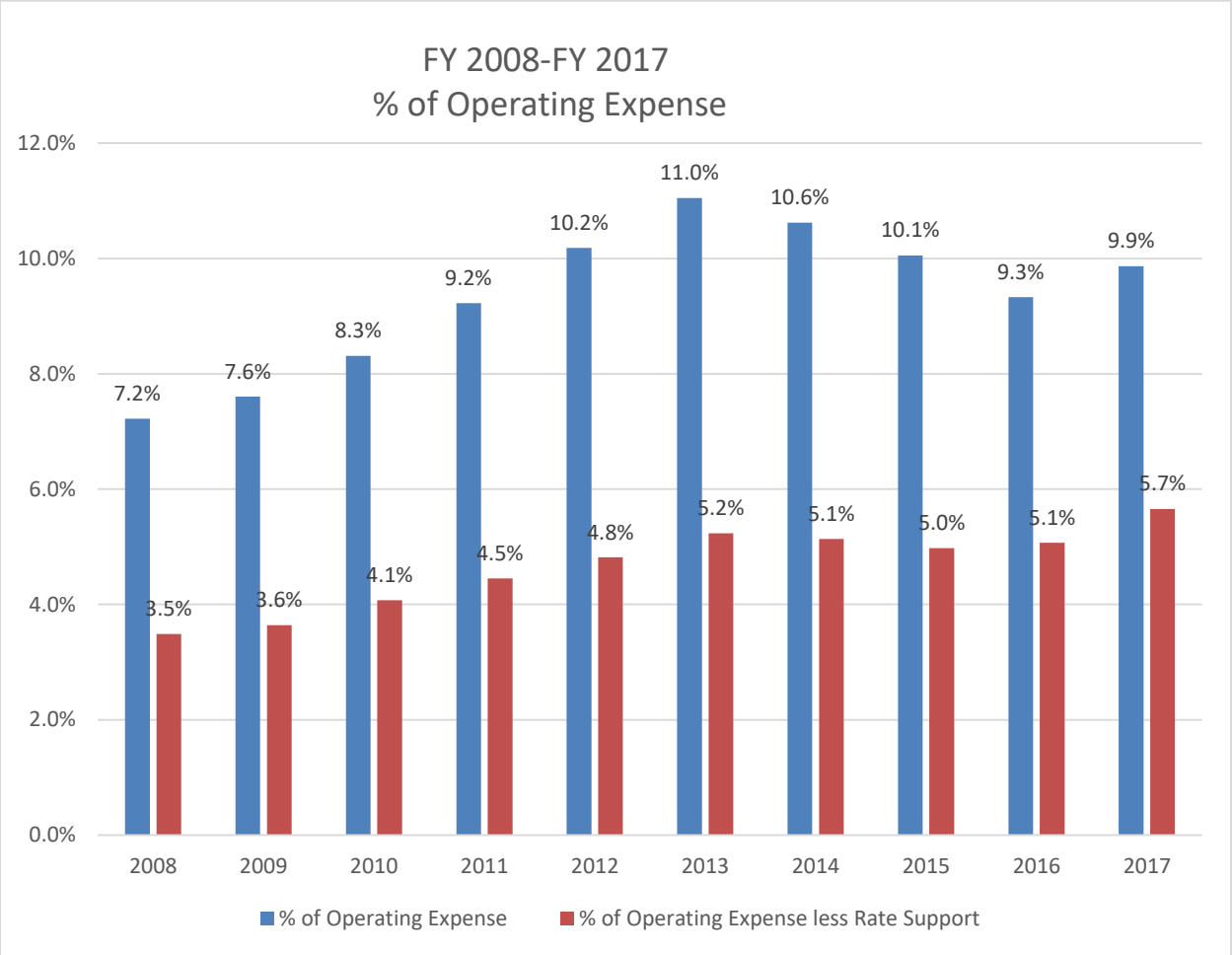


Figure 5. FY 2008 – FY 2017 Community Benefit Expenses as a Percentage of Operating Expenses with and without Rate Support



CONCLUSION

In summary, all 52 hospital submitted their FY 2017 CBRs, showing a total of $1.56 billion in community benefit expenditures, demonstrating a slight increase over FY 2016. The distribution of expenditures across community benefit categories remained similar to prior years. Expenditures as a percentage of operating expenses also slightly increased in FY 2017 over FY 2016.

The narrative portion provides the HSCRC with richer detail on hospital community benefit activities beyond what is included in the financial report. Of the 52 reporting hospitals, 45 submitted complete reports with responses to every question, and seven hospitals did not respond to one or more questions. Some of the missing elements could be obtained from other publicly available data sources. Encouraging findings of the review include senior-level commitment to community benefit activities and community engagement. For example, most hospitals reported that their senior leadership is involved in the implementation and delivery of community benefit

activities, and most conduct internal audits and Board reviews and approvals of the CBRs. Roughly 87 percent of the hospitals have staff members participating in LHICs.

The review identified several policy areas for further analysis and/or improvement. In terms of service areas, the review identified 106 ZIP codes in Maryland that are not covered by any hospital CBSA. This is a marked improvement over FY 2016, where over 200 ZIP codes were not covered. Further analysis could include: reviewing population health metrics of these gap areas, identifying the hospitals closest to these areas, and reviewing these hospitals' methodologies for defining their CBSAs. Further analysis could also compare the CHNA results and community benefit initiatives among hospitals that share CBSAs in more densely covered areas to help better target resources.

Access to and partnerships with behavioral health and post-acute providers are another potential area for policy development. Behavioral health was one of the top CHNA-identified needs and the top physician gap reported by hospitals. Post-acute care facilities were the least frequently reported external collaborator. As the state shifts to the Total Cost of Care All-Payer Model with an even greater emphasis on population health, collaboration with behavioral health and post-acute care providers will be essential to meeting goals and waiver targets. Finally, the review found that one hospital's reported financial assistance policy is lower than the minimum threshold in regulations. The HSCRC intends to follow up to ensure compliance with the regulations on financial assistance.

In last year's statewide summary report, staff identified a number of areas for improving the CBR reporting tool. In consultation with the Community Benefit Workgroup, a number of these changes are in progress and will be incorporated into the FY 2018 reporting process.

APPENDIX A. ZIP CODE LISTS

Appendix A Table 1. List of ZIP Codes not Covered by Any CBSA

Zip Code	County
21524	Allegany
21529	Allegany
21543	Allegany
20776	Anne Arundel
21210	Baltimore City
21233	Baltimore City
21287	Baltimore City
21153	Baltimore County
21156	Baltimore County
20615	Calvert
20639	Calvert
20676	Calvert
20685	Calvert
20688	Calvert
20689	Calvert
20732	Calvert
21636	Caroline
21640	Caroline
21649	Caroline
21622	Dorchester
21626	Dorchester
21627	Dorchester
21634	Dorchester
21648	Dorchester
21659	Dorchester
21669	Dorchester
21672	Dorchester
21675	Dorchester
21677	Dorchester
21835	Dorchester
21869	Dorchester
21714	Frederick
21717	Frederick
21762	Frederick
21522	Garrett
21523	Garrett
21130	Harford
21610	Kent
21635	Kent
21645	Kent
21650	Kent
21667	Kent
20812	Montgomery
20816	Montgomery
20818	Montgomery
20838	Montgomery
20839	Montgomery
20860	Montgomery
20861	Montgomery
20862	Montgomery
20880	Montgomery
20889	Montgomery
20896	Montgomery
20899	Montgomery
20607	Prince George's
20608	Prince George's
20623	Prince George's
20712	Prince George's
20722	Prince George's
20742	Prince George's
20762	Prince George's
20769	Prince George's
20771	Prince George's
21607	Queen Anne's
21619	Queen Anne's
21623	Queen Anne's
21628	Queen Anne's
21638	Queen Anne's
21644	Queen Anne's
21657	Queen Anne's
21658	Queen Anne's
20606	St. Mary's
20609	St. Mary's
20618	St. Mary's
20619	St. Mary's
20620	St. Mary's
20621	St. Mary's
20624	St. Mary's
20626	St. Mary's
20628	St. Mary's
20630	St. Mary's
20634	St. Mary's
20636	St. Mary's
20650	St. Mary's
20656	St. Mary's
20659	St. Mary's
20667	St. Mary's
20670	St. Mary's
20674	St. Mary's
20680	St. Mary's
20684	St. Mary's
20687	St. Mary's
20690	St. Mary's
20692	St. Mary's
21612	Talbot
21624	Talbot
21625	Talbot
21647	Talbot
21652	Talbot
21654	Talbot
21662	Talbot
21665	Talbot
21676	Talbot
21679	Talbot
21715	Washington
21795	Washington

Appendix A Table 2. List of CBSA ZIP Codes Covered by 8 or More Hospitals

ZIP Codes	County
21215	Baltimore City
21216	Baltimore City

APPENDIX B. COMMUNITY HEALTH MEASURES REPORTED BY HOSPITALS

In addition to the measures reported in Table 3 of the main body of this report, hospitals reported a number of other community health measures.

Measure	Source
Income & Economic Factors	
% Below FPL/Uninsured By Race/Ethnicity	US Census, ACS
Free school lunch eligibility	County Health Rankings
Medical & Somatic Factors	
Incidence: Cancer	Atlantic General Hospital CHNA
Death Rate: Coronary Heart Disease	MDH SHIP; Community Health Needs Assessment, Anne Arundel County, 2016
Death Rate: Stroke	MDH SHIP; Community Health Needs Assessment, Anne Arundel County, 2016
Death Rate: Diabetes	MDH SHIP, Community Health Needs Assessment, Anne Arundel County, 2016
Death Rate: Cancer	MDH SHIP; Community Health Needs Assessment, Anne Arundel County, 2016
ED Visits: General	MDH SHIP; Community Health Needs Assessment, Anne Arundel County, 2016
ED Visits: Diabetes	MDH SHIP; Community Health Needs Assessment, Anne Arundel County, 2016
ED Visits: Asthma	MDH SHIP; Community Health Needs Assessment, Anne Arundel County, 2016
ED Visits: Hypertension	MDH SHIP; Community Health Needs Assessment, Anne Arundel County, 2016
Infant Mortality Rate by Race/Ethnicity	MDH SHIP
Rate of STD Infection	Maryland Department of Health
Rate of People with a Usual Primary Care Provider	Maryland Department of Health – Behavioral Risk Factor Surveillance System
Rate of Hospital Encounters for Newborns with Maternal Drug/Alcohol Exposure	HSCRC Hospital Data, 2000-2015, Maryland resident births only
Low Birth Weight	MDH SHIP
Children's Blood Lead Levels	Maryland Department of Planning
% of Live Births with Inadequate Birth Spacing	Not provided
# of FQHCs	Not provided
% Physician Shortage Specialties	Not provided
Population per Physician	Not provided
Teen Birth Rate	Baltimore City Health Department
Mental Health Providers to population	County Health Rankings

# of Safety Net Clinics	PG County Health Improvement Plan
% of Women Receiving Prenatal Care in 1st Trimester	Baltimore City Health Department
Food & Nutrition Factors	
Fruit/Vegetable Consumption	CHNA; Healthy Montgomery; HCI Healthy Communities Inc.
Food Insecurity Rate	Feeding America, Map the Meal Gap
Food desert	Community Health Needs Assessment, Anne Arundel County, 2016
% on SNAP or Food Stamps	Community Health Needs Assessment, Anne Arundel County, 2016 / US Census
Food Insecurity Index	County Health Rankings
SNAP Retailers	US Dept. of Agriculture, Food and Nutrition Service, USDA - SNAP Retailer Locator
WIC Retailors	US Department of Agriculture, Economic Research Service, USDA - Food Environment Atlas. 2011.
Limited Access to Healthy Foods	County Health Rankings
Number of Grocery Stores	CHNA; US Census Bureau, County Business Patterns
Carryout Restaurant Density	Baltimore City Health Department Open Food Facilities Permit/License Database (2016)
Corner Store Density	Johns Hopkins University, Center for a Livable Future Food Stores list (2016)
Number of Fast Food Restaurants/Fast Food Density	CHNA; US Census, County Business Patterns
Transportation Factors	
Means of Transportation to Work	US Census, ACS
Rate of Pedestrian Injuries	MDH SHIP
Disabled Population Potentially Requiring Transportation Assistance	The Transit Question: Baltimore Regional Transit Needs Assessment Baltimore Metropolitan Council, 2015
% of Residents that Travel outside of County for Medical Care	Not provided
Traffic Fatalities	National Highway Traffic Safety Administration, Safety Facts 2015
Educational Factors	
High School Graduation Rate by Race/Ethnicity	2017 Maryland Report Card
Bachelor's or Higher by Race/Ethnicity	US Census, ACS
12th Grade Students Proficient in English by Race/Ethnicity	2017 Maryland Report Card

12th Grade Students Proficient in Algebra by Race/Ethnicity	2017 Maryland Report Card
Illiteracy	Claritas/Conduent Healthy Communities Institute
Population 25+ w/o HS Diploma	US Census
Readiness for Kindergarten by Race/Ethnicity	MDH SHIP
Housing Factors	
Severity of Housing Problems by Race/Ethnicity	US Census, American Housing Survey, 2015
Severe Housing Problem	County Health Rankings
% of renters who are paying 30% or more on their household income in rent:	Claritas 2017
Wait List for Public Housing/Section 8	Community Health Needs Assessment, Anne Arundel County, 2016
% Substandard Housing Units	US Census, ACS
% Overcrowded Housing	US Census, ACS
Rate of Lead Paint Violations	Baltimore City Health Department 2017 Neighborhood Health Profile
Concentration of Vacant Lots/Vacant Buildings	Baltimore City Health Department 2017 Neighborhood Health Profile
Homelessness	Metropolitan Washington Council on Governments Point-In-Time Survey, 2017; Community Health Needs Assessment, Anne Arundel County, 2017
Environmental Factors	
Air Pollution	Healthy Communities Institute, 2017
Annual Ozone Air Quality (2010)	American Lung Association
Air Pollution: Particulate Matter	County Health Rankings
Water Pollution: Drinking water violations	County Health Rankings
% of Days Exceeding Emission Standards for Ozone Levels	CDC, EPHT
% of Days Exceeding the Particulate Matter 2.5* Standards	CDC, EPHT
Other Factors	
Liquor Outlet Density	US Census, County Business Patterns
Rate of Recreation and Fitness Facilities	US Census, County Business Patterns
Violent Crime	County Health Rankings
Adolescents Who Use Tobacco Products	SHIP 2013, Maryland Youth Risk Behavior Survey (YRBS)
Percentage of Adults who currently smoke	MDH Behavioral Risk Factor Surveillance System (BRFSS)

Physical Activity	MDH Behavioral Risk Factor Surveillance System (BRFSS)
Community Need Index	Dignity Health
Causes of Death by Race/Ethnicity	Maryland Vital Statistics Annual Report 2015
Rate of Premature Death/Years of Potential Life Lost	Maryland Vital Statistics Annual Report 2015
ALICE (Asset Limited, Income Constrained, Employed) Households	The United Way
Homicide Rate	Baltimore City Police Department via OpenBaltimore Data Portal (2015)
Percentage of Children Living in Single-Parent Households	US Census, ACS
Hardship Index	US Census, ACS
Non-Fatal Shooting Rate	Baltimore City Police Department via OpenBaltimore Data Portal (2015)
Youth Homicide Mortality Rate	Baltimore City Health Department
Alcohol-Impaired Driving Deaths	MD SHIP

APPENDIX C. CHNA SCHEDULES

Hospital	Date Most Recent CHNA was Completed as Reported on Hospital Website or FY 16 CBR
McCready Health	Oct 2014
Union Hospital of Cecil County	Feb 2015
MedStar Good Samaritan	Mar 2015
MedStar Montgomery Medical Center	Mar 2015
MedStar Union Memorial Hospital	Mar 2015
MedStar Southern Maryland Hospital Center	Mar 2015
MedStar St. Mary's Hospital	Mar 2015
MedStar Franklin Square Medical Center	Apr 2015
Medstar Harbor Hospital	Apr 2015
UMMC Midtown Campus	Jun 2015
UMMC	Jun 2015
UM Harford Memorial Hospital	Jun 2015
UM Upper Chesapeake Health	Jun 2015
Mt. Washington Pediatric Hospital	Jun 2015
UM Rehabilitation & Orthopaedic Institute	Jun 2015
UM Charles Regional Medical Center	Jun 2015
Anne Arundel Medical Center	Feb 2016
Atlantic General Hospital	May 2016
Garrett Regional Medical Center	May 2016
Johns Hopkins Bayview Medical Center	May 2016
UM Shore Regional Health at Chestertown	May 2016
UM Shore Health at Dorchester	May 2016
UM Shore Health at Easton	May 2016
Meritus Medical Center	May 2016
Fort Washington Medical Center	Jun 2016
Frederick Memorial Hospital	Jun 2016
Greater Baltimore Medical Center	Jun 2016
Johns Hopkins Medicine - Suburban Hospital	Jun 2016
Doctors Community Hospital	Jun 2016
UM Baltimore Washington Medical Center	Jun 2016
Sheppard Pratt Health System	Jun 2016
UM St. Joseph Medical Center	Jun 2016
Lifebridge Carroll Hospital	Jun 2016
Johns Hopkins Hospital	Jun 2016
Mercy Medical Center	Jun 2016

Hospital	Date Most Recent CHNA was Completed as Reported on Hospital Website or FY 16 CBR
St. Agnes Hospital	Jun 2016
Peninsula Regional Medical Center	Jun 2016
Johns Hopkins - Howard County General Hospital	Jun 2016
Lifebridge Levindale Hebrew Geriatric Center and Hospital of Baltimore	Jun 2016
Lifebridge Northwest Hospital	Jun 2016
Lifebridge Sinai Hospital	Jun 2016
Bon Secours Baltimore Health System	Jul 2016
Holy Cross Germantown Hospital	Oct 2016
Holy Cross Hospital	Oct 2016
UM Laurel Regional Hospital	Nov 2016
Adventist HealthCare Behavioral Health & Wellness Services	Dec 2016
Adventist HealthCare Rehabilitation	Dec 2016
Adventist HealthCare Shady Grove Medical Center	Dec 2016
Adventist HealthCare - Washington Adventist Hospital	Dec 2016
UM Prince George's Hospital Center	Jan 2017
Western Maryland Regional Medical Center	Jun 2017
CalvertHealth Medical Center	Nov 2017

*Data Source: As reported by hospitals on their FY 2017 Community Benefit Reports and edited according to hospital websites

APPENDIX D. FY 2017 FUNDING FOR NURSE SUPPORT PROGRAM I, DIRECT MEDICAL EDUCATION, AND CHARITY CARE

Hospital Name	Direct Medical Education (DME)	Nurse Support Program I (NSPI)	Charity Care in Rates	Total Rate Support
Adventist Behavioral Health Rockville	$0	$0	$0	$0
Adventist Rehab of Maryland	$0	$68,933	$0	$68,933
Adventist Shady Grove Hospital	$0	$389,913	$4,797,542	$5,187,456
Adventist Washington Adventist	$0	$260,622	$8,684,111	$8,944,733
Anne Arundel Medical Center	$0	$562,953	$6,335,939	$6,898,892
Atlantic General	$0	$102,371	$2,316,359	$2,418,730
Bon Secours	$0	$117,218	$899,678	$1,016,895
Calvert Hospital	$0	$144,500	$2,176,000	$2,320,500
Carroll Hospital Center	$0	$254,038	$1,221,586	$1,475,623
Doctors Community	$0	$226,463	$9,468,194	$9,694,657
Fort Washington Medical Center	$0	$48,291	$768,542	$816,833
Frederick Memorial	$0	$346,610	$6,904,879	$7,251,489
Garrett County Hospital	$0	$44,694	$1,546,473	$1,591,166
GBMC	$4,194,880	$432,708	$1,604,159	$6,231,747
Holy Cross Germantown Hospital	$0	$0	$3,092,349	$3,092,349
Holy Cross Hospital	$2,634,917	$480,562	$27,292,403	$30,407,882
Howard County Hospital	$0	$286,303	$5,158,530	$5,444,833
Johns Hopkins Bayview Medical Center	$23,453,200	$618,221	$26,088,029	$50,159,450
Johns Hopkins Hospital	$115,867,630	$2,209,869	$24,954,381	$143,031,879
Lifebridge Levindale	$0	$59,785	$0	$59,785
Lifebridge Northwest Hospital	$0	$254,116	$3,595,003	$3,849,119
LifeBridge Sinai	$15,229,309	$717,312	$8,472,594	$24,419,216
McCready	$0	$15,060	$367,194	$382,254
MedStar Franklin Square	$11,655,216	$491,173	$6,811,737	$18,958,126
MedStar Good Samaritan	$4,806,657	$303,789	$4,560,785	$9,671,231
MedStar Harbor Hospital	$5,343,651	$207,453	$3,417,876	$8,968,979
MedStar Montgomery General	$0	$174,302	$1,992,944	$2,167,247
MedStar Southern Maryland	$0	$262,673	$4,022,184	$4,284,856
MedStar St. Mary's Hospital	$0	$166,124	$3,683,181	$3,849,305
MedStar Union Memorial	$9,752,671	$419,375	$6,771,320	$16,943,365
Mercy Medical Center	$4,838,569	$495,806	$18,749,305	$24,083,680
Meritus Medical Center	$0	$312,302	$5,542,696	$5,854,998

Hospital Name	Direct Medical Education (DME)	Nurse Support Program I (NSPI)	Charity Care in Rates	Total Rate Support
Mt. Washington Pediatrics	$0	$60,265	$0	$60,265
Peninsula Regional	$0	$422,384	$6,620,689	$7,043,072
Sheppard Pratt	$2,371,114	$141,516	$0	$2,512,630
St. Agnes	$7,476,728	$418,877	$27,150,173	$35,045,778
Suburban Hospital	$458,561	$295,845	$3,502,960	$4,257,365
UM Baltimore Washington	$580,333	$402,011	$5,938,598	$6,920,942
UM Charles Regional Medical Center	$0	$148,386	$1,706,659	$1,855,046
UM Harford Memorial	$0	$104,704	$2,096,121	$2,200,825
UM Laurel Regional Hospital	$0	$106,468	$2,371,907	$2,478,375
UM Midtown	$3,978,733	$228,796	$5,629,153	$9,836,681
UM Prince Georges Hospital Center	$6,074,694	$279,091	$10,629,273	$16,983,058
UM Rehabilitation and Ortho Institute	$3,901,174	$120,365	$0	$4,021,539
UM Shore Medical Chestertown	$0	$64,477	$426,073	$490,550
UM Shore Medical Dorchester	$0	$56,007	$783,716	$839,723
UM Shore Medical Easton	$0	$192,832	$3,734,949	$3,927,780
UM St. Joseph	$0	$390,826	$6,174,750	$6,565,577
UM Upper Chesapeake	$0	$320,268	$3,839,873	$4,160,141
UMMC & Shock Trauma	$120,151,366	$1,511,612	$13,493,927	$135,156,905
Union Hospital of Cecil County	$0	$157,025	$1,727,206	$1,884,231
Western Maryland Health System	$0	$322,959	$10,457,099	$10,780,058
Total	**$342,769,401**	**$16,218,248**	**$307,579,100**	**$666,566,749**

APPENDIX E. FY 2017 COMMUNITY BENEFIT ANALYSIS

Hospital Name	Number of Employees	Number of Staff Hours for CB Operations	Total Hospital Operating Expense	Total Community Benefit Expense	Total CB as % of Total Operating Expense	Total in Rates for Charity Care, DME, and NSPI*	Net CB minus Charity Care, DME, NSPI in Rates	Total Net CB(minus Charity Care, DME, NSPI in Rates) as % of Operating Expense	CB Reported Charity Care
Adventist Behavioral Health Rockville*	397	850	$40,204,927	$6,434,207	16.00%	$0	$6,434,207	16.00%	$1,451,432
Adventist Rehab of Maryland*	499	931	$43,589,181	$2,613,228	6.00%	$68,933	$2,544,295	5.84%	$502,712
Adventist Washington Adventist*	1,342	6,947	$219,120,045	$35,528,904	16.21%	$8,944,733	$26,584,171	12.13%	$7,442,497
Anne Arundel Medical Center	4,746	4,080	$561,392,000	$49,726,315	8.86%	$6,898,892	$42,827,423	7.63%	$4,450,854
Atlantic General	930	110	$117,342,233	$14,427,140	12.29%	$2,418,730	$12,008,410	10.23%	$2,569,517
Average	1,730	2,471	$304,507,851	$30,048,369	9.63%		6.81%		$5,527,912
Bon Secours	641	17,964	$113,068,120	$17,553,534	15.52%	$1,016,895	$16,536,638	14.63%	$675,245
Calvert Hospital	1,314	285	$135,047,535	$17,126,333	12.68%	$2,320,500	$14,805,833	10.96%	$2,694,783
Carroll Hospital Center	1,759	2,080	$197,802,000	$15,634,748	7.90%	$1,475,623	$14,159,124	7.16%	$790,716
Doctors Community	1,629	244	$193,854,072	$12,020,650	6.20%	$9,694,657	$2,325,993	1.20%	$6,756,740
Frederick Memorial	1831	141	$350,118,000	$30,651,702	8.75%	$7,251,489	$23,400,213	6.68%	$8,081,000
Ft. Washington	424	0	$42,883,433	$1,907,768	4.45%	$816,833	$1,090,935	2.54%	$928,769
Garrett County Hospital	446	10	$46,818,203	$4,231,884	9.04%	$1,591,166	$2,640,718	5.64%	$2,792,419
GBMC	2,395	4,300	$419,396,862	$25,758,934	6.14%	$6,231,747	$19,527,187	4.66%	$2,085,315
Holy Cross Germantown	711	486	$97,124,985	$6,769,618	6.97%	$3,092,349	$3,677,269	3.79%	$2,819,650
Holy Cross Hospital	3,551	6,155	$413,796,889	$51,921,784	12.55%	$30,407,882	$21,513,902	5.20%	$31,396,990
Howard County Hospital	1,828	2,647	$260,413,000	$22,449,500	8.62%	$5,444,833	$17,004,667	6.53%	$3,368,222
Johns Hopkins Bayview Medical Center	3,449	4,780	$613,834,000	$72,395,922	11.79%	$50,159,450	$22,236,473	3.62%	$16,951,000
Johns Hopkins Hospital	0	7,800	$2,307,202,000	$206,666,870	8.96%	$143,031,879	$63,634,991	2.76%	$21,697,000
Levindale	897	368	$73,760,005	$3,539,218	4.80%	$59,785	$3,479,433	4.72%	$1,341,932

Hospital Name	Number of Employees	Number of Staff Hours for CB Operations	Total Hospital Operating Expense	Total Community Benefit Expense	Total CB as % of Total Operating Expense	Total in Rates for Charity Care, DME, and NSPI*	Net CB minus Charity Care, DME, NSPI in Rates	Total Net CB(minus Charity Care, DME, NSPI in Rates) as % of Operating Expense	CB Reported Charity Care
Lifebridge Northwest Hospital	1,787	2,117	$240,547,439	$14,287,633	5.94%	$3,849,119	$10,438,514	4.34%	$2,734,207
LifeBridge Sinai	4,987	6,720	$727,868,000	$55,851,186	7.67%	$24,419,216	$31,431,970	4.32%	$6,526,756
McCready	300	20	$16,564,839	$498,110	3.01%	$382,254	$115,857	0.70%	$307,205
MedStar Franklin Square	3,225	2,576	$508,539,888	$35,802,002	7.04%	$18,958,126	$16,843,876	3.31%	$5,147,814
MedStar Good Samaritan	2,018	916	$282,735,786	$20,079,606	7.10%	$9,671,231	$10,408,375	3.68%	$4,078,427
MedStar Harbor Hospital	1,139	1,752	$187,002,302	$22,633,260	12.10%	$8,968,979	$13,664,281	7.31%	$2,816,043
MedStar Montgomery General	1,190	30	$160,725,287	$7,886,254	4.91%	$2,167,247	$5,719,007	3.56%	$1,322,823
MedStar Southern Maryland	1,347	10,909	$243,629,886	$15,693,910	6.44%	$4,284,856	$11,409,054	4.68%	$3,014,042
MedStar St. Mary's Hospital	1,200	4,480	$168,757,516	$15,653,272	9.28%	$3,849,305	$11,803,967	6.99%	$2,458,649
MedStar Union Memorial	2,369	40	$443,482,532	$29,527,733	6.66%	$16,943,365	$12,584,368	2.84%	$4,426,976
Mercy Medical Center	3,482	2,513	$464,031,500	$52,967,410	11.41%	$24,083,680	$28,883,730	6.22%	$14,411,600
Meritus Medical Center	2,579	825	$309,163,913	$22,183,520	7.18%	$5,854,998	$16,328,521	5.28%	$4,596,841
Mt. Washington Pediatrics	784	1,596	$55,412,291	$1,985,899	3.58%	$60,265	$1,925,634	3.48%	$382,465
Peninsula Regional	2,891	576	$432,141,737	$44,875,753	10.38%	$7,043,072	$37,832,681	8.75%	$8,301,400
Shady Grove*	1,994	10,979	$323,661,835	$28,114,540	8.69%	$5,187,456	$22,927,085	7.08%	$3,646,551
Sheppard Pratt	2,756	378	$221,570,405	$19,905,390	8.98%	$2,512,630	$17,392,760	7.85%	$5,473,873
St. Agnes	2,678	0	$433,986,000	$48,844,580	11.25%	$35,045,778	$13,798,803	3.18%	$21,573,282
Suburban Hospital	1,786	1,636	$283,346,000	$21,607,689	7.63%	$4,257,365	$17,350,324	6.12%	$3,168,000
UM Prince Georges Hospital Center	0	2,773	$286,955,092	$53,997,890	18.82%	$16,983,058	$37,014,832	12.90%	$9,166,191
UM Baltimore Washington	2,200	3,978	$334,210,000	$26,067,933	7.80%	$6,920,942	$19,146,991	5.73%	$6,703,000
UM Charles Regional Medical Center	886	1,078	$117,918,178	$11,319,474	9.60%	$1,855,046	$9,464,428	8.03%	$1,474,409
UM Harford Memorial	1,000	921	$84,926,000	$7,461,406	8.79%	$2,200,825	$5,260,581	6.19%	$1,927,000

Hospital Name	Number of Employees	Number of Staff Hours for CB Operations	Total Hospital Operating Expense	Total Community Benefit Expense	Total CB as % of Total Operating Expense	Total in Rates for Charity Care, DME, and NSPI*	Net CB minus Charity Care, DME, NSPI in Rates	Total Net CB(minus Charity Care, DME, NSPI in Rates) as % of Operating Expense	CB Reported Charity Care
UM Laurel Regional Hospital	0	1,386	$93,884,647	$15,061,246	16.04%	$2,478,375	$12,582,871	13.40%	$2,521,365
UM Midtown	1,361	832	$204,226,000	$30,288,566	14.83%	$9,836,681	$20,451,885	10.01%	$5,174,000
UM Rehabilitation and Ortho Institute	698	509	$107,006,000	$10,317,122	9.64%	$4,021,539	$6,295,583	5.88%	$2,271,000
UM Shore Medical Chestertown	221	1,060	$46,048,000	$7,921,125	17.20%	$490,550	$7,430,575	16.14%	$373,000
UM Shore Medical Dorchester	319	475	$42,909,000	$5,794,585	13.50%	$839,723	$4,954,861	11.55%	$647,362
UM Shore Medical Easton	1,135	1,200	$190,646,000	$26,586,762	13.95%	$3,927,780	$22,658,982	11.89%	$2,786,102
UM St. Joseph	2,434	0	$341,335,000	$36,904,631	10.81%	$6,565,577	$30,339,054	8.89%	$6,105,000
UM Upper Chesapeake	2,185	2,148	$284,219,000	$12,890,023	4.54%	$4,160,141	$8,729,882	3.07%	$3,014,000
UMMC	9,010	1,480	$1,470,095,000	$212,701,198	14.47%	$135,156,905	$77,544,293	5.27%	$20,308,000
Union Hospital of Cecil County	1,133	2,184	$157,260,383	$7,878,901	5.01%	$1,884,231	$5,994,670	3.81%	$1,411,673
Western Maryland Health System	1,923	215	$322,835,314	$41,568,344	12.88%	$10,780,058	$30,788,287	9.54%	$10,385,555
All Hospitals	**86,493**	**128,480**	**$15,834,408,260**	**$1,562,515,213**	**9.87%**	**$666,566,749**	**$895,948,463**	**5.66%**	**$287,451,403**

* The Adventist Hospital System requested and received permission to report its community benefit activities on a calendar year basis to more accurately reflect true activities during the community benefit cycle. The numbers listed in the "Total in Rates for Charity Care, DME, and NSPI*" column reflect the HSCRC's activities for FY 2017 and therefore are different from the numbers reported by the Adventist Hospitals.

APPENDIX F. FY 2017 HOSPITAL COMMUNITY BENEFIT AGGREGATE DATA

	Type of Activity	Number of Staff Hours	Number of Encounters	Direct Cost	Indirect Cost	Offsetting Revenue	Net Community Benefit with Indirect Cost	Net Community Benefit without Indirect Cost
Unreimbursed Medicaid Costs								
T99	Medicaid Assessments			$364,824,999		$294,126,673	$70,698,325	$70,698,325
Community Health Services								
A10	Community Health Education	245,856	2,926,907	$16,246,875	$8,854,504	$1,601,931	$23,499,448	$14,644,944
A11	Support Groups	28,471	43,317	$1,529,695	$783,188	$328,475	$1,984,408	$1,201,220
A12	Self-Help	29,923	196,273	$1,336,359	$757,062	$386,290	$1,707,131	$950,069
A20	Community-Based Clinical Services	334,088	479,045	$15,111,045	$12,500,540	$10,166,251	$17,445,334	$4,944,794
A21	Screenings	40,387	171,433	$2,946,342	$1,849,395	$763,471	4,032,266	$2,182,870
A22	One-Time/Occasionally Held Clinics	7,356	49,164	$395,613	$200,770	$77,638	$518,744	$317,974
A23	Free Clinics	16,034	20,890	$4,118,590	$2,228,520	$168,322	$6,178,788	$3,950,268
A24	Mobile Units	36,316	15,000	$1,309,319	$724,934	$1,445,905	$588,348	$(136,586)
A30	Health Care Support Services	342,205	267,167	$36,707,564	$18,511,061	$3,689,969	$51,528,656	$33,017,595
A40	Other	42,554	94,297	$7,622,462	$2,942,086	$3,427,161	$7,137,387	$4,195,301
A41	Other	27,069	8,622	$1,425,550	$930,575	$116,085	$2,240,040	$1,309,465
A42	Other	5,928	11,931	$243,058	$115,141	$1,495	$356,704	$241,563
A43	Other	3,460	1,743	$136,358	$99,413	8$4,999	$150,773	$51,359
A44	Other	1,027	0	$42,905	$29,304	$-	$72,209	$42,905
A99	**Total**	**1,160,675**	**4,285,789**	**$89,171,735**	**$50,526,494**	**$22,257,993**	**$117,440,236**	**$66,913,742**
Health Professions Education								
B1	Physicians/Medical Students	4,135,304	49,285	$348,459,765	$81,440,890	$381,307	$429,519,347	$348,078,458
B2	Nurses/Nursing Students	590,411	43,527	$25,893,390	$4,888,814	$149,648	$30,632,556	$25,743,742

	Type of Activity	Number of Staff Hours	Number of Encounters	Direct Cost	Indirect Cost	Offsetting Revenue	Net Community Benefit with Indirect Cost	Net Community Benefit without Indirect Cost
B3	Other Health Professionals	320,096	52,811	$14,648,267	$2,878,051	$220,489	$17,305,829	$14,427,778
B4	Scholarships/Funding for Professional Education	3,981	1,807	$3,273,815	$45,551	$-	$3,319,365	$3,273,815
B50	Other	92,329	21,266	$3,903,137	$399,301	$30,360	$4,272,077	$3,872,777
B51	Other	39,861	2,724	$2,397,166	$49,419	$2,260,967	$185,618	$136,199
B52	Other	2,080	3,000	$37,659	$-	$-	$37,659	$37,659
B99	**Total**	**5,184,061**	**174,420**	**$398,613,198**	**$89,702,025**	**$3,042,771**	**$485,272,453**	**395,570,428**
	Mission-Driven Health Services							
	Mission-Driven Health Services Total	**3,460,700**	**1,486,387**	**$621,094,181**	**$92,190,198**	**$181,612,254**	**$531,672,125**	**$439,481,927**
	Research							
D1	Clinical Research	85,528	2,037	$10,993,186	$2,054,541	$7,146,100	$5,901,627	$3,847,085
D2	Community Health Research	25,234	3,758	$1,821,608	$508,873	$30,137	$2,300,344	$1,791,471
D3	Other	21,121	0	$1,120,549	$-	$123,280	$997,269	$997,269
D99	**Total**	**131,883**	**5,795**	**$13,935,343**	**$2,563,414**	**$7,299,517**	**$9,199,240**	**$6,635,826**
	Financial Contributions							
E1	Cash Donations	1,271	4,312	$9,035,932	$104,746	$64,398	$9,076,279	$8,971,534
E2	Grants	39	238	$869,008	$92,238	$211,329	$749,917	$657,679
E3	In-Kind Donations	56,679	125,439	$5,297,537	$364,548	$742,147	$4,919,938	$4,555,390
E4	Cost of Fund Raising for Community Programs	4,741	5,742	$694,919	$123,928	$12,622	$806,225	$682,297
E99	**Total**	**62,729**	**135,731**	**$15,897,395**	**$685,459**	**$1,030,496**	**$15,552,359**	**$ 14,866,899**
	Community-Building Activities							
F1	Physical Improvements/Housing	16,655	3,063	$5,623,673	$3,479,897	$3,040,953	$6,062,618	$2,582,720
F2	Economic Development	12,907	5,970	$1,449,377	$484,519	$377,657	$1,556,239	$1,071,720

	Type of Activity	Number of Staff Hours	Number of Encounters	Direct Cost	Indirect Cost	Offsetting Revenue	Net Community Benefit with Indirect Cost	Net Community Benefit without Indirect Cost
F3	Support System Enhancements	88,984	14,269	$3,264,804	$1,766,242	$728,145	$4,302,901	$2,536,659
F4	Environmental Improvements	16,759	2,674	$701,162	$344,856	$5,400	$1,040,619	$695,762
F5	Leadership Development/Training for Community Members	7,580	857	$274,238	$168,055	$-	$442,293	$274,238
F6	Coalition Building	25,098	44,733	$3,581,069	$2,125,862	$244,238	$5,462,693	$3,336,831
F7	Community Health Improvement Advocacy	30,649	8,329	$2,368,508	$1,367,825	$-	$3,736,333	$2,368,508
F8	Workforce Enhancement	84,610	44,100	$3,722,194	$2,203,527	$276,473	$5,649,248	$3,445,721
F9	Other	4,849	84,366	$534,648	$308,812	$6,090	$837,369	$528,558
F10	Other	208	156	$12,200	$6,238	$-	$18,438	$12,200
F99	**Total**	**288,299**	**208,517**	**$21,531,874**	**$12,255,832**	**$4,678,956**	**$29,108,751**	**$16,852,919**
	Community Benefit Operations							
G1	Dedicated Staff	116,049	12,159	$7,108,908	$4,587,067	$105,116	$11,590,859	$7,003,792
G2	Community health/health assets assessments	4,081	198	$383,358	$174,222	$12,622	$544,957	$370,736
G3	Other Resources	8,350	545	$1,635,386	$570,586	$30,848	$2,175,125	$1,604,539
G99	**Total**	**128,480**	**12,902**	**$9,127,652**	**$5,331,875**	**$148,586**	**$14,310,941**	**8,979,066**
	Charity Care							
	Total Charity Care	**$287,451,403**						
	Foundation-Funded Community Benefits							
J1	Community Services	8,172	11,928	$956,931	$79,343	$202,966	$833,308	$753,965
J2	Community Building	65,110	11,940	$2,886,877	$55,657	$1,966,463	$976,071	$920,414
J3	Other	0	0	$-	$-	$-	$-	$ -
J99	**Total**	**73,282**	**23,868**	**$3,843,808**	**$135,001**	**$2,169,429**	**$1,809,380**	**$1,674,379**

	Type of Activity	Number of Staff Hours	Number of Encounters	Direct Cost	Indirect Cost	Offsetting Revenue	Net Community Benefit with Indirect Cost	Net Community Benefit without Indirect Cost
Total Hospital Community Benefits								
A	Community Health Services	1,160,675	4,285,789	$89,171,735	$50,526,494	$22,257,993	$117,440,236	$66,913,742
B	Health Professions Education	5,184,061	174,420	$398,613,198	$89,702,025	$3,042,771	$485,272,453	$395,570,428
C	Mission Driven Health Care Services	3,460,700	1,486,387	$621,094,181	$2,190,198	$181,612,254	$531,672,125	$439,481,927
D	Research	131,883	5,795	$13,935,343	$2,563,414	$7,299,517	$9,199,240	$6,635,826
E	Financial Contributions	62,729	135,731	$15,897,395	$685,459	$1,030,496	$15,552,359	$4,866,899
F	Community Building Activities	288,299	208,517	$21,531,874	$12,255,832	$4,678,956	$29,108,751	$16,852,919
G	Community Benefit Operations	128,480	12,902	$9,127,652	$5,331,875	$148,586	$14,310,941	$8,979,066
H	Charity Care	0	0	$287,451,403	0	$-	$287,451,403	$287,451,403
J	Foundation Funded Community Benefit	73,282	23,868	$3,843,808	$135,001	$2,169,429	$1,809,380	$1,674,379
T99	Medicaid Assessments	0	0	$364,824,999	$-	$294,126,673	$70,698,325	$70,698,325
K99	**Total Hospital Community Benefit**	**10,490,110**	**6,333,409**	**$1,825,491,590**	**$253,390,297**	**$516,366,675**	**$1,562,515,212**	**$ 1,309,124,914**
	Total Operating Expenses	**$15,834,408,260**						
	% Operating Expenses w/ Indirect Costs	**9.87%**						
	% Operating Expenses w/ o Indirect Costs	**8.27%**						