State of Maryland
Department of Health and Mental Hygiene

Nelson J. Sabatini
Chairman

Herbert S. Wong, PhD
Vice-Chairman

Joseph Antos, PhD

Victoria W. Bayless

George H. Bone, M.D.

John M. Colmers

Jack C. Keane

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

Donna Kinzer
Executive Director

Katie Wunderlich, Director
Engagement & Alignment

Allan Pack, Director
Population Based
Methodologies

Chris L. Peterson, Director
Clinical & Financial Information

Gerard J. Schmith, Director
Revenue & Regulation
Compliance

541st MEETING OF THE HEALTH SERVICES COST REVIEW COMMISSION
June 14, 2017

EXECUTIVE SESSION
11:00am
(The Commission will begin in public session at 11:00 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. **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**

2. **Discussion on Planning for Model Progression – Authority General Provisions Article, §3-103 and §3-104**

3. **Personnel Matters – Authority General Provisions Article, §3-305 (b) (1)**

PUBLIC SESSION
1:00 p.m.

1. **Review of the Minutes from the Public Meeting and Executive Session on May 10, 2017**
2. **Executive Director's Report**
3. **New Model Monitoring**
4. **Docket Status – Cases Closed**
   2383A – Johns Hopkins Health System
5. **Docket Status – Cases Open**
   2371R – MedStar Franklin Square Medical Center
   2372A - Doctors Community Hospital
   2384R – McCready Health
   2385A – University of Maryland Medical Center
   2386A – University of Maryland Medical Center
   2387A – University of Maryland Medical Center
   2388A – Medstar Health
   2389A – MedStar Health
   2390N – McCready Health
   2391A – Johns Hopkins Health System
   2392A – Johns Hopkins Health System
   2393A – Johns Hopkins Health System
6. **Presentation by Lifebridge Health**
7. **Final Recommendation for PAU Savings for RY 2018**
8. **Final Recommendation for Maximum Revenue Guardrail for Quality Programs for RY 2019**
9. **Final Recommendation for Nursing Support Program II for FY 2018**

10. **Final Recommendation for Update Factor for FY 2018**

11. **Draft Recommendation for Nursing Support Program I for FY 2018**

12. **Draft Recommendation on Uncompensated Care Policy for FY 2018**

13. **Report on Ongoing Support of CRISP in FY 2018 for HIE Operations and Reporting Service Activities**

14. **Hearing and Meeting Schedule**

Executive Director's Report

The Executive Director's Report will be distributed during the Commission Meeting

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 JUNE 7, 2017

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
2371R	MedStar Franklin Square Medical Center	12/23/2016	7/12/2017	N/A	Capital	GS	OPEN
2372A	Doctors Community Hospital	1/5/2017	N/A	N/A	ARM	DK	OPEN
2384R	McCready Health	4/28/2017	6/27/2017	N/A	Rebundled MRI	CK	OPEN
2385A	University of Maryland Medical Center	5/9/2017	N/A	N/A	ARM	DNP	OPEN
2386A	University of Maryland Medical Center	5/9/2017	N/A	N/A	ARM	DNP	OPEN
2387A	University of Maryland Medical Center	5/9/2017	N/A	N/A	ARM	DNP	OPEN
2388A	MedStar Health	5/10/2017	N/A	N/A	ARM	DNP	OPEN
2389A	MedStar Health	5/10/2017	N/A	N/A	ARM	DNP	OPEN
2390N	McCready Health	5/19/2017	6/18/2017	N/A	IRC	CK	OPEN
2391A	Johns Hopkins Health Care	5/30/2017	N/A	N/A	ARM	DNP	OPEN
2392A	Johns Hopkins Health Care	5/30/2017	N/A	N/A	ARM	DNP	OPEN
2393A	Johns Hopkins Health Care	5/30/2017	N/A	N/A	ARM	DNP	OPEN

PROCEEDINGS REQUIRING COMMISSION ACTION - NOT ON OPEN DOCKET

NONE

IN RE: THE PARTIAL RATE	*	**BEFORE THE HEALTH SERVICES**
APPLICATION OF	*	**COST REVIEW COMMISSION**
MCCREADY MEMORIAL	*	**DOCKET: 2017**
HOSPITAL	*	**FOLIO: 2194**
CRISFIELD, MARYLAND	*	**PROCEEDING: 2384R**

Staff Recommendation

June 14, 2017

Introduction

On April 28, 2017, McCready Memorial Hospital (the "Hospital") submitted a partial rate application to the Commission for a rebundled rate for Magnetic Resonance Imaging (MRI) services to be provided inpatients as the Hospital will no longer be providing MRI services on campus due to financial feasibility. This new rebundled rate would replace its currently approved MRI rate. A rebundled rate is approved by the Commission when a hospital provides non-physician services to inpatients through a third-party contractor off-site. By approving a rebundled rate, the Commission makes it possible for a hospital to bill for services provided off site, as required by Medicare. The Hospital requests that the MRI rate be set at the statewide median and be effective June 1, 2017.

Staff Evaluation

Based on Staff's review, the statewide median for MRI services is $41.22 per RVU.

Recommendation

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

1. That a rebundled MRI rate of $41.22 per RVU be approved June 1, 2017; and

2. That no change be made to the Hospital's Global Budget Revenue for MRI services.

IN RE: THE APPLICATION FOR	*	**BEFORE THE MARYLAND HEALTH**
ALTERNATIVE METHOD OF RATE	*	**SERVICES COST REVIEW**
DETERMINATION *		**COMMISSION**
UNIVERSITY OF MARYLAND	*	**DOCKET: 2017**
MEDICAL CENTER *		**FOLIO: 2195**
BALTIMORE, MARYLAND	*	**PROCEEDING: 2385A**

Staff Recommendation

June 14, 2017

I. INTRODUCTION

University of Maryland Medical Center ("Hospital") filed an application with the HSCRC on May 9, 2017 for an alternative method of rate determination under COMAR 10.37.10.06. The Hospital requests approval from the HSCRC for continued participation in global rates for solid organ transplant and blood and bone marrow transplants for one year with Aetna Health Inc. and Coventry Health Plan, Inc. beginning August 1, 2017.

II. OVERVIEW OF THE APPLICATION

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

III. FEE DEVELOPMENT

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

IV. IDENTIFICATION AND ASSESSMENT OF RISK

The Hospital will continue to submit bills to UPI for all contracted and covered services. UPI is responsible for billing the payer, collecting payments, disbursing payments to the Hospital at its full HSCRC approved rates, and reimbursing the physicians. The Hospital contends that the arrangement between UPI and the Hospital holds the Hospital harmless from any shortfalls in payment from the global price contract.

V. STAFF EVALUATION

Staff reviewed the experience under this arrangement for the last year and found it to be favorable. Staff believes that the Hospital can continue to achieve favorable performance under this arrangement.

VI. STAFF RECOMMENDATION

Based on the Hospital's favorable performance, staff recommends that the Commission approve the Hospital's application for an alternative method of rate determination for solid organ transplant, and blood and bone marrow transplant services, for a one year period beginning August 1, 2017. The Hospital will need to file a renewal application to be considered for continued participation.

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

IN RE: THE APPLICATION FOR	*****	**BEFORE THE MARYLAND HEALTH**	
ALTERNATIVE METHOD OF RATE	*****	**SERVICES COST REVIEW**	
DETERMINATION	*****	**COMMISSION**	
UNIVERSITY OF MARYLAND	*****	**DOCKET:**	**2017**
MEDICAL CENTER	*****	**FOLIO:**	**2196**
BALTIMORE, MARYLAND	*****	**PROCEEDING:**	**2386A**

Staff Recommendation

June 14, 2017

I. INTRODUCTION

The University of Maryland Medical Center ("Hospital") filed an application with the HSCRC on May 9, 2017 for an alternative method of rate determination under COMAR 10.37.10.06. The Hospital requests approval to participate in a global rate arrangement with the Kaiser Foundation Hospitals and the Permanente Federation, LLC ("Kaiser") for Heart Transplant and Mechanical Circulatory Support services for a period of one year beginning July 1, 2017.

II. OVERVIEW OF APPLICATION

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

III. FEE DEVELOPMENT

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

IV. IDENTIFICATION AND ASSESSMENT OF RISK

The Hospital will submit bills to UPI for all contracted and covered services. UPI is responsible for billing the payer, collecting payments, disbursing payments to the Hospital at its full HSCRC approved rates, and reimbursing the physicians. The Hospital contends that the arrangement between UPI and the Hospital holds the Hospital harmless from any shortfalls in payment from the global price contract.

V. STAFF EVALUATION

The format used to calculate the cases rates, i.e., historical data for like cases, has been utilized as the basis for other heart transplant cases in which the Hospital is currently participating. Staff believes that the Hospital can achieve a favorable experience under this

arrangement.

VI. STAFF RECOMMENDATION

The staff recommends that the Commission approve the Hospital's application for an alternative method of rate determination for Heart Transplant and Mechanical Circulatory Support services, for a one year period commencing July 1, 2017. The Hospital will need to file a renewal application for review to be considered for continued participation.

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

IN RE: THE APPLICATION FOR	*****	**BEFORE THE MARYLAND HEALTH**	
ALTERNATIVE METHOD OF RATE	*****	**SERVICES COST REVIEW**	
DETERMINATION	*****	**COMMISSION**	
UNIVERSITY OF MARYLAND	*****	**DOCKET:**	**2017**
MEDICAL CENTER	*****	**FOLIO:**	**2197**
BALTIMORE, MARYLAND	*****	**PROCEEDING:**	**2387A**

Staff Recommendation

June 14, 2017

I. INTRODUCTION

The University of Maryland Medical Center ("Hospital") filed an application with the HSCRC on May 9, 2017 for an alternative method of rate determination under COMAR 10.37.10.06. The Hospital requests approval to continue its participation in a global rate arrangement with Maryland Physicians Care ("MPC") for solid organ and blood and bone marrow transplant services for a period of one year beginning August 23, 2017.

II. OVERVIEW OF APPLICATION

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

III. FEE DEVELOPMENT

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

IV. IDENTIFICATION AND ASSESSMENT OF RISK

The Hospital will continue to submit bills to UPI for all contracted and covered services. UPI is responsible for billing the payer, collecting payments, disbursing payments to the Hospital at its full HSCRC approved rates, and reimbursing the physicians. The Hospital contends that the arrangement between UPI and the Hospital holds the Hospital harmless from any shortfalls in payment from the global price contract.

V. STAFF EVALUATION

Staff found that the actual experience under the arrangement for the last year has been favorable. Staff believes that the Hospital can continue to achieve favorable performance under this arrangement.

VI. STAFF RECOMMENDATION

The staff recommends that the Commission approve the Hospital's application for an alternative method of rate determination for solid organ and blood and bone marrow transplant services, for a one year period commencing August 23, 2017. The Hospital will need to file a renewal application for review to be considered for continued participation.

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

IN RE: THE APPLICATION FOR	*	**BEFORE THE MARYLAND HEALTH**
ALTERNATIVE METHOD OF RATE	*	**SERVICES COST REVIEW**
DETERMINATION	*	**COMMISSION**
MEDSTAR HEALTH	*	**DOCKET: 2016**
	*	**FOLIO: 2198**
BALTIMORE, MARYLAND	*	**PROCEEDING: 2388A**

Staff Recommendation

June 14, 2017

I. INTRODUCTION

MedStar Health filed an application with the HSCRC on May 10, 2017 on behalf of Union Memorial Hospital and Good Samaritan Hospital (the "Hospitals") to participate in an alternative method of rate determination, pursuant to COMAR 10.37.10.06. Medstar Health requests approval from the HSCRC for continued participation in a global rate arrangement for joint replacement services with MAMSI for a one year period beginning September 1, 2017.

II. OVERVIEW OF APPLICATION

The contract will continue to be held and administered by Helix Resources Management, Inc. (HRMI). HRMI will manage all financial transactions related to the global price contract including payments to the Hospitals and bear all risk relating to services associated with the contract.

III. FEE DEVELOPMENT

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

IV. IDENTIFICATION AND ASSESSMENT OF RISK

The Hospitals will continue to submit bills to HRMI for all contracted and covered services. HRMI is responsible for billing the payer, collecting payments, disbursing payments to the Hospitals at their full HSCRC approved rates, and reimbursing the physicians. The Hospitals contend that the arrangement between HRMI and the Hospitals holds the Hospitals harmless from any shortfalls in payment from the global price contract.

V. STAFF EVALUATION

The staff reviewed the experience under this arrangement for the last year and found that it was favorable. The staff believes that the Hospitals can continue to achieve a favorable experience under this arrangement.

VI. STAFF RECOMMENDATION

The staff recommends that the Commission approve the Hospitals' request for continued participation in the alternative method of rate determination for orthopedic services, for a one year period, commencing September 1, 2017. The Hospitals will need to file a renewal application for review to be considered for continued participation.

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

IN RE: THE APPLICATION FOR	*	**BEFORE THE MARYLAND HEALTH**	
ALTERNATIVE METHOD OF RATE	*	**SERVICES COST REVIEW**	
DETERMINATION	*	**COMMISSION**	
MEDSTAR HEALTH	*	**DOCKET:**	**2017**
	*	**FOLIO:**	**2199**
BALTIMORE, MARYLAND	*	**PROCEEDING:**	**2389A**

Staff Recommendation

June 14, 2017

I. INTRODUCTION

MedStar Health filed an application with the HSCRC on May 10, 2017 on behalf of Union Memorial Hospital (the "Hospital") for an alternative method of rate determination, pursuant to COMAR 10.37.10.06. Medstar Health requests approval from the HSCRC for continued participation in a global rate arrangement for cardiovascular services with the Kaiser Foundation Health Plan of the Mid-Atlantic, Inc. for one year beginning August 1, 2017.

II. OVERVIEW OF APPLICATION

The contract will continue to be held and administered by Helix Resources Management, Inc. (HRMI). HRMI will manage all financial transactions related to the global price contract including payments to the Hospital and bear all risk relating to services associated with the contract.

III. FEE DEVELOPMENT

The hospital portion of the global rates was renegotiated in 2007. The remainder of the global rate is comprised of physician service costs. Also in 2007, additional per diem payments were negotiated for cases that exceed the outlier threshold.

IV. IDENTIFICATION AND ASSESSMENT OF RISK

The Hospital will continue to submit bills to HRMI for all contracted and covered services. HRMI is responsible for billing the payer, collecting payments, disbursing payments to the Hospital at its full HSCRC approved rates, and reimbursing the physicians. The Hospital contends that the arrangement between HRMI and the Hospital holds the Hospital harmless from any shortfalls in payment from the global price contract.

V. STAFF EVALUATION

The staff reviewed the results of last year's experience under this arrangement and found that they were favorable.

VI. STAFF RECOMMENDATION

The staff recommends that the Commission approve the Hospital's request for continued participation in the alternative method of rate determination for cardiovascular services for a one year period commencing August 1, 2017. The Hospital will need to file a renewal application for review to be considered for continued participation.

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

IN RE: THE APPLICATION FOR	*****	**BEFORE THE MARYLAND HEALTH**	
ALTERNATIVE METHOD OF RATE	*****	**SERVICES COST REVIEW**	
DETERMINATION	*****	**COMMISSION**	
JOHNS HOPKINS HEALTH	*****	**DOCKET:**	**2017**
SYSTEM	*****	**FOLIO:**	**2201**
BALTIMORE, MARYLAND	*****	**PROCEEDING:**	**2391A**

Staff Recommendation

June 14, 2017

I. INTRODUCTION

Johns Hopkins Health System (System) filed an application with the HSCRC on May 30, 2017 on behalf of Johns Hopkins Hospital and Johns Hopkins Bayview Medical Center (the Hospitals) for an alternative method of rate determination, pursuant to COMAR 10.37.10.06. The System requests approval from the HSCRC to continue to participate in an amended global rate arrangement for solid organ transplant, bone marrow transplant, and cardiovascular services with Global Excel Management, formerly Olympus Managed Health for a period of one year beginning July 1, 2017.

II. OVERVIEW OF APPLICATION

The contract will continue to be held and administered by Johns Hopkins HealthCare, LLC ("JHHC"), which is a subsidiary of the System. JHHC will manage all financial transactions related to the global price contract including payments to the Hospitals and bear all risk relating to regulated services associated with the contract.

III. FEE DEVELOPMENT

The hospital portion of the global rates was developed by calculating mean historical charges for patients receiving kidney, bone marrow transplants, and cardiovascular services at the Hospitals. The remainder of the global rate is comprised of physician service costs. Additional per diem payments were calculated for cases that exceed a specific length of stay outlier threshold.

IV. IDENTIFICATION AND ASSESSMENT OF RISK

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

V. STAFF EVALUATION

Although there was no activity under this arrangement last year, staff believes that the Hospitals can achieve a favorable experience under this arrangement.

VI. STAFF RECOMMENDATION

The staff recommends that the Commission approve the Hospitals' application for an alternative method of rate determination for solid organ, bone marrow transplant, and cardiovascular services for a one year period commencing July 1, 2017. The Hospitals will need to file a renewal application for review to be considered for continued participation. Consistent with its policy paper regarding applications for alternative methods of rate determination, the staff recommends that this approval be contingent upon the execution of the standard Memorandum of Understanding ("MOU") with the Hospitals for the approved contract. This document would formalize the understanding between the Commission and the Hospitals, and would include provisions for such things as payments of HSCRC-approved rates, treatment of losses that may be attributed to the contract, quarterly and annual reporting, confidentiality of data submitted, penalties for noncompliance, project termination and/or alteration, on-going monitoring, and other issues specific to the proposed contract. The MOU will also stipulate that operating losses under the contract cannot be used to justify future requests for rate increases.

IN RE: THE APPLICATION FOR	*	**BEFORE THE MARYLAND HEALTH**	
ALTERNATIVE METHOD OF RATE	*	**SERVICES COST REVIEW**	
DETERMINATION	*	**COMMISSION**	
JOHNS HOPKINS HEALTH	*	**DOCKET:**	**2017**
SYSTEM	*	**FOLIO:**	**2202**
BALTIMORE, MARYLAND	*	**PROCEEDING:**	**2392A**

Staff Recommendation

June 14, 2017

I. INTRODUCTION

Johns Hopkins Health System ("System') filed an application with the HSCRC on May 30, 2017 on behalf of its member hospitals (the "Hospitals") for an alternative method of rate determination, pursuant to COMAR 10.37.10.06. The System requests approval from the HSCRC to continue to participate in a global arrangement to provide solid organ and bone marrow transplants services with Cigna Health Corporation. The System requests approval of the arrangement for a period of one year beginning July 1, 2017.

II. OVERVIEW OF APPLICATION

The contract will continue to be held and administered by Johns Hopkins HealthCare, LLC ("JHHC"), which is a subsidiary of the System. JHHC will continue to manage all financial transactions related to the global price contract including payments to the Hospitals and bear all risk relating to regulated services associated with the contract.

III. FEE DEVELOPMENT

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

IV. IDENTIFICATION AND ASSESSMENT OF RISK

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

V. STAFF EVALUATION

Staff found that the experience under the arrangement for the last year has been favorable.

VI. STAFF RECOMMENDATION

The staff recommends that the Commission approve the Hospitals' request for participation in an alternative method of rate determination for bone marrow and solid organ transplant services, for a one year period commencing July 1, 2017, and that this approval be contingent upon the execution of the standard Memorandum of Understanding ("MOU"). The Hospitals will need to file a renewal application for review to be considered for continued participation.

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

IN RE: THE APPLICATION FOR	*	**BEFORE THE MARYLAND HEALTH**	
ALTERNATIVE METHOD OF RATE	*	**SERVICES COST REVIEW**	
DETERMINATION *		**COMMISSION**	
JOHNS HOPKINS HEALTH	*	**DOCKET:**	**2017**
SYSTEM	*	**FOLIO:**	**2203**
BALTIMORE, MARYLAND	*	**PROCEEDING:**	**2393A**

Staff Recommendation

June 14, 2017

I. INTRODUCTION

Johns Hopkins Health System ("System") filed an application with the HSCRC on May 30, 2017 on behalf of its member hospitals, Johns Hopkins Hospital, Johns Hopkins Bayview Medical Center, and Howard County General Hospital (the "Hospitals") for an alternative method of rate determination, pursuant to COMAR 10.37.10.06. The System requests approval from the HSCRC to participate in a revised global rate arrangement with the Priority Partners Managed Care Organization. Inc., the Johns Hopkins Employer Health Programs, Inc., and the Johns Hopkins Uniformed Services Family Health Plan. The System wishes to add Spine surgery services to the currently approved Bariatric surgery services under this arrangement. The System requests approval of the revised arrangement for a period of one year beginning July 1, 2017.

II. OVERVIEW OF APPLICATION

The contract will continue to be held and administered by Johns Hopkins HealthCare, LLC ("JHHC"), which is a subsidiary of the System. JHHC will manage all financial transactions related to the global price contract including payments to the System hospitals and bear all risk relating to regulated services associated with the contract.

III. FEE DEVELOPMENT

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

IV. IDENTIFICATION ANDASSESSMENT OF RISK

The Hospitals will continue to submit bills to JHHC for all contracted and covered services. JHHC is responsible for billing the payer, collecting payments, disbursing payments to the Hospitals at their full HSCRC approved rates, and reimbursing the physicians. The System

contends that the arrangement among JHHC, the Hospitals, and the physicians holds the Hospitals harmless from any shortfalls in payment from the global price contract. JHHC maintains it has been active in similar types of fixed fee contracts for several years, and that JHHC is adequately capitalized to bear risk of potential losses.

V. STAFF EVALUATION

Staff found that the experience for bariatric services have been favorable and believes that the Hospitals can achieve a favorable experience under this arrangement for spine surgery services.

VI. STAFF RECOMMENDATION

The staff recommends that the Commission approve the Hospitals' application for an alternative method of rate determination for Bariatric and Spine Surgery Procedures for a one year period commencing July 1, 2017. The Hospitals will need to file a renewal application for review to be considered for continued participation.

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

Lifebridge Health Presentation

Representatives from Lifebridge will present materials at the Commission meeting.

Final Recommendation for the Potentially Avoidable Utilization Savings Policy for Rate Year 2018

June 14, 2017

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

Table of Contents

LIST OF ABBREVIATIONS

ADI	Area deprivation index
ARR	Admission-Readmission Revenue Program
CMS	Centers for Medicare & Medicaid Services
CY	Calendar year
DRG	Diagnosis-related group
ECMAD	Equivalent case-mix adjusted discharge
FFY	Federal fiscal year
FY	Fiscal year
GBR	Global budget revenue
HRRP	Hospital Readmissions Reduction Program
HSCRC	Health Services Cost Review Commission
IPPS	Inpatient prospective payment system
PAU	Potentially avoidable utilization
PQI	Prevention quality indicators
RRIP	Readmissions Reduction Incentive Program
RY	Rate year
SOI	Severity of Illness
TPR	Total patient revenue

INTRODUCTION

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

In this recommendation, staff is proposing to continue the PAU methodology used in rate year 2017, to increase the level of savings derived from the policy, and to specify the calculations and application of the policy in conjunction with the state fiscal year (FY) 2018 update. The purpose of this report is to present background information and supporting analyses for the PAU savings recommendation for rate year (RY) 2018.

BACKGROUND

The United States ranks behind most countries on many measures of health outcomes, quality, and efficiency. Physicians face particular difficulties in receiving timely information, coordinating care, and dealing with administrative burden. Enhancements in chronic care— with a focus on prevention and treatment in the office, home, and long-term care settings—are essential to improving indicators of healthy lives and health equity. As a consequence of inadequate chronic care and care coordination, the healthcare system currently experiences an unacceptably high rate of preventable hospital admissions and readmissions. Maryland's new All-Payer Model was approved by CMS effective January 1, 2014. This Model 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.

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

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 set forth in the HSCRC's Admission-Readmission Revenue (ARR) Program.[1] Nearly all 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 the ARR and the

[1] A readmission is an admission to a hospital within a specified time period after a discharge from the same or another hospital.

advent of global budgets, the HSCRC created a Savings policy to ensure that payers received savings that would be similar to those that would have been expected from the federal Medicare HRRP. Unlike the federal Hospital Readmissions Reduction Program (HRRP) which provides savings to payers by avoiding readmissions, the Maryland system "locks in" those savings into the hospital budget, so a separate savings policy is necessary. Under the new All-Payer Model, the Commission continued to use the savings adjustment to ensure a focus on reducing readmissions, to ensure savings to purchasers, and to meet the exemption requirements for "revenue at-risk" under Maryland's value-based programs.

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

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

In RY 2017, the Commission expanded the savings policy to align the measure with the potentially avoidable utilization (PAU) definition used in the market shift adjustment, incorporating readmissions, as well as admissions for ambulatory care sensitive conditions as measured by the Agency for Health Care Research and Quality's Prevention Quality Indicators (PQIs).[5] Aligning the readmissions measure with the PAU definition changed the focus of the readmissions measure from "sending" hospitals to "receiving" hospitals. In other words, the updated PAU methodology calculated the percentage of revenue associated with readmissions that occur at the hospital, 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, the savings associated with readmission reductions will accrue to the receiving hospital. Finally, aligning the readmission measure with the PAU definition enabled the measure to include observation stays that are longer than 23 hours in the calculation of both readmissions and PQIs. In RY 2017, the Commission increased the total reduction percentage to 1.25% of total revenue.

---

[2] Only same-hospital readmissions were counted, and stays of one day or less and planned admissions were excluded.

[3] The case-mix adjustment was based on a total of observed readmissions vs. expected readmissions, which is calculated using the statewide average readmission rate for each diagnosis-related group (DRG) severity of illness (SOI) cell and aggregated for each hospital.

[4] This measures 30-day all-cause, all hospital readmissions with planned admission and other exclusions.

[5] PQIs measure inpatient admissions for ambulatory care sensitive conditions. For more information on these measures, see http://www.qualityindicators.ahrq.gov/modules/pqi_overview.aspx .

Exemption from CMS Quality-Based Payment Programs

Section 3025 of the Affordable Care Act established the federal Medicare Hospital Readmission Reduction Program in federal fiscal year (FFY) 2013, which requires the Secretary of the U.S. Department of Health and Human Services to reduce payments to inpatient prospective payment system (IPPS) hospitals with excess readmissions for patients in fee-for-service Medicare.[6,7] According to the IPPS rule published for FFY 2015, the Secretary is authorized to exempt Maryland hospitals from the Medicare Hospital Readmissions Reduction Program if Maryland submits an annual report describing how a similar program in the State achieves or surpasses the nationally measured results for patient health outcomes and cost savings under the Medicare program. As mentioned in other HSCRC quality-based payment recommendations reports, the new All-Payer Model changed the criteria for maintaining exemptions from the CMS programs. As part of the new All-Payer Model Agreement, the aggregate amount of revenue at-risk in Maryland quality/performance-based payment programs must be equal to or greater than the aggregate amount of revenue at-risk in the CMS Medicare quality programs. The PAU savings adjustment is one of the performance-based programs used for this comparison. 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.

ASSESSMENT

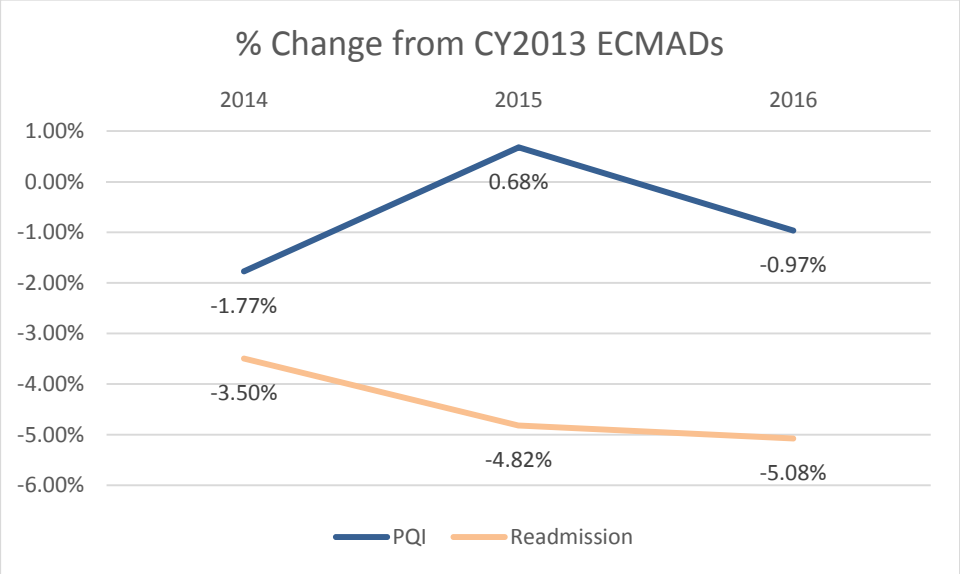
A central focus of the new All-Payer Model is the reduction of PAU through improved care coordination and enhanced community-based care. While hospitals have achieved significant progress in transforming the delivery system to date, there needs to be a continued emphasis on care coordination, improving quality of care, and providing care management for complex and high-needs patients. For this reason, staff suggests that the HSCRC continue to focus the savings program on PAU, defined to include both readmissions and PQIs.

Potentially Avoidable Utilization

Calendar year (CY) 2017 trends indicate that readmission improvement is accelerating, while progress in reducing PQIs remains limited. Figure 1 below shows trends in readmissions and PQIs since CY 2013. While the CY 2016 equivalent case-mix adjusted readmission discharges (ECMADs) declined by 5.08 percent over CY 2013, PQIs declined by 0.97 percent, which was preceded by a 0.68 percent PQI increase in CY 2015. Appendix I shows more detailed information on specific PQI trends. PQI trends between CY 2015 and CY 2016 should be interpreted with caution due to differences in PQI logic because of ICD-10 implementation.

[6] Patient Protection and Affordable Care Act, 124 Stat. 119 (2010) (codified as amended at 42 U.S.C. § 1395ww(q) (Supp. 2010)).
[7] For more information on this program, see https://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/AcuteInpatientPPS/Readmissions-Reduction-Program.html.

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



Proposed Required Revenue Reduction

HSCRC staff proposes to adjust the annual savings amount from last year's annual reduction of 0.65% to an annual reduction of 0.20%, which will result in a statewide PAU savings adjustment

Figure 2. Proposed RY 2018 Statewide Savings

Estimated PAU Revenue	**Formula**	**Value**		
RY 2017 Total Approved Permanent Revenue	A	$15.8 billion		
Total RY18 PAU %	B	10.86%*		
Total RY18 PAU $ (Eligible Savings)	C	$1.7 billion		
Statewide Savings Calculations	**Formula**	**Total**	**Last year**	**Net**
Proposed RY 2018 Revenue Adjustment %	D	-1.45%	-1.25%	-0.20%
Proposed RY 2018 Revenue Adjustment $ (Expected Savings)	E=A*D	-$228.4 million**	-$194.4 million	-$34.0 million

*Based on CY2016 Performance Data
**Expected Savings constitutes 13.35% of estimated PAU in RY18.

As previously mentioned, efforts to improve care and health and reduce PAU are essential to the success of the All-Payer Model. The RY 2018 recommendation continues to emphasize Maryland hospitals' commitment to these goals, while providing PAU savings to purchasers. This year's proposal also helps ensure that Maryland quality programs continue to meet or exceed the revenue at-risk in Medicare quality programs.

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

- All Maryland hospitals contribute to the statewide PAU savings of 1.45%; however, each hospital's reduction is proportional to the hospital's amount of revenue associated with PAU in the most recent year. See Appendix II for more information on PAU by hospital.
- The PAU savings adjustment amount is not related to year-over-year improvement in PAU during the rate year, hence providing an incentive for all hospitals to reduce PAU. Hospitals that reduce their PAU beyond the savings benchmark during the rate year will retain 100 percent of the difference between their actual reduction and the savings benchmark.
- As the PAU Savings policy is applied prospectively, the HSCRC sets a targeted dollar amount for savings, and thus guarantees a fixed amount of savings.

Hospital Protections

The Commission and stakeholders wish to ensure that hospitals that treat a higher proportion of disadvantaged patients have the needed resources for care delivery and improvement, while not excusing poor quality of care, or inadequate care coordination, for these patients. Staff proposes to continue to apply the methodology used in last year's PAU Savings Policy and to cap the PAU savings contributions at the state average if a hospital has a high proportion of disadvantaged populations. The measure includes the percentage of Medicaid and Self-pay or Charity ECMADs for inpatient and observation cases with 23 hours or longer stays, with protection provided to those hospitals in the top quartile. For RY 2019, HSCRC staff is developing risk-adjustment approaches for measuring hospital PAU revenue with Commission contractor Mathematica Policy Research.

Appendix III provides the results of the PAU savings policy based on the proposed 0.20 percent annual (1.45 percent total) reduction in total patient revenues with and without these protections.

Comments Received on Proposed Savings Policy Recommendation

The Maryland Hospital Association (MHA) submitted a comment letter on 5/15/17 (Appendix IV) expressing concern with the use of Prevention Quality Indicators (PQIs). HSCRC staff has examined the issue and determined that PQI software is used in multiple payment programs, such as the CMS Physician Value-Based Modifier[8], ACO quality metrics[9], and Medicaid Adult Core Measures Set[10]. However, HSCRC staff does recognize that the denominator used with PQIs varies among the programs. The PAU Savings Policy uses revenue as the PQI denominator,

[8] https://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/PhysicianFeedbackProgram/Downloads/2015-ACSC-MIF.pdf
[9] https://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/sharedsavingsprogram/Downloads/2017-Reporting-Year-Narrative-Specifications.pdf
[10] https://www.medicaid.gov/medicaid/quality-of-care/downloads/2017-adult-core-set.pdf

rather than an attribution-based denominator used in other programs. For the purposes of the PAU Savings Policy, the HSCRC staff believes that the use of PQIs with a denominator of total approved revenue is appropriate. The Savings Policy indicates the Commission's focus for the upcoming year, but allows hospitals to generate savings through other reductions in avoidable utilization. If hospitals exceed their PAU savings benchmark, which represents 13.35% of the identified PAU related revenue, the hospitals may retain 100% of the additional savings. Staff believes the PAU Savings Policy provides a mechanism to generate savings for payers and ensures the success of the All-Payer Model by adjusting for needed reductions in PAUs that are a key focus of the Model.

Future Expansion of PAU

Staff will continue to consider additional categories of admissions to the PAU measures. Areas of future focus for additional PAU measures include sepsis and other avoidable admissions from long-term care and post-acute settings, unplanned medical admissions through the emergency department setting, and readmissions that occur in a 60-day or 90-day period after index admission.

RECOMMENDATIONS

Based on this assessment, staff recommends the following for the PAU savings policy for RY 2018:

1. Set the value of the PAU savings amount to 1.45 percent of total permanent revenue in the state, which is a 0.20 percent net reduction in RY 2018.

2. Cap the PAU savings reduction at the statewide average reduction for hospitals with higher socioeconomic burden, which is defined for this purpose as above 75th percentile of Medicaid and Self-pay or Charity ECMADs.

3. Evaluate further expansion of PAU definitions for RY 2019 to incorporate additional categories of unplanned admissions.

APPENDIX I. ANALYSIS OF PQI TRENDS

PQIs—developed by the Agency for Healthcare Research and Quality—measure inpatient admissions for ambulatory care sensitive conditions. The following figure presents an analysis of the change in PQI rates between CYs 2015 and 2016. However, overall total PQI trends and trends for PQI 08 and 13 should be interpreted with caution due to the impact of ICD-10 and AHRQ PQI version changes.[11] From 2015 to 2016, there were improvements in the rates of PQI 03 (diabetes long-term complications), 07 (hypertension), 05 (chronic obstructive pulmonary disease or asthma in older adults), and 11 (bacterial pneumonia) However, there were continuing increases in PQI 10 (dehydration) and 14 (uncontrolled diabetes).

Appendix I. Figure 1. PQI Trends, CY 2015-CY 2016

PQI Admission Rate	CY 2015 PQI COUNT	CY 2016 PQI COUNT	CY 2015-2016 %CHANGE	CY 2015-2016 PQI Count	CY 2016 % CONTRIBUTION
	A	B	C=B/A-1	D=B-A	
PQI 01 Diabetes Short-Term Complications	2,971	2,993	0.74%	22	0.98%
PQI 02 Perforated Appendix	1,071	1,207	12.70%	136	6.06%
PQI 03 Diabetes Long-Term Complications	4,324	3,525	-18.48%	- 799	-35.62%
PQI 05 COPD or Asthma in Older Adults	13,489	13,043	-3.31%	- 446	-19.88%
PQI 07 Hypertension	2,897	2,319	-19.95%	- 578	-25.77%
PQI 08 Heart Failure *	14,720	11,402	-22.54%	- 3,318	-147.93%
PQI 10 Dehydration	5,245	7,342	39.98%	2,097	93.49%
PQI 11 Bacterial Pneumonia	9,649	9,179	-4.87%	- 470	-20.95%
PQI 12 Urinary Tract Infection	7,683	7,712	0.38%	29	1.29%
PQI 13 Angina Without Procedure*	880	1,780	102.27%	900	40.12%
PQI 14 Uncontrolled Diabetes	965	2,192	127.15%	1,227	54.70%
PQI 15 Asthma in Younger Adults	1,078	927	-14.01%	- 151	-6.73%
PQI 16 Lower-Extremity Amputation among Patients with Diabetes	704	782	11.08%	78	3.48%
Total PQI, Unduplicated	**65,114**	**62,871**	**-3.44%**	**- 2,243**	**100.00%**

[11] AHRQ updated to PQI software version 6 in October 2016. The major changes in version 6 include the retirement of PQI 13 (Angina without Procedure), and a correction to an incorrect decrease in PQI 08 (Heart Failure) under ICD-10.

APPENDIX II. PERCENT OF REVENUE IN PAU BY HOSPITAL

The following figure presents the total non-PAU revenue for each hospital, total PAU revenue by PAU category (PQI, readmissions, and total), total hospital revenue, and PAU as a percentage of total hospital revenue for CY 2016. Overall, PAU revenue comprised 10.86 percent of total statewide hospital revenue.

Appendix II. Figure 1. PAU Percentage of Total Revenue by Hospital, CY 2016

Hosp ID	Hospital Name	Non-PAU Revenue A	Readmission Revenue B	PQI Revenue C	Total PAU Revenue D=B+C	Grand Total Hospital Revenue E=A+D	% Readmission F=B/E	% PQI G=C/E	% PAU H=F+G
210001	MERITUS	$283,289,310	$23,494,447	$17,431,874	$40,926,321	$324,215,631	7.25%	5.38%	12.62%
210002	UMMC	$1,435,191,399	$93,675,647	$20,684,230	$114,359,877	$1,549,551,276	6.05%	1.33%	7.38%
210003	PRINCE GEORGE	$246,688,579	$22,850,811	$14,644,428	$37,495,238	$284,183,818	8.04%	5.15%	13.19%
210004	HOLY CROSS*	$449,274,541	$39,116,459	$19,456,706	$58,573,165	$507,847,706	7.70%	3.83%	11.53%
210005	FREDERICK MEMORIAL	$319,528,571	$22,787,248	$17,033,173	$39,820,420	$359,348,991	6.34%	4.74%	11.08%
210006	HARFORD	$84,734,904	$11,413,170	$7,405,362	$18,818,532	$103,553,436	11.02%	7.15%	18.17%
210008	MERCY	$488,967,333	$18,196,792	$8,910,342	$27,107,134	$516,074,467	3.53%	1.73%	5.25%
210009	JOHNS HOPKINS	$1,983,907,849	$149,286,161	$37,525,052	$186,811,213	$2,170,719,063	6.88%	1.73%	8.61%
210010	DORCHESTER	$37,560,890	$4,428,502	$4,790,869	$9,219,371	$46,780,260	9.47%	10.24%	19.71%
210011	ST. AGNES	$373,518,101	$34,126,243	$26,439,581	$60,565,824	$434,083,925	7.86%	6.09%	13.95%
210012	SINAI	$671,374,840	$46,429,824	$22,084,279	$68,514,103	$739,888,943	6.28%	2.98%	9.26%
210013	BON SECOURS	$90,243,822	$14,576,531	$6,427,626	$21,004,157	$111,247,979	13.10%	5.78%	18.88%
210015	FRANKLIN SQUARE	$434,451,376	$48,312,713	$28,450,630	$76,763,343	$511,214,718	9.45%	5.57%	15.02%
210016	WASHINGTON ADVENTIST	$230,211,335	$20,384,557	$12,259,135	$32,643,691	$262,855,026	7.76%	4.66%	12.42%
210017	GARRETT COUNTY	$47,907,285	$1,301,034	$2,951,330	$4,252,364	$52,159,649	2.49%	5.66%	8.15%
210018	MONTGOMERY GENERAL	$157,121,596	$13,179,066	$8,061,244	$21,240,310	$178,361,906	7.39%	4.52%	11.91%
210019	PRMC	$375,726,858	$27,944,511	$21,591,418	$49,535,929	$425,262,787	6.57%	5.08%	11.65%
210022	SUBURBAN	$268,526,295	$21,158,297	$11,703,782	$32,862,079	$301,388,373	7.02%	3.88%	10.90%

Hosp ID	Hospital Name	Non-PAU Revenue A	Readmission Revenue B	PQI Revenue C	Total PAU Revenue D=B+C	Grand Total Hospital Revenue E=A+D	% Readmission F=B/E	% PQI G=C/E	% PAU H=F+G
210023	ANNE ARUNDEL	$531,467,116	$28,422,056	$21,567,332	$49,989,388	$581,456,503	4.89%	3.71%	8.60%
210024	UNION MEMORIAL	$387,563,521	$27,863,344	$15,148,428	$43,011,772	$430,575,293	6.47%	3.52%	9.99%
210027	WESTERN MARYLAND	$292,514,732	$21,538,583	$13,559,716	$35,098,299	$327,613,031	6.57%	4.14%	10.71%
210028	ST. MARY	$165,372,543	$11,055,617	$10,236,061	$21,291,678	$186,664,221	5.92%	5.48%	11.41%
210029	HOPKINS BAYVIEW	$533,626,396	$51,181,366	$24,245,810	$75,427,176	$609,053,573	8.40%	3.98%	12.38%
210030	CHESTERTOWN	$45,378,104	$3,668,205	$4,218,472	$7,886,676	$53,264,780	6.89%	7.92%	14.81%
210032	UNION HOSPITAL OF CECIL	$139,474,644	$8,679,051	$11,444,321	$20,123,372	$159,598,016	5.44%	7.17%	12.61%
210033	CARROLL COUNTY	$207,735,335	$17,628,425	$16,110,880	$33,739,305	$241,474,641	7.30%	6.67%	13.97%
210034	HARBOR	$166,109,732	$15,972,533	$11,126,689	$27,099,222	$193,208,954	8.27%	5.76%	14.03%
210035	CHARLES REGIONAL	$127,077,125	$10,590,715	$10,156,771	$20,747,486	$147,824,611	7.16%	6.87%	14.04%
210037	EASTON	$176,562,941	$10,657,173	$12,058,895	$22,716,068	$199,279,009	5.35%	6.05%	11.40%
210038	UMMC MIDTOWN	$177,671,741	$23,608,371	$7,850,769	$31,459,140	$209,130,881	11.29%	3.75%	15.04%
210039	CALVERT	$124,008,743	$7,173,390	$8,766,775	$15,940,165	$139,948,908	5.13%	6.26%	11.39%
210040	NORTHWEST	$214,136,851	$22,904,526	$18,580,729	$41,485,254	$255,622,105	8.96%	7.27%	16.23%
210043	BALTIMORE WASHINGTON	$352,763,331	$36,132,870	$24,334,401	$60,467,272	$413,230,603	8.74%	5.89%	14.63%
210044	G.B.M.C.	$394,487,807	$22,088,927	$15,900,674	$37,989,601	$432,477,409	5.11%	3.68%	8.78%
210045	MCCREADY	$14,664,665	$527,671	$1,039,034	$1,566,705	$16,231,370	3.25%	6.40%	9.65%
210048	HOWARD COUNTY	$262,331,613	$21,701,488	$15,597,612	$37,299,100	$299,630,713	7.24%	5.21%	12.45%
210049	UPPER CHESAPEAKE	$291,541,981	$20,665,762	$14,816,885	$35,482,648	$327,024,629	6.32%	4.53%	10.85%
210051	DOCTORS	$193,700,410	$23,307,784	$16,057,893	$39,365,677	$233,066,087	10.00%	6.89%	16.89%
210055	LAUREL REGIONAL	$76,524,079	$8,204,956	$4,280,226	$12,485,181	$89,009,261	9.22%	4.81%	14.03%
210056	GOOD SAMARITAN	$249,052,413	$26,757,469	$16,434,629	$43,192,098	$292,244,511	9.16%	5.62%	14.78%
210057	SHADY GROVE	$349,193,037	$24,088,433	$14,101,319	$38,189,752	$387,382,790	6.22%	3.64%	9.86%
210058	REHAB & ORTHO	$101,744,779	$324,691		$324,691	$102,069,470	0.32%		0.32%

Hosp ID	Hospital Name	Non-PAU Revenue A	Readmission Revenue B	PQI Revenue C	Total PAU Revenue D=B+C	Grand Total Hospital Revenue E=A+D	% Readmission F=B/E	% PQI G=C/E	% PAU H=F+G
210060	FT. WASHINGTON	$41,152,352	$3,063,270	$4,465,871	$7,529,141	$48,681,493	6.29%	9.17%	15.47%
210061	ATLANTIC GENERAL	$97,618,544	$3,908,166	$4,882,142	$8,790,307	$106,408,852	3.67%	4.59%	8.26%
210062	SOUTHERN MARYLAND	$230,216,619	$24,002,657	$18,299,811	$42,302,468	$272,519,087	8.81%	6.72%	15.52%
210063	UM ST. JOSEPH	$367,993,303	$21,653,327	$12,826,818	$34,480,145	$402,473,448	5.38%	3.19%	8.57%
210064	LEVINDALE	$52,996,890	$4,390,825		$4,390,825	$57,387,715	7.65%		7.65%
210065	HOLY CROSS GERMANTOWN*	$78,854,583	$6,919,516	$5,463,433	$12,382,949	$91,237,532	7.58%	5.99%	13.57%
	STATEWIDE	**$14,461,534,140**	**$1,121,343,178**	**$641,423,453**	**$1,762,766,631**	**$16,224,300,772**	**6.91%**	**3.95%**	**10.86%**

*Holy Cross and Holy Cross Germantown are combined for PAU Savings adjustments (combined CY 2016 PAU % is 11.84%).

APPENDIX III. Modeling Results Proposed PAU Savings Policy Reductions for RY 2018

The following figure presents the proposed PAU savings reduction policy for each hospital for RY 2018.

Appendix III. Figure 1. Proposed PAU Savings Policy Reductions for RY 2018, by Hospital

Hospital ID	Hospital Name	FY17 Permanent Total Revenue	CY16 PAU %	FY18 PAU Savings Adjustment	FY18 PAU Savings Adjustment Before Protections	CY 16 % ECMAD Inpatient Medicaid &SelfPay Charity	FY18 PAU Savings Adjust w/ Protection (%)	FY 18 PAU Savings with Protections Revenue Impact ($)	FY17 PAU Savings Adjustment with Protection ($)	Net Impact to RY 2018 Inflation Factor	Net RY 18 Revenue Impact
		A	B	C=B* -13.9[12]	D = A*C	E	F	G = A*F	H	K=(G-H)/A	L=K*A
210001	MERITUS	$314,827,422	12.62%	-1.75%	-$5,520,664	18.70%	-1.75%	-$5,520,664	-$4,350,206	-0.37%	-$1,170,528
210002	UMMC	$1,316,372,491	7.38%	-1.03%	-$13,498,782	30.64%	-1.03%	-$13,498,782	-$11,958,459	-0.12%	-$1,540,156
210003	PRINCE GEORGE	$286,573,599	13.19%	-1.83%	-$5,252,190	42.75%	-1.51%	-$4,324,396	-$3,608,563	-0.25%	-$715,861
210004	HOLY CROSS*	$479,646,983	11.84%	-1.65%	-$7,893,731	22.24%	-1.65%	-$7,893,731	-$6,837,249	-0.22%	-$1,056,662
210005	FREDERICK MEMORIAL	$329,156,555	11.08%	-1.54%	-$5,067,592	7.36%	-1.54%	-$5,067,592	-$4,326,716	-0.23%	-$740,931
210006	HARFORD	$99,998,182	18.17%	-2.52%	-$2,524,681	18.01%	-2.52%	-$2,524,681	-$2,058,207	-0.47%	-$466,492
210008	MERCY	$502,208,027	5.25%	-0.73%	-$3,663,552	24.46%	-0.73%	-$3,663,552	-$3,375,724	-0.06%	-$287,765
210009	JOHNS HOPKINS	$2,229,450,835	8.61%	-1.20%	-$26,672,300	23.44%	-1.20%	-$26,672,300	-$23,369,402	-0.15%	-$3,301,817
210010	DORCHESTER	$48,094,357	19.71%	-2.74%	-$1,317,165	25.45%	-1.51%	-$725,744	-$1,202,307	0.99%	$476,567
210011	ST. AGNES	$416,466,586	13.95%	-1.94%	-$8,072,607	23.43%	-1.94%	-$8,072,607	-$6,807,387	-0.30%	-$1,265,225
210012	SINAI	$709,153,890	9.26%	-1.29%	-$9,124,538	24.01%	-1.29%	-$9,124,538	-$7,716,249	-0.20%	-$1,408,380
210013	BON SECOURS	$114,232,763	18.88%	-2.62%	-$2,996,761	59.97%	-1.51%	-$1,723,772	-$1,584,298	-0.12%	-$139,478
210015	FRANKLIN SQUARE	$492,402,641	15.02%	-2.09%	-$10,276,606	26.75%	-1.51%	-$7,430,356	-$6,318,376	-0.23%	-$1,111,845
210016	WASHINGTON ADVENTIST	$258,319,310	12.42%	-1.73%	-$4,457,978	30.47%	-1.51%	-$3,898,038	-$3,278,301	-0.24%	-$619,708

[12] Required % reduction in PAU revenue= [Savings (-1.45%) + the statewide impact of Medicaid Protection (-0.06%)] / % PAU (10.86%) = -13.90%.

Hospital ID	Hospital Name	FY17 Permanent Total Revenue	CY16 PAU %	FY18 PAU Savings Adjustment	FY18 PAU Savings Adjustment Before Protections	CY 16 % ECMAD Inpatient Medicaid &SelfPay Charity	FY18 PAU Savings Adjust w/ Protection (%)	FY 18 PAU Savings with Protections Revenue Impact ($)	FY17 PAU Savings Adjustment with Protection ($)	Net Impact to RY 2018 Inflation Factor	Net RY 18 Revenue Impact
		A	B	C=B* -13.9[12]	D = A*C	E	F	G = A*F	H	K=(G-H)/A	L=K*A
210017	GARRETT COUNTY	$53,507,634	8.15%	-1.13%	-$605,944	15.88%	-1.13%	-$605,944	-$484,974	-0.23%	-$120,981
210018	MONTGOMERY GENERAL	$169,927,186	11.91%	-1.65%	-$2,812,121	15.26%	-1.65%	-$2,812,121	-$2,351,779	-0.27%	-$460,333
210019	PENINSULA REGIONAL	$419,622,018	11.65%	-1.62%	-$6,792,718	18.01%	-1.62%	-$6,792,718	-$5,584,916	-0.29%	-$1,207,672
210022	SUBURBAN	$296,104,140	10.90%	-1.51%	-$4,484,669	8.47%	-1.51%	-$4,484,669	-$3,310,346	-0.40%	-$1,174,349
210023	ANNE ARUNDEL	$575,908,245	8.60%	-1.19%	-$6,881,944	11.90%	-1.19%	-$6,881,944	-$5,776,774	-0.19%	-$1,105,168
210024	UNION MEMORIAL	$414,710,552	9.99%	-1.39%	-$5,756,652	18.79%	-1.39%	-$5,756,652	-$5,370,044	-0.09%	-$386,510
210027	WESTERN MARYLAND	$316,661,093	10.71%	-1.49%	-$4,712,416	14.37%	-1.49%	-$4,712,416	-$3,839,345	-0.28%	-$873,035
210028	ST. MARY	$172,574,583	11.41%	-1.59%	-$2,736,037	19.47%	-1.59%	-$2,736,037	-$2,134,757	-0.35%	-$601,250
210029	HOPKINS BAYVIEW	$620,440,469	12.38%	-1.72%	-$10,672,844	29.09%	-1.51%	-$9,362,447	-$7,898,881	-0.24%	-$1,463,619
210030	CHESTERTOWN	$54,289,889	14.81%	-2.06%	-$1,117,206	12.33%	-2.06%	-$1,117,206	-$847,354	-0.50%	-$269,875
210032	UNION HOSP OF CECIL	$156,358,285	12.61%	-1.75%	-$2,739,652	26.43%	-1.51%	-$2,359,447	-$1,987,435	-0.24%	-$371,976
210033	CARROLL COUNTY	$223,662,684	13.97%	-1.94%	-$4,341,595	13.67%	-1.94%	-$4,341,595	-$3,958,120	-0.17%	-$383,582
210034	HARBOR	$190,469,979	14.03%	-1.95%	-$3,713,160	32.39%	-1.51%	-$2,874,192	-$2,461,177	-0.22%	-$412,939
210035	CHARLES REGIONAL	$143,723,289	14.04%	-1.95%	-$2,803,843	17.95%	-1.95%	-$2,803,843	-$2,386,640	-0.29%	-$417,229
210037	EASTON	$195,481,707	11.40%	-1.58%	-$3,096,495	17.25%	-1.58%	-$3,096,495	-$2,642,856	-0.23%	-$453,713
210038	UMMC MIDTOWN	$228,124,869	15.04%	-2.09%	-$4,767,381	42.15%	-1.51%	-$3,442,404	-$2,895,546	-0.24%	-$546,815
210039	CALVERT	$141,821,983	11.39%	-1.58%	-$2,244,537	16.25%	-1.58%	-$2,244,537	-$1,865,860	-0.27%	-$378,665
210040	NORTHWEST	$248,058,564	16.23%	-2.26%	-$5,594,125	21.22%	-2.26%	-$5,594,125	-$4,615,117	-0.39%	-$979,087
210043	BALTIMORE WASHINGTON	$398,733,080	14.63%	-2.03%	-$8,105,616	17.50%	-2.03%	-$8,105,616	-$7,057,541	-0.26%	-$1,048,269
210044	G.B.M.C.	$435,420,575	8.78%	-1.22%	-$5,312,059	10.34%	-1.22%	-$5,312,059	-$4,050,196	-0.29%	-$1,261,849
210045	MCCREADY	$15,530,984	9.65%	-1.34%	-$208,250	14.53%	-1.34%	-$208,250	-$121,592	-0.56%	-$86,663
210048	HOWARD COUNTY	$291,104,867	12.45%	-1.73%	-$5,035,913	15.50%	-1.73%	-$5,035,913	-$4,020,574	-0.35%	-$1,015,374

Hospital ID	Hospital Name	FY17 Permanent Total Revenue	CY16 PAU %	FY18 PAU Savings Adjustment	FY18 PAU Savings Adjustment Before Protections	CY 16 % ECMAD Inpatient Medicaid &SelfPay Charity	FY18 PAU Savings Adjust w/ Protection (%)	FY 18 PAU Savings with Protections Revenue Impact ($)	FY17 PAU Savings Adjustment with Protection ($)	Net Impact to RY 2018 Inflation Factor	Net RY 18 Revenue Impact
		A	B	C=B* -13.9[12]	D = A*C	E	F	G = A*F	H	K=(G-H)/A	L=K*A
210049	UPPER CHESAPEAKE	$325,619,300	10.85%	-1.51%	-$4,909,071	11.39%	-1.51%	-$4,909,071	-$4,286,879	-0.19%	-$622,258
210051	DOCTORS	$226,126,371	16.89%	-2.35%	-$5,306,892	18.75%	-2.35%	-$5,306,892	-$4,318,086	-0.44%	-$988,851
210055	LAUREL REGIONAL	$98,343,286	14.03%	-1.95%	-$1,917,175	29.37%	-1.51%	-$1,484,000	-$1,310,667	-0.18%	-$173,379
210056	GOOD SAMARITAN	$284,642,445	14.78%	-2.05%	-$5,845,659	20.39%	-2.05%	-$5,845,659	-$5,130,445	-0.25%	-$715,306
210057	SHADY GROVE	$376,694,222	9.86%	-1.37%	-$5,160,898	19.17%	-1.37%	-$5,160,898	-$4,461,883	-0.19%	-$699,144
210058	REHAB & ORTHO	$117,465,701	0.32%	-0.04%	-$8,357	24.04%	-0.01%	-$8,357	-$6,651	0.00%	-$1,762
210060	FT. WASHINGTON	$47,023,363	15.47%	-2.15%	-$1,010,796	18.46%	-2.15%	-$1,010,796	-$802,982	-0.44%	-$207,796
210061	ATLANTIC GENERAL	$102,841,659	8.26%	-1.15%	-$1,180,344	12.82%	-1.15%	-$1,180,344	-$1,032,629	-0.14%	-$147,681
210062	SOUTHERN MARYLAND	$269,769,528	15.52%	-2.16%	-$5,817,602	21.05%	-2.16%	-$5,817,602	-$5,253,518	-0.21%	-$564,088
210063	UM ST. JOSEPH	$388,253,807	8.57%	-1.19%	-$4,623,341	11.27%	-1.19%	-$4,623,341	-$3,595,241	-0.26%	-$1,028,096
210064	LEVINDALE	$57,520,942	7.65%	-1.06%	-$611,430	5.70%	-1.06%	-$611,430	-$435,119	-0.31%	-$176,302
210065	HOLY CROSS GERMANTOWN*	$100,218,431	11.84%	-1.65%	-$1,649,332	21.98%	-1.65%	-$1,649,332	-$1,271,536	-0.38%	-$377,823
	STATEWIDE	**$15,753,659,372**	**10.86%**	**-1.51%**	-$237,722,720	**20.85%**		-$228,429,107		-0.22%	-$34,069,720
					Top Quartile=	24.14%					

* Holy Cross Germantown is combined with Holy Cross Hospital for PAU Savings calculations but PAU percent's in Appendix II are presented separately for reference.

Maryland
Hospital Association

May 15, 2017

Alyson Schuster, Ph.D.
Associate Director, Performance Measurement
Health Services Cost Review Commission
4160 Patterson Avenue
Baltimore, MD 21215

Dear Ms. Schuster:

On behalf of the 64 hospital and health system members of the Maryland Hospital Association (MHA), we appreciate the opportunity to comment on the *Draft Recommendation for the Maximum Revenue Guardrail for Maryland Hospital Quality Programs for Rate Year 2019,* and the *Draft Recommendations for the Potentially Avoidable Utilization Savings Policy for Rate Year 2018*. We support HSCRC staff's recommendation to limit to 3.5 percent of total revenue the maximum penalty that any one hospital may be assessed as a result of the performance-based policies.

We continue to disagree with the staff's use of Prevention Quality Indicators (PQIs) in a way that is not recommended by their developer, the Agency for Healthcare Research and Quality (AHRQ). The metric was created not for hospitalized patients, but to measure prevention opportunities in the broader population. Because HSCRC measures the percentage of people admitted with a PQI as a percent of total discharges, the metric is capturing the hospital's historic service mix rather than the hospital's effectiveness in managing individuals' chronic conditions outside the hospital.

As the state considers moving to a second phase of the all-payer demonstration that could include responsibility for population health metrics, it is vital that hospitals be held accountable for metrics that accurately represent their effectiveness at managing the health of people at risk for progressing to high cost and high utilization. While we understand HSCRC's interest in creating an additional incentive to reduce avoidable utilization beyond global budgets and the readmissions policy, the use of PQIs without the ability to define the individual hospital's at-risk population is a shaky foundation on which to move forward. In addition, we would note that the $228.4 million in savings provided to payers through this policy substantially exceeds the $149 million in infrastructure funding that has been provided to hospitals to support care coordination and care management.

We appreciate the commission's consideration of our comments.

Sincerely,

Traci La Valle

Traci La Valle, Vice President

cc: Nelson J. Sabatini, Chairman
Herbert S. Wong, Ph.D., Vice Chairman
Joseph Antos, Ph.D.
Victoria W. Bayless
George H. Bone, M.D.
John M. Colmers
Jack C. Keane
Donna Kinzer, Executive Director

Final Recommendation for the Maximum Revenue Guardrail for Maryland Hospital Quality Programs for Rate Year 2019

June 14, 2017

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

Table of Contents

LIST OF ABBREVIATIONS

CMS	Centers for Medicare & Medicaid Services
CY	Calendar year
FFY	Federal fiscal year
FY	State fiscal year
HSCRC	Health Services Cost Review Commission
MHAC	Maryland Hospital-Acquired Conditions Program
PAU	Potentially avoidable utilization
PQI	Prevention quality indicator
QBR	Quality-based reimbursement
RRIP	Readmissions Reduction Incentive Program
RY	State rate year
VBP	Value-based purchasing

INTRODUCTION

The Maryland Health Services Cost Review Commission's (HSCRC's or Commission's) performance-based payment methodologies are important policy tools that provide strong incentives for hospitals to improve their quality performance over time. These performance-based payment programs hold amounts of hospital revenue at-risk directly related to specified performance benchmarks. Because of its long-standing Medicare waiver for its all-payer hospital rate-setting system, special considerations were given to Maryland, including exemption from the federal Medicare quality-based programs. Instead, the HSCRC implements various Maryland-specific quality-based payment programs, which are discussed in further detail in the background section of this report.

Maryland entered into a new All-Payer Model Agreement with the Centers for Medicare & Medicaid Services (CMS) on January 1, 2014. One of the requirements under this new agreement is that the proportion of hospital revenue that is held at-risk under Maryland's quality-based payment programs must be greater than or equal to the proportion that is held at-risk under national Medicare quality programs. The Model Agreement also requires Maryland to achieve specific reduction targets in potentially preventable conditions and readmissions, in addition to the revenue at-risk requirement. In an effort to meet these reduction targets, Maryland restructured its quality programs in such a way that financial incentives are established prior to the performance period in order to motivate quality improvement and the sharing of best practices while holding hospitals accountable for their performance.

The purpose of this report is to make a recommendation for the maximum amount one hospital can be penalized for RY 2019, otherwise known as the maximum revenue guardrail. For Rate Year (RY) 2019, the recommendations for the maximum penalties and rewards for each quality program are set forth in the individual policies rather than in an aggregate at-risk policy. At the time of this final policy, the PAU savings and GBR PAU efficiency adjustments are preliminary estimates.

BACKGROUND

1. Federal Quality Programs

In developing the recommendation for the maximum revenue guardrail, the staff first analyzed the aggregate revenue at-risk for Maryland's quality-based payment programs compared to the amount at-risk for the following national Medicare quality programs:

- The Medicare Hospital Readmissions Reduction Program (HRRP), which reduces payments to inpatient prospective payment system hospitals with excess readmissions.[1]
- The Medicare Hospital-Acquired Condition Reduction (HAC) Program, which ranks hospitals according to performance on a list of hospital-acquired condition quality measures and reduces Medicare payments to the hospitals in the lowest performing quartile.[2]
- The Medicare Value Based Purchasing (VBP) Program, which adjusts hospitals' payments based on their performance on the following four hospital quality domains: clinical care, patient experience of care, safety, and efficiency.[3]

2. Maryland's Quality-Based Programs

As discussed in the introduction section of this report, Maryland is exempt from the federal Medicare hospital quality programs. Instead, Maryland implements the following quality-based payment programs:

- The Quality Based Reimbursement (QBR) program employs measures in several domains, including clinical care, patient experience, and safety. Originally, financial adjustments were been based on revenue neutral scaling of hospitals in allocating rewards and reductions based on performance.[4] The distribution of rewards/penalties was based on relative points achieved by the hospitals and were not known before the end of performance period. Starting in FY 2017, the QBR program revenue neutrality requirement was removed, and payment adjustments were linked to a preset scale instead of relatively ranking hospitals, which was designed to provide hospitals with more predictable revenue adjustments based. However, due to issues with setting the preset scale the commission approved changing the RY 2017 and RY 2018 program to adjust hospital revenue by relatively ranking hospitals and penalizing and rewarding hospitals below or above the statewide average; these revenue adjustments were not revenue neutral. In RY 2019, a modified full scaling approach was approved by the commission

[1] For more information on the Medicare Hospital Readmissions Reduction Program, see https://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/AcuteInpatientPPS/Readmissions-Reduction-Program.html.
[2] For more information on the Medicare Hospital-Acquired Condition Reduction program, see https://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/AcuteInpatientPPS/HAC-Reduction-Program.html.
[3] For information on the Medicare VBP program, see https://www.medicare.gov/hospitalcompare/Data/hospital-vbp.html.
[4] The term "scaling" refers to the differential allocation of a pre-determined portion of base regulated hospital revenue contingent on the assessment of the relative quality of hospital performance. The rewards (positive scaled amounts) or reductions (negative scaled amounts) are then applied to each hospital's revenue on a "one-time" basis (and not considered permanent revenue).

so that hospitals can estimate revenue adjustments; this new scale ensures that rewards will only be given out to hospitals that perform well compared to the nation.

- The Maryland Hospital Acquired Conditions (MHAC) program measures hospital performance using 3M's potentially preventable complications. HSCRC calculates observed-to-expected ratios for each complication and compares them with statewide benchmarks and thresholds. This program was modified substantially in the CY 2014 performance period to align with the All-Payer Model Agreement. Revenue adjustments are determined using a preset payment scale. For RY 2016 through RY 2018 the revenue at-risk and reward structure was based on a tiered approach that requires statewide targets to be met for higher rewards and lower reductions. Starting in RY 2019, the commission approved a single scale approach that is not contingent on statewide improvement.
- The Readmission Reduction Incentive Program (RRIP) establishes a readmissions reduction target, an attainment target, and a scale for rewards/penalties for hospitals. The statewide minimum improvement target is established to eliminate the gap between the national Medicare readmission rate and the Maryland Medicare readmission rate.
- In addition to the three programs described above, two additional performance-based payment adjustments are implemented to hospital revenues prospectively. The Potentially Avoidable Utilization (PAU) Savings Program reduces each hospital's approved revenues prospectively based on revenue associated with avoidable admissions and readmissions. The demographic PAU efficiency adjustment reductions are applied to global budgets to reduce allowed volume growth based on the percentage of revenue associated with PAU for each hospital. These adjustments are considered within the context of the update factor discussions, and measurement periods are based on a previous calendar year.

Figure 1 below provides the maximum penalties or rewards for the three CMS and Maryland quality programs for RY/FFY 2018 and RY/FFY 2019. In general, CMS programs relatively rank hospital performance when determining penalties or rewards, whereas Maryland's quality programs use preset scales. For RY 2018 and RY 2019 staff estimates that the Maryland quality programs have met or exceeded the National potential and realized risk, respectively. These estimates use the methodology that HSCRC and CMMI agreed upon, but final numbers are pending CMMI review. See Appendix A for additional details on the aggregate at-risk test.

Figure 1. 2018 Maximum Quality Penalties or Rewards for Maryland and The Nation

MD All-Payer	Max Penalty %	Max Reward %	National Medicare	Max Penalty %	Max Reward %
RY/FFY 2018					
MHAC	3%/1%	1.0%	HAC	1.0%	N/A
RRIP	2.0%	1.0%	HRRP	3.0%	N/A
QBR	2.0%	1.0%	VBP	2.0%	2.0%
RY/FFY 2019					
MHAC	2.0%	1.0%	HAC	1.0%	N/A
RRIP	2.0%	1.0%	HRRP	3.0%	N/A
QBR	2.0%	2.0%	VBP	2.0%	2.0%

ASSESSMENT

In order to develop the maximum revenue at-risk guardrail for RY 2019 quality programs, HSCRC staff considered CMS relevant policies, conducted analyses, and solicited input from the Performance Measurement Workgroup.[5] During its February meeting, the Performance Measurement Workgroup reviewed data comparing the amount of revenue at-risk in Maryland with the national Medicare programs. Again the RY 2019 aggregate at-risk amounts were approved as part of the actual quality program policies, and this report only presents a recommendation for the maximum revenue guardrail.

Maximum Revenue at-risk Hospital Guardrail

As the HSCRC increases the maximum revenue adjustments statewide, the potential for a particular hospital to receive significant revenue reductions has raised concerns that such penalties may generate unmanageable financial risk. As hospitals improve quality in the state, the variation between individual hospitals is expected to decline, increasing the chances of a single hospital receiving the maximum penalty for all quality programs. Similar to the risk corridors in other VBP programs, a maximum penalty guardrail may be necessary to mitigate the detrimental financial impact of unforeseen large adjustments in Maryland programs. Given the increases in risk levels in other programs, a hospital-specific guardrail will provide better protection than a statewide limit. In RY 2017 and RY 2018, the hospital maximum penalty guardrail was set at 3.50 percent of total hospital revenue. Staff used the Medicare aggregate amount at-risk total as the benchmark to calculate the hospital maximum penalty guardrail (e.g. 6 percent * 58 percent of inpatient revenue). This maximum revenue guardrail applies to QBR, MHAC, RRIP, and net PAU Savings. For RY 2018, the estimated maximum penalty for one hospital was 1.06 percent of total hospital revenue (which corresponds to 1.41 percent of inpatient revenue).

RECOMMENDATION

For RY 2019, the maximum penalty guardrail should continue to be set at 3.50 percent of total hospital revenue.

[5] For more information on the Performance Measurement Workgroup, see http://hscrc.maryland.gov/hscrc-workgroup-performance-measurement.cfm.

APPENDIX A. COMPARISON OF AGGREGATE REVENUE AT-RISK FOR MARYLAND QUALITY-BASED PAYMENT PROGRAMS COMPARED TO MEDICARE PROGRAMS

After discussions with CMS, HSCRC staff performed analyses of both "potential" and "realized" revenue at-risk. Potential revenue at-risk refers to the maximum amount of revenue that is at-risk in the measurement year. Realized risk refers to the actual amounts imposed by the programs. The comparison with the national amounts is calculated on a cumulative basis. Figure 1 compares the potential amount of revenue at-risk in Maryland with the amount at-risk in the national programs. The difference between the national Medicare and Maryland all-payer annual amounts are summed after each year's experience to compare the annual difference.

The top half of Figure 1 displays the percentage of potential inpatient revenue at-risk in Maryland for all payers for each of Maryland's quality-based payment programs for RYs 2014 through 2019. The bottom half of the figure displays the percentage of potential national Medicare inpatient revenue at-risk for quality-based payment programs for FFYs 2014 through 2019. These potential at-risk numbers are the absolute values of the maximum penalty or reward. Due to efforts to align Maryland's quality-based payment programs with the national programs and the increasing emphasis on value-based payment adjustments, Maryland has exceeded the national aggregate maximum at-risk amounts since RY 2016. Cumulatively, Maryland's maximum at-risk total would be 24.3 percent higher than the nation in FFY 2019. The Maryland RY 2019 RRIP and RY 2018 PAU savings numbers are pending final commission approval; the RY 2019 PAU savings and RY 2018/2019 demographic PAU efficiency adjustment numbers are estimated based on previous year.

Figure 1. Potential Revenue at-risk for Quality-Based Payment Programs, Maryland Compared with the National Medicare Programs, 2014-2019

% of MD All-Payer Inpatient Revenue	RY 2014	RY 2015	RY 2016	RY 2017	RY 2018	RY 2019
MHAC	2.0%	3.0%	4.0%	3.0%	3.0%	2.0%
RRIP*			0.5%	2.0%	2.0%	*2.0%*
QBR	0.5%	0.5%	1.0%	2.0%	2.0%	2.0%
Subtotal	2.5%	3.5%	5.5%	7.0%	7.0%	6.0%
PAU Savings*	0.4%	0.9%	1.4%	4.5%	*5.9%*	*5.9%*
Demographic PAU Efficiency Adjustment*	0.5%	0.9%	1.1%	1.3%	*1.2%*	*1.2%*
MD Aggregate Maximum At-risk	3.4%	5.2%	8.0%	12.8%	14.1%	13.1%

*Italicized numbers subject to change

% of National Medicare Inpatient Revenue	FFY 2014	FFY 2015	FFY2016	FFY2017	FFY2018	FFY2019
HAC		1.0%	1.0%	1.0%	1.0%	1.0%
Readmits	2.0%	3.0%	3.0%	3.0%	3.0%	3.0%
VBP	1.3%	1.5%	1.8%	2.0%	2.0%	2.0%

Medicare Aggregate Maximum At-risk	3.3%	5.5%	5.8%	6.0%	6.0%	6.0%
Annual MD-US Difference	**0.2%**	**-0.3%**	**2.2%**	**6.8%**	**8.1%**	**7.1%**

As Maryland's programs moved away from revenue neutral rewards and penalties and toward payment adjustments based on preset payment scales, the actual amounts imposed in quality-based programs differ from the maximum amounts established in the policies and none of the hospitals may be subject to the maximum penalty when the payment adjustments are implemented. On the other hand, the national Medicare programs may make payment adjustments only to the lowest performing hospitals, limiting the reach of the performance-based adjustments. CMMI and HSCRC staff worked on a methodology to compare the total actual payment adjustments by summing the absolute average payment adjustments across all programs, namely aggregate realized at-risk. Maryland is expected to meet or exceed both the potential and realized at-risk amounts of the national Medicare programs but final approval is pending CMMI confirmation. Figure 3 provides a comparison of the average adjustment amount between Maryland and national programs. Maryland's overall aggregate average adjustments were 4.66 percent of the total inpatient revenue in RY 2016, compared to 1.36 percent in the national Medicare programs in FFY 2018. The PAU savings revenue adjustments account for a large proportion of Maryland's higher realized risk. Of note, the RY 2017 QBR adjustments currently represent only the revenue amount that went into effect in January 2017, and the RY 2018 adjustment is simply the remainder of the adjustment. The actual RY 2018 QBR adjustments may be put into rates in January 2018, which will increase the QBR amounts.

Figure 2. Realized Revenue at-risk for Quality-Based Payment Programs, Maryland Compared with the National Medicare Programs, 2014-2018

% of MD All-Payer Inpatient Revenue	**RY 2014**	**RY 2015**	**RY 2016**	**RY 2017**	**RY 2018**
MHAC	0.22%	0.11%	0.18%	0.40%	0.50%
RRIP			0.15%	0.57%	0.61%
QBR*	0.11%	0.14%	0.30%	*0.26%*	*0.15%*
Subtotal	0.34%	0.25%	0.63%	1.23%	1.26%
PAU Savings*	0.29%	0.64%	0.93%	2.6%	3.1%
Demographic PAU Efficiency Adjustment*	0.28%	0.33%	0.39%	0.3%	0.3%
MD Aggregate Maximum At-risk	**0.90%**	**1.22%**	**1.95%**	**4.13%**	**4.66%**
*SFY 18 numbers pending final review and approval					
% of National Medicare Inpatient Revenue	**FFY 2014**	**FFY 2015**	**FFY2016**	**FFY2017***	**FFY2018***
HAC		0.22%	0.23%	0.24%	0.24%

Readmits	0.28%	0.52%	0.51%	0.61%	0.61%
VBP	0.20%	0.24%	0.40%	0.51%	0.51%
Medicare Aggregate Maximum At-risk	**0.47%**	**0.97%**	**1.14%**	**1.36%**	**1.36%**
Annual MD-US Difference	**0.43%**	**0.25%**	**0.81%**	**2.76%**	**3.30%**
*HSCRC estimated CMS numbers based on publicly available files and this is subject to change. FFY 2018 uses FFY 2017 estimates.					

In summary, staff estimate that Maryland outperformed the national programs in the potential and realized aggregate payment amounts. Maryland hospitals continued to improve their performance in reducing complications and readmissions. However, further reductions in revenue associated with PAU will be important for financial success under the new all-payer model. Finally, as additional performance-based revenue adjustments are implemented, such as the Medicare Performance Adjustment for total cost of care, the potential aggregate at-risk amounts for other programs may be reduced. Staff will continue to discuss the appropriate amounts for performance-based payment programs with the appropriate workgroups and other stakeholders.

See Figure 3 for hospital-level results.

Figure 3. Consolidated Adjustments for All Quality-Based Payment Programs for Rate Year 2018, by Hospital

Hospital Name	FY 17 Total Permanent Revenue	FY 17 Permanent Inpatient Revenue	MHAC % Inpatient	RRIP % Inpatient	QBR % Inpatient	PAU Savings % Inpatient	PAU Net Impact % Inpatient	PAU Demographic % Inpatient	Total Impact % Inpatient	Total Impact % Total Revenue
PRINCE GEORGE	$286,573,599	$215,010,869	0.41%	-0.84%	-0.65%	-2.01%	-0.33%	-0.39%	-1.41%	-1.06%
CHESTERTOWN	$54,289,889	$18,989,104	0.35%	-1.35%	0.00%	-5.88%	-1.42%	-0.62%	-2.42%	-0.85%
HARFORD	$99,998,182	$46,975,749	0.53%	-0.61%	-0.13%	-5.37%	-0.99%	-0.56%	-1.21%	-0.57%
UNION HOSPITAL OF CECIL	$156,358,285	$68,179,037	0.41%	-1.06%	0.00%	-3.46%	-0.55%	-0.55%	-1.19%	-0.52%
MCCREADY	$15,530,984	$2,930,574	1.00%	-0.80%		-7.11%	-2.96%	0.00%	-2.76%	-0.52%
SOUTHERN MARYLAND	$269,769,528	$163,339,853	0.38%	-0.19%	-0.69%	-3.56%	-0.35%	-1.00%	-0.84%	-0.51%
HOLY CROSS	$479,646,983	$339,593,506	0.88%	-0.59%	-0.60%	-2.32%	-0.31%	-0.28%	-0.62%	-0.44%
FRANKLIN SQUARE	$492,402,641	$287,510,180	0.62%	-0.53%	-0.40%	-2.58%	-0.39%	-0.22%	-0.70%	-0.41%
WASHINGTON ADVENTIST	$258,319,310	$150,097,509	0.06%	0.43%	-0.69%	-2.60%	-0.41%	-0.55%	-0.61%	-0.36%
WESTERN MARYLAND	$316,661,093	$171,858,929	0.06%	0.02%	-0.20%	-2.74%	-0.51%	0.00%	-0.63%	-0.34%
SUBURBAN	$296,104,140	$189,851,798	0.41%	-0.14%	0.00%	-2.36%	-0.62%	-0.39%	-0.35%	-0.22%
HARBOR	$190,469,979	$107,761,881	0.47%	-0.28%	0.00%	-2.67%	-0.38%	-0.16%	-0.19%	-0.11%
BALTIMORE WASHINGTON	$398,733,080	$227,399,457	0.26%	0.37%	-0.27%	-3.56%	-0.46%	-0.39%	-0.09%	-0.05%
MERITUS	$314,827,422	$185,173,878	0.44%	0.23%	-0.07%	-2.98%	-0.63%	-0.15%	-0.03%	-0.02%
JOHNS HOPKINS	$2,229,450,835	$1,357,164,899	0.00%	0.30%	-0.07%	-1.97%	-0.24%	-0.14%	-0.01%	-0.01%
ANNE ARUNDEL	$575,908,245	$296,168,973	0.50%	0.32%	-0.40%	-2.32%	-0.37%	-0.30%	0.05%	0.02%
DOCTORS COMMUNITY	$226,126,371	$132,931,890	0.85%	0.09%	-0.13%	-3.99%	-0.74%	-1.05%	0.07%	0.04%
ST. AGNES	$416,466,586	$233,151,492	0.59%	0.37%	-0.33%	-3.46%	-0.54%	-0.32%	0.08%	0.05%
HOPKINS BAYVIEW	$620,440,469	$348,529,477	0.74%	-0.23%	0.00%	-2.69%	-0.42%	-0.20%	0.09%	0.05%
PENINSULA REGIONAL	$419,622,018	$235,729,906	0.00%	0.60%	0.00%	-2.88%	-0.51%	-0.17%	0.09%	0.05%
HOWARD COUNTY	$291,104,867	$176,085,796	0.35%	0.37%	0.00%	-2.86%	-0.58%	-0.42%	0.15%	0.09%
SINAI	$709,153,890	$397,073,246	0.24%	0.68%	-0.40%	-2.30%	-0.35%	-0.15%	0.16%	0.09%
HOLY CROSS GERMANTOWN	$100,218,431	$62,086,212		0.78%		-2.66%	-0.61%	-0.48%	0.17%	0.11%
UMMC MIDTOWN	$228,124,869	$114,950,934	1.00%	0.16%	-0.46%	-2.99%	-0.48%	-0.14%	0.22%	0.11%
EASTON	$195,481,707	$100,000,562	0.62%	0.54%	-0.40%	-3.10%	-0.45%	-0.16%	0.30%	0.16%

Hospital Name	FY 17 Total Permanent Revenue	FY 17 Permanent Inpatient Revenue	MHAC % Inpatient	RRIP % Inpatient	QBR % Inpatient	PAU Savings % Inpatient	PAU Net Impact % Inpatient	PAU Demographic % Inpatient	Total Impact % Inpatient	Total Impact % Total Revenue
NORTHWEST	$248,058,564	$125,696,184	0.74%	0.92%	-0.56%	-4.45%	-0.78%	-0.41%	0.32%	0.16%
CARROLL COUNTY	$223,662,684	$116,510,378	0.38%	0.35%	0.00%	-3.73%	-0.33%	-0.46%	0.40%	0.21%
G.B.M.C.	$435,420,575	$216,554,825	0.09%	0.94%	0.00%	-2.45%	-0.58%	-0.18%	0.45%	0.22%
UNIVERSITY OF MARYLAND	$1,316,372,491	$874,727,573	0.29%	0.23%	0.00%	-1.54%	-0.18%	-0.12%	0.35%	0.23%
UPPER CHESAPEAKE	$325,619,300	$133,152,736	0.47%	0.67%	0.00%	-3.69%	-0.47%	-0.54%	0.67%	0.28%
MONTGOMERY GENERAL	$169,927,186	$79,298,762	0.71%	0.50%	0.00%	-3.55%	-0.58%	-0.60%	0.63%	0.29%
UNION MEMORIAL	$414,710,552	$231,121,787	0.62%	0.48%	-0.40%	-2.49%	-0.17%	-0.33%	0.53%	0.30%
REHAB & ORTHO	$117,465,701	$67,555,816	0.44%	0.16%		-0.01%	0.00%	-0.01%	0.60%	0.34%
CHARLES REGIONAL	$143,723,289	$68,387,041	0.44%	0.90%	0.00%	-4.10%	-0.61%	-0.68%	0.73%	0.35%
FT. WASHINGTON	$47,023,363	$19,371,986	1.00%	1.00%	0.00%	-5.22%	-1.07%	-1.04%	0.93%	0.38%
ST. MARY	$172,574,583	$77,346,008	1.00%	0.66%	0.00%	-3.54%	-0.78%	-0.46%	0.88%	0.40%
ATLANTIC GENERAL	$102,841,659	$38,966,012	0.62%	1.00%	0.00%	-3.03%	-0.38%	-0.28%	1.24%	0.47%
GARRETT COUNTY	$53,507,634	$21,836,267	0.82%	1.00%	0.00%	-2.77%	-0.55%	-0.06%	1.27%	0.52%
CALVERT	$141,821,983	$63,319,998	0.76%	1.00%	0.00%	-3.54%	-0.60%	-0.25%	1.17%	0.52%
FREDERICK MEMORIAL	$329,156,555	$178,853,951	0.38%	1.00%	0.00%	-2.83%	-0.41%	-0.40%	0.97%	0.53%
MERCY	$502,208,027	$216,281,427	0.50%	0.86%	0.00%	-1.69%	-0.13%	-0.15%	1.23%	0.53%
SHADY GROVE	$376,694,222	$219,319,153	0.24%	1.00%	0.00%	-2.35%	-0.32%	-0.34%	0.92%	0.53%
GOOD SAMARITAN	$284,642,445	$158,579,215	0.62%	0.81%	0.00%	-3.69%	-0.45%	-0.48%	0.98%	0.54%
LAUREL REGIONAL	$98,343,286	$59,724,224	0.85%	0.67%	-0.29%	-2.48%	-0.29%	-0.50%	0.94%	0.57%
BON SECOURS	$114,232,763	$62,008,295	0.35%	1.00%	0.00%	-2.78%	-0.22%	-0.05%	1.13%	0.61%
UM ST. JOSEPH	$388,253,807	$234,995,507	0.65%	0.88%	0.00%	-1.97%	-0.44%	-0.20%	1.09%	0.66%
LEVINDALE	$57,520,942	$54,805,171	0.41%	1.00%		-1.12%	-0.32%	-0.21%	1.09%	1.04%
DORCHESTER	$48,094,357	$24,256,573	0.47%	-0.37%	0.00%	-2.99%	1.96%	-0.22%	2.07%	1.04%
Statewide	**$15,753,659,372**	**$8,971,214,597**	**0.39%**	**0.30%**	**-0.17%**	**-2.55%**	**-0.38%**	**-0.28%**	**0.14%**	**0.08%**

Maryland
Hospital Association

May 15, 2017

Alyson Schuster, Ph.D.
Associate Director, Performance Measurement
Health Services Cost Review Commission
4160 Patterson Avenue
Baltimore, MD 21215

Dear Ms. Schuster:

On behalf of the 64 hospital and health system members of the Maryland Hospital Association (MHA), we appreciate the opportunity to comment on the *Draft Recommendation for the Maximum Revenue Guardrail for Maryland Hospital Quality Programs for Rate Year 2019,* and the *Draft Recommendations for the Potentially Avoidable Utilization Savings Policy for Rate Year 2018*. We support HSCRC staff's recommendation to limit to 3.5 percent of total revenue the maximum penalty that any one hospital may be assessed as a result of the performance-based policies.

We continue to disagree with the staff's use of Prevention Quality Indicators (PQIs) in a way that is not recommended by their developer, the Agency for Healthcare Research and Quality (AHRQ). The metric was created not for hospitalized patients, but to measure prevention opportunities in the broader population. Because HSCRC measures the percentage of people admitted with a PQI as a percent of total discharges, the metric is capturing the hospital's historic service mix rather than the hospital's effectiveness in managing individuals' chronic conditions outside the hospital.

As the state considers moving to a second phase of the all-payer demonstration that could include responsibility for population health metrics, it is vital that hospitals be held accountable for metrics that accurately represent their effectiveness at managing the health of people at risk for progressing to high cost and high utilization. While we understand HSCRC's interest in creating an additional incentive to reduce avoidable utilization beyond global budgets and the readmissions policy, the use of PQIs without the ability to define the individual hospital's at-risk population is a shaky foundation on which to move forward. In addition, we would note that the $228.4 million in savings provided to payers through this policy substantially exceeds the $149 million in infrastructure funding that has been provided to hospitals to support care coordination and care management.

We appreciate the commission's consideration of our comments.

Sincerely,

Traci La Valle

Traci La Valle, Vice President

cc: Nelson J. Sabatini, Chairman
Herbert S. Wong, Ph.D., Vice Chairman
Joseph Antos, Ph.D.
Victoria W. Bayless
George H. Bone, M.D.
John M. Colmers
Jack C. Keane
Donna Kinzer, Executive Director

Final Recommendation on the Nurse Support Program II: FY 2018 Competitive Institutional Grants

June 14, 2017

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

This is a final recommendation for Commission consideration at the June 14, 2017 Public Commission Meeting.

Table of Contents

LIST OF ABREVIATIONS

ATB	Associate to Bachelor's Degree
AY	Academic Year
APIN	Academic Progression in Nursing
BSN	Bachelor of Science in Nursing
FY	Fiscal year
HSCRC	Health Services Cost Review Commission
MHEC	Maryland Higher Education Commission
MSN	Master of Science in Nursing
NSP II	Nurse Support Program II
RFA	Request for Applications
RN	Registered Nurse
RN-BSN	Baccalaureate Completion Nursing Graduates

INTRODUCTION

This report presents recommendations for the Nurse Support Program II (NSP II) Competitive Institutional Grant Review Panel for fiscal year (FY) 2018. The FY 2018 recommendations align with both NSP II and national nursing goals and objectives. This report and recommendations are 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 NSP I program to address the nursing shortage impacting Maryland hospitals. 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 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. The MHEC, the coordinating board for all Maryland institutions of higher education, was selected by the HSCRC to administer the NSP II programs.

Maryland has made significant progress in alleviating the state's nursing shortage. However, Maryland remains the only state in the geographic region and 1 of only 16 states in the nation projected to have a nursing shortage in 2025 (HRSA, 2014). In 2015, at the conclusion of the program evaluation of the NSP II for FYs 2006 to 2015, the HSCRC renewed funding at 0.1 percent of hospital regulated gross patient revenue for FY 2016 through 2020. In 2016, the Maryland General Assembly revised the NSP II statute to meet Maryland's changing health care delivery models by allowing all registered nurses (RNs)to be eligible to receive grants though the NSP II .[1] The next program evaluation is due in FY 2020.

MARYLAND NURSING EDUCATION PROGRESS

Over the last five years, the number of entry-level (BSN) and baccalaureate completion (RN-BSN) graduates increased by 22 percent, from 1,486 graduates in 2012 to 1,815 graduates in 2016. After graduation in academic year (AY) 2016, 683 of BSN nursing graduates were already working as registered nurses and continuing their education to complete the BSN degree either as part of a hospital employment agreement or personal professional development.

[1] Chapter 159, 2016 Laws of Maryland.

Table 1: Nursing Degree Completions by Year and Degree

Nursing Degree Completions	2012	2016	% change
Associate Degree in Nursing	1738	1537	-12%
Bachelors of Science in Nursing	1486	1815	22%
Masters of Science in Nursing	516	526	2%
Doctoral Degrees (PhD or DNP)	56	55	-2%
Source: Maryland Higher Education Commission			

Maryland nursing programs will need to increase enrollment and graduate additional RNs each year in order to meet the continuing demands of the nursing workforce.

With the focus on a more highly educated workforce, a greater number of nurses with a Master of Science in Nursing (MSN) or a doctoral degree are needed to teach the next generation. The 19 nursing schools represented in the FY 2018 proposals reported that they had 40 full-time and 12 part-time faculty vacancies due to resignations and retirements, a lack of qualified applicants, and budget constraints. Each new faculty member potentially increases institutional capacity to allow admissions for 10 additional applicants. 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. The NSP II Review Panel provided the strongest recommendations to proposals that expanded educational capacity and were aligned with the two major goals of the NSP II— increasing the number of nurse graduates and nurse faculty.

ACADEMIC AND PRACTICE PARTNERSHIP

An academic-hospital partnership funded by NSP II assisted 130 staff nurses over the past decade to earn an MSN degree. Hospital-based nurses serve as clinical instructors, faculty, preceptors, or mentors. The university-based program continues to recruit, support, and prepare nurses through partnerships with 18 Maryland acute care hospitals. The Leadership Consortium and the Maryland Clinical Simulation Resource Consortium were developed to provide opportunities across settings for academic nurse faculty and clinical practice nurses to work closer together. Over a two year period, nurses from academia and practice were nominated by health systems at 15 hospitals and 24 nursing programs.

During the 2014 NSP II evaluation, Chief Nursing Officers at Maryland hospitals identified the following positions as the most difficult to fill: emergency, critical care, operative/preoperative, nurse manager, director, and nursing professional development practitioner (hospital-based nurse educator). As a result, the guidelines and service commitment for the Hal and Jo Cohen Graduate Nurse Faculty Scholarship were revised to include hospital-based nurse educators, in addition to nursing program faculty. Chief Nursing Officers and deans/directors at both hospitals and

schools of nursing nominate nurses for this scholarship. All programs are described in detail on the Nurse Support Program website.[2]

The NSP II is supporting an education-focused approach to the nurse residency programs across the State amid nursing programs' efforts to bridge the gap in a rapidly evolving health care delivery model. With this cycle, an implementation grant was recommended to create academic credit options for completion of Nurse Residency Programs, as well as a one-year proposal to better align expectations of practice and academia with graduate competencies and nurse residency outcomes.

All grant recipient project directors are required to report on their grant-supported work annually through publications in peer-reviewed journals or presentations to fellow nurses in Maryland. Presentations may be through organizations such as the Maryland Nurse's Association, the Maryland Organization for Nurse Leaders, the Maryland Action Coalition or other professional nursing conferences or NSP II project director meetings. Each year, program updates from grant recipients and publication citations are added to the Nurse Support Program website.

ACADEMIC PROGRESSION IN NURSING

The *Maryland Nursing Articulation Education Agreement (1985)* for seamless academic progression for Licensed Practical Nursing to Associate Degree Nursing to BSNs is being updated through MHEC after reaching full consensus through the Maryland Council of Deans and Directors of Nursing Programs (MCDDNP) to better align with the latest academic progression in nursing (APIN) initiatives. One of the major recommendations from the Institute of Medicine's *Future of Nursing Report* was to increase the percentage of RNs with BSN degrees up to 80 percent by 2020 (2010). About half of Maryland's new RNs continue to graduate from Associate Degree in nursing programs at community colleges across the State.

An example of an APIN initiative is the Associate to Bachelor's Degree (ATB) model, which provides a pathway to the BSN. In the ATB model, the student nurse at the community college can dually enroll in a university to take specific courses, allowing the student nurse to finish both an Associate and BSN degree within a three-year period. This minimizes educational costs and reduces the time needed to complete the BSN. Integrating nursing curriculum for the community college and university programs without redundancy is the major challenge. Many of the NSP II grant programs funded over the last few years have supported efforts to implement this ATB partnership model or alternate routes to the BSN with good results. Nursing leaders agree, it's not where you start, it's where you finish. Across Maryland, universities and community colleges are working together through funded projects to reach APIN goals.

[2] Available at www.nursesupport.org.

FY 2018 COMPETITIVE GRANT PROCESS

In response to the FY 2018 request for applications (RFA), the NSP II Competitive Institutional Grant Review Panel received a total of 40 requests for funding, including 30 new competitive grants proposals, 9 resource grant requests, and 1 continuation grant recommendation. The nine-member review panel —comprised of former NSP II grant project directors, retired nurse educators, licensure and policy leaders, MHEC staff, 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 2018 RFA. The review panel convened and developed consensus around the most highly recommended proposals. As a result, the review panel recommends funding for 28 of the 40 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- to five-year full implementation grants, continuation grants, and nursing program resource grants for a total of $17.6 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 1 lists the recommended proposals for FY 2018 funding.

Table 2. Final Recommendations for Funding for FY 2018

Grant #	Institution	Grant Title	Proposed Funding
18-101	Anne Arundel Community College	Academic Progression RN to BSN/MSN	$726,895
18-102	Baltimore City Community College	Planning with Coppin State University	$63,890
18-104	College of Southern Maryland	Associate to Bachelor's Pathway	$1,115,231
18-107	Frostburg State University	Nurse Practitioner Program	$3,840,422
18-109	Frostburg State University	Pathway to a DNP	$212,257
18-111	Johns Hopkins University	DNP/PhD Dual Degree	$1,530,263
18-113	Johns Hopkins University	Palliative Care Competencies	$1,264,039
18-114	Johns Hopkins University	Post NP- Pediatric Care	$810,488
18-115	Montgomery College	Academic to Practice Transition	$100,316
18-119	Notre Dame of Maryland	Preparing Leaders for Nursing	$493,593
18-120	Salisbury University	Communication for Nurse Leaders	$1,981,929
18-121	Salisbury University	Maryland Nurse Educator Career Portal	$1,793,292
18-122	Towson University	TU Collaborative Partnership Program	$1,266,250
18-123	University of Maryland	Preparing Nurses to Lead Primary Care	$147,922
18-125	University of Maryland	MDAC 2018 Summit on Academic Progression	$91,305
18-126	University of Maryland	Academic Credit for Nurse Residency II	$105,474
18-127	University of Maryland	Development of Clinical Faculty	$182,808
18-130	Wor-Wic Community College	Planning Associate to Bachelors	$55,991
18-201	Carroll Community College	Faculty Development 2018	$81,000
18-202	Cecil Community College	Expand Clinical Simulation	$98,693

Grant #	Institution	Grant Title	Proposed Funding
18-203	College of Southern Maryland	Enhanced Simulation Project	$99,991
18-204	C. College of Baltimore County	Enhancing Capacity in Simulation	$100,000
18-205	Hagerstown Community College	Enhanced Simulation Lab Capacity	$99,958
18-206	Montgomery College	Accreditation and MCSRC Resources	$85,645
18-207	Morgan State University	Accreditation and Simulation Resources	$99,999
18-208	Towson University	Simulation Resources	$97,727
18-209	University of Maryland	Student Tracking and Evaluation System	$99,300
18-301	Allegany College of Maryland	Nurse Managed Wellness	$946,000
TOTAL			**$17,590,678**

RECCOMENDATIONS

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 nursing undergraduate degree completions at Towson University with collaborative hospital partnerships with Howard County Hospital, Johns Hopkins Hospital, Sinai Hospital Center, St. Joseph's Medical Center and University of Maryland Medical Center
- Awarding a planning grant for Baltimore City Community College for ATB degrees at Coppin State University
- Implementing a new Nurse Practitioner degree program in Western Maryland at Frostburg State University
- Implementing a post-doctorate Adult and Gerontological Primary Care Nurse Practitioner Certificate at the University of Maryland
- Continuing the Allegany College of Maryland's Nurse Managed Wellness program
- Developing web-based Leadership and Communication toolkits on the Eastern Shore of Maryland at Salisbury University with hospital partners Atlantic General Hospital, Peninsula Regional Medical Center and University of Maryland Shore Regional Health

HSCRC and MHEC staff members recommend the 28 proposals presented in Table 1 for FY 2018 Competitive Institutional Grant funding.

REFERENCES

Bopp, A. & Einhelig, K. (2017). Dual enrollment nursing partnerships: Steps to successful implementation. *Nursing Education Perspectives, 38*(2), 106-107.

Danner, M. & Preston, L.C. (2014). Development of accelerated options in an associate degree nursing program. *Teaching and Learning in Nursing*, *9*(2), 80-83.

Daw, P. & Terhaar, M. (2017). Program evaluation of a nursing workforce intervention: The Maryland Nurse Support Program II. *Nursing Economics*, *35*(1), 14-20.

Hinderer, K., Jarosinski, J., Seldomridge, L. & Reid, T. (2016). From expert clinician to nurse educator: Outcomes of a faculty academy initiative. *Nurse Educator*, *41*(4), 194-198.

Institute of Medicine of the National Academies. (2010, October 5). The future of nursing: Leading change, advancing health. Retrieved from http://www.nationalacademies.org/hmd/Reports/2010/The-Future-of-Nursing-Leading-Change-Advancing-Health.aspx

Maryland Higher Education Commission. (2017, February 28). Maryland Nursing Graduate Data Report provided by Alexia Van Orden, Research and Policy Analyst.

Mills, M.E.,Hickman, L.J., & Warren, J.I. (2014). Developing dual role nursing staff-clinical instructor: a partnership model. *Journal of Nursing Administration*, *44* (2), 65-67.

Institute of Medicine. (2015). Assessing progress on the Institute of Medicine report: The future of nursing. Washington, DC: The National Academies Press. Health Services Cost Review Commission.

U.S. Department of Health and Human Services, Health Resources and Services Administration, National Center for Health Workforce Analysis. (2014, December). The future of the nursing workforce: National- and state-level projections, 2012-2025. Retrieved from http://bhw.hrsa.gov/healthworkforce/supplydemand/nursing/workforceprojections/nursingpro jections.pdf

Final Recommendations on the Update Factors for FY 2018

June 14, 2017

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

This document contains the final staff recommendations for the update factors for FY 2018.

Table of Contents

LIST OF ABBREVIATIONS

ACA	Affordable Care Act
ACO	Accountable Care Organization
CAGR	Compound Annual Growth Rate
CMMI	Center for Medicare & Medicaid Innovation
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
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
RY	Rate 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 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, during the past three years, the expansion of Medicaid and other Affordable Care Act (ACA) enrollment has reduced uncompensated care (UCC), resulting in the State reducing several revenue assessments. The rate reductions for UCC 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) 2017, there were three categories of hospital revenue. One category included out-of-state revenues for several Johns Hopkins Health System hospitals. However, this revenue was brought under the global budget during RY 2017. As a result, there are only two remaining categories of hospital revenue under the All-Payer Model:

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 2018 for global revenues and non-global revenues.

ASSESSMENT

Overview of Final Update Factors Recommendations

Since the initiation of the All Payer Model effective January 1, 2014, Maryland hospitals in the aggregate have been provided revenue budgets that allow for investments in care coordination and other infrastructure to implement care improvement and population health initiatives. During the first two years of the Model, hospitals also experienced increased profitability from regulated revenues. That improvement in financial condition can be credited, in large measure, to the successes of hospitals in rapid adoption of global budget models, adoption of interventions that have moderated or decreased potentially avoidable utilization, implementation of cost controls, and increases in revenues provided by the HSCRC for care coordination and infrastructure. Additionally, actual inflation estimates turned out to be lower than the amount provided for inflation in rate updates for the initial two years of the Model. This higher inflation in rates allowed for additional investments in care coordination and population health.

In RY 2017, there were large declines in the federal Medicare update factor for the federal fiscal year (FFY) 2017 under the ACA and limited Maryland hospital savings in calendar year (CY) 2015 relative to the national Medicare growth. As a result, the HSCRC approved an update that lowered approved revenues for PAU by an additional 0.45 percent. As a result of this reduction, as well as higher inflation and other factors, hospital margins declined. Medicare hospital savings have again increased in CY 2016.

As described in detail below, for RY 2018, HSCRC staff is proposing a preliminary update of 2.97 percent per capita for global revenues and a preliminary update of 2.28 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 2.68 percent growth, which was derived from combining 91.2 percent of Global Insight's First Quarter 2017 market basket growth of 2.80 percent with 8.80 percent of the capital growth estimate of 1.40 percent, which calculates to 2.68 percent. The proposed inflation/trend adjustment would be as follows:

Table 1. RY 2018 Proposed Inflation/Trend Adjustment

	Global Revenues	Psych & Mt. Washington
Proposed Base Update (Gross Inflation)	2.68%	2.68%
Productivity Adjustment		-0.40%
Proposed Update	2.68%	2.28%

For psychiatric hospitals and Mt. Washington Pediatric Hospital, staff is proposing to use a productivity adjustment of 0.40 percent. This results in a proposed update of 2.28 percent. Additionally, these hospitals get a volume adjustment rather than a population adjustment. HSCRC staff is currently working on implementing quality measures for future rate years.

Summary of Other Policies Impacting RY 2018 Revenues

The inflation/trend adjustment is just one component of the adjustments to hospital global budgets for RY 2018. Therefore, 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, PAU savings, UCC, and other adjustments on global revenues. The proposed adjustments provide for an estimated net revenue growth of 3.52 percent and per capita growth of 3.15 percent for RY 2018, before accounting for reductions in UCC and assessments. After accounting for those factors, the revenue growth is estimated at 3.34 percent with a

corresponding per capita growth of 2.97 percent for RY 2018. 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 2018

Balanced Update Model for Discussion			
Components of Revenue Change Linked to Hospital Cost Drivers/Performance			
			Weighted Allowance
Adjustment for Inflation			2.40%
- Total Drug Cost Inflation for All Hospitals*			0.28%
Gross Inflation Allowance	A		2.68%
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		0.56%
-Demographic Adjustment (0.36%)			
-Transfers			
-Categoricals			
- Drug Population/Utilization (.2%**)			
Other adjustments (positive and negative)			
- Set Aside for Unknown Adjustments	D		0.40%
- Medicare Performance Adjustment (Future Use)	E		0.00%
Net Other Adjustments	F =	Sum of D thru E	0.40%
- Reversal of one-time adjustments for drugs	G		-0.10%
-Reverse prior year's PAU savings reduction	H		1.25%
-PAU Savings	I		-1.45%
-Reversal of prior year quality incentives -QBR, MHAC, Readmissions	J		-0.12%
-Positive incentives & Negative scaling adjustments	K		0.30%
Net Quality and PAU Savings	L =	Sum of G thru K	-0.12%
Net increase attributable to hospitals	M =	Sum of A + B + C + F + L	3.52%
Per Capita	N =	(1+M)/(1+0.36%)	3.15%
Components of Revenue Offsets with Neutral Impact on Hosptial Finanical Statements			
-Uncompensated care reduction, net of differential	O		-0.18%
-Deficit Assessment	P		0.00%
Net decreases	Q =	O + P	-0.18%
Revenue growth, net of offsets	R =	M + Q	3.34%
Per capita revenue growth	S =	(1+R)/(1+0.36%)	2.97%

* Provided Based on proportion of drug cost to total cost (drug index 5.2% X 5.4% national weight)

**Prospective adjustment 0.10 percentfor new outpatient infusion and chemotherapy drugs (50% of estimated input in rates the beginning of FY)
The second 0.10 percent will be earmarked for new outpatient infusion and chemotherapy drugs (50% of actual input in rates mid-year)

For 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 CY 2016 into CY 2017. 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.

Also, in the first half of RY 2017, hospitals undercharged their global budgets by approximately 1.0 percent. To recover this undercharge, hospitals will need to increase revenues in the second half of the RY 2017. This will contribute to an increase in the total cost of care for CY 2017. HSCRC has made CMMI aware of this undercharge, and its implications for CY 2017 data.

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:

- **Adjustments for Volume**: Staff proposes a 0.36 percent adjustment that is equal to the Maryland Department of Planning's estimate of population growth for CY 2017[1]. In the previous year, staff used an estimate based on five-year population growth projections. For the last two years (i.e., RYs 2016 and 2017), the actual growth estimate has been lower than the forecast. 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. For RY 2018, the staff proposes to provide the full value of the 0.36 percent growth for the demographic adjustment to hospitals.
- **Rising Cost of New Drugs**: The rising cost 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 0.28 percent of the inflation allowance to fund increases in the cost of drugs and to provide this allowance to the portion of total hospital costs that were comprised of drug costs in FY 2016. Staff also proposes to provide a prospective volume adjustment of 0.10 percent to fund a portion of the rising cost of new outpatient physician-administered drugs, which will be provided on a hospital-specific basis. Each hospital with regulated oncology drugs reported drug costs for outpatient infusion, chemotherapy, and biological drugs that accounted for at least

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

80 percent of drugs billed for RY 2016. Staff will spread the 0.10 percent adjustment among those hospitals based on their 2016 actual costs that were submitted for RY 2016. In addition, staff will collect similar data for RY 2017, and will provide an update of an estimated 0.10 percent effective with the mid-year 2018 update. In doing so, staff will provide a 0.20 percent volume adjustment for drugs, together with a 0.28 percent inflation allowance for drugs. During RY 2017, staff provided a retrospective and prospective volume adjustment for drugs, each of approximately 0.10 percent. The one-time adjustment portion will be reversed. The HSCRC staff expects to continue to refine the policies as it receives additional cost and use information.

- **Set-Aside for Unforeseen Adjustments**: Staff recommends a 0.40 percent set-aside to fund unforeseen adjustments during the year. This amount was reduced from 0.50 percent in RY 2017 to provide funding for a drug adjustment in RY 2018.
- **Reversal of the Prior Year's PAU Savings Reduction and Quality Incentives**: The total RY 2017 PAU savings and quality adjustments are restored to the base for RY 2018, with new adjustments to reflect the PAU savings reduction and quality incentives for RY 2018.
- **PAU Savings Reduction and Scaling Adjustments**: The RY 2018 PAU savings will be continued, and an additional 0.20 percent savings is targeted for RY 2018. Staff have provided preliminary estimates for both positive and negative quality incentive programs, which have been changed so that they are no longer revenue neutral. However, staff is still working on finalizing these figures.

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:

- **UCC Reductions**: The proposed UCC reduction for FY 2018 will be -0.18 percent. The amount in rates was 4.69 percent in RY 2017, and the proposed amount for RY 2018 is 4.51 percent.
- **Deficit Assessment**: The legislature did not reduce the deficit assessment for FY 2018. Therefore, this line item is set at 0 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. Notable factors include the PAU savings adjustment and investments in care coordination, as described in additional detail below.

PAU Savings Adjustment

Maryland is now in its fourth performance year of the All-Payer Model. The Model is based on the expectation that an All-Payer approach and global or population-based budgets will result in more rapid changes in population health, care coordination, and other improvements, which in turn will result in reductions in PAUs. To that end, the Commission approved budgets that did not offset Medicare's ACA and productivity adjustments, and provided infrastructure investment funding to support care coordination and population health activities. For RYs 2015 and 2016, the HSCRC applied a PAU savings adjustment with an incremental revenue reduction averaging 0.20 percent to allocate and ensure savings for purchasers of care. In RY 2017, there was an incremental increase in the PAU adjustment of 0.45 percent. For RY 2018, staff is proposing an increase in the PAU saving adjustment of 0.20 percent, similar to RYs 2015 and 2016.

Investments in Care Coordination and Implementation of Care Interventions

Investments

The HSCRC provided funding for some initial investments in care coordination resources. Staff believes that several categories of investments for implementation are critical to the success of the Model. Multiple workgroups have identified the need to focus on high needs patients, complex patients, and patients with chronic conditions and other factors that place them at risk of requiring extensive resources. Of particular concern are Medicare patients, who have more extensive needs, but fewer system supports. Additionally, there are several major opportunities with post-acute and long-term care that are important to address. There is significant variation in post-acute care costs, and hospitals need to work with partners to address this variation. There are also potentially avoidable admissions and readmissions from post-acute and long-term care facilities. There are documented successes in reducing these avoidable admissions, both in Maryland and nationally. These improvements require partnerships and coordination among hospitals and long-term and post-acute care providers. As hospitals continue to implement these approaches in FY 2017, declines in utilization may free up resources to make additional investments (if there is not a corresponding increase in non-hospital costs). The HSCRC staff has completed an amendment to the All-Payer Model to provide data and additional flexibility in implementing care redesign together with physicians and community-based partners. Also, the State has proposed a Maryland Comprehensive Primary Care Model (MCPCM) to CMS, which it hopes to initiate in early 2018. The MCPCM will provide care management resources to participating primary care practices.

Implementation of the care redesign and population health improvement will require additional investments. It will be important to reinvest hospital resources and to identify aligned resources outside of hospitals to make these efforts successful.

Additional resources could be beneficial for organizations that are prepared to implement:

- Care management for complex patients, in collaboration with regional partnerships and community partners

- Care coordination and chronic care improvement focused on rising risk patients as well as population health improvement, in collaboration with community partners
- Effective approaches to address post-acute and long-term care opportunities
- Other care redesign programs that engage physicians and other non-hospital providers in efforts aligned with the All-Payer Model

Interventions

As part of the FY 2017 update, each hospital in the State agreed to focus on total cost of care for Medicare, implement increased interventions and care coordination for high needs and rising needs patients, and to work with physicians relative to Medicare Access & CHIP Reauthorization Act (MACRA) opportunities. As discussed in the following section entitled Medicare Financial Test, for CY 2016, the State was successful in limiting the growth in Medicare total cost of care relative to national growth. Hospitals have been working with CRISP to share information on care coordination activities for high needs patients, and this information is being reviewed in the aggregate each month. As mentioned, the State has worked with stakeholders to secure a Care Redesign Amendment to the All-Payer Model. The clearance process for the Amendment took longer than anticipated, and the Amendment was just signed with CMS at the end of April 2017. Hospitals have also been participating in Accountable Care Organizations (ACOs). Additional effort is still needed to implement increasing levels of interventions for high needs patients and to engage physicians and other providers in aligned efforts. HSCRC staff is considering the importance and implications of these efforts on the Model's ongoing success. Staff is interested in Commissioners' and stakeholders' views on how progress on these efforts should be taken into account for the upcoming rate year.

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. However, staff does not yet have the updated cost per beneficiary estimates for CY 2017, and thus these calculations are subject to change. 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 2018. As shown in Table 3, cumulative growth of 19.23 percent is permitted through CY 2018.

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	Cumulative Growth F = (1+A)*(1+B)*(1+C)*(1+D)*(1+E)
Calculation of Revenue Cap	3.58%	3.58%	3.58%	3.58%	3.58%	19.23%

Table 4 below shows the allowed all-payer growth in gross revenues. Staff has removed adjustments due to reductions in UCC and assessments that do not affect the hospitals' bottom lines. Staff projects that the actual cumulative growth, excluding changes in UCC and assessments, through FY 2018 is 15.69 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

	A Actual Jan- June 2014	B Actual FY 2015	C Actual FY 2016	D Staff Est. FY 2017	E Proposed FY 2018	F = (1+A)*(1+B)*(1+C)*(1+D)*(1+E) Cumulative Through FY 2018
Maximum Gross Revenue Growth Allowance	**2.13%**	**4.21%**	**4.06%**	**3.95%**	**3.95%**	**19.68%**
Revenue Growth for Period	0.90%	2.51%	2.47%	2.23%	3.34%	11.97%
Savings from UCC & Assessment Declines that do not Adversely Impact Hospital Bottom Line		1.09%	1.40%	0.69%	0.18%	3.40%
Revenue Growth with UCC & Assessment Savings I	0.90%	3.60%	3.87%	2.92%	3.52%	**15.69%**
Revenue Difference from Growth Limit						**3.99%**

"Maximum Gross Revenue Growth Allowance" includes the following population estimates: FY16/CY15 = 0.46%; FY17/CY16 = 0.36%

Note: The figures in the table above are different than the net revenue figures reported at the beginning of this section of the report. The figure above does not reflect actual UCC or include other adjustments between gross and net revenues such as denials. They reflect adjustments to gross revenue budgets.

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 and two (CY 2014 and CY 2015) of the Model generated approximately $251 million in Medicare savings. Performance year three (CY 2016) savings have not yet been audited, but current staff projections show an estimated savings of $287 million, bringing the three-year cumulative savings to over $538 million. Under these calculations, the cumulative savings are ahead of the required savings of $132 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 three-year cumulative savings estimate is $364 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.

Staff has estimated that the total cost of care growth is below the national growth for CY 2016. However, Maryland non-hospital cost growth exceeds the national growth rate for CY 2016. This difference appears to be driven by increases in Maryland's non-hospital Part B services, which include clinic and professional fees. Staff determined that the growth is primarily in professional fees and is conducting further assessments of the cause of these increases. A commitment to continue the success of the first three year is critical to building long-term support for Maryland's Model. Therefore, staff recommends maintaining the goal used in the RYs 2015, 2016 and 2017 updates of growing Maryland hospital costs per beneficiary about 0.50 percent slower than the nation for RY 2018. Attainment of this goal will maintain any ongoing savings from prior periods and help achieve savings in the total cost of care, as well as provide evidence of the model's continued success.

Consideration of National Cost Figures

Medicare's Proposed National Rate Update for FFY 2018

CMS published proposed updates to the federal Medicare inpatient rates for FFY 2018 in the Federal Register in mid-April 2017.[2] 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 2.90 percent in FFY 2018 compared to FFY 2017, after accounting for inflation, a disproportionate share increase, and other adjustments required by law. The proposed rule includes an initial market basket update of 2.90 percent for those hospitals that were meaningful users of electronic health records in FFY 2016 and for those

[2] See https://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/AcuteInpatientPPS/FY2018-IPPS-Proposed-Rule-Home-Page-Items/FY2018-IPPS-Proposed-Rule-Regulations.html?DLPage=1&DLEntries=10&DLSort=0&DLSortDir=ascending.

hospital that submitted data on quality measures, less a productivity cut of 0.40 percent and an additional market basket cut of 0.75 percent, as mandated by the ACA. This proposed update also reflects a proposed 0.4588 percentage point increase for documentation and coding required by the American Taxpayer Relief Act of 2012 and a proposed reduction of approximately 0.60 percentage points to remove the Two-Midnight rule payment increase made in FY 2017 that was deemed to be unlawful. Disproportionate share payment changes resulted in an increase of approximately 1.30 percent from FFY 2017.

Table 5. Medicare's Proposed Rate Updates for FFY 2018

	Inpatient	Outpatient
Base Update		
Market Basket	2.90%	2.90%
Productivity	-0.40%	-0.40%
ACA	-0.75%	-0.75%
Coding	0.46%	
Two Midnight Rule	-0.60%	
	1.61%	1.75%
Other Changes		
DSH	1.30%	0.00%
Outlier Adjustment	0.00%	0.00%
	1.30%	0.00%
	2.9%	1.8%

Applying the inpatient assumptions about market basket, productivity, and mandatory ACA outpatient savings, staff estimates a 1.80 percent Medicare outpatient update effective January 2018. 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 three 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. For each of the three past timeframes, all-payer growth outpaced Medicare growth on a per capita basis. For the past three 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 of in hospital payment growth relative to the national growth rate, designed to provide at least $330 million in cumulative savings over a 5-year period.

If the projections from the CMS Office of the Actuary are correct, the projected national Medicare fee-for-service per capita hospital spending will increase by 1.60 percent in CY 2017 and by 2.20 percent for total cost of care (Part A&B). For CY 2018, the projections show 4.20

percent for per capita hospital spending and 3.00 percent for total cost of care per capita. The proposed update in this recommendation is for FY 2018. Therefore, staff has used an average of CY 2017 and CY 2018 projections from the President's FY 2018 Budget to calculate Medicare growth on line A in Table 6A and 6B below. In 2016, hospitals focused on Medicare spending and avoidable utilization, and this proved to be successful in CY 2016. The staff recommends that the Commission again focus hospitals on this imperative.

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 (Table 6A and 6B). 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 "difference statistic' that reflected the historical increase in Medicare per capita spending in Maryland which was lower than all-payer per capita spending growth. CareFirst has updated this statistic each year using data provided by HSCRC staff. For the FY 2018 update CareFirst calculated a conservative difference of 1.36 percent, which used a 3-year average difference reduced by the average absolute variance.

An alternative approach to calculating the difference statistic is to use the compounded annual growth rate difference (CAGR) from RY 2013 to RY 2016, which like the conservative difference statistic controls for volatility. Using CAGR, staff has calculated a difference statistic of 1.50 percent.

Staff calculated two different scenarios using the difference statistic. 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 2018 Medicare savings is 4.17 percent. Table 6A utilizes the difference statistic developed by CareFirst. The second scenario (Table 6B) shows a maximum all-payer per capita growth rate of 4.31 percent and utilizes the difference statistic based on CAGR. Both scenarios are pictured below. The proposed update for FY 2018 produces a growth that is lower than either of these figures.

Table 6A. Scenario 1 Maximum All-Payer Increase that will still produce the Desired FY 2018 Medicare Savings

Maximum Increase that Can Produce Medicare Savings		
Medicare		
Medicare Growth (CY 2017 1.6%+ CY 2018 4.2%)/2	A	2.90%
Savings Goal for FY 2018	B	-0.50%
Maximum growth rate that will achieve savings (A+B)	C	2.40%
Conversion to All-Payer		
Actual statistic between Medicare and All-Payer	D	1.36%
Conversion to All-Payer growth per resident (1+C)*(1+D)-1	E	**3.79%**
Conversion to total All-Payer revenue growth (1+E)*(1+0.36%)-1	F	**4.17%**

Table 6B. Scenario 2 Maximum All-Payer Increase that will still produce the Desired FY 2018 Medicare Savings

Maximum Increase that Can Produce Medicare Savings		
Medicare		
Medi Medicare Growth (CY 2017 1.6%+ CY 2018 4.2%)/2	A	2.90%
Savings Goal for FY 2018	B	-0.50%
Maximum Growth Rate that will Achieve Savings (A+B)	C	2.40%
Conversion to All-Payer		
Actual Statistic between Medicare and All-Payer (CAGR)	D	1.50%
Conversion to All-Payer Growth per Resident (1+C)*(1+D)-1	E	**3.94%**
Conversion to Total All-Payer Revenue Growth (1+E)*(1+0.36%)-1	F	**4.31%**

Additionally, staff has analyzed several revenue scenarios and how they impact the Medicare growth for CY 2017. While HSCRC is approving a rate increase for RY 2018, it is focused on the impact on CY 2017 as well as CY 2018. During CY 2016, hospitals undercharged the mid-year GBR limit by approximately $79.7 million, or about 1.00 percent. While the savings generated by this undercharge and the dis-savings that will generated through the recovery of this undercharge in CY 2017 will wash out for the hospital savings requirement, this could affect the total cost of care guardrail. Staff estimates that this could affect the total cost of care growth year-over-year by more than 0.50 percent. Combined with other fluctuations, this could cause Maryland to exceed the 1.00 percent total cost of care growth guardrail. HSCRC staff has requested that CMMI consider this temporary timing difference before noticing a triggering event. CMMI has provided a draft response, and staff is awaiting a final response.

Staff is also evaluating the growth in CY 2017 and its likely impact on guardrails. All scenarios presented by staff in the following table adjust for the undercharge.

Table 7. Estimated Position on Medicare Target

Estimated Position on Medicare Waiver Test		
Step 1:		
Actual Revenue CY 2016		16,414,160,613
Allowed Increase		**3.95%**
Maximum Revenue Allowed CY 2017		17,062,519,957
Step 2:		
Approved GBR FY 2017		16,740,527,157
Actual Revenue 7/1/16-12/31/16		8,185,165,864
Projected Revenue 1/1/17-6/30/17	**A**	**8,555,361,293**
Step 3:		
Estimated Approved GBR FY 2018		17,163,766,845
Permanent Update Less .40 set aside		2.90%
Step 4:		
Estimated Revenue 7/1/17-12/31/17 (after 49.73% & seasonality)		8,513,281,951
less Hopkins Payback		(17,594,500)
	B	**8,495,687,451**
Step 5:		
Estimated Revenue CY 2017	**A+B**	**17,051,048,744**
Increase over CY 2016 Revenue		3.88%
Amount Over (Under) Max Revenue		(11,471,213)
Amount Over (Under) Max Revenue with .20 set aside		5,520,162

The steps for the table 7 are described below:

- Step 1: The table begins with actual revenue for CY 2016, with the undercharge of $79.7 million added back for the year. The resulting adjusted revenue amount is increased by growth limit shown in table 6a to provide an estimated of allowed revenue for CY 2017.
- Step 2: The table then shows the approved global revenue for FY 2017 and actual revenue for the last six months of CY 2016 to calculate the projected revenue for the first six months of CY 2017 (i.e. the last six months of FY 2017).
- Step 3: This step shows estimated FY 2018 global budget revenue based on the information that staff has available to date. The permanent update over CY 2016 shows a 2.90 percent increase less the 0.40 percent set aside.
- Step 4: For this step, to determine the calendar year revenues, staff estimates the revenue for the first half of FY 2018 by applying the recommended mid-year split percentage of 49.73 percent to the estimated approved revenue for FY 2018 and hospital specific

seasonality adjustments. A reduction in revenues resulting from the temporary rate adjustment for Johns Hopkins Hospital is subtracted from revenues.

- Step 5: This step shows the resulting estimated revenue for CY 2017 and then calculates the increase over CY 2016 Revenue. The final portion of step 5 shows the amount of revenue over the maximum revenue (shown in step 1) with and without the use of the 0.40 percent set-aside.

With the hospital growth rate for Medicare estimated at 1.60 percent per capita for CY 2017 and a difference statistic of 1.36 percent to 1.50 percent, the revenue growth for the calendar year estimated at 3.88 percent will exceed the estimated Medicare growth for the calendar year. Hospitals will need to continue efforts to decrease avoidable utilization and reach a higher difference statistic as they did in CY 2016. Staff also continues to be concerned about the total cost of care growth. While staff does not propose to further limit the increases based on these calendar year tests, staff does recommend careful monitoring and ongoing updates of revenue estimates. Staff also notes the Commission's ability to address unfavorable performance during the rate year.

Stakeholder Input

HSCRC staff worked with the Payment Models Workgroup to review and provide input on the proposed FY 2018 updates. Staff has received and reviewed comments from CareFirst, the Maryland Hospital Association, Medicaid and the Department of Budget Management, and MedChi.

CareFirst expressed concern for the initial draft update and believes that, if the entire revenue growth were to be implemented it would put the State at risk for meeting each of financial tests that are under the All-Payer demonstration. Staff has laid out its careful analysis of the update above, and recommends close monitoring of the situation, in light of higher expected growth in CY 2017.

The Maryland Hospital Association (MHA) and its member hospitals support the staff recommendations for the update to global revenue and non-global revenues for FY 2018. MHA stated that Maryland's hospitals are committed to reducing avoidable hospital utilization and monitoring Medicare total cost of care in order to achieve the goals of the demonstration.

Medicaid and the Department of Budget Management (DBM) expressed concern for the staff's recommendation based on the impact the proposed revenue growth would have on rates as well as the effect the advanced payment to Johns Hopkins Hospital will have on the Medicaid Budget. In addition, Medicaid and DBM believe that the set-aside for unknown adjustments is unjustified and not needed at this time. Staff will exclude the set-aside from the MCO update calculation it makes for the first half of the year, and will work with Medicaid to determine if it is warranted for the mid-year update. Staff recommends that Medicaid and HSCRC work together with hospitals to identify opportunities for reduced utilization that could improve the budgetary outcomes for Medicaid on an ongoing basis.

MedChi, The Maryland State Medical Society, submitted a letter in support of the staff recommendation. MedChi further supports an increase beyond the recommendation for hospitals that participate in care redesign and gainsharing with physicians as an incentive, to help accelerate uptake on the two new care redesign programs and initiatives. The Secretary of Health is organizing an input group to accelerate discussions regarding initiatives that could be implemented January 1 or before. Under the new Care Redesign Amendment, the State may update and expand programs, many with a 30-day approval cycle.

See Appendix II for all written comments on the staff recommendation for the FY 2018 update factors.

RECOMMENDATIONS

Based on the currently available data and the staff's analyses to date, the HSCRC staff is providing the following final recommendations for the FY 2018 update factors.

For Global Revenues:

a) Provide an overall increase of 3.34 percent for revenue (net of UCC offset) and 2.97 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 0.28 percent of the inflation allowance based on each hospital's proportion of drug cost to total cost. In addition to an adjustment for drug prices, staff is also proposing a 0.20 percent adjustment for drug volume/utilization, 0.10 percent prospectively allocated to hospitals using the FY 2016 outpatient oncology drug utilization and standard costs filed by hospitals, and the other 0.10 percent based on actual growth for FY 2017 over FY 2016. These adjustments will help fund the rising cost of new outpatient, physician-administered drugs.

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

d) Hospitals should renew the GBR amendment that was put into place for FY 2017 that requires a focus on reducing Potentially Avoidable Utilization (PAU) and a continued focus on total cost of care growth, ensuring that hospital savings are not swamped by non-hospital cost growth. Continuing a focus on PAU will be important to meeting

performance needs in the current year. Hospitals should continue to focus on care improvements, working with physician partners in Care Redesign Programs and with ACOs.

e) Continue to consider on an ongoing basis whether to differentiate hospital updates based on progress relative to high needs patients and other aligned efforts with physicians and other providers.

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

a) Provide an overall update of 2.28 percent by using a productivity adjustment of 0.40 percent from the inflation factor of 2.68 percent.

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

APPENDIX I. DIFFERENTIAL STATISTIC METHODOLOGY – CAREFIRST

Meeting the Dual Waiver Tests of the Demonstration: Calculating GBR Target Budget Increases using the "Differential Statistic"

Report to the Payment Models Work Group
Jack S. Cook
Robert Murray
May 3, 2017

The All-Payer Model Demonstration
Description and Characteristics of the Dual Waiver Tests
The All Payer Test

- The All-Payer Test:
  - Is defined in terms of the **All-Payer Statistic**:
    - Maryland hospital charges for services to Maryland residents calculated annually on a per capita basis
  - Requires that the All-Payer Statistic may not increase by more than 3.58% annually over the term of the Demonstration
  - Can be formulated in each year in terms of parameters that are largely known in advance (prior year increases in the All-Payer Statistic, population growth and the 3.58% annual limitation)

2

The All-Payer Statistic
Annual Increases: 2013-2016

Table 1

Column:	(1)	(2)	(3)	(4)
	Total Hospital Charges to ($1,000,000)	Maryland Population (1,000)	All-Payer Statistic (1)/(2)	Percent Change
Calendar Year:				
2013	$15,623.8	5,931.1	$2,392.99	--
2014	$15,920.5	5,967.3	$2,429.78	1.54%
2015	$16, 377.9	5,995.0	$2,493.77	2.59%
2016	$16,477.1	6,016.4	$2,502.75	0.40%

Data came from the HSCRC Staff

3

The All-Payer Model Demonstration
Description and Characteristics of the Dual Waiver Tests
The Medicare Test

- The Medicare Test:
  - Is defined in terms of the **Medicare Statistic**:
    - All hospital payments for services to Medicare FFS beneficiaries residing in Maryland calculated annually on a per beneficiary basis
  - Requires that the Medicare Statistic may not increase by more than the US average increase in Medicare hospital payment per FFS beneficiary less the annual savings requirement
  - Is formulated in terms of several parameters not known in advance (the US average increase; the level of payments for services to Medicare FFS beneficiaries made to out-of-state hospitals, etc.)

4

The Medicare Statistic
Annual Increases: 2013-2016 (data from CMMI)

Table 2

Column:	(1)	(2)	(3)	(4)
	MD Hospital Charges to FFS Beneficiaries ($1,000,000)	Resident FFS Beneficiaries (1,000)	Medicare Statistic Charges/FFS Beneficiary	Percent Change
Calendar Year:				
2013	$4,664.3	767.3	$6,079.00	-
2014	$4,756.0	792.0	$6,005.24	-1.21%
2015	$4,977.2	816.2	$6,098.04	1.55%
2016	$4,964.6	829.0	$5,988.83	-1.79%

Data are from the CMMI

Note: Estimate does not account for out of area services or changes in the Medicare payment to charge ratio in Maryland

5

The All-Payer Model Demonstration
Meeting the Dual Waiver Tests
The Differential Statistic

- The Differential Statistic:
  - Is defined for 2012 through 2015 as the difference between
    - The annual increase in the All-Payer Statistic, and
    - The annual increase in the Medicare Statistic
  - Allows the HSCRC to unify the Dual Waiver Test requirements into a single limitation
    - In this application of the Differential Statistic methodology the single limitation relates to the Medicare Test as illustrated on Schedule 2 below

6

The All-Payer Model Demonstration
Meeting the Dual Waiver Tests

- The Conservative Differential Statistic (DS):
  - As noted, the DS is merely an average of the differences in the rates of growth of the All-Payer Statistic and the Medicare Statistic.
  - Since it is an average historical difference, using the straight average difference to project a future year's results means there is a 50% chance that our estimated DS will be lower than the actual difference and a 50% chance that our estimated DS will be higher than the actual difference.
  - To provide a higher level of conservatism to this analysis, in our original 2013 proposed DS methodology we proposed the use of a Conservative Differential Statistic.

7

The All-Payer Model Demonstration
Meeting the Dual Waiver Tests

- The Conservative Differential Statistic (DS) continued:
  - The calculation of the Conservative DS involves an extra step, where we calculate the variance between the DS in a particular year and the average of the DS over all years in our array.
  - The variance that we calculated for each year is the "Absolute Value" of the variance for the particular year.
  - We then average these Absolute Value Variances and subtract this average from the DS to obtain a Conservative DS.
  - This extra step enhances the probability that our projected DS will result in a growth in Medicare hospital expenditures per beneficiary (less the 0.5% savings provision) in Maryland that is below the increase in payments per FFS beneficiaries nationally from 50% to about 80%
  - Schedule 1, on the next slide, summarizes the Staff's calculation of the Differential Statistic and Conservative Differential Statistic using data from 2013-2016.

8

Step 1: Calculation of the Conservative Differential Statistic (DS) for FY 2018

HSCRC Data MD Hospital All Payer Claims per Resident

Annual Rate of Change All Payer

CMMI MD Medicare Hospital Claims per Beneficiary

Annual Rate of Change Medicare

Schedule 1

Line	Calendar Year	A All Payer Claims/Resident (1)	B % Change	C Medicare (2) Claim/Benef.	D % Change	E=B-D Differential Statistic	F Annual Absolute Value
1	2013	$2,392.99		$6,079.00			Variance
2	2014	$2,429.78	1.54%	$6,005.24	-1.21%	2.75%	0.75%
3	2015	$2,492.77	2.59%	$6,098.04	1.55%	1.05%	0.95%
4	2016	$2,502.75	0.40%	$5,988.83	-1.79%	2.19%	0.19%
5		Average	1.51%	$6,030.70	-0.49%	1.996%	0.633%
6		Conservative Differential Statistic (L5, Col. E - L5, Col. F)				1.364%	

This is precisely the same Methodology as was used last year to calculate the DS and Conservative DS.

Annual Differential Statistic Calculation Col. B-D

Average DS

Conservative DS = Average DS less Absolute Value Variance 1.996-0.633=1.364

9

Step 2: Determine Limitations on the Increase in Allowable Revenue under the All Payer and Medicare Waiver Test Limits

Schedule 2

The All Payer Limit:

1. The Annual Allowed Increase in Charges/Resident:	3.58%
2. Projected CY 2017 Increase in Maryland Population:	0.36%
3. All Payer Test Limitation (L1+L2)	3.94%

The Medicare Hospital Waiver Limit:

4. Projected Increase in U.S. Hospital Expend. per FFS Medicare Beneficiary:	2.70%
5. Annual Maryland Savings Target (reflects desired annual savings or cushion)	(0.50%)
6. Allowed Increase in Hospital Expend. per Maryland FFS Beneficiary (L4+L5)	2.20%
7. Conservative Differential Statistic (From Schedule 1, L6, Col. E)	1.36%
8. Allowed Increase in Charges per MD Resident (L6+L7)	3.56%
9. Projected 2017 Increase in Maryland Population	0.36%
10. Medicare Waiver Test Limitation (L8+L9)	3.92%

Key Observations:

- It appears that the All Payer and the Medicare Hospital Waiver Limits are nearly identical
- We will focus on meeting the Medicare Hospital Limit because it is slightly lower
- Per this application of the Differential Statistic, Maryland Aggregate All Payer GBR revenue can grow by 3.92% above the prior calendar year's approved revenue and still meet both the Medicare and All Payer Limits

Step 3: Determine the Aggregate Aggregate Charge Data from Selected Six Month Periods

- We received aggregate charge data from the Staff for the three six month periods:
  - First Half FY 2016 (i.e., 7/1/15 - 12/31/15)
  - Last Half FY 2016 (i.e., 1/1/16 – 6/30/16)
  - First Half FY 2017 (i.e. 7/1/16 – 12/31/16)
- We need these six month amounts to determine charge levels in the FH CY17 (i.e., January – June 2017 or LH FY17)
- Once we have an estimate of LH FY17 (i.e., FH CY 17) charges, we can compare that to what is allowed for the Full CY 17 and determine what the hospitals can charge for the second half of CY 17 to meet the Medicare Waiver test.

Schedule 3

Line	Period	Dates:	Amounts ($000,000)	
1	FH FY 2016	7/1/15 - 12/31/15	$8,189.5	FY 16
2	LH FY 2016	1/1/16 - 6/30/16	$8,229.0	
3	FH FY 2017	7/1/16 - 12/31/16	$8,105.4	CY 16

- We also convert these numbers to average six month aggregate charges based on CY 16 and FY 16 charges. We use these numbers later.

Schedule 3A

	Total Charge	Average Six Month Charges
CY 2016 and Avg 6 month period (L2+L3)	$16,334.4	$8,167.2
FY 2016 and Avg 6 month period (L1+L2)	$16,418.5	$8,209.3

11

Step 4: Calculate First Half (FH) Calendar Year 2017 (LH FY17) Aggregate Charges based on data provided by Staff

- Staff indicated that charges in the last six months of FY17 are projected to go up by **4.34%** over the same period in FY16 – shown by staff to be $8,229,000,000 (from Sched. 3, line 2)

Schedule 4

		in ($000,000)	
1	Aggregate Charges in LH FY16	$8,229.0	← FH CY16
2	Projected increase by staff	1.0434	← Per Staff
3	Projected Aggregate Charges LH FY 17	$8,586.1	

- So, we expect that First Half CY 17 (LH FY 17) charges (including both Permanent and Temporary components) will be this amount: $8,586.1 mill. (i.e., $8,229 m. LH FY 16 Revenue x 1.0434)

12

Step 5: Calculate the Temporary & Permanent Revenue Components of the $8,586.1 mill. of FH CY17 Revenue

- To determine what portion of the $8,586.1 m is Permanent, Staff indicated that they expected Aggregate FY 2017 Base Revenue to be 1.83% above FY 2016 Revenue
- From Schedule 3A, we know that FY 2016 Revenue was $16,418.5 mill.
- Six month average Revenue for FY 2016 is $16,418.5/2 = $8,209.3 mill.
- We therefore assume that of the $8,586.1 mill. charged in FY CY 2017, $8,359.5 mill. is Permanent Revenue ($8,209.3 x 1.0183 = $8,359.5)
- This means that the Temporary component of the $8,586.1 mill. in charges in FY CY17 is $226.6 mill. ($8,586.1 - $8,359.5 – $226.6)

Schedule 5

	($000,000)	
Average Charge CY 16	$8,209.3	← 6 month Avg. Charge Level FY2016 from Sched. 3A above
Permanent increase per Staff	1.0183	← Per Staff
Permanent component of Charges LH FY17	$8,359.5	← Permanent Revenue
Estimated Aggregate Charges LH FY 17	$8,586.1	
Temporary is the difference between total and Perm	**$226.6**	← Temporary Revenue

- We now have the basis for estimating Aggregate Revenue for CY 2017 – both the actual amount charged FH CY 17 ($8,586.1 m) and the Permanent piece flowing into LH CY 17 ($8,359.1 m)

13

Step 6: Compare the Total Revenue Allowed under the Waiver Test Limits to Amounts Charged in FH CY17 Plus Permanent Revenue flowing into the LH of CY 17

- Having determined the amounts charged in FH CY17 (and the amounts permanently carrying over into Last Half CY17) we can now determine how much more Maryland Hospital GBR revenues can grow in the Last Half of CY17 (via the FY18 Update Factor) to allow Maryland to meet the Medicare Waiver Test Limitation.
- We understand Staff may be seeking CMS permission to accrue amounts ($79.7 m) approved revenue not charged in FH FY 2017 (i.e., undercharged in LH CY 16) back to the CY 2016 for Waiver Test Compliance purposes
- Therefore, we will calculate Total Allowed GBR Revenue in CY 2017 both assuming:

  1) No reallocation of the CY 16 undercharged revenue (of $79.7 mill.) back to CY;

  2)Under the assumption CMS **allows the State to accrue** the amounts undercharged in Last Half of CY 2016, back to CY 2016 for purposes of the Waiver Test Compliance calculations (in which case they would not count against the Wavier Test limits for CY17)

- Schedule 6 (on the next slide) shows the impact of this reallocation on CY17

14

Step 6: Accounting for Possible Accrual of CY 2016 (i.e., LH FY 17) "Undercharges" back to CY 2016 for the purposes of the Waiver Compliance

- Schedule 6 shows the impact on LH CY 16 and FH CY 17 Revenues, if CMS allows Maryland to accrue undercharges in LH CY 16 (FH FY 17) back to Calendar Year 2016 for Waiver Test Compliance purposes

Schedule 6

	(in $000,000)	A Actual	B FH FY 2017 Undercharge	C Reallocated
1	FH FY16 July - Dec 2015	$8,189.5		$8,189.5
2	LH FY16 Jan - June 2016	$8,229.0		$8,229.0
3	FH FY17 July - Dec 2016	$8,105.4	$79.70	$8,185.1
4	Avg CY 16	$8,167.2		$8,207.1
5	Est. 1/1/17-6/30/17 Charges	$8,586.1	-$79.70	$8,506.4

Undercharged amount here ($79.7 m)in LH CY16 (FH FY17)

Would be reallocated here back to CY 16

With a corresponding reduction to amounts charged in CY 17

- Schedules 7 and 7A calculate the Allowed Aggregate GBR Revenue Increase for FY 2018 under both scenarios

15

Step 7: Calculate the Allowed increase in Aggregate GBR Revenues necessary to meet the Medicare Waiver Test Limitation for CY 2017 (no Reallocation)

Scenario 1: Assuming no Reallocation of $79.7 m. Undercharges back to CY16

- Schedule 7 calculates the Allowed Total GBR Revenue Increase effective 7/1/17 (RY 18)

This is done based on an accounting of actual charged amounts in FH CY 17 ($8,586.1 m – see line 6 in Schedule 7) and Permanent amounts flowing into FY 2018 (which will be charged in the LH CY 17 ($8,359.5 m. see line 8 Schedule 7)

It is also based on the 3.92% Limitation in All-Payer Aggregate Revenue growth in CY 2017 (of $16,974.7 m.) from the application of the Differential Statistic Methodology

Schedule 7

		(in $000,000)	
1	FH CY16 actual	$8,229.0	
2	LH CY 16 actual	$8,105.4	
3	Annual CY 16	$16,334.4	← Per HSCRC Staff
4	Allowed Increase	1.0392	Pct. Charge Growth Limit from Schedule 2
5	Allowed CY17 Charges L3 x L4	$16,974.7	Allowed CY17 Rev. to meet Medicare Limit
6	FH CY17 Charges From Sched. 6 line 5 col A.	$8,586.1	Amounts Charged in FH CY17 (Schedule 4)
7	Allowed LH CY 17 Charges L5-L6	$8,388.6	Additional Allowed Chg. Growth in LH CY17
8	Permanent portion From Schedule 5	$8,359.5	Permanent amounts flowing into LH CY17
9	Allowed Increase 7/1/17 (L7/L8)-1	0.348%	← This reflects the pct. amount aggregate GBR Revenues can increase in LH CY17 above the permanent approved revenue as of 7/1/17 and still meet Waiver Limit

It also assumes no reallocation Of the $79.7 m. in undercharges

($8,388.6 m/$8,359.5 m.) -1 = 0.348%

Step 7A: Calculate the Allowed increase in Aggregate GBR Revenues necessary to meet the Medicare Waiver Test Limitation for CY 2017 (with Reallocation)

Scenario 2: Assumes Reallocation of $79.7 m. in Undercharges back to CY16

- Schedule 7 calculates the Allowed Total GBR Revenue Increase effective 7/1/17 (RY 18)

  This is done based on an accounting of actual charged amounts in FH CY 17 ($8,506.1.1 m – see line 6 in Schedule 7A) and Permanent amounts flowing into FY 2018 (which will be charged in the LH CY 17 ($8,359.5 m. see line 8 Schedule 7A)

  It is also based on the 3.92% Limitation in All-Payer Aggregate Revenue growth in CY 2017 (of $17,057.5 m.) from the application of the Differential Statistic Methodology

Schedule 7A

			(in $000,000)
1	FH CY16 actual		$8,229.0
2	LH CY 16 actual (reallocated)		$8,185.1
3	Annual CY 16		$16,414.1
4	Allowed Increase		1.0392
5	Allowed CY17 Charges	L3 x L4	$17,057.5
6	FH CY17 Charges	From Sched. 6 line 5 col C.	$8,506.4
7	Allowed LH CY 17 Charges	L5-L6	$8,551.1
8	Permanent portion	From Schedule 5	$8,359.5
9	Allowed Increase 7/1/17 (L7/L8)-1		2.292%

($8,551.1 m/$8,359.5 m.) -1 = 2.292%

It also assumes the $79.7 m. in Undercharges are reallocated

← Per HSCRC Staff

Pct. Charge Growth Limit from Schedule 2

Allowed CY17 Rev. to meet Medicare Limit

Amounts Charged in FH CY17 (Schedule 4)

Additional Allowed Chg. Growth in LH CY17

Permanent amounts flowing into LH CY17

← This reflects the pct. amount aggregate GBR Revenues can increase in LH CY17 above the permanent approved revenue as of 7/1/17 and still meet Waiver Limit

Summary and General Observations

- Application of the Differential Statistic Methodology in the context of the Fy2018 Update would result in the following Updates under different assumptions regarding the allocation of the $79.7 million in undercharges to CY 2016

  Assumes a CMS Actuary Forecast for US Hospital Expenditure per FFS Beneficiary of 2.70% for CY 2017

  Result assuming no reallocation of the $79.7 m in undercharges in the FH FY 2017 to CY 2016 — 0.35%

  Result assuming a reallocation of the $79.7 m in undercharges in the FH FY 2017 to CY 2016 — 2.29%

- These results would also include a reversal of the Temporary component of $226.6 m. effective 7/1/17

APPENDIX II. COMMENT LETTERS

Chet Burrell
President and Chief Executive Officer

CareFirst BlueCross BlueShield
1501 S. Clinton Street, 17th Floor
Baltimore, MD 21224-5744
Tel: 410-605-2558
Fax: 410-781-7606
chet.burrell@carefirst.com

May 9, 2017

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

Dear Mr. Sabatini and Ms. Kinzer:

The purpose of this letter is to provide CareFirst's comments on the HSCRC staff's "Draft Recommendations on the Update Factors for FY 2018." In short, we urge the Commission to reject the Staff's recommendation of 3.39% and to develop a new recommendation for the Commission's consideration. The reasons for this are outlined below.

CareFirst believes that the recommended Update Factor—if implemented—would jeopardize the State's prospects of meeting all three of the financial tests that are required under the Maryland Model Demonstration. Specifically, based on a forecasting methodology (the "Differential Statistic Methodology" or "DSM") that was accepted by the HSCRC staff, we estimate that if the 3.39% Update Factor is implemented, the following would occur:

1) Maryland's growth in all payer costs would (according to the DSM) rise to 5.4%, exceeding the 3.94% target. This percent is based on the fact that hospital revenues will dramatically increase in CY 2017—as detailed under the HSCRC's own projections. The 5.4% increase in CY2017 over CY2016 is the result of a lower CY2016 charge base (denominator) due to the $70M undercharge and the higher CY2017 period (numerator) driven, in part, by hospitals' upcharge to recover the previous year's undercharge.

2) Medicare savings would decrease by $93 million relative to savings that would occur had Maryland met the goal of growing at U.S. Medicare hospital per beneficiary growth less 0.5% in CY 2017. CareFirst projects that under the recommended Update Factor, Maryland Medicare Hospital Expenditures per Medicare Beneficiary would increase 3.75 percent, significantly greater than what CMS currently projects for the rest of the US. We estimate the US target to be 2.2 percent (after taking out 0.5 percent as is required). We ask how this estimate can be reconciled with the 3.75 percent presented for the State's Update Factor and given its focus on meeting the targets under the Demonstration.

3) Maryland would likely exceed the Medicare Total Cost of Care (TCOC) Test if non-hospital Medicare FFS expenditures continue to grow at a rate that exceeds the national U.S. non-hospital Medicare FFS increases per beneficiary by approximately 1.5%, as has been the average for the past two years. Under this assumption, we estimate that Medicare TCOC in Maryland would increase by 3.41—a level of 1.31 percentage points greater than the State's target.

Thus, it appears as though the staff recommendation has not taken into account the impact of the actual increases in hospital costs that will occur in CY 2017 on these three Demonstration targets, after a period of hospital undercharges in the second half of CY 2016.

At such a critical time when the State is negotiating the future of the Demonstration with the federal government, we believe it is imperative that the HSCRC consider an Update Factor that is more conservative. Considering that hospital revenue is projected to be 4.3% higher in the first half of 2017 than in 2016—due to deferrals and undercharges in the last half of 2016—a very low Update Factor is implied.

We would also point out that Maryland hospitals have consistently generated total operating margins that have hovered around 3.0% and operating margins from rate-regulated activities that have exceeded 8.0% during the term of the Demonstration. We also note that hospitals received $239 million in FY 2015 and FY 2016 for Care Management Infrastructure funding, with $200 million added to rates for every subsequent FY. To date, neither we nor anyone else to our knowledge has been able to determine how these funds were spent to improve care coordination or outcomes. It concerns us that recent HSCRC reporting seems to indicate that these funds were largely spent to subsidize Part B physician activities.

For these reasons we strongly urge the Commission to direct staff to develop a proposed Update Factor that better protects the State against failing to comply with the thresholds provided under the Demonstration and to make this proposal in time for the Commission to consider at its June meeting.

Sincerely,

Chet Burrell
President & CEO

Maryland
Hospital Association

June 2, 2017

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

Dear Chairman Sabatini:

On behalf of the Maryland Hospital Association's 64 member hospitals and health systems, I am writing to support the staff recommendation for the update to global budgets and non-global budget revenues for fiscal year 2018. As the draft recommendation notes, significant progress has been made in the past three years toward achieving the goals of the All-Payer Model demonstration, with Medicare hospital savings far exceeding the requirements through calendar year 2016, and the quality improvement goals of reductions in readmissions and hospital-acquired conditions well on track. These accomplishments were accelerated by the commission and its staff, including the infrastructure investments, recognition of high-cost drug growth, and other funding provided in the model's first three years. Together, we must continue to ensure future progress toward the Triple Aim goals of the demonstration, and the funding recommended in the 2018 update will help make that possible.

At the same time, Maryland's hospitals also recognize the need to continue to reduce avoidable hospital utilization. ***Maryland's hospitals – individually and collectively – are committed to transforming the delivery of care and to the challenge of further reducing avoidable hospital utilization.*** Hospitals are keenly aware that the funding provided for next year demands that the Medicare total cost of care be monitored closely, to ensure that growth in non-hospital spending is more than offset by reductions in avoidable hospital utilization. We hope that the addition of the two Care Redesign Programs for next year will also help accomplish the demonstration's goals.

We look forward to discussing this update at the commission's meeting on June 14, and to continue to work together on behalf of the patients and communities we serve.

Sincerely,

Michael B. Robbins

Michael B. Robbins, Senior Vice President

cc: Herbert S. Wong, Ph.D., Vice Chairman
Joseph Antos, Ph.D.
Victoria W. Bayless
George H. Bone, M.D.
John M. Colmers
Jack C. Keane
Donna Kinzer, Executive Director
Caitlin Grim, Health Services Rate Analyst
Deon Joyce, Health Services Rate Analyst

STATE OF MARYLAND
DHMH
Maryland Department of Health and Mental Hygiene
Larry Hogan, Governor - Boyd K. Rutherford, Lt. Governor - Dennis R. Schrader, Secretary

June 2, 2017

Nelson J. Sabatini
Chair
The Health Services Cost Review Commission
4160 Patterson Avenue
Baltimore, MD 21215

Dear Chairman Sabatini:

The Medicaid program and the Department of Budget and Management (DBM) have jointly reviewed the draft recommendation of the Health Services Cost Review Commission's (HSCRC) Staff for the fiscal year (FY) 2018 Update Factor. We are writing to express our concern regarding the Staff's draft recommendation of 3.34 percent revenue growth (net of offsets; 2.97 percent revenue growth per capita). For the reasons described below, we feel that the proposed Update Factor is not financially-sustainable for the Medicaid program and for the state budget collectively.

Impact on the Medicaid Budget

First, and though not unusual, the proposed increase in rates was not entirely planned for in the FY 2018 Medicaid budget. When developing the FY 2018 budget, the Department of Health and Mental Hygiene and DBM did include an assumption for a rate increase of 1.87 percent; however, the Staff recommendation of 3.34 percent far exceeds this amount. We also assumed a utilization trend for inpatient services that has not materialized. This places even greater pressure on the Medicaid budget, which is already projecting a deficit in FY 2018. We would further note that the State is projecting a General Fund deficit in the range of $700 million for FY 2019, and since Medicaid is the State's second largest expenditure, cost controls are needed.

Effect of Temporary Rate Adjustments

The HSCRC approved a temporary advanced payment in rates of $75 million to Johns Hopkins during the first six months of calendar year (CY) 2018. The $75 million will be repaid via rate reductions over the course of three years. Unscheduled advanced hospital payments of this magnitude have a significant

impact on the Medicaid budget and are contrary to the goals of requiring the hospitals to operate under the global budget revenue (GBR) system.

Placeholder for Unknown Adjustments

Lastly, the FY 2018 Update Factor includes a placeholder for unknown adjustments. The amount allocated—0.4 percent—is larger than other line items of significance, including drug cost inflation (0.28 percent) and the demographic adjustment (0.36 percent). Unless additional detail is provided to justify its inclusion, the Medicaid program contends that this item is unnecessary.

Both departments understand the value of the global budget revenue (GBR) approach to hospital financing, which constitutes a powerful tool for transforming health care from volume to value-based reimbursement and investing in improvements to support that transformation. We look forward to working with the HSCRC and other stakeholders as the Update Factor is finalized for FY 2018. If you have any questions, please contact Tricia Roddy, Director for the Medicaid Office of Planning at tricia.roddy@maryland.gov or Jennifer McIlvaine, Supervising Budget Analyst at DBM at jennifer.mcilvaine@maryland.gov.

Sincerely,

Shannon M. McMahon
Deputy Secretary, Health Care Financing
Department of Health and Mental Hygiene

Marc Nicole
Deputy Secretary
Department of Budget and Management

MedChi
The Maryland State Medical Society

Your Advocate.
Your Resource.
Your Profession.

June 5, 2017

The Honorable Nelson Sabatini, Chair
Health Services Cost Review Commission
4160 Patterson Avenue
Baltimore, MD 21215
Sent via Email to Donna.Kinzer@maryland.gov

Re: FY2018 Hospital Update Factor

Dear Chairman Sabatini:

MedChi, The Maryland State Medical Society, on behalf of Maryland physicians, is writing to support the HSCRC Staff recommendation update of 3.12% in total revenues for FY2018. An update of 3.12% would cover any inflationary expenses of hospitals and ensure that employed physicians continue to be appropriately compensated for their services.

Furthermore, MedChi suggests that an increase beyond the recommended 3.12% be made available to hospitals that participate in care redesign / gainsharing programs with physicians. Starting this year, physicians must report data to the Centers for Medicare and Medicaid Services (CMS), which will reward or penalize physicians financially, based on the submitted data. Physicians can receive a separate reward for participating in an advanced alternative payment model (APM.) However, Maryland physicians are at a disadvantage because some payment models cannot be implemented in Maryland due to Maryland's unique All-Payer Model. CMS has corrected for this problem by allowing the creation of two new care redesign programs that are APM programs.

Unfortunately, the uptake on the two new programs to date has been slow. We would recommend allowing additional funds to participating hospitals as an incentive on top of the update. While MedChi supports the two care redesign programs (Internal Cost Savings and Pay-for-Outcomes) that are already developed, MedChi believes that an additional increase for participating hospitals would help further (1) align hospitals with non-employed physicians and community providers; and (2) assist hospitals in meeting the objectives and global budget set in the All-Payer Model.

Please let me know if I can provide any more insight on this matter.

Thank you.

Sincerely,

Gene M. Ransom, III
Chief Executive Officer

1211 Cathedral Street • Baltimore, MD 21201-5516 • 410.539.0872 • Fax: 410.547.0915 • 1.800.492.1056 • www.medchi.org

Nurse Support Program I (NSP I)
Outcomes Evaluation FY 2013 – FY 2016 and Draft Recommendations for Future Funding

June 14, 2017

Health Services Cost Review Commission

4160 Patterson Avenue
Baltimore, Maryland 21215
(410) 764-2605
FAX: (410) 358-6217

This is a draft recommendation for Commission consideration at the June 14, 2017, Public Commission meeting. Please submit comments on this draft to the Commission by Thursday, July 5, 2017, via hard copy mail or email to Oscar.Ibarra@maryland.gov.

TABLE OF CONTENTS

FIGURES

LIST OF ABBREVIATIONS

AD	Associates Degree in Nursing
BSN	Baccalaureate Degree in Nursing
EBP	Evidence-Based Practice
FTE	Fulltime Equivalent Employee
FY	Fiscal Year
GBR	Global Budget Revenue
HSCRC	Health Services Cost Review Commission
HRSA	Health Resources and Services Administration
IOM	Institute of Medicine
LPN	Licensed Practical Nurse
MS/MSN	Master's Degree/Master's in Nursing Degree
NESP	Nurse Education Support Program
NRP	Nurse Residency Program
NSP I	Nurse Support Program I
QI	Quality Improvement
RN	Registered Nurse

EXECUTIVE SUMMARY

Nurse Support Program I (NSP I) Outcomes Evaluation FY 2013 to FY 2016 and Recommendations for Future Funding

Transforming nursing, the single largest sector of the health care professions (more than 3 million registered nurses nationally and 70,000 in the state of Maryland[1]), will dramatically impact the health care system in Maryland and nationally. Early on, the Maryland Health Services Cost Review Commission (HSCRC) recognized the importance of nursing to the health of the State. To that end, the HSCRC implemented the first phase of the Nurse Support Program I (NSP I) in June 2001 to address the short- and long-term issues of recruiting and retaining nurses in Maryland hospitals. Since program implementation, approximately $131 million (fiscal year [FY] 2001 through FY 2016) has been funded in rates to support the NSP I.

In 2012, the NSP I program aims were aligned with the Institute of Medicine's (IOM's)[2] recommendations in its Future of Nursing report and included the following:

1. *Education and career advancement*. This area includes initiatives that increase the number of advance degree nurses preparing them as future leaders; recruitment and retention of newly licensed nurses through nursing residency programs; and supporting nursing students and experienced RNs re-entering the workforce after an extended leave.
2. *Patient quality and satisfaction*. This area includes lifelong learning initiatives such as certification and continuing education which are linked to improved nursing competency and better patient outcomes.
3. *Advancing the practice of nursing*. This area includes activities that advance the practice of nursing, such as nurse-driven evidenced-based research; innovative organizational structures for clinical nurses to have a voice in determining nursing practice, standards, and quality of care; and American Nurses Credentialing Center's Magnet® and Pathway to Excellence programs demonstrating nursing excellence.

With these recommendations, came the development of nursing and organizational metrics to assess hospitals progress in achieving these program aims. This report contains analysis of outcome data for FYs 2013 to 2016 using the revised organizational metrics and a new secure, web-based data collection tool. Program achievements and areas for continued monitoring and improvement are highlighted below.

---

[1] The Henry J. Kaiser Family Foundation. *Total Number Of Professionally Active Nurse.* Published April 2017. *http://kff.org/other/state-indicator/total-registered-nurses/?currentTimeframe* Accessed May 7, 2017.
[2] IOM (Institute of Medicine). *The Future Of Nursing: Leading Change, Advancing Health.* Washington, DC: The National Academies Press; 2010.

NSP I Achievements in FYS 2013 to 2016

- More than 5,800 newly licensed RNs participated in nurse residency programs supported by NSP I. Voluntary turnover rates were reduced upwards of 10 percentage points, resulting in cost savings of $17.6 million.
- Reduced turnover rates by 12 percentage points among RNs participating in orientation programs for hard-to-fill positions such as the emergency department.
- More than 500 RNs graduated with advanced nursing degrees, increasing the pool of BSN, masters and doctoral prepared RNs.
- Financial support for nursing students increased by almost fourfold. Almost 300 new RNs were added to the workforce and student nurse attrition was reduced by six (6) percentage points over the four years.
- Increased professional and technical certification by more than eight (8) to upwards of 19 percentage points over the four years. Additionally, almost 4,000 RNs obtained initial technical or recertification in FYs 2015 & 2016.
- Nine hospitals attained or maintained Magnet® or Pathway to Excellence designation. Another 17 hospitals reported pursuing nursing excellence designation.
- Reduced vacancy rates by four (4) percentage points over the four years.
- Increased new hire RN retention rates by 10 percentage points from 76 percent in FYs 2013 & 2014 to more than 86 percent in FYs 2015 & 2016.
- Cost savings of more than $23 million in agency RN usage, reduced full-time equivalents (FTEs) from 1,004 to 854 RN agency between FY 2015 and 2016.

Areas for Continued Monitoring and Improvement

- Improve hospital reporting of individual NSP I program expenditures, and increase reliability and accuracy of hospital outcome data.
- Monitor orientation programs turnover data of newly licensed and experienced registered nurses working in areas of critical need (such as emergency departments, critical care, women and infants, and perioperative care).
- Determine the demand in Maryland for nursing transition (refresher) programs that enables registered nurses to re-enter the profession.
- Monitor trends in nurse recruitment and retention rates, as well as, agency nurse usage.

Future Recommendations

- Align NSP with future hospital-based RN workforce requirements by broadening the NSP goal from recruiting and retaining hospital bedside RNs to recruiting and retaining hospital-based RNs.
- Redefine categories eligible for funding, such as transition into practice for new licensed RNs and into specialty practice for experienced RNs, nursing student programs, and the addition of a new program aim focused on developing nursing leaders.
- Explicitly define categories of initiatives that are not eligible for funding.
- Establish NSP I Advisory Board to make recommendations, monitor hospital programs, and their associated outcomes.
- Revise budget forms to align with the outcomes data collection tool.
- Develop and implement a data reporting and analytic system that will allow quarterly or semi-annual submission of data to improve accuracy and ease of analysis.

EXECUTIVE BRIEF

Nurse Support Program I (NSP I) Outcomes Evaluation FY 2013 to FY 2016 and Recommendations for Future Funding

Introduction

This report summarizes the Nurse Support Program I (NSP I) hospital activities and outcomes for fiscal years (FYs) 2013 to 2016 and presents recommendations for the next phase of the NSP I for FYs 2018 through 2022.

Background

The Maryland Health Services Cost Review Commission (HSCRC) instituted a nursing education support program in response to forecasts of significant short and long-term shortages of registered nurses (RNs) in the state of Maryland and nationally. To abate these severe and cyclical nursing shortages in 1986, the HSCRC implemented the Nurse Education Support Program (NESP), which focused on supporting college and hospital-based training of RNs and licensed practical nurses (LPNs).

After consecutive years of economic growth in the national economy in the late 1990s and early 2000s, new forecasts of nursing shortages again spurred the HSCRC into action, and NSP I was implemented. The intent of this five-year, non-competitive grant program was to increase the number of bedside hospital nurses through retention and recruitment activities. Annually, hospitals have been eligible to receive the lesser of their budget request or up to 0.1 percent of the hospital's gross patient revenue. The grant funds were provided through hospital rate adjustments and were used for approved projects that meet the goals of the NSP I. Since its inception in 2001, hospitals have taken significant action to successfully grow and sustain the state's hospital RN workforce.

To that end, NSP I has been renewed twice since 2001, at approximately five-year intervals, to ensure the continuation of hospital initiatives to grow the nursing workforce and advance the profession. As the NSP I approached its second renewal in 2013, HSCRC staff conducted an in-depth program evaluation with its stakeholders. Findings demonstrated that the Maryland hospital RN workforce grew significantly between FY 2007 and 2011, between 15 percent to more than 25 percent (as reported by 11 hospitals). Although difficult to measure the direct impact of NSP I funds, nurse leaders attributed much of the growth and retention of bedside hospital RNs to the NSP I.

As the economy improved following the economic downturn in 2008, impending shortages were projected despite the increases in supply that strengthened and stabilized the RN workforce. The growing number of health care consumers—many with chronic diseases—coupled with the aging of the population, has contributed to an ever-increasing demand for health care services. The Health Resources and Services Administration (HRSA) predicted that Maryland would be one of 16 states to experience a nursing shortage, while the nation as a whole would have a mild

surplus[3]. Based on the successes the program achieved in increasing the nurse workforce, coupled with the impending trends, the HSCRC supported the renewal of the NSP I for an additional five years from FY 2013 to FY 2018. Similar to its previous renewal, significant changes were made to the program based on an environmental scan of the healthcare landscape.

Unprecedented changes like the Affordable Care Act, the Quadruple Aim[4], and the Institute of Medicine's (IOM's) Future of Nursing Report[5] reshaped the health care landscape. With the changes in payment models, health care access, along with emphasis on better quality, safety, and patient experience came the recognition that the role of professional nurses also must change.

Accordingly, the NSP I aims were aligned with the IOM Future of Nursing report, which included recommendations to better prepare the future hospital RN workforce in Maryland. Below are the recommended NSP I categories and hospital initiatives to achieve the eight (8) IOM key recommendations for transforming the nursing workforce.

Education and career advancement. This area includes initiatives that support newly licensed or experienced RNs as they transition into practice or to new practice environments (i.e., nursing residency programs) and increase the number of new and advanced degree nurses (tuition assistance). Examples of initiatives include:

- Nurse residency program
- Orientation for critical need areas (i.e., emergency department)
- Transitional (nurse refresher) program
- RN tuition assistance
- Nursing student tuition assistance

Patient quality and satisfaction. This area includes efforts that can demonstrate the link between improved nursing competency and better patient outcomes (certification). It also includes activities that develop nurses as lifelong learners and prepares them as leaders (continuing education). Examples include:

---

[3] U.S. Department of Health and Human Services, Health Resources and Services Administration, *National Center for Health Workforce Analysis. The Future of the Nursing Workforce: National- and State-Level Projections, 2012-2025.* Rockville, Maryland, 2014.
http://bhw.hrsa.gov/healthworkforce/supplydemand/nursing/workforceprojections/nursingproject ions.pdf May 26, 2017

[4] The Quadruple Aim includes the original Triple Aim components (enhancing patient experience, improving population health and reducing costs) and adding the goal of improving the work life of health providers, including clinicians and staff .
Bodenheimer, T. & Sinsky, C. From Triple To Quadruple Aim: Care Of The Patient Requires Care Of The Provider. *Annals of Family Medicine.* 2014; 12(6): 573-576.

[5] IOM (Institute of Medicine). *The Future Of Nursing: Leading Change, Advancing Health*. Washington, DC: The National Academies Press; 2010.

- RN professional certification
- RN technical certification
- RN continuing education

Advancing the practice of nursing. This area includes activities that advance the practice of nursing; provide clinical nurses with a voice in determining nursing practice, standards, and quality of care; and participation in national programs demonstrating nursing excellence. Examples of these activities include:

- Nursing excellence (Magnet® or Pathway to Excellence® designation)
- Shared governance model
- Evidence-based practice, quality improvement, and/or research projects

The HSCRC, with stakeholder input, developednursing and organizational metrics to assess hospitals' progress in achieving the program aims. This report shares the most recent outcome data collected from hospitals participating in the NSP I from FY 2013 through FY 2016. This report discusses the continued growth of nurses as health care professionals and their impact on the health care delivery system in Maryland, as well as areas of continued improvement needed in optimizing the use of NSP I funds.

Data Collection Process

In 2013, nurse and hospital leaders with HSCRC staff revised the annual report to include standardized outcome metrics that addressed the varied programs for each of the three newly proposed program aims. For consistency, outcome metrics were operationalized using nationally accepted definitions. Unlike previous reports, the newly revised report also contained a financial section requesting hospitals to report actual expenditures (administrative and project costs) for each of the programs supported by the NSP I. A secure, web-based data collection tool was used for ease of data entry and accuracy

. The revised annual report consists of three sections: an end-of-year financial report, hospital program outcome metrics, and overall hospital metrics, such as vacancy and turnover data. In Section I, NSP I coordinators report their hospital's actual expenditures, including administrative and project costs. Additionally, respondents report individual program expenditures for each of the program supported by the NSP I. In Section II, hospitals report outcome metrics for each program. For example, if the hospital invests NSP I funds in a nurse residency program, professional RN certification, tuition assistance, and Magnet® activities, the hospital must report outcome metrics associated with each of those programs. Section III collects standardized metrics about RN recruitment, retention, and vacancy rates, as well as hospital use of agency RNs. HSCRC require hospitals to complete the online annual report and submit actual expenditures for each fiscal year.

In 2015, the data collection tool was revised due to numerous reporting errors in the two previous fiscal years. Changes included streamling questions, clarifying written instructions, and

providing an operational definition reference guide. Further, an educational webinar for NSP coordinators was provided to improve data entry and reporting accuracy.

Hospital Reporting

In 2013, 47 of the 50 (94 percent),eligible Maryland hospitals submitted the required data collection tool and end-of-year expense report Many of the submitted reports contained large amounts of missing data. Of the 47 hospitals that submitted reports, only 45 were included in the final analysis due to incomplete data entry. In 2014, 46 hospitals (96 percent) out of the 50 eligible hospitals submitted reports. Again, one survey was excluded from the final analysis due to incomplete data entry. For FYs 2015 and 2016 all of the eligible hospitals (48 due to hospital mergers) submitted completed reports.

Programs Supported Through the NSP I

More than $67 million of NSP I funds were invested in RNs at participating hospitals between FYs 2013 and 2016. A comparison of actual project, administrative, and total expenditures for the four years revealed that administrative expenses increased from 50 percent of total expenses in FYs 2013 and 2014 to 57 percent in FYs 2015 and 2016. During the fouryears, hospitals most frequently spent funds on programs supporting Education and Career Advancement (Figure 1). An analysis of spending by individual programs found more than 40 percent of NSP I funds were invested in nurse residency and orientation programs (Figure 2). With the advent of the Global Budget Revenue (GBR) payment methodology, funding by hospitals for quality improvement, evidence-based practice, and research programs substantially increased from four (4) percent of total expended dollars in the previous years to more than 13 percent in FYs 2015 and 2016. Correspondingly, the amounts allocated to nursing excellence programs decreased. Although the percentage of total funds for tuition assistance declined in the last two years, amount of tuition assistance supporting nursing students doubled from less than $500,000 in FY 2015 to almost one million in FY 2016. The increased interest by hospitals for nursing students may suggest concerns to older RNs leaving the workforce for a potential RN nursing workforce shortage in Maryland.

When comparing reported program expenditures (i.e., the sum of individual program expenses) with the reported total expenditures in FYs 2013 and 2014, staff found an unexplained variance of 30 percent. NSP I coordinators attributed the variance to misunderstanding the question, lack of knowledge of NSP I expenditures, inadquate assistance from financial officers, and not reporting funds for programs that appeared not to fit into one of the listed categories.

To improve reporting of program expenses in FY 2015, an explaination of funding for the “Other” category was required. Additionally, extensive education was provided to NSP I coordinators to improve the reporting of end-of-the-year expenses. Although expense reporting substantially improved and no unexplained variances were found, the amount of expenses reported in the “Other” category was still concerning. More than 20 hospitals cited the use of funds for programs outside the recommended categories, accounting for more than 13 percent of NSP I exspenditures.

Figure 1: Percent of NSP I Funds Invested in Future of Nursing Program Aims, FYs 2013 - 2016

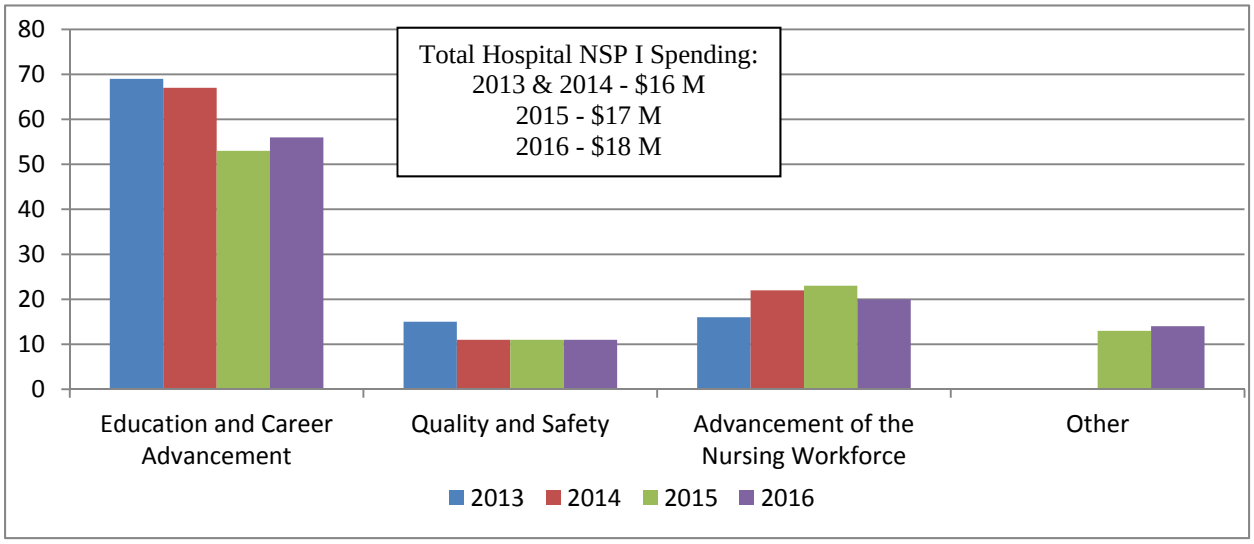
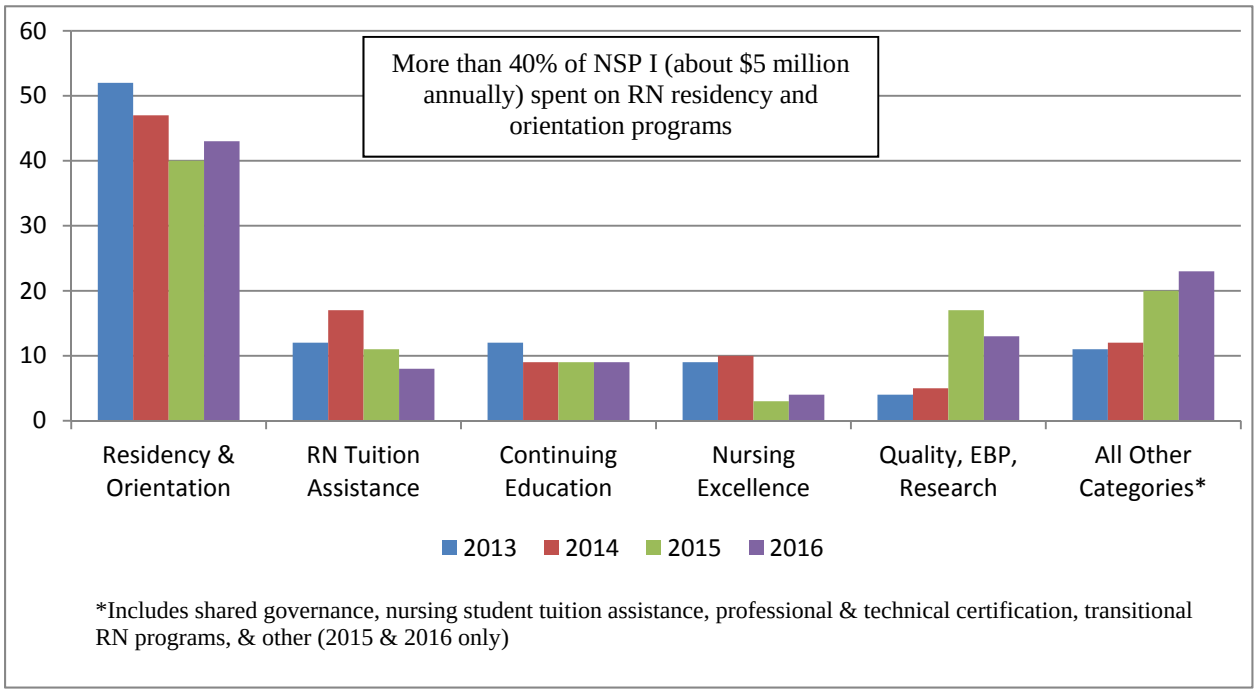


Figure 2: NSP I Top Funding Categories, FYs 2013 - 2016



*Includes shared governance, nursing student tuition assistance, professional & technical certification, transitional RN programs, & other (2015 & 2016 only)

Impact of the GBR on Hospital Nursing Workforce

In the FY 2015 and 2016 reports, NSP I Coordinators were asked about the impact of the GBR that was instituted with most Maryland hospitals by June 2014 and the responses varied widely. Several hospitals indicated that the impact had been positive, for instance, providing opportunities for investments in training for nurses in care management and transition strategies; and incorporating patient educators and quality advisors as resources to the nursing staff. One hospital has used the shared governance model to engage the nursing staff in budget stewardship, utilization of supplies, and development of creative quality improvements at the bedside; thereby decreasing costs and improving population health demands. Another hospital had implemented innovative staffing models to address declines in inpatient admissions, such as crossing training for nurses in ICU, step-down and Telemedicine units and staggering shifts.

However, not all the feedback was positive. Many coordinators sited the GBR as the reason for turnover among experienced nurses due to stagnant wages that are not competitive with non-hospital facilities and the increased workload of monitoring quality measures. The increase in the acuity of the patients, coupled with the shrinking inpatient nursing staff, has put a significant burden on the remaining nurses, decreasing overall job satisfaction. Several responses indicated challenges in recruitment and retention of nursing staff. There is an increased focus on efficient spending, and nursing leaders have to be fiscally responsible with resources, at the expense of investing in their nursing workforce. Several coordinators reported declines in opportunities for nurses to engage in non-patient care activities such as research, safety and evidence-based practice (EBP) because of budgetary constraints.

These responses highlight the need for continued funding of the NSP I, which provides an additional resource for investing in the nurse workforce. One coordinator responded, “If it <wasn't> for the NSP grant, many of our programs would have been discontinued.” As described in the following section, NSP I funds has allowed hospitals to invest in residency and other programs that has attracted highly motivated, and educated nurses to Maryland hospitals.

Summary of NSP I Achievements

The goal of NSP I is to increase the number of bedside nurses in Maryland through retention and recruitment activities. As described in previous renewal reports, Maryland hospitals continue to meet and exceed the goals of NSP. Hospitals attribute NSP I to its successes in retaining newly licensed RNs, advancing nursing education and certification, improving use of evidence-based practices, attaining recognition for nursing excellence, and improving RN retention. As written by one hospital, “The NSP program allows our hospital to provide the nurse residency program, continuing education for our nurses and assistance in preparing for the pediatric certification exam. Without funding, our small education department would be overwhelmed trying to meet the needs of the nursing department.”

Increasing Bedside Nurses through RN Transition into Practice Programs

The concept of nurse residency programs emerged to prevent newly licensed RNs from leaving their employer or the profession entirely. Nurse residency programs improve the organization, management, communication, and clinical skills, as well as retention of newly licensed RNs, and reduce hospital costs associated with attrition[6]. Unlike other professions in medicine, transition programs (referred to as residencies) have not been mandated by the nursing profession to integrate new graduates into the workplace. Maryland is recognized nationally as a leader in the nurse residency program; having one of the only statewide collaborative models with more than 20 participating hospitals and financial support through the NSP I.

Approximately half of the responding hospitals invested NSP I funds into nurse residency programs (NRP) over the four years. Hospitals were able to fund program coordinators and instructors; nurse residents' or other staff salaries that facilitate resident attendance; and program expenses such as educational materials. More than 3,800 newly licensed RNs participated in nurse residency programs supported by NSP I. Voluntary turnover rates were reduced upwards of 10 percentage points in hospitals offering an NRP, compared to hospitals not offering NRPs (Figure 3). Cost savings due to decreased attrition (cost to recruit and retain a replacement RN) is estimated at $88,000 per RN[7]. A 10 percent (200 RNs) reduction in turnover rates equates to an annual statewide cost saving of $17.6 million by hospitals investing in residency programs. This program alone demonstrates the far-reaching impact NSP I has had on bedside hospital nurse retention.

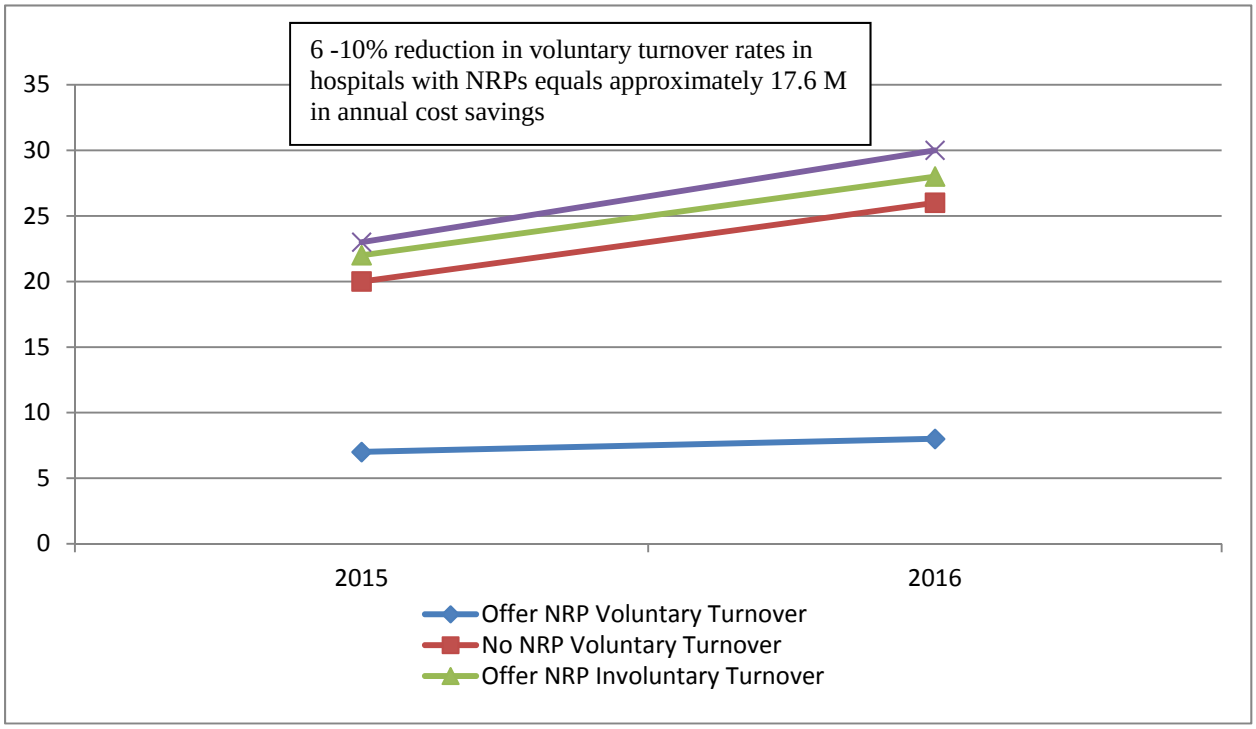
Comparing hospital hiring practices for baccalaureate-prepared (BSN) and associates degree (AD) RNs, hospitals offering one-year nurse residency programs preferred hiring BSN nurses. In fact, BSNs were almost twice as likely to be hired compared to their AD counterparts, whereas, hospitals with no residency program are more likely to hire AD RNs. The hospitals offering no residency program are also more likely to be smaller and more rural.

---

[6] National Academies of Sciences, Engineering and Medicine. *Assessing Progress on the Institute of Medicine Report The Future of Nursing*. Washington, DC: The National Academies Press; 2015. http://www.nationalacademies.org/hmd/Reports/2015/Assessing-Progress-on-the-IOM-Report-The-Future-of-Nursing.aspx. Accessed May 26, 2017.

[7] Trepanier. S., Early, S., Ulrich, B., & Cherry, B. New Graduate Nurse Residency Program: A Cost Benefit Analysis Based on Turnover and Contract Labor Usage. *Nurs Econ*. 2012; 30(4), 207-14.

Figure 3: Comparison of 1-Year Nurse Residency and No Nurse Residency Program Voluntary Turnover Rates, FY 2015 vs 2016



Decreasing Turnover Rates for Hard-to-Fill Critical Need Positions

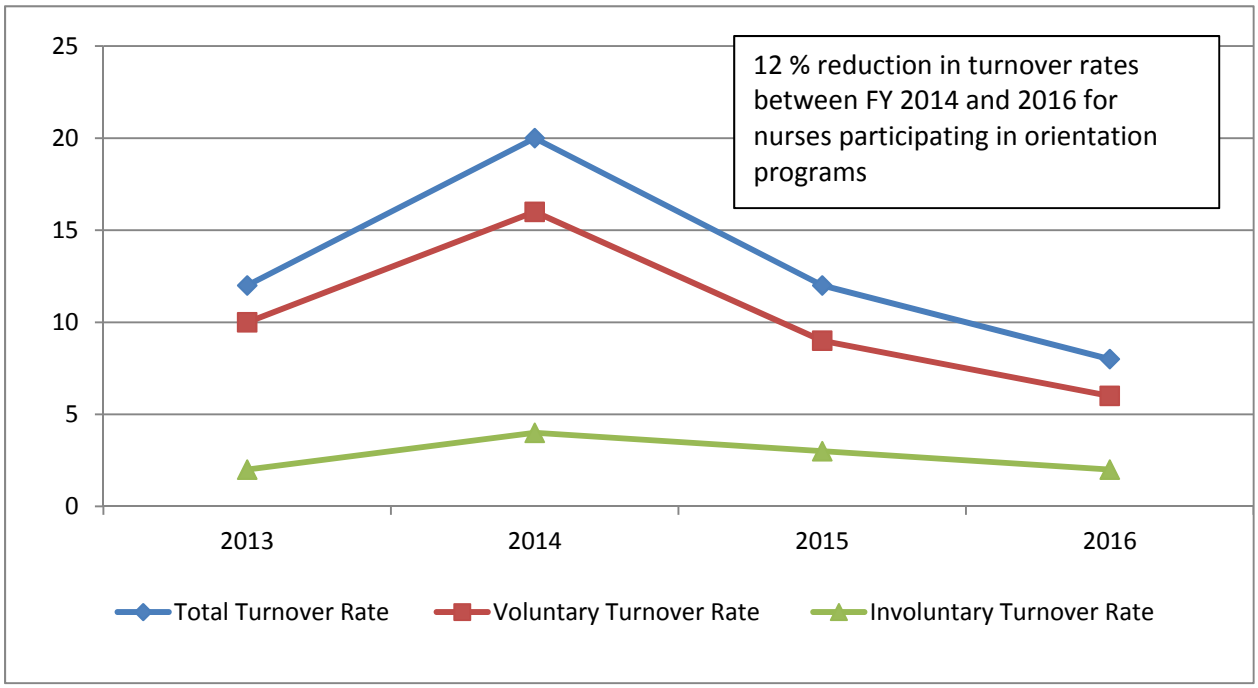
Nationally, nurse leaders are struggling with transitioning newly licensed RNs and experienced RNs to hard-to-fill specialty clinical roles and critical leadership roles. Areas of greatest need for RNs in Maryland are the Emergency Department, adult critical care/intermediate care, perioperative, women and infant health, and medical-surgical specialties. Maryland hospital workforce data, collected from hospital Chief Nursing Officers, also identified nurse manager, director, and nursing professional development practitioner (hospital-based nurse educator) as difficult roles to fill[8]. Furthermore, respondents cited a need for experienced clinical bedside nurses.

Over the four years, about half of the hospitals reported using NSP I funds to support the implementation of orientation programs for hard-to-fill positions. But unlike nurse residency programs, poorly reported outcome metrics associated with the orientation programs make it difficult to examine the impact of these funds. As discussed in the HSCRC NSP I interim

[8] Daw, P. & Warren, J. I. *Transforming the Future Nursing Workforce: Innovative Statewide Opportunities.* Podium presentation at the Maryland Nurses Association 113th Annual Convention "Every Nurse A Leader" Conference Center At The Maritime Institute Linthicum Heights, MD October 13-14, 2016

outcome evaluation report[9] that was presented to the Commission in February, a 25 percentage points increase in turnover rates were reported for nurses participating in orientation programs between FYs 2013 and 2014. Further analysis and discussions with NSP I coordinators indicate the turnover data may have been overstated. For the final analysis, inaccurate data were removed and the turnover rates declined from a high of 20 percent in 2014 to 8 percent in 2016 (Figure 4). Despite the issues with the data, this downward trend suggests orientation programs are positively impacting hard-to-fill RN turnover rates.

Figure 4: Orientation Program Turnover Rates



Preparing a Highly Educated RN Workforce

Demands for new and expanded RN roles to provide care across the health care continuum, as well as, shortages of RNs as primary care providers, faculty, and researchers has made it imperative for RNs to achieve higher levels of education. Strong research evidence has linked lower mortality rates, fewer medication errors, and positive outcomes to nurses prepared at the baccalaureate and graduate degree levels[10]. Quality patient care hinges on a well-educated,

[9] Health Services Cost Review Commission. *Nurse Support Program I Outcomes Evaluation FY 2013-2014 and Recommendations for the Future, February 8 2017*; http://www.Hscrc.State.Md.Us/Documents/Commission-Meeting/2017/02/HSCRC-Public-CM-Pre-Meeting-Packet-2017-02-02.Pdf. 2017. Web. Apr. 30 2017.
[10] American Association of Colleges of Nurses. *Creating a More Highly Qualified Nursing Workforce.* http://www.aacn.nche.edu/media-relations/fact-sheets/nursing-workforce. 26 May 2017.

highly functioning, motivated nursing workforce. The IOM Future of Nursing report called for 80 percent of RNs to hold a BSN degree by 2020 and a doubling of doctoral-prepared RNs.[11]

Through NSP I, the pool of BSN, master's degree and doctoral RNs in Maryland hospitals has substantially increased over the past 10 years of reporting. Between FYs 2007 and 2012, about 25 hospitals invested $8.5 million in tuition assistance supporting approximately 800 RNs. Similarly, between FY 2013 and 2016 18 to 22 hospitals invested more than $6.7 million in tuition assistance, allowing 2,300 RNs to obtain financial assistance towards advanced nursing degrees. Of those nurses receiving assistance in the last four years, approximately 522 graduated from nursing programs (74 percent with BSNs and 22 percent with MS/MSNs). Additionally, two RNs graduated with doctoral degrees in nursing. Furthermore, the student attrition rate held steady between 2 and 4 percent during this period.

These successes may be partially attributed to the synergistic effects of the NSP I and II programs. NSP II grants have funded programs for RNs to easily transition into BSN, MS/MSN, and doctoral programs. Once NSP II program that is helping to facilitate this movement is newly-funded Associate-to-Bachelor's nursing programs that facilitate duel enrollment in an AD nursing program at a community college and the BSN degree a partner nursing school. Another NSP II program uses shared resources among hospital and schools of nursing to increase the pool of nurse clinical instructors, while advancing the numbers of masters-prepared RNs in the hospitals. The program, initially funded in FY 2006, has grown from the 2 hospitals to 18 hospitals participating in FY 2016.

Increasing the Nursing Pipeline

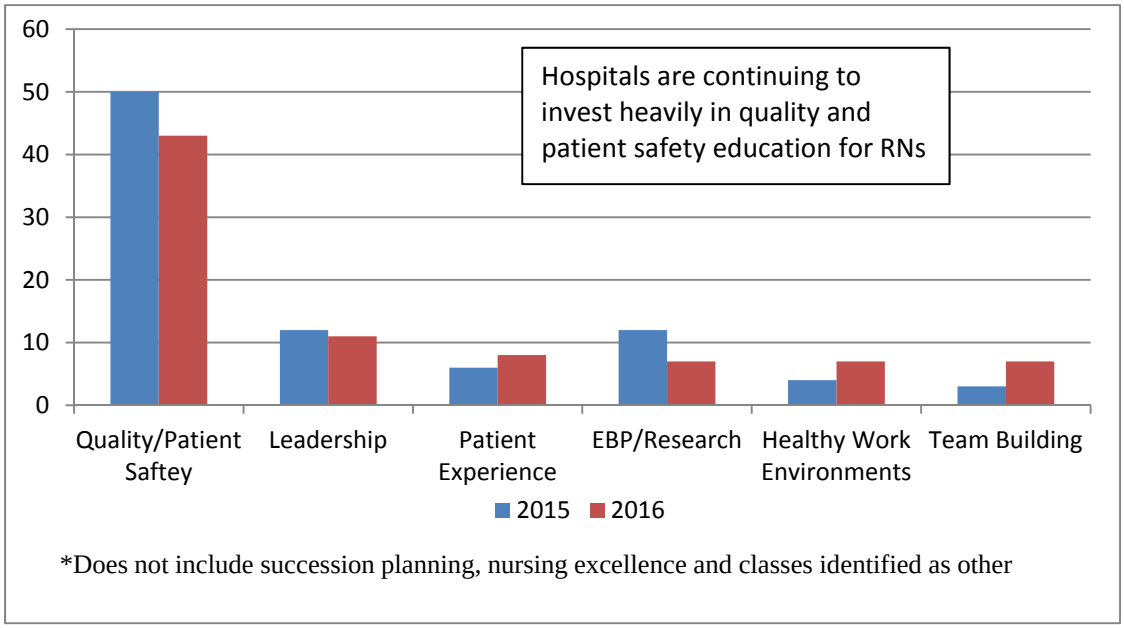
Between FYs 2013 and 2016, financial support for nursing students by hospitals increased almost fourfold and added 282 new RNs to the workforce. Anecdotally, hospitals reported using NSP I funds beyond the traditional tuition assistance. Hospitals paid wages for student time while attending classes, stipends for incidentals such as textbooks and fees, and supported hospital-based externship and internship programs. More than half (282) of the approximately 524 nursing students funded through NSP I graduated from their basic licensure programs. Of those graduating, approximately 59 completed associate degree programs, 185 completed baccalaureate degree programs and 36 completed generic master's degree programs[12] Student attrition rates fell by 6 percentage points, from 7 percent to less than 1 percent over the four years. Hiring practices remained constant or slightly increased suggesting hospitals are hiring more new graduates to fill positions being vacated by older counterparts as they start to exit the workforce with the improving economy.

[11] IOM (Institute of Medicine). Future directions of credentialing research in nursing: Workshop summary. Washington, DC: The National Academies Press, 2015.
[12] Data by degree type was not reported for all new nursing graduates by hospitals,

Advancing Lifelong Learning through RN Certification and Continuing Education

As described in the previous 5-year renewal report, Maryland hospitals continue to encourage RNs to obtain specialty and technical certification and participate in continuing education classes. Certified nurses can positively impact their workplace, peers, and patients[13]. Hospitals employing certified wound care nurses were found to have better RN pressure ulcer assessment and prevention practices and lower rates of pressure ulcers[14]. Approximately 2,800 RNs completed certifications between FYs 2007 and 2012. Hospitals reported increases upwards of 19 percentage points for the most recent four years. In addition, almost 4,000 RNs obtained initial technical or recertification in FY 2015 & 2016. RNs obtained certification in multiple specialty nursing areas; ranging from medical-surgical to women's health, wound care, and nurse executive certifications.

Figure 5: NSP I Top Internal & External Continuing Education Categories



*Does not include succession planning, nursing excellence and classes identified as other

Provision of ongoing continuing education is another method to foster lifelong learning. Almost half of the hospitals over the course of the four years reported the use of NSP I to support continuing education programs for RNs. More than 9,000 RNs attended educational programs focused on topics associated with goals of the quadruple aim (better quality, better health, lower

[13] IOM (Institute of Medicine). *Future Directions Of Credentialing Research In Nursing: Workshop Summary*. Washington, DC: The National Academies Press, 2015.
[14] Boyle, D. K., Bergquist-Beringer, S. & Cramer, E. Relationship of Wound, Ostomy, and Continence Certified Nurses and Healthcare-Acquired Conditions in Acute Care Hospitals. *J Wound Ostomy Continence Nurs.* 2017; 44(3):283-292. DOI: 10.1097/WON.0000000000000327

cost, and healthier workforce). Quality and patient safety classes comprised more than 50 percent of the educational offerings (Figure 5).

Advancing the Practice of Nursing

Eight (8) hospitals in Maryland have successfully achieved Magnet® and one has achieved Pathway to Excellence® designation with funding from the NSP I. Of those hospitals, six were re-designated as Magnet® hospitals in FY 2013 and 2014 and one in 2016. Seventeen hospitals are pursuing either Magnet® or Pathway to Excellence® designation, up from 13 in 2014. Magnet designated hospitals with the initial and re-designation dates are listed below.

- Anne Arundel Medical Center (2014)
- Mercy Medical Center (2011, 2016)
- Sinai Hospital of Baltimore (2008; 2013)
- MedStar Franklin Square Medical Center (2008; 2013)
- Johns Hopkins Hospital (2003; 2008; 2013)
- University of Maryland Medical Center (2009; 2014)
- UM Shore Medical Center at Easton (2009; 2014)
- UM Shore Medical Center at Dorchester (2009; 2014)

Pathway to Excellence

- Union Hospital of Cecil County (2016)

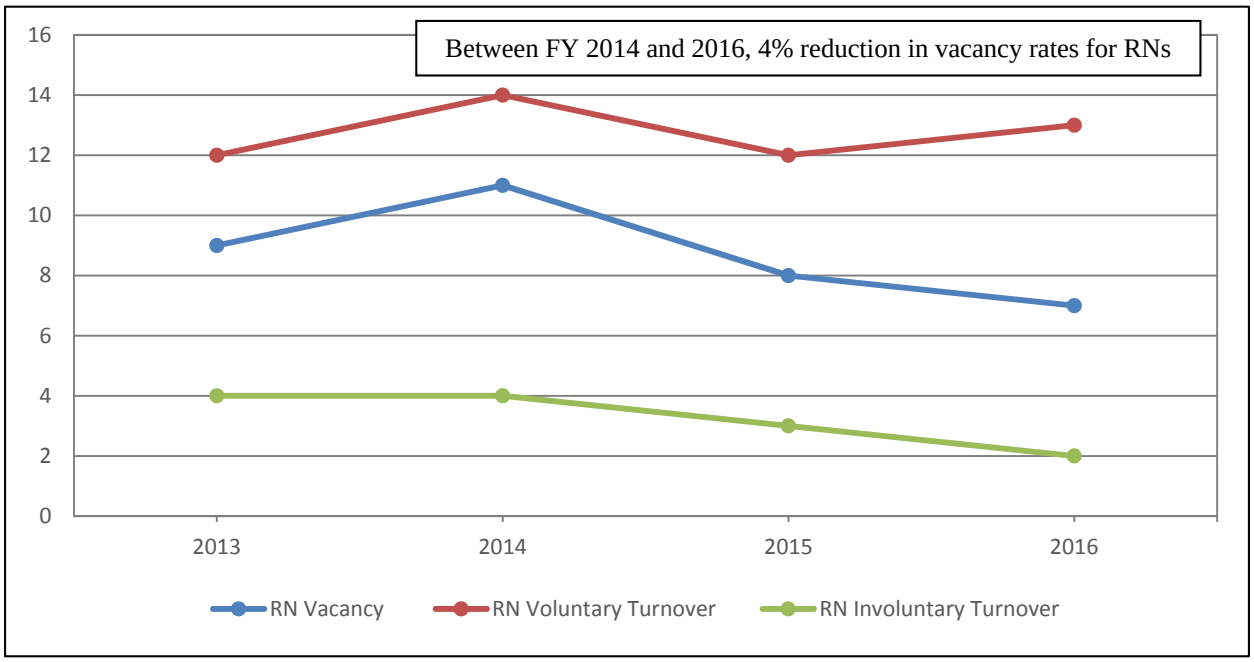
Advancing Nursing Science

The NSP I supports research studies, evidence-based practice (EBP), or quality improvement (QI) projects to build the science of nursing and improve patient care outcomes. The numbers of hospitals involved in QI, EBP, or research studies grew from five in 2013 to 12 in 2016 and expended funds increased almost seven-fold. Funding supported nurse residents and RN teams in conducting QI/EBP projects, such as early mobilization programs, pressure ulcer reduction, and early warning systems for sepsis. A project conducted by one hospital to improve identification of multiple birth babies was implemented throughout its healthcare system as a best practice.

Improving Hospital Vacancy & Turnover Rates While Reducing RN Agency Costs

Vacancy rates decreased by four percentage points and new hire RN retention rates increased by 10 percentage points between FYs 2013 and 2016 (Figure 6). Correspondingly, hospital use of agency RNs declined by 150 FTEs (FYs 2015 to 2016) equating to a cost savings of more than $23 million.

Figure 6: Hospital Vacancy & Turnover FY 2013-2016



Recommendations for the NSP I for FY 2018 - 2022

The future growth of the national nursing workforce (RNs per capita) is projected to vary significantly; ranging from zero growth in New England to 40 percent growth in the West South and Central Region. Growth forecasts for the Mid-Atlantic Region suggest less than 10 percent growth in RN FTEs and only eight (8) percent growth in RN FTEs per capita. Unlike other fast growing regions in the nation with a projected surplus of nurses, Maryland is projected to be one of the slowest growth regions and projected to have workforce shortfall by 2030[15]. A 5-year continuation of NSP I is recommended to prevent the projected workforce shortage of nurses**.** The HSCRC's investment in nursing practice and education is as timely and relevant today as it was decades ago. Transforming nursing in Maryland will, by virtue of the sheer numbers in hospitals, have far-reaching statewide effects on the quality and safety of the state's hospitals.

To ensure continuous program improvement, the following programmatic changes are recommended.

[15] Aurbach, D. I., Buerhaus, P. I., & Staiger, D. O. How Fast will the Registered Nurse Workforce Grow Through 2030? Projections in Nine Regions of the Country. *Nursing Outlook,* 2017, 65 (1), 116-122. DOI: http://dx.doi.org/10.1016/j.outlook.2016.07.004

Recommendation 1: Broaden the NSP goal to include all hospital-based RNs.

As health care transitions from a focus on episodic, acute care to population health, new health care models and delivery systems are being introduced to provide high-quality, patient-centered care across the care continuum. Global and national trends are calling for nurse leaders to prepare staff for new and expanding roles that come with new competencies for nurses. Initiatives that expand and encourage partnerships between academic and hospital nurse leaders to prepare nurses for present and future roles and produce the nurse with the right skill sets to meet new care delivery models/workforce requirements in Maryland should continue to be promulgated by NSP I and II.

Recommendation 2: Redefine categories for eligible funding.

A well-educated nursing workforce is fundamental to transforming the nursing profession and will address the increasing demand for safe, high-quality, and effective health care services. Bedside RNs are being asked to rapidly transition from a focus on discharge planning to another setting, to providing continuity of care across the health care continuum. With the new health care demands, nurses will have new innovative roles and acquire new skill sets, including the need for strong leadership skills. Future RNs will need to fill a variety of leadership roles from the bedside to the C-suite. It is recommended that a new leadership category is added to the NSP I initiatives and many of the current programs are redefined to keep up with projected health care trends.

Further, the current quality and retention rates of transition to specialty practice programs, such as to the emergency department, are problematic. Continued investment in practice transition programs and recording of outcome metrics are required to determine their effectiveness in retaining RNs.

Finally, new options for hospital-based nursing student programs, such as externships and internships, need to be made available to increase the nursing pipeline. As the economy improves and older RNs exit the workforce, significant geographical shortages of health care providers and nurses are projected. It is also recommended that innovative academic-practice models that maximize the capacity for the preparation of new RNs continue to be funded through NSP I and NSP II.

Recommendation 3: Establish NSP I Advisory Board.

HSCRC staff have continuously improved processes for NSP I. However, greater ownership and oversight is required by hospital leaders to strengthen and improve NSP I. An Advisory Board, consisting of key stakeholders, is recommended to advise HSCRC staff about programmatic improvements, monitor hospital programs for alignment with the NSP I goal, and evaluate outcome metrics and make recommendations.

Recommendation 4: Establish categories of initiatives not eligible for funding.

From this analysis, it is evident many hospitals are not using NSP I funds as intended. Program guidelines to include a comprehensive list of approved programs are recommended, as well as, mandatory hospital education about the NSP program. A formal review process of hospital program applications by an Advisory Board should lessen this issue.

Recommendation 5: Revise forms to align with the data collection tool.

Hospital respondents expressed confusion about the reporting forms which they believed contributed to problems with reporting data accurately. It is recommended that forms be reviewed and revised as needed, guidelines developed, and education provided to hospitals prior to the next funding cycle.

Recommendation 6: Develop and implement a new data reporting and analytic tool.

This analysis identified the need for hospitals to improve the reporting of organizational metrics. HSCRC staff met with NSP I coordinators to discuss issues with reporting and methods to improve their ability to provide reliable and accurate data. Although staff developed a complete instructional guide, added and revised operational definitions, and offered a live educational webinar (which was recorded for later viewing) to NSP I coordinators, issues persisted. New online systems allowing for real-time data entry are recommended to improve accuracy of data.

Draft Recommendations for the Uncompensated Care Policy for Rate Year 2018

June 7, 2017

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

Table of Contents

LIST OF ABBREVIATIONS

ACA	Affordable Care Act
CRISP	Chesapeake Regional Information System for Our Patients
CY	Calendar year
ED	Emergency department
FPL	Federal poverty level
FY	Fiscal year
HSCRC	Health Services Cost Review Commission
MHA	Maryland Hospital Association
MHBE	Maryland Health Benefit Exchange
PAC	Primary Adult Care Program
RY	Rate year
UCC	Uncompensated care

INTRODUCTION

Uncompensated care (UCC) refers to care provided for which compensation is not received. This may include a combination of bad debt and charity care.[1] Since it first began setting rates, the Maryland Health Services Cost Review Commission (HSCRC or Commission) has recognized the cost of UCC within Maryland's unique hospital rate-setting system. As a result, patients who cannot pay for care are still able to access hospital services, and hospitals are credited for a reasonable level of UCC provided to those patients. Under the current HSCRC policy, UCC is funded by a statewide pooling system in which regulated Maryland hospitals draw funds from the pool if they experience a greater-than-average level of UCC and pay into the pool if they experience a less-than-average level of UCC. This ensures that the cost of UCC is shared equally across all of the hospitals within the system.

The HSCRC determines the total amount of UCC that will be placed in hospital rates for each year and the amount of funding that will be made available for the UCC pool. Additionally, the Commission approves the methodology for distributing these funds among hospitals. The purpose of this report is to provide background information on the UCC policy and to make recommendations for the UCC pool and methodology for rate year (RY) 2018. The UCC amount to be built into rates for Maryland hospitals is 4.51 percent for RY 2018.

BACKGROUND

Overview of Maryland's Uncompensated Care Policy

Historical Methodology

Traditionally, the HSCRC prospectively calculated the rate of UCC at each regulated Maryland hospital by combining historical UCC rates with predictions from a regression model.[2] The HSCRC builds a statewide pool into the rate structure for Maryland hospitals, and hospitals either pay into or withdraw from the pool, depending on each hospital's prospectively calculated UCC rate. Each year, the total amount of funds available in the pool is determined by the total percentage of gross patient revenue that was not compensated in regulated Maryland hospitals during the previous year. For example, if the actual total cost of UCC was 6 percent in 2015, then the 2016 pool would be prospectively set at 6 percent of the 2016 gross patient revenue.

Impact of the Affordable Care Ace

A primary goal of the Affordable Care Act (ACA) was to expand coverage to uninsured or underinsured individuals. Under these reforms, Maryland expanded Medicaid coverage to

[1] COMAR 10.37.10.01K
[2] A regression is a general statistical technique for determining how much of a change in an output amount is likely to result from changes in measures of multiple inputs.

individuals with income up to 138 percent of the federal poverty level (FPL). The Medicaid expansion included the extension of full Medicaid benefits to people previously enrolled in the Primary Adult Care (PAC) program. The PAC program offered limited health care coverage to adults aged 19 to 64 years with incomes up to 116 percent of the FPL who were ineligible for Medicaid. PAC covered such services as primary care, family planning, prescriptions, mental health care and addiction services, and outpatient hospital emergency department (ED) services. However, PAC did not reimburse hospitals for inpatient or outpatient care beyond the ED. PAC enrollees were transitioned into full Medicaid benefits—including hospital inpatient and outpatient care - starting January 1, 2014. The Medicaid expansion also included individuals with incomes up to 138 percent of the FPL who were not previously enrolled in PAC. In addition to the ACA Medicaid expansion, many individuals newly purchased health insurance coverage through the Maryland Health Benefit Exchange (MHBE). Counting both individuals who obtained Medicaid coverage and those who selected a private health plan through the MHBE, more than 475,380 Marylanders enrolled in coverage through February 2017. This included about 299,743 new Medicaid enrollees and 157,637 MHBE enrollees. HSCRC staff has focused efforts on how the new categories of Medicaid enrollees covered through the ACA expansion affected UCC. The following sections summarize the UCC updates for each year after the ACA coverage expansions.

Updates for RY 2015

Because of the ACA coverage expansion described above, the HSCRC prospectively reduced UCC for RY 2015 to incorporate expected declines in UCC due to the implementation of the ACA on January 1, 2014. HSCRC staff estimated total unpaid hospital charges for the PAC population in the pre-ACA period by linking HSCRC discharge abstract data (case-mix data) and Medicaid PAC eligibility files using a patient-id matching algorithm available through the Chesapeake Regional Information System for Our Patients (CRISP). Based on the estimates from the analysis of historical hospital data, the HSCRC reduced the statewide UCC pool assessment from 7.23 percent to 6.14 percent to reflect the impact of ACA in the first year.

Hospital-specific adjustments combined the two-year historic trend and regression model and subtracted their estimated write-off amounts for the PAC population. The annual UCC percentage for each hospital was weighted equally (50/50) between the two-year average and the predicted regression value as shown in the formula below.

$$\frac{Average\ Uncompensated\ Care\ Rate\ for\ Past\ 2\ Years + Regression\ Value}{2} - Estimated\ UCC\ \%\ for\ PAC\ Population = Annual\ Uncompensated\ Care\ Percentage$$

Once the annual UCC percentages were calculated for each hospital, they were adjusted so that the pooling system would remain revenue neutral.

In addition to prospective reductions for the PAC population, the HSCRC updated the regression model used to determine the RY 2015 predicted UCC percentage for each hospital based on

analysis of fiscal year (FY) 2013 and FY 2014 data. As in previous years, the primary payer and type of service (inpatient, outpatient, or ED) variables were strong predictors of UCC rates. A new variable was added to the regression model to reflect trends in UCC for undocumented immigrants who lack insurance coverage. Since reliable information is not available through the Census Bureau or other sources, zip codes where Medicaid provided emergency coverage for undocumented immigrants were used as a proxy to measure the influence of this specific population.[3] The final regression model relied upon the following five explanatory variables:

- The proportion of a hospital's total charges from inpatient Medicaid admissions through the ED
- The proportion of a hospital's total charges from inpatient commercial insurance cases
- The proportion of a hospital's total charges from inpatient self-pay and charity cases
- The proportion of a hospital's total charges from outpatient self-pay and charity ED cases
- The proportion of a hospital's total charges from inpatient self-pay and charity admissions through the ED from the 80th percentile of Medicaid undocumented immigrant enrollment zip codes

Three hospitals, Levindale Hospital, the University of Maryland Rehabilitation & Orthopedic Institute (formerly Kernan Hospital), and the Shock Trauma Center were excluded from the regression calculations. The HSCRC set the annual UCC percentages for these hospitals at their actual average UCC percentage for the previous three years.

Updates for RY 2016

Because the ACA coverage expansions occurred during the middle of FY 2014, staff recommended against using FY 2014 data in the RY 2016 update. Only six months of ACA experience were included in FY 2014 data, which was inadequate for assessing the impact of the ACA on UCC. Instead, staff recommended to continue to reduce the UCC rates prospectively by estimated reductions in unpaid hospital charges for the Medicaid expansion population using a similar approach applied for the PAC population in the RY 2015 rates. The prospective adjustment for RY 2015 only included the estimated impact of the PAC program gaining full Medicaid coverage. The adjustment for RY 2016, however, captured the actual calendar year (CY) 2014 impact on UCC from extending Medicaid coverage to the entire expansion population (PAC and non-PAC). The RY 2016 UCC amount was therefore set at 5.35 percent.

Updates for RY 2017

For RY 2017, HSCRC staff re-evaluated the regression model and found that most of the variables were no longer statistically significant, and should not be used to determine the reasonable level of UCC to be built into individual hospital rates. Because there was only one

[3] Maryland Medicaid covers emergency services for undocumented immigrants. …

year of post-ACA data available, there were limitations to using the previous regression models and averaging the historical experience from audited financial reports. The Maryland Hospital Association (MHA) discussed the alternative models and adjustments with the hospitals in various meetings. The MHA recommended a regression model that predicts a patient's chances of having UCC based on their payer type, location of service (inpatient, ED, and other outpatient) and the Area Deprivation Index, and calculated the percentage of UCC based on average UCC amounts by payer and location of service. Based on stakeholder input, the HSCRC decided to continue to do a 50/50 blend of FY 2015 financial audited UCC levels and FY 2016 predicted or estimated UCC levels to determine hospital-specific adjustments. The RY 2017 UCC amount was set at 4.69 percent.

ASSESSMENT

Determining the Appropriate Level of Uncompensated Care Funding in Rates

The HSCRC must determine the percentage of UCC to incorporate in hospitals' rates in order to fund the UCC pool. Based on the most recent audited reports, the statewide UCC rate was 4.51 percent in FY 2016. The rate of Marylanders without health insurance decreased from 10.2 percent in 2013 to 7.9 percent in 2014, according to the statistics published by the U.S. Census Bureau on September 16, 2015.[4] Maryland's uninsured rate continued to decrease to 6 percent as of March 2015, according to a report issued by the Census Bureau and Kaiser Family Foundation.[5] While more people are getting insurance coverage, underinsurance and increases in the purchase of high deductible health plans may be creating upward pressures on UCC. Given these two dynamics, HSCRC staff recommends funding a UCC rate of 4.51percent. This represents the full reported UCC rate for FY 2016.

Updates for RY 2018

The UCC Methodology for RY 2018 is a logistic regression model that predicts a patient's chances of having UCC based on payer type, location of service (inpatient, ED, and other outpatient) and the Area Deprivation Index, and a calculated percentage of UCC based on average UCC amounts by payer and location of service. A 50/50 blend of the most current Fiscal Year's financial audited UCC levels and the current Fiscal Year's predicted or estimated UCC levels is used to determine hospital-specific adjustments.

The only departure from the methodology used in RY 2017 is the substitution of the Maryland Area Deprivation Index for the National Area Deprivation Index, which accounts for census block information for out of state patients who received care at Maryland hospitals.

[4] http://www.marylandhbe.com/fewer-marylanders-without-health-coverage-census-bureau-reports/
[5] http://www.marylandhbe.com/how-are-we-doing-on-health-coverage-maryland/.

RECOMMENDATIONS

Based on the preceding analysis, HSCRC staff recommends the following for RY 2018:

1. Reduce statewide UCC provision in rates from 4.69 % to 4.51 % effective July 1, 2017.

2. Continue to use the regression modeling approach approved by the Commission at the June 2016 meeting.

3. Substitute the Maryland Area Deprivation Index for the National Area Deprivation Index in the regression model

4. Continue to do 50/50 blend of FY16 audited UCC and predicted UCC.

APPENDIX I. HOSPITAL UNCOMPENSATED CARE PROVISION FOR RY 2018

HOSPID	Hospital Name	FY 2018 Projected Regulated Revenue	FY 2016 UCC Based on FY 2018 Projected Regulated Revenue	FY 2016 Percent UCC from the RE Schedule	Percent Predicted UCC (Adjusted)	50/50 Blend Percent	Percent UCC
210001	Meritus Medical Center	334,876,102	15,772,976	4.71%	5.18%	4.95%	4.99%
210002	Univ. of Maryland Medical Center	1,438,951,222	57,937,435	4.03%	3.19%	3.61%	3.64%
210003	Prince Georges Hospital	299,902,921	28,405,399	9.47%	9.21%	9.34%	9.42%
210004	Holy Cross	510,747,952	45,895,492	8.99%	7.70%	8.34%	8.41%
210005	Frederick Memorial Hospital	355,915,557	14,515,105	4.08%	4.74%	4.41%	4.45%
210006	Univ. of Maryland Harford Memorial Hospital	106,578,160	6,578,589	6.17%	4.38%	5.28%	5.32%
210008	Mercy Medical Center, Inc.	538,345,601	28,566,363	5.31%	3.99%	4.65%	4.69%
210009	Johns Hopkins	2,366,190,615	49,570,950	2.09%	3.40%	2.75%	2.77%
210010	Univ. of Maryland Shore Medical Center at Dorchester	51,324,507	2,494,452	4.86%	5.39%	5.12%	5.17%
210011	St. Agnes Hospital	444,698,256	25,608,578	5.76%	4.88%	5.32%	5.37%
210012	Sinai Hospital	788,805,489	30,777,142	3.90%	3.84%	3.87%	3.91%
210013	Bon Secours Hospital	122,064,769	4,534,940	3.72%	4.41%	4.06%	4.10%
210015	MedStar Franklin Square Hospital	523,147,899	23,199,201	4.43%	4.32%	4.38%	4.41%
210016	Washington Adventist Hospital	275,389,883	20,442,671	7.42%	6.86%	7.14%	7.20%
210017	Garrett County Memorial Hospital	57,364,238	3,960,486	6.90%	5.65%	6.28%	6.33%
210018	MedStar Montgomery General Hospital	184,391,069	7,447,435	4.04%	4.13%	4.08%	4.12%
210019	Peninsula Regional Medical Center	450,628,695	18,584,640	4.12%	4.46%	4.29%	4.33%
210022	Suburban Hospital Association,Inc	318,412,820	6,552,937	2.06%	3.77%	2.92%	2.94%
210023	Anne Arundel General Hospital	621,928,839	15,808,583	2.54%	3.22%	2.88%	2.91%
210024	MedStar Union Memorial Hospital	442,830,792	18,770,214	4.24%	4.29%	4.27%	4.30%
210027	Western Maryland Hospital	334,505,088	16,334,563	4.88%	4.59%	4.73%	4.78%
210028	MedStar St. Marys Hospital	186,121,688	9,714,669	5.22%	4.37%	4.79%	4.84%

210029	Johns Hopkins Bayview Med. Center	666,010,152	33,998,371	5.10%	4.82%	4.96%	5.01%
210030	Univ. of Maryland Shore Medical Center at Chestertown	57,238,507	2,848,810	4.98%	4.35%	4.67%	4.71%
210032	Union Hospital of Cecil County	166,907,564	8,015,248	4.80%	4.84%	4.82%	4.86%
210033	Carroll County General Hospital	236,562,484	6,813,225	2.88%	3.43%	3.16%	3.18%
210034	MedStar Harbor Hospital Center	201,496,286	11,605,956	5.76%	5.45%	5.60%	5.65%
210035	Univ. of Maryland Charles Regional Medical Center	154,976,711	9,035,605	5.83%	4.73%	5.28%	5.32%
210037	Univ. of Maryland Shore Medical Center at Easton	209,808,601	7,329,670	3.49%	3.54%	3.52%	3.55%
210038	Univ. of Maryland Medical Center Midtown Campus	246,916,488	20,169,517	8.17%	4.55%	6.36%	6.41%
210039	Calvert Memorial Hospital	151,755,504	4,419,262	2.91%	3.28%	3.09%	3.12%
210040	Northwest Hospital Center, Inc.	266,087,214	15,035,724	5.65%	5.13%	5.39%	5.44%
210043	Univ. of Maryland Baltimore Washington Medical Center	425,989,496	23,966,211	5.63%	4.92%	5.27%	5.32%
210044	Greater Baltimore Medical Center	466,093,482	12,180,306	2.61%	3.34%	2.98%	3.00%
210045	McCready Foundation, Inc.	16,286,106	465,420	2.86%	6.16%	4.51%	4.55%
210048	Howard County General Hospital	315,577,785	10,389,468	3.29%	4.05%	3.67%	3.70%
210049	Univ. of Maryland Upper Chesepeake Medical Center	351,518,563	12,638,937	3.60%	3.47%	3.53%	3.56%
210051	Doctors Community Hospital	241,014,229	17,714,444	7.35%	5.49%	6.42%	6.48%
210055	Laurel Regional Hospital	104,081,752	12,077,044	11.60%	9.19%	10.40%	10.49%
210056	MedStar Good Samaritan Hospital	303,040,058	15,260,137	5.04%	4.79%	4.91%	4.96%
210057	Shady Grove Adventist Hospital	407,839,291	17,034,632	4.18%	4.76%	4.47%	4.51%
210060	Fort Washington Medical Center	50,414,055	4,783,427	9.49%	9.11%	9.30%	9.38%
210061	Atlantic General Hospital	110,209,823	6,141,921	5.57%	5.39%	5.48%	5.53%
210062	MedStar Southern Maryland Hospital	285,564,731	16,992,245	5.95%	4.60%	5.27%	5.32%
210063	Univ. of Maryland St. Josephs Medical Center	417,895,708	17,103,218	4.09%	3.73%	3.91%	3.95%
210065	Holy Cross German Town	112,196,258	11,182,548	9.97%	9.21%	9.59%	9.67%
Total		16,718,603,010	748,674,163	4.48%	4.38%	4.44%	4.48%

Note: Levindale, UMROI, and UM-Shock Trauma are not included in this analysis.

APPENDIX II. WRITE-OFF DATA SUMMARY STATISTICS

The figure below presents the UCC reduction rate by hospital between FY 2015 and FY 2016. Reduction rates vary by hospital.

Appendix II. Table 1. UCC Reductions by Hospital, FY 2015-2016

HOSPID	Hospital Name	FY 2015 % UCC	FY 2016 % UCC	Variance over/(under)
210001	Meritus Medical Center	4.59%	4.71%	0.12%
210002	UM Medical Center	2.75%	4.03%	1.28%
210003	Prince Georges Hospital	9.24%	9.47%	0.23%
210004	Holy Cross	8.05%	8.99%	0.93%
210005	Frederick Memorial Hospital	3.39%	4.08%	0.69%
210006	UM Harford Memorial Hospital	8.94%	6.17%	-2.77%
210008	Mercy Medical Center, Inc.	6.44%	5.31%	-1.13%
210009	Johns Hopkins	2.25%	2.09%	-0.15%
210010	UM Shore Medical Center at Dorchester	6.57%	4.86%	-1.71%
210011	St. Agnes Hospital	4.99%	5.76%	0.77%
210012	Sinai Hospital	4.20%	3.90%	-0.30%
210013	Bon Secours Hospital	3.96%	3.72%	-0.24%
210015	MedStar Franklin Square Hospital	4.10%	4.43%	0.33%
210016	Washington Adventist Hospital	10.20%	7.42%	-2.78%
210017	Garrett County Memorial Hospital	8.25%	6.90%	-1.35%
210018	MedStar Montgomery General Hospital	4.76%	4.04%	-0.72%
210019	Peninsula Regional Medical Center	3.72%	4.12%	0.40%
210022	Suburban Hospital Association,Inc	3.97%	2.06%	-1.91%
210023	Anne Arundel General Hospital	3.04%	2.54%	-0.50%
210024	MedStar Union Memorial Hospital	3.53%	4.24%	0.71%
210027	Western Maryland Hospital	4.83%	4.88%	0.06%
210028	MedStar St. Marys Hospital	5.35%	5.22%	-0.13%
210029	Johns Hopkins Bayview Med. Center	6.49%	5.10%	-1.38%
210030	UM Shore Medical Center at Chestertown	6.62%	4.98%	-1.64%
210032	Union Hospital of Cecil County	4.74%	4.80%	0.06%
210033	Carroll County General Hospital	2.15%	2.88%	0.73%
210034	MedStar Harbor Hospital Center	5.00%	5.76%	0.76%
210035	UM Charles Regional Medical Center	6.81%	5.83%	-0.98%
210037	UM Shore Medical Center at Easton	5.34%	3.49%	-1.85%
210038	UM Medical Center Midtown Campus	10.51%	8.17%	-2.34%
210039	Calvert Memorial Hospital	3.34%	2.91%	-0.42%
210040	Northwest Hospital Center, Inc.	6.39%	5.65%	-0.74%

210043	UM BWMC	5.82%	5.63%	-0.19%
210044	Greater Baltimore Medical Center	2.48%	2.61%	0.13%
210045	McCready Foundation, Inc.	7.62%	2.86%	-4.76%
210048	Howard County General Hospital	4.14%	3.29%	-0.85%
210049	UM Upper Chesepeake Medical Center	5.25%	3.60%	-1.65%
210051	Doctors Community Hospital	7.28%	7.35%	0.07%
210055	Laurel Regional Hospital	8.81%	11.60%	2.80%
210056	MedStar Good Samaritan Hospital	4.02%	5.04%	1.02%
210057	Shady Grove Adventist Hospital	4.79%	4.18%	-0.61%
210060	Fort Washington Medical Center	8.73%	9.49%	0.76%
210061	Atlantic General Hospital	4.58%	5.57%	1.00%
210062	MedStar Southern Maryland Hospital	5.72%	5.95%	0.23%
210063	UM St. Josephs Medical Center	4.09%	4.09%	0.00%
210065	Holy Cross Germantown	9.57%	9.97%	0.40%
Total 4.		**59%**	**4.48%**	**-0.12%**

Note: Levindale, UMROI, and UM-Shock Trauma are not included in this analysis.

*Source: HSCRC Financial Audited Data

The figure below presents the UCC write off distribution by payer for services provided in RY 2016 based on the account-level information provided to the Commission. Nearly 36 percent of UCC Write Off has a primary payer of charity care/self-pay. Commercial payers and Medicaid (including out-of-state Medicaid) accounted for 29.08 and 12.44 percent of UCC, respectively.

Appendix II. Table 2. UCC Write Off Distribution by Payer, RY 2016

Payer	Total Write Off	% of Total Write Off
Charity/Self Pay	$259,714,663	35.97%
Commercial	$209,983,202	29.08%
Medicaid	$89,803,193	12.44%
Medicare	$117,800,930	16.31%
Other	$44,821,568	6.21%
Grand Total	$722,123,557	100.00%


Appendix III

Logistic Regression Methodology (1 of 5)

$$Expected\ encounter\ \$UCC = Chance\ of\ visit\ resulting\ in\ UCC \times Avg.Charge \times \%\ UCC\ of\ Bill$$

To calculate each hospital's UCC%:

- An **expected UCC dollar amount** is calculated for every patient encounter
- UCC dollars are summed at the hospital level
- Summed UCC dollars are divided by hospital total charges (from write-off data)

- The **expected UCC dollar amount** is calculated as the product of three numbers:
  - **Chance of visit resulting in UCC**: From logistic regression formula, based on patient ADI (or ADI with other variables)
  - **Avg. Charge**: Average of total charges by hospital, by payer, by patient type
  - **% UCC of Bill**: Statewide average UCC% by payer, by patient type; only for encounters with UCC

The following 6 pages will illustrate an example of this methodology, using ADI as the only predictor

Logistic Regression Methodology (2 of 5)

$$\textit{Expected encounter \$UCC} = \textit{Chance of visit resulting in UCC} \times \textit{Avg. Charge} \times \textit{\% UCC of Bill}$$

Patient Acct	Hospital	ADI Ventile	Patient Type	Payer (clean)	Net Write-Off	W-O Flag	Total Charges	Avg. Charge	Chance of UCC	% UCC of Bill	Expected $UCC (Avg. Charge)	Expected $UCC (Actual Charge)
00000001	A	90	OP	Blue Cross	$ -	0	$ 700		23.5%			
00000002	A	20	IP	Medicare	$ 250	1	$ 4,000		15.6%			
00000003	A	55	IP	Medicare	$ 150	1	$ 2,000		19.2%			
00000004	B	55	IP	Medicare	$ -	0	$ 5,000		19.2%			

To determine each encounter's **Chance of Resulting in UCC**:

- Every encounter is assigned a Write-Off Flag
  - 0 = No write-off reported
  - 1 = Any write-off reported
- All 6.3 million encounters (statewide) are run through a logistic regression model to determine the correlation between the predictor variable (ADI) and the dependent variable (UCC flag)
- The regression outputs result in a formula which calculates a likelihood of UCC using ADI Ventile. Each encounter's ADI Ventile is run through the formula to obtain a Chance of UCC

Please find the formula and resulting Chance of UCC table on the following page

Logistic Regression Methodology (3 of 5)

$$\text{Expected encounter \$UCC} = \text{Chance of visit resulting in UCC} \times \text{Avg. Charge} \times \%\,\text{UCC of Bill}$$

Patient Acct	Hospital	ADI Ventile	Patient Type	Payer (clean)	Net Write-Off	W-O Flag	Total Charges	Avg. Charge	Chance of UCC	% UCC of Bill	Expected $UCC (Avg. Charge)	Expected $UCC (Actual Charge)
00000001	A	90	OP	Blue Cross	$ -	0	$ 700	$ 700	23.5%			
00000002	A	20	IP	Medicare	$ 250	1	$ 4,000	$ 3,000	15.6%			
00000003	A	55	IP	Medicare	$ 150	1	$ 2,000	$ 3,000	19.2%			
00000004	B	55	IP	Medicare	$ -	0	$ 5,000	$ 5,000	19.2%			

To determine each encounter's **average charge** (and to account for charge structure differences between hospitals:

- A table is created with the average charge by hospital, by patient type, and by payer
- Each encounter's hospital, patient type, and payer are used to look up the appropriate average charge amount

ALTERNATE METHOD

- It may be more telling to use an encounter's **actual charges** (Total Charges field, above) instead of the estimated Avg. Charge
- Expected encounter UCC dollars were also calculated using this alternate method

Logistic Regression Methodology (4 of 5)

$$Expected\ encounter\ \$UCC = Chance\ of\ visit\ resulting\ in\ UCC \times Avg.\ Charge \times \%\ UCC\ of\ Bill$$

Patient Acct	Hospital	ADI Ventile	Patient Type	Payer (clean)	Net Write-Off	W-O Flag	Total Charges	Avg. Charge	Chance of UCC	% UCC of Bill	Expected $UCC (Avg. Charge)	Expected $UCC (Actual Charge)
00000001	A	90	OP	Blue Cross	$ -	0	$ 700	$ 700	23.5%	15.82%		
00000002	A	20	IP	Medicare	$ 250	1	$ 4,000	$ 3,000	15.6%	6.93%		
00000003	A	55	IP	Medicare	$ 150	1	$ 2,000	$ 3,000	19.2%	6.93%		
00000004	B	55	IP	Medicare	$ -	0	$ 5,000	$ 5,000	19.2%	6.93%		

To determine each encounter's **% UCC of Bill**:

- The dataset is filtered to only look at encounters with write-off amounts
- From this filtered dataset, a table is created with the % UCC of Bill by patient type and by payer
- Each encounter's patient type and payer are used to look up the appropriate % UCC of Bill

EXAMPLE: 15.82% of Patient 1's bill is expected to be UCC, and that bill is expected to be, on average, $700. Therefore, if Patient 1 were to have UCC costs, those costs would average being 15.82% * $700 = $110.74. Additionally, there is a 23.5% chance of Patient 1 having these costs.

Please find table of % UCC of Bill by patient type, by payer on the following page

Logistic Regression Methodology (5 of 5)

$$Expected\ encounter\ \$UCC = Chance\ of\ visit\ resulting\ in\ UCC \times Avg.Charge \times \%\ UCC\ of\ Bill$$

								A1	A2	B	C	A1* B*C	A2*B*C
Patient Acct	Hospital	ADI Ventile	Patient Type	Payer (clean)	Net Write-Off	W-O Flag	Total Charges	Avg. Charge	Chance of UCC	% UCC of Bill	Expected $UCC (Avg. Charge)	Expected $UCC (Actual Charge)
00000001	A	90	OP	Blue Cross	$ -	0	$ 700	$ 700	23.5%	15.82%	$ 26.02	$ 26.02
00000002	A	20	IP	Medicare	$ 250	1	$ 4,000	$ 3,000	15.6%	6.93%	$ 32.43	$ 43.24
00000003	A	55	IP	Medicare	$ 150	1	$ 2,000	$ 3,000	19.2%	6.93%	$ 39.92	$ 26.61
00000004	B	55	IP	Medicare	$ -	0	$ 5,000	$ 5,000	19.2%	6.93%	$ 66.53	$ 66.53

To determine each encounter's **Expected UCC dollar amount**:

- **Using Avg. Charge -** Multiply each encounter's Chance of UCC, Avg. Charge, and UCC%
- **Using Actual Total Charge -** Multiply each encounter's Chance of UCC, Total Charges, and UCC%

These UCC dollar amounts are aggregated at the hospital level and then divided by each hospital's Total Charges to formulate the predicted hospital-level UCC%

- Hospital A UCC%:
  - By Avg. Charge = ($26.02 + $32.43 + 39.92) / ($700 + $4000 + $2000) = 1.47%
  - By Actual Charge = ($26.02 + $43.24 + 26.61) / ($700 + $4000 + $2000) = 1.43%

State of Maryland
Department of Health and Mental Hygiene

Nelson J. Sabatini
Chairman

Herbert S. Wong, PhD
Vice-Chairman

Joseph Antos, PhD

Victoria W. Bayless

George H. Bone, M.D.

John M. Colmers

Jack C. Keane

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

Donna Kinzer
Executive Director

Katie Wunderlich, Director
Engagement & Alignment

Allan Pack, Director
Population Based Methodologies

Chris L. Peterson, Director
Clinical & Financial Information

Gerard J. Schmith, Director
Revenue & Regulation Compliance

TO: **Commissioners**

FROM: **HSCRC Staff**

DATE: **June 14, 2017**

RE: **Hearing and Meeting Schedule**

July 12, 2017 To be determined - 4160 Patterson Avenue
HSCRC/MHCC Conference Room

August 9, 2017 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 11:45 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/commission-meetings-2017.cfm.

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