State of Maryland
Department of Health and Mental Hygiene

Nelson J. Sabatini
Chairman

Herbert S. Wong, Ph.D.
Vice-Chairman

Victoria W. Bayless

George H. Bone, M.D.

John M. Colmers

Stephen F. Jencks, M.D., M.P.H.

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

Stephen Ports, Director
Center for Engagement and Alignment

Sule Gerovich, Ph.D., Director
Center for Population Based Methodologies

Vacant, Director
Center for Clinical and Financial Information

Gerard J. Schmith, Director
Center for Revenue and Regulation Compliance

530th MEETING OF THE HEALTH SERVICES COST REVIEW COMMISSION
May 11, 2016

EXECUTIVE SESSION
11:00 a.m.
(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. **Discussion on appointment of Commission ex-officio membership – Authority General Provisions §§3-103, and 3-305(b)(1)**

4. **Update on Hospital Rate Issue (JHH) - Authority General Provisions Article, §3-305(b)(7)**

PUBLIC SESSION
1:00 p.m.

1. **Review of the Minutes from the Public Meeting and Executive Session on April 13, 2016**
2. **Executive Director's Report**
3. **New Model Monitoring**
4. **Docket Status – Cases Closed**

   2320N – Sheppard Pratt Health System
   2337R – LifeBridge Health, Inc.
   2341A – University of Maryland Medical Center
   2340A – Johns Hopkins Health System

5. **Docket Status – Cases Open**

   2319R – Sheppard Pratt Health System
   2342A – Johns Hopkins Health System
   2339R – Prince George's Hospital Center
   2343A – Johns Hopkins Health System

6. **Final Recommendation for Continued Support of Maryland Patient Safety Center**
7. **Final Recommendation for NSPII**

8. **Update on Draft Recommendation for Modification to the Readmission Incentive Program for FY 2018**

9. **Update on Draft Recommendation for Total Amount at Risk for Quality Programs for FY 2018**

10. **Draft Recommendation for Potentially Avoidable Utilization Savings Policy for Rate Year 2017**

11. **Draft Recommendation for Uncompensated Care for FY 2017**

12. **Draft Recommendation for Update Factor for FY 2017**

13. **Draft Recommendation for Transformation Implementation Grant Awards**

14. **Report on Ongoing Support of CRISP in FY 2017 for HIE Operations and Reporting Service Activities**

15. **Hearing and Meeting Schedule**

Minutes to be included into the post-meeting packet

upon approval by the Commissioners

There is no written ExecutiveDirector’s Reportthis month.

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 APRIL 28, 2016

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
2319R	Sheppard Pratt Health System	11/24/2015	7/13/2016	7/13/2015	CAPITAL	GS	OPEN
2339R	Prince George's Hospital Center	3/16/2016	4/15/2016	8/15/2016	PEDS/MSG	CK	OPEN
2342A	Johns Hopkins Health System	4/29/2016	N/A	N/A	ARM	DNP	OPEN
2343A	Johns Hopkins Health System	4/29/2016	N/A	N/A	ARM	DNP	OPEN

PROCEEDINGS REQUIRING COMMISSION ACTION - NOT ON OPEN DOCKET

NONE

IN RE: **THE APPLICATION FOR**	*	**BEFORE THE MARYLAND HEALTH**	
ALTERNATIVE METHOD OF RATE	*	**SERVICES COST REVIEW**	
DETERMINATION *		**COMMISSION**	
JOHNS HOPKINS HEALTH	*	**DOCKET:**	**2016**
SYSTEM	*	**FOLIO:**	**2152**
BALTIMORE, MARYLAND	*	**PROCEEDING:**	**2342A**

Staff Recommendation

May 11, 2016

I. INTRODUCTION

Johns Hopkins Health System (the "System") filed an application with the HSCRC on April 29, 2016 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 participate in a global rate arrangement for joint replacement services with Health Design Plus, Inc. for Pacific Business Group on Health clients for a period of one year beginning June 1, 2016.

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 updated global rates was developed by calculating mean historical charges for patients receiving similar joint replacement 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

Staff found that the experience under this arrangement over the last year has been

favorable. Therefore, staff recommends approval of the Hospitals' request.

VI. STAFF RECOMMENDATION

The staff recommends that the Commission approve the Hospitals' application for an alternative method of rate determination for joint replacement services for a one year period commencing June 1, 2016. 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:**	**2016**
SYSTEM	*	**FOLIO:**	**2153**
BALTIMORE, MARYLAND	*	**PROCEEDING:**	**2343A**

Staff Recommendation

May 11, 2016

I. INTRODUCTION

Johns Hopkins Health System (the "System") filed an application with the HSCRC on April 29, 2016 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 a global rate arrangement for joint replacement and cardiovascular services with Health Design Plus, Inc. for clients other than those of Pacific Business Group on Health clients for a period of one year beginning June 1, 2016.

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 updated global rates was developed by calculating mean historical charges for patients receiving similar joint replacement and cardiovascular procedures 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 has been no activity to date, 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 joint replacement and cardiovascular services for a one year period commencing June 1, 2016. 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.

Final Recommendations on Continued Financial Support of the Maryland Patient Safety Center for FY 2017

May 11, 2016

Health Services Cost Review Commission
4160 Patterson Avenue
Baltimore, MD 21215

This document contains the final staff recommendations for providing continued financial support of the Maryland Patient Safety Center.

Final Recommendations on Continued Financial Support of the Maryland Patient Safety Center for FY 2017

Introduction

In 2004, the Maryland Health Services Cost Review Commission (HSCRC or Commission) adopted recommendations that made it a partner in the initiation of the Maryland Patient Safety Center (MPSC) by providing seed funding through hospital rates. The initial recommendations provided funding to cover 50 percent of the reasonable budgeted costs of the MPSC. The Commission works collaboratively on MPSC projects as appropriate. It also receives an annual briefing and documentation on the progress of the MPSC in meeting its goals, as well as an estimate of expected expenditures and revenues for the upcoming fiscal year. Based on staff project collaboration experience, and on the annual information provided by the MPSC, staff evaluates the reasonableness of the budget items presented and makes continued financial support recommendations to the Commission.

Over the past 12 years, the rates of eight Maryland hospitals were increased by the following amounts in total, and funds have been transferred on a biannual basis (by October 31 and March 31 of each year):

- Fiscal year (FY) 2005: $762,500
- FY 2006: $963,100
- FY 2007: $1,134,980
- FY 2008: $1,134,110
- FY 2009: $1,927,927
- FY 2010: $1,636,325
- FY 2011: $1,544,594
- FY 2012: $1,314,433
- FY 2013: $1,225,637
- FY 2014: $1,200,000
- FY 2015: $1,080,000
- FY 2016: $972,000

In March 2016, the HSCRC received a request for continued financial support of the MPSC through hospital rates in FY 2017 (see Appendix I). The MPSC is requesting a total of $874,800 in funding support from the HSCRC, a 10 percent decrease over the previous year.

Background

The 2001 General Assembly passed the “Patients’ Safety Act of 2001,” charging the Maryland Health Care Commission (MHCC), in consultation with the Department of Health and Mental Hygiene (DHMH), with studying the feasibility of developing a system for reducing the number of preventable adverse medical events in Maryland, including a system of reporting such incidences. The MHCC subsequently recommended the establishment of the MPSC as one approach to improving patient safety in Maryland.

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

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

Assessment

Strategic Priorities and Partnerships

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

The MPSC's goals are to:

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

To accomplish its vision, mission, and goals, the MPSC has established and continues to build new strategic partnerships with an array of key private and public organizations. The organizations represent a broad array of interests and expertise, including policymakers and providers of care across the continuum of health care quality/safety and health care learning and education. Appendix I more fully details the MPSC's priorities and partnerships.

Maryland Patient Safety Center Activities, Accomplishments, and Outcomes

The highlights of the MPSC's[1] key accomplishments for FY 2016, more fully outlined in Appendix I, include:

- Member hospitals totaled 43.
- The MPSC began marketing of the Caring for the Caregiver initiative, with strong interest from hospitals in Maryland, New York, South Carolina, and California.

[1] More information about the Center may be found at: http://www.marylandpatientsafety.org/Index.aspx

- Mid-Atlantic Patient Safety Organization (PSO) members included 26 facilities.
- The MPSC commenced the First Time Cesarean-Section initiative.
- The MPSC commenced the Neonatal Abstinence Syndrome initiative.
- The MPSC recruited 16 hospitals, 5 long-term care (LTC) facilities, and 5 ambulatory surgery centers for the Clean Collaborative initiative; recruitment continues.
- The Sepsis Collaborative initiative decreased sepsis mortality thus far by roughly 11 percent for both cohorts of hospital participants.
- The MPSC partnered with VHQC in a LTC Sepsis collaborative (which included 32 Maryland LTC facilities).
- The Safe from Falls LTC collaborative completed and decreased falls with injury in participating LTC facilities by 30.56 percent.

For FY 2017, the MPSC is conducting the activities listed below (along with the impact areas each are targeting)—also see Appendix I.

- Perinatal/Neonatal Quality Collaborative
    - Reduce first-time C-sections in singleton, vertex, nulliparous women (readmissions, length of stay (LOS))
    - Standardize care and treatment of neonatal abstinence syndrome (readmissions, LOS, transfers to higher levels of care)
- Sepsis Prevention (LTC)
    - Partner with VHQC to reduce mortality in the post acute setting (readmissions, LOS)
- Improving Sepsis Mortality (acute care)
    - Reduce mortality due to sepsis through early identification and rapid treatment (LOS, mortality)
- Clean Collaborative
    - Reduce incidence of Healthcare Associated Infections through improved practices related to surface contamination (potentially preventable complications, LOS)
- Errors in Diagnosis
    - Convene study group to analyze the Health and Medicine Division (HMD) (previously the Institute of Medicine (IOM)) September 2015 recommendations for adoption and development of a statewide initiative (LOS, readmissions, utilization)
- Patient Family-Centered Care Bundle

  - Convene study group to institute relevant patient family-centered care related activities (readmissions, patient satisfaction)

- Medication Reconciliation
  - Convene study group to develop applicable initiative(s) (readmissions, LOS)

FY 2017 Projected Budget

The MPSC continued its efforts to work with its partners to secure program-specific funding for FY 2017 and estimates the amounts they will secure for FY 2017 in the proposed budget outlined in Figure 1 below.

Final Recommendations on Continued Financial Support of the Maryland Patient Safety Center for FY 2017

Figure 1. Proposed MPSC Revenue and Expenses

REVENUE			**FY 2016 Budget**			**FY 2017 Budget**
Cash Contributions from MHA/Delmarva			100,000			100,000
Cash Contributions from Hospitals			75,000			30,000
Cash Contributions for Long-term Care			25,000			25,000
HSCRC Funding			972,000			874,800
Membership Dues			275,000			350,000
Education Session Revenue			22,000			14,000
Conference Registrations-Annual MedSafe Conference			3,000			2,000
Conference Registrations-Annual Patient Safety Conference			130,000			75,000
Sponsorships			130,000			140,000
Program Sales			60,000			60,000
Patient Safety Certification Revenue			-			85,000
DHMH Grant			200,000			200,000
Other Grants/Contributions			100,000			50,000
Total Revenue			**2,092,000**			**2,005,800**
EXPENSES	**FY 2016 MPSC**	**FY 2016 Consultants**	**FY 2016 Total**	**FY 2017 MPSC**	**FY 2017 Consultants**	**FY 2017 Total**
Administration	551,250		551,250	581,750		581,750
Outpatient Dialysis (previously committed)	-		-	-		-
Programs			-			-
Education Sessions		78,000	78,000		69,000	69,000
Annual Patient Safety Conference		360,000	360,000		370,500	370,500
MEDSAFE Conference		55,000	55,000		33,250	33,250
Caring for HC	57,000	60,000	117,000	93,400	50,000	143,400
Patient/Family Centered Care	-	-	-	-	-	-

Final Recommendations on Continued Financial Support of the Maryland Patient Safety Center for FY 2017

Safety Initiatives-Perinatal/Neonatal	221,300	-	221,300	206,850	-	206,850
Safety Initiatives-Hand Hygiene	52,050	15,000	67,050	-	-	-
Safety Initiatives-Safe from Falls	24,600	500	25,100	-	-	-
Safety Initiatives-Adverse Event Reporting	15,600	85,000	100,600	25,100	40,000	65,100
Patient Safety Certification	117,400	52,000	169,400	132,300	15,000	147,300
Sepsis	71,500	87,900	159,400	38,200	47,150	85,350
Clean Environment	81,600	105,000	186,600	61,300	97,900	159,200
Patient Family Bundle				22,700	-	22,700
Med Rec				19,500	-	19,500
Surgical				19,500	-	19,500
Diagnosis Errors				19,500	-	19,500
Total Expenses	**1,192,300**	**898,400**	**2,090,700**	**1,220,100**	**722,800**	**1,942,900**
Net Income (Loss)			**1,300**			**62,900**

MPSC Return on Investment

As noted in the last several Commission recommendations, the All-Payer System provides funding support for the MPSC with the expectation that there will be both short- and long-term reductions in Maryland health care costs—particularly related to such outcomes as reduced mortality rates, LOS, patient acuity, and malpractice insurance costs. However, these results continue to be difficult to quantify, and the MPSC has been able to provide limited evidence that its programs have resulted in cost savings, and only to the extent that these savings relate to individual programs and for limited periods of time.

Based on the data that are generated and reported by the MPSC to the HSCRC (e.g., an 11 percent reduction in sepsis mortality in cohorts I and II), staff continues to believe that there are indications that the programs of the MPSC are well conceived. The Sepsis Collaborative to improve sepsis mortality aligns with the Commission's goals as it aspires to reduce infection complications and mortality. The MPSC has continued to work to maintain sources of revenue (e.g., in conference registration fees and in membership dues), demonstrating perceived value of the MPSC's provider customer base.

Recommendations

In light of the information presented above, HSCRC staff provides the following recommendations on the MPSC funding support policy for FY 2017:

1. The HSCRC should provide funding support for the MPSC in FY 2017 through an increase in hospital rates in the amount of $874,800, a $97,200 (10 percent) reduction from FY 2016;
2. The MPSC should continue to aggressively pursue other sources of revenue, including from other provider groups that benefit from the MPSC's programs, to help support the MPSC into the future and maintain reasonable cash reserves;
3. Going forward, the HSCRC should continue to decrease the amount of support by a minimum of 10 percent per year, or a greater amount contingent upon:
    a. How well the MPSC initiatives align with a broader statewide plan and activities for patient safety; and
    b. Whether new MPSC revenues should offset HSCRC funding support.

Maryland Patient Safety Center FY 2017 Program Plan & Budget

Presented to the
Health Services Cost Review Commission
March 2016

Appendix I. MPSC Report to HSCRC on FY 2016 Results To Date and FY 2017 Program Plan and Budget Request

Maryland Patient Safety Center Board of Directors

- **James R. Rost, MD**, Medical Director, NICU and Medical Director of Patient Safety, Shady Grove Adventist Hospital
- **Gerald Abrams**, Director
  Abrams, Foster, Nole & Williams, PA
- **Carmela Coyle**, President & CEO
  Maryland Hospital Association
- **Joseph DeMattos, Jr., MA**, President
  Health Facilities Association of Maryland
- **Deborah Dokken**
  Patient / Family Advocate
- **Barbara Epke**, Vice President
  LifeBridge Health, Inc. & Sinai Hospital of Baltimore
- **E. Robert Feroli, Jr., PharmD, FASHP, FSMSO**
  Johns Hopkins Hospital, Department of Pharmacy
- **Eugene Friedman**, Former Corporate Counsel
  1st Mariner Bank
- **Paul Fronstin, Ph.D.,** Director, Center for Research and Health Benefits Innovation, Employee Benefit Research Institute;
  Commissioner, Maryland Health Care Commission
- **Warren Green**, Former President & CEO
  LifeBridge Health
- **David Horrocks**, President, CRISP
- **Andrea Hyatt**, President, Maryland Ambulatory Surgery Association
- **Robert Imhoff**, President & CEO
  Maryland Patient Safety Center
- **Joanna Kaufman**, Former Program/Information Specialist, Institute for Patient- and Family-Centered Care
- **Lawrence Linder, MD, FACEP, FAAEM**
  President and CEO
  University of Maryland Community Medical Group
- **David Mayer, MD**
  Corporate Vice President of Quality and Safety
  MedStar Health
- **Sherry Perkins, PhD, RN**, COO and CNO
  Dimensions Health
- **Steve Ports**, Principal Deputy Director
  Health Services Cost Review Commission
- **Sheree Sample-Hughes,** Delegate, Maryland General Assembly, District 37 A
- **Susan Sheridan,** Patient / Family Advocate
- **Barbara Tachovsky,** Former President, Main Line Hospitals, Paoli, PA.
- **Kathleen White, PhD, RN, NEA-BC, FAAN,**
  Associate Professor
  Department of Acute and Chronic Care
  The Johns Hopkins University
  School of Nursing

MARYLAND Patient Safety CENTER

Strategic Priorities

Vision - *Who we are*
A center of patient safety innovation, convening providers of care to accelerate our understanding of, and implement evidence–based solutions for, preventing avoidable harm

Mission – *Why we exist*
Making healthcare in Maryland the safest in the nation

Goals - *What will we accomplish*
- Eliminate preventable harm for every patient, with every touch, every time
- Develop a shared culture of safety among patient care providers
- Be a model for safety innovation in other states

Strategic Areas of Focus - *What we will do*

- Prevent Harm and Demonstrate the Value of Safety
- Spread Excellence
- Lead Innovation in New Areas of Safety Improvement

MARYLAND Patient Safety CENTER

Strategic Partners

- **Courtemanche & Associates -** An interdisciplinary healthcare firm that serves healthcare organizations to improve care through compliance with regulatory and accreditation requirements
- **Quantros -** National vendor of adverse event reporting services
- **VHQC** – Maryland QIO
- **Vermont Oxford Network -** Voluntary collaboration of healthcare professionals working together as an interdisciplinary community to change the landscape of neonatal care.
- **American College of Obstetrics and Gynecologists -** national organization promoting maternal and infant health
- **Health Facilities Association of Maryland -** A leader and advocate for Maryland's long-term care provider community
- **Institute for Safe Medication Practices** – The leading national organization educating others about safe medication practices
- **Maryland Healthcare Education Institute** – The educational affiliate of the Maryland Hospital Association
- **Maryland Hospital Association** - The advocate for Maryland's hospitals, health systems, communities, and patients before legislative and regulatory bodies
- **LifeSpan Network -** The largest senior care provider association in the Mid-Atlantic, representing more than 300 senior care provider organizations in Maryland and the District of Columbia
- **Maryland Ambulatory Surgical Association -** The state membership association that represents ambulatory surgery centers (ASCs) and provides advocacy and resources to assist ASCs in delivering high quality, cost-effective ambulatory surgery to the patients they serve
- **Johns Hopkins School of Medicine / The Armstrong Institute for Patient Safety and Quality** – The patient safety center within Johns Hopkins Medicine

MARYLAND Patient Safety CENTER

FY16 Highlights

- Began marketing of Caring for the Caregiver with strong interest from hospitals in Maryland, NY, SC, and CA.
- Member hospitals totaled 43
- Mid-Atlantic PSO members include 26 facilities
- Commenced First Time Cesarean-Section initiative
- Commenced Neonatal Abstinence Syndrome initiative
- Recruited 16 hospitals, 5 LTC and 5 ASC's for Clean Collaborative initiative. Recruitment continues.
- Sepsis Collaborative improvements to date show Cohort I has decreased sepsis mortality in by 11.0% and Cohort II by 11.1%
- Partnered with VHQC in a LTC Sepsis collaborative (32 MD LTCs)
- Safe from Falls- LTC collaborative completed and decreased falls with injury in participating long term care facilities by 30.56%

FY17 Initiatives: Safety Initiatives

- **Perinatal/Neonatal Quality Collaborative**
  - Reduce first time C-sections in singleton, vertex, nulliparous women (readmissions, LOS)
  - Standardizing care and treatment of neonatal abstinence syndrome (readmissions, LOS, transfers to higher levels of care)
- **Sepsis Prevention (LTC)**
  - Partnering with VHQC to reduce mortality in the post acute setting (readmissions, LOS)
- **Sepsis Mortality (acute care)**
  - Reduce mortality due to sepsis through early identification and rapid treatment (LOS, mortality)
- **Clean Collaborative**
  - Reduce incidence of HAI's through improved practices related to surface contamination (PPC's, LOS)
- **Errors in Diagnosis**
  - Convene study group to analyze IOM September 2015 recommendations for adoption and development of statewide initiative (LOS, readmissions, utilization)
- **Patient Family Centered Care Bundle**
  - Convene study group to institute relevant patient family centered care related activities (readmissions, patient satisfaction)
- **Medication Reconciliation**
  - Convene study group to develop applicable initiative(s) (readmissions, LOS)

MARYLAND Patient Safety CENTER

FY17 Initiatives: Education Programs

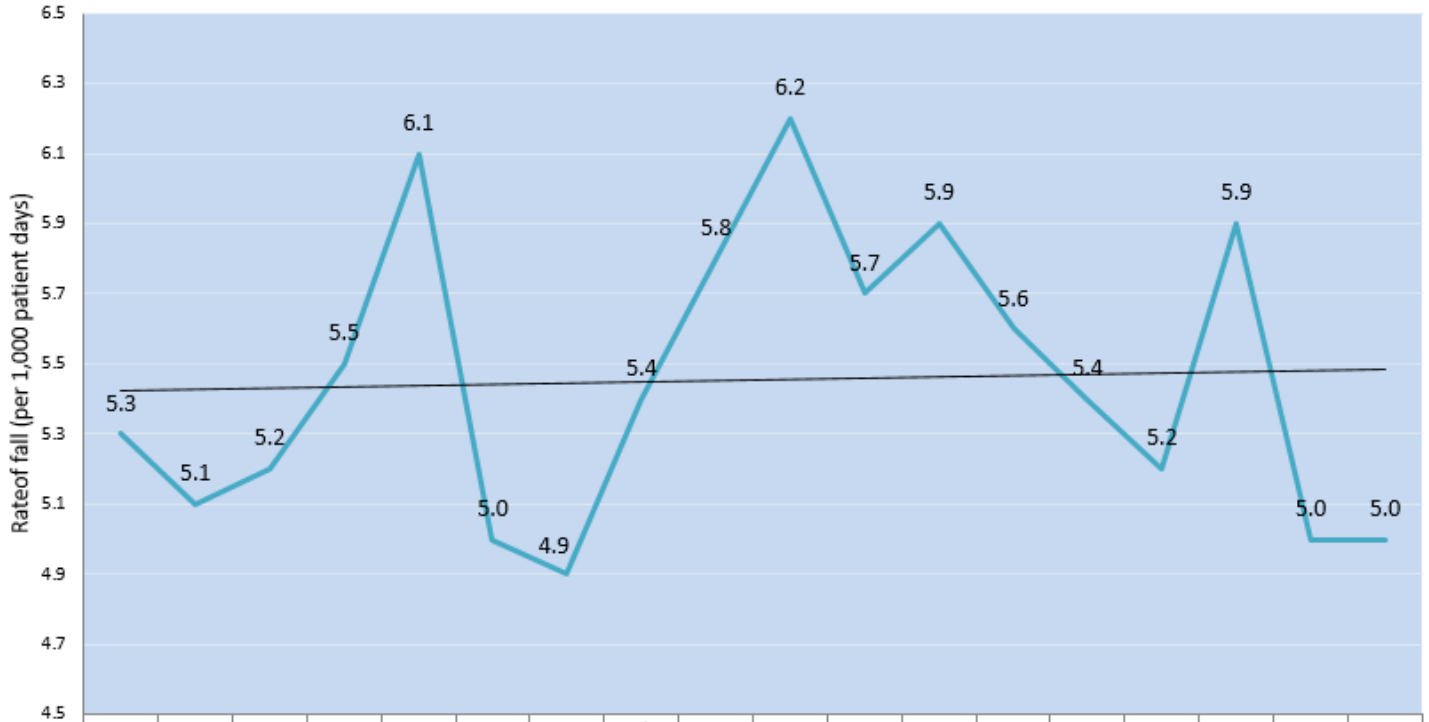
- Educational programming according to needs of members & marketplace.
- Objectives:
  - Educate providers regarding pertinent patient safety/medication related issues
  - Expand geographic and participant reach of the Center
  - Increase participation levels
  - Increase revenue generation
  - Establish Center as recognized educational resource

FY17 Initiatives: Conferences

- The Annual Maryland Patient Safety Center Conference is the Center's signature event; providing awareness, education and the exchange of best practice solutions to a broad-based audience that goes well beyond the Center's usual participants. The annual Medication Safety Conference has become a premier event for the Center concentrating on the prevention of medication errors with an emphasis on processes and technology.
- Objectives:
  - Educate providers regarding pertinent patient safety / medication related issues
  - Expand geographic and participant reach of the Center
  - Increase participation levels
  - Increase revenue generation
  - Establish Center as recognized educational resource
- Vendor: Maryland Healthcare Education Institute

SAFE from FALLS – Long Term Care

Long Term Care Rate of Falls in Participating Facilities
July 2014 to December 2015

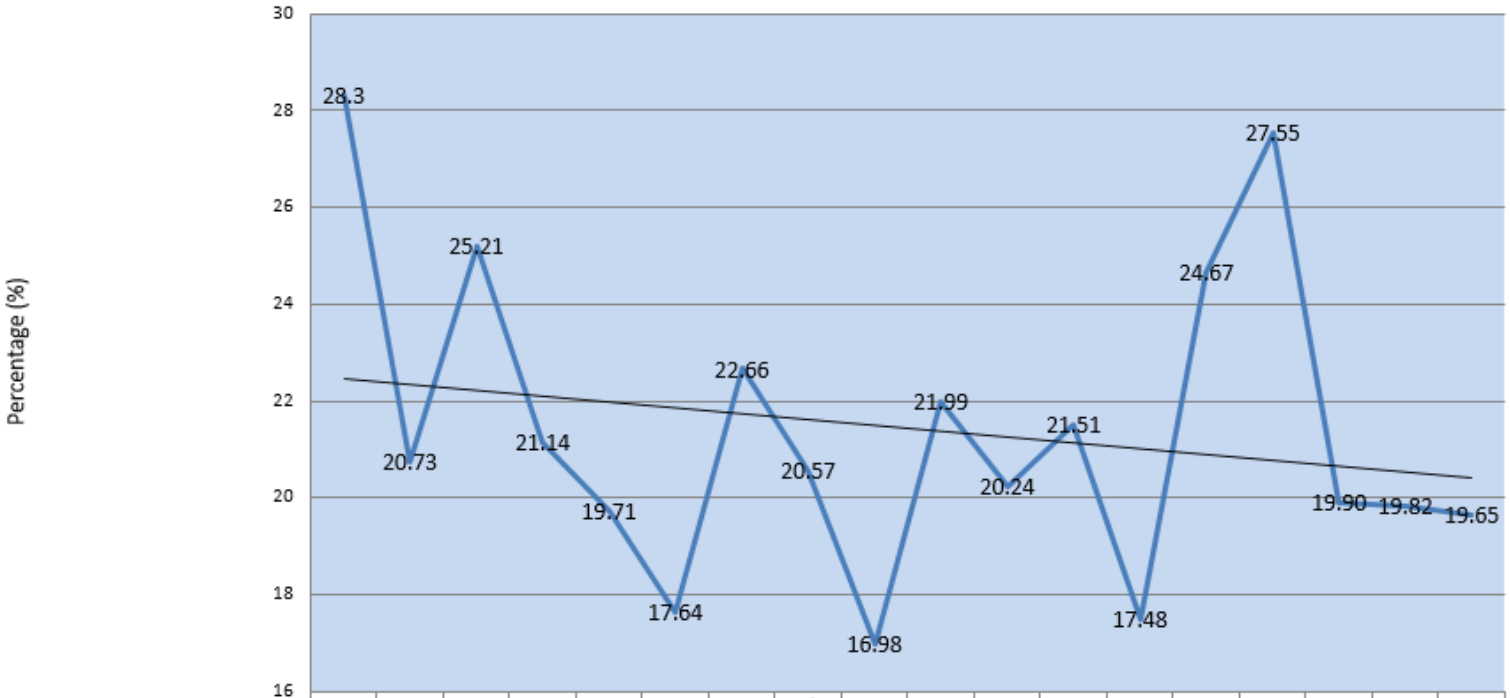


	Jul-14	Aug-14	Sep-14	Oct-14	Nov-14	Dec-14	Jan-15	Feb-15	Mar-15	Apr-15	May-15	Jun-15	Jul-15	Aug-15	Sep-15	Oct-15	Nov-15	Dec-15
	15	19	20	21	21	21	21	21	21	21	21	21	21	21	20	20	20	20
Rate of Falls	5.3	5.1	5.2	5.5	6.1	5.0	4.9	5.4	5.8	6.2	5.7	5.9	5.6	5.4	5.2	5.9	5.0	5.0

MARYLAND Patient Safety CENTER

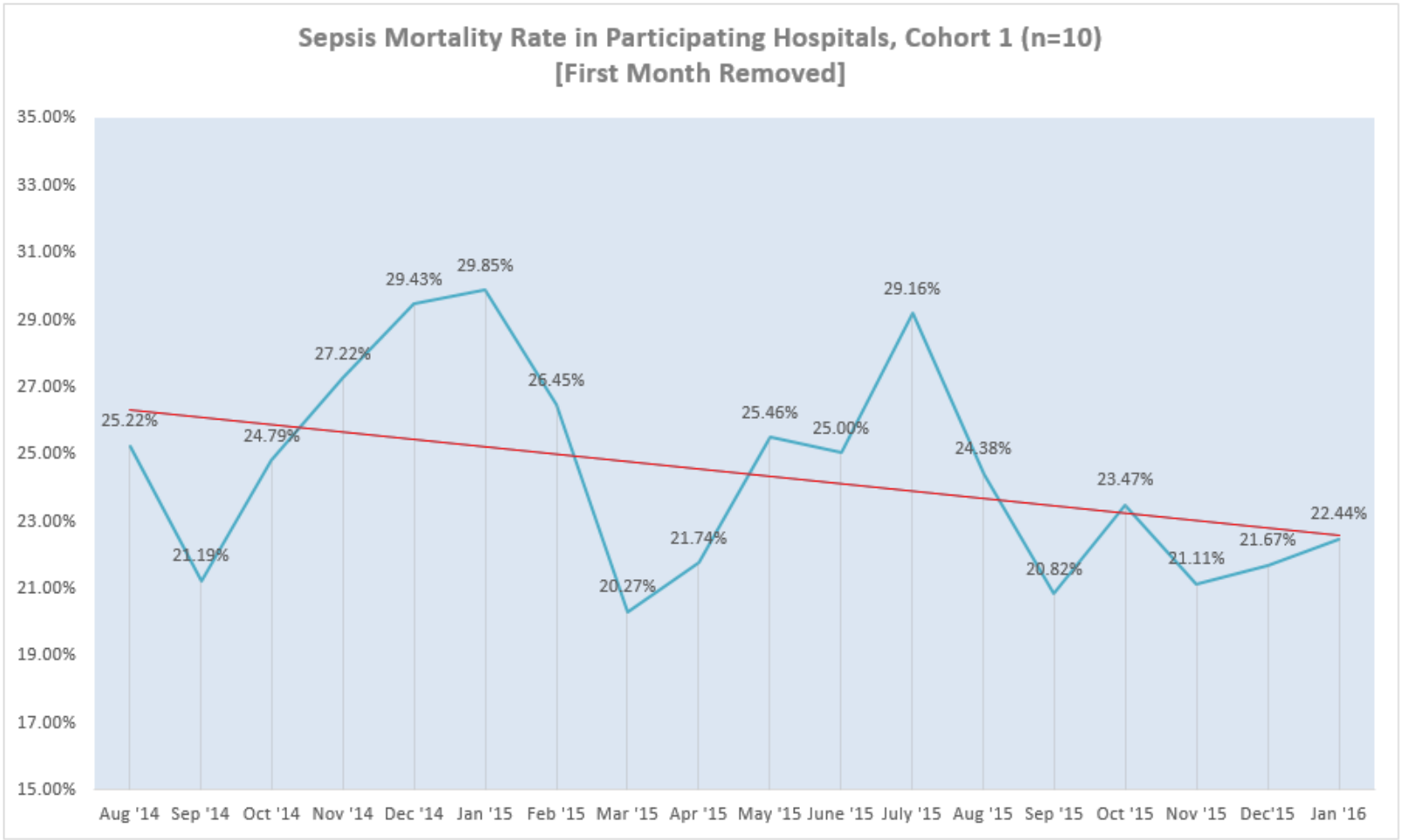
SAFE from FALLS – Long Term Care

Rate of Falls with Injury in Participating Facilities
July 2014 to December 2015

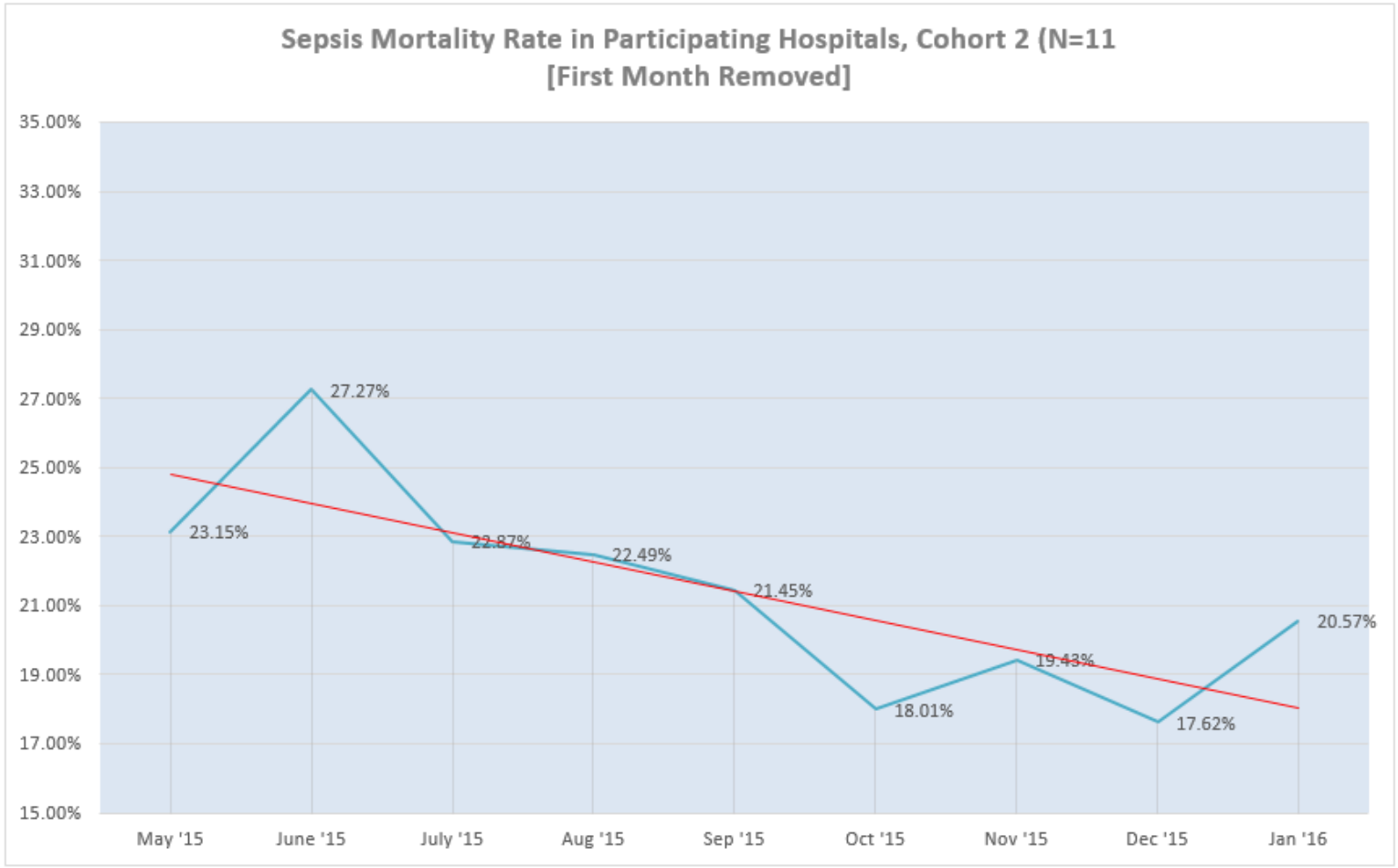


	Jul-14	Aug-14	Sep-14	Oct-14	Nov-14	Dec-14	Jan-15	Feb-15	Mar-15	Apr-15	May-15	Jun-15	Jul-15	Aug-15	Sep-15	Oct-15	Nov-15	Dec-15
	15	19	20	21	21	21	21	21	21	21	21	21	21	21	20	20	20	20
Rate of Falls With Injury	28.3	20.73	25.21	21.14	19.71	17.64	22.66	20.57	16.98	21.99	20.24	21.51	17.48	24.67	27.55	19.90	19.82	19.65

Improving Sepsis Mortality

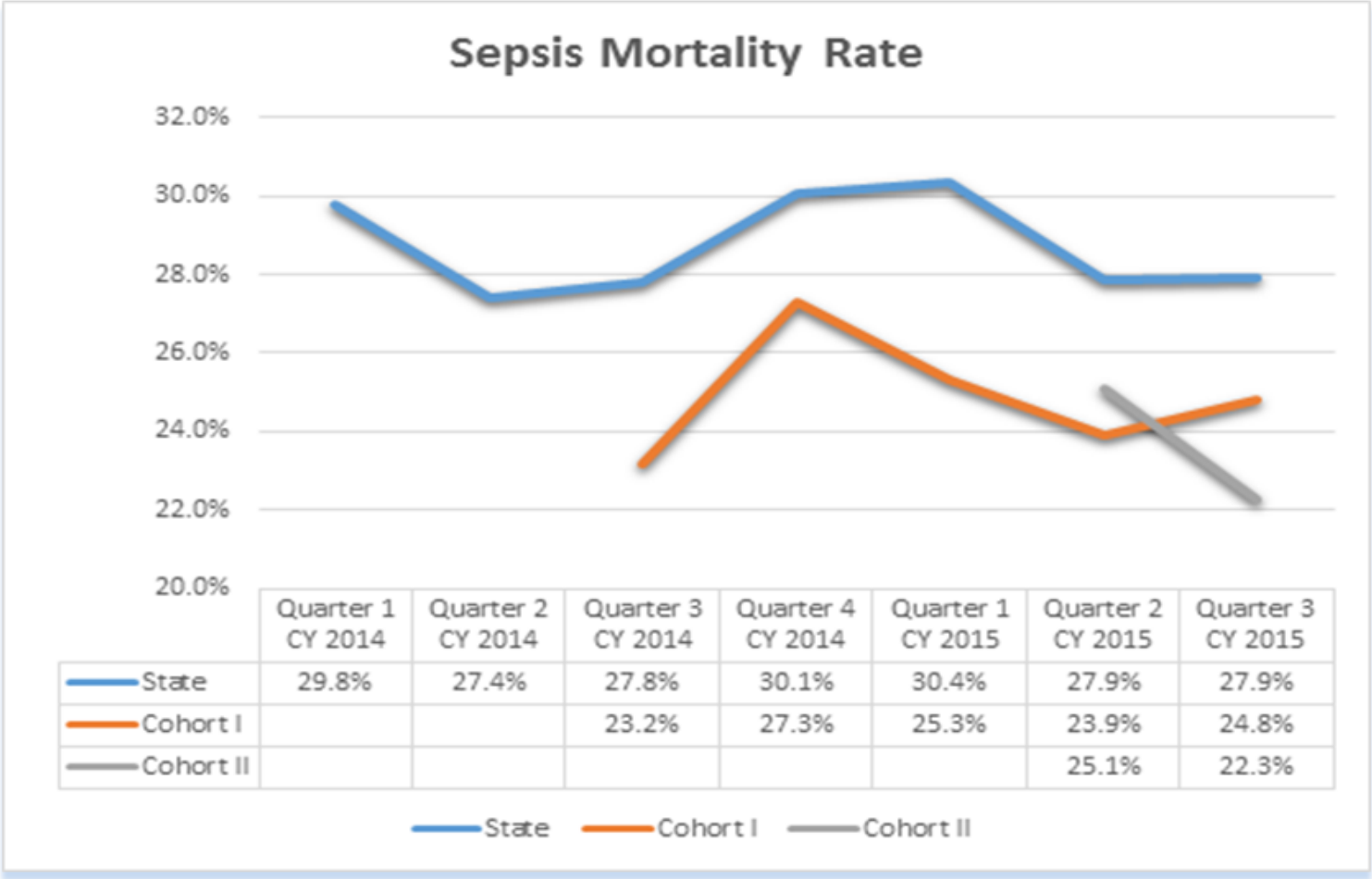


Improving Sepsis Mortality



MARYLAND Patient Safety CENTER

Improving Sepsis Mortality



	Quarter 1 CY 2014	Quarter 2 CY 2014	Quarter 3 CY 2014	Quarter 4 CY 2014	Quarter 1 CY 2015	Quarter 2 CY 2015	Quarter 3 CY 2015
State	29.8%	27.4%	27.8%	30.1%	30.4%	27.9%	27.9%
Cohort I			23.2%	27.3%	25.3%	23.9%	24.8%
Cohort II						25.1%	22.3%

MPSC Members FY 2016

- Adventist Health Care, including:
  - Adventist Behavioral Health
  - Shady Grove Medical Center
  - Washington Adventist Hospital
- Adventist Rehabilitation Hospital
- Anne Arundel Medical Center
- Atlantic General Hospital
- Bon Secours Baltimore Health System
- Calvert Memorial Hospital
- Carroll Hospital Center
- Doctors Community Hospital
- Fort Washington Medical Center
- Frederick Regional Health System
- Garrett County Memorial Hospital
- Greater Baltimore Medical Center
- Holy Cross Hospital
- Johns Hopkins Howard County General Hospital
- Johns Hopkins Suburban Hospital
- Kennedy Krieger Institute
- Laurel Regional Hospital (Dimensions Health)
- Levindale Hebrew Geriatric Center & Hospital
- McCready Health
- MedStar Franklin Square Medical Center
- MedStar Good Samaritan Hospital
- MedStar Southern Maryland Hospital Center
- MedStar St. Mary's Hospital
- MedStar Union Memorial Hospital
- Mercy Medical Center
- Northwest Hospital
- Prince George's Hospital Center (Dimensions Health)
- Sheppard Pratt Health System
- Sinai Hospital of Baltimore
- Union Hospital of Cecil County
- UMD Baltimore Washington Medical Center
- UMD Charles Regional Medical Center
- UMD Medical Center
- UMD Medical Center Midtown Campus
- UMD Rehabilitation & Orthopaedic Institute
- UMD Shore Medical Center Dorchester
- UMD Shore Medical Center Easton
- UMD Shore Medical Center Chestertown
- UMD St. Joseph Medical Center
- UMD Upper Chesapeake Health
- Western Maryland Health System

MARYLAND Patient Safety CENTER

Mid Atlantic PSO Members FY 2016

- Anne Arundel Medical Center
- Atlantic General Hospital
- Bon Secours Hospital
- Calvert Memorial Hospital
- Carroll Hospital Center
- Doctors Community Hospital
- Frostburg Nursing and Rehabilitation Center
- Ft. Washington Medical Center
- Garrett County Memorial Hospital
- Greater Baltimore Medical Center
- Kennedy Krieger Institute
- Levindale Hebrew Geriatric Center
- MedStar St. Mary's Hospital
- MedStar Union Memorial Hospital
- Mercy Medical Center
- Meritus Medical Center
- Mt. Washington Pediatric Hospital
- Northwest Hospital
- SagePoint Senior Living Services
- Sheppard Pratt Health System
- Sinai Hospital
- UMD Harford Memorial Hospital
- UMD Shore Health at Chestertown
- UMD Upper Chesapeake Medical Center
- UMD Rehabilitation and Orthopaedic Institute
- Washington Adventist Hospital
- Western Maryland Health System

MARYLAND Patient Safety CENTER

Strategic Direction

- Improve culture of patient safety
- Expand provider involvement
- Supporting provider efforts with regard to Waiver requirements and initiatives
- Continued coordination with statewide healthcare priorities:
  - HSCRC
  - OHQC
  - MHCC
  - DHMH

FY 2017 Budget

REVENUE	FY 2016 Budget
Cash Contributions from MHA/Delmarva	100,000
Cash Contributions from Hospitals	75,000
Cash Contributions for Long-term Care	25,000
HSCRC Funding	972,000
Membership Dues	275,000
Education Session Revenue	22,000
Conference Registrations-Annual MedSafe Conference	3,000
Conference Registrations-Annual Patient Safety Conference	130,000
Sponsorships	130,000
Program Sales	60,000
Patient Safety Certification Revenue	-
DHMH Grant	200,000
Other Grants/Contributions	100,000
Total Revenue	2,092,000

EXPENSES	FY 2016 MPSC	FY 2016 Consultants	FY 2016 Total
Administration	551,250		551,250
Outpatient Dialysis (previously committed)	-		-
Programs			-
Education Sessions		78,000	78,000
Annual Patient Safety Conference		360,000	360,000
MEDSAFE Conference		55,000	55,000
Caring for HC	57,000	60,000	117,000
Patient/Family Centered Care	-	-	-
Safety Initiatives-Perinatal/Neonatal	221,300	-	221,300
Safety Initiatives-Hand Hygiene	52,050	15,000	67,050
Safety Initiatives-Safe from Falls	24,600	500	25,100
Safety Initiatives-Adverse Event Reporting	15,600	85,000	100,600
Patient Safety Certification	117,400	52,000	169,400
Sepsis	71,500	87,900	159,400
Clean Environment	81,600	105,000	186,600
Patient Family Bundle			
Med Rec			
Surgical			
Diagnosis Errors			
Total Expenses	1,182,300	888,400	2,080,700
Net Income (Loss)			1,300

	FY 2017 Budget
	100,000
	30,000
	25,000
	874,800
	350,000
	14,000
	2,000
	75,000
	140,000
	60,000
	85,000
	200,000
	50,000
	2,006,800

	FY 2017 MPSC	FY 2017 Consultants	FY 2017 Total
	581,750		581,750
	-		-
			-
		69,000	69,000
		370,500	370,500
		33,250	33,250
	93,400	50,000	143,400
	-	-	-
	206,850	-	206,850
	-	-	-
	-	-	-
	25,100	40,000	65,100
	132,300	15,000	147,300
	38,200	47,150	85,350
	61,300	97,900	159,200
	22,700	-	22,700
	19,500	-	19,500
	19,500	-	19,500
	19,500	-	19,500
	1,220,100	722,300	1,942,900
			63,900

Nurse Support Program II FY 2017 Competitive Institutional Grants

May 11, 2016

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 April 13, 2016 Public Commission Meeting.

INTRODUCTION

This report presents the recommendations of the Nurse Support Program II (NSP II) Competitive Institutional Grant Review Panel for fiscal year (FY) 2017. The FY 2017 recommendations align with both NSP II and national-level goals and objectives. This report and recommendations are submitted by the Maryland Higher Education Commission (MHEC) and the Maryland Health Services Cost Review Commission (HSCRC).

BACKGROUND

Over the last 30 years, the HSCRC has funded programs to address the cyclical nursing workforce shortages. 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 that underlie the nursing shortage. The Commission approved an increase of 0.1 percent of regulated gross hospital revenue to expand the pool 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 FYs 2016 through 2020.

MARYLAND PROGRESS IN NURSING EDUCATION

- Maryland has seen a 48.1 percent increase in the number of entry-level (BSN) and baccalaureate completion (RN-BSN) graduates, from 1,105 graduates in 2010 to 1,636 graduates in 2015.
- The number of Associate Degree in Nursing (ADN) graduates increased by 12.6 percent, from 1,443 graduates in 2010 to 1,625 graduates in 2015.
- The number of Master's in Nursing (MSN) graduates increased by 42.6 percent, from 441 graduates in 2010 to 629 graduates in 2015.
- The number of Doctor of Nursing Practice (DNP) and Doctor of Philosophy in Nursing (PhD) graduates increased by 10.9 percent, from 64 graduates in 2010 to 71 graduates in 2015.

FY 2016 – FY 2020 UPDATES

NSP II Program Improvements

Senate Bill (SB) 108[1] was introduced during the 2016 Maryland legislative session with the purpose of deleting the term "bedside" from the descriptor of nurses in the statutory provision establishing the NSP II.[2] Instead of focusing on "bedside" nurses, SB 108 allows the NSP II to improve the pipeline of nurses with the skills necessary to keep pace with the rapidly changing health care delivery system. Steve Ports, Director, Center for Engagement and Alignment at the HSCRC, testified as a co-sponsor of the bill with Priscilla Moore, NSP II Grants Specialist at MHEC. SB 108 was passed by both the Maryland Senate and the House and was approved by the Governor on April 26, 2016.

The most recent HSCRC recommendations to NSP II staff included focusing on better data management to inform future policy and programmatic decisions. In response to this recommendation, enhancements to the existing nursesupport.org website are currently being developed to provide high-volume data submission, management, analysis, and report preparation for future outcome evaluations. This project is on schedule to be completed in time for the FY 2016 to 2020 reporting period.

New NSP II Programs: Academic and Practice Partnerships

The NSP II's newest program, the Nurse Leadership Consortium and Clinical Simulation Resource Consortium, aligns with the recommendations of a study commissioned by the American Association of Colleges of Nursing, which examined the potential for enhanced partnerships between academic nursing and academic health centers (the American Association of Colleges of Nursing, 2016). These new programs were created to provide opportunities across settings for academic nurse faculty and clinical practice nurses to work closer together. Both programs have dedicated advisory councils with representation from hospitals and academia to provide oversight and guidance. During the first year, 72 registered nurses participated in the NSP II Leadership Consortium and Clinical Simulation Resource Consortium. These participants were nominated by health systems at 9 hospitals and 20 nursing programs. These programs are open to all hospitals, health systems, and schools of nursing through an annual nomination process.

FY 2017 COMPETITIVE GRANT PROCESS AND RECOMMENDATIONS

In response to the FY 2017 request for applications (RFA), the NSP II Competitive Institutional Grant Review Panel received 24 new proposals and 3 continuation recommendations. The seven-member review panel—comprised of hospital nursing educators, former NSP I and NSP II grant

[1] S.B. 108, 2016 Gen. Assem., 436th Sess. (Md. 2016).
[2] [2] MD. CODE ANN., Educ. §11-405.

project directors, retired nurse educators, licensure and policy leaders, MHEC staff, and HSCRC staff—reviewed all proposals. All new proposals received by the deadline were scored by the panel according to the rubric outlined in the FY 2017 RFA. The review panel convened and developed consensus around the most highly recommended proposals. As a result, the review panel recommends funding for 16 of the 24 proposals. These funded proposals, which include one-year planning grants, five-year full implementation grants, and three continuation grants, total $17.5 million. Table 1 lists the recommended proposals for FY 2017 funding.

Table 1. Final Recommendations for Funding for FY 2017 Competitive Institutional Grants

Grant #	Institution	Grant Title	Proposed Funding
17-102	Community College of Baltimore County	Expanded Pathways to BSN	$1,085,971
17-104	Chesapeake College	Academic Progressions in Nursing	$913,399
17-106	Hood College	Baccalaureate Nursing at Hood College	$1,351,867
17-107	John Hopkins University	Nurse Faculty for the Future	$1,023,932
17-108	Morgan State University	SAM II	$784,438
17-110	Notre Dame of Maryland University	RN to BSN	$1,716,608
17-112	Salisbury University	BS Bound	$74,299
17-114	Stevenson University	Progress through Partnerships	$1,363,848
17-115	University of Maryland	Care Coordination Specialty	$255,198
17-116	University of Maryland	Care Coordination & Case Management	$113,701
17-117	University of Maryland	Collaborative NP Clinical Training	$945,866
17-119	University of Maryland	Developing Educators to Teach Online	$80,970
17-120	University of Maryland	Faculty Mentorship Program II	$350,031
17-121	University of Maryland	FNP Expansion to Shady Grove	$1,586,781
17-123	University of Maryland	Project RUSH- PhD Program	$595,210
17-124	University of Maryland	Psychiatric MH FNP	$168,924
17-125	John Hopkins University	Inter-professional Education	$1,692,335
17-126	University of Maryland	RN- BSN or MSN Clinical Faculty	$3,120,506
17-127	Montgomery College	Military to Associate Degree	$341,594
		TOTAL	**$17,565,478**

The recommended proposals represent the NSP II's commitment to increasing nursing degree completions, seamless academic pathways, academic practice partnerships, diversity, and statewide resources. The most highly recommended proposals support nursing undergraduate degree completions at Morgan State University, Associate to Bachelor degrees at The Community College of Baltimore County, RN-BSN completion programs at Notre Dame of Maryland University and Stevenson University, and two care coordination and case management

planning grants at the University of Maryland. The final recommended proposals align with the NSP II goals and support nursing education across Maryland.

HSCRC and MHEC staff members recommend the 16 proposals presented in Table 1 for FY 2017 funding. .

REFERENCES

American Association of Colleges of Nursing- Manatt (2016, March 1). *Advancing health care transformation: A new era for academic nursing*. Retrieved from http://www.aacn.nche.edu/AACN-Manatt-Report.pdf.

Institute of Medicine. (2010). *The future of nursing: Leading change advancing health.* Washington, DC: The National Academies Press.

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. (2015). Nurse Support Program II (NSP II) Outcomes Evaluation FY 2006 – FY 2015, Health Services Cost Review Commission, January 14, 2015 Minutes. Retrieved from http://www.hscrc.state.md.us/documents/commission-meeting/2015/01-14/HSCRC-Post-Commission-Meeting-2015-01-15.pdf

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/nursingprojections.pdf.

Nurse Support Program II

Recommendations for the FY 2017 NSP II Competitive Institutional Grants

HSCRC
Health Services Cost Review Commission

FY 2016 - FY 2020: Updates

- NSP II Statute in Education Article, Section 11-405, revised to remove "bedside" as a descriptor.
- SB 208 voted favorable in both the House and Senate.
- Improved metrics and program evaluation process
- Developing enhancements to nursesupport.org website to provide automated data collection, management, analysis and reporting.

FY 2017 Grant Recommendations

- Total Funding Recommended- $17.5 mil
  - 4 Planning Grants
  - 12 Implementation Grants
  - 3 Continuation Grants
- Broad geographic representation
- Funding recommended for proposals at 11 higher education institutions
  - 4 community colleges
  - 4 private
  - 2 public Universities
  - 1 HBCU

FREDERICK
MEMORIAL HOSPITAL

May 4, 2016

Carol Snapp, CNM, DNSc
BSN Program Director
Hood College
401 Rosemont Avenue
Frederick, MD 21701

Dear Dr. Snapp,

I am writing in support of a collaborative effort between Hood College and Frederick Memorial Hospital (FMH) to create a Memorandum of Understanding whereas FMH's nursing clinical experts may teach part time at Hood College. Hood College Faculty in turn would serve as mentors to help the nurse clinicians adapt to the formal teaching role. Hood would compensate these specialty clinicians for both time spent in orientation as well as the classroom.

It is exciting to continue our work together as we educate future generations of nurses, and also provide challenging and rewarding opportunities for FMH nurses to develop both personally and professionally.

Sincerely,

Cheryl

Cheryl Cioffi DNP, RN, ANP-BC, NEA-BC
Senior Vice President for Patient Care Services & Chief Nursing Officer
Frederick Memorial Hospital

DRAFT Recommendations for the Readmissions Reduction Incentive Program for Rate Year 2018

Updated May 11, 2016

Health Services Cost Review Commission

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

This document contains the revised draft staff recommendations for updating the Maryland Hospital Readmissions Reduction Incentive Program, revised from draft presented at the March 9, 2016 Commission meeting. Please submit comments on this draft to the Commission by Wednesday May 25, 2016, via hard copy mail or email to Dianne.feeney@maryland.gov.

Table of Contents

LIST OF ABBREVIATIONS

Affordable Care Act	ACA
ADI	Area deprivation index
APR-DRG	All-patient refined diagnosis-related group
ARR	Admission-Readmission Revenue Program
CMS	Centers for Medicare & Medicaid Services
CY	Calendar year
ED	Emergency department
FFS	Fee-for-Service
FFY	Federal fiscal year
FY	Fiscal year
HRRP	Hospital Readmissions Reduction Program
ICD-10	International Classification of Disease, 10th Edition
HSCRC	Health Services Cost Review Commission
MHA	Maryland Hospital Association
MHAC	Maryland Hospital-Acquired Conditions Program
PAU	Potentially avoidable utilization
PPC	Potentially preventable complication
PQI	Prevention quality indicator
RRIP	Readmissions Reduction Incentive Program
RSSP	Readmissions Shared Savings Program
RY	Rate year
SES/D	Socio-economic and demographic
SOI	Severity of illness
YTD	Year-to-date

INTRODUCTION

The purpose of this report to provide background information on the Readmissions Reduction Incentive Program (RRIP) and to make recommendations for updating the state rate year (RY) 2018 methodology. This draft is updated from the first draft recommendations presented at the March 9, 2016 Maryland Health Services Cost Review Commission (HSCRC or Commission) meeting. The RY 2017 approved policy stated that staff would assess the impact of admission reductions, sociodemographic factors, and all-payer versus Medicare readmission trends and make adjustments to the rewards or penalties if necessary. The first draft presented the results of these analyses and provided options for possible modifications to both the RY 2017 results and the RY 2018 methodology. In the last two months, staff has made more progress on understanding the impact of socioeconomic demographic adjustments and out-of-state readmissions. Staff is now recommending moving to a methodology that would assess both the hospital readmission rate compared to the state benchmark readmission rate, as well as the improvement rate from calendar year (CY) 2013. Staff is also proposing to align the savings policy with the potentially avoidable utilization (PAU) measure for RY 2017, which would combine readmissions and prevention quality indicators (PQIs) in calculating the savings adjustment (this recommendation is presented in a separate report). The draft recommendations for the RRIP are based on the assumption that the Commission will adopt the proposed PAU Savings Program. If there are modifications to that proposal, final recommendations for the RRIP may need to be adjusted to align these two programs.

BACKGROUND

Medicare Hospital Readmissions Reduction Program

The United States health care system currently experiences an unacceptably high rate of preventable hospital readmissions. These excessive readmissions generate considerable unnecessary costs and substandard care quality for patients. A readmission is defined as an admission to a hospital within a specified time period after a discharge from the same or another hospital. Under authority of the Affordable Care Act (ACA), the Centers for Medicare & Medicaid Services (CMS) established its Medicare Hospital Readmissions Reduction Program (HRRP) in federal fiscal year (FFY) 2013. Under this program, CMS calculates the average risk-adjusted, 30-day hospital readmission rates for patients with certain conditions using claims data. If a hospital's risk-adjusted readmission rate for such patients exceeds that average, CMS penalizes it in the following year for all Medicare admissions in proportion to its rate of excess readmissions. Penalties under the HRRP were first imposed in FFY 2013, during which the maximum penalty was 1 percent of the hospital's base inpatient claims. The maximum penalty increased to 2 percent for FFY 2014 and 3 percent for FFY 2015 and beyond. CMS uses three years of previous data to calculate each hospital's readmission rate. For penalties in FFYs 2013 and 2014, CMS focused on readmissions occurring after initial hospitalizations for three conditions: heart attack, heart failure, and pneumonia. For penalties in FFY 2015, CMS included two additional conditions: chronic obstructive pulmonary disease and elective hip or knee replacement. In the future, CMS intends to continue with these conditions and will add the

assessment of performance following initial diagnosis of coronary artery bypass graft surgery to the list for FFY 2017. [1]

Overview of the Maryland RRIP Program

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 HRRP. The ACA requires Maryland to have a similar program and achieve the same or better results in costs and outcomes in order to maintain this exemption. The Commission made an initial attempt to encourage reductions in unnecessary readmissions when it created the Admission-Readmission Revenue (ARR) program in RY 2012. The ARR program, which was adopted by most Maryland hospitals, established "charge per episode" constraints on hospital revenue, providing strong financial incentives to reduce hospital readmissions. The ARR program was replaced with global budgets in RY 2014. In May 2013, the Commission also approved the Readmission Shared Savings Program (RSSP) for RY 2014 to achieve savings that would be approximately equal to those that would have been expected from the federal Medicare HRRP. Based on hospital achievement levels in reducing readmissions, the RSSP decreased hospital inpatient revenues on average by 0.20 percent of state total revenue in its first year.

The All-Payer Model Agreement with CMS replaced the requirements of the ACA by establishing two sets of requirements to maintain exemptions from federal programs for readmissions and hospital-acquired conditions. One set of requirements established performance targets for readmissions and complications, while the second set of requirements ensured that the amount of revenue adjustments in Maryland's quality-based programs matched CMS levels in aggregate. For readmissions, the performance requirement is for Maryland's statewide hospital readmission rate to be equal to or below the national Medicare readmission rate by CY 2018. Maryland must also make scheduled, annual progress toward this goal.

In April 2014, in order to meet the new Model requirements, the Commission approved a new readmissions program—the RRIP—to further bolster the incentives to reduce unnecessary readmissions. The Performance Measurement Work Group established the following guiding principles for the RRIP:

- The measurements used for performance linked with payment must include all patients, regardless of payer.
- The measurements must be fair to hospitals.
- Annual targets must be established to reasonably support the overall goal of meeting or outperforming the national Medicare readmission rate by CY 2018.
- The measurements used should be consistent with the CMS readmissions measure.

[1] For more information on HRRP, see https://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/AcuteInpatientPPS/Readmissions-Reduction-Program.html.

- The approach must include the ability to track progress.

The RRIP provided a positive increase of 0.50 percent of inpatient revenues in RY 2016 for hospitals that were able to meet or exceed a pre-determined reduction target for readmissions in CY 2014 relative to CY 2013. Readmission rates are adjusted for case-mix using all-patient refined diagnosis-related group (APR-DRG) severity of illness (SOI) (see Appendix I for details of indirect standardization method). The readmissions reduction target was set at 6.76 percent for all-payer case-mix adjusted readmission rates. [2] The HSCRC did not impose penalties in the first year of the RRIP program.

As the progress in reducing readmissions was slower than projected, the RRIP methodology was updated for RY 2017 to include both higher potential rewards for hospitals that achieved or exceeded the readmission reduction target and payment reductions for hospitals that did not achieve the required readmission reductions. Rewards and payment reductions were allocated along a scale commensurate with hospital improvement rates. The readmission reduction target for RY 2017 was set at 9.30 percent.[3]

ASSESSMENT

Maryland's Performance to Date

Medicare Waiver Test Performance

With the onset of the All-Payer Model Agreement, HSCRC and CMS staff worked to refine the Medicare readmission measure specifications used to determine contract compliance. These changes narrowed the gap between the Maryland and national Medicare readmission rates to 7.96 percent for CY 2013 (the base measurement period for the Model), as the original estimates included planned admissions, and more importantly, specially-licensed rehabilitation and psychiatric beds for Maryland, but not for the nation (see Appendix II for details). Final calculations indicate that Maryland's Medicare readmission rate was 16.61 percent compared with the national rate of 15.39 percent for CY 2013.

Using the revised final measurement methodology, Maryland performed better than the nation in reducing readmission rates in both CY 2014 and CY 2015. Figures 1 and 2 below compare the cumulative readmission rate changes by month between Maryland and the national Medicare program. Figure 1 shows the changes between CY 2013 and CY 2014, and Figure 2 shows changes between CY 2014 and CY 2015.

---

[2] This target was based on the excess levels of Medicare readmissions in Maryland in CY 2013 (8.78 percent), divided by five (representing each year of the Model Agreement performance period), plus an estimate of the reduction in Medicare readmission rates that would be achieved nationally (5.00 percent)

[3] The target was updated based on remaining national to Medicare readmission rates and a projected 1.34 percent decline in the national Medicare readmission rates in CY 2015.

In Figure 1, for the month of January 2014, Maryland experienced a 2.18 percent increase compared with January 2013. Throughout the year, this trend shifted, with Maryland achieving a 0.56 percent decrease in readmissions between January and August 2014, compared with the same time period in CY 2013. For CY 2014, the readmission rates for Maryland declined by 0.85 percent in comparison to January to December 2013. In contrast, the national readmission rate, represented by the blue line, increased by 0.71 percent during the same period.

Figure 1. Cumulative Readmission Rate Change by Month, CY 2014-2013, Maryland vs. National Medicare Readmissions

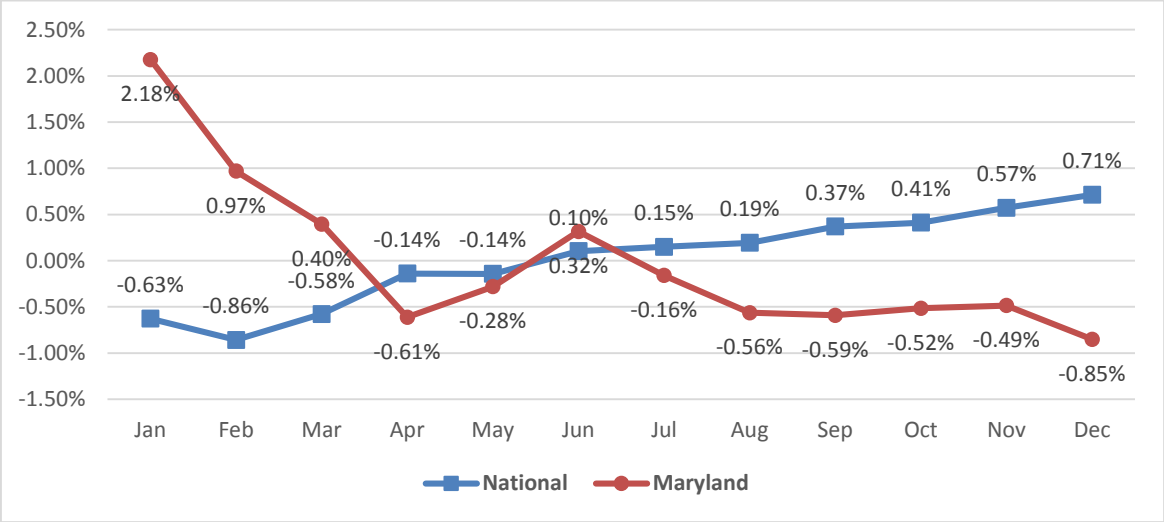
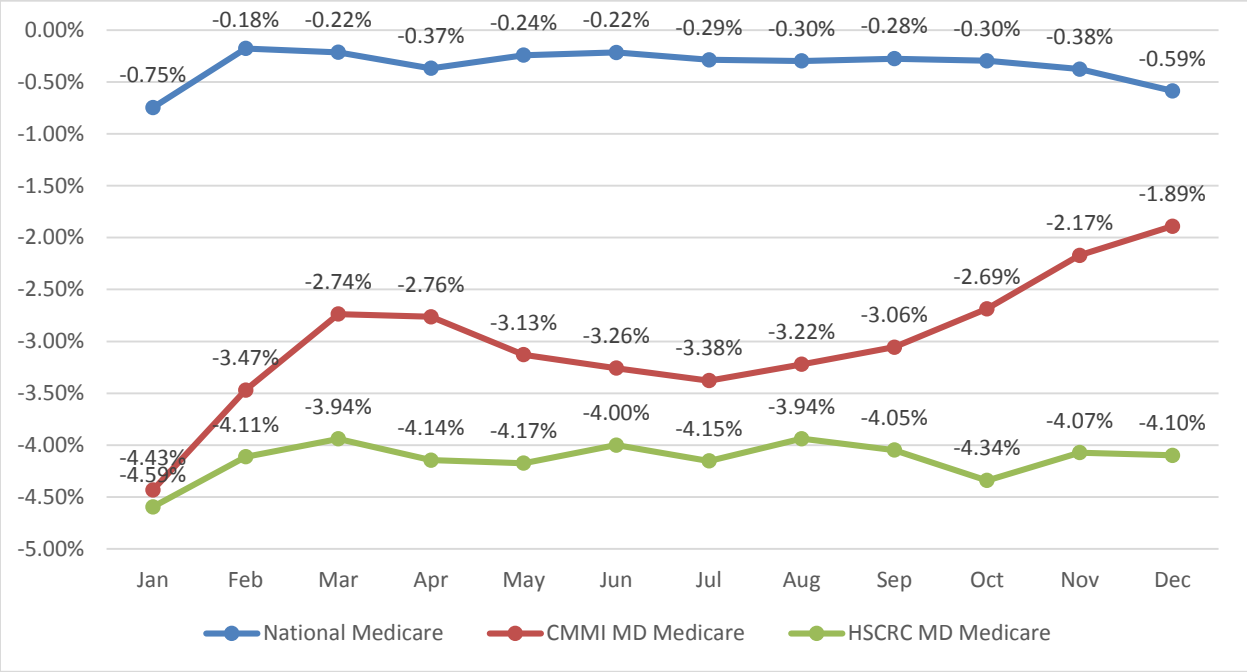


Figure 2 presents preliminary data for CY 2015, indicating that Maryland has experienced a 1.89 percent reduction in the Medicare readmission rate compared with CY 2014 and exceeded the national decrease in the Medicare readmission rate of 0.59 percent based on the CMS Innovation Center (CMMI) preliminary reports. However, these trends should be considered with caution as HSCRC and CMMI are investigating the potential impact of the transition to International Classification of Disease-10th Edition (ICD-10) on readmission rates after September 2015. The third line in the graph provides the Medicare readmission rate trend from HSCRC data, which may provide some indication that Maryland readmission rates declined at similar levels in the last three months of the year. Staff is working with the CMMI data contractor to resolve these issues and finalize the trend reports. According to staff calculations, Maryland will meet the annual readmission requirement based on November trends but will not meet it based on December trends (Appendix III).

Figure 2. Cumulative Readmission Rate Change by Month, CY 2015-2014, Maryland vs. National Medicare Readmissions



All-Payer Performance

While the CMS readmission target is based on the unadjusted readmission rate for Medicare patients, the RRIP adjustments that are applied measure the all-payer case-mix adjusted readmission rate, in line with the guiding principles and all-payer approach used in all other programs in Maryland. The RRIP measure was refined to incorporate many of the elements of the CMS Medicare measure specifications (e.g., planned admissions and transfer logic). See Appendix I for more details on the RRIP methodology.

Maryland made progress in CY 2015 towards meeting the Medicare readmission reduction contract requirement, although this may be mainly attributed to a slower than expected rate of decline in the national readmission rates. Despite this progress, the all-payer readmission rate decline has fallen short of the statewide CY 2015 cumulative target of 9.30 percent. Appendix IV provides hospital-level improvement rates for discharges occurring through December 2015.[4] Overall, all-payer readmission rates declined by 7.20 percent over CY 2013, with nearly one-third of the hospitals meeting or exceeding the 9.30 percent reduction target. Eight hospitals had an increase in their readmission rates, with the highest increase of 17.28 percent.

[44] Staff is still investigating ICD-10 impact on the readmission rates for all-payer rates.

Improvement Target Calculation Methodology for Rate Year 2018

As previously stated, under the All-Payer Model Agreement, Maryland is required at minimum to close one-fifth of the gap between the national and Maryland readmission rates and match the national decline in Medicare readmission rates to eliminate the excessive level of readmissions by CY 2018. Although we now know the one-fifth of the gap, which is 0.25 percentage points, predicting national readmission rates has been challenging to set targets prospectively for the state. Furthermore, additional adjustment factors are necessary to convert the Medicare readmission target to an all-payer case-mix adjusted target. HSCRC contractor, Mathematica Policy Research, modeled different specifications to predict national readmission rates using three different assumed rates for the estimated annual rate of change for the national readmission rate, including the current rate of change for CY 2015 and the historical rate of change over the past several years. This yielded cumulative all-payer targets ranging from 9.1 to 12.7 percent, depending on the assumptions used for the Medicare national rate of change. The models assume that Maryland would need to match the annual decline in the national Medicare readmission rate, close the remaining gap between the Maryland and national rates by one-third, and adjust the target upwards to make up for the difference between the Maryland Medicare readmission rates from CMMI calculations and the HSCRC all-payer case-mix adjusted trends. The lowest bound estimate is based on a -0.6 percent decline in the national readmission rate, which is the rate of change in CY 2014; the highest bound is based on a decline of -1.8 percent in the national Medicare readmission rates, which assumes national trends resume the larger declines experienced prior to CY 2013. [5]

Figure 3. Maryland and National Medicare Historical and Projected Readmission Rate Reductions Based on Varying Assumptions

Measurement Years	Base Year MD/National Readmission Rate	Assumed National Annual Rate of Change	Actual National Annual Rate of Change	Actual National Cumulative Change	MD Cumulative Medicare Rate of Target	All Payer to Medicare Readmission Rate Percent Change Difference	Cumulative All Payer Target
CY 2014	8.9%	**-5.0%**	0.7%	0.7%	-6.8%		**-6.8%**
CY 2015	7.7%	**-1.3%**	-0.6%	0.1%	-4.7%	-4.6%	**-9.3%**
CY 2016 Modeling Results:							

[5] For the CY 2014 target calculation, Medicare's national rate of readmissions was assumed to drop by 5.0 percent in CY 2014. Accordingly, the target rate of readmission reductions included in the RRIP for CY 2014 was 6.76 percent (i.e., 1.76 percent + 5.0 percent = 6.76 percent), and was applied to all payers based on stakeholder workgroup recommendations. For the CY 2015 target calculation, the remaining gap divided by 4 was 1.64 percent, and the national readmission reduction estimate was 1.3 percent. Based on HSCRC trends indicating that all-payer risk-adjusted readmission rates were declining much more rapidly, 4.5 percent was added to convert the Medicare target to an all payer target.

Measurement Years	Base Year MD/National Readmission Rate	Assumed National Annual Rate of Change	Actual National Annual Rate of Change	Actual National Cumulative Change	MD Cumulative Medicare Rate of Target	All Payer to Medicare Readmission Rate Percent Change Difference	Cumulative All Payer Target
CY16 - Current Rate of Change		-0.6%			-5.5%	-3.6%	-9.1%
CY16 -Lowess Model Lowest Bound		-0.8%			-5.8%	-3.6%	-9.4%
CY 16 Long Term Historical Trend		-1.8%			-9.2%	-3.6%	-12.7%

In establishing a cumulative readmission reduction target for the RRIP for RY 2018, staff previously noted that it is important to strike a reasonable balance between the desire to set a target that is not unrealistically high and the need to conform to the requirements of the Model Agreement. With each passing year, underachievement in any particular year becomes increasingly hard to offset in the remaining years before CY 2018. Again, the consequence for not achieving the minimum annual reduction would be a corrective action plan and potentially the loss of the waiver from the Medicare HRRP. The consequences of not meeting the target are stated in the Model Agreement as follows:

> *If, in a given Performance Year, Regulated Maryland Hospitals, in aggregate, fail to outperform the national Readmissions Rate change by an amount equal to or greater than the cumulative difference between the Regulated Maryland Hospitals and national Readmission Rates in the base period divided by five, CMS shall follow the corrective action and/or termination provisions of the Waiver of Section 1886(q) as set forth in Section 4.c and in Section 14.*

Requiring Maryland to conform to the national Medicare HRRP would reduce our ability to design, adjust, and integrate our reimbursement policies consistently across all payers based on local input and conditions. In particular, the national program is structured as a penalty-only system based on a limited set of conditions, whereas the Commission prefers to have the flexibility to implement much broader incentive systems that reflect the full range of conditions and causes of readmissions on an all-payer basis. Given that Maryland's readmission rate is still high compared with the national rate, some Performance Measurement Workgroup members supported a more aggressive target. Other Workgroup members felt that because Maryland is making good progress toward meeting the Model Agreement requirement, the target should be less aggressive.

Measuring the Better of Attainment or Improvement

In order to refine the methodology for RY 2018, the HSCRC solicited input from the Performance Measurement Workgroup.[6] The Workgroup discussed pertinent issues and potential changes to Commission policy for RY 2018 that were approved by the Commission and reviewed the most recent performance data available. Workgroup members recommended to delay the final recommendations until the impact of socio-economic adjustments are better understood.

In the March draft report, HSCRC staff indicated that it was unable to measure whether a particular hospital has low or high readmission rate, commonly referred to as "attainment" in quality improvement. Since that time, staff has made progress in measuring attainment with assistance from Mathematica and filling in gaps in estimates for out-of-state readmissions using Medicare data. In our preliminary report, staff expressed a concern that it appeared that hospitals with low initial readmission rates might be unduly penalized under the RRIP improvement targets. Since that time, the Maryland Hospital Association (MHA), CareFirst, HSCRC, and Mathematica Policy Research, have been examining models to see if we can address the major concerns in measuring attainment. Staff greatly appreciates stakeholders' careful consideration and constructive suggestions to improve the current methodology.

Staff believes that adequate progress has been made in developing a model that could be used in evaluating attainment and improvement, although we are continuing to evaluate it. Mathematica's preliminary analysis found that the current adjustment methodology using APR-DRGs provides adequate risk adjustment, and including additional measures in the risk adjustment model, such as age, sex, Elixhauser Comorbidity Index,[7] primary payer, and the Area Deprivation Index (ADI)[8] does not substantially change the model accuracy and hospital readmission rankings. More importantly, although some hospital's readmission rates are adjusted downward with the inclusion of additional risk adjustments, the rate of change in readmissions shows a slower improvement rate. In other words, hospitals may gain more attainment points from risk adjustment, but they would loose from improvement points (see Appendix V for Mathematica's presentation slides).

The relationship between ADI and readmission rates is a complex one, and complicated statistical analyses may be needed to distinguish the hospital-level factors contributing to high

---

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

[7] The Elixhauser Comorbidity Index is a method for measuring patient comorbidity based of patient diagnosis.

[8] The Area Deprivation Index was developed by HIPxChange, which is sponsored by the University of Wisconsin-Madison. The ADI is a composite measure of the socioeconomic deprivation of a geographic location (like a Census-block). It reflects various socioeconomic indicators like the level of education of the population, the employment rate, median family income, home value, and percent of the population below 150 percent of the federal poverty line. Higher values of the index indicate higher levels of socioeconomic deprivation. For more information, see: https://www.hipxchange.org/ADI.

readmission rates from patient-level factors, such as ADI. Furthermore, the application of socio-economic and demographic (SES/D) adjustments to hospital quality measures is a subject of national debate, requiring extensive discussions and stakeholder input to determine policy implications and alternative methods of controlling for SES/D factors. HSCRC staff will continue to evaluate various risk adjustment methodologies to finalize the recommendation in June.

MHA arrived at a similar conclusion based on their own statistical modeling about the adequacy of the current case-mix adjustment methodology. MHA proposes setting a statewide readmission attainment target (benchmark), similar to the current policy which sets an improvement target. Individual hospitals' performance relative to the statewide target would be tied to specific payment adjustment amounts, and hospitals would be evaluated on both attainment and improvement performance. The hospital's final payment adjustment would be based on the "better of" the two adjustments. They also support linking performance milestones to pre-set payment adjustments to make the results predictable. (Appendix VI).

HSCRC staff agrees that the MHA proposed modification holds promise as it includes several features that have worked well in the HSCRC's Quality-Based Reimbursement and Maryland Hospital Acquired Conditions (MHAC) programs. Staff also agrees that the use of defined performance targets and evaluation of individual hospital performance relative to those targets tied to payment adjustments could provide a clear goal and predictable revenue consequences, allowing hospitals to monitor progress throughout the year.

Three critical determinations have to be made to move to an approach proposed by the MHA.

1. Adjustments for out-of-state readmissions: The MHA proposes to use the information the state receives from CMS on Medicare readmissions occurring at out-of-state hospitals. This adjustment would be based on Medicare trends and would not be adjusted for clinical or other factors that would be used in RRIP in-state readmission adjustments. HSCRC staff does not have information from other payers and cannot assess the impact of any adjustments to these rates. However, using Medicare proportions for this year and working towards a more refined approach for the CY 2017 measurement year might be reasonable (Please see Appendix IX for modeling results for Medicare out-of-state readmission ratios).

2. Determination of an attainment target: The MHA proposes to use statewide average readmission rates as the benchmark for penalties and rewards. HSCRC staff and payer representatives at the Workgroup expressed a need to have benchmarks better than the state average given the higher readmission rates in Maryland. One option might be to adjust the attainment target down to the national average rate using information from CMS Medicare readmission trends. However, the HSCRC staff believes attainment benchmarks need to be more stringent than the national average rates to improve readmission rates in Maryland. Table 4 provides the distribution of CY 2015 readmission rates and the imputed national average. Only two Maryland hospitals were statistically

significantly better than the national average based on CMS Medicare hospital-wide readmission rates available at hospitalcompare.gov.

Figure 4. CY 2015 All-Payer Readmission Rates and Estimated National Average

		CY 2015 Case-mix Adjusted Readmission Rates Adjusted for Out-of-State Readmissions
Lowest Readmission Rate	A	9.72%
Lowest 25th percentile	B	12.09%
State Average	C	13.29%
Highest 25th percentile	D	14.16%
Highest Readmission Rate	E	16.59%
MD/National Difference in Medicare Readmission Rates	F	4.89%
National Imputed Average for All-Payer	G=C*(1-F)	12.64%

* Medicare out of state readmissions are used for adjustments.

3. Determination of an improvement target: If the changes to the measurement would allow positive adjustments for hospitals, the required statewide improvement target may need to be increased to ensure that the Medicare readmission targets are met. Staff will be examining this issue in May and finalize the improvement target based on this analysis and most recent trend data from CMMI.

The Link between Shared Savings and RRIP

As mentioned in the overview, the HSCRC Savings Program prospectively adjusts hospital rates to achieve a specified statewide savings amount. For the past several years, the shared savings adjustment for each hospital was based upon past readmission rates. Staff is proposing to broaden the savings program to include additional categories of PAU. This proposal is described in a separate draft report.

CareFirst supports prospectively applying rate adjustments based on performance, and, in effect, blending the RRIP incentives with the Shared Savings Program adjustment (Appendix VII). The CareFirst proposal supports testing the relevance of adjusting hospital readmission rates based on its distribution of indigent and non-indigent patients. If there is a difference in readmission rates for these two patient cohorts statewide, CareFirst supports applying a proportional adjustment to each hospital's readmission rate and measuring hospital performance by blending their indigence/case-mix adjusted readmission rate and actual base year readmission rate. At this time, staff does not support blending the programs since we are planning to broaden the categories of PAU included in the Savings Program, both for RY 2017 and on an ongoing basis.

Considerations for the RY 2017 RRIP Policy

One of the guiding principles for Maryland's hospital quality programs is to set the policy and benchmarks ahead of the performance periods. However, in light of the extensive changes in the RRIP policy for RY 2017, the Commission suggested last year that staff examine the developing policy results during the performance period because of some potential payment equity issues. In approving a policy that sets improvement targets equally for all hospitals, there were concerns that individual hospitals might be penalized even though they were performing relatively well. For example, if the initial readmission rate for a hospital was relatively low, it may be harder to reduce the same percentage of readmissions as other hospitals with higher initial rates.

Staff has evaluated a RY 2018 approach based on the better of attainment or improvement to moderate adjustments in light of recent analysis.

Given the substantial progress made in the attainment and improvement model for RY 2018, staff proposes to adopt a similar methodology for the RY 2017 time period. The modeling results based on the staff recommendations below are provided in Appendix VIII. Overall, the new approach would lower the statewide total penalties from $36.2million to $28.9 million. The total rewards would increase from $8.3 million to $12.4 million. These effects combined would change the net impact of the RRIP from -$27.8 million to -$16.5 million.

RECOMMENDATION

Based on this assessment, HSCRC staff recommends the following updates to the RRIP program for RY 2018:

1. The RRIP policy should continue to be set for all-payers.
2. Hospital performance should be measured as the better of attainment or improvement.
3. The attainment benchmark should be set at the state top-quartile readmission rate in the most recent performance period.
4. The reduction target should be set at 9.50 percent from CY 2013 readmission rates.

Staff also recommends the following:

5. For RY 2017, apply the same methodology outlined above based on a 9.3 reduction target as approved by the Commission last year.

Staff will evaluate the impact of different risk adjustment models on both attainment and improvement rates and finalize the measure specifications and propose the final approach in the June recommendation.

APPENDIX I. HSCRC CURRENT READMISSIONS MEASURE SPECIFICATIONS

1) Performance Metric

The methodology for the Readmissions Reduction Incentive Program (RRIP) measures performance using the 30-day all-payer all hospital (both intra and inter hospital) readmission rate with adjustments for patient severity (based upon discharge all-patient refined diagnosis-related group severity of illness [APR-DRG SOI]) and planned admissions.

The measure is very similar to the readmission rate that will be calculated for the new All-Payer Model with a few exceptions. For comparing Maryland's Medicare readmission rate to the national readmission rate, the Centers for Medicare & Medicaid Services (CMS) will calculate an unadjusted readmission rate for Medicare beneficiaries. Since the Health Services Cost Review Commission (HSCRC) measure is for hospital-specific payment purposes, adjustments had to be made to the metric that accounted for planned admissions and SOI. See below for details on the readmission calculation for the program.

2) Adjustments to Readmission Measurement

The following discharges are removed from the numerator and/or denominator for the readmission rate calculations:

- Planned readmissions are excluded from the numerator based upon the CMS Planned Readmission Algorithm V. 3.0. The HSCRC has also added all vaginal and C-section deliveries as planned using the APR-DRGs rather than principal diagnosis (APR-DRGs 540, 541, 542, 560). Planned admissions are counted in the denominator because they could have an unplanned readmission.
- Discharges for newborn APR-DRG are removed.
- Admissions with ungrouable APR-DRGs (955, 956) are not eligible for a readmission but can be a readmission for a previous admission.
- Hospitalizations within 30 days of a hospital discharge where a patient dies is counted as a readmission, however the readmission is removed from the denominator because there cannot be a subsequent readmission.
- Admissions that result in transfers, defined as cases where the discharge date of the admission is on the same or next day as the admission date of the subsequent admission, are removed from the denominator counts. Thus, only one admission is counted in the denominator and that is the admission to the transfer hospital. It is this discharge date that is used to calculate the 30-day readmission window.
- Discharges from rehabilitation hospitals (provider ids Chesapeake Rehab 213028, Adventist Rehab 213029, and Bowie Health 210333).
- Holy Cross Germantown is excluded from the program until it has one full year of base period data; Levindale is included in the program; and chronic beds within acute care hospitals are excluded for this year but will be included in future years.

- In addition, the following data cleaning edits are applied:
    - Cases with null or missing Chesapeake Regional Information System unique patient identifiers (CRISP EIDs) are removed.
    - Duplicates are removed.
    - Negative interval days are removed.
    - HSCRC staff is revising case-mix data edits to prevent submission of duplicates and negative intervals, which are very rare. In addition, CRISP EID matching benchmarks are closely monitored. Currently, 99 percent of inpatient discharges have a CRISP EID.

3) Improving Accuracy of Maryland and National Readmission Rate Comparison

In addition to the above adjustments, below are the specification changes made to allow an accurate comparison of Maryland's Medicare readmission rates with those of the nation.

- Requiring a 30-day enrollment period in fee-for-service (FFS) Medicare after hospitalization to fully capture all readmissions.
- Removing planned readmissions using the CMS planned admission logic for consistency with the CMS readmission measures.
- Excluding specially-licensed rehabilitation and psychiatric beds from Maryland rates due to inability to include these beds in national estimates due to data limitations. In contrast, the HSCRC includes psychiatric and rehabilitation readmissions in the all-payer readmission measure used for payment policy.
- Refining the transfer logic to be consistent with other CMS readmission measures.
- Changing the underlying data source to ensure clean data and inclusion of all appropriate Medicare FFS claims (e.g., adjusting the method for calculating claims dates and including claims for patients with negative payment amounts).

4) Details on the Calculation of Case-Mix Adjusted Readmission Rate

Data Source:

To calculate readmission rates for the RRIP, the inpatient abstract/case-mix data with CRISP EIDs (so that patients can be tracked across hospitals) is used for the measurement period plus an extra 30 days. To calculate the case-mix adjusted readmission rate for the CY 2013 base period and the CY 2016 performance period, data from January 1 through December 31, plus 30 days in January of the next year would be used.

SOFTWARE: APR-DRG Version 32

Calculation:

$$\text{Risk-Adjusted Readmission Rate} = \frac{\text{(Observed Readmissions)}}{\text{(Expected Readmissions)}} \times \text{Statewide Readmission Rate}$$

Numerator: Number of observed hospital specific unplanned readmissions.

Denominator: Number of expected hospital specific unplanned readmissions based upon discharge APR-DRG and Severity of Illness. See below for how to calculate expected readmissions adjusted for APR-DRG SOI.

Risk Adjustment Calculation:

- Calculate the Statewide Readmission Rate without Planned Readmissions.
    - Statewide Readmission Rate = Total number of readmissions with exclusions removed / Total number of hospital discharges with exclusions removed.
- For each hospital, calculate the number of observed unplanned readmissions.
- For each hospital, calculate the number of expected unplanned readmissions based upon discharge APR-DRG SOI (see below for description). For each hospital, cases are removed if the discharge APR-DRG and SOI cells have less than two total cases in the base period data (CY 2013).
- Calculate the ratio of observed (O) readmissions over expected (E) readmissions. A ratio of > 1 means that there were more observed readmissions than expected based upon that hospital's case mix. A ratio < 1 means that there were fewer observed readmissions than expected based upon that hospital's case mix.
- Multiply O/E ratio by the statewide rate to get risk-adjusted readmission rate by hospital.

Expected Values:

The expected value of readmissions is the number of readmissions a hospital, given its mix of patients as defined by discharge APR-DRG category and SOI level, would have experienced had its rate of readmissions been identical to that experienced by a reference or normative set of hospitals. Currently, HSCRC is using state average rates as the benchmark.

The technique by which the expected value or expected number of readmissions is calculated is called indirect standardization. For illustrative purposes, assume that every discharge can meet the criteria for having a readmission, a condition called being "at risk" for a readmission. All discharges will either have no readmissions or will have one readmission. The readmission rate is the proportion or percentage of admissions that have a readmission.

The rates of readmissions in the normative database are calculated for each APR-DRG category and its SOI levels by dividing the observed number of readmissions by the total number of discharges. The readmission norm for a single APR-DRG SOI level is calculated as follows:

Let:

N = norm
P = Number of discharges with a readmission
D = Number of discharges that can potentially have a readmission
i = An APR DRG category and a single SOI level

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

For this example, this number is displayed as readmissions per discharge to facilitate the calculations in the example. Most reports will display this number as a rate per one thousand.

Once a set of norms has been calculated, they can be applied to each hospital. For this example, the computation is for an individual APR-DRG category and its SOI levels. This computation could be expanded to include multiple APR-DRG categories or any other subset of data, by simply expanding the summations.

Consider the following example for an individual APR DRG category.

Expected Value Computation Example

1 Severity of Illness Level	2 Discharges at Risk for Readmission	3 Discharges with Readmission	4 Readmissions per Discharge	5 Normative Readmissions per Discharge	6 Expected # of Readmissions
1	200	10	.05	.07	14.0
2	150	15	.10	.10	15.0
3	100	10	.10	.15	15.0
4	50	10	.20	.25	12.5
Total	**500**	**45**	**.09**		**56.5**

For the APR-DRG category, the number of discharges with readmission is 45, which is the sum of discharges with readmissions (column 3). The overall rate of readmissions per discharge, 0.09, is calculated by dividing the total number of discharges with a readmission (sum of column 3) by the total number of discharges at risk for readmission (sum of column 2), i.e., 0.09 = 45/500. From the normative population, the proportion of discharges with readmissions for each SOI level for that APR-DRG category is displayed in column 5. The expected number of

readmissions for each SOI level shown in column 6 is calculated by multiplying the number of discharges at risk for a readmission (column 2) by the normative readmissions per discharge rate (column 5) The total number of readmissions expected for this APR-DRG category is the expected number of readmissions for the SOI.

In this example, the expected number of readmissions for this APR-DRG category is 56.5, compared to the actual number of discharges with readmissions of 45. Thus, the hospital had 11.5 fewer actual discharges with readmissions than were expected for this APR-DRG category. This difference can also be expressed as a percentage.

APR-DRGs by SOI categories are excluded from the computation of the actual and expected rates when there are only zero or one at risk admission statewide for the associated APR-DRG by SOI category.

APPENDIX II. CMS MEDICARE TEST READMISSION MEASURE VERSION 5 CHANGES

Below are the specification changes made to allow an accurate comparison of Maryland's Medicare readmission rates with those of the nation.

- Requiring a 30-day enrollment period in fee-for-service (FFS) Medicare after hospitalization to fully capture all readmissions.
- Removing planned readmissions using the CMS planned admission logic for consistency with the CMS readmission measures.
- Excluding specially-licensed rehabilitation and psychiatric beds from Maryland rates due to inability to include these beds in national estimates due to data limitations. In contrast, the HSCRC includes psychiatric and rehabilitation readmissions in the all-payer readmission measure used for payment policy.
- Refining the transfer logic to be consistent with other CMS readmission measures.
- Changing the underlying data source to ensure clean data and inclusion of all appropriate Medicare FFS claims (e.g., adjusting the method for calculating claims dates and including claims for patients with negative payment amounts).

APPENDIX III. CMS MEDICARE READMISSION RATE TARGET CALCULATIONS

The following figures show the CMS Medicare readmission rate target calculations. The first figure shows the calculations for determining the annual reduction required to close the gap between the Maryland and national Medicare readmission rates, as required by the All-Payer Model Agreement. The second figure shows the calculations for determining Maryland's progress on meeting the readmissions reduction target. Data through November 2015 show that Maryland is meeting the target, but data through December 2015 show that Maryland is not meeting the target. However, both November and December trends are underestimating Maryland's progress. HSCRC and CMMI staff confirmed that ICD-10 transition is resulting in higher readmission estimates for Maryland rates, and working to correct the issue.

BASE YEAR RATES

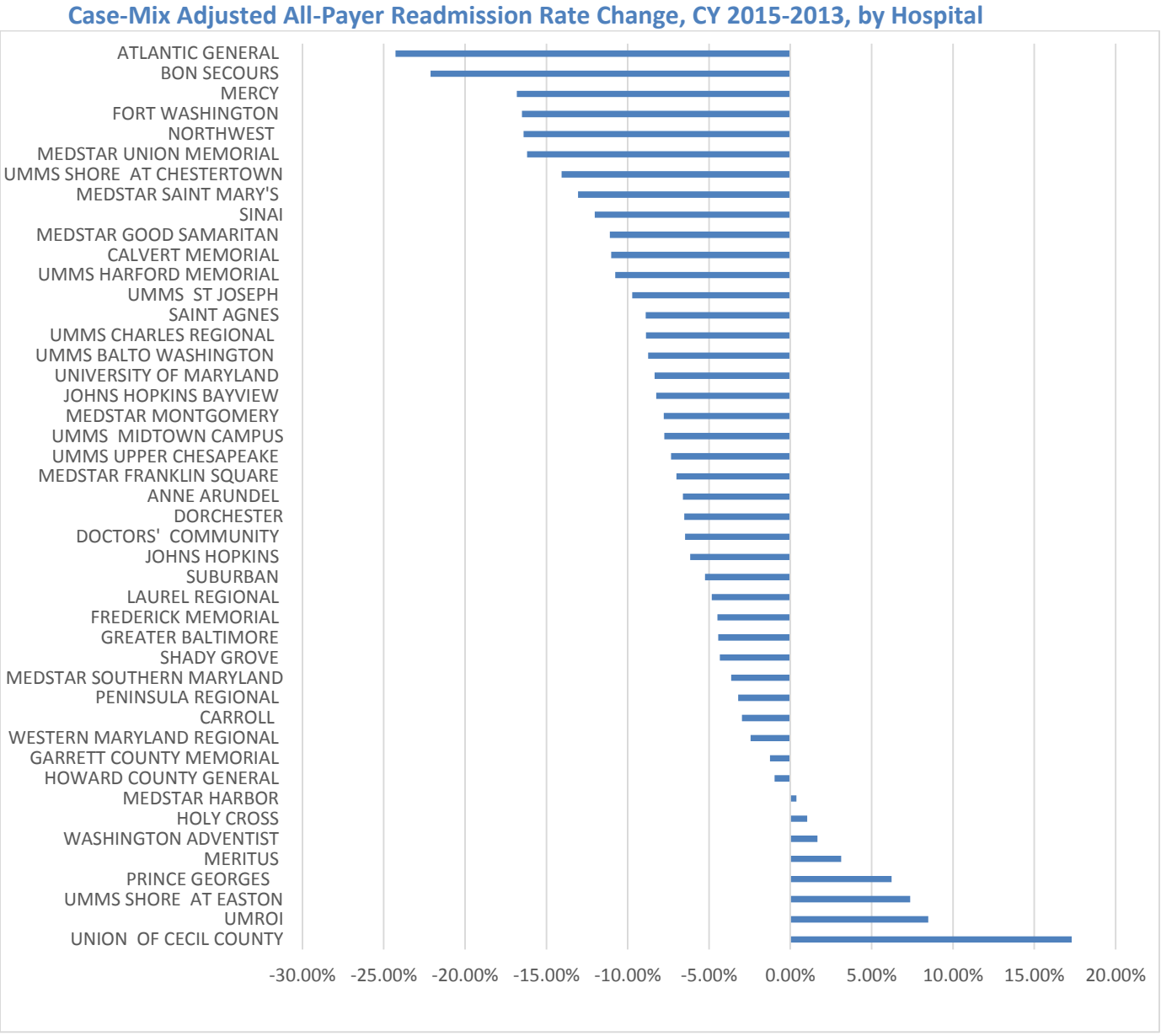
CY 2013 National Medicare Readmission Rate	A	15.39%
CY 2013 MD Medicare Readmission Rate	B	16.61%
MD vs National Difference	C=B-A	1.23%
Annual Reduction needed to Close the Gap	D=C/5	0.25%

PERFORMANCE YEAR CALCULATIONS

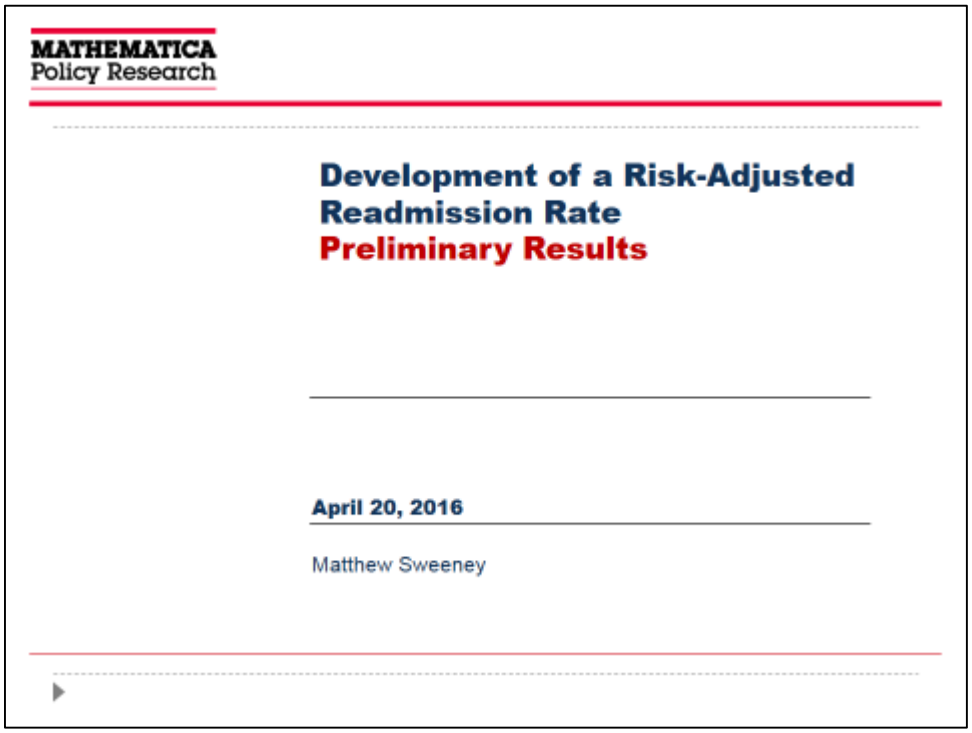
	National % Annual Change	National Rate	MD-National Difference	MD Target Rate	MD Actual Rate	MD-National Difference	MD % Annual Target	MD % Actual Change
A	B	C	D=1.23 % (-0.25%*2)	E	F	G=F-C	H	I
CY14	0.71%	15.50%	**0.98%**	16.47%	16.47%	**0.97%**	-0.84%	-0.85%
CY15-Estimated using Nov. Trend	-0.38%	15.44%	**0.73%**	16.17%	16.11%	**0.67%**	-1.82%	-2.17%
CY 15-Estimated using Dec. Trend	-0.59%	15.40%	**0.73%**	16.14%	16.16%	**0.75%**	-2.02%	-1.89%

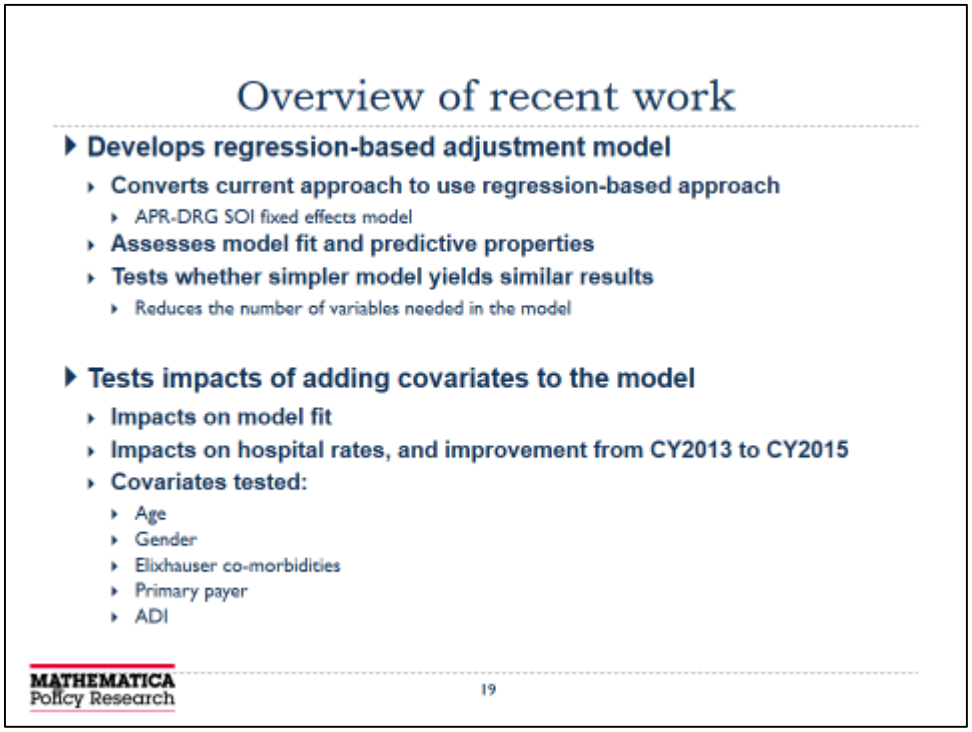
APPENDIX IV. ALL-PAYER HOSPITAL-LEVEL READMISSION RATE CHANGE CY 2015-2013

The following figure presents the change in all-payer case-mix adjusted readmissions by hospital between CY 2013 and CY 2015.



APPENDIX V. MATHEMATICA POLICY RESEARCH READMISSION REGRESSION RISK ADJUSTMENT ANALYSIS PRELIMINARY RESULTS





Converting Current Approach

- **Indirect standardization**
  - **Calculate statewide readmission norms for each APR-DRG SOI category**
  - **Calculate hospital-level predicted readmission, based on relative frequency of APR-DRG SOI categories**
- **Fixed effects regression**
  - **Mathematically, yields identical number of predicted readmissions**
  - **Stay-level regression**
    - Dependent variable: 0/1 indicator for 30-day readmission
    - Independent variables: 0/1 indicator for each of the ~1100 APR-DRG SOI categories
  - **Pros:**
    - Facilitates assessment of explanatory power and predictive ability
    - Easy to measure impact of additional covariates
  - **Con:**
    - Computationally intensive

MATHEMATICA Policy Research

21

Alternate Models

- **"Norms" – based regression**
  - **Replace APR-DRG SOI indicators with CY 2013 norms (single variable)**
    - Proxy for a readmission-based APR-DRG weight
    - Log-transformation improves model fit
- **Test impact of additional covariates**
  - **Patient age and gender**
  - **Elixhauser co-morbidities**
    - 31 indictors for various conditions
    - Calculated based on information from the index stay
  - **Primary payer**
    - Medicare FFS
    - Medicare Managed Care
    - Medicaid
    - Commercial
    - Self pay
    - Other
  - **ADI**
    - Indicators for each of the 20 quantiles of the ADI distribution

MATHEMATICA Policy Research

23

Data and Methods

- **Data:**
  - **CY 2013 and CY 2015 inpatient data**
- **Methods:**
  - **Regressions**
    - Estimate logistic model on CY 2013 stays
    - Calculate predicted probability of readmission for both CY 2013 and CY 2015 stays
      - CY 2015 predicted values are benchmarked to CY 2013, similar to current approach
    - Measure R-square and c-statistic
      - R-square: how much variation is explained by the model?
      - C- statistic: how well does model predict readmission?
  - **Hospital-level rates**
    - Calculate sum of predicted probabilities for each hospital
    - Calculate O/E ratio (where E = sum of predicted probabilities)
    - O/E x State Rate in CY 2013 = risk-adjusted rate
    - Calculate percent improvement between CY 2013 and CY 2015 for each hospital

MATHEMATICA Policy Research

25

Summary of Models

Model	APR-SOI Fixed Effects	CY 2013 Norms	Age and Gender	Elixhauser Comorbidities	Payer	ADI
Baseline	Yes	No	No	No	No	No
15	No	Yes	No	No	No	No
18	No	Yes	Yes	Yes	No	No
19	No	Yes	Yes	Yes	Yes	No
20	No	Yes	Yes	Yes	Yes	Yes

MATHEMATICA Policy Research

27

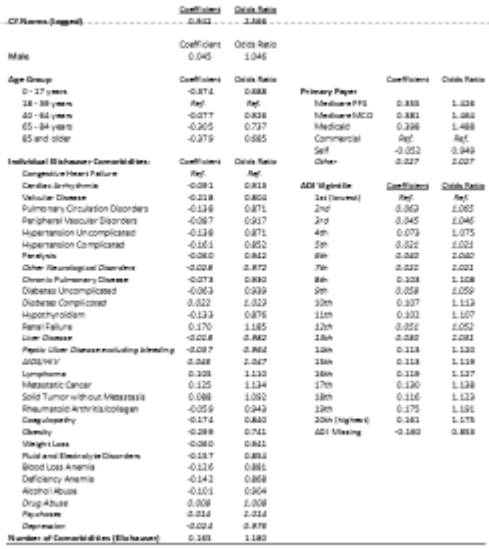
Model Fit Statistics

Model	Controls	Number of Observations	c-statistic	Max-rescaled R square
Baseline	APR-DRG SOI Fixed Effects	561,903	0.712	0.128
15	CY 2013 Norms	561,903	0.712	0.127
18	Model 15 Plus: Age, Gender, Comorbidities	561,903	0.726	0.142
19	Model 18 Plus: Primary Payer	561,903	0.730	0.147
20	Model 19 Plus: ADI	561,903	0.731	0.148

MATHEMATICA Policy Research

29

Model Coefficients: Fully Adjusted Model



Note: coefficients in italics are not statistically significant at the 5 percent level

MATHEMATICA Policy Research

31

Impact on Rates: CY2013

	Baseline	Model 15	Model 18	Model 19	Model 20
Baseline	1.000	0.999	0.964	0.943	0.908
Model 15	0.999	1.000	0.965	0.944	0.909
Model 18	0.964	0.965	1.000	0.992	0.978
Model 19	0.943	0.944	0.992	1.000	0.992
Model 20	0.908	0.909	0.978	0.992	1.000

Source: Mathematica analysis of CY 2013 Readmissions data provided by HSCRC.
Notes:
(1) Each of the correlation coefficients reported in the table are statistically significant at the <.0001 level.
(2) Baseline model controls for APR-DRG SOI fixed effects
(3) Model 15: controls for (logged) CY 2013 norms
(4) Model 18: Model 15 plus age, gender, and co-morbidity controls
(5) Model 19: Model 18 plus primary payer controls
(6) Model 20: Model 19 plus ADI controls

MATHEMATICA Policy Research

33

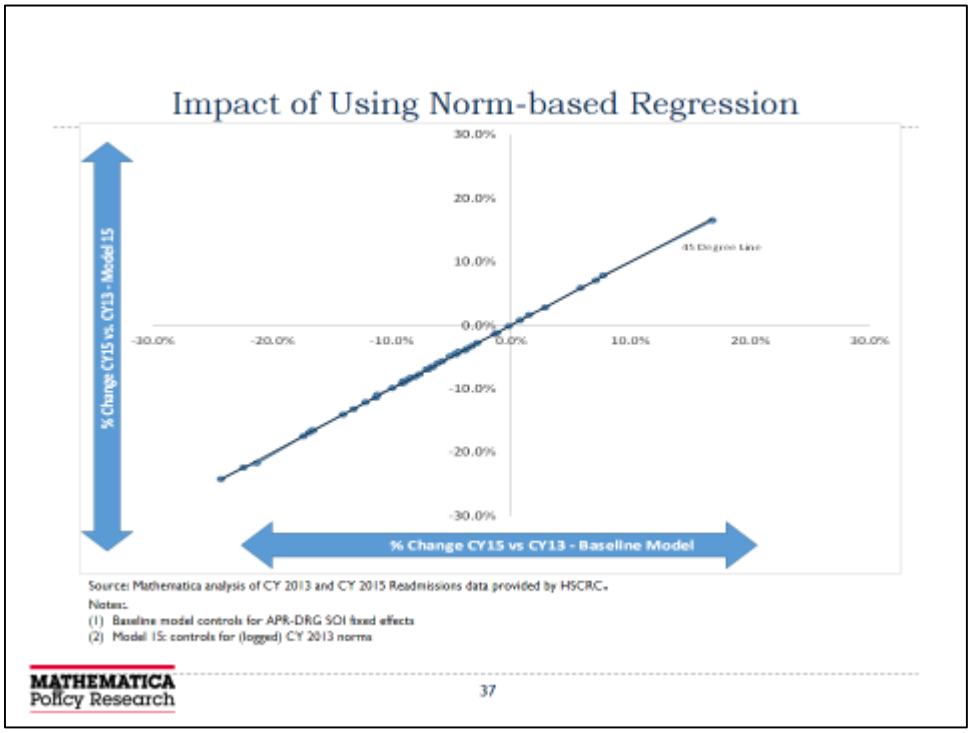
Impact on Improvement Rate: CY 2015 vs CY 2013

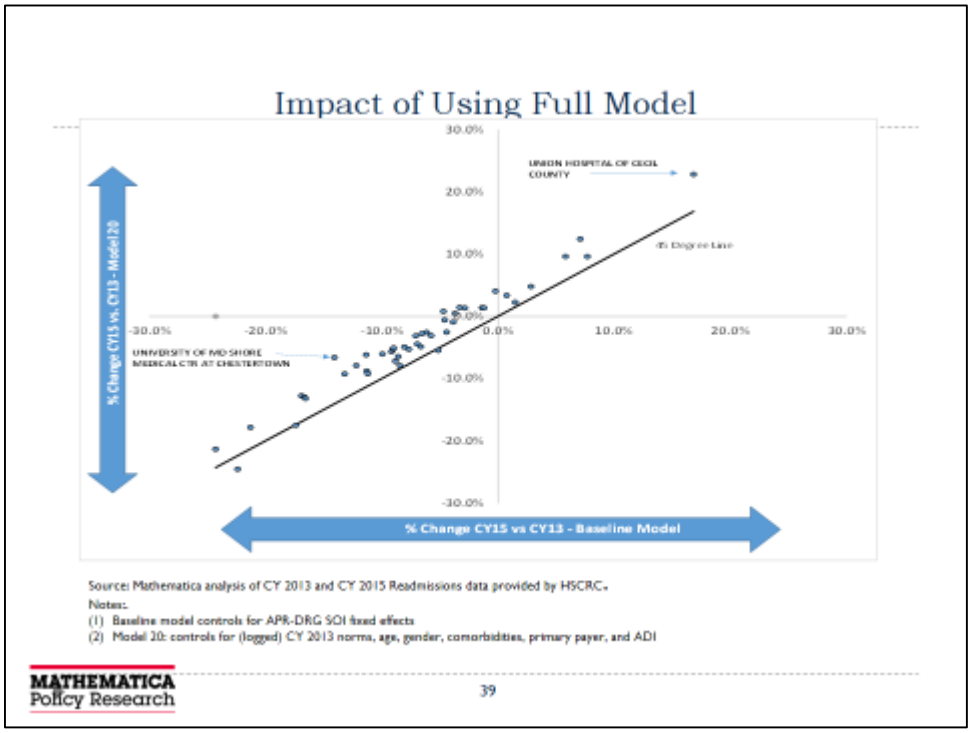
	Baseline	Model 15	Model 18	Model 19	Model 20
Baseline	1.000	0.999	0.977	0.980	0.981
Model 15	0.999	1.000	0.976	0.979	0.980
Model 18	0.977	0.976	1.000	0.989	0.989
Model 19	0.980	0.979	0.989	1.000	0.999
Model 20	0.981	0.980	0.989	0.999	1.000

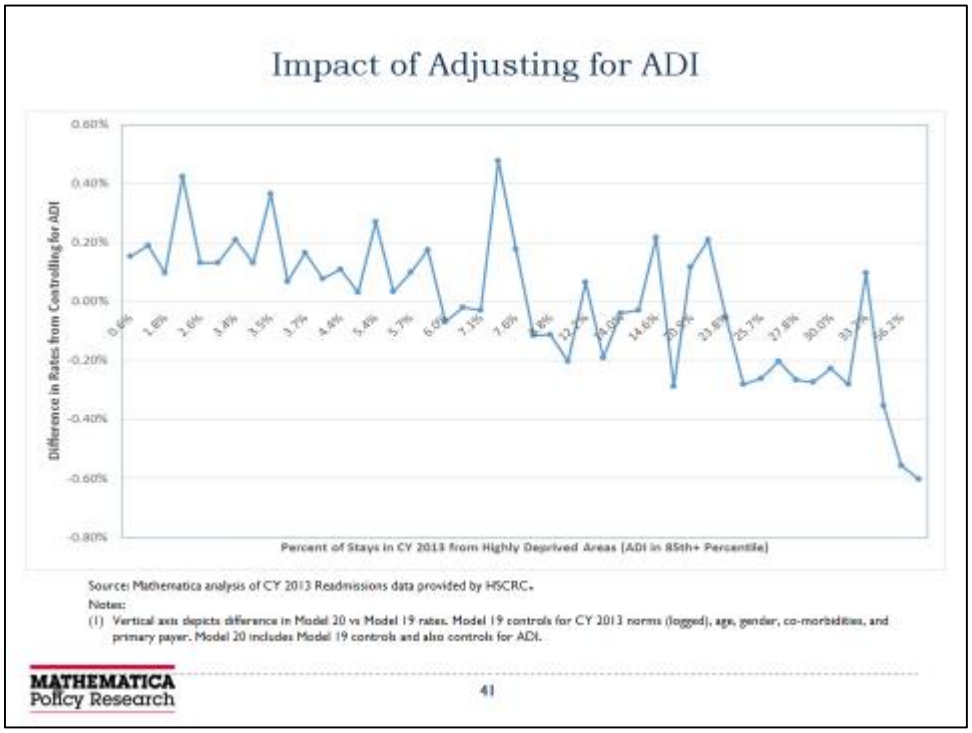
Source: Mathematica analysis of CY 2013 and CY 2015 Readmissions data provided by HSCRC.
Notes:
(1) Each of the correlation coefficients reported in the table are statistically significant at the <.0001 level.
(2) Baseline model controls for APR-DRG SOI fixed effects
(3) Model 15: controls for (logged) CY 2013 norms
(4) Model 18: Model 15 plus age, gender, and co-morbidity controls
(5) Model 19: Model 18 plus primary payer controls
(6) Model 20: Model 19 plus ADI controls

MATHEMATICA Policy Research

35


Impact of Using Norm-based Regression
30.0%
20.0%
10.0%
0.0%
-10.0%
-20.0%
-30.0%
-30.0%
-20.0%
-10.0%
0.0%
10.0%
20.0%
30.0%
45 Degree Line
% Change CY15 vs. CY13 - Model 15
% Change CY15 vs CY13 - Baseline Model
Source: Mathematica analysis of CY 2013 and CY 2015 Readmissions data provided by HSCRC.
Notes:
(1) Baseline model controls for APR-DRG SOI fixed effects
(2) Model 15: controls for (logged) CY 2013 norms
MATHEMATICA Policy Research
37


Impact of Using Full Model
30.0%
20.0%
10.0%
0.0%
-10.0%
-20.0%
-30.0%
-30.0%
-20.0%
-10.0%
0.0%
10.0%
20.0%
30.0%
UNION HOSPITAL OF CECIL COUNTY
45 Degree Line
UNIVERSITY OF MD SHORE MEDICAL CTR AT CHESTERTOWN
% Change CY15 vs. CY13 - Model 20
% Change CY15 vs CY13 - Baseline Model
Source: Mathematica analysis of CY 2013 and CY 2015 Readmissions data provided by HSCRC.
Notes:
(1) Baseline model controls for APR-DRG SOI fixed effects
(2) Model 20: controls for (logged) CY 2013 norms, age, gender, comorbidities, primary payer, and ADI
MATHEMATICA Policy Research
39


Impact of Adjusting for ADI
0.60%
0.40%
0.20%
0.00%
-0.20%
-0.40%
-0.60%
-0.80%
Difference in Rates from Controlling for ADI
0.6%
1.8%
2.6%
3.4%
3.5%
3.7%
4.4%
5.4%
5.7%
6.0%
7.1%
7.6%
7.8%
12.2%
13.6%
14.6%
20.9%
23.8%
25.7%
27.8%
30.0%
33.7%
46.2%
Percent of Stays in CY 2013 from Highly Deprived Areas (ADI in 85th+ Percentile)
Source: Mathematica analysis of CY 2013 Readmissions data provided by HSCRC.
Notes:
(1) Vertical axis depicts difference in Model 20 vs Model 19 rates. Model 19 controls for CY 2013 norms (logged), age, gender, co-morbidities, and primary payer. Model 20 includes Model 19 controls and also controls for ADI.
MATHEMATICA Policy Research
41

APPENDIX VI. SUMMARY OF THE MARYLAND HOSPITAL ASSOCIATION RATE YEAR 2018 RRIP PROGRAM PROPOSAL

MHA Readmissions Policy Recommendations

April 2016

MHA is recommending a readmissions policy that includes consideration of the readmission rate that a hospital attains (the hospital's rate compared to a target rate) and how much the hospital has improved its readmission rate compared to its own performance in a base period. The MHA recommendations for an attainment and improvement policy can be added to the HSCRC's current approach that sets an improvement target and ties specific improvement milestones to payment adjustment. The MHA approach can also be used with the current risk model--statewide readmission rates, or "norms"--or one of the more sophisticated risk models in development. MHA's preference is for a risk model that moves beyond the norms and includes additional factors such as age, gender, primary payer, additional chronic co-morbid conditions and measures of neighborhood socio-economic status; however, we recognize that these models are still in development and need to be fully vetted before they are used in a payment policy.

To include both attainment and improvement in the readmissions policy, MHA proposes to set a statewide risk-adjusted readmission attainment target, similar to the current policy which sets an improvement target. Individual hospitals' performance relative to the statewide risk-adjusted target would be tied to specific payment adjustment amounts, and hospitals would be evaluated on both attainment and improvement performance. The hospital's final payment adjustment would be the "better of" the two adjustments.

The chart below shows how the performance milestones could be linked to pre-set payment adjustments. For example, if a hospital's readmission rate in the performance year is 3.0 percent above (worse than) the target, the hospital would score a 0.25 percent attainment penalty. However, if that hospital had improved its readmission rate by 7.5 percent, it would score a 0.72 percent improvement reward. The actual payment adjustment would be the better of the two scores, or a positive 0.72 percent adjustment. Similarly, if a hospital's readmission rate is 5.5 percent below the target, the hospital would score a 0.51 percent payment increase for attainment. On the improvement scale, if the hospital had improved compared to its base rate by 2.0 percent, its improvement payment adjustment score would be a positive 0.15 percent. The actual payment adjustment would be the better of the two scores, or a 0.51 percent positive adjustment. A hospital with a readmission rate worse than the target and that fails to improve would receive a negative payment adjustment.

Attainment Payment Scale					**Improvement Payment Scale**			
	Performance vs Target	Payment Adjustment				Percent Improvement	Payment Adjustment	
Outperform target by	-20.0%	2.00%	Max attainment reward		Performance improves	-20.0%	2.00%	Max improvement reward
	-15.0%	1.50%				-15.0%	1.50%	
	-12.3%	1.20%				-12.3%	1.20%	
	-10.3%	1.00%				-10.3%	1.00%	
	-7.5%	0.72%				-7.5%	0.72%	
	-5.5%	0.51%				-5.5%	0.51%	
	-3.0%	0.25%				-3.0%	0.25%	
	-2.0%	0.15%				-2.0%	0.15%	
	-1.0%	0.05%				-1.0%	0.05%	
Target	0.0%	0.00%						
Miss target by	1.0%	-0.05%			Performance declines	1.0%	-0.05%	
	2.0%	-0.15%				2.0%	-0.15%	
	3.0%	-0.25%				3.0%	-0.25%	
	5.5%	-0.51%				5.5%	-0.51%	
	7.5%	-0.72%				7.5%	-0.72%	
	10.3%	-1.00%				10.3%	-1.00%	
	12.3%	-1.20%				12.3%	-1.20%	
	15.0%	-1.50%				15.0%	-1.50%	
	20.0%	-2.00%	Max attainment penalty			20.0%	-2.00%	Max improvement pe

This approach includes several features that have worked well in the HSCRC's Quality Based Reimbursement and Maryland Hospital Acquired Conditions programs. The "better of" attainment or improvement is designed to "raise all boats" by providing an incentive to achieve best performance for all hospitals regardless of where on the spectrum they are starting. In addition, the use of defined performance targets and evaluation of individual hospital performance relative to those targets tied to payment adjustments provides a clear goal and predictable revenue consequences that hospitals can monitor progress toward throughout the year. Because the approach is straightforward, it requires little to no additional work to implement and could be accomplished using the current readmissions reporting and tracking systems.

APPENDIX VII. SUMMARY OF THE CAREFIRST RATE YEAR 2018 RRIP PROGRAM PROPOSAL

Summary of the CareFirst Proposal to modify the RRIP and Combine it with the HSCRC's RSSP

In response to complaints from hospitals regarding a potential unfairness in the Readmission Reduction Incentive Program (RRIP) policy, the HSCRC staff revised the RRIP methodology to reduce the uniform readmission rate reduction percentage for hospitals with lower base year readmission rate attainment levels. This modification was based on a presumption that hospitals with low readmission rates may have less opportunity to reduce their readmission rates at the same percentage than hospitals with higher base year readmission rates. However, in making this modification to the RRIP policy, the staff did not account for certain factors (i.e., a hospital's number of out-of-state readmissions or the Socio-Economic Status (SES) of a hospital's patients), which can have a substantial (both positive and negative) impact on hospital readmission rate attainment levels.

Also, given the multitude of overlapping incentives in the rate setting system for readmission reduction, many representatives of the HSCRC's Performance Measurement Work Group (PMWG) have suggested that the Commission staff consider the development of a single incentive-based readmission policy that would combine elements of the RRIP and the HSCRC' Readmission Shared Saving Program (RSSP), address certain issues in the measurement of readmission attainment, improvement performance and hopefully streamline the Commission's overall attempt to incentivize hospitals to reduce unnecessary readmissions.

CareFirst's proposed modification to the RRIP and RSSP draws on previous HSCRC policy approaches (specifically the HSCRC's Uncompensated Care and Disproportionate Share methodologies) that attempted to address similar policy issues and proposes a method for combining the RSSP and the RRIP methodologies into one integrated readmission incentive structure. The proposed approach includes suggested adjustments to improve the overall fairness of a readmission performance assessment by taking into consideration the Socio-Economic Status (SES) of a hospital's patients, its level of out-of-state readmissions and its base year readmission rate attainment level. Finally, the proposal recommends combining elements of the HSCRC's RSSP and RRIP into a single program that takes into account both readmission attainment and improvement, unifies and strengthens the incentives for hospitals to reduce their readmissions and provides flexibility for the HSCRC to incorporate other categories of unnecessary hospital utilization, such as the Patient Quality Indicators (PQIs), into the methodology in future years.

APPENDIX VIII. RY 2017 IMPROVEMENT AND ATTAINEMENT MODEL RESULTS

The following figure presents the proposed CY 2016 readmission target rates. Columns A and B show the hospital's actual case-mix adjusted readmission rates for CYs 2013 and 2015 respectively; column C shows the percent change between the two years. Columns D through G present the scaling results using the current methodology, and columns H through L present the scaling results using the proposed attainment methodology.

				Current Scaling (Improvement)				Attainment				
Hospital Name	CY 13 Case-Mix Adjusted Rate Adjusted for Out of State A	CY 15 Case-Mix Adjusted Rate Adjusted for Out of State B	% Change In In-state readmissi on Rate C	Target D	Over/ Under Target E=C-D	FY 17 Scaling F	FY 17 Adjustment G	Target (Best % 25 in CY15) H	Over/ Under Target I	FY 17 Scaling J	FY 17 Adjustment K	FY17 Better of Attainment/ Improvement L =(G or K)
GARRETT COUNTY	10.64%	9.72%	-1.30%	-9.3%	8.0%	-0.87%	**-$164,300**	12.09	-19.6%	1.00%	$187,809	$187,809
MCCREADY	13.03%	10.63%	-18.42%	-9.3%	-9.1%	1.00%	$28,152	12.09	-12.1%	1.00%	$28,152	$28,152
ATLANTIC GENERAL	14.13%	10.89%	-24.31%	-9.3%	-15.0%	1.00%	$377,503	12.09	-9.9%	1.00%	$377,503	$377,503
CALVERT	12.00%	11.26%	-11.05%	-9.3%	-1.7%	0.20%	$125,257	12.09	-6.9%	0.79%	$492,244	$492,244
HARFORD	12.83%	11.26%	-10.72%	-9.3%	-1.4%	0.16%	$74,465	12.09%	-6.8%	0.78%	$357,481	$357,481
FREDERICK MEMORIAL	11.95%	11.42%	-4.53%	-9.3%	4.8%	-0.52%	**-$996,637**	12.09%	-5.5%	0.63%	$1,205,243	$1,205,243
UM ST. JOSEPH	12.81%	11.59%	-9.79%	-9.3%	-0.5%	0.06%	$128,262	12.09%	-4.1%	0.47%	$1,072,784	$1,072,784
G.B.M.C.	12.06%	11.68%	-4.37%	-9.3%	4.9%	-0.54%	**-$1,118,980**	12.09%	-3.3%	0.38%	$797,865	$797,865
UPPER CHESAPEAKE HEALTH	12.84%	11.91%	-7.33%	-9.3%	2.0%	-0.21%	**-$292,026**	12.09%	-1.5%	0.17%	$234,637	$234,637
DORCHESTER	12.89%	12.01%	-6.53%	-9.3%	2.8%	-0.30%	**-$81,774**	12.09%	-0.6%	0.07%	$18,854	$18,854

				Current Scaling (Improvement)				Attainment				
Hospital Name	CY 13 Case-Mix Adjusted Rate Adjusted for Out of State A	CY 15 Case-Mix Adjusted Rate Adjusted for Out of State B	% Change In In-state readmission Rate C	Target D	Over/ Under Target E=C-D	FY 17 Scaling F	FY 17 Adjustment G	Target (Best % 25 in CY15) H	Over/ Under Target I	FY 17 Scaling J	FY 17 Adjustment K	FY17 Better of Attainment/ Improvement L =(G or K)
SHADY GROVE	12.61%	12.06%	-4.30%	-9.3%	5.0%	-0.55%	**-$1,206,343**	12.09%	-0.2%	0.02%	**$52,079**	**$52,079**
PENINSULA REGIONAL	12.70%	12.10%	-3.27%	-9.3%	6.0%	-0.66%	**-$1,595,709**	12.09%	0.1%	-0.01%	**-$19,068**	**-$19,068**
ANNE ARUNDEL	13.34%	12.60%	-6.63%	-9.3%	2.7%	-0.29%	**-$827,385**	12.09%	4.3%	-0.49%	**-$1,396,013**	**-$827,385**
EASTON	11.84%	12.68%	7.37%	-9.3%	16.7%	-1.82%	**-$1,857,369**	12.09%	4.9%	-0.56%	**-$573,811**	**-$573,811**
SUBURBAN	13.04%	12.78%	-5.19%	-9.3%	4.1%	-0.45%	**-$841,723**	12.09%	5.7%	-0.66%	**-$1,237,518**	**-$841,723**
MONTGOMERY GENERAL	14.12%	12.79%	-7.81%	-9.3%	1.5%	-0.16%	**-$119,636**	12.09%	5.8%	-0.67%	**-$491,759**	**-$119,636**
CARROLL COUNTY	13.18%	12.79%	-3.01%	-9.3%	6.3%	-0.69%	**-$936,510**	12.09%	5.8%	-0.67%	**-$913,739**	**-$913,739**
ST. MARY	14.93%	12.87%	-13.06%	-9.3%	-3.8%	0.43%	$279,369	12.09%	6.4%	-0.74%	**-$478,902**	$279,369
UNION MEMORIAL	15.36%	12.88%	-16.21%	-9.3%	-6.9%	0.79%	$1,842,780	12.09%	6.5%	-0.75%	**-$1,742,928**	$1,842,780
HOWARD COUNTY	13.09%	12.98%	-0.93%	-9.3%	8.4%	-0.91%	**-$1,564,587**	12.09%	7.3%	-0.84%	**-$1,444,636**	**-$1,444,636**
FRANKLIN SQUARE	14.10%	13.21%	-6.99%	-9.3%	2.3%	-0.25%	**-$663,542**	12.09%	9.3%	-1.06%	**-$2,793,006**	**-$663,542**
CHARLES REGIONAL	14.16%	13.26%	-8.90%	-9.3%	0.4%	-0.04%	**-$28,837**	12.09%	9.7%	-1.12%	**-$739,165**	**-$28,837**
MERCY	16.06%	13.34%	-16.76%	-9.3%	-7.5%	0.86%	$1,825,697	12.09%	10.3%	-1.19%	**-$2,528,220**	$1,825,697
MERITUS	13.14%	13.43%	3.12%	-9.3%	12.4%	-1.36%	**-$2,588,491**	12.09%	11.1%	-1.28%	**-$2,432,954**	**-$2,432,954**
SINAI	15.23%	13.45%	-12.02%	-9.3%	-2.7%	0.31%	$1,299,110	12.09%	11.3%	-1.30%	**-$5,385,981**	$1,299,110
HOLY CROSS	13.47%	13.58%	0.97%	-9.3%	10.3%	-1.12%	**-$3,462,196**	12.09%	12.3%	-1.35%	**-$4,156,395**	**-$3,462,196**
GOOD SAMARITAN	15.23%	13.60%	-11.09%	-9.3%	-1.8%	0.21%	$337,040	12.09%	12.5%	-1.37%	**-$2,244,579**	$337,040

				Current Scaling (Improvement)				Attainment				
Hospital Name	CY 13 Case-Mix Adjusted Rate Adjusted for Out of State A	CY 15 Case-Mix Adjusted Rate Adjusted for Out of State B	% Change In In-state readmission Rate C	Target D	Over/ Under Target E=C-D	FY 17 Scaling F	FY 17 Adjustment G	Target (Best % 25 in CY15) H	Over/ Under Target I	FY 17 Scaling J	FY 17 Adjustment K	FY17 Better of Attainment/ Improvement L =(G or K)
NORTHWEST	16.10%	13.60%	-16.41%	-9.3%	-7.1%	0.82%	$1,017,100	12.09%	12.6%	-1.37%	**-$1,707,968**	$1,017,100
CHESTERTOWN	15.47%	13.63%	-14.03%	-9.3%	-4.7%	0.54%	$117,396	12.09%	12.7%	-1.39%	**-$300,285**	$117,396
ST. AGNES	15.00%	13.63%	-8.93%	-9.3%	0.4%	-0.04%	**-$94,421**	12.09%	12.8%	-1.39%	**-$3,222,142**	**-$94,421**
REHAB & ORTHO	12.73%	13.81%	8.48%	-9.3%	17.8%	-1.94%	**-$1,218,671**	12.09%	14.3%	-1.56%	**-$976,854**	**-$976,854**
WESTERN MARYLAND HEALTH SYSTEM	14.12%	13.83%	-2.44%	-9.3%	6.9%	-0.75%	**-$1,257,543**	12.09%	14.4%	-1.57%	**-$2,636,171**	**-$1,257,543**
WASHINGTON ADVENTIST	13.84%	14.02%	1.65%	-9.3%	11.0%	-1.20%	**-$1,857,560**	12.09%	16.0%	-1.75%	**-$2,713,654**	**-$1,857,560**
BALTIMORE WASHINGTON MEDICAL CENTER	15.49%	14.08%	-8.72%	-9.3%	0.6%	-0.06%	**-$148,068**	12.09%	16.5%	-1.80%	**-$4,184,172**	**-$148,068**
HARBOR	14.07%	14.16%	0.43%	-9.3%	9.7%	-1.06%	**-$1,251,979**	12.09%	17.1%	-1.87%	**-$2,204,490**	**-$1,251,979**
DOCTORS COMMUNITY	14.66%	14.17%	-6.48%	-9.3%	2.8%	-0.31%	**-$388,985**	12.09%	17.2%	-1.88%	**-$2,377,839**	**-$388,985**
UNIVERSITY OF MARYLAND	15.96%	14.52%	-8.32%	-9.3%	1.0%	-0.11%	**-$947,498**	12.09%	20.1%	-2.00%	**-$17,638,376**	**-$947,498**
LAUREL REGIONAL	15.82%	14.67%	-4.83%	-9.3%	4.5%	-0.49%	**-$347,008**	12.09%	21.4%	-2.00%	**-$1,420,309**	**-$347,008**
PRINCE GEORGE	14.53%	14.99%	6.24%	-9.3%	15.5%	-1.70%	**-$3,415,029**	12.09%	24.0%	-2.00%	**-$4,021,775**	**-$3,415,029**
FT. WASHINGTON	17.74%	15.07%	-16.44%	-9.3%	-7.1%	0.82%	$158,288	12.09%	24.7%	-2.00%	**-$385,833**	$158,288
HOPKINS BAYVIEW MED CTR	16.62%	15.28%	-8.21%	-9.3%	1.1%	-0.12%	**-$393,478**	12.09%	26.4%	-2.00%	**-$6,610,863**	**-$393,478**

				Current Scaling (Improvement)				Attainment				
Hospital Name	CY 13 Case-Mix Adjusted Rate Adjusted for Out of State A	CY 15 Case-Mix Adjusted Rate Adjusted for Out of State B	% Change In In-state readmission Rate C	Target D	Over/ Under Target E=C-D	FY 17 Scaling F	FY 17 Adjustment G	Target (Best % 25 in CY15) H	Over/ Under Target I	FY 17 Scaling J	FY 17 Adjustment K	FY17 Better of Attainment/ Improvement L =(G or K)
UNION HOSPITAL OF CECIL COUNT	12.58%	15.31%	17.28%	-9.3%	26.6%	-2.00%	**-$1,387,798**	12.09%	26.7%	-2.00%	**-$1,387,798**	**-$1,387,798**
SOUTHERN MARYLAND	15.39%	15.33%	-3.61%	-9.3%	5.7%	-0.62%	**-$928,335**	12.09%	26.8%	-2.00%	**-$2,984,550**	**-$928,335**
JOHNS HOPKINS	16.60%	15.42%	-6.22%	-9.3%	3.1%	-0.34%	**-$4,022,743**	12.09%	27.6%	-2.00%	**-$23,882,880**	**-$4,022,743**
BON SECOURS	20.65%	16.27%	-22.12%	-9.3%	-12.8%	1.00%	$747,897	12.09%	34.6%	-2.00%	**-$1,495,794**	**$747,897**
UMMC MIDTOWN	17.83%	16.59%	-7.74%	-9.3%	1.6%	-0.17%	**-$219,674**	12.09%	37.2%	-2.00%	**-$2,569,928**	**-$219,674**
State	**14.26%**	**12.84%**	**-7.2%**	**-9.3%**			**-$27,866,519**				**-$106,475,706**	**-$16,515,170**

APPENDIX IX. OUT-OF-STATE MEDICARE READMISSION RATIOS

The following figure presents calculation of Out-of-state adjustments using the Medicare readmission information from CMMI. The table is sorted by column C. Garrett County Hospital has the largest proportion of their readmissions occurring at hospitals outside of Maryland, which is equal to 38 percent of their instate readmissions.

HOSPITAL NAME	CY 13 Casemix Adjusted All Payer Readmission Rate (In-State Readmissions)	CY13 Instate/Total Medicare Readmission Rate	CY 13 Casemix Adjusted Rate with Out-of-State	CY 15 Casemix Adjusted All Payer Readmission Rate (In-State Readmissions)	CY15 Instate/Total Medicare Readmission Rate	CY 15 Casemix Adjusted Rate with Out-of-State	PERCENT CHANGE Case-mix Adjusted	PERCENT CHANGE WITH OUT-OF STATE Adjustment
A	B	C	D=B*C	E	F	G=E*F	H=E/B-1	I=G/D-1
GARRETT COUNTY	7.72%	1.38	10.64%	7.62%	1.28	9.72%	-1.30%	-8.66%
FT. WASHINGTON	13.87%	1.28	17.74%	11.59%	1.30	15.07%	-16.44%	-15.06%
PRINCE GEORGE	11.54%	1.26	14.53%	12.26%	1.22	14.99%	6.24%	3.18%
SOUTHERN MARYLAND	12.75%	1.21	15.39%	12.29%	1.25	15.33%	-3.61%	-0.43%
UNION HOSPITAL OF CECIL COUNT	10.88%	1.16	12.58%	12.76%	1.20	15.31%	17.28%	21.68%
WASHINGTON ADVENTIST	12.11%	1.14	13.84%	12.31%	1.14	14.02%	1.65%	1.31%
CALVERT	10.59%	1.13	12.00%	9.42%	1.19	11.26%	-11.05%	-6.19%
ST. MARY	13.40%	1.11	14.93%	11.65%	1.10	12.87%	-13.06%	-13.83%
CHARLES REGIONAL	12.92%	1.10	14.16%	11.77%	1.13	13.26%	-8.90%	-6.32%
DORCHESTER	12.56%	1.10	13.76%	11.74%	1.13	13.23%	-6.53%	-3.89%
HOLY CROSS	12.35%	1.09	13.47%	12.47%	1.09	13.58%	0.97%	0.78%
ATLANTIC GENERAL	13.00%	1.09	14.13%	9.84%	1.11	10.89%	-24.31%	-22.92%
JOHNS HOPKINS	15.44%	1.08	16.60%	14.48%	1.07	15.42%	-6.22%	-7.12%
SUBURBAN	12.13%	1.07	13.04%	11.50%	1.11	12.78%	-5.19%	-1.98%

HOSPITAL NAME	CY 13 Casemix Adjusted All Payer Readmission Rate (In-State Readmissions)	CY13 Instate/Total Medicare Readmission Rate	CY 13 Casemix Adjusted Rate with Out-of-State	CY 15 Casemix Adjusted All Payer Readmission Rate (In-State Readmissions)	CY15 Instate/Total Medicare Readmission Rate	CY 15 Casemix Adjusted Rate with Out-of-State	PERCENT CHANGE Case-mix Adjusted	PERCENT CHANGE WITH OUT-OF STATE Adjustment
A	B	C	D=B*C	E	F	G=E*F	H=E/B-1	I=G/D-1
WESTERN MARYLAND HEALTH SYSTEM	13.14%	1.07	14.12%	12.82%	1.08	13.83%	-2.44%	-2.07%
PENINSULA REGIONAL	11.91%	1.07	12.70%	11.52%	1.05	12.10%	-3.27%	-4.79%
SHADY GROVE	11.87%	1.06	12.61%	11.36%	1.06	12.06%	-4.30%	-4.37%
LAUREL REGIONAL	14.91%	1.06	15.82%	14.19%	1.03	14.67%	-4.83%	-7.25%
DOCTORS COMMUNITY	13.88%	1.06	14.66%	12.98%	1.09	14.17%	-6.48%	-3.39%
MERITUS	12.49%	1.05	13.14%	12.88%	1.04	13.43%	3.12%	2.17%
MONTGOMERY GENERAL	13.44%	1.05	14.12%	12.39%	1.03	12.79%	-7.81%	-9.43%
CHESTERTOWN	14.75%	1.05	15.47%	12.68%	1.07	13.63%	-14.03%	-11.94%
UNIVERSITY OF MARYLAND	15.27%	1.05	15.96%	14.00%	1.04	14.52%	-8.32%	-9.02%
FREDERICK MEMORIAL	11.49%	1.04	11.95%	10.97%	1.04	11.42%	-4.53%	-4.43%
HARFORD	12.41%	1.03	12.83%	11.08%	1.02	11.26%	-10.72%	-12.20%
MERCY	15.57%	1.03	16.06%	12.96%	1.03	13.34%	-16.76%	-16.95%
ANNE ARUNDEL	12.97%	1.03	13.34%	12.11%	1.04	12.60%	-6.63%	-5.50%
EASTON	11.54%	1.03	11.84%	12.39%	1.02	12.68%	7.37%	7.07%
HOPKINS BAYVIEW MED CTR	16.32%	1.02	16.62%	14.98%	1.02	15.28%	-8.21%	-8.07%
CARROLL COUNTY	12.95%	1.02	13.18%	12.56%	1.02	12.79%	-3.01%	-2.94%
HOWARD COUNTY	12.89%	1.02	13.09%	12.77%	1.02	12.98%	-0.93%	-0.89%

HOSPITAL NAME	CY 13 Casemix Adjusted All Payer Readmission Rate (In-State Readmissions)	CY13 Instate/Total Medicare Readmission Rate	CY 13 Casemix Adjusted Rate with Out-of-State	CY 15 Casemix Adjusted All Payer Readmission Rate (In-State Readmissions)	CY15 Instate/Total Medicare Readmission Rate	CY 15 Casemix Adjusted Rate with Out-of-State	PERCENT CHANGE Case-mix Adjusted	PERCENT CHANGE WITH OUT-OF STATE Adjustment
A	B	C	D=B*C	E	F	G=E*F	H=E/B-1	I=G/D-1
BALTIMORE WASHINGTON MEDICAL CENTER	15.26%	1.01	15.49%	13.93%	1.01	14.08%	-8.72%	-9.07%
UPPER CHESAPEAKE HEALTH	12.68%	1.01	12.84%	11.75%	1.01	11.91%	-7.33%	-7.27%
G.B.M.C.	11.91%	1.01	12.06%	11.39%	1.03	11.68%	-4.37%	-3.11%
UM ST. JOSEPH	12.67%	1.01	12.81%	11.43%	1.01	11.59%	-9.79%	-9.50%
BON SECOURS	20.43%	1.01	20.65%	15.91%	1.02	16.27%	-22.12%	-21.20%
HARBOR	13.94%	1.01	14.07%	14.00%	1.01	14.16%	0.43%	0.63%
UNION MEMORIAL	15.24%	1.01	15.36%	12.77%	1.01	12.88%	-16.21%	-16.14%
ST. AGNES	14.90%	1.01	15.00%	13.57%	1.00	13.63%	-8.93%	-9.16%
UMMC MIDTOWN	17.71%	1.01	17.83%	16.34%	1.02	16.59%	-7.74%	-6.95%
SINAI	15.14%	1.01	15.23%	13.32%	1.01	13.45%	-12.02%	-11.68%
GOOD SAMARITAN	15.15%	1.01	15.23%	13.47%	1.01	13.60%	-11.09%	-10.69%
FRANKLIN SQUARE	14.03%	1.00	14.10%	13.05%	1.01	13.21%	-6.99%	-6.32%
NORTHWEST	16.03%	1.00	16.10%	13.40%	1.02	13.60%	-16.41%	-15.53%
MCCREADY	13.03%	1.00	13.03%	10.63%	1.00	10.63%	-18.42%	-18.42%
REHAB & ORTHO	12.73%	1.00	12.73%	13.81%	1.00	13.81%	8.48%	8.48%
Hospital Average	**13.48%**		**14.28%**	**12.50%**		**13.31%**	**-6.60%**	**-6.29%**

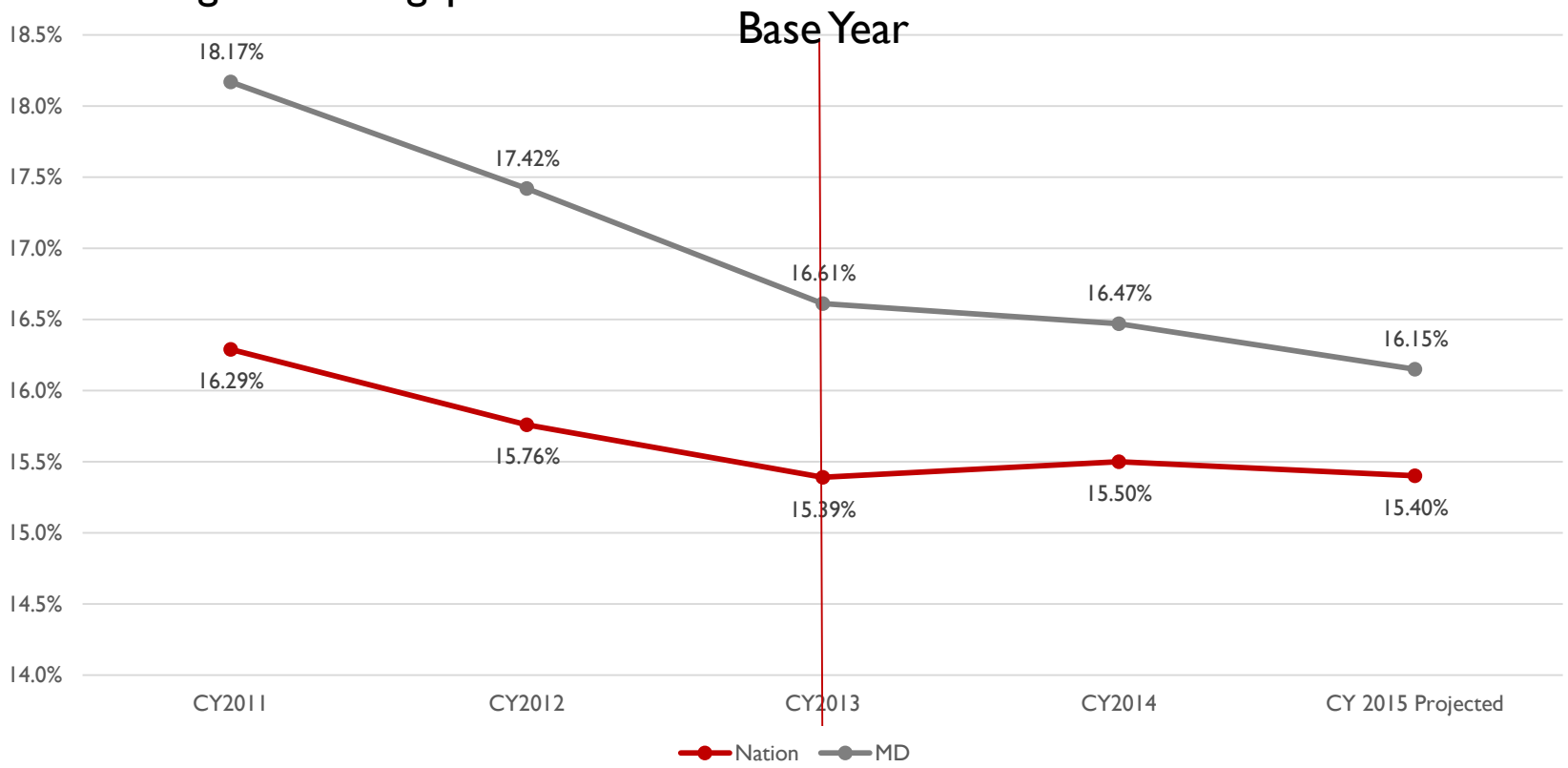
Readmission Reduction Incentive Program Draft FY 2018 Policy

RRIP Background

- Started in CY 2014 performance year with 0.5% inpatient revenue bonus if a hospital reduced its case-mix adjusted readmission rate by 6.76% in one year.
- Last year
  - Improvement target was set at 9.3% over two years (CY 2015 compared to CY 2013 rates)
  - Rewards scaled up to 1% commensurate with improvement rates
  - Penalties scaled up to -2% were introduced for hospitals that were below the improvement target commensurate with improvement rates
  - Continue to evaluate factors that may impact performance and meeting Medicare readmission benchmarks

Medicare Benchmark: At or below National Medicare Readmission Rate by CY 2018

Maryland is reducing readmission rate faster than the nation. Maryland is projected to reduce the gap from 7.93% in the base year to 4.87 % in CY 2015*. Our target for the gap is 4.75% difference.



*HSCRC and CMMI staff identified an ICD-10 issue impacting readmission rates and are working on resolutions. Trends prior to ICD-10 indicate that Maryland meets the Medicare target.

Analyses of Issues Discussed in FY 2017 Policy

- Medicare vs All-Payer Targets
- Relationship between overall admissions (denominator) and readmission rate
- Impact of Socio-economic and Demographic Factors
- Impact of Observation stays
- Diminishing impact to reduce readmissions as readmission rates are lower

RRIP proposals for FY 2018

- MHA proposal combines improvement and attainment into a single payment adjustment
- Carefirst proposal blends 50/50 actual readmission rate with indigenous adjusted readmission rates
- Payment adjustments based on readmission rates (attainment) needs further considerations for;
  - Readmissions at out of state hospitals- use Medicare ratios
  - Impact of patient's socio-economic factors – Hospitals who are gaining from adjustments are loosing from improvement rates.
  - Benchmarks: Staff recommends the highest benchmark rather than the state average readmission rate.

Draft Recommendations for the RRIP Policy

- For RY 2018
  - The RRIP policy should continue to be set for all-payers.
  - Hospital performance should be measured better of attainment of improvement
  - Set attainment benchmark at the state top-quartile readmission rate in the most recent performance period.
  - Set the reduction target at 9.5 percent from CY2013 readmission rates
- For RY 2017 apply the same methodology outlined above based on 9.3 reduction target as approved by the Commission last year.
- Staff will evaluate the appropriate risk adjustment in May to finalize the recommendation.

DRAFT Recommendations for the Aggregate Revenue Amount At-Risk under Maryland Hospital Quality Programs for Rate Year 2018

Updated Draft May 11, 2016

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

This document contains the revised draft staff recommendations for updating the aggregate revenue amount at-risk under Maryland hospital quality programs, revised from the March 2, 2016 draft presented at the March 9, 2016 Commission meeting. Please submit comments on this draft to the Commission by Wednesday May 25th, 2016, via hard copy mail or email to Dianne.feeney@maryland.gov.

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) quality-based payment methodologies are important policy tools with great potential to provide strong incentives for hospitals to improve their quality performance over time. These quality-based payment programs hold amounts of hospital revenue at risk directly related to specified performance benchmarks. Maryland's Quality-Based Reimbursement (QBR) program employs measures that are similar to those in the federal Medicare Value-Based Purchasing (VBP) program. 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 recommendations for the amount of revenue that should be held at risk for rate year (RY) 2018. Except for some QBR measures that are based on CMS timelines, the performance year for Maryland's quality-based payments is a calendar year. The base year from which the improvement is calculated is the state fiscal year, and the adjustments are applied in the following rate year. For RY 2018, which starts in July 2017, the performance year is calendar year (CY) 2016, and base year is state fiscal year (FY) 2015. The timeline for the RY 2018 aggregate at risk recommendation was postponed to align with the RY 2018 Readmissions Reduction Incentive Program (RRIP) recommendations. Final recommendations for both policies may require alignment with the Readmissions Shared Savings Policy to estimate the overall impact of all programs in tandem including shared savings adjustments, as staff is contemplating revisions to the shared savings policy.

BACKGROUND

1. Federal Quality Programs

Maryland's amount of revenue at risk for quality-based payment programs is compared against the amount at risk for the following national Medicare quality programs:

- The Medicare Hospital Readmissions Reduction Program, which reduces payments to inpatient prospective payment system hospitals with excess readmissions.[1]
- The Medicare Hospital-Acquired Condition Reduction 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 VBP program, which adjusts hospitals' payments based on their performance on the following four hospital quality domains: clinical care, patient experience of care, outcomes, and efficiency.[3]

Across these programs, 5.75 percent of inpatient revenue was at risk for federal fiscal year (FFY) 2016 and 6.0 percent in FFY 2017.

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 QBR program employs measures in several domains, including clinical care, patient experience, outcomes, and patient safety. Since the beginning of the program, financial adjustments have been based on revenue neutral scaling of hospitals in allocating rewards and reductions based on performance, with the net increases in rates for better performing hospitals funded by net decreases in rates for poorer performing hospitals.[4] The distribution of rewards/penalties has been 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 from the program, and payment adjustments were linked to a point-based scale (i.e., present payment scale) instead of relatively ranking hospitals, all of which was designed to provide hospitals with more predictable revenue adjustments based on their performance.
- The Maryland Hospital Acquired Conditions (MHAC) program measures hospital performance using 3M's potentially preventable complications. HSCRC calculates

---

[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).

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. The revenue at risk and reward structure is based on a tiered approach that requires statewide targets to be met for higher rewards and lower reductions.

- The RRIP establishes a readmissions reduction target and 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 quality-based payment adjustments are implemented to hospital revenues prospectively. The Readmission Shared Savings Program reduces each hospital's approved revenues prospectively based on its case-mix adjusted readmission rates. Potentially avoidable utilization (PAU) efficiency 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. For FY 2017, the measurement period will be based on the CY 2015 period.

The Commission approved the following amounts of inpatient revenue to be held at-risk for rate year 2016:

- QBR– A maximum penalty of 1.00 percent of inpatient revenue, with revenue-neutral scaled rewards up to 1.00 percent.
- MHAC– A maximum penalty of 4.00 percent of inpatient revenue if the statewide improvement target is not met; a 1.00 percent maximum penalty and rewards up to 1.00 percent if the statewide improvement target is met.
- RRIP– A reward of 0.50 percent of inpatient revenue for any hospital that improves its all-payer readmission rate by at least 6.76 percent.
- Readmission Shared Savings- An average reduction of 0.60 percent of total hospital revenue.

The Commission approved the following amounts to be held at-risk for RY 2017:

- QBR– A maximum penalty of 2.00 percent of inpatient revenue, with rewards scaled up to a maximum of 1.00 percent.
- MHAC– A maximum penalty of 3.00 percent of inpatient revenue if the statewide improvement target is not met; a 1.00 percent maximum penalty and rewards up to 1.00 percent if the statewide improvement target is met.
- RRIP– A maximum penalty of 2.00 percent of inpatient revenue, and a 1.00 percent maximum reward for hospitals that reduce readmission rates at or better than the minimum improvement target.

- Maximum penalty guardrail– A maximum penalty guardrail of 3.50 percent of total hospital revenue. This means, for example, that a hospital that received the maximum penalty for all three quality-based payment programs would have a maximum penalty of 7.00 percent inpatient revenue, which is equal to 4.20 percent of total hospital revenue. Staff used the Medicare aggregate amount at risk total as the benchmark for calculating the hospital maximum penalty guardrail (e.g. 6 percent * 58 percent of inpatient revenue).

ASSESSMENT

In order to develop the amount of revenue at risk for RY 2018, HSCRC staff consulted with CMS, conducted analyses, and solicited input from the Performance Measurement Workgroup.[5] During its January meeting, the Performance Measurement Workgroup reviewed (1) data comparing the amount of revenue at risk in Maryland with the national Medicare programs, and (2) staff's proposal for the amount at risk for RY 2018.

Aggregate Revenue At-Risk Comparison with 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 cumulative difference over the Model agreement term.

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 rate years 2014 through 2017. 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 2017. 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 exceeded the national aggregate maximum at risk amounts in both RYs 2016 and 2017. Cumulatively, Maryland's maximum at risk total was 7.44 percent higher than the nation in FFY 2017.

[5] For more information on the Performance Measurement Workgroup, see http://www.hscrc.state.md.us/hscrc-workgroup-performance-measurement.cfm.

Figure 1. Potential Revenue at Risk for Quality-Based Payment Programs, Maryland Compared with the National Medicare Programs, 2014-2017

% of MD All Payer Inpatient Revenue	FY 2014	FY 2015	FY 2016	FY 2017
MHAC	2.00%	3.00%	4.00%	3.00%
RRIP			0.50%	2.00%
QBR	0.50%	0.50%	1.00%	2.00%
Shared Savings	0.41%	0.86%	1.35%	*4.36%**
GBR PAU	0.50%	0.86%	1.10%	*TBD*
MD Aggregate Maximum At Risk	3.41%	5.22%	7.95%	11.36%

*Subject to change based on RY 2017 policy, which is to be finalized at June 2016 Commission meeting. Net Shared Savings Maximum penalty is 3.52 %.

Medicare National - Potential Inpatient Revenue at Risk Absolute Values

% of National Medicare Inpatient Revenue	FFY 2014	FFY 2015	FFY2016	FFY2017
HAC		1.00%	1.00%	1.00%
Readmissions	2.00%	3.00%	3.00%	3.00%
VBP	1.25%	1.50%	1.75%	2.00%
Medicare Aggregate Maximum At Risk	3.25%	5.50%	5.75%	6.00%
Cumulative MD-Medicare National Difference	**0.16%**	**-0.12%**	**2.08%**	**7.44%**

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. For example, the maximum penalty is set to the lowest attainment score in the base year measurement. As hospitals improve their scores during the performance year, 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.

Figure 2 summarizes the statewide totals and average payment adjustments for Maryland hospitals for RY 2016. The first five blue columns display the results for each of the quality-based payment programs. The sixth blue column displays the aggregate amount of revenue at risk, summed across all five programs. The final blue column, "Net Adjustment Across all Programs," represents the maximum penalty and reward for an individual hospital (rows 2 and 3) and the average absolute adjustments across all hospitals (row 4). The final row shows the total net adjustments, accounting for both penalties and rewards. While aggregate potential amount at risk was at 7.76 percent, the sum of average adjustments across all programs was 1.95 percent of inpatient revenue, which is higher than the estimated CMS rate of 1.01 percent. When we sum

penalties and rewards across the hospital, the maximum penalty and reward received by one hospital was 1.95 percent, and 1.09 percent respectively. In RY 2016, the total net adjustments were $38.3 million, with $68.3 million in total penalties and $29.9 million in total rewards. When summarized at the hospital level, one hospital received a reduction of 1.95 percent of inpatient revenue across all the programs. The maximum reward received across all programs was 1.09 percent of hospital inpatient revenue.

Figure 2. Actual Revenue Adjustments and Potential at Risk Percent Inpatient Revenue for Maryland's Quality-Based Payment Programs, RY 2016

	MHAC	RRIP	QBR	Shared Savings	PAU	Aggregate (Sum of All Programs)	Net Hospital Adjustment Across all Programs
Potential At Risk (Absolute Value)	4.00%	0.50%	1.00%	1.16%	1.10%	7.76%	
Maximum Hospital Penalty	-0.21%	NA	-1.00%	-0.29%	-1.10%	-2.59%	-1.95%
Maximum Hospital Reward	1.00%	0.50%	0.73%	NA	NA	2.23%	1.09%
Average Absolute Level Adjustment	**0.18%**	**0.15%**	**0.30%**	**0.93%**	**0.39%**	**1.95%**	**0.70%**
Total Penalty	-$1,080,406	NA	-$12,880,046	-$27,482,838	-$26,900,004	-$68,343,293	
Total Reward	$7,869,585	$9,233,884	$12,880,046	NA	NA	$29,983,515	
Total Net Adjustments	**$6,789,180**	**$9,233,884**	**$0**	**-$27,482,838**	**-$26,900,004**	**-$38,359,778**	

Figure 3 summarizes preliminary statewide totals and average payment adjustments for Maryland hospitals for RY 2017 for the MHAC, RRIP, shared savings, and QBR programs. Figure 3 follows the same format as Figure 2. Reflecting higher amounts at risk approved for RRIP and QBR approved by the Commission for RY 2017 and staff proposal to increase the shared savings amount to 1.25 percent of total revenue, the aggregate maximum potential penalty is 10.36 percent. Year-to-date actual adjustment calculations for QBR is based on first six months of data update and MHAC and RRIP calculations are subject to change based on the evaluation of the impact of ICD-10 transition. Staff did not reflect the impact of draft RRIP recommendations to modify the RY 2017 RRIP payment adjustments. With these data caveats, the sum of average payment adjustments across all programs is 4.13 percent of inpatient revenue. On a hospital specific basis, the maximum penalty received by a single hospital is 3.10 percent, and the maximum reward is 1.41 percent. On a statewide basis, the net impact of performance-based adjustments is -0.46 percent of the state total revenue.

Figure 3. Actual Revenue at Risk for Maryland's Quality-Based Payment Programs, RY 2017 Year-to-Date

	MHAC*	RRIP**	QBR***	Shared Savings***	Net Shared Savings***	PAU	State Aggregate	Hospital Net
	A	B	C	D	E	F	G=Sum(A-D or E)	
Potential At Risk (Absolute Value)	3.00%	2.00%	2.00%	4.36%	3.52%		11.36%	
Maximum Hospital Penalty (% Inpatient Revenue)	-0.25%	-2.00%	-1.78%	-4.36%	-3.52%		-8.38%	-3.10%
Maximum Hospital Reward (% Inpatient Revenue)	1.00%	1.00%	1.00%	NA	NA	NA	3.00%	1.41%
Average Absolute Level Adjustment (% Inpatient Revenue)	**0.42%**	**0.65%**	**0.51%**	**2.56%**	**1.60%**		**4.13%**	**1.30%**
Total Penalty	-$502,722	-$36,224,835	-$4,980,623	-$190,634,642	-$99,588,238		-$141,017,447	
Total Reward	$29,403,229	$8,358,316	$33,335,873	$0	$278,971	NA	$71,097,418	
Total Net Adjustments	**$28,900,507**	**-$27,866,519**	**$28,355,250**	**-$190,634,642**	**-$99,309,267**		**-$69,920,029**	
% Total Revenue	**0.19%**	**-0.18%**	**0.19%**	**-1.25%**	**-0.65%**		**-0.46%**	

*All calculations are preliminary subject to the assessment of ICD-10 impact.
**RRIP results are preliminary results as of December 2015 and do not reflect any potential protections that may be developed based on the approved RY 2017 recommendation.
***QBR year-to-date results are preliminary estimates based on two quarters of new data due to data lag for measures from CMS. Staff will provide updated calculations for the final recommendation.
****Shared Savings are based on a 1.25 percent statewide reduction with protections for high Medicaid percentage hospitals based on the draft FY2017 recommendation.

In summary, Maryland outperformed the national programs in both the scope of the measurements and in the aggregate payment amounts at risk. Maryland hospitals improved their performance in reducing complications and more recently in improving readmissions. All-Payer Model financial success will depend on further reductions in PAU, and staff intends to shift more focus on potentially avoidable admissions in quality-based payment programs in the future and reduce penalties other areas. Staff will continue to discuss the appropriate amounts for quality-based payment programs with the Performance Measurement and Payment Models Workgroups.

See Appendix I for hospital-level results.

Maximum Revenue at Risk Hospital Guardrail

As the HSCRC increases the maximum revenue adjustments statewide, the potential for a particular hospital to receive large revenue reductions that may cause unmanageable financial risk has raised concerns. 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 penalties from all 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, the hospital maximum penalty guardrail was set at 3.50 percent of total hospital revenue.

RECOMMENDATION

Based on this assessment, HSCRC staff recommends the following maximum penalties and rewards for the QBR, MHAC and RRIP programs for RY 2018:

1. QBR: The maximum penalty should be 2.00 percent, while the maximum reward should be 1.00 percent.

   The maximum penalty matches the penalty in Medicare's VBP program and increases the incentive for hospitals to improve their Hospital Consumer Assessment of Healthcare Providers and Systems survey scores, which continue to be low compared with the nation.

2. MHAC: There should be a 3.00 percent maximum penalty if the statewide improvement target is not met; there should be a 1.00 percent maximum penalty and a reward up to 1.00 percent if the statewide improvement target is met.

3. RRIP: The maximum penalty should be 2.00 percent, and the reward should be 1.00 percent for hospitals that reduce readmission rates at or better than the minimum improvement.

4. Maximum penalty guardrail: The hospital maximum penalty guardrail should continue to be set at 3.50 percent of total hospital revenue.

5. The quality adjustments should be applied to inpatient revenue centers, similar to the approach used by CMS. HSCRC staff can apply the adjustments to hospitals' medical surgical rates to concentrate the impact of this adjustment on inpatient revenue, consistent with federal policies.

APPENDIX I. RY 2016 HOSPITAL-LEVEL SCALING RESULTS FOR QUALITY-BASED PAYMENT PROGRAMS

Appendix 1 contains the following figures for rate year 2016:

1. The consolidated revenue adjustments across all quality-based payment programs, by hospital
2. The adjustments for the quality-based reimbursement (QBR) program, by hospital
3. The adjustments for the Readmission Reduction Incentive Program (RRIP), by hospital
4. The adjustments for the Maryland Hospital-Acquired Conditions (MHAC) program, by hospital
5. FY 2017 year-to-date results, by hospital

Figure 1. Consolidated Adjustments for All Quality-Based Payment Programs for Rate Year 2016, by Hospital

Hospital Name	FY 2015 Permanent Inpatient Revenue	MHAC % Revenue Adjustment	RRIP % Revenue Adjustment	QBR % Revenue Adjustment	NET Shared Savings % Revenue Adjustment	PAU % Revenue Adjustment	Net Impact %	Net Impact $
SOUTHERN MARYLAND	$161,253,766	-0.21%	0.00%	-0.51%	-0.31%	-0.92%	-1.95%	$(3,138,427)
DORCHESTER	$23,804,066	0.00%	0.00%	-0.54%	-0.29%	-0.75%	-1.58%	$(374,986)
PRINCE GEORGE	$176,633,177	0.00%	0.00%	-1.00%	-0.30%	-0.27%	-1.57%	$(2,773,413)
GOOD SAMARITAN	$178,635,338	0.00%	0.00%	-0.46%	-0.39%	-0.31%	-1.15%	$(2,059,395)
ANNE ARUNDEL	$308,739,341	0.00%	0.00%	-0.42%	-0.23%	-0.35%	-1.00%	$(3,087,905)
CHARLES REGIONAL	$76,417,734	0.21%	0.00%	-0.06%	-0.37%	-0.85%	-1.07%	$(816,786)
UNION MEMORIAL	$239,732,514	0.00%	0.50%	-0.85%	-0.43%	-0.31%	-1.09%	$(2,602,721)
FRANKLIN SQUARE	$282,129,812	0.00%	0.00%	-0.35%	-0.28%	-0.30%	-0.93%	$(2,614,927)
HOLY CROSS	$319,832,140	0.00%	0.00%	-0.31%	-0.35%	-0.25%	-0.91%	$(2,900,125)
CARROLL COUNTY	$136,537,813	-0.17%	0.00%	0.31%	-0.24%	-0.70%	-0.80%	$(1,090,207)
HARBOR	$122,412,282	0.00%	0.00%	-0.36%	-0.33%	-0.18%	-0.87%	$(1,066,772)
WASHINGTON ADVENTIST	$160,049,373	0.00%	0.00%	-0.15%	-0.35%	-0.42%	-0.93%	$(1,484,691)
SUBURBAN	$182,880,097	0.00%	0.00%	-0.10%	-0.28%	-0.47%	-0.84%	$(1,534,715)
ATLANTIC GENERAL	$38,616,313	0.63%	0.00%	-0.72%	-0.33%	-0.41%	-0.82%	$(318,359)
BALTIMORE WASHINGTON MEDICAL CENTER	$224,082,798	0.00%	0.00%	0.42%	-0.36%	-0.72%	-0.67%	$(1,492,281)
FT. WASHINGTON	$17,901,765	0.95%	0.00%	-0.18%	-0.43%	-1.10%	-0.77%	$(137,591)
SHADY GROVE	$231,030,092	0.00%	0.00%	-0.22%	-0.22%	-0.29%	-0.72%	$(1,672,839)
DOCTORS COMMUNITY	$136,010,794	-0.17%	0.50%	0.10%	-0.27%	-0.88%	-0.72%	$(982,849)
GARRETT COUNTY	$18,608,187	0.00%	0.50%	-0.81%	-0.15%	-0.47%	-0.94%	$(173,989)
EASTON	$95,655,306	0.00%	0.00%	0.03%	-0.41%	-0.36%	-0.74%	$(707,029)
UMMC MIDTOWN	$137,603,928	0.00%	0.00%	-0.20%	-0.46%	-0.13%	-0.79%	$(1,089,137)
HOWARD COUNTY	$167,430,727	0.00%	0.00%	0.19%	-0.23%	-0.51%	-0.54%	$(910,182)
MERITUS	$188,367,776	0.05%	0.00%	0.01%	-0.21%	-0.27%	-0.41%	$(778,226)

Hospital Name	FY 2015 Permanent Inpatient Revenue	MHAC % Revenue Adjustment	RRIP % Revenue Adjustment	QBR % Revenue Adjustment	NET Shared Savings % Revenue Adjustment	PAU % Revenue Adjustment	Net Impact %	Net Impact $
FREDERICK MEMORIAL	$190,475,901	0.00%	0.00%	0.13%	-0.18%	-0.42%	-0.47%	$(889,726)
HARFORD	$46,774,506	0.00%	0.00%	0.15%	-0.35%	-0.37%	-0.58%	$(270,103)
UNIVERSITY OF MARYLAND	$869,783,534	0.00%	0.00%	-0.09%	-0.23%	-0.14%	-0.46%	$(3,997,336)
UNION HOSPITAL OF CECIL COUNT	$67,638,499	0.05%	0.00%	0.23%	-0.10%	-0.57%	-0.39%	$(263,934)
MONTGOMERY GENERAL	$87,866,458	0.00%	0.50%	-0.12%	-0.28%	-0.53%	-0.43%	$(380,174)
UPPER CHESAPEAKE HEALTH	$153,131,633	0.00%	0.00%	0.35%	-0.34%	-0.43%	-0.42%	$(636,439)
LAUREL REGIONAL	$77,138,956	0.00%	0.50%	-0.20%	-0.30%	-0.40%	-0.40%	$(310,923)
G.B.M.C.	$200,727,665	-0.14%	0.00%	0.20%	-0.29%	-0.23%	-0.45%	$(909,220)
JOHNS HOPKINS	$1,303,085,115	0.00%	0.00%	0.30%	-0.40%	-0.14%	-0.24%	$(3,063,257)
ST. AGNES	$238,960,906	0.05%	0.50%	-0.10%	-0.36%	-0.34%	-0.25%	$(592,138)
BON SECOURS	$75,937,922	0.47%	0.50%	-0.84%	-0.33%	0.00%	-0.20%	$(148,483)
PENINSULA REGIONAL	$232,896,408	0.16%	0.00%	0.08%	-0.20%	-0.13%	-0.09%	$(204,159)
HOPKINS BAYVIEW MED CTR	$354,237,613	0.37%	0.00%	0.15%	-0.25%	-0.19%	0.07%	$242,340
MERCY	$232,326,849	0.00%	0.50%	0.28%	-0.46%	-0.19%	0.13%	$293,111
WESTERN MARYLAND HEALTH SYSTEM	$182,494,313	0.00%	0.00%	0.73%	-0.15%	-0.11%	0.46%	$846,736
REHAB & ORTHO	$69,116,851	0.37%	0.00%		-0.42%	-0.15%	-0.20%	$(138,972)
NORTHWEST	$141,883,177	0.68%	0.50%	0.10%	-0.26%	-0.48%	0.55%	$775,801
SINAI	$428,400,532	0.32%	0.50%	0.28%	-0.34%	-0.19%	0.57%	$2,422,359
CHESTERTOWN	$29,287,619	0.53%	0.50%	0.15%	-0.23%	-0.25%	0.70%	$205,232
CALVERT	$67,061,373	0.63%	0.50%	0.11%	-0.13%	-0.54%	0.57%	$382,528
UM ST. JOSEPH	$230,010,193	0.58%	0.00%	0.58%	-0.32%	-0.26%	0.58%	$1,335,237
ST. MARY	$69,990,405	0.68%	0.50%	0.34%	-0.11%	-0.40%	1.01%	$710,270
MCCREADY	$ 3,571,064	1.00%	0.50%	N/A	-0.36%	-0.04%	1.09%	$39,024

Figure 2. Adjustments for the QBR Program for Rate Year 2016, by Hospital

Hospital Name	FY 2015 Permanent Inpatient Revenue	QBR Final Points	Scaling Basis	Revenue Impact of Scaling	Revenue Neutral Adjusted Revenue Impact of Scaling	Revenue Neutral Adjusted % Payment Adjustment
A	B	C	D	E=B*D	F	G=(B+F)/B-1
PRINCE GEORGE	$176,633,176.79	0.204	-1.000%	-$1,766,332	-$1,766,332	-1.000%
UNION MEMORIAL	$239,732,514.10	0.236	-0.848%	-$2,032,700	-$2,032,700	-0.848%
BON SECOURS	$75,937,921.77	0.237	-0.842%	-$639,466	-$639,466	-0.842%
GARRETT COUNTY	$18,608,187.37	0.243	-0.811%	-$150,839	-$150,839	-0.811%
ATLANTIC GENERAL	$38,616,312.78	0.262	-0.721%	-$278,422	-$278,422	-0.721%
DORCHESTER	$23,804,066.20	0.300	-0.536%	-$127,696	-$127,696	-0.536%
SOUTHERN MARYLAND	$161,253,765.94	0.306	-0.506%	-$815,828	-$815,828	-0.506%
GOOD SAMARITAN	$178,635,337.98	0.316	-0.457%	-$817,238	-$817,238	-0.457%
ANNE ARUNDEL	$308,739,340.58	0.324	-0.420%	-$1,297,299	-$1,297,299	-0.420%
HARBOR	$122,412,281.84	0.337	-0.355%	-$434,912	-$434,912	-0.355%
FRANKLIN SQUARE	$282,129,811.54	0.338	-0.351%	-$990,065	-$990,065	-0.351%
HOLY CROSS	$319,832,140.30	0.347	-0.309%	-$989,139	-$989,139	-0.309%
SHADY GROVE	$231,030,091.92	0.366	-0.215%	-$497,403	-$497,403	-0.215%
LAUREL REGIONAL	$77,138,956.35	0.369	-0.203%	-$156,364	-$156,364	-0.203%
UMMC MIDTOWN	$137,603,928.30	0.370	-0.199%	-$273,596	-$273,596	-0.199%
FT. WASHINGTON	$17,901,765.04	0.373	-0.183%	-$32,819	-$32,819	-0.183%
WASHINGTON ADVENTIST	$160,049,372.87	0.379	-0.153%	-$245,350	-$245,350	-0.153%
MONTGOMERY GENERAL	$87,866,457.56	0.387	-0.117%	-$102,775	-$102,775	-0.117%
ST. AGNES	$238,960,906.16	0.390	-0.099%	-$236,680	-$236,680	-0.099%
SUBURBAN	$182,880,097.32	0.391	-0.095%	-$174,048	-$174,048	-0.095%
UNIVERSITY OF MARYLAND	$869,783,533.93	0.392	-0.089%	-$777,220	-$777,220	-0.089%
CHARLES REGIONAL	$76,417,733.97	0.399	-0.057%	-$43,855	-$43,855	-0.057%

Hospital Name	FY 2015 Permanent Inpatient Revenue	QBR Final Points	Scaling Basis	Revenue Impact of Scaling	Revenue Neutral Adjusted Revenue Impact of Scaling	Revenue Neutral Adjusted % Payment Adjustment
MERITUS	$188,367,775.67	0.415	0.020%	$37,886	$23,050	0.012%
EASTON	$95,655,306.19	0.420	0.045%	$42,869	$26,081	0.027%
PENINSULA REGIONAL	$232,896,407.52	0.439	0.139%	$323,230	$196,651	0.084%
NORTHWEST	$141,883,177.42	0.446	0.169%	$240,213	$146,144	0.103%
DOCTORS COMMUNITY	$136,010,793.59	0.446	0.169%	$230,271	$140,095	0.103%
CALVERT	$67,061,372.88	0.447	0.174%	$116,461	$70,854	0.106%
FREDERICK MEMORIAL	$190,475,900.63	0.455	0.216%	$411,978	$250,644	0.132%
HOPKINS BAYVIEW MED CTR	$354,237,613.19	0.460	0.239%	$845,105	$514,157	0.145%
HARFORD	$46,774,506.17	0.461	0.245%	$114,535	$69,683	0.149%
CHESTERTOWN	$29,287,619.34	0.462	0.250%	$73,134	$44,494	0.152%
HOWARD COUNTY	$167,430,726.52	0.476	0.318%	$531,634	$323,443	0.193%
G.B.M.C.	$200,727,664.89	0.478	0.327%	$656,806	$399,596	0.199%
UNION HOSPITAL OF CECIL COUNT	$67,638,499.19	0.488	0.375%	$253,429	$154,185	0.228%
MERCY	$232,326,849.10	0.504	0.453%	$1,052,795	$640,513	0.276%
SINAI	$428,400,532.05	0.505	0.456%	$1,953,758	$1,188,653	0.277%
JOHNS HOPKINS	$1,303,085,115.22	0.512	0.490%	$6,390,980	$3,888,230	0.298%
CARROLL COUNTY	$136,537,812.51	0.516	0.510%	$696,104	$423,505	0.310%
ST. MARY	$69,990,405.25	0.525	0.554%	$387,680	$235,862	0.337%
UPPER CHESAPEAKE HEALTH	$153,131,633.20	0.531	0.583%	$892,707	$543,117	0.355%
BALTIMORE WASHINGTON MEDICAL CENTER	$224,082,797.59	0.552	0.684%	$1,533,183	$932,778	0.416%
UM ST. JOSEPH	$230,010,193.37	0.609	0.961%	$2,209,908	$1,344,493	0.585%
WESTERN MARYLAND HEALTH SYSTEM	$182,494,313.32	0.657	1.192%	$2,175,921	$1,323,816	0.725%
Statewide	**$8,904,474,715**			**$8,290,541**	**$0**	**0%**

Figure 3. Adjustments for the RRIP Program for Rate Year 2016, by Hospital

HOSPITAL NAME	FY 2015 Permanent Inpatient Revenue	CY 13 Base Year Risk-Adjusted Readmission Rate	CY 14 Performance Period Risk-Adjusted Readmission Rate	CY 14 Readmission Improvement	% Payment Adjustment	Revenue Impact of Scaling
A	B	C	D	E=D/C-1	H	I=H*B
MCCREADY	$3,571,064.06	11.82%	9.30%	-21.30%	0.50%	$17,855
ST. MARY	$69,990,405.25	12.09%	10.21%	-15.52%	0.50%	$349,952
CALVERT	$67,061,372.88	9.63%	8.16%	-15.30%	0.50%	$335,307
BON SECOURS	$75,937,921.77	18.43%	15.79%	-14.31%	0.50%	$379,690
DOCTORS COMMUNITY	$136,010,793.59	12.52%	10.77%	-13.97%	0.50%	$680,054
CHESTERTOWN	$29,287,619.34	13.29%	11.79%	-11.24%	0.50%	$146,438
NORTHWEST	$141,883,177.42	14.52%	13.11%	-9.70%	0.50%	$709,416
ST. AGNES	$238,960,906.16	13.43%	12.15%	-9.53%	0.50%	$1,194,805
UNION MEMORIAL	$239,732,514.10	13.78%	12.53%	-9.08%	0.50%	$1,198,663
MERCY	$232,326,849.10	13.96%	12.77%	-8.56%	0.50%	$1,161,634
MONTGOMERY GENERAL	$87,866,457.56	12.03%	11.11%	-7.58%	0.50%	$439,332
SINAI	$428,400,532.05	13.67%	12.67%	-7.34%	0.50%	$2,142,003
LAUREL REGIONAL	$77,138,956.35	13.18%	12.23%	-7.27%	0.50%	$385,695
GARRETT COUNTY	$18,608,187.37	7.21%	6.69%	-7.24%	0.50%	$93,041
HOPKINS BAYVIEW MED CTR	$354,237,613.19	14.71%	13.86%	-5.78%	0.00%	$0
PRINCE GEORGE	$176,633,176.79	10.04%	9.49%	-5.47%	0.00%	$0
G.B.M.C.	$200,727,664.89	10.67%	10.09%	-5.43%	0.00%	$0
UMMC MIDTOWN	$137,603,928.30	15.97%	15.16%	-5.07%	0.00%	$0
ANNE ARUNDEL	$308,739,340.58	11.99%	11.38%	-5.06%	0.00%	$0
HOWARD COUNTY	$167,430,726.52	11.81%	11.21%	-5.04%	0.00%	$0
UM ST. JOSEPH	$230,010,193.37	11.40%	10.83%	-4.97%	0.00%	$0
ATLANTIC GENERAL	$38,616,312.78	11.65%	11.09%	-4.86%	0.00%	$0
HARBOR	$122,412,281.84	12.81%	12.28%	-4.15%	0.00%	$0

HOSPITAL NAME	FY 2015 Permanent Inpatient Revenue	CY 13 Base Year Risk-Adjusted Readmission Rate	CY 14 Performance Period Risk-Adjusted Readmission Rate	CY 14 Readmission Improvement	% Payment Adjustment	Revenue Impact of Scaling
SHADY GROVE	$231,030,091.92	10.84%	10.42%	-3.87%	0.00%	$0
SOUTHERN MARYLAND	$161,253,765.94	11.39%	10.96%	-3.83%	0.00%	$0
GOOD SAMARITAN	$178,635,337.98	13.62%	13.10%	-3.80%	0.00%	$0
BALTIMORE WASHINGTON MEDICAL CENTER	$224,082,797.59	13.77%	13.30%	-3.38%	0.00%	$0
CARROLL COUNTY	$136,537,812.51	11.86%	11.53%	-2.77%	0.00%	$0
UNIVERSITY OF MARYLAND	$869,783,533.93	13.78%	13.55%	-1.63%	0.00%	$0
WESTERN MARYLAND HEALTH SYSTEM	$182,494,313.32	11.89%	11.73%	-1.31%	0.00%	$0
SUBURBAN	$182,880,097.32	10.94%	10.81%	-1.27%	0.00%	$0
FRANKLIN SQUARE	$282,129,811.54	12.63%	12.50%	-1.05%	0.00%	$0
HARFORD	$46,774,506.17	11.04%	10.95%	-0.80%	0.00%	$0
REHAB & ORTHO	$69,116,850.62	11.46%	11.47%	0.01%	0.00%	$0
JOHNS HOPKINS	$1,303,085,115.22	13.97%	13.97%	0.04%	0.00%	$0
UNION HOSPITAL OF CECIL COUNT	$67,638,499.19	9.77%	9.82%	0.51%	0.00%	$0
UPPER CHESAPEAKE HEALTH	$153,131,633.20	11.45%	11.59%	1.27%	0.00%	$0
FREDERICK MEMORIAL	$190,475,900.63	10.38%	10.51%	1.30%	0.00%	$0
MERITUS	$188,367,775.67	11.38%	11.53%	1.36%	0.00%	$0
FT. WASHINGTON	$17,901,765.04	12.53%	12.74%	1.65%	0.00%	$0
DORCHESTER	$23,804,066.20	11.07%	11.28%	1.89%	0.00%	$0
CHARLES REGIONAL	$76,417,733.97	11.57%	11.90%	2.82%	0.00%	$0
PENINSULA REGIONAL	$232,896,407.52	10.77%	11.08%	2.88%	0.00%	$0
HOLY CROSS	$319,832,140.30	11.12%	11.69%	5.09%	0.00%	$0
WASHINGTON ADVENTIST	$160,049,372.87	10.79%	11.42%	5.77%	0.00%	$0
EASTON	$95,655,306.19	10.47%	11.93%	13.98%	0.00%	$0
	$8,977,162,630				**Rewards:**	**$9,233,884**

Figure 4. Adjustments for the MHAC Program for Rate Year 2016, by Hospital

Hospital Name	FY 2015 Permanent Inpatient Revenue	Final MHAC Score	% Payment Adjustment	Revenue Impact of Scaling
A	B	C	D	E
SOUTHERN MARYLAND	$161,253,765.94	0.40	-0.2069%	-$333,628
DOCTORS COMMUNITY	$136,010,793.59	0.41	-0.1724%	-$234,501
CARROLL COUNTY	$136,537,812.51	0.41	-0.1724%	-$235,410
G.B.M.C.	$200,727,664.89	0.42	-0.1379%	-$276,866
SUBURBAN	$182,880,097.32	0.47	0.0000%	$0
LAUREL REGIONAL	$77,138,956.35	0.48	0.0000%	$0
WASHINGTON ADVENTIST	$160,049,372.87	0.48	0.0000%	$0
ANNE ARUNDEL	$308,739,340.58	0.48	0.0000%	$0
HARBOR	$122,412,281.84	0.49	0.0000%	$0
MONTGOMERY GENERAL	$87,866,457.56	0.50	0.0000%	$0
DORCHESTER	$23,804,066.20	0.52	0.0000%	$0
PRINCE GEORGE	$176,633,176.79	0.52	0.0000%	$0
FREDERICK MEMORIAL	$190,475,900.63	0.53	0.0000%	$0
UNION MEMORIAL	$239,732,514.10	0.53	0.0000%	$0
FRANKLIN SQUARE	$282,129,811.54	0.54	0.0000%	$0
HOWARD COUNTY	$167,430,726.52	0.54	0.0000%	$0
HOLY CROSS	$319,832,140.30	0.54	0.0000%	$0
HARFORD	$46,774,506.17	0.54	0.0000%	$0
BALTIMORE WASHINGTON MEDICAL CENTER	$224,082,797.59	0.54	0.0000%	$0
GARRETT COUNTY	$18,608,187.37	0.55	0.0000%	$0
WESTERN MARYLAND HEALTH SYSTEM	$182,494,313.32	0.55	0.0000%	$0
JOHNS HOPKINS	$1,303,085,115.22	0.56	0.0000%	$0
UNIVERSITY OF MARYLAND	$869,783,533.93	0.57	0.0000%	$0

Hospital Name	FY 2015 Permanent Inpatient Revenue	Final MHAC Score	% Payment Adjustment	Revenue Impact of Scaling
A	B	C	D	E
UPPER CHESAPEAKE HEALTH	$153,131,633.20	0.57	0.0000%	$0
SHADY GROVE	$231,030,091.92	0.58	0.0000%	$0
GOOD SAMARITAN	$178,635,337.98	0.58	0.0000%	$0
UMMC MIDTOWN	$137,603,928.30	0.60	0.0000%	$0
EASTON	$95,655,306.19	0.60	0.0000%	$0
MERCY	$232,326,849.10	0.61	0.0000%	$0
UNION HOSPITAL OF CECIL COUNT	$67,638,499.19	0.62	0.0526%	$35,599
ST. AGNES	$238,960,906.16	0.62	0.0526%	$125,769
MERITUS	$188,367,775.67	0.62	0.0526%	$99,141
PENINSULA REGIONAL	$232,896,407.52	0.64	0.1579%	$367,731
CHARLES REGIONAL	$76,417,733.97	0.65	0.2105%	$160,879
SINAI	$428,400,532.05	0.67	0.3158%	$1,352,844
HOPKINS BAYVIEW MED CTR	$354,237,613.19	0.68	0.3684%	$1,305,086
REHAB & ORTHO	$69,116,850.62	0.68	0.3684%	$254,641
BON SECOURS	$75,937,921.77	0.70	0.4737%	$359,706
CHESTERTOWN	$29,287,619.34	0.71	0.5263%	$154,145
UM ST. JOSEPH	$230,010,193.37	0.72	0.5789%	$1,331,638
ATLANTIC GENERAL	$38,616,312.78	0.73	0.6316%	$243,893
CALVERT	$67,061,372.88	0.73	0.6316%	$423,546
ST. MARY	$69,990,405.25	0.74	0.6842%	$478,882
NORTHWEST	$141,883,177.42	0.74	0.6842%	$970,780
FT. WASHINGTON	$17,901,765.04	0.79	0.9474%	$169,596
MCCREADY	$3,571,064.06	0.83	1.0000%	$35,711
	$8,977,162,630			**$6,789,180**

Figure 5. FY 2017 Year-to-Date Hospital-Level Consolidated Results

Hospital Name	FY 16 Permanent Inpatient Revenue	MHAC (Below Target)	RRIP	QBR YTD	FY 17 Net Shared Savings	PAU TBD	Net Impact %	Net Impact $
MERCY	$212,830,654	0.49%	0.86%	0.46%	-0.39%		1.41%	$3,009,077
UM ST. JOSEPH	$229,182,131	0.59%	0.06%	0.86%	-0.62%		0.89%	$2,037,880
UNIVERSITY OF MARYLAND	$881,918,802	0.62%	-0.11%	0.32%	-0.56%		0.28%	$2,462,969
UNION MEMORIAL	$232,103,368	0.22%	0.79%	0.50%	-1.25%		0.26%	$597,006
ST. MARY	$64,646,317	0.81%	0.43%	1.00%	-2.09%		0.15%	$100,143
SINAI	$415,350,729	0.41%	0.31%	0.29%	-0.88%		0.12%	$498,007
ATLANTIC GENERAL	$37,750,252	0.27%	1.00%	0.46%	-1.72%		0.02%	$6,942
SUBURBAN	$187,561,350	0.32%	-0.45%	0.86%	-0.85%		-0.12%	$(228,419)
HOPKINS BAYVIEW MED CTR	$330,543,143	0.65%	-0.12%	0.36%	-1.23%		-0.34%	$(1,124,798)
CALVERT	$62,336,014	0.95%	0.20%	0.61%	-2.13%		-0.37%	$(233,048)
FT. WASHINGTON	$19,291,671	1.00%	0.82%	0.68%	-2.94%		-0.45%	$(86,020)
ANNE ARUNDEL	$283,614,957	0.19%	-0.29%	0.50%	-0.93%		-0.53%	$(1,497,081)
FRANKLIN SQUARE	$262,267,357	0.54%	-0.25%	0.36%	-1.23%		-0.58%	$(1,531,706)
JOHNS HOPKINS	$1,194,143,999	0.00%	-0.34%	0.32%	-0.58%		-0.60%	$(7,151,146)
PENINSULA REGIONAL	$242,318,199	0.76%	-0.66%	0.64%	-1.35%		-0.61%	$(1,486,593)
CHESTERTOWN	$21,575,174	0.59%	0.54%	0.68%	-2.67%		-0.85%	$(183,299)
FREDERICK MEMORIAL	$191,005,669	0.27%	-0.52%	0.61%	-1.31%		-0.96%	$(1,831,945)
ST. AGNES	$231,110,720	0.51%	-0.04%	0.39%	-1.83%		-0.96%	$(2,223,848)
UPPER CHESAPEAKE HEALTH	$135,939,076	0.59%	-0.21%	0.61%	-1.95%		-0.97%	$(1,315,671)
GOOD SAMARITAN	$163,894,501	0.16%	0.21%	0.61%	-1.98%		-1.01%	$(1,649,579)
HARBOR	$117,729,862	0.59%	-1.06%	0.57%	-1.16%		-1.06%	$(1,243,575)
REHAB & ORTHO	$62,701,880	0.43%	-1.94%	0.00%	0.44%		-1.07%	$(668,557)

Hospital Name	FY 16 Permanent Inpatient Revenue	MHAC (Below Target)	RRIP	QBR YTD	FY 17 Net Shared Savings	PAU TBD	Net Impact %	Net Impact $
HOWARD COUNTY	$171,058,543	0.30%	-0.91%	0.93%	-1.39%		-1.08%	$(1,851,357)
BALTIMORE WASHINGTON	$231,829,554	0.46%	-0.06%	0.32%	-1.85%		-1.13%	$(2,623,939)
MCCREADY	$2,815,158	1.00%	1.00%	0.00%	-3.17%		-1.17%	$(32,946)
G.B.M.C.	$207,515,795	0.03%	-0.54%	0.39%	-1.12%		-1.24%	$(2,564,878)
CHARLES REGIONAL	$66,118,800	0.30%	-0.04%	0.79%	-2.33%		-1.29%	$(851,823)
SHADY GROVE	$220,608,397	0.11%	-0.55%	0.29%	-1.16%		-1.32%	$(2,904,395)
MONTGOMERY GENERAL	$73,591,277	0.46%	-0.16%	0.39%	-2.04%		-1.35%	$(990,272)
GARRETT COUNTY	$18,780,919	1.00%	-0.87%	0.39%	-1.87%		-1.35%	$(253,694)
WESTERN MARYLAND HEALTH	$167,618,972	0.14%	-0.75%	0.39%	-1.22%		-1.45%	$(2,423,121)
CARROLL COUNTY	$136,267,434	0.19%	-0.69%	0.71%	-1.86%		-1.64%	$(2,237,130)
UMMC MIDTOWN	$128,496,390	0.38%	-0.17%	-0.89%	-1.18%		-1.86%	$(2,388,217)
NORTHWEST	$124,512,352	0.19%	0.82%	-0.56%	-2.34%		-1.89%	$(2,350,288)
BON SECOURS	$74,789,724	0.00%	1.00%	-1.78%	-1.13%		-1.91%	$(1,426,493)
HOLY CROSS	$308,412,592	0.65%	-1.12%	-0.33%	-1.16%		-1.97%	$(6,066,336)
WASHINGTON ADVENTIST	$155,199,154	0.00%	-1.20%	0.25%	-1.13%		-2.07%	$(3,217,652)
HARFORD	$45,713,956	1.00%	0.16%	0.18%	-3.43%		-2.09%	$(953,441)
MERITUS	$190,659,648	0.22%	-1.36%	0.29%	-1.26%		-2.11%	$(4,026,507)
DORCHESTER	$26,999,062	0.84%	-0.30%	0.64%	-3.52%		-2.34%	$(631,238)
DOCTORS COMMUNITY	$126,399,313	0.05%	-0.31%	0.18%	-2.37%		-2.44%	$(3,085,281)
LAUREL REGIONAL	$71,015,471	0.03%	-0.49%	-1.11%	-1.16%		-2.73%	$(1,938,171)
SOUTHERN MARYLAND	$149,227,508	0.00%	-0.62%	0.11%	-2.28%		-2.80%	$(4,174,375)
PRINCE GEORGE	$201,088,746	-0.25%	-1.70%	0.07%	-0.93%		-2.80%	$(5,636,119)
EASTON	$101,975,577	0.16%	-1.82%	0.29%	-1.62%		-2.99%	$(3,048,831)
UNION HOSPITAL OF CECIL	$69,389,876	0.49%	-2.00%	0.46%	-2.05%		-3.10%	$(2,152,141)

DRAFT Recommendation for the Aggregate Revenue Amount At-Risk under Maryland Hospital Quality Programs for Rate Year 2018

Background

- Maryland quality based programs are exempt from Medicare Programs.
  - Exemption from the Medicare Value-Based Purchasing (VBP) program is evaluated annually
  - Exceptions from the Medicare Hospital Readmissions Reduction Program and the Medicare Hospital-Acquired Condition Reduction Program are granted based on achieving performance targets
  - Maryland aggregate at-risk amounts are compared against Medicare programs

Maryland surpasses National Medicare Aggregate Revenue at Risk in Quality Payments

Figure 1. Potential Revenue at Risk for Quality-Based Payment Programs, Maryland Compared with the National Medicare Programs, 2014-2017

% of MD All-Payer Inpatient Revenue	FY 2014	FY 2015	FY 2016	FY 2017
MHAC - Complications	2.00%	3.00%	4.00%	3.00%
RRIP - Readmissions			0.50%	2.00%
QBR – Patient Experience, Mortality, Safety	0.50%	0.50%	1.00%	2.00%
Shared Savings	0.41%	0.86%	1.35%	4.36%*
GBR Potentially Avoidable Utilization (PAU)	0.50%	0.86%	1.10%	TBD
MD Aggregate Maximum At Risk	3.41%	5.22%	7.95%	11.36%

*Italics are based on RY 2016 results, and subject to change
based on RY 2017 policy, which is to be finalized at June 2016 Commission meeting.

Medicare National				
% of National Medicare Inpatient Revenue	FFY 2014	FFY 2015	FFY 2016	FFY 2017
Hospital Acquired Complications (HAC)		1.00%	1.00%	1.00%
Readmissions	2.00%	3.00%	3.00%	3.00%
VBP	1.25%	1.50%	1.75%	2.00%
Medicare Aggregate Maximum At Risk	3.25%	5.50%	5.75%	6.00%

Cumulative MD-Medicare National Difference	0.16%	-0.12%	2.08%	7.44%

RY 2017 Year to Date Results

	MHAC*	RRIP**	QBR***	Shared Savings***	Net Shared Savings***	PAU*	State Aggregate	Hospital Net
	A	B	C	D	E	F	G=Sum(A-D)	
Potential At Risk (Absolute Value)	3.00%	2.00%	2.00%	4.36%	3.52%		11.36%	
Maximum Hospital Penalty (% Inpatient Revenue)	-0.25%	-2.00%	-1.78%	-4.36%	-3.52%		-8.38%	-3.10%
Maximum Hospital Reward (% Inpatient Revenue)	1.00%	1.00%	1.00%	NA	0.44%	NA	3.00%	1.41%
Average Absolute Level Adjustment (% Inpatient Revenue)	**0.42%**	**0.65%**	**0.51%**	**2.56%**	**1.60%**		**4.13%**	**1.35%**
Total Penalty	-$502,722	-$36,224,835	-$4,980,623	-$190,634,642	-$99,309,267		-$141,017,447	
Total Reward	$29,403,229	$8,358,316	$33,335,873	$0	$278,971	NA	$71,097,418	
Total Net Adjustments	**$28,900,507**	**-$27,866,519**	**$28,355,250**	**-$190,634,642**	**-$99,309,267**		**-$69,920,029**	
% Total GBR Revenue	**0.19%**	**-0.18%**	**0.19%**	**-1.25%**	**-0.65%**		**-0.46%**	

**All calculations are preliminary subject to the assessment of ICD-10 impact.*
***RRIP results are preliminary results as of December 2015 and do not reflect any potential protections that may be developed based on the approved RY 2017 recommendation.*
****QBR YTD results are preliminary estimates based on two quarters of new data due to data lag for measures from CMS. Staff will provide updated calculations for the final recommendation.*
*****Shared Savings are based on 0.65 % net statewide reduction based on draft FY2017 recommendation.*

DRAFT Recommendations

- No change is recommended to FY 2017 levels

	Max Penalty	Max Reward
MHAC Below target	-3.0%	0.0%
MHAC Above Target	-1.0%	1.0%
RRIP	-2.0%	1.0%
QBR	-2.0%	1.0%

- Continue to set the maximum penalty guardrail at 3.5 percent of total hospital revenue
- The quality adjustments should be applied to inpatient revenue centers, similar to the approach used by CMS. The HSCRC staff can apply the adjustments to hospitals' medical surgical rates to concentrate the impact of this adjustment to inpatient revenues, consistent with federal policies.

Draft Recommendations for the Potentially Avoidable Utilization Savings Policy for Rate Year 2017

May 11, 2016

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

This document contains the draft staff recommendations for implementing the Potentially Avoidable Utilization Savings Policy for Rate Year 2017. Please submit comments on this draft to the Commission by Wednesday May 25, 2016, via hard copy mail or email to Dianne.feeney@maryland.gov

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
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 referred to as the readmission shared savings policy. The PAU savings policy is important for maintaining hospitals' focus on improving care and health for patients by 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 update the policy to incorporate an additional category of PAU, 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) 2017 update. The purpose of this report is to present background information and supporting analyses for the PAU savings recommendations for rate year (RY) 2017.

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. Such indicators include mortality amenable to health care and a healthy life expectancy at age 60. 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 is premised on the opportunity for Maryland and CMS to test whether an all-payer system that is accountable for the total hospital cost of care on a per capita basis 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 aimed at improving care and care coordination, with a particular focus on reducing PAU.

Under the state's previous Medicare waiver, the Commission approved a shared savings policy on May 1, 2013, which reduced hospital revenues based on case-mix adjusted readmission rates[1] using specifications set forth in the HSCRC's Admission-Readmission Revenue (ARR) Program. Nearly all hospitals in the state were participating in the ARR program, which incorporated 30-

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

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. Because Medicare policies are tied to a fee-for-service system, it receives savings when avoidable admissions are reduced. In contrast, Maryland's ARR and TPR systems locked in the savings, and Maryland was required to reduce approved revenues to ensure savings to purchasers, including Medicare, from the reductions in readmissions to maintain Maryland's exemption from the CMS Medicare Hospital Readmission Reduction Program. The Commission initiated a reduction of 0.20 percent of total revenues starting in FY 2014 to implement this policy. Under the new All-Payer Model, the Commission continued to use the savings adjustment to assure a focus on reducing readmissions, assure 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[2] for each hospital for the previous calendar year.[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.

For 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] The savings reduction percentage was 0.60 percent of total revenue in RY 2016 (a 0.20 percent incremental net impact for RY 2016).

Exemption from CMS Quality-Based Payment Programs

Section 3025 of the Affordable Care Act[5] 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] 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

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

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. This policy is intentionally different from the other quality-based programs that are scaled to provide rewards or penalties based on improvement or attainment levels in that it is designed to assure savings from the application of the policy.

ASSESSMENT

Alignment of Savings with Potentially Avoidable Utilization

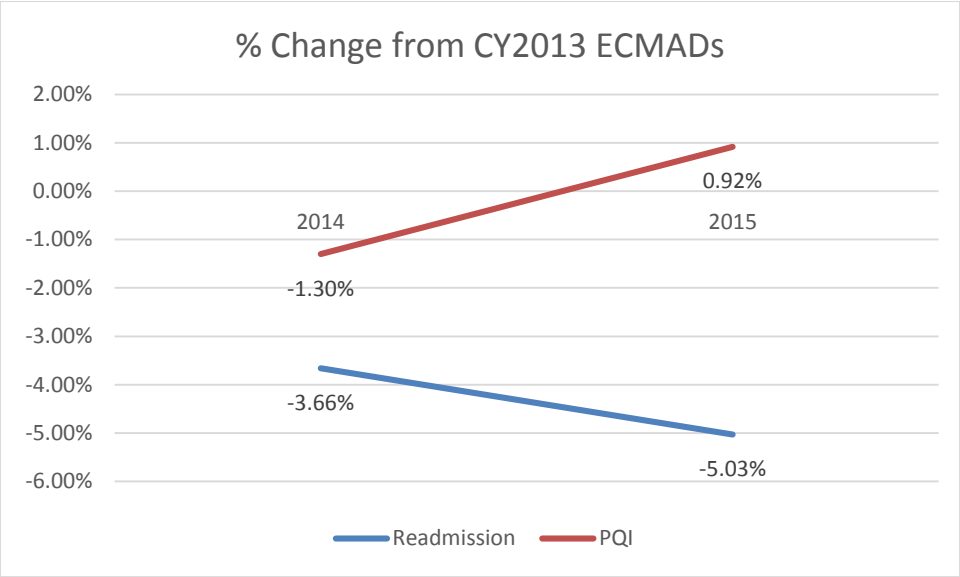
With the introduction of the new All-Payer Model and global budgets, reducing PAU through improved care coordination and enhanced community-based care became a central focus. HSCRC provided additional revenue in global budgets over the last three years to bolster investments in care coordination resources and infrastructure. Infrastructure adjustments of 0.325 percent in FY 2014, 0.325 percent in FY 2015, and 0.40 percent in FY 2016 were included in most global budgets to enable the successful transition to the new model and provide funds for the needed investments. The total ongoing commitment for infrastructure is approximately $180 million for global budget revenue (GBR) hospitals—an amount approaching the statewide estimated operating costs for care coordination developed by consultants for the Care Coordination Workgroup.[7] These adjustments recognized the need for investment in care coordination, care management, population health improvement, and other requirements of global models. Successful care management and population health efforts will require hospitals to maintain and enhance their investments in addressing the needs of complex patients; improving and coordinating care for individuals with chronic conditions; integrating and coordinating care with other hospitals and non-hospital providers; and investing in IT, analytics, human resources, training, and alignment models to support these efforts.

As the Model is premised on the ability to improve care and health, thereby reducing the pace of hospital cost increases, an intense focus needs to be placed on achieving these results that are both beneficial to patients and the system. HSCRC staff is proposing to focus the savings program more broadly on PAU. For FY 2017, HSCRC staff proposes to use the same definition of PAU that is used for the market shift calculations, incorporating both readmissions and admissions for ambulatory care sensitive conditions as measured by the Agency for Health Care

[7] http://hscrc.maryland.gov/hscrc-workgroup-care-coordination.cfm

Research and Quality's Prevention Quality Indicators (PQIs) [8]. Last year, the savings measure focused on readmissions, as the Commission was concerned about the slow rate of improvement in readmissions in Maryland. Calendar year (CY) 2015 trends indicate that readmission improvement is accelerating, while progress in reducing PQIs has been limited. Figure 1 below shows trends in readmissions and PQIs since CY 2013. While the CY 2015 equivalent case-mix adjusted readmission discharges (ECMADs) declined by 5.03 percent over CY 2013, PQIs increased by 0.92 percent, which was preceded by a 1.30 percent PQI reduction in CY 2014. Appendix I shows more detailed information on specific PQI trends.

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



In addition to including PQIs in the savings methodology, alignment with PAU will change the focus of the readmissions measure from "sending" hospitals to "receiving" hospitals. In other words, the PAU methodology currently calculates the percentage of revenue associated with readmissions that occur at the hospital regardless of where the first (index) admission occurred. This is more consistent with the opportunities for savings under global budgets since the readmit hospital only accrues savings if the actual number of readmissions at that hospital decreases. This also incentivizes hospitals to collaborate with other area hospitals to reduce readmissions.

Alignment with PAU will also enable the measure to include observation stays in the calculation of both readmissions and PQIs. As the use of observation stays has increased over the past few years, HSCRC staff recommends including observation stays that are longer than 23 hours in avoidable utilization measures.

[8] 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 .

Proposed Required Revenue Reduction

HSCRC staff proposes a statewide PAU savings adjustment of 1.25 percent of total hospital revenue. Because last year's statewide savings reduction of 0.60 percent is added back into rates, this represents an incremental reduction of 0.65 percent. Statewide required reductions in PAU are determined based on the proposed reduction in total revenue.

The proposed incremental savings increase of 0.65 percent provides an increase from the approximate 0.20 incremental percent level in the prior three rate years. In the third year of the All-Payer Model, with its intense focus on improving care and health and reducing PAU, there is a need to provide increased savings from reducing PAU. This proposal provides these savings and also apportions the savings to hospitals with higher levels of PAU. Both of these policy outcomes are important as the federal government increases the pace of reductions in hospital payments under the Affordable Care Act, (which is discussed in more detail in the RY 2017 Balanced Update Draft Recommendation), and hospitals need to keep up/accelerate the pace in reducing avoidable utilization to achieve the care improvements that are essential for success under the All-Payer Model.

Figure 2. Proposed RY 2017 Statewide Savings

Statewide Savings	Formulas	
RY 2016 Total Approved Permanent Revenue	A	$15.2 billion
Proposed RY 2017 Incremental Revenue Adjustment %	B	-0.65%
Incremental Revenue Adjustment	E=C-D	-$99.3 million

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

- Every hospital contributes to the PAU savings; however, the PAU savings are distributed in proportion to each hospital's 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 an actual reduction in PAU during the rate year, hence providing an equitable reduction for quality improvement related to PAU reductions across all hospitals. 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.
- When applied prospectively, the HSCRC sets the targeted dollar amount for savings, thus guaranteeing a fixed amount of savings.

Hospital Protections

The Commission and stakeholders are concerned about ensuring 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 care coordination because of higher deprivation. The HSCRC convened a subgroup to discuss risk-adjusting the readmissions

measures for socio-demographic factors and evaluate the impact of the Area Deprivation Index (ADI) on readmission rates.[9] As the ADI is currently being updated with more recent data, more work is needed to understand the hospital-level impact of this specific measure. In the meantime, staff proposes to apply a methodology similar to last year's and to cap the PAU savings contributions at the state average if a hospital has a high proportion of disadvantaged populations. Last year, staff used the percentage of discharges for those aged 18 years and older with Medicaid as the payer as a measure of the proportion of disadvantaged patients. This year, staff proposes to update the measure to include the percentage of Medicaid ECMADs for inpatient and observation cases with 23 hour or longer stays, with protection provided to those hospitals in the top quartile.

Appendix III provides the results of the PAU savings policy based on the proposed 1.25 percent reduction in total patient revenues with and without these protections.

Future Expansion of PAU

Staff intends to continue its focus of adding categories of admissions to the PAU measures. We considered adding sepsis to the measure for FY 2017, but this will require more vetting and specification development. It also appears that there may be coding discrepancies among hospitals in identifying sepsis cases. Staff is recommending that hospitals with high levels of sepsis cases or apparent shifts in PQI coding take the opportunity to evaluate their coding. Staff may need to focus coding audit resources on these hospitals if we do not see progress in this area. Other areas of future focus for additional PAU measures include admissions from long-term care and post-acute settings, as well as unplanned medical admissions through the emergency department setting.

RECOMMENDATIONS

Based on this assessment, staff recommends the following for the PAU savings policy for RY 2017:

1. Align the measure with the PAU definitions used in the market shift adjustment, which is comprised of readmissions and PQIs (inclusive of observation cases that are greater than 23 hours).

[9] The Area Deprivation Index was developed by HIPxChange, which is sponsored by the University of Wisconsin-Madison. The ADI is a composite measure of the socioeconomic deprivation of a geographic location (like a Census-block). It reflects various socioeconomic indicators like the level of education of the population, the employment rate, median family income, home value, and percent of the population below 150 percent of the federal poverty level. Higher values of the index indicate higher levels of socioeconomic deprivation. For more information, see: https://www.hipxchange.org/ADI.

2. Set the value of the PAU savings amount to 1.25 percent of total permanent revenue in the state, which is a 0.65 percent net reduction in RY 2017.
3. Cap the PAU savings reduction at the statewide average reduction for hospitals with higher socio-economic burden.
4. Evaluate further expansion of PAU definitions for RY 2018 to incorporate additional categories of unplanned admissions.
5. Evaluate progress on sepsis coding and the apparent discrepancies in levels of sepsis cases across hospitals, including the need for possible independent coding audits.

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 2014 and 2015. The table shows that 7 of the 13 PQIs measured increased during this time period. PQIs 10 (dehydration), 08 (heart failure), and 14 (uncontrolled diabetes) accounted for the majority of this increase. Of the PQIs that decreased, 05 (chronic obstructive pulmonary disease or asthma in older adults), 03 (diabetes long-term complications), and 11 (bacterial pneumonia) accounted for the majority of the decrease.

Appendix I. Figure 1. PQI Trends, CY 2014-CY 2015

PQI Admission Rate	CY 2014 PQI COUNT A	CY 2015 PQI COUNT B	CY 2014-2015 %CHANGE C=D/A	CY 2015-2014 PQI COUNT D=B-A	CY 2015 % CONTRIBUTION
PQI 15 Asthma in Younger Adults	1,188	1,070	-9.9%	-118	-10.85%
PQI 03 Diabetes Long-Term Complications	4,853	4,454	-8.2%	-399	-36.67%
PQI 05 Chronic Obstructive Pulmonary Disease or Asthma in Older Adults	13,826	13,327	-3.6%	-499	-45.86%
PQI 11 Bacterial Pneumonia	9,712	9,504	-2.1%	-208	-19.12%
PQI 02 Perforated Appendix	1,091	1,069	-2.0%	-22	-2.02%
PQI 07 Hypertension	2,887	2,873	-0.5%	-14	-1.29%
PQI 01 Diabetes Short-Term Complications	2,933	2,935	0.1%	2	0.18%
PQI 12 Urinary Tract Infection	7,446	7,603	2.1%	157	14.43%
PQI 08 Heart Failure	13,744	14,435	5.0%	691	63.51%
PQI 16 Lower-Extremity Amputation among Patients with Diabetes	773	822	6.3%	49	4.50%
PQI 10 Dehydration	4358	5,161	18.4%	803	73.81%
PQI 14 Uncontrolled Diabetes	629	957	52.1%	328	30.15%
PQI 13 Angina Without Procedure	571	889	55.7%	318	29.23%
Total PQI, Unduplicated	**64,011**	**65,099**	**1.7%**	**1,088**	**100%**

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 2015. Overall, 12.0 percent of total statewide hospital revenue was for PAU.

Appendix II. Figure 1. PAU a Percentage of Total Revenue by Hospital, CY 2015

Hospital Name	Non-PAU Revenue A	PQI Revenue B	Readmissions Revenue C	Total PAU Revenue D=B+C	Grand Total Hospital Revenue E=A+D	% PQI F=B/E	% Readmission G=C/E	% PAU H=F+G
MERITUS	$278,406,701	$16,506,961	$24,318,918	$40,825,878	$319,232,579	5.2%	7.6%	12.8%
UNIVERSITY OF MARYLAND	$1,389,491,670	$18,414,592	$122,455,882	$140,870,475	$1,530,362,144	1.2%	8.0%	9.2%
PRINCE GEORGE	$239,861,216	$15,407,093	$24,992,690	$40,399,783	$280,260,999	5.5%	8.9%	14.4%
HOLY CROSS	$423,300,823	$20,094,808	$43,040,350	$63,135,158	$486,435,981	4.1%	8.8%	13.0%
FREDERICK MEMORIAL	$317,156,797	$17,381,958	$22,945,724	$40,327,683	$357,484,480	4.9%	6.4%	11.3%
HARFORD	$85,096,314	$8,297,250	$10,904,505	$19,201,755	$104,298,069	8.0%	10.5%	18.4%
MERCY	$471,820,138	$10,684,953	$21,794,382	$32,479,334	$504,299,472	2.1%	4.3%	6.4%
JOHNS HOPKINS	$2,028,758,508	$36,613,835	$184,699,682	$221,313,517	$2,250,072,025	1.6%	8.2%	9.8%
DORCHESTER	$42,892,139	$6,073,560	$5,857,573	$11,931,134	$54,823,272	11.1%	10.7%	21.8%
ST. AGNES	$356,529,636	$25,274,064	$38,307,309	$63,581,373	$420,111,009	6.0%	9.1%	15.1%
SINAI	$642,833,350	$23,848,201	$55,938,937	$79,787,138	$722,620,488	3.3%	7.7%	11.0%
BON SECOURS	$88,874,197	$6,036,590	$15,064,171	$21,100,761	$109,974,958	5.5%	13.7%	19.2%
FRANKLIN SQUARE	$420,330,428	$30,082,935	$52,095,964	$82,178,899	$502,509,327	6.0%	10.4%	16.4%
WASHINGTON ADVENTIST	$225,198,609	$13,138,857	$23,614,634	$36,753,491	$261,952,100	5.0%	9.0%	14.0%
GARRETT COUNTY	$42,130,137	$2,992,594	$1,434,329	$4,426,923	$46,557,060	6.4%	3.1%	9.5%
MONTGOMERY GENERAL	$148,138,128	$8,239,791	$14,183,996	$22,423,787	$170,561,915	4.8%	8.3%	13.1%
PENINSULA REGIONAL	$373,979,999	$22,521,716	$29,904,869	$52,426,585	$426,406,584	5.3%	7.0%	12.3%

Hospital Name	Non-PAU Revenue A	PQI Revenue B	Readmissions Revenue C	Total PAU Revenue D=B+C	Grand Total Hospital Revenue E=A+D	% PQI F=B/E	% Readmission G=C/E	% PAU H=F+G
SUBURBAN	$269,202,439	$10,402,538	$21,805,253	$32,207,791	$301,410,230	3.5%	7.2%	10.7%
ANNE ARUNDEL	$516,288,595	$22,768,974	$31,797,948	$54,566,922	$570,855,517	4.0%	5.6%	9.6%
UNION MEMORIAL	$354,567,170	$16,432,554	$34,213,629	$50,646,183	$405,213,352	4.1%	8.4%	12.5%
WESTERN MARYLAND HEALTH SYSTEM	$288,903,823	$14,348,413	$23,217,946	$37,566,359	$326,470,182	4.4%	7.1%	11.5%
ST. MARY	$150,032,480	$9,257,977	$10,211,186	$19,469,163	$169,501,643	5.5%	6.0%	11.5%
HOPKINS BAYVIEW MED CTR	$517,023,650	$24,097,730	$52,182,957	$76,280,687	$593,304,337	4.1%	8.8%	12.9%
CHESTERTOWN	$51,319,765	$4,942,230	$3,701,442	$8,643,672	$59,963,436	8.2%	6.2%	14.4%
UNION HOSPITAL OF CECIL COUNT	$137,071,783	$10,571,492	$11,521,078	$22,092,570	$159,164,353	6.6%	7.2%	13.9%
CARROLL COUNTY	$218,824,400	$16,816,193	$20,409,621	$37,225,814	$256,050,214	6.6%	8.0%	14.5%
HARBOR	$175,567,212	$10,421,636	$17,429,467	$27,851,104	$203,418,315	5.1%	8.6%	13.7%
CHARLES REGIONAL	$128,956,952	$10,535,610	$12,449,466	$22,985,076	$151,942,028	6.9%	8.2%	15.1%
EASTON	$165,432,187	$11,386,835	$12,869,968	$24,256,804	$189,688,991	6.0%	6.8%	12.8%
UMMC MIDTOWN	$167,014,146	$8,796,622	$26,341,559	$35,138,181	$202,152,326	4.4%	13.0%	17.4%
CALVERT	$127,332,113	$9,387,103	$7,791,408	$17,178,511	$144,510,623	6.5%	5.4%	11.9%
NORTHWEST	$211,539,568	$18,117,312	$24,684,742	$42,802,054	$254,341,622	7.1%	9.7%	16.8%
BALTIMORE WASHINGTON MEDICAL CENTER	$342,252,701	$25,468,829	$40,984,390	$66,453,219	$408,705,920	6.2%	10.0%	16.3%
G.B.M.C.	$400,457,097	$14,488,299	$24,519,029	$39,007,328	$439,464,425	3.3%	5.6%	8.9%
MCCREADY	$13,226,530	$699,421	$393,646	$1,093,067	$14,319,597	4.9%	2.7%	7.6%
HOWARD COUNTY	$252,632,955	$13,795,599	$23,375,631	$37,171,230	$289,804,185	4.8%	8.1%	12.8%
UPPER CHESAPEAKE HEALTH	$284,441,747	$16,219,977	$23,478,429	$39,698,406	$324,140,153	5.0%	7.2%	12.2%
DOCTORS COMMUNITY	$188,793,086	$15,482,969	$24,959,883	$40,442,853	$229,235,939	6.8%	10.9%	17.6%

Hospital Name	Non-PAU Revenue A	PQI Revenue B	Readmissions Revenue C	Total PAU Revenue D=B+C	Grand Total Hospital Revenue E=A+D	% PQI F=B/E	% Readmission G=C/E	% PAU H=F+G
LAUREL REGIONAL	$79,001,750	$4,714,422	$8,721,220	$13,435,641	$92,437,391	5.1%	9.4%	14.5%
GOOD SAMARITAN	$247,943,422	$17,191,923	$32,496,362	$49,688,284	$297,631,706	5.8%	10.9%	16.7%
SHADY GROVE	$345,872,425	$14,228,530	$29,710,825	$43,939,355	$389,811,779	3.7%	7.6%	11.3%
REHAB & ORTHO	$103,787,974		$561,614	$561,614	$104,349,588	0.0%	0.5%	0.5%
FT. WASHINGTON	$40,693,732	$4,358,517	$3,068,272	$7,426,789	$48,120,521	9.1%	6.4%	15.4%
ATLANTIC GENERAL	$93,614,924	$5,193,041	$4,395,444	$9,588,485	$103,203,409	5.0%	4.3%	9.3%
SOUTHERN MARYLAND	$216,820,507	$20,381,819	$27,071,720	$47,453,539	$264,274,046	7.7%	10.2%	18.0%
UM ST. JOSEPH	$374,716,235	$11,717,107	$23,087,498	$34,804,605	$409,520,840	2.9%	5.6%	8.5%
HOLY CROSS GERMANTOWN	$56,181,444	$5,143,503	$6,750,014	$11,893,518	$68,074,962	7.6%	9.9%	17.5%
GERMANTOWN	$13,564,670			$0	$13,564,670	0.0%	0.0%	0.0%
QUEEN ANNES	$5,095,489			$0	$5,095,489	0.0%	0.0%	0.0%
BOWIE HEALTH	$21,300,381			$0	$21,300,381	0.0%	0.0%	0.0%
Grand Total	**$14,134,272,138**	**$648,976,932**	**$1,275,755,564**	**$1,924,732,496**	**$16,059,004,635**	**4.0%**	**7.9%**	**12.0%**

APPENDIX III. PROPOSED PAU SAVINGS POLICY REDUCTIONS FOR RY 2017

The following figure presents the proposed PAU savings reduction policy for each hospital for RY 2017.

Appendix IV. Figure 1. Proposed PAU Savings Policy Reductions for RY 2017, by Hospital

Hospital Name	FY16 Total Permanent Revenue A	CY15 PAU % B	FY17 PAU Savings Adjustment C=(B*-10.76%)[10]	FY 17 PAU Savings Adjustments D=A*C	CY 15 % ECMAD Medicaid E	FY17 PAU Savings Adjustment with Medicaid Protection F	FY 17 PAU Savings with Protections Revenue Impact G=A*F	FY2016 PAU Savings Adjustment H	Net Impact to RY 2017 Inflation Factor I=F-H	Net RY 17 Revenue Impact J=A*O
DORCHESTER	$49,366,715	21.76%	-2.34%	$(1,156,349)	23.06%	-2.34%	($1,156,349)	-0.42%	-1.92%	$(949,237)
BON SECOURS	$122,434,137	19.19%	-2.07%	$(2,528,394)	56.12%	-1.29%	($1,579,400)	-0.60%	-0.69%	$(844,796)
HARFORD	$100,472,983	18.41%	-1.98%	$(1,990,911)	17.10%	-1.98%	($1,990,911)	-0.42%	-1.56%	$(1,566,678)
SOUTHERN MARYLAND	$253,004,092	17.96%	-1.93%	$(4,889,670)	20.26%	-1.93%	($4,889,670)	-0.59%	-1.35%	$(3,405,927)
DOCTORS COMMUNITY	$223,767,089	17.64%	-1.90%	$(4,249,064)	17.40%	-1.90%	($4,249,064)	-0.56%	-1.34%	$(2,990,333)
UMMC MIDTOWN	$219,210,914	17.38%	-1.87%	$(4,101,103)	45.09%	-1.29%	($2,827,821)	-0.60%	-0.69%	$(1,512,555)
NORTHWEST	$247,056,826	16.83%	-1.81%	$(4,474,886)	19.68%	-1.81%	($4,474,886)	-0.63%	-1.18%	$(2,911,216)
GOOD SAMARITAN	$288,837,900	16.69%	-1.80%	$(5,189,995)	17.14%	-1.80%	($5,189,995)	-0.67%	-1.12%	$(3,247,468)
FRANKLIN SQUARE	$467,028,289	16.35%	-1.76%	$(8,220,483)	25.27%	-1.29%	($6,024,665)	-0.60%	-0.69%	$(3,222,495)
BALTIMORE WASHINGTON MEDICAL CENTER	$386,382,591	16.26%	-1.75%	$(6,761,773)	15.78%	-1.75%	($6,761,773)	-0.64%	-1.11%	$(4,286,200)

[10] PAU reduction= % PAU (11.99%) / Savings (-1.25%) + the statewide impact of Medicaid Protection (0.33%) = -10.76%.

Hospital Name	FY16 Total Permanent Revenue A	CY15 PAU % B	FY17 PAU Savings Adjustment C=(B*-10.76%)[10]	FY 17 PAU Savings Adjustments D=A*C	CY 15 % ECMAD Medicaid E	FY17 PAU Savings Adjustment with Medicaid Protection F	FY 17 PAU Savings with Protections Revenue Impact G=A*F	FY2016 PAU Savings Adjustment H	Net Impact to RY 2017 Inflation Factor I=F-H	Net RY 17 Revenue Impact J=A*O
FT. WASHINGTON	$45,652,051	15.43%	-1.66%	$(758,349)	18.69%	-1.66%	($758,349)	-0.42%	-1.24%	$(568,132)
ST. AGNES	$411,217,253	15.13%	-1.63%	$(6,698,462)	20.25%	-1.63%	($6,698,462)	-0.60%	-1.03%	$(4,224,147)
CHARLES REGIONAL	$141,318,694	15.13%	-1.63%	$(2,300,942)	16.24%	-1.63%	($2,300,942)	-0.54%	-1.09%	$(1,539,060)
CARROLL COUNTY	$245,978,519	14.54%	-1.56%	$(3,849,056)	13.42%	-1.56%	($3,849,056)	-0.54%	-1.03%	$(2,531,762)
LAUREL REGIONAL	$119,028,393	14.53%	-1.56%	$(1,862,084)	25.03%	-1.29%	($1,535,466)	-0.60%	-0.69%	$(821,296)
PRINCE GEORGE	$254,542,717	14.42%	-1.55%	$(3,949,253)	38.93%	-1.29%	($3,283,601)	-0.56%	-0.73%	$(1,862,003)
CHESTERTOWN	$53,997,130	14.41%	-1.55%	$(837,761)	11.68%	-1.55%	($837,761)	-0.49%	-1.07%	$(575,383)
WASHINGTON ADVENTIST	$253,346,309	14.03%	-1.51%	$(3,825,862)	28.83%	-1.29%	($3,268,167)	-0.60%	-0.69%	$(1,748,090)
UNION HOSPITAL OF CECIL COUNT	$153,588,495	13.88%	-1.49%	$(2,294,548)	26.21%	-1.29%	($1,981,292)	-0.36%	-0.93%	$(1,424,084)
HARBOR	$197,732,385	13.69%	-1.47%	$(2,913,856)	32.30%	-1.29%	($2,550,748)	-0.60%	-0.69%	$(1,364,353)
HOLY CROSS	$460,413,549	13.53%	-1.46%	$(6,705,068)	18.78%	-1.46%	($6,705,068)	-0.68%	-0.78%	$(3,576,612)
HOLY CROSS GERMANTOWN	$81,754,373	13.53%	-1.46%	$(1,190,601)	20.58%	-1.46%	($1,190,601)	0.00%	-1.46%	$(1,190,601)
MONTGOMERY GENERAL	$163,785,394	13.15%	-1.42%	$(2,317,608)	13.99%	-1.42%	($2,317,608)	-0.50%	-0.91%	$(1,497,867)
HOPKINS BAYVIEW MED CTR	$587,810,819	12.86%	-1.38%	$(8,134,158)	27.34%	-1.29%	($7,582,760)	-0.60%	-0.69%	$(4,055,895)
HOWARD COUNTY	$293,651,614	12.83%	-1.38%	$(4,053,896)	13.42%	-1.38%	($4,053,896)	-0.57%	-0.81%	$(2,383,723)
MERITUS	$309,029,336	12.79%	-1.38%	$(4,253,692)	17.42%	-1.38%	($4,253,692)	-0.60%	-0.78%	$(2,394,995)

Hospital Name	FY16 Total Permanent Revenue A	CY15 PAU % B	FY17 PAU Savings Adjustment C=(B*-10.76%)[10]	FY 17 PAU Savings Adjustments D=A*C	CY 15 % ECMAD Medicaid E	FY17 PAU Savings Adjustment with Medicaid Protection F	FY 17 PAU Savings with Protections Revenue Impact G=A*F	FY2016 PAU Savings Adjustment H	Net Impact to RY 2017 Inflation Factor I=F-H	Net RY 17 Revenue Impact J=A*O
EASTON	$192,089,981	12.79%	-1.38%	$(2,643,834)	16.75%	-1.38%	($2,643,834)	-0.52%	-0.86%	$(1,648,186)
UNION MEMORIAL	$401,103,154	12.50%	-1.35%	$(5,395,814)	16.67%	-1.35%	($5,395,814)	-0.62%	-0.73%	$(2,908,137)
PENINSULA REGIONAL	$413,594,890	12.29%	-1.32%	$(5,473,193)	16.47%	-1.32%	($5,473,193)	-0.53%	-0.79%	$(3,282,403)
UPPER CHESAPEAKE HEALTH	$319,063,053	12.25%	-1.32%	$(4,205,859)	10.18%	-1.32%	($4,205,859)	-0.49%	-0.83%	$(2,657,276)
CALVERT	$140,329,390	11.89%	-1.28%	$(1,795,446)	15.75%	-1.28%	($1,795,446)	-0.33%	-0.95%	$(1,326,439)
WESTERN MARYLAND HEALTH SYSTEM	$312,666,774	11.51%	-1.24%	$(3,872,356)	14.68%	-1.24%	($3,872,356)	-0.58%	-0.66%	$(2,050,593)
ST. MARY	$157,099,191	11.49%	-1.24%	$(1,942,161)	17.38%	-1.24%	($1,942,161)	-0.38%	-0.86%	$(1,349,848)
FREDERICK MEMORIAL	$351,816,017	11.28%	-1.21%	$(4,271,689)	9.37%	-1.21%	($4,271,689)	-0.50%	-0.71%	$(2,511,216)
SHADY GROVE	$374,624,719	11.27%	-1.21%	$(4,544,992)	17.77%	-1.21%	($4,544,992)	-0.53%	-0.69%	$(2,566,857)
SINAI	$698,636,216	11.04%	-1.19%	$(8,302,553)	23.46%	-1.19%	($8,302,553)	-0.66%	-0.53%	$(3,671,674)
SUBURBAN	$281,584,933	10.69%	-1.15%	$(3,238,548)	6.12%	-1.15%	($3,238,548)	-0.58%	-0.57%	$(1,602,672)
JOHNS HOPKINS	$2,091,289,526	9.84%	-1.06%	$(22,139,287)	22.47%	-1.06%	($22,139,287)	-0.73%	-0.33%	$(6,966,723)
ANNE ARUNDEL	$538,213,054	9.56%	-1.03%	$(5,537,267)	11.08%	-1.03%	($5,537,267)	-0.54%	-0.49%	$(2,624,340)
GARRETT COUNTY	$44,762,699	9.51%	-1.02%	$(458,111)	17.25%	-1.02%	($458,111)	-0.24%	-0.78%	$(350,985)
ATLANTIC GENERAL	$100,960,082	9.29%	-1.00%	$(1,009,587)	9.55%	-1.00%	($1,009,587)	-0.36%	-0.64%	$(647,857)

Hospital Name	FY16 Total Permanent Revenue A	CY15 PAU % B	FY17 PAU Savings Adjustment C=(B*-10.76%)[10]	FY 17 PAU Savings Adjustments D=A*C	CY 15 % ECMAD Medicaid E	FY17 PAU Savings Adjustment with Medicaid Protection F	FY 17 PAU Savings with Protections Revenue Impact G=A*F	FY2016 PAU Savings Adjustment H	Net Impact to RY 2017 Inflation Factor I=F-H	Net RY 17 Revenue Impact J=A*O
UNIVERSITY OF MARYLAND	$1,255,657,181	9.21%	-0.99%	$(12,440,413)	29.32%	-0.99%	($12,440,413)	-0.60%	-0.39%	$(4,906,470)
G.B.M.C.	$423,026,290	8.88%	-0.96%	$(4,041,362)	9.29%	-0.96%	($4,041,362)	-0.41%	-0.55%	$(2,317,224)
UM ST. JOSEPH	$376,368,831	8.50%	-0.91%	$(3,442,804)	10.66%	-0.91%	($3,442,804)	-0.54%	-0.38%	$(1,417,505)
MCCREADY	$14,230,659	7.63%	-0.82%	$(116,917)	12.45%	-0.82%	($116,917)	-0.19%	-0.63%	$(89,249)
MERCY	$488,127,907	6.44%	-0.69%	$(3,383,687)	23.29%	-0.69%	($3,383,687)	-0.52%	-0.17%	$(840,155)
REHAB & ORTHO	$115,242,602	0.54%	-0.06%	$(66,757)	21.27%	-0.06%	($66,757)	-0.30%	0.24%	$278,971
State Total	**$15,220,895,718**	**11.99%**	**-1.30%**	**$(197,830,463)**	**19.78%**	**1.25%**	**($190,634,642)**	**-0.60%**	**-0.65%**	**$(99,309,267)**
				Top 25th Percentile=	**23.17%**					

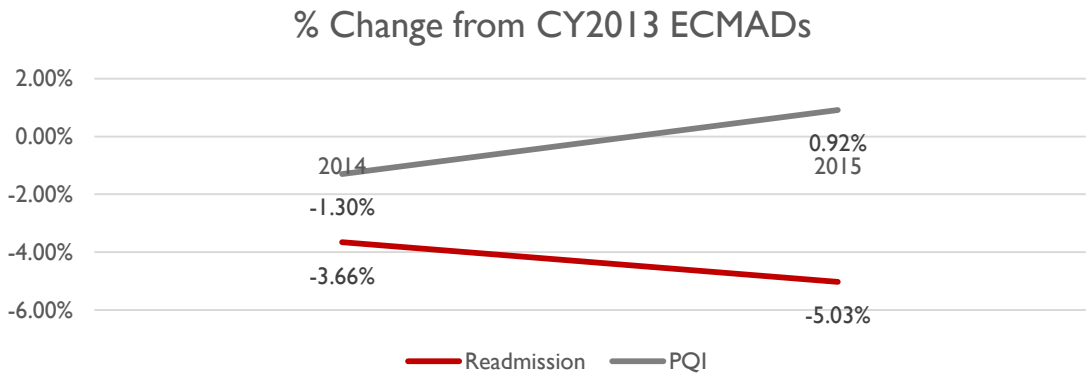
Rate Year (RY) 2017 Potentially Avoidable Utilization Savings Policy Draft Recommendation

Background

- Ensure savings to the purchasers from incentive programs and satisfy exemption requirements from Medicare programs
- Started in RY 2014 in conjunction with the Admission Readmission Revenue (ARR) Program
- All-Payer Model moved the payments to global budgets
  - RY2016 Policy remained the focus on readmissions because of concerns over progress in readmissions reductions
  - Aligned the readmission measure from same hospital readmissions to any hospital within the state
  - Capped the reductions to statewide average for hospitals that are above the 75th percentile on the percentage of Medicaid discharges for those over age 18

Proposed Changes to the Savings Policy

- Align the shared savings with Potentially Avoidable Utilization in the market shift adjustments
  - Add Prevention Quality Indicators (PQI)*
  - Readmissions are counted at the receiving hospital
  - Add observation stays lasting 23 hour or longer to inpatient discharges



*Developed Agency For Health Care Quality and Research http://www.qualityindicators.ahrq.gov/modules/pqi_overview.aspx
Also known as Ambulatory Care Sensitive Conditions, that is conditions for which good outpatient care can potentially prevent the hospitalization.

RY 2017 PAU Savings Draft Recommendations

- Align the measure with the PAU definitions used in the market shift adjustment
- Set the value of the PAU savings amount to 1.25 percent of total permanent revenue in the state, which is a 0.65 percent net reduction in RY 2017.
- Cap the PAU savings reduction at the statewide average reduction for hospitals with higher socio-economic burden.
- Evaluate further expansion of PAU definitions for RY 2018 to incorporate additional categories of unplanned admissions.
- Evaluate progress on sepsis coding and the apparent discrepancies in levels of sepsis cases across hospitals, including the need for possible independent coding audits.

DRAFT Recommendations on the Uncompensated Care Policy for 2017

May 11, 2016

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

This document contains the draft staff recommendations for updating the Uncompensated Care policy for rate year 2017. Please submit comments on this draft to the Commission by Wednesday May 25, 2016, via hard copy mail or email to Nduka.Udom@maryland.gov .

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
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 has approved 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) 2017.

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 due to UCC experienced 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 individuals with income up to 138 percent of the federal poverty level (FPL). The Medicaid

[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 results from a change in measures of multiple inputs.

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—on 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 received 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 375,000 Marylanders enrolled in coverage through February 2015. This included about 254,000 new Medicaid enrollees and 120,000 MHBE enrollees. HSCRC staff has focused efforts on the new categories of Medicaid enrollees covered through the ACA expansions and their impact on UCC.

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 included 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 regression model used to determine the RY 2015 predicted UCC percentage for each hospital was updated 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 emergency) 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 was limited to an estimate of the 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 therefore was set at 5.35 percent.

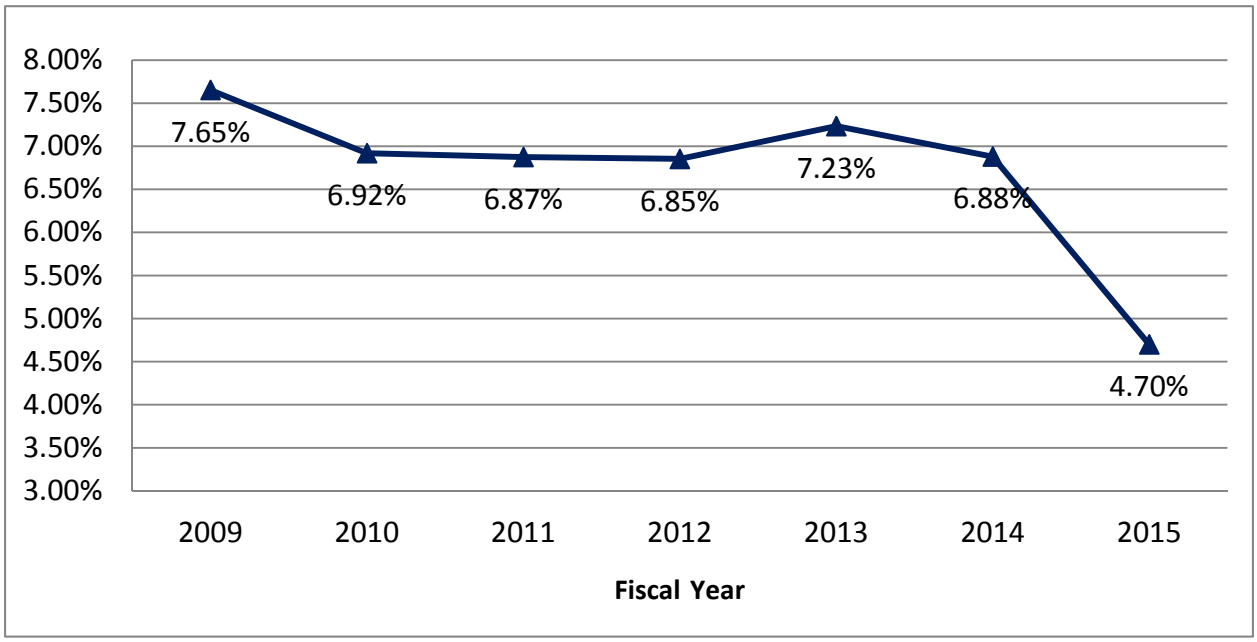
Recent Trends in Uncompensated Care

The figure below shows the actual total UCC rate for all regulated Maryland hospitals between FY 2009 and FY 2015. Over the past three fiscal years, hospitals' UCC costs declined by 2.35 percentage points, a reduction of approximately $311 million in unpaid hospital charges. The

[3] Medicaid provides coverage of emergency services for undocumented immigrants …

declines ranged from -0.42 to 14.16 percentage points across Maryland hospitals. Hospital specific trends are provided in Appendix I.

Figure 1. UCC as Percentage of Gross Patient Revenue, FY 2009-2015



Source: Hospital Annual Financial Audited Cost Reports, RE Schedule

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 4.70 percent in FY 2015. The rate of Marylanders without health insurance decreased from 10.2 percent to 7.9 percent in 2014, according to the latest statistics from the Census Bureau. A Gallup poll estimated that 7 percent of Marylanders were uninsured at the mid-year point of 2015.[4] While more people are getting insurance coverage, underinsurance and increases in the purchase of high-deductible health plans are creating upward pressures on UCC. Given these two dynamics, HSCRC staff recommends funding the full 4.70 percent reported by hospitals in the FY 2015 Annual Audited Cost Reports, which represents the hospitals' post-ACA experience.

Staff and the industry are continuing to work on the methodology for determining each hospital's reasonable level of UCC for RY 2017. HSCRC staff has evaluated the current regression model

[4] http://www.marylandhbe.com/fewer-marylanders-without-health-coverage-census-bureau-reports/

and found that most of the variables are no longer statistically significant, and therefore could not be used to determine the reasonable level of UCC to be built into hospital rates. Because there is only one year of post-ACA data available, there are limitations to using the previous regression models and averaging the historical experience from audited financial reports. Staff will report the final analyses completed through the stakeholder process in the final recommendation.

Stakeholder Input and Evaluation of Continuing Sources of Uncompensated Care

After the collection of account level write-off data from hospitals, combined with hospital encounter data, the Commission provided this dataset to the industry and interested parties to determine the sources of UCC and variables that could be used in analyzing and quantifying reasonable percentages of UCC to be built into hospital rates. The industry is still working on the analyses and when completed, the results will be made available and attached to the staff recommendation. Summary level data describing payer distributions are provided in Appendix II.

Staff presented a preliminary data summary at the HSCRC Payment Models Workgroup meeting on May 2, 2016. More detailed analyses and modeling have been discussed by the Maryland Hospital Association Financial and Technical Workgroup. Currently, two main alternative approaches are being evaluated.

1. Estimate “expected” UCC rates based on the statewide average percentage of UCC by payer and patient type
2. Estimate “predicted” UCC rates based on a patient-level regression model to predict the chances of individual patients generating UCC costs, and on the statewide average percent of UCC levels by payer and patient type

As part of the data validation and modeling process, staff discovered that hospitals reported differences between the HSCRC rates and Medicaid payments for patients who reside in other states where Medicaid does not pay the HSCRC rates. As these differences are considered as contractual allowances and are reported in the financial audited UCC data, staff is working with the industry to ensure that the predicted or expected rates used for the payment adjustments also reflect these amounts correctly.

RECOMMENDATIONS

Based on the preceding analysis, HSCRC staff recommends the following:

1. The UCC provision in rates should be 4.70 percent, effective July 1, 2016.
2. The HSCRC should 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.

APPENDIX I. HOSPITAL UNCOMPENSATED CARE TRENDS (HOSPITAL AUDITED FINANCIAL COST REPORTS RE SCHEDULE)

Appendix I. Figure 1. UCC Trends by Hospital, FY 2013-2015

	% Bad Debt and Charity (% UCC)			The Difference from FY 2013		
Hospital Name	FY 2013	FY 2014	FY 2015		FY 2014	FY 2015
ANNE ARUNDEL	5.21%	5.06%	3.04%		-0.15%	-2.17%
ATLANTIC GENERAL	7.68%	6.98%	4.58%		-0.70%	-3.10%
BON SECOURS	18.12%	14.58%	3.96%		-3.54%	-14.16%
CALVERT	6.16%	6.53%	3.34%		0.37%	-2.82%
CARROLL COUNTY	4.70%	4.44%	2.15%		-0.26%	-2.54%
DOCTORS COMMUNITY	9.29%	9.49%	7.28%		0.20%	-2.01%
FORT WASHINGTON*	13.63%	10.85%	10.85%		-2.77%	-2.77%
FREDERICK MEMORIAL	6.03%	6.72%	3.39%		0.69%	-2.64%
GARRETT COUNTY	10.86%	9.27%	8.25%		-1.58%	-2.61%
GBMC	3.12%	3.38%	2.48%		0.26%	-0.64%
HOLY CROSS	9.26%	8.78%	8.05%		-0.48%	-1.21%
HOLY CROSS GERMANTOWN			9.57%			
HOWARD COUNTY	5.99%	5.66%	4.14%		-0.33%	-1.85%
JOHNS HOPKINS	4.27%	4.16%	2.25%		-0.10%	-2.02%
JOHNS HOPKINS BAYVIEW	9.28%	8.82%	6.49%		-0.46%	-2.80%
LAUREL REGIONAL	14.23%	11.16%	8.81%		-3.07%	-5.43%
LEVINDALE			4.11%			
MCCREADY	8.32%	8.49%	7.62%		0.17%	-0.70%
MEDSTAR FRANKLIN SQUARE	7.06%	5.93%	4.10%		-1.13%	-2.96%
MEDSTAR GOOD SAMARITAN	6.60%	6.12%	4.02%		-0.48%	-2.59%
MEDSTAR HARBOR	8.59%	6.04%	5.00%		-2.55%	-3.59%
MEDSTAR MONTGOMERY GENERAL	6.59%	5.44%	4.76%		-1.15%	-1.83%
MEDSTAR SOUTHERN MARYLAND	6.84%	8.25%	5.72%		1.41%	-1.12%
MEDSTAR ST. MARY'S	8.47%	5.49%	5.35%		-2.98%	-3.12%
MEDSTAR UNION MEMORIAL	8.13%	5.58%	3.53%		-2.56%	-4.60%
MERCY	8.29%	8.07%	6.44%		-0.22%	-1.85%
MERITUS	7.20%	7.39%	4.59%		0.20%	-2.61%
NORTHWEST	8.41%	7.76%	6.39%		-0.65%	-2.02%
PENINSULA REGIONAL	6.87%	5.94%	3.72%		-0.92%	-3.15%
PRINCE GEORGES	15.51%	13.05%	9.24%		-2.46%	-6.26%
SHADY GROVE*	6.76%	7.68%	7.68%		0.92%	0.92%
SINAI	5.41%	6.09%	4.20%		0.67%	-1.22%

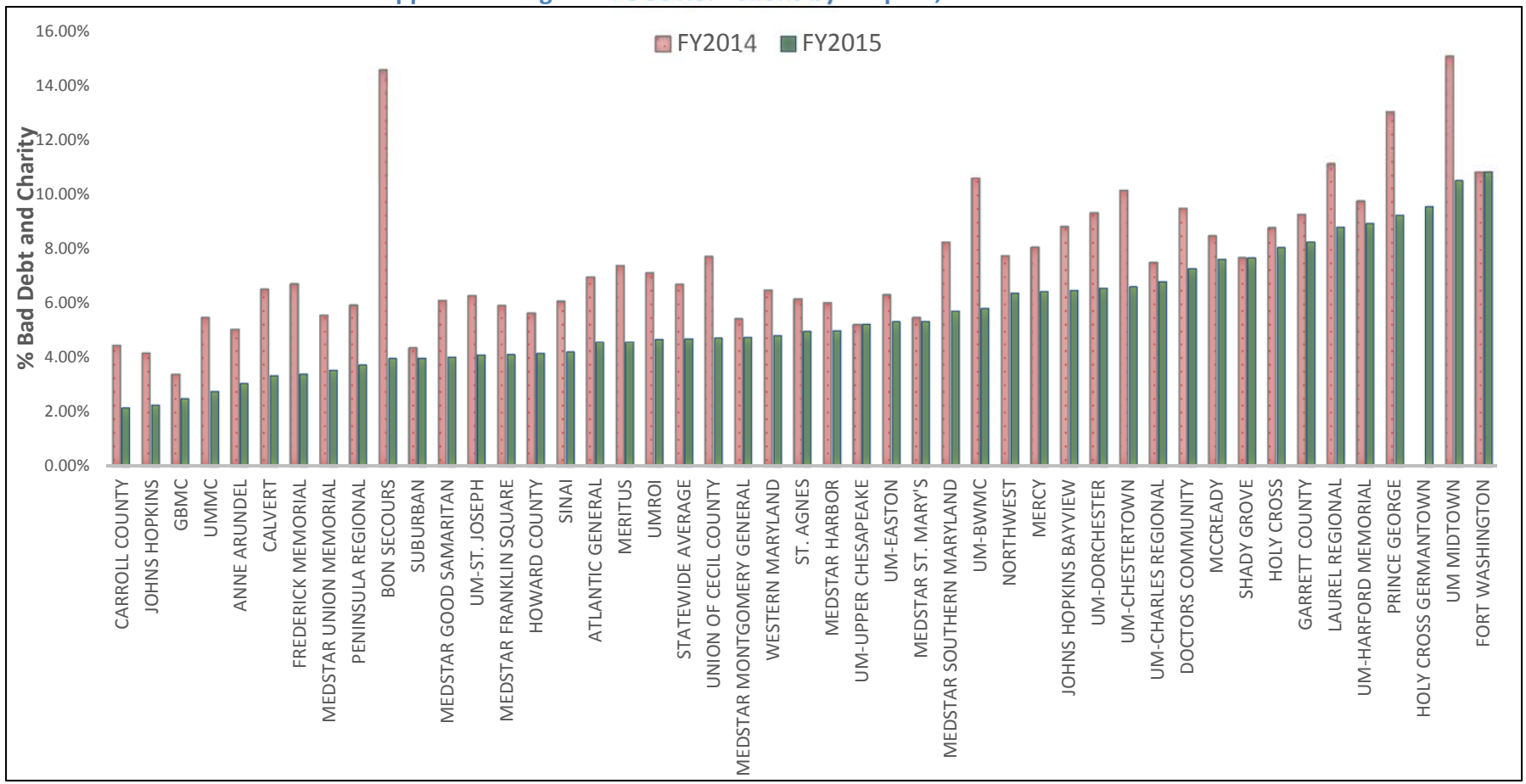
	% Bad Debt and Charity (% UCC)			The Difference from FY 2013		
Hospital Name	**FY 2013**	**FY 2014**	**FY 2015**		**FY 2014**	**FY 2015**
ST. AGNES	7.96%	6.17%	4.99%		-1.78%	-2.97%
SUBURBAN	5.07%	4.35%	3.97%		-0.72%	-1.10%
UM-BWMC	9.78%	10.63%	5.82%		0.85%	-3.96%
UM-CHARLES REGIONAL	7.46%	7.52%	6.81%		0.06%	-0.65%
UM-CHESTERTOWN	10.13%	10.16%	6.62%		0.02%	-3.52%
UM-DORCHESTER	6.99%	9.33%	6.57%		2.34%	-0.42%
UM-EASTON	5.86%	6.32%	5.34%		0.47%	-0.52%
UM-HARFORD MEMORIAL	12.44%	9.76%	8.94%		-2.68%	-3.50%
UMMC	5.40%	5.49%	2.75%		0.09%	-2.65%
UM-MIDTOWN	15.22%	15.08%	10.51%		-0.15%	-4.71%
UMROI	5.20%	7.13%	4.69%		1.94%	-0.51%
UM-ST. JOSEPH	5.13%	6.30%	4.09%		1.18%	-1.04%
UM-UPPER CHESAPEAKE	6.08%	5.23%	5.25%		-0.85%	-0.84%
UNION OF CECIL COUNTY	8.69%	7.73%	4.74%		-0.96%	-3.95%
WASHINGTON ADVENTIST*	14.08%	12.20%	12.20%		-1.89%	-1.89%
WESTERN MARYLAND	6.89%	6.50%	4.83%		-0.39%	-2.06%
Grand Total	**7.06%**	**6.71%**	**4.70%**		**-0.35%**	**-2.35%**

*FY 2015 rates for hospitals with December Fiscal year end reporting periods are from the previous year report.

APPENDIX II. WRITE-OFF DATA-SUMMARY STATISTICS

The figure below presents the UCC reduction rate by hospital between FY 2014 and 2015. Reduction rates vary by hospital.

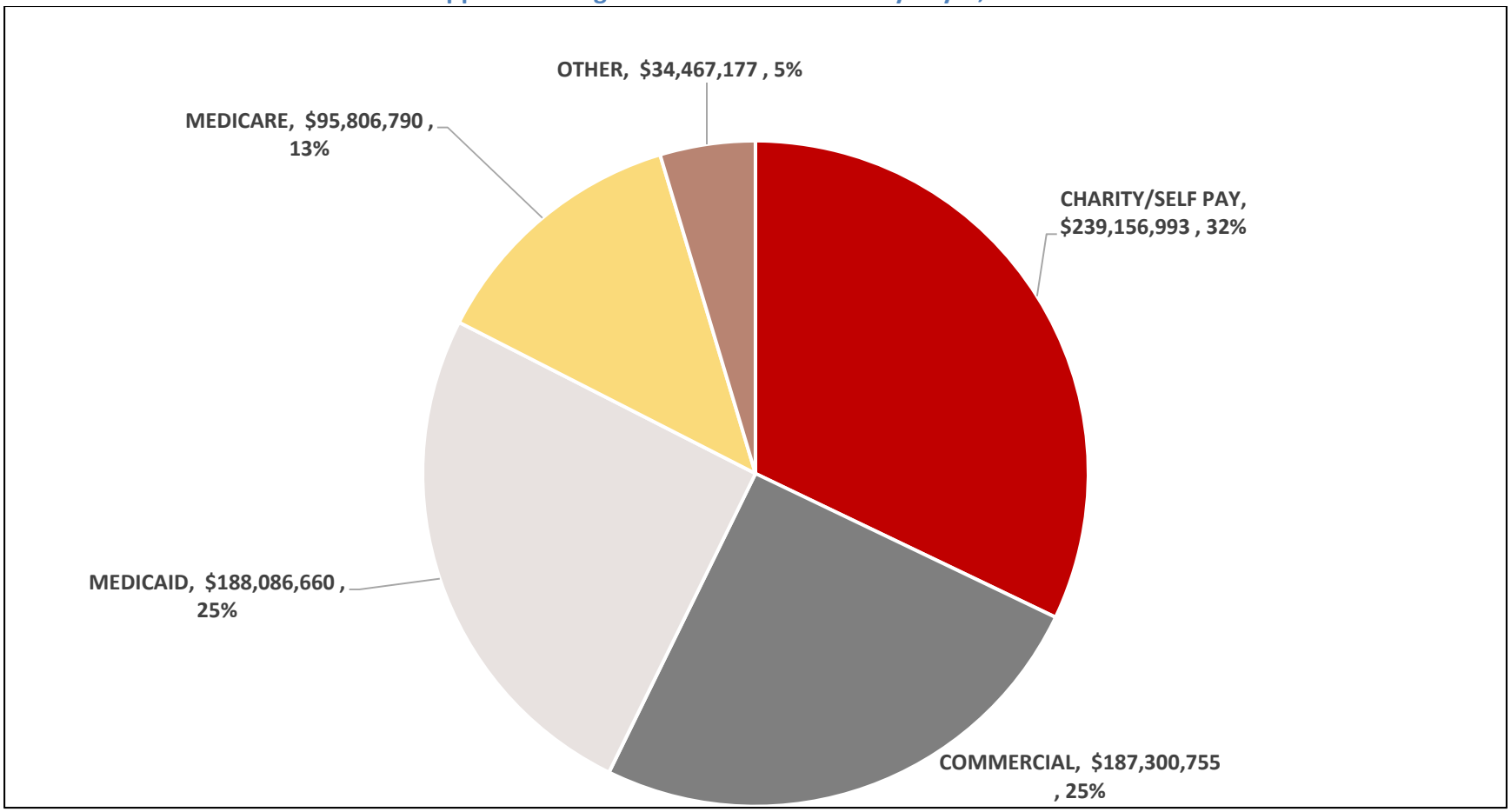
Appendix II. Figure 1. UCC Reductions by Hospital, FY 2014-2015



*Source: HSCRC Financial Audited Data

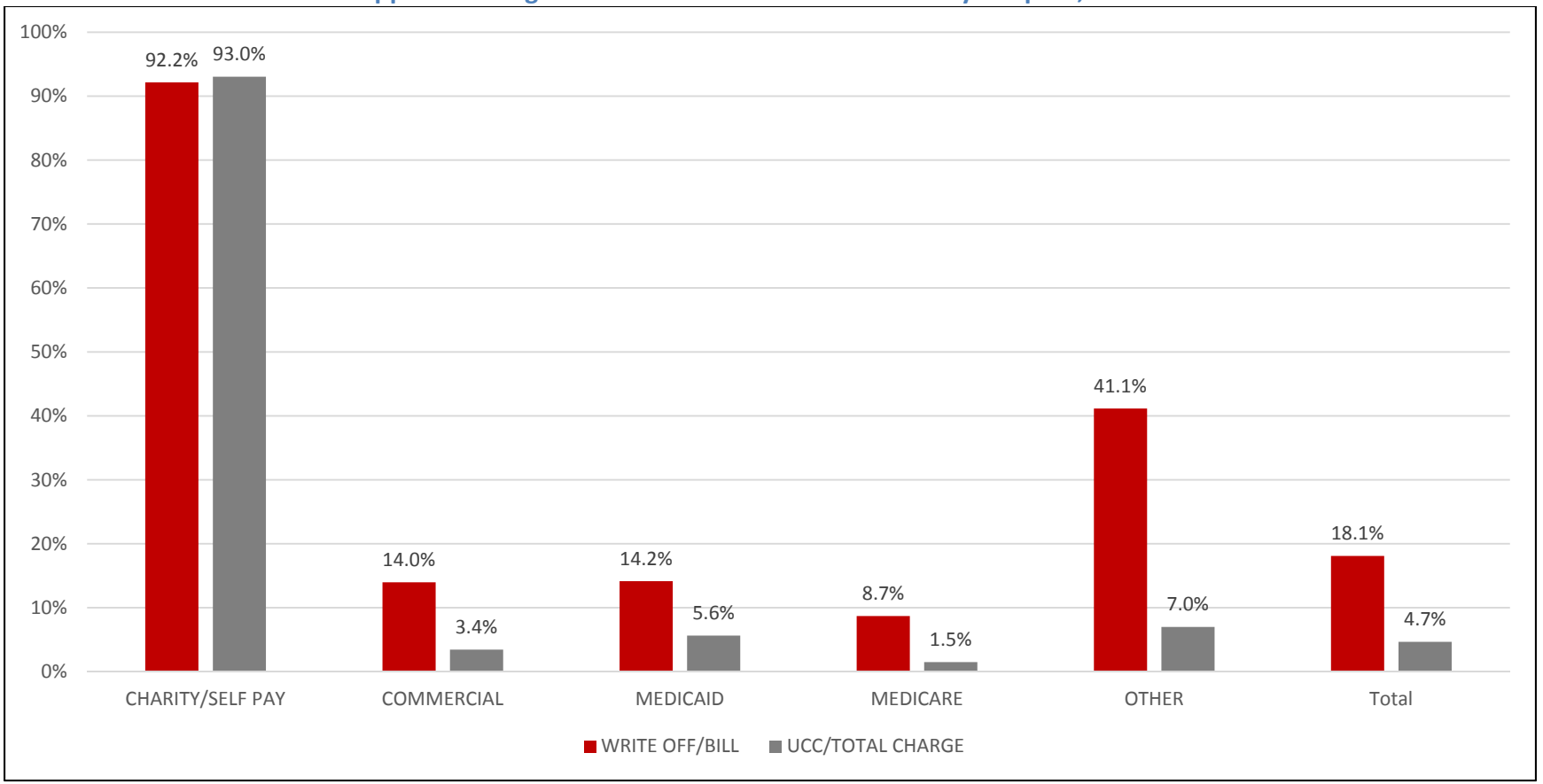
The figure below presents the UCC distribution by payer for services provided in FY 2015 based on the account level information provided to the Commission for the first time last year. Nearly one-third of UCC has a primary payer of charity care/self-pay. Commercial payers and Medicaid (including out-of-state Medicaid) each accounted for 25 percent of UCC.

Appendix II. Figure 2. UCC Distribution by Payer, FY 2015



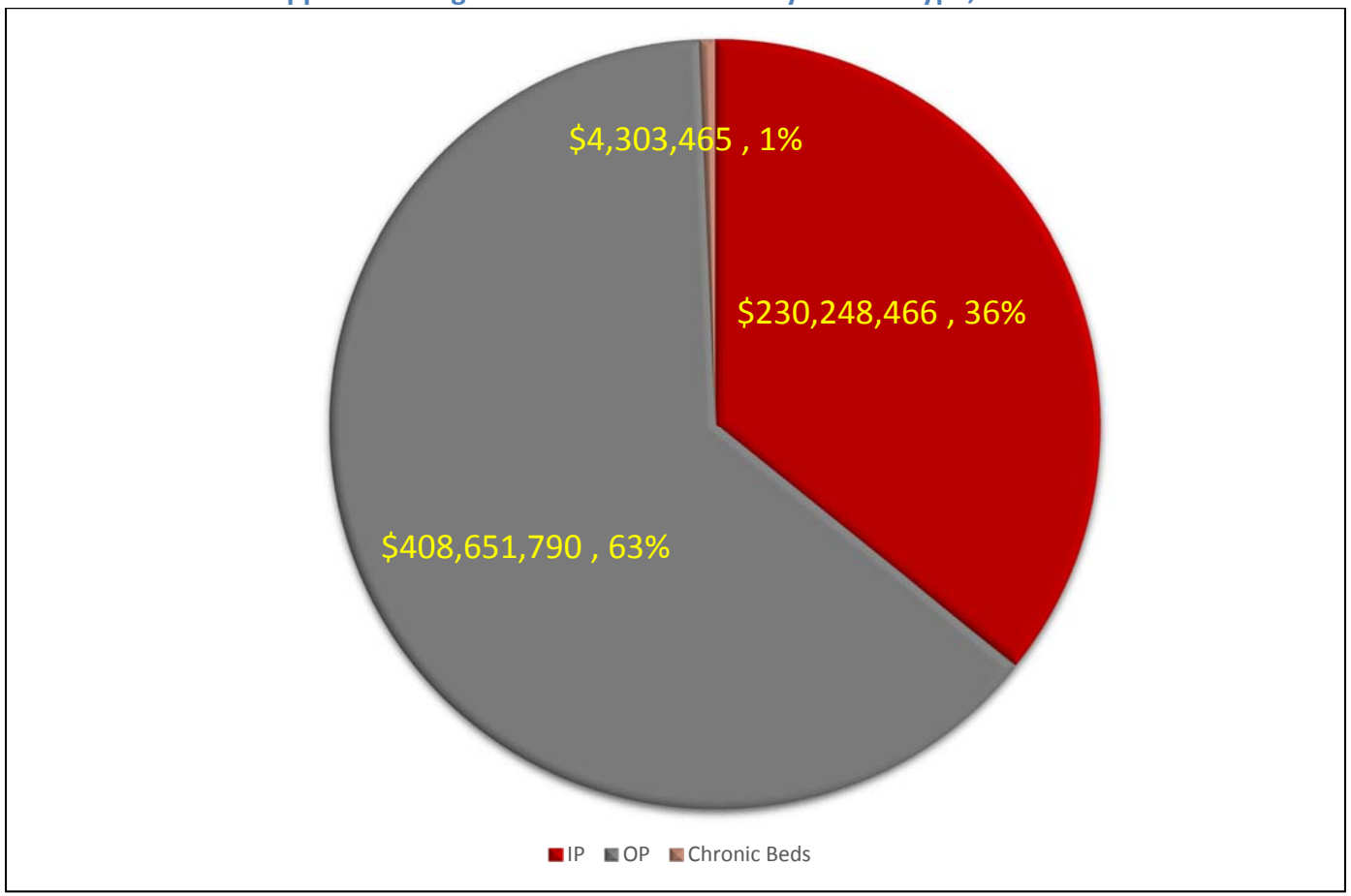
The following figure presents the write-off and UCC percentages by payer for services provided in FY 2015. For example, 92 percent of the bill is written off for charity care/self-pay patients, and the overall UCC amount is 93 percent of total charity care/self-pay charges. This demonstrates that the payer source is a strong predictor of UCC.

Appendix II. Figure 3.Write-Off and UCC Amounts by Hospital, FY 2015



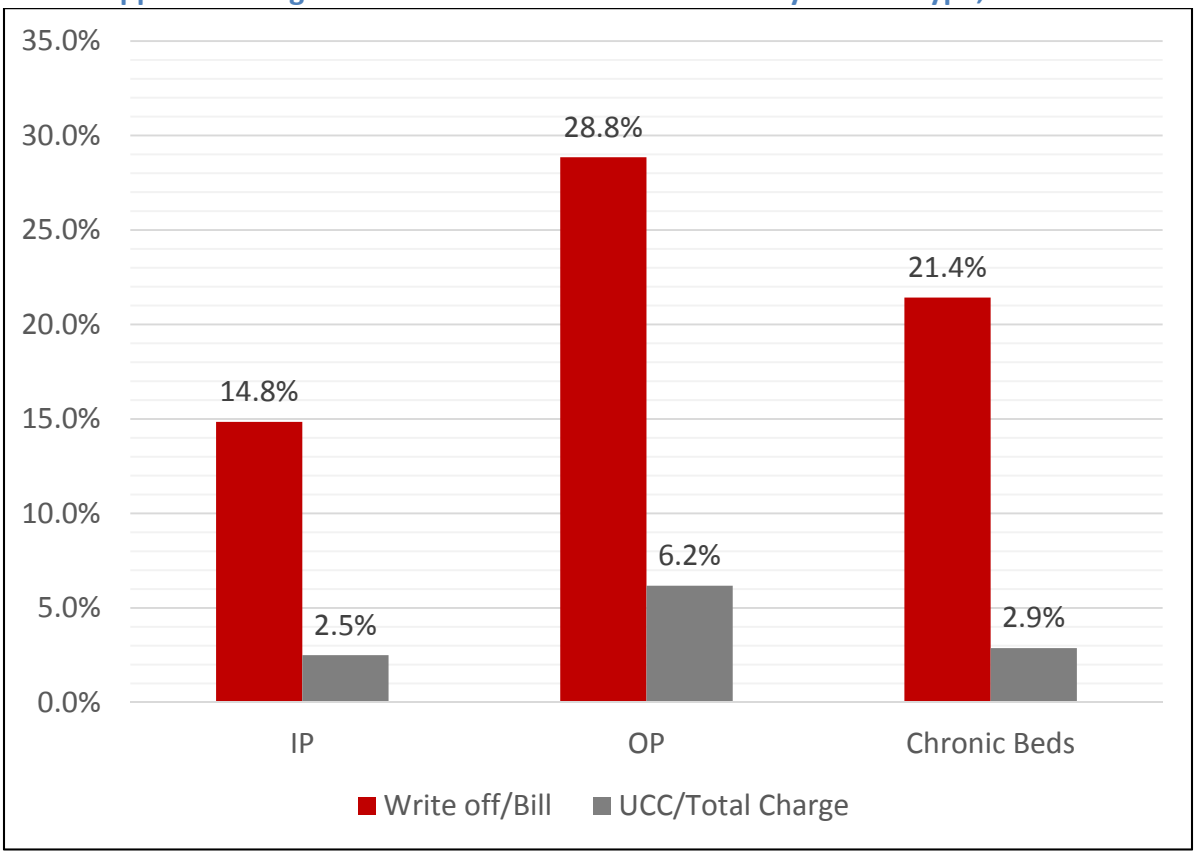
The following figure presents the distribution of UCC by service type (inpatient, outpatient, and chronic beds). Outpatient services account for the majority of UCC dollars.

Appendix II. Figure 4. UCC Distribution by Service Type, FY 2015



The following figure presents the write-off and UCC percentages by service type for services provided in FY 2015.

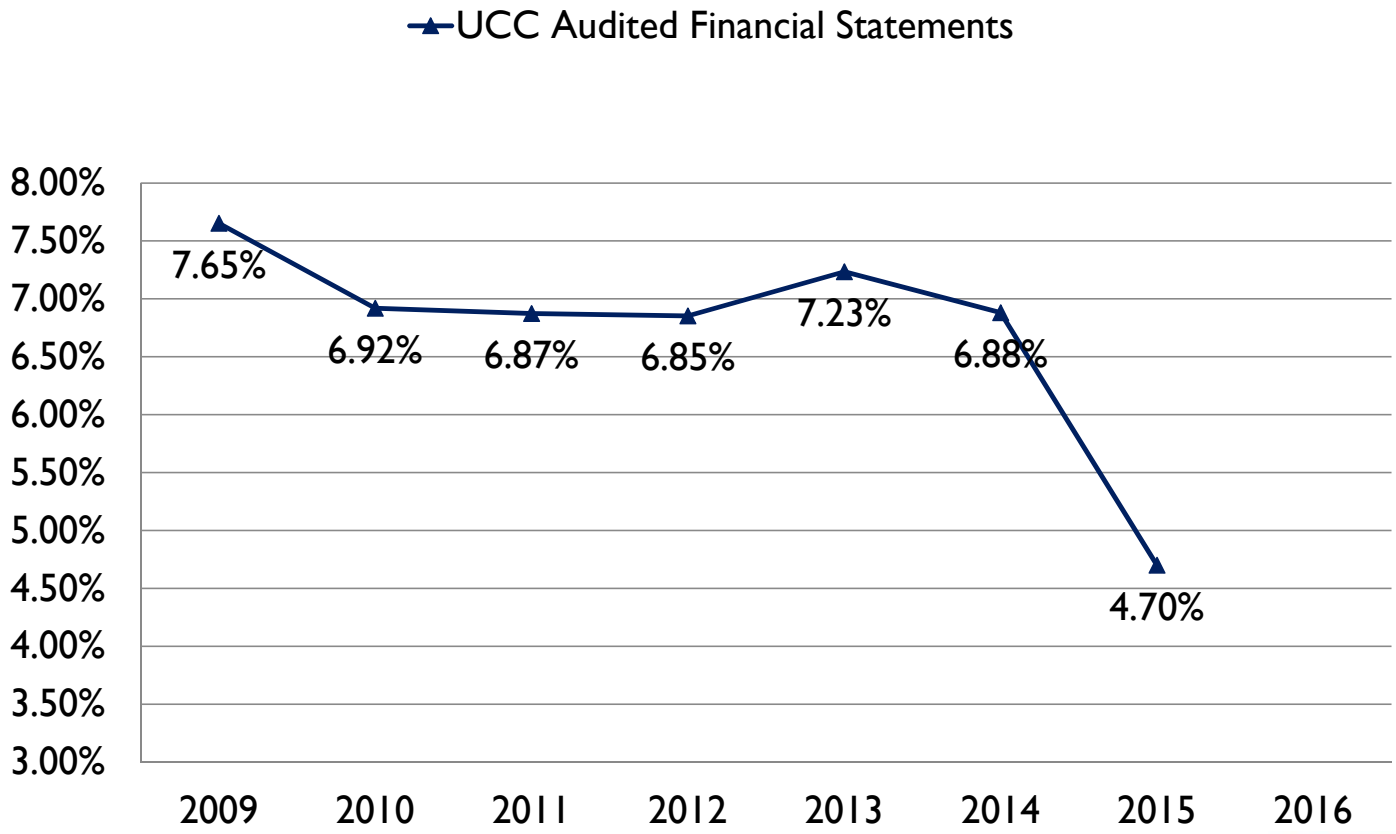
Appendix II. Figure 5. Write-Off and UCC Amounts by Service Type, FY 2015



Uncompensated Care Policy
Year 2017

HSCRC
Health Services Cost
Review Commission

Uncompensated Care as a Percent of Gross Patient Revenue Fiscal Years 2009- 2015



HSCRC
Health Services Cost Review Commission

HSCRC UCC Adjustments for ACA

- Traditionally staff prospectively calculates the rate of uncompensated care at each regulated hospital by combining historical uncompensated care rates with predictions from a regression model over three years.
- The Commission adjusted this methodology to incorporate a prospective yet conservative adjustment for the expected impact of the ACA's Medicaid expansion on uncompensated care.
  - For FY 2015, results of the historic trend and regression model were adjusted down from 7.23% to 6.14% to capture the expected impact of the State extending full Medicaid benefits to people previously enrolled in the PAC program.
  - For FY 2016, results were adjusted further down to 5.25 % based on estimated impact for higher enrollment rates in Medicaid due to woodwork effect and expansion.

UCC Policy 2017 Considerations

- Reduce statewide UCC provision in rates from 5.25 % to 4.70 % effective July 1, 2016
- Continue to do 50/50 blend of FY15 audited UCC and predicted UCC
- For hospital predicted rates
  - Focus on post ACA period (FY 15 experience)
  - Two alternatives are considered
    - Statewide hospital level model using average UCC % by Payer source, type of service.
    - Predictive regression analysis

Draft Recommendations on the Update Factors for FY 2017

May 2, 2016

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

This document contains the draft staff recommendations for the update factors for FY 2017. Any comments may be sent to Cait Grim at Caitlin.Grim@maryland.gov or Deon Joyce at Deon.Joyce@maryland.gov by COB on May 25, 2016.

Table of Contents

LIST OF ABBREVIATIONS

ACA	Affordable Care Act
CMS	Centers for Medicare & Medicaid Services
CON	Certificate of need
CY	Calendar year
FFS	Fee-for-service
FFY	Federal fiscal year
FY	Fiscal year
GBR	Global budget revenue
HSCRC	Health Services Cost Review Commission
MHIP	Maryland Health Insurance Plan
PAU	Potentially Avoidable Utilization
PQIs	Prevention Quality Indicators
TPR	Total patient revenue

INTRODUCTION AND BACKGROUND

The Maryland Health Services Cost Review Commission (HSCRC or Commission) has been setting hospital payment rates for all payers since 1997. As part of this process, the HSCRC updates hospitals' rates and approved revenues on July 1 of each year to account for such factors as inflation, policy adjustments, and 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 has a triple aim of promoting 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 New All-Payer 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.

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 order to meet the requirements of the New All-Payer Model and assure that the annual update will not result in a revenue increase beyond the 3.58 percent limit. 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 New 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 when reviewing the proposed updates to understand that they incorporate both price and volume adjustments for revenues under global budgets. They cannot simply be compared to a rate update that does not control for volume changes, since they are intended to compensate for both price and volume changes.

There are three categories of hospital revenue under the New All-Payer Model. The first two categories are under the HSCRC's full rate-setting authority. The third category of hospital revenue includes hospitals where HSCRC sets rates, but Medicare does not pay on the basis of those rates. The three categories of hospital revenue are:

1. Hospitals/revenues under global budgets, including Global Budget Revenue (GBR) agreements and Total Patient Revenue (TPR) agreements for the 10 hospitals that were renewed on July 1, 2013, for their second three-year term.
2. Hospital revenues that are not included under global budgets but are subject to rate regulation on an all-payer basis by the HSCRC, such as revenues for out-of-state residents at certain hospitals.

3. 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. 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 fiscal year (FY) 2017.

ASSESSMENT

Calculation of the Update Factors for Revenue Categories 1-3

In this draft recommendation, staff focused on the update factor for inflation/trend for hospitals or revenues in each of the three categories. Separate staff reports provide recommendations on uncompensated care and potentially avoidable utilization savings.

The inflation/trend adjustment for Category 1 and Category 2 revenues starts by using the gross blended statistic of 2.49 percent growth, which was derived from combining 91.2 percent of Global Insight's First Quarter 2016 market basket growth of 2.60 percent with 8.80 percent of the capital growth estimate of 1.30 percent. For the global revenues, staff has determined that the correction factor to the First Quarter market basket growth estimate has averaged -0.56 percent for the last three years. Staff is applying the correction factor in advance, in order to avoid overstatement of growth for FY 2017. For non-global revenues, staff applies the 0.50 percent reduction for productivity and a reduction of 0.75 percent for Affordable Care Act (ACA) adjustment that are equivalent to the amount used in Medicare's proposed inpatient prospective payment system update for FY 2017. As a result, the proposed inflation/trend adjustment would be as follows:

Table 1. FY 2017 Proposed Rate Adjustments

	Global Revenues	Non-Global Revenues
Proposed Base Update	2.49%	2.49%
Productivity Adjustment		-0.50%
ACA Adjustment		-0.75%
Average Correction Factor	-0.56%	
Proposed Update	1.92%	1.24%

For psychiatric hospitals and Mt. Washington Pediatric Hospital, staff turns to the proposed psychiatric facility update for Medicare. Medicare applies a 0.50 percent reduction for productivity and a 0.75 percent reduction for ACA savings mandates to a market basket update of 2.80 percent to derive a net amount of 1.55 percent. HSCRC staff recommends adopting the same factor and net adjustments for the Maryland psychiatric hospitals and Mt. Washington Pediatric Hospital.

Summary of Other Policies Impacting FY 2017 Revenues

The update factor is just one component of the adjustments to hospital global budgets for FY 2017. In considering the system-wide update for the All-Payer Model, staff sought 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 the expectations of reduced avoidable utilization.

Table 2 summarizes the net impact on global revenues of staff proposals for inflation, volume, PAU savings, uncompensated care, and other adjustments. The proposed adjustments provide for estimated net revenue growth of 2.71 percent and per capita growth of 2.18 percent for FY 2017 before accounting for reductions in uncompensated care and assessments. After accounting for those factors, the revenue growth is estimated at 2.01 percent with a corresponding per capita growth of 1.49 percent. Descriptions and policy considerations are discussed for each step in the text following the table.

Table 2. Net Impact of Update Factors on Hospital Global Revenues, FY 2017

Balanced Update Model for Discussion			
Maximum allowed growth			
Maximum revenue growth allowance	A		3.58%
Population growth	B		0.52%
Maximum revenue growth allowance ((1+A)*(1+B)	C		4.12%
Components of Revenue Change Linked to Hospital Cost Drivers/Performance			
			Weighted Allowance
Adjustment for Inflation			1.72%
- Allowance for High Cost New Drugs			0.20%
Gross Inflation Allowance	A		1.92%
Implementation for Partnership Grants	B		0.25%
Care Coordination			
-Rising Risk With Community Based Providers			
-Complex Patients With Regional Partnerships & Community Partners			
-Long Term Care & Post Acute			
	C		
Adjustment for volume	D		0.52%
-Demographic Adjustment			
-Transfers			
-Categoricals			
Other adjustments (positive and negative)			
- Set Aside for Unknown Adjustments	E		0.50%
- Workforce Support Program	F		0.06%
- Holy Cross Germantown	G		0.07%
- Non Hospital Cost Growth	H		0.00%
Net Other Adjustments	I =	Sum of E thru H	0.63%
-Reverse prior year's PAU savings reduction	J		0.60%
-PAU Savings	K		-1.25%
-Reversal of prior year quality incentives	L		-0.15%
-Positive incentives (Readmissions and Other Quality)	M		0.47%
-Negative scaling adjustments	N		-0.28%
Net Quality and PAU Savings	O =	Sum of J thru N	-0.61%
Net increase attributable to hospitals	P =	Sum of A + B + C + D + I + O	2.72%
Per Capita	Q =	(1+P)/(1+0.52%)	2.19%
Components of Revenue Change with Neutral Impact on Hosptial Finanical Statements			
-Uncompensated care reduction, net of differential	R		-0.55%
-Deficit Assessment	S		-0.15%
Net decreases	T =	R + S	-0.70%
Net revenue growth	U =	P + T	2.02%
Per capita revenue growth	V =	(1+U)/(1+0.52%)	1.49%

Components of Revenue Change Linked to Hospital Cost Drivers and Performance

Staff accounted for a number of factors that are linked to hospital costs and performance. These include:

- Adjustments for Volume: Staff proposes a 0.52 percent adjustment that is equal to the Maryland Department of Planning's estimate of population growth for calendar year (CY) 2016[1]. In the previous year, staff used an estimate based on five-year population growth projections. For the last two years, the actual growth estimate has been lower than the forecast. As a result, staff proposes to use the most recent growth rate as a proxy for the 2017 growth estimate. Hospital-specific adjustments will vary based on changes in the demographics of each hospital's service area, as well as the portion of the adjustment set aside to account for growth in highly specialized services.
- High Cost New Drugs: The rising cost of new physician-administered drugs in the outpatient setting is 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 0.20 percent of the inflation allowance to provide a pool for outpatient physician-administered drugs, with a focus on partial funding of new drugs and growth in the use of high cost drugs. Staff is currently working on the methodology for determining what drugs should be included in this adjustment and how this money will be allocated to the hospitals that qualify.
- Implementation Grants: Last year, the HSCRC approved funding of up to 0.25 percent for infrastructure implementation proposals that would accelerate the implementation of care coordination efforts and provide for early reductions in avoidable utilization The evaluation of these proposals has taken longer than anticipated, as staff needed to address concerns about the deployment of funds that had already been provided, as well as the concerns regarding the progression in reducing avoidable utilization. As a result, as these funds are awarded, they will increase the hospital revenues in FY 2017 rather than in FY 2016, as originally anticipated.
- Population Health Workforce Program: In December 2015, the Commission approved up to $10 million in FY 2017 hospital rates to be provided on a competitive basis to train and hire workers from geographic areas of high economic disparities and unemployment. The workers will focus on population health and community based care interventions consistent with the All-Payer Model.

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

- Certificate of Need (CON) Adjustments: Holy Cross Germantown Hospital opened in the fall of 2014. The FY 2017 adjustment of 0.07 percent is the estimated increase of $12 million for FY 2017.
- Set-Aside for Unforeseen Adjustments: Staff recommends a 0.50 percent set-aside to fund unforeseen adjustments during the year. A similar allowance was made for both FY 2015 and FY 2016.
- Reversal of the Prior Year's PAU Savings Reduction and Quality Incentives: The total FY 2016 PAU savings and quality adjustments are restored to the base for FY 2017, with new adjustments to reflect the PAU savings reduction and quality incentives for FY 2017.
- PAU Savings Reduction and Scaling Adjustments: The FY 2017 PAU savings are continued, and an additional 0.65 percent savings is targeted for FY 2017. A recommendation on this item will be set forth to the Commission in a separate staff report and is discussed in additional detail later in this document. Preliminary estimates are provided for both positive and negative quality incentive programs, which have been changed so that they are no longer revenue neutral. Staff is working to finalize these figures.

Components of Revenue Change that are Not Hospital Generated

Several changes will decrease the revenues for FY 2017. These include:

- Uncompensated Care Reductions: The proposed uncompensated care reduction for FY 2017 will be -0.55 percent. The amount in rates was 5.25 percent in FY 2016, and the proposed amount for FY 2017 is 4.70 percent. The FY 2017 policy is the subject of a separate recommendation to the Commission.
- Deficit Assessment: The legislature provided for a specific level of deficit assessment reduction for 2017. This line item reflects that reduction.

While Table 2 computes the central provisions leading to a balanced update for the All-Payer Model overall, there are additional variables to consider such as 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..

Medicare's Proposed National Rate Update for FFY 2017

CMS published proposed updates to the federal Medicare inpatient rates for federal fiscal year (FFY) 2017 in the Federal Register in mid-April.[2] These updates are summarized in the table below. These updates will not be finalized for several months and could change. The proposed

[2] See https://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/AcuteInpatientPPS/FY2017-IPPS-Proposed-Rule-Home-Page-Items/FY2017-IPPS-Proposed-Rule-Regulations.html?DLPage=1&DLEntries=10&DLSort=0&DLSortDir=ascending.

rule would increase rates by approximately 0.40 percent in FFY 2017 compared to FFY 2016, after accounting for inflation, disproportionate share reductions, outlier adjustments, and other adjustments required by law. The proposed rule includes an initial market basket update of 2.80 percent for those hospitals that were meaningful users of electronic health records in FFY 2015 and that submit data on quality measures, less a productivity cut of 0.50 percent and an additional market basket cut of 0.75 percent, as mandated by the ACA. This also reflects a proposed 1.50 percentage point reduction for documentation and coding required by the American Taxpayer Relief Act of 2012 and a proposed increase of approximately 0.80 percentage points to remove the adjustment to offset the estimated costs of the Two Midnight policy and address its effects in FFYs 2014 through 2016.[3] Additionally, -0.20 percent will be removed to account for the increase in a high cost outlier threshold. Disproportionate share payment reductions resulted in a decrease of -0.30 percent from FFY 2016.

Table 3. Medicare's Proposed Rate Updates for FFY 2017

	Inpatient	Outpatient
Base Update		
Market Basket	2.80%	2.80%
Productivity	-0.50%	-0.50%
ACA	-0.75%	-0.75%
Coding	-1.50%	
Two Midnight Rule	0.80%	
	0.85%	1.55%
Other Changes		
DSH	-0.30%	
Outlier Adjustment	-0.20%	
	-0.50%	
	0.4%	

Applying the inpatient assumptions about market basket, productivity, and mandatory ACA savings to outpatient, staff estimates a 1.55 percent Medicare outpatient update effective January 2017. This estimate is pending any adjustments that may be made when the proposed update to the federal Medicare outpatient rates get published.

[3] CMS reduced hospital rates for the implementation of the Two Midnight rule, based on an estimate that some patients that were being treated in observation would be admitted. Subsequently, this estimate was overturned. The adjustments noted above include one time and prospective adjustments relative to this matter.

Discussion of the FY 2017 Balanced Update

The staff proposal increases the resources available to hospitals to account for rising inflation, population changes, and other factors, while providing savings for purchasers through a PAU savings adjustment. The proposed adjustments coupled with the ongoing incentives to reduce potentially avoidable utilization inherent to the Model should allow the hospital industry to make additional investments while maintaining operating margins at reasonable levels. As discussed below, the proposed update falls within the financial parameters of the All-Payer Model agreement.

PAU Savings Adjustment

Maryland is now in its third 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 provide an approach that will result in more rapid changes in population health, care coordination, and other improvements, which will result in reductions in avoidable utilization. To that end, the Commission has provided for revenue budgets that did not offset Medicare's ACA and productivity adjustments, and also has provided infrastructure investment funding to support care coordination activities. For FYs 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. This was calculated using predicted versus actual readmissions. Staff proposes an incremental increase in the PAU saving adjustment of 0.65 percent, bringing the total adjustment to 1.25 percent. Staff also proposes to apply the adjustment based on the proportion of each hospital's revenue relative to admissions/observations that are classified as potentially avoidable utilization, comprised of readmissions and admissions for ambulatory care sensitive conditions (PQIs). This progression in approach is important to advance the Model objectives of ensuring savings from reducing avoidable utilization. This approach, and its implications are more fully discussed in a separate staff recommendation.

Investments in Care Coordination

The HSCRC has provided funding for some initial investments in care coordination resources. Staff believes that several categories of investments and 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 important 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. For FY 2018, the

staff intends to evaluate an update that differentiates the levels of rates provided based on implementation progress in the following three areas:

- Care management for complex patients with regional partnerships and community partners
- Care coordination and chronic care improvement focused on rising risk patients with community partners
- Effective approaches to address post-acute and long term care opportunities

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.

Market Shift Adjustment

The HSCRC staff discussed its intent to move market shift updates to a bi-annual process starting July 1. At this time, staff would like to consider moving the market shift adjustment to a quarterly adjustments that culminates in a final adjustment for year end. Quarterly adjustments create some potential flaws, as shorter timeframes exacerbate the impact of small cells. While these will work themselves out over the course of the year, they may create different results as the quarters build on each other. Also, the importance of timeliness and accuracy of hospital data increases. Nevertheless, staff is reviewing market shift with requests for corridor relief, and request for relief from hospitals that are experiencing increases in market shift. As such, staff is requesting comments on the advisability of quarterly market shift adjustments.

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 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 annual per capita growth of 3.58 percent. This concept is illustrated in Table 4 below. As shown in the table, the maximum cumulative growth allowed through CY2017 is 15.11 percent.

Table 4. Calculation of the Cumulative Allowable Growth in Per Capita All-Payer Revenue for Maryland Residents

	CY 2014 A	CY 2015 B	CY 2016 C	CY 2017 D	Cumulative Growth E = (1+A)*(1+B)*(1+C)*(1+D)
Calculation of Revenue Cap	3.58%	3.58%	3.58%	3.58%	15.11%

For the purpose of evaluating the impact of the recommended update factor on compliance with the all-payer revenue test, staff calculated the maximum cumulative growth that is allowable

through the end of FY 2017 (the first 42 months of the waiver). As shown in Table 5A, cumulative growth of 13.12 percent is permitted through FY 2017. Staff projects actual cumulative growth through FY 2017 of 6.40 percent. This estimate reflects:

- Actual CY 2014 experience January through June and actual FY 2015 experience;
- The assumption that hospitals will use the full charge capacity available through their global budgets for FY 2016; and
- The staff recommended update for FY 2017.

Table 5A presents figures on a per capita basis while figure 5B shows allowed growth in gross revenues. Staff has removed adjustments due to reductions in uncompensated care and assessments that do not affect hospital's bottom lines for comparison to the maximum growth allowances.

The actual and proposed revenue growth is well below the maximum levels.

Table 5A. Proposed Update and Compliance with the All-Payer Per Capita Revenue Test

	A Actual Jan- June 2014	B Actual FY 2015	C Staff Est. FY 2016	D Proposed FY 2017	E = (1+A)*(1+B)*(1+C)*(1+D) Cumulative Through FY 2017
Maximum Per Capita Revenue Growth Allowance	**1.79%**	**3.58%**	**3.58%**	**3.58%**	**13.12%**
Per Capita Growth for Period	0.57%	1.85%	2.36%	1.49%	6.40%
Savings from UCC & Assessment Declines that do not Adversely Impact Hospital Bottom Line		1.08%	1.40%	0.70%	3.21%
Per Capita Growth with UCC & Assessment Savings Removed	0.57%	2.93%	3.76%	2.19%	**9.76%**
Per Capita Difference between Cap & Projection					**3.36%**

*3.58 percent annual growth divided by 2 to capture half year.
**1.13 percent growth divided by 2 to capture half year.

Table 5B. Proposed Update and Compliance with the All-Payer Gross Revenue Test

	A Actual Jan- June 2014	B Actual FY 2015	C Staff Est. FY 2016	D Proposed FY 2017	E = (1+A)*(1+B)*(1+C)*(1+D) Cumulative Through FY 2017
Maximum Gross Revenue Growth Allowance	**2.13%**	**4.26%**	**4.12%**	**4.12%**	**15.44%**
Revenue Growth for Period	0.90%	2.51%	2.94%	2.02%	8.62%
Savings from UCC & Assessment Declines that do not Adversely Impact Hospital Bottom Line		1.09%	1.41%	0.70%	3.23%
Revenue Growth with UCC & Assessment Savings Removed	0.90%	3.60%	4.35%	2.72%	**12.04%**
Revenue Difference between Cap & Projection					**3.40%**

*population estimates: FY15/CY14 0.66%; FY16/CY15 0.52%

Medicare Financial Test

The second key financial test under the Model is to generate $330 million in Medicare fee-for-service (FFS) savings over five years. The savings for the five-year period were calculated assuming that Medicare FFS costs per Maryland beneficiary would grow about 0.50 percent per year slower than the national per beneficiary Medicare FFS costs after the first year.

Year one of the demonstration generated approximately $116 million in Medicare savings. CY 2015 savings have not yet been audited, but current projections show an estimated savings of $135 million, bringing the two-year cumulative savings to just over $250 million. Cumulative savings are ahead of the required savings of $49.5 million for two years. However, there has been a shift toward greater utilization of non-hospital services in the state relative to national rates of growth, and Maryland is currently exceeding the national growth rate for the total cost of care by an estimated $60 million (which is a preliminary figure that is subject to change). When calculating savings on total cost of care, the two-year cumulative estimate is $213 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, including non-hospital cost increases. The purpose is to ensure that cost increases outside of hospitals do not undermine the Medicare savings that result from implementation of the All-Payer Model by hospitals. If Maryland exceeds the national growth rate by more than 0.90 percent in any year or exceeds the national growth rate in two consecutive years, it is required to provide an explanation of the increase and potentially provide for corrective action. Since staff estimates that the total cost of care growth exceeds the national growth for CY 2015, staff is focused on determining the causes of the increase. About half of the excess growth is in Medicare Part A services (skilled nursing facility, home health, and hospice), which are related to hospital services. The other half is in Part B services. Staff determined that the growth is primarily in professional fees and is making further assessments of the cause of increases. Staff recommends maintaining the Model contract goal of growing Maryland costs per beneficiary about 0.50 percent slower than the nation in FY 2017. Attainment of this goal will both maintain any ongoing savings from prior periods and help achieve savings in the total cost of care, as well as provide evidence of continuing success of the model.

A commitment to continue the success of the first two years is critical to building long-term support for Maryland's Model.

Allowable Growth

If the projections from the CMS Office of the Actuary for CYs 2016 and 2017 are correct, national Medicare per capita hospital spending will increase by 1.75 percent in FY 2017. The staff goal of limiting Maryland's Medicare per capita growth to 0.50 percentage points below the national rate results in a maximum allowable Medicare per capita growth of 1.25 percent. Since staff is concerned about the total cost of care requirements for Medicare in calendar year 2016, as previously explained, staff also measures the results against the CY 2016 projection of 1.20 percent growth.

For the purpose of evaluating the maximum all-payer growth that will allow Maryland to meet the per capita Medicare FFS growth target, the Medicare target must be translated to an all-payer growth limit (Tables 6A and 6B). During deliberations on the FY 2015 update, a consultant to CareFirst developed a "difference statistic" that reflected that the historical increase in Medicare per capita spending was lower than all-payer per capita spending in Maryland. HSCRC used a difference statistic of 2 percent when calculating the comparisons for the Medicare target limit for FY 2016. However, the actual difference was lower for CY 2015, and as a result, the difference statistic was updated for use in the FY 2017 update. This figure is added to the Medicare target to calculate an all-payer target. Using a blend of case-mix data from CY 2011-2015 and experience data from CY2013-2015, the difference statistic was calculated as a conservative projection of 0.89 percent.

Using the revised difference statistic, staff calculates two different scenarios. Under the first scenario (Table 6A), that the maximum all-payer per capita growth that will allow the state to realize the desired FY 2017 Medicare savings is 2.12 percent. The second scenario (Table 6B) shows a maximum all-payer per capita growth of 2.68 percent. Both scenarios are pictured below and fall within the all-payer guardrails.

Table 6A: Scenario 1 Maximum All-Payer Increase that will still produce the Desired FY 2017 Medicare Savings

Maximum Increase that Can Produce Medicare Savings		
Medicare		
Medicare Growth CY 2016	A	1.20%
Savings Goal for FY 2017	B	-0.50%
Maximum growth rate that will achieve savings (A+B)	C	0.70%
Conversion to All-Payer		
Actual statistic between Medicare and All-Payer	D	0.89%
Conversion to All-Payer growth per resident (1+C)*(1+D)-1	E	1.60%
Conversion to total All-Payer revenue growth (1+E)*(1+0.52%)-1	F	2.12%

Table 6B: Scenario 2 Maximum All-Payer Increase that will still produce the Desired FY 2017 Medicare Savings

Maximum Increase that Can Produce Medicare Savings		
Medicare		
Medicare Growth (CY 2016 + CY 2017)/2	A	1.75%
Savings Goal for FY 2017	B	-0.50%
Maximum Growth Rate that will Achieve Savings (A+B)	C	1.25%
Conversion to All-Payer		
Actual Statistic between Medicare and All-Payer	D	0.89%
Conversion to All-Payer Growth per Resident (1+C)*(1+D)-1	E	2.15%
Conversion to Total All-Payer Revenue Growth (1+E)*(1+0.52%)-1	F	2.68%

Note: National Medicare growth projection 1.2% for CY 2016 and 2.3% for CY 2017 from CMS Office of Actuary, February 2016 analysis.

The staff recommended update will produce the desired savings if national actuarial projections are accurate, and the difference statistic correctly translates the Medicare growth to all-payer growth (Tables 7A and 7B).

Table 7A: Scenario 1 Comparison of Medicare Savings Requirements to Model Results

Comparison to Modeled Requirements	All-Payer Maximum to Achieve Medicare Savings	Modeled All-Payer Growth	Difference
Revenue Growth	2.12%	2.01%	-0.11%
Per Capita Growth	1.60%	1.49%	-0.11%

Table 7B: Scenario 2 Comparison of Medicare Savings Requirements to Model Results

Comparison to Modeled Requirements	All-Payer Maximum to Achieve Medicare Savings	Modeled All-Payer Growth	Difference
Revenue Growth	2.68%	2.01%	-0.67%
Per Capita Growth	2.15%	1.49%	-0.67%

Stakeholder Input

HSCRC staff worked with the Payment Models Work Group to review and provide input on the FY 2017 updates. See Appendix I for all written comments on the staff recommendation for the FY 2017 update factors

RECOMMENDATIONS

The preliminary recommendations of the HSCRC staff are as follows and are offered on the assumption that the other policy recommendations that affect the overall targets are approved (including the PAU savings adjustment and the uncompensated care reductions):

1. Update the three categories of hospitals and revenues as follows:
    a. Revenues under global budgets should increase by 2.02 percent.
    b. Revenues that are not under global budgets but subject to the Medicare rate-setting waiver should increase by1.24 percent.
    c. Revenues for psychiatric hospitals and Mt. Washington Pediatric Hospital should increase by1.55 percent.

APPENDIX I. UPDATING AND REEVALUATING THE DIFFERENCE STATISTIC METHODOLOGY

Calculating the Annual Update Allowance Under the Demonstration

Updating and Reevaluating the Difference Statistic Methodology

Jack Cook

April 15, 2016

Executive Summary

In a previous paper, *Calculating the Annual Update Allowance under the Demonstration*, we suggested a methodology for calculating the annual update so as to have the HSCRC be in compliance with both the All-Payer Waiver Test and the Medicare Waiver Test prescribed by the Demonstration.

Each of the Waiver Tests prescribed a limit on the rate of growth in hospital payments calculated on a per capita basis. The All-Payer Waiver Test limits the annual growth in the hospitals charges for services to Maryland residents calculated on a per resident basis (the All-Payer Statistic). The Medicare Waiver Test limits the growth in all hospital payments for services to resident Medicare FFS beneficiaries calculated on a per beneficiary basis (the Medicare Statistic). The proposed methodology is formulated in terms of an estimate (the Difference Statistic) of the difference between the annual increase in the All-Payer Statistic and the annual increase in the Medicare Statistic. For example, if in 2015, the All-Payer Statistic had increased by, say, 2.58% and the Medicare Statistic by 1.53%, then the Difference Statistic for 2015 would be 1.05%.

$$1.05\% = 2.58\% - 1.53\%$$

In the previous paper we estimated the Difference Statistic using five years of HSCRC claims data (2009-2013), determined the average over the five years, 2.94%, and proposed the use of a conservative Difference Statistic of 2.0% for the purpose of deriving he Annual Update Allowance. The technical details of the suggested methodology require the use of a conservative Difference Statistic in order to provide reasonable assurance that both Waiver Tests will be met.

This paper updates the calculation of the Difference Statistic using the HSCRC claims from 2011 to 2015 and an enhanced method of estimating the increase in the Medicare Statistic: the initial derivation of the Difference Statistic estimated the annual increase in the FFS beneficiaries based on the increase in the age 65+ population in Maryland; the updated estimates used the actual number of Part A and Part B beneficiaries weighted to create a single measure of the FFS beneficiaries residing in Maryland.

The updated calculation resulted in an average Difference Statistic of 2.10 and a conservative Difference Statistic projection of 1.24. However, it was noted that the Difference Statistic applicable to 2012 was unusually large (3.50) and that the four years of Difference Statistics used to calculate the average split between the first two years (2012 and 2013) preceding the term of the Demonstration and the second two years (2014 and 2015) being the first two years of the Demonstration. This split, for which there was no counterpart in the initial calculation of the Difference Statistics since the Demonstration hadn't begun, suggests that the updated calculation might be limited to the first two years of the Demonstration. Using the data from the first two years of the Demonstration, the Difference Statistic is 1.73% and a conservation projection is 1.0%.

One would like to corroborate the estimates of the Difference Statistics derived from the HSCRC claims data by the use of Medicare payment data, preferably including out of state claims. These complete payment data from 2006 to 2012 are available from CMS and the Maryland hospital payments for Medicare services to resident FFS beneficiaries are available from 2013 to 2015. However, we have not been able to reconcile and unify these Medicare payment data in a credible way. Therefore, the corroboration that we have been able to carry out involves only the Maryland hospital payments from 2013 to 2015.

For these years the average Difference Statistic was 1.80% and the conservatively projected Difference Statistic was .89%. These results therefore corroborate the Difference Statistic (1.73%) and the conservation projection (1.0%) derived from the HSCRC claims in the period 2013-2015.

1. Schedule 1: Maryland Hospital Charges per Resident

The hospital charge data in columns 1 and 2 of Schedule 1 were derived from the HSCRC's case mix tapes for 2011 through 2015 by the HSCRC staff.

Column 1 includes the hospital charges for all services and column 2 the hospital charges for services to Maryland residents. Column 3 computes the percentage of the hospital's total charges accounted for by services to Maryland residents. The uniformity of the column 3 percentages suggests that the coding of the residences of Maryland patients was done consistently throughout 2011 to 2015.

Column 4 records the Maryland population; column 5 the hospital charges per Maryland resident (col 2/ col 4); and column 6 the annual rate of increase in the charges per resident. The annual increases in the hospital charges for services to Maryland residents is the first of the two statistics used to derive the Difference Statistic.

Schedule 1

Maryland Hospital Charges per Resident
Annual Increases: 2011- 2015

Hospital Charges (000,000's)

CY	Total	MD Residents	% MD Res Claims	MD Population (000's)	MD Res Claims/ Capita Charge	% Change from Prior Year
2011	$14,540.1	$13,317.2	91.6	5,844.2	$2,279	-
2012	$15,017.5	$13,732.1	91.4	5,890.7	$2,331	2.38
2013	$15,44.3	$14,025.2	90.8	5,936.0	$2,363	1.37
2014	$15,741.2	$14,331.8	91.0	5,975.3	$2,399	1.52
2015	$16,211.1	$14,784.6	91.2	6,006.4	$2,461	2.58

2. Schedule 2: Maryland Hospital Charges per Resident Medicare FFS Beneficiary

The hospital charges in column 1 represent the charges of Maryland hospitals to Medicare FFS beneficiaries residing in Maryland. Column 2 reports the number of such beneficiaries; column 3 the hospital charges per beneficiary (column 1/ column 2); and column 4 records the annual percentage change in the hospital charges per FFS beneficiary. The annual percentage change in the hospital charges per FFS beneficiary are the second statistics used to derive the Difference Statistic.

Schedule 2

Maryland Hospital Charges per Resident Medicare FFS Beneficiaries
Annual Increase 2011- 2015

Year	Hospital Charges (000,000's)	Resident FFS Beneficiaries (000's)	Charge/Beneficiary	% Charge
2011	$4,958.1	712.6	$6,958	
2012	$5,058.9	736.1	$6,873	-1.22
2013	$5,270.3	767.3	$6,869	-.06
2014	$5,391.5	792.0	$6,807	-.89
2015	$5,641.8	816.3	$6,911	1.53

3. Schedule 3: The Difference Statistic and Variances

Columns 1 and 2 record the hospital charges per resident for services to Maryland residents and the annual increases in such charges per resident from Schedule 1. Column 3 and 4 record the Maryland hospital charges per resident FFS beneficiary and the annual increase in these amounts from Schedule 2.

Column 5 calculates the Difference Statistic in each year 2012-2015 and the average 2.10 over the five years. Column 6 specifies for each year the absolute value of the difference between the particular year's Difference Statistic and the average. For example, in 2012, the variance in Column 6 is 1.40, the difference between the Difference Statistic (3.50) and the average Difference Statistic (2.10):

$$1.40= 3.50 – 2.10$$

The conservative projection of the Difference Statistic based on the results of Schedule 3 is 1.24, the average Difference Statistic (2.10) minus the average variances (0.86):

$$1.24 = 2.10- .86$$

Schedule 3

The Difference Statistic and Variance
Maryland Hospital Charge Data: 2011- 2015

Maryland Residents

Year	Chrg/Res	% Change	Chrgs/FFS Beneficiary	% Change	Diff Statistic	Variance
2011	$2,279	-	$6,958	-		
2012	$2,331	2.28	$6,873	-1.22	3.50	1.40
2013	$2,363	1.37	$6,869	-.06	1.43	0.67
2014	$2,399	1.52	$6,807	-.89	2.41	0.31
2015	$2,461	2.58	$6,911	1.53	1.05	1.05
Average					2.10	0.86
Difference Statistic – Avg Variance					1.24	

4. Discussion of Schedule 3

The statistics on Schedule 3 are derived from the consistently accumulated claims data of the HSCRC. However, these claims data for Medicare FFS beneficiaries residing in Maryland provide only an imperfect estimate of the statistic used in the Medicare Waiver Test (the total Medicare payments for hospital services to the resident FFS beneficiaries) because:

- The HSCRC claims do not include the claims for hospital services of resident FFS beneficiaries provided by out of state hospitals, and
- The claims do not reflect the variation in the payment to charge ratio for Medicare hospital services resulting from Medicare policies, including the Sequester

In addition, the four years of estimated Difference Statistics cover two periods in which the dynamics of hospital reimbursement in Maryland were very different. The first period (2012-2013) preceded the term of the All-Payer Model Demonstration and included the beginning of the Sequester in March 2013. The second (2014-2015) represented the first two years of the Demonstration, the implementation of the GBR target budgets, and the impact of enrollment under the ACA.

Over these two periods the average Difference Statistic dropped from 2.465 ((3.5 + 1.43)/2) to 1.730 ((2.41 + 1.05)/2), reflecting a moderation in the growth of private sector volume in period 2. Furthermore, the average variance dropped from 1.035 ((1.40+0.67)/ 2) to 0.68 ((.31+ 1.05)/ 2). This suggests that the use of a Difference Statistic of approximately 1.00 would be an appropriately conservative estimate based on the second period's data.

5. Alternative Estimates of the Difference Statistic

The HSCRC staff has accumulated Medicare inpatient and outpatient payments for Maryland hospital services for resident Medicare FFS beneficiaries for the period 2013-2015, including a 2-month run out with completion factors. Schedule 2A sets forth these payment data, the number of FFS beneficiaries, the payment per beneficiary and the annual percentage change in these payments per beneficiary in 2014 and 2015. These percentage changes are then used on Schedule 3A to re-estimate the Difference Statistic.

Schedule 2A

Summary of Maryland Hospital Medicare Payments
FFS Beneficiaries 2013-2015

CY	Inpatient	Outpatient	Total	FFS Beneficiaries (000's	Payment/ Beneficiary	% Change Payment/ Beneficiary
2013	$3,379.1	$1,285.3	$4,664.4	767.3	$6,079	-
2014	$3,390.0	$1,366.0	$4,756.0	792.0	$6,005	-1.20
2015	$3,514.5	$1,469.9	$4,984.5	816.3	$6,106	1.69
Combined	2015/2013					.49

Schedule 3A records the percentage change in the Maryland hospital charges per resident for 2014 and 2015 from Schedule 1 and the percentage change in the payments per beneficiary from Schedule 2A. The Difference Statistics derived from these results average 1.80 and the average variance is .91. This suggests that the use of a Difference Statistic of .89 would be likely to ensure compliance with the Medicare Waiver Test.

Schedule 3A

CY	% Change MD Resident Charges per Capita (Sch 1)	% Change Medicare Payment Per Beneficiary (Sch 2A)	Difference Statistic	Variance
2013	1.52	-1.20	2.72	.92
2014	2.58	1.69	.89	.91
Average			1.80	
Average Variance			.91	
Conservatively Projected Diff Statistic			.89	

APPENDIX II. COMMENT LETTERS ATTACHED

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 6, 2016

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:

This letter provides CareFirst's comments on the HSCRC staff's Draft Recommendations for the Update to Hospital Rates and the "PAU Savings Program" (PSP) for the Fiscal Year ending 2017.

Background

It appears that in the first year of the Model Agreement (CY 2014), the Maryland rate setting system easily met the All Payer test and both of the Medicare financial tests: 1) the U.S. FFS Medicare hospital expenditure savings requirement of $0; and 2) the national total Medicare Part A and Part B expenditures "Total Cost of Care" (TCOC) test. However, while continuing to achieve strong cumulative savings through CY2015, this performance trend has slipped somewhat causing a need for further root cause assessments. Preliminary data indicates that Maryland is exceeding the U.S. Medicare TCOC growth rate in CY 2015 and it is imperative to provide an Update at July 1, 2016 that ensures compliance with this waiver term for CY2016. If Maryland's Medicare TCOC growth exceeds that of the U.S. by more than 1.0 percentage points in CY 2015, or if it exceeds the national growth rate for two consecutive years (e.g., CY 2015 and CY 2016), the State would experience a "Triggering Event," which would elicit a "Warning Notice" from CMS that might, after some discussion, require Maryland to file an acceptable "Corrective Action Plan" (CAP) with CMS to avoid termination of the Model Agreement. Obviously, termination of the waiver would be disastrous for the State and its hospitals. Experiencing a Triggering Event in the midst of negotiations with CMS/CMMI regarding the continuation of the Model Agreement could jeopardize the ability of the State to obtain a Phase II extension.

The less favorable performance in CY 2015 appears to be a function of:

1) A high FY 2016 Update that increased both CY 2015 and CY 2016 spending, but has not been offset by reduced Medicare utilization;

2) An increase in the use of Part A post-acute care services (i.e., skilled nursing facility and home health services) in CY 2015 that will likely continue into CY 2016. The Model Agreement included the TCOC test so that savings under the hospital system would not be more than offset by increases in costs outside the hospital setting and to ensure that hospitals did not shift routine hospital services to non-hospital settings/facilities; and

3) What the HSCRC staff has characterized as an "uneven implementation of care coordination strategies thus far" by hospitals (particularly as it relates to the Medicare population);

Moreover, despite the infusion of nearly $200 million of care management infrastructure funding into the hospital system, there appears to have been virtually no change to date in the statewide level of PAUs over the past several years. Significantly, slightly more than half of the hospitals currently have increases in PAUs.

PAU Savings Program

Given these results, CareFirst strongly supports the staff's proposal to increase the PAU Savings Program (PSP) offset to rates to 1.25% in FY 2017 (from 0.60% in FY 2016) and to scale these rate offsets based on each hospital's level of PAUs. An increased emphasis on reducing PAUs is consistent with the HSCRC's GBR-based model of rate control. The Commission has frequently noted that, under fixed target budgets, the reduction of unnecessary utilization is an essential source of savings that should be used to offset investments in community-based initiatives and care coordination activities.

2017 Update Factor

In addition, we believe that the FY 2017 update factor must reflect the reality of the State's current and projected position relative to TCOC. We base this on the fact that CY 2015 performance on the Medicare TCOC test appears to have been unfavorable and this performance may also negatively affect performance in the first half of CY 2016 because the relatively high update factor that was approved in July 2015 will remain in effect until June 30, 2016.

The FY 2016 Update Factor— which provided hospitals with over 4.0% additional revenue, when the effects of termination of the MHIP assessment and reduction in hospital Uncompensated Care (UCC) provisions are considered— was predicated on a projected level of Medicare volume reductions that has not been realized.[1]

We have reviewed the methodology and the assumptions that the HSCRC staff used to develop the draft FY 2017 Update of 2.02% that is contained in the "Draft Recommendations on the Update Factor for FY 2017" (May 2, 2016) and provided in the pre-meeting package for the May public meeting and we generally support the approach taken by the staff. However, we have concerns that approving the full Update provision at July 1 could result in Maryland exceeding the National TCOC guardrail for the second consecutive year, causing a "triggering event". Specifically, we believe that the total hospital revenue increase needs to be held to no more than 2.11% in CY 2016 if Maryland is to meet the Medicare tests in the Model Agreement. Given that the approved revenue increase for FY 2016 was 2.94%, approximately half of that amount (i.e., 1.47%) will have been consumed in the first half of CY 2016.

[1] The elimination of the MHIP assessment and reduction in hospital UCC worked to reduce hospital gross patient revenues (their gross charge levels), however, hospital net patient revenues increased by approximately 4.35%. A similar dynamic is occurring in FY 2017 associated with a reduction in the Medicaid Deficit Assessment of 0.15% and an estimated drop in hospital Uncompensated Care of 0.55%. Thus, while gross patient service revenue would increase by 2.01% (under the current staff proposal), the hospitals' net revenues would increase by 2.71% (the 2.02% recommended GBR increase plus 0.70% = 0.15%+0.55%).

This would mean that the maximum revenue increase that the HSCRC could approve effective July 1, 2016 without jeopardizing the Model Agreement is 1.28% (i.e., 1.47% + .50 x 1.28% = 2.11%). Exhibit 1 to this letter illustrates this point in more detail.

If, after six months, it is clear that the system is outperforming the Medicare financial tests, the HSCRC could reasonably consider increasing the Update effective January 1, 2017.

PAUs

Finally, we believe that the HSCRC staff's formulation of PAUs—which includes unplanned readmissions, observation cases, Prevention Quality Indicator (PQIs) and Maryland Hospital Acquired Conditions (MHACs) —is a good first step in defining a methodology to incent hospitals to reduce PAUs.

However, we believe that the Commission should consider the following modifications and refinements to the PAU methodology:

1) The PAU list consists of inpatient services only in relation to each hospital's total (inpatient and outpatient) revenue. This calculation masks the level of PAUs at hospitals that have relatively large proportions of outpatient services;

2) The exemption of procedure-based utilization from the PAU list leaves a large pool of services that may or may not be appropriate outside the scrutiny of the PAU methodology. This means that hospitals with relatively high levels of procedural services— which are not considered in the determination of PAU levels— will tend to show lower PAU levels as a proportion of their total services. We suggest that the HSCRC revise its PAU methodology to compute the level of PAUs relative to the share of each hospital's revenue that is subject to the PAU definitions; and

3) The PAU list currently does not address the fact that the health services literature has amply established the fact that a substantial number of hospital procedures are unnecessary—either because they have little value under any circumstances, or they are over-utilized or they could be performed in more appropriate settings. The HSCRC should over time expand the PAU list to encompass such procedures with the assistance of experts— such as those at RAND, Dartmouth and other organizations—that have done extensive work in this area for many years.

We would like to recognize the HSCRC Staffs openness throughout this process of balancing all stakeholder concerns and comments and putting forward a very reasonable and workable recommendation. Thank you for this opportunity to comment on these very important policy initiatives.

Sincerely,

Chet Burrell
President & CEO

Exhibit I – Recommended Modification to the staff FY Update Proposal

In order for the State to achieve its goal of generating the desired level of 0.5% savings relative to the U.S. Medicare national FFS hospital growth rate, the impact of the FY 2016 approved revenue Update on the period January through June 2016 must be offset by a lower approved Update for FY 2017 (which will impact the last six months of CY 2016).

Table 1 below shows that, in order to meet the staff's goal, the HSCRC should approve a FY 2017 overall GBR revenue Update of 1.28%, not 2.01%, which was the amount that was being considered by the staff at the time of the May 2 Payment Models work group meeting. This 1.28% amount is the maximum affordable update for FY 2017 because the Commission must offset the impact of the large FY 2016 Update, which has inflated hospital revenues during the first six months of the calendar year.

If the HSCRC were to approve a 2.02% GBR revenue Update for FY 2017, Maryland could fail to meet the goal of achieving the desired level of Medicare hospital savings in CY 2016 (i.e., the CY 2016 U.S. Medicare FFS hospital expenditure per beneficiary growth rate less the 0.5% savings provision).

TABLE 1[2]

Meeting the Dual Waiver Tests with a Projection of Maximum GBR Increases
Combining Fiscal Year Approved Revenue Growth for both FY16 & FY 17

		Per Beneficiary	
(1) CMS Actuary Projection CY16 US hospital growth		1.20%	
(2) Less annual Savings %		-0.50%	
(3) Medicare Test Target		0.70%	
(4) Conservative Difference Statistic		0.89%	
(5) Projected Increase in MD Charges per Resident		1.59%	
(6) Population Growth		0.52%	
(7) Allowed CY 2016 Revenue Growth ((5) + (6))		2.11%	
	FY16 Approved Revenue Increase		FY 17 Approved Revenue Increase to hit Medicare Waiver Target
(8) Approved GBR Revenue Increase	2.94% (1)		1.28%
(9) Six Months of FY16 Approved GBR	1.47%		
(10) Six Months of FY 17 Approved			0.64%
(11) Allowed CY 2016 Revenue Growth (9) + (10)		2.11%	

(1) Derived from the FY16 approved Update of 3.19% less the 0.25% Transformation Grant funding delayed to FY17

[2] Table 1 shows a 2.11% update because this is the level necessary to meet the U.S. Medicare FFS Hospital expenditure per beneficiary less 0.5% target for FY 2016. Staff recommended a 2.02% update in order to provide a cushion for meeting this goal. However, as noted, it did not factor in the impact of the larger Update effective FY 2016 which impacts the first six months of CY 2016.

Maryland
Hospital Association

May 9, 2016

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 provide feedback on the Health Services Cost Review Commission (HSCRC) staff draft recommendations on the global budget update factor for fiscal year 2017. The decision before you is critical to the future of the all-payer model in Maryland. Every one percentage point subtracted from or added to this update equals $160 million either withheld from or paid to Maryland's hospitals for patient care inside and outside the hospital.

We ask that commissioners please consider the following important data that augment the current draft recommendation:

Savings Far Exceed Targets
As stated in our April 19 letter, substantial progress has been made in the first two years of the waiver, particularly on Medicare savings (see attached charts):

- The Medicare hospital savings through the end of the waiver's second year was more than ***five*** **times the minimum savings required under the agreement**, and already ahead of the minimum required by June 30, 2017 (chart 1)
- If hospitals continue to save 0.50 percent ***below*** the national growth rate for the remainder of the agreement, total savings are projected to exceed **$850 million, more than *two-and-a-half times* the agreement's minimum required savings of $330 million** (chart 2)
- If Maryland hospital spending grew ***at*** the national rate for the balance of the five-year agreement, total hospital savings would be **$681 million, more than *double* the minimum savings requirement** (chart 2)

The staff's proposed update would push savings and reductions in the all-payer rate of spending for hospital care even further. Staff propose a total all-payer growth through June 30, 2017, of **7.81 percent per capita** (**6.40 percent** after removing the savings from uncompensated care and assessment reductions). This limited growth in spending for hospital care is more than ***one-third*** lower than the allowed ceiling under our all-payer demonstration (chart 3).

Full Range of Allowable Growth Options Not Presented
On pages 13-14 of the staff proposal, two charts present paths to achieve the desired fiscal year 2017 Medicare hospital savings of 0.50 percent. This is an opportunity to engage in a critical policy discussion about the cumulative minimum level of Medicare hospital savings to be achieved, when the minimum required savings through June 30, 2017 have already been exceeded and the all-payer agreement specifies a minimum ***cumulative*** five-year savings total of $330 million.

The Medicare hospital savings requirement of $330 million was calculated assuming the growth in Maryland's spending for hospital care would be lower than the national growth rate by 0.50 percent per year. In the agreement's first year, Maryland reduced that growth rate by far more – 2.15 percent. The commission can set a savings target for fiscal year 2017 less than the 0.50 percent recommended by staff, and still ***significantly exceed*** the minimum savings required. Setting a policy on hospital savings that does not account for the significant cumulative savings to date would undermine the still-tenuous status of the all-payer model.

In addition, Page 13 of the draft proposal suggests that the maximum all-payer growth rate that could be granted to achieve desired savings is limited to between 2.12 percent and 2.68 percent (1.59 percent to 2.15 percent per capita). However, two elements of the calculation are subject to a range of estimates not presented:

- **The projection of national Medicare spending growth for fiscal year 2017.** Several sources of data can be used for projecting Medicare national spending growth. We believe the most reliable is the projection of hospital spending in the Medicare Trustees annual report to Congress. In its latest report, spending growth is projected at 1.81 percent in calendar year 2016 and 2.52 percent in calendar year 2017, for a fiscal year 2017 projected growth of 2.18 percent (compared with staff's indicated range of 1.20-1.75 percent). Further, in its report, the CMS Actuary indicates that based on a study of its estimates for the time period 1997-2013, it has historically *underestimated* hospital spending by about 0.4 percentage points per year.

- **The "difference statistic" that estimates the difference in all-payer spending per capita and Medicare hospital spending per beneficiary.** In calendar years 2014 and 2015, the average difference between the all-payer spending per capita and the Medicare spending per beneficiary was 1.62 percent, nearly double the "conservative projection" of the difference statistic staff are using (0.89 percent).

In short, there are several alternative scenarios not shown on pages 13 and 14 of your materials that commissioners might consider for fiscal year 2017's maximum allowable all-payer increase. These scenarios demonstrate the ability to further increase the update.

Maximum Increase that Can Produce Desired FY 2017 Medicare Savings

	Scenario 1 (Page 13)	**Scenario 2 (Page 14)**	**Alternative Scenario 3**	**Proposed Scenario 4**
Estimated Medicare Growth (FY 2017)	1.20%	1.75%	2.18%	1.85%
Savings Goal (FY 2017)	-0.50%	-0.50%	-0.0%	-0.25%
Maximum Growth Rate that Will Achieve Savings	0.70%	1.25%	2.18%	1.60%

Conversion to All-Payer

	Scenario 1 (Page 13)	**Scenario 2 (Page 14)**	**Alternative Scenario 3**	**Proposed Scenario 4**
Actual Statistic Between Medicare and All-Payer	0.89%	0.89%	1.62%	1.25%
Conversion to All-Payer per Resident	1.60%	2.15%	3.84%	2.87%
Conversion to Total All-Payer Revenue Growth	2.12%	2.68%	4.38%	3.41%

At the May 11 meeting, MHA will provide commissioners with our recommendation for the update for fiscal year 2017, which will be well within the range of allowable increases that commissioners could consider. We ask commissioners to review the broader range of alternative scenarios and provide an update that does not undercut, at this still early stage, the important achievements and continued investments needed for successfully improving care delivery and health in Maryland.

Thank you for your consideration.

Sincerely,

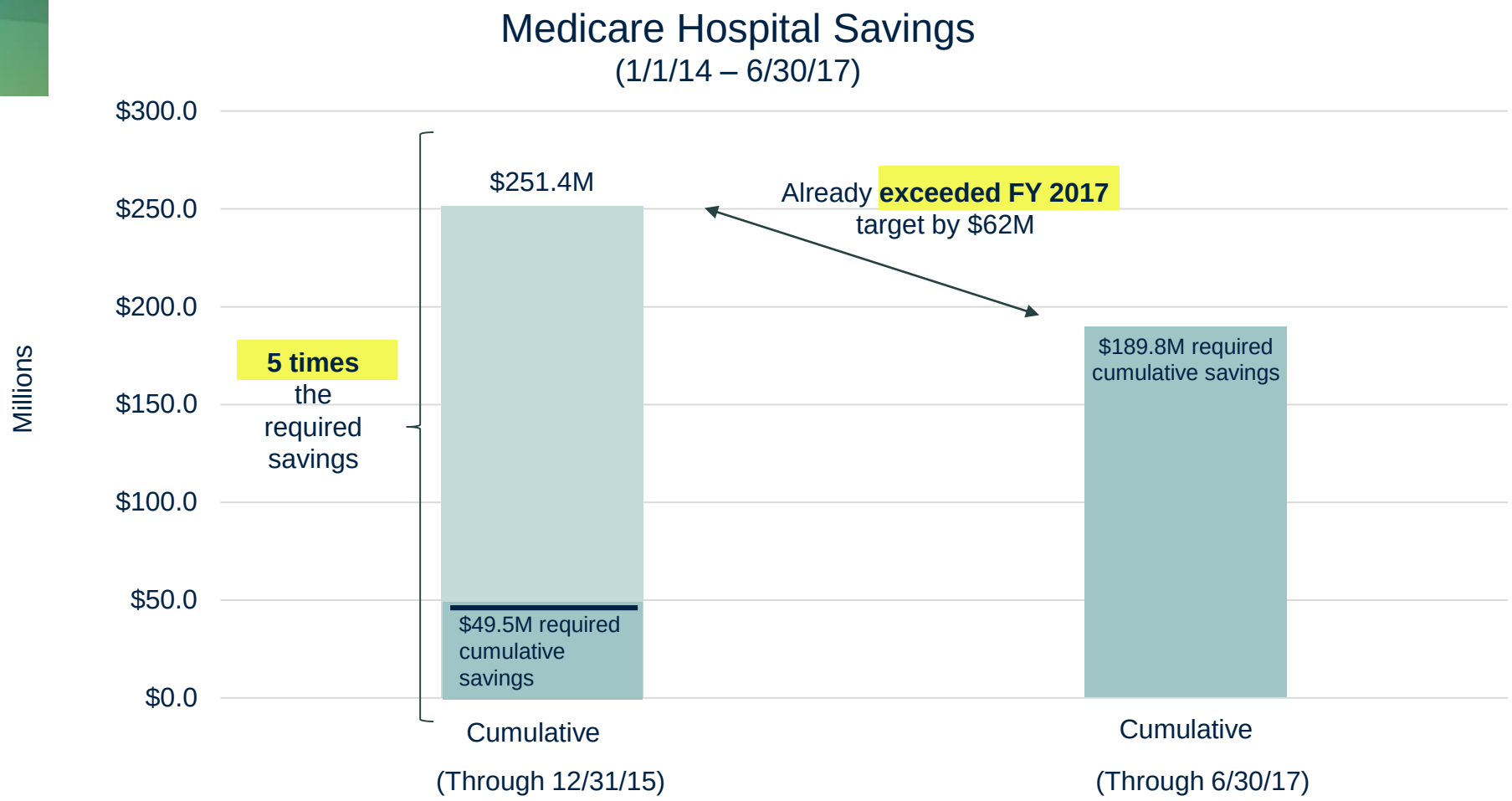
Michael B. Robbins

Michael B. Robbins
Senior Vice President

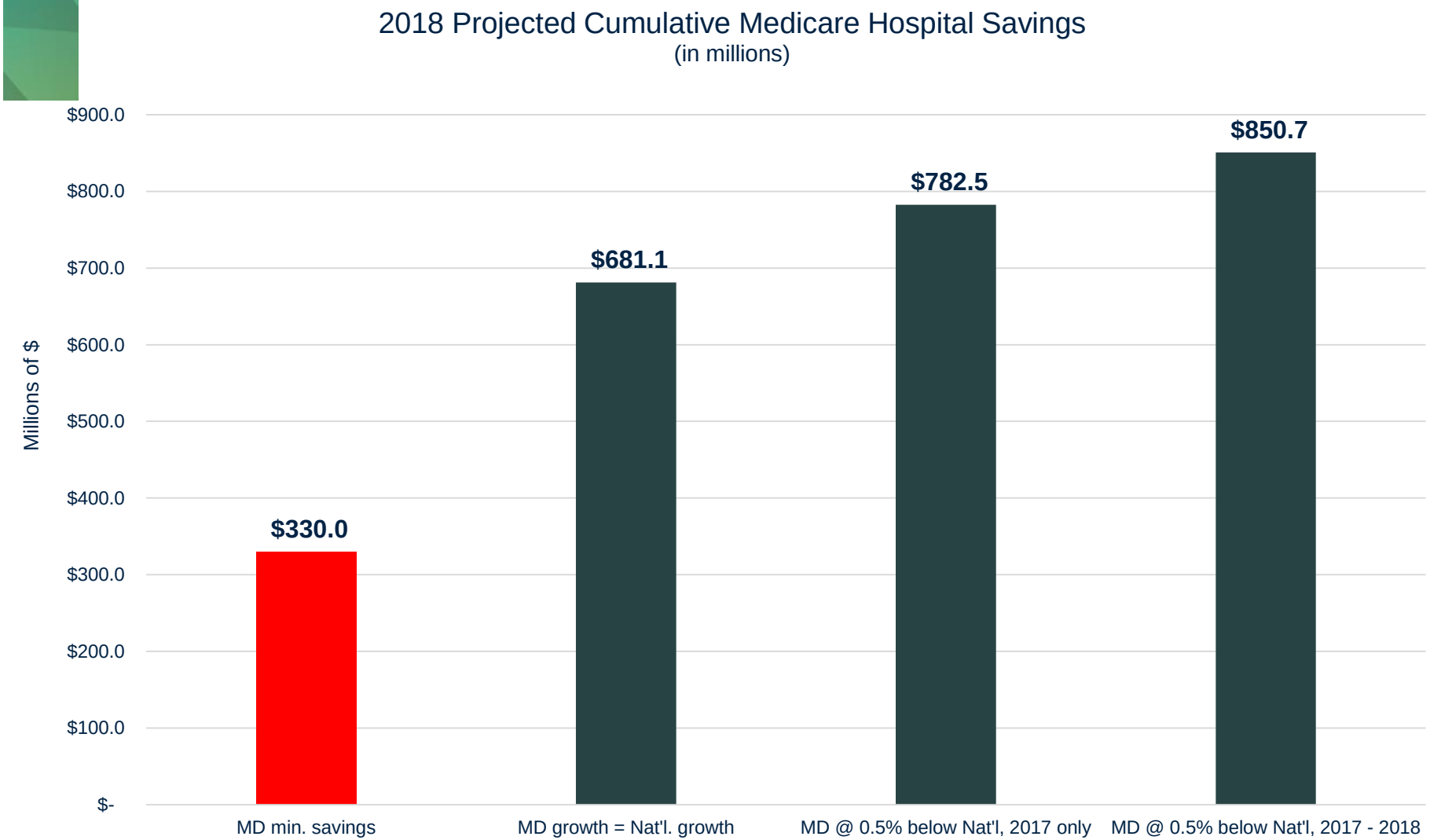
cc: Herbert S. Wong, Ph.D., Vice Chairman
Victoria W. Bayless
George H. Bone, M.D.
John M. Colmers
Stephen F. Jencks, M.D., M.P.H.
Jack C. Keane
Donna Kinzer, Executive Director

Attachment

Medicare Hospital Savings is Already Five Times the Required Amount

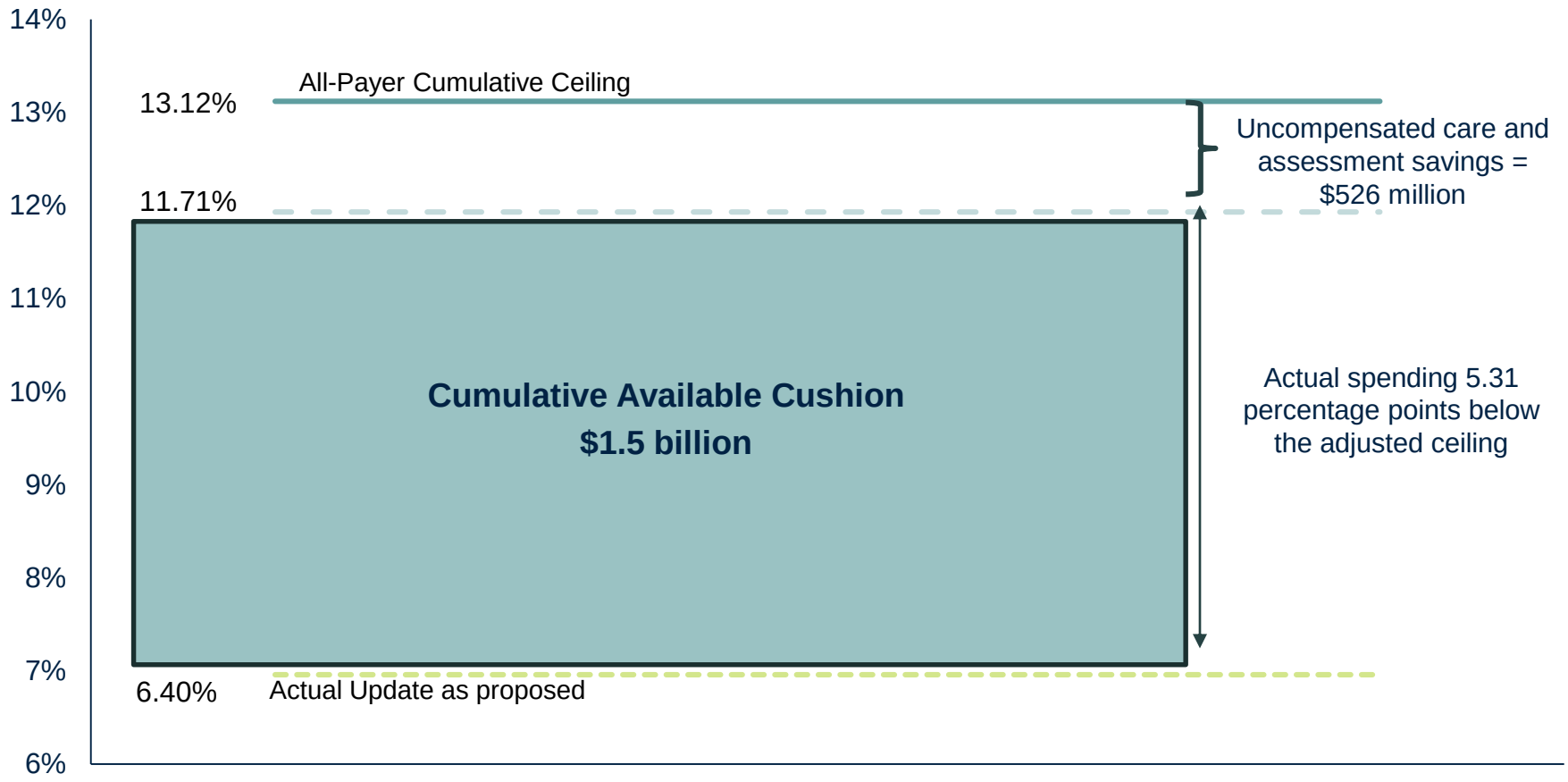


Expected Medicare Savings will far Exceed Requirement



Plenty of Cushion is Available

All-Payer Cumulative Update Capacity
(per capita; 1/1/14 – 6/30/17)



FY 2017 Update Factor

May 11, 2016

HSCRC
Health Services Cost Review Commission

Balanced Update Model for Discussion

Components of Revenue Change Linked to Hospital Cost Drivers/Performance

			Weighted Allowance
Adjustment for Inflation			1.72%
- Allowance for High Cost New Drugs			0.20%
Gross Inflation Allowance	A		1.92%
Implementation for Partnership Grants	B		0.25%
Care Coordination			
-Rising Risk With Community Based Providers			
-Complex Patients With Regional Partnerships & Community Partners			
-Long Term Care & Post Acute			
	C		
Adjustment for volume	D		0.52%
-Demographic Adjustment			
-Transfers			
-Categoricals			
Other adjustments (positive and negative)			
- Set Aside for Unknown Adjustments	E		0.50%
- Workforce Support Program	F		0.06%
- Holy Cross Germantown	G		0.07%
- Non Hospital Cost Growth	H		0.00%
Net Other Adjustments	I =	Sum of E thru H	0.63%
-Reverse prior year's PAU savings reduction	J		0.60%
-PAU Savings	K		-1.25%
-Reversal of prior year quality incentives	L		-0.15%
-Positive incentives (Readmissions and Other Quality	M		0.47%
-Negative scaling adjustments	N		-0.28%
Net Quality and PAU Savings	O =	Sum of J thru N	-0.61%
Net increase attributable to hospitals	P =	Sum of A + B + C + D + I + O	2.72%
Per Capita	Q =	(1+P)/(1+0.52%)	2.19%

Components of Revenue Change with Neutral Impact on Hosptial Finanical Statements

-Uncompensated care reduction, net of differential	R		-0.55%
-Deficit Assessment	S		-0.15%
Net decreases	T =	R + S	-0.70%
Net revenue growth	U =	P + T	2.02%
Per capita revenue growth	V =	(1+U)/(1+0.52%)	1.49%

Medicare Savings Requirements: Scenario 1

Maximum Increase that Can Produce Medicare Savings		
Medicare		
Medicare Growth CY 2016	A	1.20%
Savings Goal for FY 2017	B	-0.50%
Maximum growth rate that will achieve savings (A+B)	C	0.70%
Conversion to All-Payer		
Actual statistic between Medicare and All-Payer	D	0.89%
Conversion to All-Payer growth per resident (1+C)*(1+D)-1	E	**1.60%**
Conversion to total All-Payer revenue growth (1+E)*(1+0.52%)-1	F	**2.12%**

Comparison of Medicare Savings Requirements to Model Results			
Comparison to Modeled Requirements	**All-Payer Maximum to Achieve Medicare Savings**	**Modeled All-Payer Growth**	**Difference**
Revenue Growth	2.12%	2.02%	-0.11%
Per Capita Growth	1.60%	1.49%	-0.11%

Medicare Savings Requirements: Scenario 2

Maximum Increase that Can Produce Medicare Savings		
Medicare		
Medicare Growth (CY 2016 + CY 2017)/2	A	1.75%
Savings Goal for FY 2017	B	-0.50%
Maximum Growth Rate that will Achieve Savings (A+B)	C	1.25%
Conversion to All-Payer		
Actual Statistic between Medicare and All-Payer	D	0.89%
Conversion to All-Payer Growth per Resident (1+C)*(1+D)-1	E	**2.15%**
Conversion to Total All-Payer Revenue Growth (1+E)*(1+0.52%)-1	F	**2.68%**

Comparison of Medicare Savings Requirements to Model Results			
Comparison to Modeled Requirements	**All-Payer Maximum to Achieve Medicare Savings**	**Modeled All-Payer Growth**	**Difference**
Revenue Growth	2.68%	2.02%	-0.67%
Per Capita Growth	2.15%	1.49%	-0.66%

Proposed Update & Compliance with the All-Payer Per Capita & Gross Revenue Test

Table 5B

	A Actual Jan- June 2014	B Actual FY 2015	C Staff Est. FY 2016	D Proposed FY 2017	Cumulative Through FY 2017
Maximum Gross Revenue Growth Allowance	**2.13%**	**4.26%**	**4.12%**	**4.12%**	**15.44%**
Revenue Growth for Period	**0.90%**	**2.51%**	**2.94%**	**2.02%**	**8.62%**
Savings from UCC & Assessment Declines that do not Adversely Impact Hospital Bottom Line		1.09%	1.41%	0.70%	3.23%
Revenue Growth less UCC & Assessment Savings	**0.90%**	**3.60%**	**4.35%**	**2.72%**	**12.04%**
Revenue Difference between Cap & Projection					**3.40%**

Summary of Recommendations

- Update the three categories of hospitals & revenues:
  - 2.02% for revenues under global budgets
  - 1.24% for revenues subject to waiver but excluded from global budgets
  - 1.55% for psychiatric hospitals and Mt. Washington Pediatric Hospital
- Increase in PAU Savings (Shared Savings)
- 0.20% set aside for allowance of Physician Administered High Cost Drugs

Draft Recommendations for Competitive Transformation Implementation Awards

May 11, 2016

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

This is draft recommendation. Any public comments should be submitted to Steve Ports at steve.ports@maryland.gov on or before May 23, 2016.

Table of Contents

OVERVIEW

The Maryland Department of Health and Mental Hygiene ("Department", or "DHMH") and the Maryland Health Services Cost Review Commission ("HSCRC," or "Commission") are recommending that nine proposals for health system transformation grants be partially or fully funded, beginning in fiscal year (FY) 2017. This recommendation follows the Commission's decision in June 2015 to authorize up to 0.25 percent of total hospital rates to be distributed to grant applicants under a competitive process for "shovel-ready" care transformation improvements that will generate more efficient care delivery in collaboration with community providers and entities and achieve immediate results under the metrics of the All-Payer Model.

BACKGROUND

The Commission received 22 proposals for transformation implementation award funding. Commission staff established an independent committee to review the transformation grant proposals and make recommendations to the Commission for funding. The Transformation Implementation Award Review Committee (Review Committee) included representatives from the Department and the Commission as well as subject matter experts, including individuals with expertise in such areas as public health, community-based health care services and supports, and health information technology. Following a comprehensive initial review, nine of the 22 proposal applicants were invited to provide clarifying information related to their proposal. These nine applicants, along with their community partners, were invited to present their proposals to the Review Committee.

After its thorough review, the Review Committee is pleased to present these recommendations to the Commission. The Review Committee is strongly encouraged about the prospects of the proposed interventions, which we believe will expand upon existing infrastructure investments to improve care coordination and population health management in Maryland and help achieve the goals of the All-Payer Model. This report reflects the Review Committee's recommendations to grant a total of just over $30.5 million for Transformation Implementation awards in FY 2017 of the authorized amount of up to 0.25 percent of FY 2016 approved hospital revenue ($37,036,786).

COMPETITIVE TRANSFORMATION IMPLEMENTATION GRANTS

In order to achieve the goals of healthcare transformation and to pave a way for success of the All-Payer Model, on August 28, 2015 the Department, in collaboration with the HSCRC, released a Request for Proposals ("RFP") for funding to implement health system transformation. Twenty-two applications were received by the extended due date of December 21, 2015.

The RFP invited proposals to build upon developed partnerships capable of identifying and addressing their regional needs and priorities and, in turn, shaping the future of health care in Maryland. The conceptual model is intended to focus on particular patient populations (e.g., patients with multiple chronic conditions and high resource use, frail elders with support

requirements, and dual-eligibles with high resource needs) and may also include a strategy for improving overall population health in the region over the long-term, with particular attention paid to reducing risk factors. The overarching goal is to utilize community-based partnerships to assist hospitals in meeting the goals of the new All-Payer Model and the Triple Aim.

The RFP limits the maximum award to 0.5 percent of a hospital's FY 2016 global budget for each approved application (although hospitals obtaining revenue through multiple awards may not receive a cumulative amount exceeding .75 percent of their revenue). Funding will be allocated via HSCRC-approved rate increases for hospitals working in conjunction with partner organizations, with the expectation of reducing potentially avoidable utilization for Medicare and dual-eligible patients. Successful proposals will be required to submit additional reporting details on the status of their ongoing implementation as the funding is released.

THE REVIEW COMMITTEE AND EVALUATION CRITERIA

The Review Committee gave preference to those models that included the following characteristics/features:

- Identified a target patient population that could be reached to improve care delivery and achieve results for the All-Payer Model;
- Built a programmatic model that would likely be successful in improving efficient care delivery;
- Remained consistent with the goals of the All-Payer Model;
- Remained consistent with the partner hospitals' Strategic Transformation Plans;
- Considered existing GBR Infrastructure Investments;
- Complemented existing resources;
- Leveraged available information technology tools;
- Focused on the needs of patients;
- Demonstrated a feasible Return on Investment and viable plan to translate into Payer Savings;
- Presented a valid implementation plan; and
- Presented a reasonable budget.

The Review Committee established evaluation criteria and weighting in each of the following categories:

1. Target Population – 10 points
2. Model Success – 20 points
3. Consistency with All-Payer Model – 10 points

4. Consistency with Strategic Transformation Plans – 10 points
5. Efficacy of Previous Investments – 5 points
6. Complement to Existing Resources – 5 points
7. Use of Existing Information Technology Resources – 5 points
8. Patient-Centeredness – 10 points
9. Feasibility of Return on Invest (ROI) and Payer Savings – 10 points
10. Implementation Plan – 10 points
11. Budget – 10 points

For applicants that were invited to present their proposal, the Review Committee gave preference to those models that included the following characteristics/features:

- A comprehensive, diverse set of community and hospital partners with standing in the region;
- The likelihood that the proposed programs would be successful in reducing avoidable utilization and improving population health;
- The operational readiness and sustainable staffing detail of the proposal;
- The timely generation of a return on investment and sustainable impact on total cost of care; and
- The overall feasibility of the proposal to be successful.

The Review Committee established evaluation criteria and weighting in each of the following additional categories:

1. Overview of Program Design – 5 points
2. Community Involvement and Community Partners' Roles – 5 points
3. Staffing Detail – 5 points
4. ROI Assumptions and Budget Request – 5 points
5. Impact on Total Cost of Care and Non-Hospital Services – 5 points
6. Operational Readiness – 5 points
7. Overall Impression – 5 points

RECOMMENDATIONS

Recommended Awardees

Based on its review, the Review Committee recommends nine grant proposals for FY 2017 funding. Table 1 below lists the recommended awardees, the award amount, and the hospitals affected. A summary of each recommended proposal may be found in the Appendix.

Table 1. Recommended Awardees

Partnership Group Name	Award Request	Award Recommendation	Hospital(s) in Proposal
Bay Area Transformation Partnership	$4,246,698.00	$3,831,143.00	Anne Arundel Medical Center; UM Baltimore Washington Medical Center
Community Health Partnership	$15,500,000.00	$6,674,286.00	Johns Hopkins Hospital; Johns Hopkins – Bayview; MedStar Franklin Square; MedStar Harbor Hospital; Mercy Medical Center; Sinai Hospital
GBMC	$2,942,000.00	$2,115,131.00	Greater Baltimore Medical Center
Howard County Regional Partnership	$1,533,945.00	$1,468,258.00	Howard County General Hospital
Nexus Montgomery	$7,950,216.00	$7,663,683.00	Holy Cross Hospital; Holy Cross – Germantown; MedStar Montgomery General; Shady Grove Medical Center; Suburban Hospital; Washington Adventist Hospital
Total Eldercare Collaborative	$1,882,870.00	$1,882,870.00	MedStar Good Samaritan; MedStar Union Memorial
Trivergent Health Alliance	$4,900,000.00	$3,100,000.00	Frederick Memorial Hospital; Meritus Medical Center; Western Maryland Hospital Center
UM-St. Joseph	$1,147,000.00	$1,147,000.00	UM St. Joseph Medical Center
Upper Chesapeake Health	$2,717,963.00	$2,692,475.00	UM Harford Memorial Hospital; UM Upper Chesapeake Medical Center; Union Hospital of Cecil County
Total	**$42,820,692.00**	**$ 30,574,846.00**	

Reporting and Evaluation

As shown above, not all of the meritorious applicants received the full amount requested. In such cases, the Review Committee considered, among other things, the FY 2016 revenue limitation, whether the proposed initiatives truly involved care coordination, whether the initiatives could have been funded with existing infrastructure dollars provided permanently in rates or resulting from ROI, and previous rate increases granted for the same or similar purposes.

Following Commission approval of the awards, staff will provide each awardee with a template for monitoring and reporting on the performance of the programs in meeting the goals of the All-Payer Model and consistent with the application proposal. The Commission reserves the right to terminate an award at any time for material lack of performance or for not meeting the letter or intent of an application.

Savings to Purchasers

The RFP specifically states, "in addition to the ROI for the participating hospitals, the HSCRC expects that a portion of the ROI accrue to payers. Applicants are expected to show how the ROI will be apportioned between the hospital(s), and payers, and how the payer portions will be applied (global budget reduction, etc.)." Because most applications were not specific on this point, the Commission is requiring a schedule of savings to purchasers for each awardee hospital through a reduction in its global budget or total patient revenue amounts. The following table presents the percentage reduction in the award amount for each hospital receiving funding through rates.

Table 2. Recommended Reduction Percentage

FY 2018	FY 2019	FY 2020
-10%	-20%*	-30%*

*10% more than the previous fiscal year.

Remaining Funding Available Under 0.25 Percent of Revenue

As previously mentioned, the Commission authorized up to 0.25 percent of approved FY 2016 revenue for this program, meaning that up to $37,036,786 may be used for the Healthcare Transformation Grants. This recommendation, if approved by the Commission, would allocate a total of $30,574,846 in FY 2017, leaving a remainder of $6,461,940. Staff is proposing that HSCRC and DHMH re-evaluate the remaining applications to determine whether the remainder could be used to further the goals of the All-Payer Model by approving individual projects proposed in the applications that have not yet received funding, or to provide partial funding to support promising collaborations and regional partnerships. The intent is to issue a draft recommendation at the Commission's September public meeting on how the remaining dollars could be distributed in this manner.

APPENDIX

Bay Area Transformation Partnership

Anne Arundel Medical Center and UM Baltimore Washington Medical Center

Hospital/Applicant:	Bay Area Transformation Partnership (BATP)
Date of Submission:	12/21/15 original submission, 01/08/16 revised submission
Health System Affiliation:	Anne Arundel Medical Center and University of Maryland Baltimore Washington Medical Center
Number of Interventions:	12 major interventions as described in section 3
Total Budget Request ($):	$ 4,010,576

Target Patient Population
The Bay Area Transformation Partnership's (BATP) target population in 2016 includes 1,260 high-utilizing Medicare and aged Dual-Eligible patients residing in the primary service areas for Anne Arundel Medical Center and the University of Maryland Baltimore Washington Medical Center. This includes 1,152 Medicare high utilizers (>=3 inpatient or observation visits >=24 hours) and 108 aged (>=65 years) Dual-Eligible individuals. Table 1 on page 1 lists the primary service area zip codes and shows a map of the areas. Berkeley Research Group (BRG) provided the baseline data for our target population and will continue to update this information on a quarterly basis throughout CY2016. Even as BATP directs its high-intensity, resource-rich interventions at this population of 1,260 in 2016, at the same time, work will begin on addressing the rising-risk population, as described in the narrative. In years 2017 thru 2019, we aspire to cumulatively expand the scope of target patients to include the high utilizers from all payers, adding segments each year, including portions of the rising-risk population, based upon our data analysis, resource and volume capabilities and BATP-generated funds that will be reinvested back into interventions for the target populations. We anticipate that in 2019 we will have the capacity to reach all-payer high-utilizers while addressing rising-risk members of the population, in order to appreciably reduce the per capita total cost of care.
Summary of program or model for each program intervention to be implemented. Include start date, and workforce and infrastructure needs

The work plan demonstrates significant preparatory work in 2015 that extends through January 2016 in anticipation of an early February award announcement.

Intervention	Start Date	Workforce and Infrastructure Needs
A. Shared Care Alerts	2/1/16	$ 591,843
B. Shared Care Plans	3/1/16	Included in above
Data Analytics	1/1/16	$ 173,060
C. Ambulatory Care Supports		
a) One-Call Care Management	2/1/16	$ 105,984
b) Physician House Calls	1/1/16	No funds required
c) Quality Coordinators (AAMC)	2/1/16	$ 138,368
D. Expansion of Behavioral Health and Integration with Primary Care		
a) Integration of Behavioral Health with Primary Care	2/1/16	$ 414,816
b) Behavioral Health Navigator Program	1/1/16	$ 107,668
E. Community Care Management	1/1/16 for AAMC 5/1/16 for UM BWMC	$ 725,058
F. Readmissions Analysis	2/1/16 begin hire 5/1/16 start services	$99,433
G. Skilled Nursing Facility Collaborative	1/1/16	$230,033
H. DoAD Senior Triage Team	1/1/16 develop material April hire, May Training, 6/1/16 services begin	$188,681
Clinical Transformation Specialist	5/1/16	$ 46,100
I. CRISP Service Expansion		
a) SNF Integration & Reporting Pilot	11/12/15 Sites identified for CRISP 1/1/16 CRISP start	Cost covered by CRISP
b) Ambulatory Care ENS and Clinical Query Portal expansion	10/30/15 Sites Identified for CRISP 1/1/16 CRISP start	Cost covered by CRISP
c) CRISP Secure Texting Pilot	10/1/15 Requirements 12/11/15 RFP reviews 3/1/16 AAMC/UM BWMC Pilot Secure Texting	Cost covered by CRISP and absorbed by AAMC/UM BWMC resources
K. Joint Patient & Family Advisory Council	1/1/16	$ 3,200
L. AAMC Collaborative Care Network	1/1/16	$ 500,000
BATP Program Oversight	1/1/16	$ 411,461
Indirect Costs	2/1/16	$ 274,871

Measurement and Outcomes Goals

The overarching goal of BATP for 2016 is to decrease the potentially avoidable hospital utilization (PAU) of our target population and realize an annual gross savings of $9.28M (16% of annual baseline charges), resulting in $4.6M in variable savings.

A **sampling** of intervention-specific measures and outcomes (using the letters corresponding to section 3 above):
A. Shared Care Alerts - % of target population with a Care Alert, pre- and post- Care Alert ED utilization, inpatient admissions and per patient charges.
B. Shared Care Plans and E. Community Care Management - % of target population with Care Managers and Care Plans and % shared via CRISP; pre- and post- care manager measures - ED visits, inpatient admissions, per patient charges; % of patients who declined services. We predict a 10% reduction in bedded care for those patients who have care management services.
C. Ambulatory Care

a) One-Call Care Management – number and types of calls, patient zip code, number and types of referrals made.
b) Physician House Calls – number of patients referred and number receiving services.
c) Quality Coordinators (AAMC) - % of target population whose conditions are being successfully managed by their PCP

D. Behavioral and Physical Health integration – number of therapy and psychiatry visits and navigator referrals for target population and impact on ED visits, inpatient/observation visits, LOS.
G. Skilled Nursing Facility Collaborative - touching 4,400+ patients, track 30-day readmission rates of target population. Expected outcome is reduced readmissions, reduced ED visits, reduced potentially preventable conditions and reduced length of stay in SNFs.
H. Senior Triage Team (DoAD) - # of super-utilizers being managed, pre- and post- care manager assignment track; per patient charges, EMS utilization, ED visits, length of stay, number of guardianships established, and patient satisfaction. Outcome should be decreased EMS utilization, decreased ED visits and decreased length of stay.
I. CRISP Services - # of SNFs and ambulatory practices using ENS and Clinical Query Portal.

Return on Investment. Total Cost of Care Savings.

CY2016 focus will be on 1,260 high utilizer Medicare/Aged Dual Eligible patients with 2 or more chronic conditions in our Primary Service Area. We expect an annual gross savings of 16%, $9,280,000, and annual net savings of $629,424. ROI = 1.157. Each year, the annual net savings will be reinvested in those interventions that are most effective, and will be applied within the following calendar year.

CY2017: Expand to an additional 400 Medicare high utilizers/Dual-Eligible Aged patients in our Primary Service Area, reaching a cumulative total of 1,660 patients, realizing an annual gross savings of 15%, $11,454,000, and annual net savings of $1,716,424. ROI = 1.428

CY2018: Include an additional 647 unique patients including Secondary Service Areas, and additional payers (Medicaid, Other), reaching a cumulative 2,307 patients, reaching an annual gross savings of 12% or $12,843,336, annual net savings of $2,411,092, and an ROI of 1.601. Importantly, we will seek to leverage the Payer infrastructure for chronic care management, taking advantage of collaboration and

communication and utilizing the cross-organizational tools we have developed as both scalable and reusable year over year (such as Care Alerts and Care Plans).

CY2019: Aspire to reach the full 2,953 all-payer high utilizer patients and leverage Payer infrastructure for chronic care management, use CRISP Care Management tools to focus and prioritize interventions. An expected 10%, $13,764,820, annual gross savings and annual net savings of $2,871,834, an ROI of 1.716.

Apportioning ROI to Payers: In 2018 and 2019, BATP will share 10% of annual net savings, proportionate to hospital savings, to payers through a GBR agreement reduction by hospital or other approved HSCRC methodologies. Since the hospitals receive funds via rate increases, the apportionment of savings for the hospitals occurs automatically for each hospital as savings are realized as the interventions result in reduced PAU.

Scalability and Sustainability Plan

The scalability of our model comes from the efficiencies gained by creating and using multi-disciplinary, cross-organizational people, processes and tools to aid in streamlined care coordination and population health management. Scalability is also gained by widening and strengthening our network of BATP participants based upon the focus of each year's target population, for example, leveraging Payer infrastructure and programs for care management in 2018 and 2019.

Sustainability without additional rate increases will be obtained by:
a) Using resources once to implement interventions which then become incorporated into everyday operations for hospital (ED, inpatient care managers), ambulatory and specialty care providers, post-acute care settings (SNFs) and private/government and payer care management,

b) Creating interventions and tools that are themselves built once, and then shared with both hospitals by CRISP and available in their portal, following the patient year over year across care settings (shared Care Alerts, shared Care Plans),

c) Reinvesting our annual net savings back into the resource-intense, hands-on interventions such as behavioral health navigation and psychiatric therapy and treatment,

d) Risk stratifying our patient populations and using different types of resources appropriately, e.g. Quality Coordinators for rising-risk populations, The Coordinating Center for high utilizers, the Senior Triage Team for super-utilizers and those with significant non-medical support/service needs.

Participating Partners and Decision-making Process. Include amount allocated to each partner.

The Governance structure for BATP includes a Board consisting of three Managers from each hospital who have met throughout the planning phase, to manage the initiative going forward. In addition, there will be an Advisory Council consisting of representatives spanning the public, private, and government sectors. Importantly, the Council will include participants who are actively engaged in the various interventions to improve care coordination and population health for our target population. Advisory Council membership will be confirmed in January 2016.

After careful review of the BATP subprojects with external legal counsel, leadership determined that the most efficient, effective governance structure would be to use a formal Memorandum of Understanding (MOU) between AAMC and UM BWMC as co-leaders of BATP. Tri-party service contract/MOU will be executed with third parties providing initiative services for BATP. Business Associate Agreements will be used for data sharing between the hospitals, and between third parties, as appropriate.

Decision-making process: The Governance Board's primary responsibilities include budget approval, oversight, allocations and adjustments. The Board will meet at least quarterly and will incorporate Advisory Council recommendations and assessments regarding subproject performance and effectiveness, intervention portfolio adjustments, issue resolution and risk management. Governance Board Managers will be entitled to vote upon all matters submitted to the Board, and the affirmative vote of the Managers from each hospital (voting as a block) shall be required to take any action.

Funding allocation for each hospital:
AAMC: $ 2,306,698
UM BWMC: $ 1,703,878
Total BATP Request: $ 4,010,576

In CY2016, there are two vendors who will bill the hospitals for care management services: The Coordinating Center and the Department of Aging & Disabilities for the Senior Triage Team intervention.
Otherwise, there are no fund distributions to agencies outside of the hospitals in CY2016.

Implementation Plan

Highlights from the BATP Implementation Plan

		AAMC	UM BWMC	CRISP	TCC	DoAD	SNFs
January	Physician entry of Care Alerts	√	√				
	Test Care Alert CCD exchange AAMC/CRISP	√		√			
	Configure shared Care Plans (Epic)	√					
	Write job descriptions: new hires	√	√		√	√	
	Obtain updated target pop list	√	√				

		AAMC	UM BWMC	CRISP	TCC	DoAD	SNFs
Feb	Go-live shared Care Alerts AAMC to CRISP	√		√			
	Care Alert re-configuration		√				
	HSCRC Announcement of Implementation Grant Awards						
	Kick-off BATP Implementation	√	√		√	√	√
	phase	√	√	√	√	√	
	Initiate hiring process for new hires (start nlt May 1)						
	11 AAMC, 10 UM BWMC, 5 DoAD	√	√		√	√	
	Develop training plans	√					
	AAMC CCN meetings						
March	UM BWMC Go-live Shared Care Alerts	√	√	√			
	Pilot Secure Texting (CRISP)	√	√				
	Quarterly meetings:						
	a) SNF Collaborative	√	√				√
	b) PFAC	√	√				
	c) Advisory	√	√	√	√	√	√
	e) Governance	√	√				
April	Test shared Care Plans w/CRISP	√	√	√			
	Continue hiring	√	√		√	√	
May	New Hires Begin Work	√	√		√	√	
	Cross-training sessions (Senior Triage, One Call Care Management, community care managers & DoAD using Care Plans, Readmissions Analyst, Quality Coordinators, Post-Acute Care Manages)	√	√		√	√	√
June	Shared Care Plans live	√	√	√			
	UM BWMC Psychiatrist Starts		√				
	CRISP ENS/Query Portal onboarding complete for SNFs, Ambulatory Practices	√	√	√			√
	Quarterly meetings (as above)	√	√	√	√	√	√
Jul – Sep	All 12 interventions fully operational	√	√	√	√	√	√
	Monitoring and process improvement	√	√	√	√	√	√
	Evaluate interventions/metrics	√	√				
	Quarterly meetings (as above)	√	√	√	√	√	√

		AAMC	UM BWMC	CRISP	TCC	DoAD	SNFs
Oct - Dec	Monitor & improve interventions Report & evaluate metrics, make recommendations for 2017 Quarterly meetings (as above)	√ √ √	√ √ √	√ √	√ √	√ √	√ √

Budget and Expenditures

Intervention	Budget
A. Shared Care Alerts	$ 591,843
B. Shared Care Plans	Included in above
Data Analytics	$ 173,060
C. Ambulatory Care Supports	
d) One-Call Care Management	$ 105,984
e) Physician House Calls	No funds required
f) Quality Coordinators (AAMC)	$ 138,368
D. Expansion of Behavioral Health and Integration with Primary Care	
c) Integration of Behavioral Health with Primary Care	$ 414,816
d) Behavioral Health Navigator Program	$ 107,668
E. Community Care Management	$ 725,058
F. Readmissions Analysis	$99,433
G. Skilled Nursing Facility Collaborative	$230,033
H. DoAD Senior Triage Team	$188,681
Clinical Transformation Specialist	$ 46,100
I. CRISP Service Expansion	
a) SNF Integration & Reporting Pilot	Cost covered by CRISP
b) Ambulatory Care ENS and Clinical Query Portal expansion	Cost covered by CRISP
c) CRISP Secure Texting Pilot	Cost covered by CRISP and absorbed by AAMC/UM BWMC resources
K. Joint Patient & Family Advisory Council	$ 3,200
L. AAMC Collaborative Care Network	$ 500,000
BATP Program Oversight	$ 411,461
Indirect Costs	$ 274,871
Total Budget	$ 4,010,576
AAMC Allocation	$ 2,306,698
UM BWMC Allocation	$ 1,703,878

9. Summary of Proposal

Hospital/Applicant:	The Johns Hopkins Hospital
Date of Submission:	December 21, 2015
Health System Affiliation:	Johns Hopkins (JHH, JHBMC), Mercy Medical Center, Lifebridge (Sinai), MedStar (Harbor and Franklin Square)
Number of Interventions:	11
Total budget requested for CY16:	$12,334,379
CY17 Budget without offsets:	$15,500,000

The target population of the Community Health Partnership of Baltimore (the Partnership) is Medicare high utilizers. In alignment with the HSCRC and the West Baltimore Collaborative, high utilizers are individuals who experienced three or more hospitalizations in the past year.

Geographically, the target population resides in the following 19 zip codes: 21202, 21205, 21206, 21209, 21211, 21213-19, 21222-25, 21230, 21231, and 21237 which represent the combined community benefit service areas (CBSAs) of the partner hospitals. The Partnership worked with the Berkley Research Group (BRG) to further define the target population.

BRG limited the target population to high utilizers (3 or more admissions in FY2015) who lived in the 19 zip codes, who were over age 18, and who had touched one of the partner hospitals in this time period and who have specific chronic and potentially avoidable conditions, including mental health and substance abuse. Using these criteria, BRG found that there were 3,148 unique high utilizers (all payers) who had a total of 11,247 inpatient visits in FY2015. Among these high utilizers, 904 were Medicare beneficiaries and 808 were dually eligible for Medicare and Medicaid. Looking at the inpatient utilization specific to this population, almost 30% of utilization is associated with conditions that are potentially avoidable. Therefore, our initial target population is the 1,712 patients in the combined Medicare and dually eligible population.

The top conditions among the target population identified by BRG were heart failure, sepsis and disseminated infections, renal failure, chronic obstructive pulmonary disease, diabetes, hypertension, obesity, pneumonia and hepatitis. Mental health and substance abuse conditions were also highly prevalent: 61% (547) of Medicare patients and 78% (627) of dually eligible patients had a mental health or substance abuse condition. Total charges for the combined Medicare and dually eligible population in FY2015 were $119,400,000.

Summary of program or model for each program intervention to be implemented. Include start data, and workforce and infrastructure needs. (300 word limit)

Partnership across city hospitals to address regional health offers a new perspective and new opportunities to come together to address health determinants. By partnering across hospitals, primary care practices, community organizations, and skilled nursing facilities, this regional partnership hopes to begin changing the drivers of health in Baltimore City that have led to high utilization and poor health outcomes to a long term financially sustainable model with improved health outcomes.

In designing interventions, the partnership's initial focus was to address current gaps in the regional system's ability to coordinate care for the target population. The strategies identified below, incorporated coordination across the different settings to ensure patients are moving across the settings and receiving care in settings that are the most appropriate.

Intervention	Start Date	Workforce and Infrastructure Needs
Community Health Care Teams	Operational	In place
Bridge Team	Y1, Q2	• Psychiatrist, physician addictions specialist, medical consultant, peer support specialists, Health Behavior Specialist, Health Behavior Specialist team leader, community health workers, nurse (some may be re-deployed from other programs)

		• Space—identified with Catholic Charities, MOU in process
House Calls	Y1, Q3	• Geriatrician and other team members (some to be redeployed) • Space
Community-based CHWs	Operational	• Expand CHW team • Case management IT platform that allows sharing of data with CBOs (system identified, to be deployed)
Neighborhood Navigators	Operational	In place. Additional CBO will be identified Y1, Q2 to host the intervention in another location in the city.
Patient Engagement Training	Operational	Team in place and has capacity.
CHWs in the ED	Y1, Q2	Hire additional community-based CHWs and deploy in the ED.
Convalescent Care	Operational	Intervention is in operation; funds will allow hiring of staff to create additional capacity.
SNF Collaborative	Y1, Q2	None
SNF Protocols	Ready to be deployed	None
Home-based Strategies	Ready to be deployed	None

Measurement and Outcomes Goals (300 word limit)

In designing metrics that will be used to measure progress, we focused on evidence-based measures that we can reliably report on, using existing data sources whenever possible. We recognize the value of aligning performance measures with existing initiatives such as the Maryland State Health Improvement Plan, Meaningful Use, Patient Centered Medical Home, the National Quality Forum, CMS Physician Quality Reporting System, Johns Hopkins Community Health Partnership (J-CHiP), and the Johns Hopkins Medicine Alliance for Patients (JMAP) ACO in order to reduce duplication of data collection and reporting efforts. Our measurement plan was shared with the West Baltimore Collaborative, and the partnerships mutually agreed that alignment across measures would be beneficial for working towards common city health goals, for simplifying documentation necessary from providers, and for maximizing our mutual understanding of how health outcomes change across Baltimore City as a result of the proposed interventions.

The measures chosen for the dashboard represent a high level view of how progress across the Partnership will be measured, based on the interventions that are deployed by all hospital partners. The measures fall into three main domains: process, quality, and utilization and costs. Metrics were chosen based on the following considerations:

- Availability of data
- Quality of data
- Feasibility of data collection
- Source of data
- Potential to inform quality improvement and demonstrative improvement
- Alignment with current reported performance metrics
- Alignment with the West Baltimore Collaborative

Additional measures will be incorporated into an internal monitoring plan that will provide information necessary to monitor implementation plans and to provide data for continuous quality improvement initiatives for the interventions described in this proposal.

Return on Investment. Total Cost of Care Savings (300 word limit)

The number of patients reached in the Partnership is based on reaching 50% of the 3,148 high utilizers defined in the catchment area in CY 16. In CY 17, the assumption is that 75% of the high utilizers will be engaged in an intervention and in CY18, 100% of the high utilizers will be engaged in an intervention. A savings of 5% in annual charges is expected in CY16 due to reductions in inpatient hospitalizations, including readmissions, decreases in lengths of stay and reductions in ED utilization. With ongoing efforts of the Partnership, savings are expected to increase to 10% in CY17 and 15% in CY18.

Annual Net Savings ($9,228,900) ($6,782,404) $1,471,346 $1,471,346
Return on Investment 0.23 0.55 1.10 1.10

Though not reflected in the ROI calculations, changes in the delivery system including provider training and education on patient engagement, the development of a SNF collaborative and community engagement through our partners are all expected to engage patients in their overall care and improve prevention efforts that could accelerate the expected savings described so that they are realized sooner than 2018 and are potentially larger than the conservative estimate provided above. As a positive ROI is realized funds will be reinvested back into the interventions that show the most benefit.

Scalability and Sustainability Plan (300 word limit)

Scalability

All of the interventions in the Partnership are scalable. Decisions to expand to additional practices, expand teams or deploy interventions in new zip codes within the Partnership will be based on lessons learned. Because the evaluation metrics may take several months to manifest, we will complement these longer-term metrics with short-term metrics. This data will enable ongoing performance monitoring and rapid-cycle feedback and allow for expansion of successful interventions more quickly.

Sustainability

Measuring and improving value is the driving force of the Partnership. Value in healthcare is defined as quality outcomes achieved per dollar spent, or expressed as Value=Quality/Cost. If the Partnership's interventions result in improvements in quality health outcomes and positive member experience while cost is held constant, we will have improved the value of healthcare to Medicare beneficiaries. The Partnership will integrate alternative funding through improved billing practices to help ensure long-term sustainability. During Q1, the Partnership will work with entities such as Med Chi to address barriers to use of the chronic care management code and to increase provider utilization. Changes to the 2016 Medicare physician fee schedule will include two new advance care-planning codes; we will educate providers and encourage appropriate use. As additional services/codes become reimbursable from the payer(s), we will pursue them.. As we find sustainable reductions to hospital services under the GBR, a portion of those funds will be reinvested in the programs.

Over the longer term, it is unlikely that the funding of these interventions can remain solely the financial responsibility of the hospital secondary to potential changes in the hospital's rates. The hospitals will work with the HSCRC and the payer community to assure that the savings achieved benefit not only the payers but that the savings ultimately flow back to patients.

Participating Partners and Decision-making Process. Include amount allocated to each partner. (300 word limit)

The hospital members of The Community Health Partnership of Baltimore (Johns Hopkins Hospital, Bayview Medical Center, Sinai Hospital, Mercy Medical Center, MedStar Franklin Square Hospital and MedStar Harbor Hospital) all participated in the planning process and contributed to the development of the proposed interventions. A steering committee and multiple subcommittees and workgroups were established. Decision-making was consensus-based. Each hospital agreed to share the costs of leadership and central operational functions proportionate to total revenue. Hospitals were able to select which specific interventions to implement, which created flexibility and made decision-making easier.

Each hospital partner has agreed to pool its .25%. JHH and JHBMC are including an additional .25 to cover interventions not selected by the Hospital partners as Johns Hopkins is not filing a separate application like many of the other hospital partners.

Hospital Partners	amount allocated
Johns Hopkins Hospital (.5)	8M
Johns Hopkins Bayview Medical Center (.5)	2.8M
MedStar Franklin Square Medical Center (.25)	1.1M
MedStar Harbor Hospital (.25)	0.5M
Mercy Medical Center (.25)	1.3M
Sinai Hospital (.25)	1.8M
Total	15.5M

The hospital partners have discussed a governance structure. A finalized structure will be described in a definitive agreement among the parties to be signed by each hospital's President before the end of Q1, calendar year 2016. Each of the hospitals will participate in the governance of the venture and will appoint representatives to a board or operating committee to be formed once the definitive agreement is executed. The board or operating committee will review the previous year's performance, including finances, quality and strategic direction. The board or operating committee will appoint a management company to manage the business and affairs of the venture and provide leadership, grant administration

The following implementation activities will be launched immediately and simultaneously.

Leadership: Will consist of Director, Administrator, Case Manager and Behavioral Health Program Managers, Project Manager, Provider Champions and a Financial Analyst.

Operations: The leadership team will launch CQI, Analytics, Evaluation, and IT efforts.

House Calls: Provide home-based medical care, care management, caregiver support, counseling, and acute inpatient continuity to high-need, high-cost home-bound individuals longitudinally.

Community-based CHWs: Provide intensive, longitudinal community-based care coordination to mitigate barriers to access, engagement, and adherence.

Neighborhood Navigators: Build capacity through intensive training and mentoring of community residents, who in turn provide social support**,** education, resource connection and linkage to care and promote engagement and help mitigate barriers to appropriate care for all members of the community (payer-agnostic).

Patient Engagement Training: Train providers and staff on the skills needed to facilitate patient engagement, effect health behavior change and promote patient satisfaction.

ED Coordination with CHWs: Deploy CHWs to the EDs to help address social determinants of health barriers and connect patients to a patient-centered medical home.

Convalescent Care: Expand access for people experiencing homelessness who are discharged from the hospital to a place to stay and recuperate from an acute illness or surgery.

SNF Collaborative: Create a SNF Preferred Provider Network modeled on Lifebridge's, conditioning referral relationships on quality and process criteria.

SNF Protocols: Implement standardized protocols for heart failure, COPD, sepsis and other infections, end of life and behavioral health problems.

Home-Based Strategy: Deploy remote patient monitoring and home health aide services.

Budget and Expenditures. Include budget for each intervention (300 word limit)

Personnel $1,490,977
Information Technology $395,670
Primary Care Teams/Care Coordination $2,748,920
Bridge Team $901,203
House Calls $606,820
CHWs in the Community $1,850,771
Neighborhood Navigators $805,522
Patient Engagement Training $91,580
ED Coordination with CHWs $422,825
Convalescent Care $374,568
Skilled Nursing Facility Collaborative $0
Skilled Nursing Facility Protocols $131,050
Home Based Strategies $953,942
Intervention Monitoring $519,164
Other Indirect Program Support $1,041,367

Total Request CY16 (start-up year) $12,334,379

Greater Baltimore Medical Center

Greater Baltimore Medical Center

Hospital/Applicant:	Greater Baltimore Medical Center
Date of Submission:	12/21/15
Health System Affiliation:	GBMC
Number of Interventions:	3
Total Budget Request ($):	$3,444,002 FY16 and FY17

Target Patient Population (Response limited to 300 words)
The target population is high-utilizer patients who frequent GBMC's acute care hospital. These **1,054 adult patients** had two or more inpatient or observation encounters in FY 2015, they represent 56% of GBMC's high utilizing patient population, their usage accounted for 36% of total Medicare charges last fiscal year. More than half (56%) of high-utilizers have at least one chronic condition and/or mental health and substance abuse diagnosis. Of the 1.054 Medicare high utilizing patients 97% have at least 1 chronic condition, 98% of the cases and 97% of charges are associated with Chronic Conditions and 84% of the patients have at least 2 or more chronic conditions (primarily hypertension, diabetes, congestive heart failure, and coronary artery disease). Within the target population of 1,054 high utilizers (emphasizing the middle tier of 840 patients), GBMC plans to focus Medicare high utilizers as the first payer source to provide services to.
Summary of program or model for each program intervention to be implemented. Include start date, and workforce and infrastructure needs (Response limited to 300 words)

Upon awarding of the grant within 10 days we expect to begin rolling out the following programs:
• **The Behavioral Health Enhanced Patient-Centered Medical Home (BHE-PCMH)** - The proposed program builds upon the patient-centered medical home model already operating in GBMC's primary care practices by strengthening existing primary care teams with a mental health professional and by providing ready access to psychiatric consultation services.
  ○ **The Behavioral Health Network (BHN)** - The proposed model integrates new behavioral health resources into the continuum of care to provide the following:
  ▪ Psychiatric consultation in the hospital
  ▪ Post discharge mental health support
  ▪ Telehealth services
• **Palliative Care and Support Our Elders: Home- and Facility-Based Care for Complex Chronic Patients** – The proposed program in partnership with Gilchrist and MedStar, will identify patients with multiple chronic conditions who require frequent hospitalizations due to the advanced degree of the chronic condition(s). This program will also provide clinical staff for palliative care efforts in 2 nursing homes within the services area. In partnership with MedStar, GBMC will coordinate efforts to provide care within patients home through home visits by a nurse practitioner.
• **Expansion of Care Coordination and Care Management Services**- GBMC has embraced the PCMH model in nine primary care offices with a deliberate focus on care coordination, preventive health care and population health. GBMC's approach placed an emphasis on helping patients achieve and maintain better health with tactics in place to reduce avoidable hospital admission and unnecessary emergency department use, eliminate gaps in care for routine screenings and improve quality outcomes for patients with chronic conditions.

Measurement and Outcomes Goals (Response limited to 300 words)
The overall goals of the programs described above are to reduce readmissions, reduce visits to the emergency room, and reduce PAU's and to reduce the cost of care to patients. The objective is to move patient care back into the community with primary care physicians and care managers providing the services needed. In order to reach the overarching outcomes GBMC has designed programmatic goals and measures to achieve the global outcomes. Please see Appendix A, tables 1-3 to view the HSCRC required outcomes and GBMC's programmatic metrics.
Return on Investment. Total Cost of Care Savings. (Response limited to 300 words)
The ROI calculated for the years 2017-2019 are: **1.28, 1.92, and 1.92** respectively. From a broad perspective, shifting avoidable acute care to more cost effective care in the primary are and community-based settings will inherently save payers money, as we have found with our ACO and the implementation of patient centered medical homes. Since each of the interventions are expected to positively impact PAUs and PQIs, the GBMC system will invest these savings to expand upon the proposed program for continued cost savings. Specifically, GBMC is strategically planning to focus on the Medicare portion of the high utilizer population during the grant period (CY 2016) to secure the highest ROI in the short term. Thereafter, GBMC will reinvest into the program with scalability plans for Dual Eligibles, followed by Medicaid
Scalability and Sustainability Plan (Response limited to 300 words)
Through the three interventions described above, GBMC expects to realize a sustainable and scalable model of integrated health care that better manages high-risk patients and reduces avoidable hospital admissions and ER visits. The requested rate increases will enable GBMC to achieve the population health model proposed in this application, which will in turn reduce healthcare costs and ultimately ensure financial sustainability. Since the three programs are leveraging existing population health efforts the programs are easily scalable across this patient population and eventually across all payers whose patients need the services GMBC is proposing
Participating Partners and Decision-making Process. Include amount allocated to each partner. (Response limited to 300 words)

In addition to utilizing the current ACO structure to be consistent the population health approach and management of the high utilizers, GBMC has partnered with the following community resources to provide the needed resources to make the three interventions successful.

- Allegeant
- Baltimore County Health Department
- Care Progress, LLC
- Catholic Charities
- Evergreen Health
- Health Care for All Coalition
- Keswick Multi-Care Center
- Kolmac Clinic
- Mosaic community services
- MedStar
- Sheppard Pratt Health System

As such there is representation as advisors to our ACO governance structure from SNF's, nursing homes, families and patients as well as other community resources GBMC depends upon.

Implementation Plan (Response limited to 300 words)

The attached implementation plan is geared to beginning much of this work February 1st. The initiative to provide care to our elders is a service that is "shovel ready" to begin today. The Behavioral Health network is a referral process that can be provided today. To strengthen our patient centered medical home we will contract with Mosaic and Sheppard Pratt to have psychiatry and other behavioral health resources available to our existing medical home offices as of February 1, 2016. The additional resources to expand our patient centered medical home to care for the top utilizers will fill a need for the patients who are utilizing acute services.

The three new initiatives are leveraging existing population health efforts and providing further services to a much needed patient population.

Budget and Expenditures: Include budget for each intervention. (Response limited to 300 words)

The total program budget for the new initiative is $3,444,002 million which includes clinical professionals, administrative and analytics functions, training, and consulting support. GBMC anticipates that in the first six months of the grant award that there will be a "ramp-up" of clinical staff and more in the following calendar year. GBMC expects that the total clinical staff required for the program will be fully in place by 2017. GBMC does see the challenge of fully staffing mental health professionals in the PCMH, however has partnered with Kolmac and Shepperd Pratt to provide services for patients early on.

Howard County Regional Partnership

Howard County General Hospital

Hospital/Applicant:	Howard County General Hospital (HCGH)/Howard County Regional Partnership (HCRP)
Date of Submission:	December 21, 2015
Health System Affiliation:	Johns Hopkins Health System

Target Patient Population
Given Howard County's growing aging population and the high costs associated with chronic conditions in the older population, HCRP will initially focus its efforts on county residents who are Medicare high utilizers. Concentrating on high cost, complex Medicare beneficiaries aligns with the goals of Maryland's All-Payer Model. The Regional Partnership defines a Medicare "high utilizer" as a Howard County resident with at least two hospital encounters (inpatient, observation and ER visit) at HCGH in the past year, including individuals who are dually eligible for Medicare and Medicaid. Using FY15 case mix data from HCGH, 7,280 patients (all payer) were identified as high utilizers. Among this group, 1,940 were Medicare beneficiaries and 670 were dually eligible, which together comprised 36% of the total high utilizer population in Howard County. The target population (2,610) accounted for 3,579 inpatient visits, 196 observation stays greater than or equal to 24 hours, 243 observation stays less than 24 hours, and 3,859 ED visits. Of the 2,610 patients in the target population, the majority (1,710) had between 2 and 6 chronic conditions. Eighty percent (2,090) of the target population is 65 years or older; 51% of those individuals are 80 years or older.
Summary of program or model for each program intervention to be implemented.

Number of Interventions:	7
Total Budget Request:	$1,533,945

HCRP will deploy specific strategies that result in a highly reliable, efficient, and patient-centered health care delivery system. Interventions to be implemented or expanded in 2016 include:

- **Community Care Team (CCT)** – Existing care coordination intervention, based on Camden Coalition model. Referral pathway from acute setting will be expanded and two new pathways implemented from the post-acute and primary care settings.
- **Acute Interventions** – Embed a community health worker in the ED to coordinate real-time referrals to community-based services. Continue existing Rapid Access Program to address urgent mental health care needs.
- **Post-Acute Interventions** – Implement final phase of standardized discharge process from HCGH to Lorien's three skilled nursing facilities (SNFs). Implement care pathways for sepsis and congestive heart failure (CHF), the two leading causes of readmissions from SNFs. Establish referral pathway to CCT from SNF. Monthly case conferences to review discharges, planned and unplanned transfers and identify areas for improvement.
- **Primary Care Interventions** – Implement referral pathway to CCT in six practices. Continue existing practice transformation efforts. Align Advanced Primary Care Collaborative with HCRP.
- **Patient Engagement Training (PET)** – Training program for CCT, providers and staff in each care setting to realize goals of person-centered care.
- **Specialized Care Coordination** – Through partnership with Gilchrist Services, implement 1) in-home medical care program for home-bound frail elderly; 2) care choices program for hospice eligible cancer, COPD, CHF and HIV/AIDS patients; and 3) care coordination program for those discharged from hospice. Expand connection points to faith-based initiative - Journey to Better Health - for those needing ongoing community support.
- **Support Tools for Care Coordination** – Expand remote patient monitoring program for CHF patients. Implement "Powerful Tools for Caregivers" program through County Office on Aging. Develop Community Resources Management System with County Health Department.

Measurement and Outcomes Goals

HCRP's initial focus is on Medicare high utilizers but ultimately looks to address the needs of all Howard County residents. To measure these outcomes and progress, HCRP created a high level metrics dashboard that represents the key interventions proposed, key quality and patient satisfaction measures, and key outcome measures to be monitored. Internally, more extensive monitoring of each intervention will be done for ongoing operational and quality improvement purposes. The Ambulatory Quality and Transformation Team from Johns Hopkins Community Physicians will perform continuous quality improvement (CQI) functions for our partner primary care practices. The population health analytics team established by HCGH, will perform CQI functions for the acute and post-acute settings, in coordination with existing internal hospital efforts as well as those in place for Lorien facilities. HCRP's Partnership Performance subcommittee will monitor performance and outcome metrics, oversee quality improvement activities and, if needed, propose changes to programs. Based on an analysis of FY15 case mix data, there are 2,610 individuals in our target population. The average total hospitals charges is $16,590 per person. The average number of total visits was 3.02 per person, with an average hospitalization and observation rate of 1.61 per person and an average ER visit rate of 1.48 per person. The readmission rate for the target group was 21% (781) and potentially avoidable utilization (based on prevention quality indicator categories) accounted for 19% (734) of the 3,775 inpatient and observation cases (greater than or equal to 24 hours) in the target population.

Return on Investment and Total Cost of Care Savings

HCRP anticipates a 5% savings on the annual charges associated with the target population engaged in CY16. The savings rate increases to 10% in CY17 as initiatives continue to positively impact the patients engaged. Finally, by years three and four of the projection period, the savings rate stabilizes at 15% as the initiatives are fully productive and successful. Savings are recognized through the reduction of readmissions, the avoidance of hospitalization encounters and the reduction in the length of stay for those patients who ultimately require acute care services. The ROI projections anticipate that HCRP will reach 100% of the target population in year three (CY18). This also represents 36% of all-payer high utilizers. For CY16, 25% of the target population will be engaged in Regional Partnership interventions; 75% will be reached in CY17. The projections are based primarily on CCT, the Rapid Access Program and Gilchrist initiatives. Other initiatives such as physician alignment and provider education, the development of a SNF collaborative and other community partnerships should enhance the ability to appropriately reduce acute care utilization, achieve greater savings and improve the ROI outcomes.

Scalability and Sustainability Plan

HCRP interventions are scalable over time. Our intervention timeline, while aggressive, is sound in its staged rollout and affords for ramp up time as well as a period of stabilization and assessment. Real-time evaluation of Regional Partnership efforts will be critical to our success. The Partnership Performance subcommittee of HCRP's Steering Committee will be tasked with ongoing performance monitoring and rapid cycle feedback to enable any necessary mid-course changes. A principal goal of the interventions is the reduction of readmissions and other potentially avoidable utilization. Commensurate with a reduction in avoidable utilization and good expense management, the global revenue model (GBR) should serve as one source of sustainable funding for components of care coordination and other HCRP activities. Just as we will work with the HSCRC and the payer community to identify new funding opportunities, HCRP will also look to its community partners. Several HCRP interventions are already funded in part by community partners, including the specialized care coordination programs, the community resources management system and RAP. In addition, HCRP is working with primary care practices to explore opportunities to use a portion of Medicare reimbursement for TCM and CCM to support care coordination interventions.

Participating Partners and Decision-making Process

The Regional Partnership is made up of representatives from the hospital, primary care and specialty care

providers, skilled nursing facilities, home care services, behavior health providers and community-based organizations. Several key community-based organizations include the Health Department, the Department of Citizen Services and its Office on Aging, as well as member organizations of the Local Health Improvement Coalition (LHIC). During the planning grant process, we actively engaged with patients, family and caregivers and will continue to keep the voice of the patient and family at the center of HCRP efforts moving forward. Howard County is unique in that it has one hospital within its geographic borders. HCGH is truly the community's hospital; a majority of residents utilize the hospital for acute care needs. The HCGH Board approved the creation of a new board committee – the HCRP Steering Committee. This committee sets strategic direction and priorities**;** makes decisions regarding target population, budget and reinvestment of savings; and approves changes to interventions. Subcommittees will be established to perform planning and monitoring functions for key aspects of HCRP: Partnership Performance, Finance and Sustainability; Provide Alignment and Network Development; Consumer and Family/Caregiver Engagement; and Community Health Integration and Social Determinants.

Implementation Plan

35

The Maryland All-Payer Model provides a glide-path for change to realize health system transformation.

HCRP will serve as the primary vehicle to coordinate and deploy specific strategies to drive this transformation. As outlined above in the summary of the program, our work centers around seven categories of interventions – 1) Community Care Team; 2) Acute Care; 3) Post-Acute Care; 4) Primary Care;

5) Patient Engagement Training; 6) Specialized Care Coordination; and 7) Support Tools for Care Coordination. Detailed project plans have been developed for each intervention category. In addition, the Regional Partnership has mapped out a plan for standing up HCRP leadership and operations (including analytics, CQI and evaluation). We have prioritized shovel-ready programs, and therefore much of the work in CY16 will focus on the expansion of existing initiatives such our principal care coordination intervention – CCT. HCRP will fully leverage existing programs of community partners including Gilchrist Services, Healthy Howard's Journey to Better Health, and the County's Office on Aging. We are also breaking new ground with our SNF collaborative and with new programs in our primary and acute care settings to address the needs of our target population of Medicare high utilizers.

The total annual cost for HCRP is $1,533,945. The prorated costs for 2016 is $1,033,077 and is based on the implementation timeline and other sources of funding, both one-time and expected ongoing investments. For example, the CCT has funding through June from the Health Department as well as a grant from the Department of Health and Mental Hygiene. In addition, the hospital's strategic transformation plan is aligned with the work of the Regional Partnership. Building on infrastructure investments made to date, HCGH has committed to funding efforts in the areas of care coordination, population health analytics, behavioral health and provider alignment. The following table lists the budget (both total annual cost and prorated 2016 cost) for leadership, operations, and interventions. Interventions that fall under Specialized Care Coordination are not included as the costs at this time are covered by partner organizations.

Budget Category	Total Annual Cost	Prorated CY16 Request
HCRP Leadership	$279,588	$245,630
HCRP Operations (Analytics, CQI, Evaluation)	$137,853	$131,853

CCT	$827,026	$468,606
Acute Interventions	$56,250	$28,125
Post-Acute Interventions	$120,000	$90,000
Primary Care Interventions	$67,500	$33,750
Patient Engagement Training	$21,228	$10,614
Support Tools for Care Coordination	$24,500	$24,500
Total:	**$1,533,945**	**$1,033,077**

Nexus Montgomery

Holy Cross Hospital; Holy Cross – Germantown; MedStar Montgomery General; Shady Grove Medical Center; Suburban Hospital; Washington Adventist Hospital

Hospitals/Applicants	**Six Lead Applicants: Holy Cross Hospital, Holy Cross Germantown Hospital, Shady Grove Medical Center, Washington Adventist Hospital, MedStar Montgomery Medical Center, Suburban Hospital**
Date of Submission:	**December 21, 2015**
Health System	Hospital: Holy Cross Hospital — Health System Affiliation: Holy Cross Health Holy Cross Germantown Hospital — Holy Cross Health Shady Grove Medical Center — Adventist HealthCare Washington Adventist Hospital — Adventist HealthCare MedStar Montgomery Medical Center — MedStar Health Suburban Hospital — Johns Hopkins Medicine
Number of Interventions	**Four**
Total Budget Request ($)	**$7,950,216**

1. Target Patient Population

The geographic scope of services consists of the Maryland ZIP codes that represent the residence of 80% of the combined patient discharges across all six lead hospitals. These ZIP codes contain the incorporated cities: Gaithersburg, Rockville, Takoma Park, College Park, Glenarden, Greenbelt, Hyattsville, Laurel, and New Carrolton.

Health Stabilization for Seniors	Hospital Care Transition Programs	Post-Acute Specialty Care Ineligible-Uninsured	Service Capacity Building for Severely Mentally Ill
Medicare and Dually Eligible, Age 65+ • Seniors in community, unstable health, chronic illness, at risk of PAU • Seniors discharged from hospital-to-SNF-to-home, at high risk of readmission	All Payer Patients discharged from hospital-to-home • High utilizers • High risk of re-admit Each hospital uses risk assessment criteria to select patients.	Uninsured patients ineligible for ACA plans or Medicaid Discharged with specialty care needs • High utilizers • High risk of re-admit or PAU	Medicaid and Dually Eligible, all ages Patients with severe behavioral health diagnoses • High utilizers • High risk of re-admit or PAU

2. Program Interventions

Health Stabilization for Seniors	Hospital Care Transition Programs	Post-Acute Specialty Care Ineligible-Uninsured	Service Capacity Building for Severely Mentally Ill

Referral by senior housing resident counselors, EMS, PCPs, or at time of discharge to SNF Risk assessment using Care at Hand (mobile technology) and intensive care coordination with follow-up risk monitoring Start: May 2016	Care transitions services and warm hand-offs using Coleman method with modifications per each hospital Start: July 2016 Workforce: RNs, Case Managers, Community Health Workers	Ineligible-uninsured patients at high risk of readmission for up to 30 days post-acute ambulatory specialty care needs referred to Project Access. Start: April 2016 Workforce: RN Navigator	Start up funds to expand crisis beds (8 beds) and add Assertive Community Treatment (ACT) team Behavioral Health Integration Manager (BHIM) to support care team meetings and cross-organizational services.
Workforce: Care team: Nurse, scheduler, six community health coaches. Program manager and social worker oversee three teams. Infrastructure: Care At Hand mobile software. SNF-to-home root cause analysis and process improvement.	Infrastructure: • Learning collaborative for cross-hospital program improvement. • Care plan sharing. • Coordination with payer case management.	Infrastructure: Existing Project Access program. Existing electronic referral system.	Start: Crisis Beds: Feb 2017 ACT team: May 2016 BHIM: April 2016 Workforce: BHIM Infrastructure: Existing ACT and crisis bed providers.

3. Measurement and Outcomes Goals

The NM RP region (42 target ZIP codes) generally has lower utilization and readmission rates than Maryland overall. However, the sheer size of the region's population – 23% of the Maryland population and 21% of Medicare FFS beneficiaries) magnifies even small changes in measured rates when translated to costs. Therefore, also faces a rapidly growing senior population that is becoming a larger percent of the total population. Therefore, the NM RP hospitals performance on outcome measures can have significant impact on NAPM. As the senior population grows, the NM RP hospitals and the region must have strong programs in place to maintain and improve performance on the key NAPM measures.

The NM RP interventions are designed to produce reductions in the following outcome measures, both for All Payer and for Medicare FFS and Dually Eligible, as follows:

Outcome Measure	All Payer				Medicare FFS			
	Baseline	Projections			Baseline	Projections		
	CY2014	CY2016	CY2017	CY2018	CY2014	CY2016	CY2017	CY2018
Total hospital cost per capita (charges per person)	$1,436	$1,432	$1,424	$1,424	$4,493	$4,461	$4,415	$4,414
Total hospital admits per capita (admits per 1000)	84.3	83.9	83.2	83.2	235.5	232.9	228.3	228.3
ED visits per capita (ED visits per 1000)	246.2	246.0	245.7	245.7	281.7	280.8	279.8	279.8
Readmission Rate	11.73%	11.40%	10.92%	10.90%	16.47%	15.72%	15.15%	15.12%

Initially, beginning to serve clients drives improvement. Later reductions come through the NM RP process improvement infrastructure, including a learning collaborative for the hospitals care transition programs and gains made in use of CRISP. Process improvement will focus on critical elements that improve return on investment: driving down program per patient cost; improving the targeting of patients to those at highest risk of hospital utilization; and increasing the efficacy of the programs at reducing admissions, readmissions and/or ED Visits for the patients served.

4. Return on Investment / Total Cost of Care Savings

The Governance Board intends a tiered framework for reinvestment into programs that support shared populations or shared challenges of the NM RP hospitals. This tiered framework focuses first on programs supporting immediate NAPM goals, second on programs creating longer-term gains in population health status, and third on developing programs mutually benefiting payers and NM RP hospitals. Payers will realize a return from the NM RP programs in the form of reduced hospital utilization by their members. Net savings and ROI for each intervention is shown below. The interventions proposed have not been evaluated for their capacity to reduce total cost of care beyond the hospitals.

Health Stabilization for Seniors (HSS)	CY2016	CY2017	CY2018	CY2019
Annual Net Savings (Medicare)	-$1,210,513	$1,968,703	$2,119,059	$2,119,059
ROI: HSS Program ROI	0.48	1.54	1.58	1.58
Hospital Care Transitions Expansion	**CY2016**	**CY2017**	**CY2018**	**CY2019**
Annual Net Savings (All Payer)	$14,215	$ 655,489	$ 786,976	$ 925,037
Annual Net Savings (Medicare)	$ 8,422	$ 310,822	$ 372,297	$436,846
ROI: Hospital Care Transitions	1.01	1.33	1.40	1.47
Post-Acute Sp. Care (Ineligible Uninsured)	**CY2016**	**CY2017**	**CY2018**	**CY2019**
Annual Net Savings (Uncomp. Care)	$ (4,499)	$ 10,333	$ 10,333	$ 10,333
ROI: PA-SC	0.97	1.04	1.04	1.04
Capacity Building for the SMI	**CY2016**	**CY2017**	**CY2018**	**CY2019**
Annual Net Savings (Medicaid)	$(841,649.5)	$ 106,028	$434,226	$ 434,226
ROI: Capacity Building for the SMI	0	1.22	3.08	3.08

5. Scalability and Sustainability Plan

The NM RP programs are sustainable without additional rate increases. Each program creates a positive return on investment, though each has a different cumulative net savings curve and date at which the program passes the breakeven mark. All programs produce cumulative savings through reduced admissions within two years. NM RP will use the savings to scale these or other programs, to sustain programs with reinvestment as costs rise over time or new technologies become available, or to build out new programs with evidence-based potential for return. Each of the programs is designed for further scaling as long there remain more high risk/ high utilizing patients than capacity of a program. NM RP recognizes that program return on investment is predicated on serving only those patients that meet high-risk criteria, so programs will not be scaled beyond that need.

Broadening scope will also be considered for reinvestment funds. For example, as PCPs referring high-risk seniors to the HSS program develop trust in the program, this may create interest in a Chronic Care Management program for their chronically ill, but stable, Medicare patients, which could be built as a shared resource with the physician community.

As the NM RP matures, joint efforts for upstream interventions to prevent or control the disease states that most impact hospital utilization (e.g. cardiovascular disease, diabetes) is expected.

6. Participating Partners and Decision-Making Process

All six Montgomery County hospitals are lead applicants and full collaborative partners in NM RP, each contributing an equal percentage of net revenue plus markup to the programs and interventions, making each an equal participant relative to its revenues. The rate increase total of $7,950,216 is allocated to partners, as follows: Holy Cross Hospital ($2,228,020), Holy Cross Germantown Hospital ($267,233), Shady Grove Medical Center ($1,856,312), Washington Adventist Hospital ($1,230,145), MedStar Montgomery Medical Center ($855,404), and Suburban Hospital ($1,513,102).

The NM RP Governing Board will have a representative from each hospital and set policy and direction for NM RP under the guidance of an Operating Agreement (key aspects of governance: committees, board seats, partners roles, voting rights) and a Participation Agreement (partnership processes: e.g. non-performance of an NM RP member, data management and sharing plan, patient protection plan, financial accountability and conflict of interest, and reporting requirements). The Governing Board can expand to up to nine seats to incorporate community partners and representatives with particular expertise. A Physician Advisory Board, comprised of a range of providers from the community, will advise the Board. The Board has two standing committees – a Partnership Program Intervention Committee (P-PIC) and a Finance Committee. The P-PIC is comprised of board and community representatives. In addition, interventions will work with specific networks of community stakeholders, including patients, families, and care-givers.

7. Implementation Plan

The workplan details:

- Implementation: four interventions
- Technology improvements (CRISP use and care plan sharing)
- Monitoring and evaluation (data collection and analysis/evaluation)
- Governance and management

All four interventions are ready for implementation immediately post-award.

- Health Stabilization for Seniors: NM RP selected a care coordination vendor (The Coordinating Center, TCC). TCC, PCC, senior living facilities, residents/, and stakeholders continue meeting to accomplish preliminary activities in expectation of funding. With March award, TCC can begin seeing clients on May 1, 2016. Expansion to SNF-to-home clients occurs in August 2016, and reaches scale in December 2016.
- Scale Up of Existing Hospital Care Transitions Programs: Each hospital needs only to add staff to scale existing operations. Staff recruitment and training is planned for 16 weeks post-award, with an estimate of July 1, 2016 as the date the programs are scaled. As 30-day readmission programs, new staff will manage full caseloads by late July 2016.
- Post-Acute Specialty Care Ineligible-Uninsured: An existing program, Project Access, has the needed infrastructure (e-referrals, network of specialists, RNs and bilingual client support workers). In the first month, the initial high readmission risk criteria will be refined, and hospital discharge planner/care transitions teams will be trained in referral processes. Months 3, 4, and 5 will pilot the program at reduced patients, with full patient load reached July 1, 2016.
- Capacity Building for Severely Mentally Ill: Cornerstone Montgomery started their second 8 bed crisis house in 2014 and will follow the same work plan. Milestones: procure Crisis House by September 2016, renovate and open by February 2017. ACT team start-up is a well-documented process. NM RP is meeting with potential vendors (PEP, Cornerstone); with selection targeted pre-award. Pending DHMH approval for ACT team expansion, clients are seen in month 3, with full client load by month 20 (estimate October 2016).

8. Budget and Expenditures

The budget presented is a Rate Year 2017 budget. This represents the annualized operational costs for the NexusMontgomery Regional Partnership interventions and infrastructure going forward. The total request, representing 0.5% of FY15 Approved Net Revenue plus markup for each of the Lead Hospitals, is **$7,950,216.**

Budget Category	1. Health Stabilization for Seniors	2. Hospital Care Transitions	3. PA-SC for Ineligible-uninsured	4. Capacity Building for SMI	NM RP Infrastructure
Labor	$ 2,499,276	$ 1,919,144	$ 29,267	$ 206,937	$ 910,984
IT/Technologies	$ 326,927	n/a	n/a	n/a	n/a
Other Impl. Act.	$ 598,020	55100	$ 224,400	$ 690,000	$ 13,287
ODC	$ 98,293	0	0	0	$ 378,582
TOTALS	$ 3,522,515	$ 1,974,244	$ 253,667	$ 896,936	$ 1,302,853

CY2016 will be a shortened operating year (ten months) and is the year in which all interventions ramp up and achieve steady state, except Crisis Bed and ACT Team expansions. The CY2016 budget is $5,639,434.

Total Eldercare Collaborative

MedStar Good Samaritan; MedStar Union Memorial

Hospital/Applicant:	MedStar Good Samaritan Hospital; MedStar Union Memorial Hospital
Date of Submission:	December 18, 2015
Health System Affiliation:	MedStar Health, Inc.
Number of Interventions:	One
Total Budget Request ($):	$1,882,870 Permanent Funding

Target Patient Population
The ***Total Elder Care Collaborative (TEC-C)*** seeks to ***demonstrate the efficacy and scalability of the shovel-ready MedStar Total Elder Care (MTEC) home-based primary care*** model for complex older patients in order to: 1) improve clinical outcomes; 2) improve the patient and family experience; and 3) lower the total costs of care. The *TEC-C* will achieve this vision by delivering home-based primary care to elders in **eight ZIP codes in the county of Baltimore City**, including the cities of Baltimore, Roland Park, Govans, Idlewylde, Loch Hill, and Northwood. Unlike traditional disease management programs, the MTEC model of home-based primary care ***focuses on the overall needs of high-risk elders, regardless of specific disease conditions***. The major health needs for this population are functional disability, care coordination, social support services, management of multiple severe chronic illnesses, and palliative and end-of-life care. The targeted geographic area in Baltimore City includes a population of elders that have multiple chronic conditions. The major conditions found in this population include dementia, stroke, psychiatric disease, congestive heart failure, chronic obstructive pulmonary disease (COPD)/respiratory failure, severe chronic kidney disease, cancer, diabetes, hypertension, and falls. Typically, several of these conditions are present in one individual. These frail elders have high symptom burden and functional impairment, which predict greater mortality and higher medical costs, including a risk of emergency department visits, hospital admission, and use of postacute care services (De Jonge et al., 2014).
Summary of program or model for each program intervention to be implemented

Frail elders will receive services from MedStar's shovel-ready, nationally recognized house call model of primary care (De Jonge et al., 2014). This home-based primary care program was previously known as the Medical House Call Program (MHCP) when developed in Washington D.C. and is now known as ***MedStar Total Elder Care (MTEC)***. Since 1999, MedStar Health has operated an MTEC-style program through MedStar Washington Hospital that cares for ill elders at home and across all settings. MTEC teams are guided by four principles: 1) a humane approach to care of frail elders; 2) state-of-the-art diagnostic tests, treatment, and technology at home; 3) coordination of all medical and social services across settings, until the end of life; and 4) economic viability for patients, providers, and payers.

MTEC consists of modular and geographically-targeted teams who serve the most ill subgroup of elders in a catchment area, usually within a 20-minute driving radius. Each team module consists of 10 staff, including geriatricians, nurse practitioners, care coordinators, triage nurses, and social workers. The core element of success is ability to offer ***a single, comprehensive source of home-based medical and social services for patients and their families.*** Core services include home-based primary care, 24/7 on-call medical staff, continuity to the hospital, intensive social services, and coordination of all specialty and ancillary services. As of 2015, MTEC has served over 3,200 elders in Washington D.C. and has an active census of 620 patients. Each team can serve a total of 300-350 frail elders. The goal of the *TEC-C* is to demonstrate the scalability of this model to Maryland, beginning with eight targeted ZIP codes in the county of Baltimore City.

Measurement and Outcomes Goals

TEC-C will monitor the following core outcome measures in the population of frail elders enrolled in *TEC-C*:

- Total hospital cost per capita; Total hospital admits per capita; Total health care cost per person; ED visits per capital; Readmissions; Potentially avoidable utilization; Patient experience

TEC-C will approach the core process measures in the following way:

- *TEC-C* is a home-based care delivery model. The *TEC-C* team is fully registered with CRISP and receives 100% of the alerts from CRISP.
- *TEC-C* screens for eligibility for the MTEC program using a geriatrics health risk assessment at intake. As all patients are screened, we expect 100% completion.
- *TEC-C* care teams currently develop and document care plans, goals of care, and advanced directives within the clinical notes for all patients enrolled in *TEC-C*. *TEC-C* will continue this method and expect 100% completion.
- The MTEC approach is designed so that each member of the care team works together serves as a collective group of care manager for each patient enrolled in *TEC*-C. By definition, this measure will be 100% for all patients at all time points.

TEC-C will monitor the following programmatic measures for patients enrolled in *TEC-C*:

- Follow-up visit completed within 2 days of hospital discharge or ED visit; Medication reconciliation completed within 2 days after transition from hospital or ED; Cause of Program Exit; Death Data; Provider Satisfaction / Retention

Return on Investment. Total Cost of Care Savings

The *TEC-C* care model will help move the state of Maryland towards the overall goals and requirements of the new All-Payer Model by decreasing hospital inpatient utilization by 19% and outpatient utilization by 20%, thus decreasing hospital cost of care. The TEC-C will decrease total cost of care by also reducing post acute care services specifically, skilled nursing facility costs. Finally, TEC-C will improve the quality measures by reducing readmissions and improving patient satisfaction.
A positive ROI of 6,754 is expected by CY2018 with a total of 528 reached patients. The number of patients enrolled is based on historic experience of staff recruitment and actual patient enrollment.

As positive ROI is realized. Payers will benefit through a lower total cost of care and a lower per capita cost for their patients

Scalability and Sustainability Plan

TEC-C is sustainable without additional rate increases in future years, beyond the ongoing amount associated with this award in the following ways:

- The MTEC program has demonstrated success having reduced per capita Medicare costs by 20 percent as part of IAH, and having received a 60% share a $1.8 million payment from CMS in July, 2015 (MedStar Washington Hospital Center, 2015). ***We hypothesize that Baltimore City elders enrolled in MTEC teams will also experience similar significant Medicare savings***.
- By operating in the proposed *TEC-C*, the catchment area of the two lead hospitals becomes central to the identification of frail elders eligible for enrollment. As these hospitals which are operating under the GBR capped revenue model begin to reduce utilization and increase quality, margins have the potential to become larger in the long-term. ***These dollars could be reinvested back into the program to sustain and further expand this population health model***.

This award will allow *TEC-C* to build upon the existing evidence base of the MTEC model by providing an evidence base for MTEC implementation in Maryland. This evidence base will allow us to quantify the return on investment as a result of reductions in utilization and increased quality. ***While the model will require an initial investment in infrastructure for the care teams, the evidence-based return on investment should promote hospital leadership's willingness to invest in the MTEC model*** and ultimately position these hospitals to recognize similar savings due to reductions in utilization and increased quality.

Participating Partners and Decision-making Process.

TEC-C is designed to function as a true collaborative for the effective care of frail elders enrolled in MTEC. Therefore, regular forums involving the mobile care teams, clinical partners, and community partners are essential to foster a shared decision-making process around care plans, challenges, and opportunities. *TEC-C* has weekly care team meetings where all teams and partners are invited to attend.

The formalized governance structure of *TEC-C* is positions the patient at the center of *TEC-C*. Given this paradigm, we have "flipped" the traditional top-down nature of our governance chart and include the patient and the services received toward the top and programmatic leadership at the bottom.

The current clinical and administrative leaders for MTEC will function as the clinical and administrative leaders for *TEC-C*. These individuals will be responsible for the overall leadership of the collaborative, including the MTEC program. *TEC-C* clinical, community, "other" partners will directly interface and collaborate with the mobile care teams in MTEC. The monitoring and evaluation partners will work with data, information systems, billing, and financial specialist to ensure accurate and timely reporting of key measures.

Implementation Plan

Deployment of the first mobile care team will occur in April 2016. Deployment of the second mobile care team will occur in July of 2017, once the first care team reaches the capacity of 300-350 patients. Other activities that facilitate implementation include: establishing the business structure; executive staffing; clinical staffing; community partner engagement; establishing operational guidelines; leasing facilities and purchasing equipment; and EMR transition.

Budget and Expenditures: Include budget for each intervention

Workforce: *TEC-C* personnel salaries will be established based on fair market compensation and a small premium for the difficult work of making house calls. Three additional FTEs for data analytics, increased outreach, & HSCRC reporting were added to the budget. We estimate $1,294,577 in year 2016, $1,938,509 in year 2017, and $2,605,107 in year 2018 for this budget category.

IT/Technologies: IT/Technologies include expenses for start-up needs, and modest adaptation. These include laptops with mobile data plans; cell phones; server configuration and support to access patient information under HIPPA standards; some EMR specialization for population health management such as time tracking and interface configuration to CRISP alerts; and "black bag" medical supplies such as pulse oximeters, stethoscopes, B/P cuffs, and wound debridement supplies. Budget amount is based on experience and market rates. We estimate $82,688 in year 2016, $101,463 in year 2017, and $110,160 in year 2018 for this budget category.

Other implementation Activities: Other implementation activities include clinical personnel regulatory requirements, adequate safety support to teams and patients, community partners' engagement, emergency patient care needs, and workflow improvements to enhance provider efficiency and flexibility. We estimate $57,260 in year 2016, $103,501 in year 2017, and $145,948 in year 2018 for this budget category.

Other Indirect Costs: We estimate $305,579 in year 2016, $298,178 in year 2017, and $330,865 in year 2018 for this budget category.

Based on the above, total expenses/investments for *TEC-C* are $1,581,072 in year 2016, $1,882,870 in year 2017, and $1,863,492 in year 2018.

Trivergent Health Alliance

Frederick Memorial Hospital; Meritus Medical Center; Western Maryland Hospital Center

Hospital/Applicant:	Trivergent Health Alliance Regional Partnership, consisting of three co-lead applicants: Meritus Medical Center (MMC), Western Maryland Health System (WMHS), Frederick Regional Health System (FRHS)
Date of Submission:	December 21, 2015
Health System Affiliation:	Trivergent Health Alliance, LLC.
Number of Interventions:	4
Total Budget Request ($):	$7,707,608 (Year 2, following ramp up completion in Year 1)

Target Patient Population (Response limited to 300 words)
The Alliance Regional Partnership has four interventions with three distinct target populations within our tri-county region of Allegany, Frederick and Washington counties: **1. Patients with Behavioral Health (BH) diagnoses.** This includes all BH diagnoses, with the top five being Depression, Anxiety, Bipolar, Psychosis and Substance Abuse, with a focus on patients who have had an inpatient BH stay and/or ED visit with BH diagnosis. **2. High utilizers of inpatient services who may benefit from Complex Care Management.** These patients have three or more Inpatient/Observation discharges in a year with diagnoses of diabetes, cardiac disease including Congestive Heart Failure (CHF), and/or respiratory disease including Chronic Obstructive Pulmonary Disease (COPD), as well as anticoagulation patients. 3. **High utilizers of Emergency Department (ED) Services**. These patients have six or more ED visits in a year. These target populations capture many of our highest cost Medicare and dual eligible patients, to align with the goals of the All-Payer Model. Although the preliminary focus is on the Medicare population, the target population also includes patients from all other payers who meet the criteria. Our long-term plan is to improve population health for the 455,000 Marylanders in our region, which includes all zip codes and cities/towns in our three counties.
Summary of program or model for each program intervention to be implemented. Include start date, and workforce and infrastructure needs (Response limited to 300 words)
1. **Behavioral Health (BH):** We will provide outpatient BH case management, early detection, and support for at-risk patients, including: - **1.1: Implement BH Care Management (leveraging the model in place at WMHS).** The start date is April 2016. Masters-level BH Case Managers are needed to support this initiative. - **1.2: Integrate BH into primary care to identify patients at-risk and link them to appropriate resources.** The start date is April 2016. The Masters-level BH CM's added for BH initiative 1.1 along with primary care office teams will work together to implement this initiative. - **1.3: A Population Health initiative to reduce stigma and increase understanding of BH needs through community health education, such as Mental Health First Aid (MHFA).** The start date is April 2016. Workforce and infrastructure needs for this initiative are the hiring of an MHFA regional coordinator as well as books and supplies for the trainings.

2. **Complex Care Management for High Utilizers:** We will replicate and refine components of local best practices and standardize common metrics for a regional care management model for hospital High Utilizers with certain chronic disease conditions. The start date is April 2016 .The workforce and infrastructure needs are 45.7 FTE.
3. **Potentially Avoidable ED Visits:** We will reduce potentially avoidable ED use by (a) improving care coordination and transitions, and (b) providing high-touch support to ED High Utilizers to identify needs early, aid in care transitions, and engage community-based support. The start date is April 2016. The workforce and infrastructure needs are 13.6 FTE.
4. **Regional Care Management Education Center (RCMEC):** The RCMEC will offer education programs to Care Management professionals and relevant support staff of the Alliance member hospitals and partners. The start date is May 2016. The workforce and infrastructure needs are 4 FTE, plus $1M technology start up.

Measurement and Outcomes Goals (Response limited to 300 words)

Progress will be gauged using process and outcome measures, including quality, patient experience, and financial indicators. We will use CRISP data to monitor and track the overarching measures that are critical to the success of the All-Payer Model (such as hospital costs per capita, readmission rates, and ED visits per capita). We will also use hospital data for intervention-specific metrics such as behavioral health admission and readmission rates. Measures will be collected and analyzed at least monthly. Progress will be tracked at the hospital and the regional level using a centralized dashboard that provides actionable information about areas for needed improvement. ***Attachment A, Table 5*** shows, by strategy, our FY15 baselines on key metrics for each target population, including:

- **1.1:** In FY15, this target population had 9,098 behavioral health ED visits. Goal: 6% reduction.
- **1.2:** Currently 46% of employed and ACO practices screen annually for depression. Goal: Universal screening (100%).
- **1.3:** In FY15, 440 individuals were trained Mental Health First Aid. Goal: 500 individuals in Yr1.
- **2:** In FY15, there were 4.4 admissions and 1.3 readmissions per High Utilizer patient; in total, they incurred ~$52.5 million in inpatient and observation charges. Goal: Reduce HU admissions, readmissions, and charges, using the WMHS costs avoided algorithm to track progress.
- **3:** In FY15, the target population had 5.7 ED visits per patient and ~$10.5 million in total ED charges. Goals will be established by July 2016.
- **4:** We will track the # of individuals trained through the new RCMEC and establish baseline in Yr1.

Spanning all initiatives, we will use CRISP/HSCRC data to measure aggregate improvements on All-Payer measures listed in the RFP, which are closely linked with our intervention-specific measures. The evidence supporting our initiatives can be found in the literature and in the positive outcomes experienced within our individual hospitals.

Return on Investment. Total Cost of Care Savings. (Response limited to 300 words)

We expect to achieve a four-year, cumulative Medicare and Dual Eligible cost savings of $13,629,629 and an overall Return on Investment (ROI) of 2.78, using the ROI template provided in the RFP. Savings will build from year one, and we expect the initiatives to remain sustainable via the ongoing hospital retention of the global budgets at each hospital. The total savings for all payers of $55,645,962 exceeds the total intervention costs for all payers of $29,436,309 to result in a four year cumulative savings of $26,209,653. These savings will accrue as a result of our proposed initiatives due to the reduction of PAU,

Readmissions, Admissions, ED visits, and Observation visits among the target populations. Strategy 2 has the largest ROI because the High Utilizer population for this strategy is 79% Medicare/Dual Eligible and thus the interventions directly impact Medicare costs. Additional detail on ROI by strategy and by payer can be found in ***Attachment B.*** We plan to reinvest these savings we achieve as a Regional Partnership in hospital care management programs and outpatient care managers and BH counselor programs to sustain the existing programs. We also expect to identify new opportunities and areas for potential investment. Additional areas of opportunity that we would like to explore to achieve All-Payer aims include end-of-life care and improving utilization and costs in Skilled Nursing Facilities. The CHWs, BH counselors, and care managers that will be hired as part of our Regional Partnership initiatives will also be able to expand their caseloads as they become more experienced in working with these populations, resulting in additional efficiencies and returns. All payers (Medicare, Medicaid, commercial) are expected to receive savings via reductions in ED, Inpatient, and Behavioral Health inpatient utilization rates.
Scalability and Sustainability Plan (Response limited to 300 words)
The financial sustainability of our initiatives is based in large part on cost reductions for High Utilizers, complex patients, and behavioral health patients through better care management and reductions in avoidable, ambulatory-sensitive utilization. The target populations we have identified are among the highest-cost, highest-need patients we see, and we believe there is vast opportunity for improving the processes and tools we use to treat them that will yield positive results, both in reduced medical costs and improved patient outcomes. The sponsor hospitals have provided the Initial Equity Funding for the Trivergent Health Alliance, and the Trivergent Health Alliance MSO. The Alliance also intends to address Skilled Nursing facility utilization. With the Strategy 2, we identified that approximately 17% of the HU patients were residents of a SNF. We believe that further investigation in each of our communities is warranted for this patient population as a group unto itself. Because 58% of all Medicaid patients in these counties are covered by Maryland Physicians Care (MPC) MCO, we believe that the savings generated from these strategies for Medicaid lives will be shared with MPC through reduced utilization The nonprofit Maryland health systems have participated in HealthChoice since inception. MPC has helped the DHMH and the State to resolve serious threats to Maryland's Medicaid program. We also believe that there is opportunity to address end of life care. The Sponsor Hospitals have committed their senior Leadership teams as well as their Board Chairs and Vice Chairs to provide guidance and support to the Executive teams. These corporations (LLC's) were created for the purpose of furthering the triple aim of CMS as embodied in the mission, vision, and values of the Alliance: reduce costs, improve quality, and improve the health of the populations of the geographic regions served by the three sponsor hospitals.
Participating Partners and Decision-making Process. Include amount allocated to each partner. (Response limited to 300 words)
Trivergent Health Alliance was created to pursue the Triple Aim as embodied in its mission, vision, and values. The Alliance Regional Partnership has developed a transparent and collaborative regional governance structure that includes representation from each of our three health systems. The Executive Committee, reporting to the Alliance Board of Directors, meets biweekly and provides hands-on oversight of the multidisciplinary work teams. Dedicated work teams support each strategy that will remain in place during implementation. Each work team has representation from each hospital, has a designated Chief Financial Officer to provide financial advice, a data analyst, and designated team lead(s). The Executive Committee is the decision-making body that includes senior leadership from FRHS, MMC and WMHS. The Executive Committee provides recommendations and updates to the Alliance Board of Directors. Decisions are made based on achieving consensus among representatives from all three Alliance hospitals. The Alliance Board of Directors meets quarterly, or as needed, to review and approve

key items such as clinical initiatives, financial models, funds allocation, and staffing. If our proposed funding amount is approved, the amount we will allocate to each Alliance hospital by CY 2017 when the initiatives have scaled will be: **WMHS:** $2,248,938; **MMC:** $2,697,758; **FRHS:** $2,760,929; **Total:** $7,707,625.

Additionally, physician and community partners are foundational to the success of Regional Care Transformation, both have voiced their support and willingness to engage in the strategies detailed in this application. Physician and community partner groups are engaged at the front lines with our work teams. The Alliance has also established a Community Advisory Committee (CAC), comprising community partner representatives including LHICs, Core Service Agencies, Skilled Nursing Facilities, Departments of Social Services, and Hospice agencies. The first CAC meeting was held in November. The group will continue to meet every other month and participate in the implementation process.

Implementation Plan (Response limited to 300 words)

The implementation work plan begins upon receipt of the award in February. Once the award value is known, the project budget will be brought into alignment with the award value. After finalizing the projects budgets, the new FTE positions will be posted. For year 1, an aggressive plan to deploy four strategies, their respective processes, workforce and technology needs, and a phased flagging process to identify the targeted HUs across the regional continuum of care has been defined. During year 1, engagement of PCP's will be phased: first to focus on deployment of the strategies in sponsor hospital employed practices, and then to deploy the strategies across hospital affiliated ACO PCPs. Community Partners will be engaged through the Community Advisory Council and partner with the strategy work teams during process development and refinement. RCMEC will be launched and utilized to train the new staff for Strategies 1, 2, and 3. Year 2 will focus on continuous process improvement of the newly deployed strategies to ensure desired outcomes are being achieved; if not, apply Lean principles regarding problem solving to foster the cycle of continuous improvement. Year 2 into 3, opportunity to deploy the strategies to non-affiliated PCPs will be pursed within compliance of the Stark Laws. During Year 3 and 4, processes will be hard wired; areas for expansion will be identified and pursued based on regional data and applying Lean continuous improvement methodology.

Community and physician partners' engagement is vital for a successful implementation of the strategies proposed in the application. The implementation timeline defines their engagement from Feb. 2016 thru Dec. 2019, The level of engagement and specific key physician partners will evolve and change over time pending the needs of the targeted HU populations.

Budget and Expenditures: Include budget for each intervention. (Response limited to 300 words)

Our summary costs by hospital and by strategy are shown below. This includes all of the costs (workforce, IT/Technology, and enabling infrastructure) to implement the four strategies. All Year 1 FTE costs have been pro-rated to fund nine months of implementation, given that the award notice will be received in February, and allotting for the time needed to recruit and hire. The 2017, 2018, 2019 total costs include full implementation of all four strategies.

Sponsor Hospital:	CY 2016	CY 2017	CY 2018	CY 2019
WMHS	$1,989,485	$2,248,938	$2,182,272	$2,182,272
MMC	$2,343,346	$2,697,758	$2,631,092	$2,631,092
FRHS	$2,380,710	$2,760,929	$2,694,262	$2,694,262
Regional Request by Year:	**$6,713,541**	**$7,707,625**	**$7,507,626**	**$7,507,626**

Strategy:	CY 2016	CY 2017	CY 2018	CY 2019
Strategy 1- BH	$1,916,216	$2,201,379	$2,147,449	$2,147,449
Strategy 2- CCM	$3,702,624	$4,312,274	$4,201,754	$4,201,754
Strategy 3- ED PAU	$1,094,640	$1,193,955	$1,158,405	$1,158,405
Total Cost per Year	$6,713,480	$7,707,608	$7,507,608	$7,507,608

UM St. Joseph

UM St. Joseph Medical Center

Hospital/Applicant:	University of Maryland-Saint Joseph Medical Center
Date of Submission:	12/21/15
Health System Affiliation:	University of Maryland Medical System
Number of Interventions:	1
Total Budget Request ($):	$1,147,000

Target Patient Population (Response limited to 300 words)

In the program's initial iteration, the Behavioral Health Center ("BHC") at University of Maryland Saint Joseph Medical Center ("UM SJMC") will provide specialized psychiatric outpatient resources focused on relapse reduction coupled with community health worker in-home support to a target patient population who meet the following criteria:
• Medicare patients
• Who suffer from a Major Mental Health diagnosis
  o Schizophrenia, Bi-Polarity, or other psychotic disorder
• Identified as high utilizers
  o 2+ bedded care admissions of greater than 24 hours within past year
• Who also suffer from at least 1 chronic condition
The BHC will function in tandem with UM SJMC's Post Discharge Center (PDC), currently under development, to offer treatment to those patients whose mental health conditions manifest as a Major Mental Health illness, separate but not exclusive from depression or related illness. There are very limited transition options for these patients, and the BHC will serve as an important and essential bridge resource for patients in the community.

Summary of program or model for each program intervention to be implemented. Include start date, and workforce and infrastructure needs (Response limited to 300 words)

The BHC will provide comprehensive psychiatric management of the target patient population, with interventions to include: pharmacological treatment, evidence-based cognitive group psychotherapies and Centeral case management. The BHC will work out of the existing space utilized by the PDC on UM SJMC campus. BHC staff will include psychiatrists, psychiatric social workers, psychiatric nurses and psychologist therapists, who will offer evaluation, a specialized treatment focused on relapse prevention, and support to patients in collaboration with existing providers. Following the period of supervision, the BHC will transition the patient to existing community resources, allowing for continuity of treatment.

To ensure patient well-being in the community, UM SJMC will fund an expansion of its Maxim Transition Assist (MTA) program, to offer in-home services to BHC patients. MTA is a private health services entity that already provides care management to UM SJMC patients for a period following discharge, will staff Behavioral Technicians dedicated to furnishing services to BHC patients, in line with Assertive Community Treatment models. It is anticipated that the BHC and MTA expansion will come online shortly after grant award, with BHC operations beginning February 29, 2016.

Measurement and Outcomes Goals (Response limited to 300 words)
In the program's initial iteration, programmatic metrics will be consist of: • process metrics with the following data elements: # monthly encounters: center visits/telephonic CM; # of encounters by initial admission DRG; % of High Risk patients scheduled at center prior to discharge; No show rate for patients scheduled at center; Average number of days between discharge and being seen at center; % of patients with: hand off to PCP or appropriate specialist within 90 days; medication reconciliation; Advanced Care planning, who test positive for mental health diagnosis; Referral source; Average number of days between 2nd visit to center (if applicable). • Clinical outcomes, post-intervention, including: % of patients receiving pharmacy support, NP/MD support; % of referrals made to community programs; 90 utilization rates for Admissions, Observations and ED visits. • patient satisfaction surveys addressing Access, Quality and Communication The program will also maintain core process measures provided by the HSCRC to include: Use of CRISP (Encounter Notification Alerts, etc.); Completion of Health Risk Assessments; Established longitudinal care plans; Shared care profile, and target population with contact from an assigned care manager.
Return on Investment. Total Cost of Care Savings. (Response limited to 300 words)
The ROI calculated for the calendar years 2017-2019 are **1.48, 2.23, and 2.23** respectively. UM SJMC is anticipating that by addressing mental and behavioral health needs of the Medicare patient population this will impact PAUs and PQIs, and the hospital will re-invest these savings to expand upon the proposed program for continued cost savings. UM SJMC is strategically planning to focus on the Medicare portion of the high utilizer population during the grant period (CY 2016) to secure the highest ROI in the short term. Thereafter, UM SJMC will reinvest into the program with scalability plans for Dual Eligibles, followed by Medicaid beneficiaries, and finally to commercial payers. Our goal is to meet the waiver requirements and to achieve the mandate of the all payer system.
Scalability and Sustainability Plan (Response limited to 300 words)
The UM SJMC program is strategically targeting the Medicare patient population and building core competencies around mental health programs to address their needs. With yearly program evaluations and meeting established outcomes and metrics, the BHC will be scaled to other payers such as Medicaid, Duals and Commercial payers. Year 1 and 2 expense will be offset by avoidable utilization savings which will be reinvested into the program. In future models, the program will expand to provide services to all payers with major mental health conditions. Such expansion will require additional staff, technology and infrastructure, that will be supported by the program's sustainability efforts. The program will be sustained primarily through savings generated through the reduction of PAUs, and funds captured through the permanent rate increase authorized by the grant award. Additionally, any billings for services rendered to the target patient population will be retained by the program.

Participating Partners and Decision-making Process. Include amount allocated to each partner. (Response limited to 300 words)
The BHC will receive advice and strategy on program structure and interventions from a governance council, made up of members from UM SJMC leadership and a number of stakeholders, categorized into three distinct categories along the care continuum: Community-Based Care, Acute Care and Post-Acute Care. The below mentioned members have submitted Letters of Intent to work closely with UM SJMC to best impact our Medicare target patient population: Primary care physicians, MTA, leadership from the Visiting Nurses Association, and Post-Acute providers: Lorien Health, Stella Maris, Genesis Health and Manor Care. Sheppard Pratt leadership and community service groups such as Mosaic and Keypoint have also expressed a strong interest to work collaboratively with UM SJMC. In the first year of this collaborative, decision-making power rests with UM SJMC.
Implementation Plan (Response limited to 300 words)
The attached implementation plan kicks off February 1st. The BHC is anticipated to be opened within 30 days of the grant award. Prior to that, UM SJMC is working towards solidifying workflow processes, communication plans to the targeted patient population, and continuing to work with providers. UM SJMC anticipates a patient ramp-up time of 3-4 months.
Budget and Expenditures: Include budget for each intervention. (Response limited to 300 words)
Findings from literature and existing initiatives provide strong and compelling support for UM SJMC to address unmet needs and develop creative new solutions for high-risk patients with severe and chronic mental illnesses as well as the chronically ill medical patients impacted by psychiatric comorbidities. The goal is to offer this high-risk cohort a relapse preventing treatment program coupled with comprehensive case management services in the outpatient setting for 60-90 days. Treatment will be provided by a highly trained team: psychiatrist with extensive pharmacological experience, psychiatric social workers with specialized experience in short-term crisis management and psychotherapy, as well as full knowledge of the breadth of community resources available to this population. The budget includes the expansion of MTA which will build off of their community health worker model (CHW) to assist with successfully transitioning this specific group of patients back into the community. To further hone in on the Medicare high utilizers that are admitted to UM SJMC, we will deploy two additional transitional nurse navigators that will channel patients to the post-discharge center and potentially the behavioral health center (as needed).

Upper Chesapeake

UM Harford Memorial Hospital; UM Upper Chesapeake Medical Center; Union Hospital of Cecil County

Hospital/Applicant:	Harford Memorial Hospital & Upper Chesapeake Medical Center, Union Hospital of Cecil County
Date of Submission:	December 21, 2015
Health System Affiliation:	University of Maryland Upper Chesapeake Health (UMMS), Union Hospital of Cecil County
Number of Interventions:	1 Integrated Set of Post Discharge / Community-based Interventions
Total Budget Request ($):	$2,716,456

Target Patient Population (Response limited to 300 words)
The purpose of the University of Maryland Upper Chesapeake Health (UMUCH) and Union Hospital of Cecil County (UHCC) Regional Partnership (RP) is to address the medical and social needs of high utilizer patients and those with multiple chronic conditions in Cecil and Harford Counties. The Regional Partnership will target Medicare and dual-eligible patients with either high rates of hospital utilization and/or multiple chronic conditions. High risk patients will be defined as patients with five or more ED visits or three or more admissions during the year. Also, patients with multiple chronic conditions will be identified as high risk. Of the 348,000 residents of the two county area, HSCRC data indicates that there are 1,550 patients classified as high utilizers and nearly 20,000 with two or more chronic conditions in Cecil and Harford Counties. The 2012 HSCRC data shows greater than 81,000 patients with a hospital encounter and at least one chronic condition. Cardiac related conditions such as coronary artery disease and hypertension were recorded in at least 30,000 charts for patients. Of the nearly 15,000 unique Medicare patients with at least one chronic condition, more than 50% have hypertension in Harford County and 40% in Cecil County. The initial focus of the program will require interacting with patients after they have "identified" themselves by coming back to the hospital. The RP also recognizes that a process for engaging these patients before they come to the hospital will be necessary and will allow providers in the community to refer patients to the program, even if they have not met the hospital utilization threshold. These patients may be described as moderate or rising risk that could benefit from these new interventions.
Summary of program or model for each program intervention to be implemented. Include start date, and workforce and infrastructure needs (Response limited to 300 words)
The RP aims to leverage existing investments in Post Discharge Clinics to extend the time that high risk patients are engaged with care management and coordination services. The new program creates a Community-based Care Management program that is comprised of teams of Community Health Workers or Social Workers lead by Nurse Care Managers. Patients may receive intensive medical and social support in the PDC (Day 0-30) and be transitioned to the CBCM (Day 31-90) to refine the care plan, coordinate patient appointments, provide ongoing education, and assess the patient's home situation. This new model will create a seamless support program for the patients that meets their needs and connects them with their existing or a new primary care provider in the community. Early data shows that the PDC is able to eliminate hospital utilization in 60% of patients in the 90 days post engagement. This program would extend this success to tackle the 40% that did have additional utilization. Direct referral to the CBCM program from Primary Care will also be developed to address the needs of the rising risk patients. This program relies on IT infrastructure that fosters greater communication among providers and allows for outreach as patient risk dictates. A partnership with CRISP will allow for stakeholders across the continuum of care to use a common Care Management and Secure Texting tools. Telehealth capabilities will also be added to the region to support home vital sign monitoring and video consultations for patients at home or in SNFs. UMUCH and UHCC will share learnings and use common approaches in the care of these patients. The RP will ramp up this activity and be ready to see patients by end of quarter 1 beginning of quarter 2 of calendar 2016.
Measurement and Outcomes Goals (Response limited to 300 words)

The program will target metrics consistent with the state transformation framework. This includes outcome measures that capture both utilization and cost (charges) data, as well as process measures that indicate improvement within the new delivery model. The RP will also develop a patient survey to monitor the satisfaction of patients with the CBCM program.

The outcome measures tracked by the RP include:

-30-day all-cause readmissions
-30-day ED revisits
-30-day readmission to observation status
-48-hour readmission from SNF
-Reduction in charges for High Risk Patients
-90 day pre/post intervention utilization

Process Metrics to be tracked include:

-Percent of patients that meet criteria that are referred to the PDC & CBCM
-ENS Subscribers in the community
-Percent of patients with a care plan in the new CRISP-hosted Care Management System
-EMS Call/ Response data by address
-Patient experience survey

This data will be collected and analyzed through emerging CRISP reporting capabilities as well as the implementation of a RP-wide Data Warehouse that incorporates information from multiple sources including the hospital EMRs, ambulatory EMRs, CRISP and eventually claims data. Preliminary review of the data relating to high risk patients indicates a reduction in the hospital utilization for patients that receive care in the UMUCH PDC. The expanded program and related IT capabilities will allow the RP to refine these care management processes, share clinical and social information with appropriate providers and better understand which patients should be targeted. The goal is to begin to draft and share reports, by community provider, that reflect Primary Care performance within these categories.

Return on Investment. Total Cost of Care Savings. (Response limited to 300 words)

Building from the success of the current and planned PDCs at UMUCH and UHCC, the RP believes that an 8% reduction in the hospital utilization, as measured by charges, is possible within the first year of the program. This is contingent upon the program engaging 60% of the High Utilizer patients and 7% of the Multiple Chronic Condition patients. The gross savings is expected to rise incrementally in year 2 by 12.5% and another 11% in year 3. This is based on a greater percentage of engagement and more targeted outreach of patients, as the data analytics from both CRISP and the RP Data Warehouse become available. The ROI calculation results in a positive return ratio of 1.43 in year 1 with increases in the following two years (1.66, 1.93 respectively).

The RP is proposing a sliding scale savings sharing methodology with the payers in this program. The sliding scale is tied to the actual ROI performance of the program each year. The target ROI calculated is the anchor point on which savings would be shared with payers via a GBR reduction. In year one, for example, the target ROI is 43%. The RP would establish a performance corridor that earns the payer a 10% share and a performance corridor with a 15% share. Performance exceeding the high range of the second corridor would generate a third tier of savings with 25% of these dollars returning to the payers. The RP would be open to reevaluating the shared savings percentage at predetermined intervals if the data is available from the HSCRC or other sources. For example, if the ROI for the first two years significantly exceeds the projected target, the RP would be willing to increase the share percentage in each performance corridor for year 3.

Scalability and Sustainability Plan (Response limited to 300 words)
The hospital systems have agreed to use these grant dollars to jointly fund infrastructure that assist in the management of high risk patients. This includes IT Capabilities such as the Data Warehouse, Care Management Platforms, Secure Texting Programs and telehealth programs that are best deployed across a larger populations. For example, this RP spreads the costs associated with establishing the Data Warehouse over two counties and more than 350,000 potential patients. The RP has also worked closely with the CRISP team to identify opportunities for pilot programs that can be scaled within the state. The RP will help implement and design key functionality of the CRISP Care Management and Secure Texting programs to demonstrate value and ease implementation in other areas of the state. Additionally the RP will deploy a home telemonitoring program, Vivify, which allows program coordinators to manage larger patient populations as the risk of hospitalization increases. The CBCM teams are also scalable with four teams of five providers including RN Care Managers, Community Health Workers, and Social Workers. Based on funding and impact, the teams can be reduced to fewer positions that work with a smaller population in a defined geography in the two counties. Alternatively, these CBCM teams may remain intact, but the hiring of all four teams may be staged or delayed based on finances. This would leave a 5-person team operating in a slightly larger geography. Additional resources such a pharmacists, or the development of a PDC elsewhere in the RP market would be funded by savings from this program and would not require additional rate increases. The projected ROI for each year is expected to exceed 1.0-indicating self-sustainment as currently composed. The breakeven point for Year 1 is a savings of 5.6% with the RP projecting a savings of 8.0%.
Participating Partners and Decision-making Process. Include amount allocated to each partner. (Response limited to 300 words)
The use of these grant dollars will be governed by a Steering Committee comprised of members of the two hospital organizations. A Memo of Understanding will be finalized that details the expectations for both organizations and delineates the decision-making authority. This includes approving annual budgets, determine expansion or contraction of the program, and the exploration of participating in alternative payment programs such as the Medicare Shared Savings Program. An operating committee that includes members of the hospital systems, Cecil and Harford Departments of Health and Offices of Aging, Healthy Harford as well as CRISP to manage the process on an ongoing basis. This includes the decisions on data governance, CRISP Pilot program feedback, geographic assignment of patients or other tweaks to the process flows that improve the effectiveness of the intervention. The operating committee will make recommendations to the Steering Committee about future investment and programmatic changes based on data analysis via CRISP reports or the new Data Warehouse. The Offices of Aging will house an embedded Community Health Worker (1 for each county) as will the respective Departments of Health (1 each). The operating committee will determine if a similar resource should be deployed within the two FQHCs- West Cecil and Beacon Health. Additional stakeholders, such as Amedysis Home Health, Lorien Health, Hart to Heart Transportation, and MedChi will be invited to participate in the operating committee or necessary subcommittees. These stakeholders were active participants in the Transformation Planning Process this summer and fall.
Implementation Plan (Response limited to 300 words)
The RP has developed a robust project plan to bring the implement and deploy the needed resources for the new program. The program is based on the Deming Cycle (Plan-Do-Check-Act) such that new protocols, pathways or treatment algorithms will be created, reviewed and adjusted based on the needs of the target population. The project plan is divided into four sections: 1) The PDC 2) the CBCM 3) IT – Telehealth 4) Data

Warehouse. Additional project plans for the CRISP-hosted tools, Care Management and Secure Texting, will be developed in conjunction with CRISP and the technology vendor. The PDC plan is focused mostly on developing process flows and policies that enable the smooth transition of the target population from the hospital to the PDC to CBCM and on to the Primary Care Provider. The CBMC plan relates to drafting job descriptions, hiring and training staff and conducting employee assessments. A process to deploy temporary resources, currently existing within the hospital systems is also contemplated. The IT- Telehealth Plan calls for the acquisition of the technology with testing and training also covered. The Data Warehouse plan is a four phase plan that will be managed by an outside vendor. The plan detail shows when the reporting capabilities will come on-line and the length of time each aspect of the development takes.

Budget and Expenditures: Include budget for each intervention. (Response limited to 300 words)

The Hospital organizations are requesting $2,716,456 in funding to support this new, patient-focused program. The budget is comprised of three major components: Staffing, Information technology infrastructure and operating expenses. The staffing model calls for the addition of four (4) Nurse Care Managers, (16) Community Health Workers, two (2) social workers, and one (1) pharmacist to provide direct patient care, coordination or education to patients. Additionally two (2) clinical coordinators, one (1) program coordinator and 1 Data Warehouse administrator will be hired. The associated expense with benefits is $1,568,237. The IT infrastructure including the CRISP-hosted programs, Telehealth capabilities, and Data Warehouse will cost $834,408 annually. The staff training and program outreach activities will cost another $61,500 per year. The operating costs (mileage, data plans, and continuing education) and indirect costs associated with sharing an HR resource for posting jobs/ screening candidates, rent, etc., is budgeted for $228,330.

DRAFT Recommendation for Transformation Implementation Grants

5/11/2016

HSCRC
Health Services Cost Review Commission

Background

- In June 2015, the Commission authorized up to 0.25% of total hospital rates to be allocated to deserving applicants under a competitive Healthcare Transformation Implementation Grant Program.
  - "Shovel-ready" projects that generate short-term ROI and reduced Medicare PAU
  - Involve community-based care coordination and provider alignment and not duplicate care transitions and prior infrastructure funding
- The RFP was released on August 28, and applications were submitted by COB December 21, 2015
- HSCRC received 22 proposals from single- or multiple-hospital applicants, addressing needs of particular regions

Review Process

- Review Committee comprised of DHMH, HSCRC, and Subject-Matter Experts
- Extensive review process evaluating several different criteria (detailed in report on page 2-3) including having the best opportunity to help Maryland on achieving the goals of the All-Payer Model
- Nine top-tier applicants were invited, with their community partners, to present their proposal; these applicants are recommended for either full or partial funding as detailed in the Recommendations table.

Recommendations

Partnership Group Name	Award Request	Award Recommendation	Hospital(s) in Proposal
Bay Area Transformation Partnership	$4,246,698.00	$3,831,143.00	Anne Arundel Medical Center; UM Baltimore Washington Medical Center
Community Health Partnership	$15,500,000.00	$6,674,286.00	Johns Hopkins Hospital; Johns Hopkins – Bayview; MedStar Franklin Square; MedStar Harbor Hospital; Mercy Medical Center; Sinai Hospital
GBMC	$2,942,000.00	$2,115,131.00	Greater Baltimore Medical Center
Howard County Regional Partnership	$1,533,945.00	$1,468,258.00	Howard County General Hospital
Nexus Montgomery	$7,950,216.00	$7,663,683.00	Holy Cross Hospital; Holy Cross – Germantown; MedStar Montgomery General; Shady Grove Medical Center; Suburban Hospital; Washington Adventist Hospital
Total Eldercare Collaborative	$1,882,870.00	$1,882,870.00	MedStar Good Samaritan; MedStar Union Memorial
Trivergent Health Alliance	$4,900,000.00	$3,100,000.00	Frederick Memorial Hospital; Meritus Medical Center; Western Maryland Hospital Center
UM-St. Joseph	$1,147,000.00	$1,147,000.00	UM St. Joseph Medical Center
Upper Chesapeake Health	$2,717,963.00	$2,692,475.00	UM Harford Memorial Hospital; UM Upper Chesapeake Medical Center; Union Hospital of Cecil County
Total	$42,820,692.00	$ 30,574,846.00	

Next Steps

- The Review Committee has recommended the nine proposals for funding at the levels indicated above.
- HSCRC will monitor the implementation of the awarded grants through additional reporting requirements.
- HSCRC is also recommending that a schedule of savings be remitted to payers through the global budget on the following schedule.
  - (Savings represent the below percentage of the award amount)

FY2018	FY2019	FY2020
10%	20%	30%

- Finally, Staff is recommending allocating the remaining $6,461,940 of the FY2016 0.25% to deserving projects and promising collaborations within the unfunded proposals. Recommendations will be made in September 2016.
- All Submitted RFPs will be posted on the HSCRC website.

Staff Report:
Maryland's Statewide Health Information Exchange, the Chesapeake Regional Information System for our Patients: FY 2017 Funding to Support HIE Operations and CRISP Reporting Services

May 11, 2016

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

Table of Contents

LIST OF ABREVIATIONS

BRFA	Budget Reconciliation and Financing Act of 2015
CMS	Centers for Medicare & Medicaid Services
CRISP	Chesapeake Regional Information System for Our Patients
DHMH	Department of Health and Mental Hygiene
EMPI	Enterprise master patient index
FY	Fiscal year
HIE	Health information exchange
HITECH	Health Information Technology for Economic and Clinical Health Act
HSCRC	Health Services Cost Review Commission
IAPD	Implementation Advanced Planning Document
ICN	Integrated care network
MHCC	Maryland Health Care Commission
MHIP	Maryland Health Insurance Plan

OVERVIEW

In accordance with its statutory authority to approve alternative methods of rate determination consistent with the All-Payer Model and the public interest,[1] this report identifies the amount of continued funding support required in fiscal year (FY) 2017 to the Chesapeake Regional Information System for our Patients (CRISP), for the following purposes:

- Health Information Exchange (HIE) operations; and
- Continuing standard CRISP reporting services to hospitals in the State and the Maryland Health Services Cost Review Commission (HSCRC or Commission).

The total amount of approved funding through hospital rates for these activities in FY 2017 is $2,360,000. As shown in Table 3, $1,060,000 of this amount is designated for HIE operations, $650,000 is for standard CRISP reporting services, and $650,000 is for the State match for Implementation Advanced Planning Document (IAPD) programing and to obtain related federal funding.

BACKGROUND

Past Funding

Over the past seven years, the Commission has approved funding to support the general operations of the CRISP HIE and reporting services through hospital rates as shown in Table 1.

Table 1. HSCRC Funding for CRISP HIE and Reporting Services, FYs 2010-2016

CRISP Budget: HSCRC Funds Received	
FY 2010	$4,650,000
FY 2011	No funds received
FY 2012	$2,869,967
FY 2013	$1,313,755
FY 2014	$1,166,278
FY 2015	$1,650,000
FY 2016	$3,250,000

[1] MD. CODE ANN., Health-Gen §19-219(c).

In December 2013, the Commission authorized staff to provide continued funding support for CRISP for FYs 2015 through 2019 without further Commission approval as long as the amount does not exceed $2.5 million in any year.

At the June 2015 Commission public meeting, the Commission approved a recommendation that exceeded the $2.5 million authorized amount. The FY 2016 approval of $3,250,000 included two components:

- CRISP HIE operations: $1,711,000
- CRISP reporting services: $1,539,000

FY 2017 FUNDING THROUGH HOSPITAL RATES

For FY 2017, staff is separating the funding request for HIE operations and standard CRISP reporting services from those relating to HIE connectivity expansion and ambulatory integration, statewide infrastructure needs, and expanded reporting services. The reason for this demarcation is that the Budget Reconciliation and Financing Act of 2015 (BRFA of 2015) permits the Commission to use the portion of the Maryland Health Insurance Plan (MHIP) balance that was derived from the federal Medicare and Medicaid programs to support integrated care networks (ICNs) in FYs 2016 through 2019. ICN activities eligible for such funding are required to be designed to reduce health care expenditures and improve outcomes for unmanaged high-needs Medicare patients and patients dually eligible for Medicaid and Medicare, consistent with the goals of Maryland's All-Payer Model.

Therefore, staff has separated those CRISP reporting services that are designed to support ICN activities as provided in the BRFA of 2015 from those that are designed to support the HIE or the general rate setting, methodology and monitoring functions of the Commission.

The Commission received an FY 2017 State budget appropriation to expend up to $25 million for the purpose of supporting ICN, alignment, and transformation activities.

HIE Operations Funding

The value of an HIE rests in the premise that more efficient and effective access to health information will improve care delivery while reducing administrative health care costs. The General Assembly charged the Maryland Health Care Commission (MHCC) and HSCRC with the designation of a statewide HIE.[2] In the summer of 2009, MHCC awarded state designation to CRISP, and HSCRC approved up to $10 million in startup funding over a four-year period through Maryland's unique all-payer hospital rate setting system. HSCRC's annual funding for CRISP is illustrated in Table 1 above.

[2] MD. CODE ANN., Health-Gen §19-143(a).

The use of HIEs is a key component of health care reform, enabling clinical data sharing among appropriately authorized and authenticated users. The ability to exchange health information electronically in a standardized format is critical to improving health care quality and safety.

Many states, along with federal policy makers, look to Maryland as a leader in HIE implementation. Further investment in building CRISP's infrastructure is necessary to support existing and future use cases and to assist HSCRC as it moves to more per-capita and population-based payment structures. A return on the investment will occur from having implemented a robust technical platform that can support innovative use cases to improve care delivery, increase efficiencies in health care, and reduce health care costs. The HSCRC derives significant benefit from the enterprise master patient index (EMPI) developed by CRISP. The EMPI has the ability to uniquely identify patients across treating providers. It is used to provide information about a patient's medical service encounter at the time of hospitalizations to a permitted recipient with an existing relationship with a patient, such as a primary care provider or payer. This index uses highly sophisticated tools from secure electronic submission of hospital registration data to CRISP. The EMPI allows for the accumulation of utilization data across hospitals, which the HSCRC, in turn, uses to track readmissions across hospitals.

Beginning in FY 2015, CRISP-related hospital rate adjustments are paid into an MHCC fund, and MHCC and the HSCRC review the invoices for approval of appropriate payments to CRISP. This process, along with the auditing of the expenditures, has created an extra layer of accountability.

In addition to its role in HIE among providers, CRISP is also involved in health care reform activities related to HSCRC, MHCC, and the Maryland Department of Health and Mental Hygiene (DHMH). In its collaboration with the Medicaid program, uniform and broad-based funding through hospital rates can also be used to leverage federal financial participation under the Health Information Technology for Economic and Clinical Health (HITECH) Act, known as IAPD funding. Under the HITECH Act, the Centers for Medicare & Medicaid Services (CMS) may approve states for Medicaid Electronic Health Record Incentive Program funding, and states receive a 90 and/or 50 percent federal financial participation match for expanding HIE through 2021. This request will enable CRISP (working with DHMH) to obtain federal funding for both the 90 percent and 50 percent programs. IAPD funding allows CRISP (working with DHMH) to qualify for funding to implement use cases that compliment ICN activities. Federal matching for IAPD is expected to draw approximately $12.7 million in federal matching funds in FY 2017.

The total amount of funding approved by staff for FY 2017 for the HIE function is $1.06 million.

Standard CRISP Reporting Services

CRISP collects admission (or encounter), discharge, and transfer information from hospitals on a nearly real-time basis. In the fall of 2013, the HSCRC expanded CRISP's required data collection to include all hospital outpatient encounters. CRISP creates an EMPI using this and other data. The EMPI—a unique identifier number assigned to each person in the database—can be attached to the HSCRC's abstract data, enabling the HSCRC to track readmissions across

hospitals, transfers among hospitals, and the movement of patients across local, regional, and statewide areas. The linkage of the EMPI to the abstract data also allows the HSCRC to focus on the care and health improvement needs of the population, including the nature and extent of use by high needs patients. This is a complex task that requires constant reconciliation between individual hospital transactional data and HSCRC abstract data, which are now submitted on a monthly basis. The linking of information using the EMPI reduces privacy and security concerns as HSCRC does not need to collect patient identifiable information in the date it receives. Through this process, HSCRC is able to obtain the information it needs in order to broaden its regulatory approaches for focusing on population-based measures, while eliminating the need for the HSCRC to collect or store highly identifiable data, such as name and address.

Standard reporting services require technology hardware and software licensing, along with a small team to create and process the reports. CRISP is beginning to transition the core reporting services from the consultants who originally installed the infrastructure and created the reports to permanent staff who can operate the services more efficiently.

Unique ID Creation and Assignment

- CRISP links the unique EMPI to HSCRC abstract data on a monthly basis and provides the unique EMPI linkage to HSCRC staff for inter-hospital and other analyses. The HSCRC staff uses the unique EMPI to track inter-hospital readmissions for the new All-Payer Model, to track transfers among hospitals on a monthly basis, and to support the analysis of hospital service utilization at the population, episode, and patient levels.

Basic Cross-Entity Report Production for HSCRC

- CRISP obtains HSCRC abstract data in order to generate reports requested by the HSCRC, such as inter-hospital readmission rates.

Standard Report Creation for Hospitals

- CRISP provides hospitals with a core set of standard reports that require the use of the unique EMPI on a monthly basis, such as inter-hospital readmissions, potentially avoidable utilization, and high-needs patients.

The FY 2016 request was disaggregated into two main categories: (1) the standard or core reporting services, and (2) expanded or ICN-related reporting services. The Commission approved rate increases of $1,539,000 in FY 2016 for both of these CRISP reporting services. For FY 2017, staff has approved $650,000 in hospital rate increases for standard reporting services only. Funding for ICN-related reporting services and other ICN-related activities will be authorized and appropriated under the provisions of the BRFA of 2015.

FUNDING OF INTEGRATED CARE NETWORK ACTIVITY UNDER THE BRFA OF 2015

As discussed above, the BRFA of 2015 permits the Commission to use the portion of the MHIP balance that was derived from the federal Medicare and Medicaid programs to support ICNs in FYs 2016 through 2019. The HSCRC Care Coordination Work Group made a series of recommendations to develop and support ICNs that can securely share information, encourage collaboration between and among providers, and provide a platform for provider and patient engagement. BRFA 2015 funds appropriated in FY 2017 will be used for ICN-related CRISP reporting services, as well as the following ICN infrastructure activities:

- Ambulatory Connectivity - The project aims to achieve bi-directional connectivity with ambulatory practices, long-term care, and other healthcare providers. Multiple methods of connectivity will be employed, including HL7 interfaces, consolidated clinical document architecture exchange, and administrative networks.
- Data Router - A key concept of the infrastructure effort is to send relevant patient-level data to the healthcare organizations that can use the data for better care management. The data router will receive and normalize health records, determine a patient-provider relationship, verify patient consent, and forward the records to the appropriate recipient in near real time.
- Clinical Portal Enhancements - The existing clinical query portal will be enhanced with new elements, including a care profile, a link to a provider directory, information on other known patient-provider relationships, and risk scores.
- Alerts and Notifications - New alerting tools will be built such that notification happens within the context of a provider's existing workflow. For example, if a patient who is part of a specific care management initiative presents at an emergency department, an in-context alert could inform the clinicians that the patient has a care manager available.
- Reporting and Analytics - Existing reporting capabilities, built on Tableau and Microsoft Reporting Services, will be expanded and made available to many more care managers. Planning is underway for potential new solution to support thousands of ambulatory practices.
- Basic Care Management Software – The software will support care management efforts throughout the State and region through data feeds, reports, and potentially a shared care management platform.
- Transformation Support – Transformation support will assist providers: in improving care delivery by training them on leveraging CRISP data and services, in sharing best practices and supporting collaborative partnerships; in connecting with consumers through education, outreach, and inclusion; and in promoting alignment activities among providers.

A draft funding plan for these activities is shown in Table 2 below:

Table 2. ICN Funding Plan for FY 2017

FY17 Project Name	Budgeted Funding (State)	Budgeted Funding (Federal)	Total
ICN Infrastructure: Ambulatory Connectivity	3,187,049	6,210,000	9,397,049
ICN Infrastructure: Data Router	939,134	-	939,134
ICN Infrastructure: Clinical Portal Enhancements	1,265,348	-	1,265,348
ICN Infrastructure: Alerts & Notifications	1,019,838	-	1,019,838
ICN Infrastructure: Reporting and Analytics	8,996,529	-	8,996,529
ICN Infrastructure: Basic Care Management Software	2,660,586	-	2,660,586
ICN Infrastructure: Practice Transformation	1,214,240	3,465,000	4,679,240
Amount Funded through BRFA / ICN	**12,871,355**	**3,465,000**	**16,336,355**

SUMMARY

Under the authority granted by the Commission, HSCRC staff approved a total of $2.36 million in funding through hospital rates in FY 2017 to support the HIE and standard CRISP reporting services for the Commission. This is comparable to the $3.25 million that was approved by the Commission in FY 2016. No additional funds are requested through hospital rates in FY 2017 to support ICN-related activities. Funding for FY 2017 ICN activities is through the appropriation and authority provided under the BRFA of 2015.

Table 3 shows the approved rate funding for HIE and standard reporting functions in FY 2017 including the federal match that will be generated from the IAPD funding.

Table 3. FY 2017 Approved Rate Support for CRISP

FY17 Project Name	Budgeted Funding (State)	Budgeted Funding (Federal)	Total
HIE Ops Assessment	1,060,000	-	1,060,000
IAPD Ops Match (50%)	350,000	350,000	700,000
IAPD Project Match (10%)	300,000	2,700,000	3,000,000
CRS Operations	650,000	-	650,000
Amount Funded by Hospital Rates	**2,360,000**	**3,050,000**	**5,410,000**

Staff Report:
CRISP FY 2017 Approved Budget for HIE Operations and CRISP Reporting Services

May 11, 2016

HSCRC Funding Support for HIE and CRS

- Over the past 7 years, the Commission has approved funding to support the general operations of the CRISP HIE and reporting services through hospital rates

CRISP Budget: HSCRC Funds Received	
FY 2010	$4,650,000
FY 2011	No funds received
FY 2012	$2,869,967
FY 2013	$1,313,755
FY 2014	$1,166,278
FY 2015	$1,650,000
FY 2016	$3,250,000

Staff Authority to Provide Funding through Rates

- Staff is authorized, without further Commission approval, to provide up to $2.5 million in hospital rates to support CRISP
- Budget consists of:
  - Health Insurance Exchange Operations (FY16 - $1.7M)
  - Standard CRISP report services (FY16 1.5M)
- Non-rate Support - Beginning in FY16, BRFA 2015 permits the use of MHIP surplus funds derived from federal Medicare and Medicaid to be used for integrated care network activities in FY16-19
  - ICN are activities designed to reduce health care expenditures and improve outcomes for unmanaged Medicare and Duals consistent with the All-Payer Model.

FY17 HIE and CRISP Reporting Services in Rates

- Under the authority granted by the Commission, HSCRC staff approved a total of $2.36 million in funding through hospital rates in FY 2017 to support the HIE and standard CRISP reporting services for the Commission.

FY17 Project Name	Budgeted Funding (State)	Budgeted Funding (Federal)	Total
HIE Ops Assessment	1,060,000	-	1,060,000
IAPD Ops Match (50%)	350,000	350,000	700,000
IAPD Project Match (10%)	300,000	2,700,000	3,000,000
CRS Operations	650,000	-	650,000
Amount Funded by Hospital Rates	**2,360,000**	**3,050,000**	**5,410,000**

ICN Budget for FY 2017

FY17 Project Name	Budgeted Funding (State)	Budgeted Funding (Federal)	Total
ICN Infrastructure: Ambulatory Connectivity	3,187,049	6,210,000	9,397,049
ICN Infrastructure: Data Router	939,134	-	939,134
ICN Infrastructure: Clinical Portal Enhancements	1,265,348	-	1,265,348
ICN Infrastructure: Alerts & Notifications	1,019,838	-	1,019,838
ICN Infrastructure: Reporting and Analytics	8,996,529	-	8,996,529
ICN Infrastructure: Basic Care Management Software	2,660,586	-	2,660,586
ICN Infrastructure: Practice Transformation	1,214,240	3,465,000	4,679,240
Amount Funded through BRFA / ICN	**12,871,355**	**3,465,000**	**16,336,355**

State of Maryland
Department of Health and Mental Hygiene

Nelson J. Sabatini
Chairman

Herbert S. Wong, Ph.D.
Vice-Chairman

Victoria W. Bayless

George H. Bone, M.D.

John M. Colmers

Stephen F. Jencks, M.D., M.P.H.

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

Stephen Ports, Director
Center for Engagement and Alignment

Sule Gerovich, Ph.D., Director
Center for Population Based Methodologies

Vacant, Director
Center for Clinical and Financial Information

Gerard J. Schmith, Director
Center for Revenue and Regulation Compliance

TO: **Commissioners**

FROM: **HSCRC Staff**

DATE: **May 11, 2016**

RE: **Hearing and Meeting Schedule**

June 8, 2016	To be determined - 4160 Patterson Avenue HSCRC/MHCC Conference Room
July 13, 2016	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 10:45 a.m. and 11:45 a.m., respectively.

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://www.hscrc.maryland.gov/commission-meetings-2016.cfm

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