Final Recommendation for Modifying the Maryland Hospital Acquired Conditions Programs for FY 2016

Health Services Cost Review Commission
4160 Patterson Avenue Baltimore, MD 21215
(410) 764-2605

April 9, 2014

This document contains the final staff recommendations for updating the Maryland Hospital Acquired Conditions (MHAC) Program for FY 2016 as approved by the Commission on April 9, 2014.

A. Introduction

The HSCRC quality-based payment methodologies are important policy tools for providing strong incentives for hospitals to improve their quality performance over time.

Current HSCRC approved policy calls for the revenue neutral scaling of hospitals in allocating rewards and penalties based on performance on the HCSRC's Maryland Hospital Acquired Conditions ("MHAC") initiative, with the net increases in rates for better performing hospitals funded entirely by net decreases in rates for poorer performing hospitals. The term "scaling" refers to the differential allocation of a pre-determined portion of base regulated hospital revenue contingent on assessment of the relative quality of hospital performance. The rewards (positive scaled amounts) or penalties (negative scaled amounts) are then applied to each hospital's revenue on a "one-time" basis (and not considered permanent revenue). In its January 2014 meeting, the Commission approved scaling 3% for the MHAC program (2% for performance and 1% for improvement) in a revenue neutral manner with a notification that there might be changes to the program to align with the Centers for Medicare and Medicaid Innovation (CMMI) All-payer model demonstration contract.

In order to enhance our ability to incentivize hospital care improvements and meet the targets proposed in the CMMI All-payer model demonstration contract that began on January 1, 2014, the Commission has convened four meetings of the Performance Measurement Workgroup to deliberate near-term issues related to the MHAC initiative. These include, for example, shifting from revenue neutral scaling to pre-established performance targets where hospitals earn up to full credit if they meet the targets. The Payment Models Workgroup discussed the scaling methodology at their two meetings in March and a subgroup meeting with representation for the Payment Models and Performance Measurement Workgroups was convened to work through the details of the proposed methodology.

Within the context of the Workgroup activity, staff has developed this recommendation to update the measurement, scoring and scaling methodologies to translate scores into rate adjustments for the MHAC initiative for performance in calendar year 2014 (beginning January 1, 2014). These updates are to be applied to FY 2016 rates for each hospital.

B. Background

1. Centers for Medicare & Medicaid Services (CMS) Hospital Acquired Conditions (HAC) Program

The federal HAC program began in FFY 2012 when CMS disallowed an increase in DRG payment for cases with added complications in 14 narrowly defined categories. Beginning in FFY 2015, CMS established a second HAC program, which reduces payments of hospitals with scores in the top quartile for the performance period on their rate of Hospital Acquired Conditions as compared to the national average. In FY 2015, the maximum reduction is one percent of total DRG payments.

The CMS HAC measures for FY 2015 are listed in Appendix I.

2. *MHAC Measures, Scaling and Magnitude at Risk to Date*

The MHAC program, which began in state FY 2011, currently uses a large subset of the 65 Potentially Preventable Complications (PPCs) developed by 3M Health Information Systems. The PPC software computes actual versus expected number of complications adjusted for each patient by the All Patient Refined Diagnosis Related Group ("APR DRG"), and severity of illness ("SOI") category. The attainment scale measures the proportion of each hospital's inpatient revenue from excess PPCs (calculated as cost*(actual minus expected number of PPCs compared to the benchmarks). The cost of each PPC is determined by a regression analysis and is updated every year. For FY 15, the expected performance benchmark is calculated using a value of 15% below the statewide average for each PPC used in the MHAC program. The improvement scale was implemented for the first time in FY14 and focused on rewarding hospitals for improvements in five high cost high prevalence PPCs. For FYs 14 and 15, the Commission approved targeting improvement for scaling 1% of inpatient revenue, bringing the "at risk" revenue to 3% for the MHAC program. Appendix II lists the measures used for the MHAC program for FY 2015.

For the MHAC program, the earlier QBR MHAC work group convened in December 2013 to discuss modifications. Representing the industry, the MHA presented the following issues of concern (See Appendix III):

- the MHAC reduction goals should be more directly aligned with the new waiver targets;
- there is little hospital-level predictability of revenue rewards and penalties; and,
- the scaling approach also promotes competition rather than collaboration and sharing of best practices to reduce MHACs.

The MHA strongly advised the Commission to consider a revised MHAC approach that could be applied retroactively beginning January 1, 2014.

As a fall back to overhauling of the MHAC program methodology that could be successfully implemented for rate year 2016, Commission staff presented the following modifications to the current MHAC methodology:

- Through the effort of the Performance Measurement Workgroup to begin in January 2014, work to adapt the MHAC policy to the new waiver requirements with a reasonable implementation period that is consistent with the new all-payer model.
- Absent Commission approval of a revised MHAC policy, continue the current MHAC policy for FY 2016 (which provides for 2% at risk for attainment and 1% for improvement) and increase the benchmark to establish the expected MHAC values for attainment to 75% of the statewide average, which represents a more linear relationship between scaling and performance.

C. Assessment

Since the inception of the program and as is currently the case, HSCRC solicits input from stakeholder groups comprising the industry including payers to determine appropriate

direction regarding areas of needed updates to the programs. These include the measures used, and the program's methodology components.

The Performance Measurement Workgroup has deliberated pertinent issues and potential changes to current Commission policy necessary to enhance our ability to successfully achieve the in-hospital complication reduction target set forth in the contract with CMMI— a 30% reduction in MHACs over five years. In its four meetings, the Workgroup has considered overall guiding principles, a revised approach for calculating hospital scores and translating them into payment, and incremental first year annual reduction targets for the MHAC program.

1. *Overall Guiding Principles*

Commission staff vetted several guiding principles for the revised MHAC program that overlap significantly with those identified by the MHA. They include:

- Program must improve care for all patients, regardless of payer.
- Breadth and impact of the program must meet or exceed the Medicare national program in terms of measures and revenue at risk.
- Program should identify predetermined performance targets and financial impact.
- First year target for the program must be established in context of the trends of complication reductions seen in the previous years as well as the need to achieve the new All-payer model goal of a 30% cumulative reduction by 2018.
- Program should prioritize high volume, high cost, opportunity for improvement and areas of national focus.
- Program design should encourage cooperation and sharing of best practices.
- Program scoring method should hold hospitals harmless for lack of improvement if attainment is highly favorable.
- Hospitals should have ability to track progress during the performance period.

2. *Proposed Revised Measurement Methodology*

The MHA and HSCRC staff presented the key methodology changes over the course of the Performance Measurement Workgroup meetings convened to date.

The discussion entailed a shift to using observed to expected ratios as the basis of the measurement for each PPC and establishing thresholds and benchmarks for each of the 65 PPC measures. It also involved calculating a hospital score of zero to ten for each PPC based on where a hospital's score falls between the thresholds and benchmarks for attainment, and the difference from the hospital's own base score for improvement. The final score is based on the better of an attainment or improvement score for each PPC (similar to QBR scoring), and is the sum of each of the PPC scores.

To target high volume, high cost PPCs and those with potentially greater opportunity for improvement or of national focus, the revised methodology proposes tiering the PPCs in groups and assigning a higher weight of the scores for the "top tier" target PPCs of priority. The Workgroup also discussed rules to address measurement stability issues, e.g., hospitals must have at least 1 expected and 10 at risk cases for the PPC to be included.

To translate the scores into payment, HSCRC staff supports setting statewide goals and proposes to differentiate the maximum revenue at risk based on the target level. Appendix IV provides additional PPC measurement and scoring details.

As part of the CMMI contract, the aggregate maximum revenue at risk in Maryland quality/performance based payment programs must be equal to or greater than the aggregate maximum revenue at risk in the CMS Medicare quality programs. Since the CMMI contract performance year is a calendar year, and CMS fiscal year is different than state fiscal year, CMMI proposed to calculate calendar year percent at risk amounts using months they were effective. Below would be the CY 2014 calculations for federal and state aggregate amount at risk:

Federal Aggregate Percent at Risk Amount Calculations: (FY2014*9/12) + (FY2015*3/12)

State Aggregate Percent at Risk Amount Calculations= (FY2014*6/12) + (FY2015*6/12)

For FY 2014, HSCRC staff is proposing that CMMI consider an exemption to this calculation, since the quality-based adjustments have been implemented in Jan 2014 and were doubled to reflect the impact of full fiscal year. In addition to the MHAC, QBR and Readmission Reduction programs, HSCRC staff is that CMMI consider including the potentially avoidable utilization adjustments and revenues at risk due to cost efficiency constraints in global budget contracts in the calculation of aggregate amounts at risk. Appendix V provides the calculations for CY 2014 and CY2015 as proposed based on the current or proposed policies.

Lastly, the comparison of aggregate amounts at risk should take into account the differences in the base revenues to which these adjustments are applied. While the majority of the CMS programs use Medicare base operating DRG payments to assess the penalties and rewards, Maryland programs are based on permanent inpatient revenue, which includes additional payments for Direct Medical Education, Graduate Medical Education, Uncompensated care (similar to Disproportionate share payments), and wage differences. HSCRC staff is working with CMMI to make appropriate adjustments to align the definitions of base revenues for the calculations.

Although the minimum required improvement to reach 30% reduction in five years is 6.87%, staff recommends a higher first year improvement target consistent with the PPC reduction increase trends from FY 2010 to 2013, as illustrated in Figure 1.

Figure 1. PPC Reduction Trends FY 10 to FY 13

Potentially Preventable Complication (PPC) Rates in Maryland- State FY2010-FY2013										
	PPC RATES				Annual Change					
	FY10	FY11	FY12	FY13	FY11	FY12	FY13		Average Annual Change	Total FY10-FY13 Change
TOTAL NUMBER OF COMPLICATIONS	53,494	48,416	42,118	34,200	-9.5%	-13.0%	-18.8%		**-13.8%**	-36.1%
UNADJUSTED COMPLICATION RATE PER 1,000 AT RISK CASES	1.92	1.82	1.65	1.41	-5.2%	-9.3%	-14.5%		**-9.7%**	-26.6%
RISK ADJUSTED COMPLICATION RATE PER 1,000 AT RISK CASES	1.92	1.77	1.58	1.3	-7.8%	-10.7%	-17.7%		**-12.1%**	-32.3%

Based on PPC v.30.

The Performance Measurement and Payment Models Workgroups considered several options for applying penalties and rewards. One of the options considered is illustrated below. Ultimately, the Workgroups agreed that the approach proposed in the recommendation section is a more equitable, transparent and simplistic approach.

In its written submission to HSCRC's call for white papers on Quality Based Reimbursement, MHA submitted an alternative proposal for a total maximum revenue at risk of 3% and a statewide target of 6.89% for CY 2014. MHA's full white paper submission entitled "Quality-Related Payment Policies HSCRC Waiver Implementation February 28, 2014" is in Appendix VI.

To provide predictability for the financial rewards and penalties, staff proposes continuous scaling with preset positions on the scale calculated using base year performance scores. Once the base year performance scores are calculated and percent reductions and rewards are determined, the same scale will be used to apply the rewards/penalties for each hospital based on its scores in the performance period.

D. Recommendations

After consideration of both the Performance Measurement and Payment Models Workgroup deliberations, staff provides the following recommendations effective for CY 2014 performance year that we will continue to vet with stakeholders.

1. Measure hospital performance using Observed (O)/Expected (E) value for each PPC. Define the minimum threshold value to begin earning points as the weighted mean of all O/E ratios (O/E =1). Define the benchmark value where a full 10 points is earned as the weighted mean of top quartile O/E ratio. Establish appropriate exclusion rules to enhance measurement fairness and stability.

2. Set benchmark at zero for PPCs that are serious reportable events (Appendix VI).

3. Prioritize PPCs that are high cost, high volume, have opportunity to improve, and are of national priority by tiering the PPCs in groups and weighting the groups in the final hospital score commensurate with the level of priority.

4. Establish tiered scaling based on state-wide MHAC performance and update annually based on the trends and CMMI contract goals.

5. Calculate rewards/penalties using preset positions on the scale based on the base year scores (Appendix VII).

6. For CY 2014 performance year (Appendix VIII):
    a. Set minimum MHAC statewide target at 8% improvement with a maximum revenue at risk of 4% of permanent inpatient revenue if this target is missed.
    b. Set maximum revenue at risk at 1% of permanent inpatient revenue if CY 2014 target stated in 6.a. is met. Provide rewards to hospitals with more than 0.60 score up to 1% of permanent inpatient revenue provided sufficient funds are collected through penalties.
    c. Set a maximum state-wide total penalty limit at 0.5% of permanent inpatient revenue.

Appendix I. CMS HAC Measures for FY 2015

CMS HAC MEASURES Implemented Since FY 2012

HAC 01: Foreign Object Retained After Surgery
HAC 02: Air Embolism
HAC 03: Blood Incompatibility
HAC 04: Stage III & Stage IV Pressure Ulcers
HAC 05: Falls and Trauma
HAC 06: Catheter-Associated Urinary Tract Infection
HAC 07: Vascular Catheter-Associated Infection
HAC 08: Surgical Site Infection - Mediastinitis After Coronary Artery Bypas Graft (CABG)
HAC 09: Manifestations of Poor Glycemic Control
HAC 10: Deep Vein Thrombosis/Pulmonary Embolism with Total Knee Replacement or Hip Replacement
HAC 11: Surgical Site Infection – Bariatric Surgery
HAC 12: Surgical Site Infection – Certain Orthopedic Procedure of Spine, Shoulder, and Elbow
HAC 13: Surgical Site Infection Following Cardiac Device Procedures
HAC 14: Iatrogenic Pneumothorax w/Venous Catheterization

CMS HAC Measures Implemented FY 2015

- Domain 1- the Agency for Health Care Research and Quality (AHRQ) composite PSI #90 which includes the following indicators:
    - Pressure ulcer rate (PSI 3);
    - Iatrogenic pneumothorax rate (PSI 6);
    - Central venous catheter-related blood stream infection rate (PSI 7);
    - Postoperative hip fracture rate (PSI 8);
    - Postoperative pulmonary embolism (PE) or deep vein thrombosis rate (DVT) (PSI 12);
    - Postoperative sepsis rate (PSI 13);
    - Wound dehiscence rate (PSI 14); and
    - Accidental puncture and laceration rate (PSI 15).
- Domain 2- two healthcare-associated infection measures developed by the Centers for Disease Control and Prevention's (CDC) National Health Safety Network:
    - Central Line-Associated Blood Stream Infection and
    - Catheter-Associated Urinary Tract Infection.

Appendix II: MHAC Measures, FY 2015

	MHAC Measures	Rate Year 2015 (Based on FY2012 Q1234 Data)			
PPC #	PPC Description	Adm $	Adm T	Cases	Notes
			T Value<1.96		Exclusion Reason
1	Stroke & Intracranial Hemorrhage	$13,527.00	34.48	825	
2	Extreme CNS Complications	$14,228.00	25.38	415	
3	Acute Pulmonary Edema and Respiratory Failure without Ventilation	$9,808.00	57.56	4635	
4	Acute Pulmonary Edema and Respiratory Failure with Ventilation	$32,783.00	80.64	780	
5	Pneumonia & Other Lung Infections	$20,888.00	102.53	3174	
6	Aspiration Pneumonia	$16,628.00	55.74	1423	
7	Pulmonary Embolism	$15,051.00	32.59	583	
8	Other Pulmonary Complications	$9,405.00	49.36	3659	
9	Shock	$19,321.00	65.17	1506	
10	Congestive Heart Failure	$6,375.00	19.93	1235	
11	Acute Myocardial Infarction	$8,294.00	23.2	985	
12	Cardiac Arrythmias & Conduction Disturbances	$2,586.00	6.22	977	
13	Other Cardiac Complications	$5,664.00	7.34	207	
14	Ventricular Fibrillation/Cardiac Arrest	$20,204.00	47.42	706	
15	Peripheral Vascular Complications Except Venous Thrombosis	$16,972.00	21.58	202	
16	Venous Thrombosis	$17,730.00	50.87	1047	
17	Major Gastrointestinal Complications without Transfusion or Significant Bleeding	$15,508.00	35.18	639	
18	Major Gastrointestinal Complications with Transfusion or Significant Bleeding	$20,802.00	29.6	250	
19	Major Liver Complications	$21,822.00	35.52	333	
20	Other Gastrointestinal Complications without Transfusion or Significant Bleeding	$14,443.00	25.43	388	
21	Clostridium Difficile Colitis	$17,412.00	60.61	1524	Clinical
22	Urinary Tract Infection	$0.00	.	0	
23	GU Complications Except UTI	$7,016.00	12.72	407	
24	Renal Failure without Dialysis	$8,248.00	59.86	6925	
25	Renal Failure with Dialysis	$41,311.00	49.57	179	
26	Diabetic Ketoacidosis & Coma	$8,617.00	5.22	45	
27	Post-Hemorrhagic & Other Acute Anemia with Transfusion	$6,618.00	19.35	1070	
28	In-Hospital Trauma and Fractures	$8,560.00	8.9	134	
29	Poisonings Except from Anesthesia	$-1,331	-1.31	119	t-value
30	Poisonings due to Anesthesia	$14,971.00	1.34	1	t-value+case
31	Decubitus Ulcer	$32,815.00	49.94	288	
32	Transfusion Incompatibility Reaction	$21,835.00	1.97	1	t-value+case
33	Cellulitis	$10,216.00	26.15	831	
34	Moderate Infectious	$22,835.00	50.37	621	
35	Septicemia & Severe Infections	$18,853.00	68.29	1823	
36	Acute Mental Health Changes	$3,787.00	8.76	659	
37	Post-Operative Infection & Deep Wound Disruption Without Procedure	$16,777.00	46.81	1052	
38	Post-Operative Wound Infection & Deep Wound Disruption with Procedure	$34,433.00	29.67	93	
39	Reopening Surgical Site	$16,986.00	19.38	163	
40	Post-Operative Hemorrhage & Hematoma without Hemorrhage Control Procedure or I&D	$9,819.00	41.69	2283	
41	Post-Operative Hemorrhage & Hematoma with Hemorrhage Control Procedure or I&D Pr	$13,367.00	15.73	171	
42	Accidental Puncture/Laceration During Invasive Procedure	$6,503.00	19.09	1087	
43	Accidental Cut or Hemorrhage During Other Medical Care	$259.00	0.17	54	t-value
44	Other Surgical Complication - Mod	$14,852.00	22.46	284	
45	Post-procedure Foreign Bodies	$1,762.00	0.8	27	t-value
46	Post-Operative Substance Reaction & Non-O.R. Procedure for Foreign Body	$-8,577	-1.05	2	t-value+case
47	Encephalopathy	$11,772.00	36.2	1194	
48	Other Complications of Medical Care	$18,559.00	42	640	
49	Iatrogenic Pneumothrax	$9,534.00	23.58	782	
50	Mechanical Complication of Device, Implant & Graft	$16,993.00	34	495	
51	Gastrointestinal Ostomy Complications	$26,871.00	40.61	284	
52	Inflammation & Other Complications of Devices, Implants or Grafts Except Vascular Infec	$11,290.00	30.89	954	
53	Infection, Inflammation & Clotting Complications of Peripheral Vascular Catheters & Infus	$14,455.00	20.57	250	
54	Infections due to Central Venous Catheters	$29,152.00	45.6	315	
55	Obstetrical Hemorrhage without Transfusion	$406.00	1.39	1494	Clinical
56	Obstetrical Hemorrhage wtih Transfusion	$3,723.00	8.09	605	
57	Obstetric Lacerations & Other Trauma Without Instrumentation	$436.00	1.33	1160	t-value
58	Obstetric Lacerations & Other Trauma With Instrumentation	$609.00	1.11	409	t-value
59	Medical & Anesthesia Obstetric Complications	$1,239.00	2.8	646	
60	Major Puerperal Infection and Other Major Obstetric Complications	$-625	-0.58	107	t-value
61	Other Complications of Obstetrical Surgical & Perineal Wounds	$1,276.00	1.54	181	t-value
62	Delivery with Placental Complications	$688.00	1.03	281	t-value
63	Post-Operative Respiratory Failure with Tracheostomy	$103,152.00	62.65	46	Clinical
64	Other In-Hospital Adverse Events	$5,354.00	10.89	509	Clinical
65	Urinary Tract Infection without Catheter	$14,313.00	77.79	3794	
66	Catheter-Related Urinary Tract Infection	$11,718.00	10.18	93	

Note: Yellow and Gray Shaded PPCs are excluded. Green shaded PPCs are also used for the improvement measurement.

Appendix III. MHA MHAC Policy Change Considerations

Maryland
Hospital Association

MHA
6820 Deerpath Road
Elkridge, Maryland 21075-6234
Tel: 410-379-6200
Fax: 410-379-8239

DRAFT

MHAC Payment Policy Changes

- Ensure we achieve waiver targets
- Match payment policy metrics to waiver target metrics as closely as possible
- Set targets and reward/penalty in advance—Eliminate scaling
- Straightforward methodology and easy to monitor progress
- Encourage cooperation and sharing of best practices

- Selecting PPCs on which to focus—asking for input from quality
  - Top 10 by dollar amount (Actual number of PPCs x PPC weight) + a few others
  - Sweet spot of high volume combined with high cost and ability to affect change

- Setting statewide targets
  - How much would the state save and how many PPCs would be reduced if all hospitals performed at the 75th percentile (for example) on all of the target PPCs

- Set targets for each hospital
  - Case-mix adjusted
  - May not expect same amount of improvement for each PPC—the improvement rate varies dramatically by PPC
  - Ability to improvement may depend on starting point—coding and documentation practices are highly influential for certain PPCs

- Create stepped or progressive targets tied to progressive earn back amounts

Appendix IV: Revised PPC Measurement Detail

Definitions

The PPC measure would then be defined as:

Observed (O)/Expected (E) value for each measure

The threshold value is the minimum performance level at which a hospital will be assigned points and is defined as:

Weighted mean of all O/E ratios (O/E =1)

(*Mean performance is measured at the case level. In addition, higher volume hospitals have more influence on PPCs' means.)*

The benchmark value is the performance level at which a full ten points would be assigned for a PPC and is defined as:

Weighted mean of top quartile O/E ratio

For PPCs that are never events, the benchmark will be set at 0.

Performance Points

Performance points are given based on a range between "Benchmark" and a "Threshold", which are determined using the base year data. The Benchmark is a reference point defining a high level of performance, which is equal to the mean of the top quartile. Hospitals whose rates are equal to or above the benchmark receive 10 full Attainment points.

The Threshold is the minimum level of performance required to receive minimum Attainment points, which is set at the weighted mean of all the O/E ratios which equals to 1. The Improvement points are earned based on a scale between the hospital's prior year score (baseline) on a particular measure and the Benchmark and range from 0 to 9.

The formulas to calculate the Attainment and Improvement points are as follows:

- Attainment Points: [9 * ((Hospital's performance period score - threshold)/ (benchmark –threshold))] + .5, where the hospital performance period score falls in the range from the threshold to the benchmark

- Improvement Points: [10 * ((Hospital performance period score -Hospital baseline period score)/(Benchmark - Hospital baseline period score))] -.5, where the hospital performance score falls in the range from the hospital's baseline period score to the benchmark

Tier A
Selected as high cost, high volume statewide plus those that match CMS HAC policy of AHRQ Patient Safety Indicators
3 Acute Pulmonary Edema and Respiratory Failure without Ventilation
4 Acute Pulmonary Edema and Respiratory Failure with Ventilation
5 Pneumonia & Other Lung Infections
6 Aspiration Pneumonia
7 Pulmonary Embolism
9 Shock
14 Ventricular Fibrillation/Cardiac Arrest
16 Venous Thrombosis
24 Renal Failure without Dialysis
28 In-Hospital Trauma and Fractures
31 Decubitus Ulcer
35 Septicemia & Severe Infections
37 Post-Operative Infection & Deep Wound Disruption Without Procedure
38 Post-Operative Wound Infection & Deep Wound Disruption with Procedure
40 Post-Operative Hemorrhage & Hematoma without Hemorrhage Control Procedure or I&D Proc
42 Accidental Puncture/Laceration During Invasive Procedure
49 Iatrogenic Pneumothrax
54 Infections due to Central Venous Catheters
65 Urinary Tract Infection without Catheter
66 Catheter-Related Urinary Tract Infection

Tier B
Selected as remaining PPCs with high Medicare percentage (>60%) and high number of Maryland hospitals (>43)
8 Other Pulmonary Complications
10 Congestive Heart Failure
11 Acute Myocardial Infarction
17 Major Gastrointestinal Complications without Transfusion or Significant Bleeding
18 Major Gastrointestinal Complications with Transfusion or Significant Bleeding
19 Major Liver Complications
27 Post-Hemorrhagic & Other Acute Anemia with Transfusion
41 Post-Operative Hemorrhage & Hematoma with Hemorrhage Control Procedure or I&D Proc
48 Other Complications of Medical Care

Tier C
Remaining PPCs
1 Stroke & Intracranial Hemorrhage
2 Extreme CNS Complications
12 Cardiac Arrythmias & Conduction Disturbances
13 Other Cardiac Complications
15 Peripheral Vascular Complications Except Venous Thrombosis
20 Other Gastrointestinal Complications without Transfusion or Significant Bleeding
21 Clostridium Difficile Colitis
23 GU Complications Except UTI
25 Renal Failure with Dialysis
26 Diabetic Ketoacidosis & Coma
29 Poisonings Except from Anesthesia
30 Poisonings due to Anesthesia
32 Transfusion Incompatibility Reaction
33 Cellulitis
34 Moderate Infectious
36 Acute Mental Health Changes
39 Reopening Surgical Site
43 Accidental Cut or Hemorrhage During Other Medical Care
44 Other Surgical Complication - Mod
45 Post-procedure Foreign Bodies
46 Post-Operative Substance Reaction & Non-O.R. Procedure for Foreign Body
47 Encephalopathy
50 Mechanical Complication of Device, Implant & Graft
51 Gastrointestinal Ostomy Complications
52 Inflammation & Other Complications of Devices, Implants or Grafts Except Vascular Infection
53 Infection, Inflammation & Clotting Complications of Peripheral Vascular Catheters & Infusions
55 Obstetrical Hemorrhage without Transfusion
56 Obstetrical Hemorrhage wtih Transfusion
57 Obstetric Lacerations & Other Trauma Without Instrumentation
58 Obstetric Lacerations & Other Trauma With Instrumentation
59 Medical & Anesthesia Obstetric Complications
60 Major Puerperal Infection and Other Major Obstetric Complications
61 Other Complications of Obstetrical Surgical & Perineal Wounds
62 Delivery with Placental Complications
63 Post-Operative Respiratory Failure with Tracheostomy
64 Other In-Hospital Adverse Events

Appendix V. Medicare and Maryland Performance-based Payments Revenues at Risk and Calendar Year Calculations

Program	Year	Medicare	Maryland
		% Revenue at Risk	
	FY 2009		
VBP/QBR			**0.50%**
	FY 2010		
VBP/QBR			**0.50%**
	FY 2011		
VBP/QBR			0.50%
HAC/MHAC			0.50%
TOTAL			**1.00%**
	FY 2012		
VBP/QBR			0.50%
HAC/MHAC			1.00%
TOTAL			**1.50%**
	FY 2013		
VBP/QBR		1.00%	0.50%
HAC/MHAC			2.00%
HRRP		1.00%	
TOTAL		**2.00%**	**2.50%**
	FY 2014		
VBP/QBR		1.25%	0.50%
HAC/MHAC			2.00%
HRRP/Readmission Shared Savings		2.00%	0.41%
GBR Potentially Avoidable Utilization Efficiency Adjustment			To be Determined after the Completion of GBR contracts
GBR Cost Efficiency Constraint			To be Determined after the Completion of GBR contracts
TOTAL		**3.25%**	**2.91%**
	FY 2015		
VBP/QBR		1.50%	0.50%
HAC/MHAC		1.00%	3.00%
HRRP/Readmission Shared Savings		3.00%	To be Proposed at May 2014 Commission Meeting
GBR Potentially Avoidable Utilization Efficiency Adjustment			To be Determined after the Completion of GBR contracts
GBR Cost Efficiency Constraint			To be Determined after the Completion of GBR contracts
TOTAL		**5.50%**	**3.50%**

Program	Year	Medicare	Maryland
		% Revenue at Risk	
	FY 2016		
VBP/QBR		1.75%	1.00%
HAC/MHAC		1.00%	4.00%
HRRP/Readmission Shared Savings Program		3.00%	To be Proposed at May 2015 Commission Meeting
Readmission Reduction Incentive Program			0.50% (Proposed)
GBR Potentially Avoidable Utilization Efficiency Adjustment			To be Determined after the Completion of GBR contracts
GBR Cost Efficiency Constraint			To be Determined after the Completion of GBR contracts
Total		**5.75%**	**5.50%**

Waiver Calendar Year Calculations based on Existing and Proposed Policies

	Medicare	Maryland	Cumulative Difference
CY 2014	3.8%	3.2%	-0.6%
CY 2015	5.6%	4.5%	-1.7%

Appendix VI. MHA White Paper Submission on Quality Based Reimbursement Programs entitled "Quality-Related Payment Policies HSCRC Waiver Implementation February 28, 2014."

NOTE: This submission also addresses the Final Recommendation for Implementing Readmissions Reduction Incentive Program for FY 2016 and is repeated in Appendix VI of that recommendation.

Appendix VI. List of Serious Reportable Events

MHA's Recommendations for PPCs Appropriate for Setting Benchmark at Zero

- In assessing which PPCs could have a benchmark set at zero, we looked to the *National Quality Forum's Serious Reportable Events in Healthcare –2011 Update: A Consensus Report* to see how closely the PPC matched one of these events.

- The SREs are a group of NQF-endorsed consensus standards that are specifically aimed at improving patient safety. They were selected by a multi-stakeholder steering committee and evaluated according to three main criteria: unambiguous, largely preventable, and serious. The definition of "largely preventable" "recognizes that some of the events are not universally avoidable given the complexity of health care and current knowledge." "Serious" is defined as "an event that can result in death, loss of a body part, disability, loss of bodily function, or require major intervention for correction (e.g., higher level of care, surgery)."

- We would recommend that the PPCs that could have benchmarks set at zero be referred to as "serious reportable events" rather than "never events," to align with the NQF Consensus Standards.

PPC #	PPC Name	Statewide Volume October 2012 - September 2013	On NQF List	NQF SRE
PPC 32	Transfusion Incompatibility Reaction	1	No	4B Patient death or serious injury associated with unsafe administration of blood products
PPC 45	Post-procedure Foreign Bodies	21	Yes	1D Unintended retention of a foreign object in a patient after surgery or other invasive procedure
PPC 46	Post-operative Substance Reaction and Non- OR Procedure for Foreign Body	3	Yes	1D Unintended retention of a foreign object in a patient after surgery or other invasive procedure
PPC 31	Pressure Ulcer	121	Yes	4R Any Stage 3, Stage 4, and unstageable pressure ulcers acquired after admission/ presentation to a health care setting

Appendix VII. Performance Scoring Scale for FY 2016

Final MHAC Score	Equal or Below State Quality Target	Exceed State Quality Target
=<0.14	**-4.00%**	**-1.00%**
0.15	-3.89%	-0.97%
0.16	-3.78%	-0.94%
0.17	-3.68%	-0.91%
0.18	-3.57%	-0.88%
0.19	-3.46%	-0.84%
0.20	-3.35%	-0.81%
0.21	-3.24%	-0.78%
0.22	-3.14%	-0.75%
0.23	-3.03%	-0.72%
0.24	-2.92%	-0.69%
0.25	-2.81%	-0.66%
0.26	-2.70%	-0.63%
0.27	-2.59%	-0.59%
0.28	-2.49%	-0.56%
0.29	-2.38%	-0.53%
0.30	-2.27%	-0.50%
0.31	-2.16%	-0.47%
0.32	-2.05%	-0.44%
0.33	-1.95%	-0.41%
0.34	-1.84%	-0.37%
0.35	-1.73%	-0.34%
0.36	-1.62%	-0.31%
0.37	-1.51%	-0.28%
0.38	-1.41%	-0.25%
0.39	-1.30%	-0.22%
0.40	-1.19%	-0.19%
0.41	-1.08%	-0.16%
0.42	-0.97%	-0.12%
0.43	-0.86%	-0.09%
0.44	-0.76%	-0.06%
0.45	-0.65%	-0.03%
0.46	-0.54%	0.00%
0.47	-0.43%	0.00%
0.48	-0.32%	0.00%
0.49	-0.22%	0.00%
0.50	-0.11%	0.00%
0.51	0.00%	0.00%

Final MHAC Score	Equal or Below State Quality Target	Exceed State Quality Target
….	0.00%	0.00%
0.61	0.00%	0.07%
0.62	0.00%	0.14%
0.63	0.00%	0.21%
0.64	0.00%	0.29%
0.65	0.00%	0.36%
0.66	0.00%	0.43%
0.67	0.00%	0.50%
0.68	0.00%	0.57%
0.69	0.00%	0.64%
0.70	0.00%	0.71%
0.71	0.00%	0.79%
0.72	0.00%	0.86%
0.73	0.00%	0.93%
0.74 =<	**0.00%**	**1.00%**

Penalty threshold:	**0.51**	**0.46**
Reward Threshold	**No rewards**	**0.60**

Appendix VIII. Scaling Modeling for FY 2016

Hospital ID	Hospital Name	FY 2014 CPC/CPE Revenue*	Base CY13 Score	Projected MHAC SCORE For Performance Year with 8% Improvement	Scenario 1: Scaling for Below State Quality Target of 8%		Projected MHAC SCORE For Performance Year with 12% Improvement	Scenario 2: Scaling for Exceed Target of 8% Improvement	
					% Adjustment -4.00%	$ Adjustment		% Adjustment -1.00%	$ Adjustment
	MAXIMUM PENALTY								
210022	SUBURBAN	$151,177,296	0.14	0.22	-3.14%	$ (4,739,613)	0.27	-0.59%	$ (897,615)
210048	HOWARD COUNTY	$146,791,098	0.19	0.27	-2.59%	$ (3,808,634)	0.31	-0.47%	$ (688,083)
210019	PENINSULA REGIONAL	$219,461,838	0.20	0.28	-2.49%	$ (5,456,889)	0.33	-0.41%	$ (891,564)
210009	JOHNS HOPKINS	$807,708,384	0.21	0.28	-2.49%	$ (20,083,560)	0.33	-0.41%	$ (3,281,315)
210044	G.B.M.C.	$184,989,402	0.21	0.29	-2.38%	$ (4,399,748)	0.34	-0.38%	$ (693,710)
210001	MERITUS	$165,746,592	0.22	0.29	-2.38%	$ (3,942,081)	0.35	-0.34%	$ (569,754)
210040	NORTHWEST	$121,348,486	0.22	0.30	-2.27%	$ (2,754,939)	0.36	-0.31%	$ (379,214)
210012	SINAI	$362,977,920	0.24	0.31	-2.16%	$ (7,848,171)	0.37	-0.28%	$ (1,020,875)
210024	UNION MEMORIAL	$215,726,275	0.25	0.33	-1.95%	$ (4,197,917)	0.38	-0.25%	$ (539,316)
210004	HOLY CROSS	$276,326,064	0.27	0.35	-1.73%	$ (4,779,694)	0.40	-0.19%	$ (518,111)
210002	UNIVERSITY OF MARYLAND	$600,197,666	0.28	0.37	-1.51%	$ (9,084,073)	0.40	-0.19%	$ (1,125,371)
210043	BALTIMORE WASHINGTON MEDICAL CENTER	$184,662,660	0.28	0.35	-1.73%	$ (3,194,165)	0.41	-0.16%	$ (288,535)
210063	UMST. JOSEPH	$180,611,979	0.28	0.34	-1.84%	$ (3,319,355)	0.41	-0.16%	$ (282,206)
210062	SOUTHERN MARYLAND	$145,134,232	0.29	0.36	-1.62%	$ (2,353,528)	0.42	-0.13%	$ (181,418)
210006	HARFORD	$42,495,040	0.31	0.38	-1.41%	$ (597,228)	0.42	-0.13%	$ (53,119)
210008	MERCY	$191,948,526	0.31	0.38	-1.41%	$ (2,697,655)	0.44	-0.06%	$ (119,968)
210029	HOPKINS BAYVIEW MED CTR	$248,923,504	0.32	0.40	-1.19%	$ (2,960,171)	0.44	-0.06%	$ (155,577)
210049	UPPER CHESAPEAKE HEALTH	$115,418,544	0.32	0.41	-1.08%	$ (1,247,768)	0.44	-0.06%	$ (72,137)
210058	REHAB & ORTHO	$45,850,528	0.32	0.40	-1.19%	$ (545,250)	0.44	-0.06%	$ (28,657)
210032	UNION HOSPITAL OF CECIL COUNT	$60,653,880	0.34	0.41	-1.08%	$ (655,718)	0.45	-0.03%	$ (18,954)
210051	DOCTORS COMMUNITY	$119,486,136	0.34	0.40	-1.19%	$ (1,420,916)	0.45	-0.03%	$ (37,339)
210023	ANNE ARUNDEL	$250,956,754	0.35	0.42	-0.97%	$ (2,441,741)	**0.46**	0.00%	$ -
210027	WESTERN MARYLAND HEALTH SYSTEM	$159,433,379	0.35	0.43	-0.86%	$ (1,378,883)	0.47	0.00%	$ -
210005	FREDERICK MEMORIAL	$169,309,101	0.36	0.42	-0.97%	$ (1,647,332)	0.47	0.00%	$ -
210010	DORCHESTER	$28,755,684	0.36	0.43	-0.86%	$ (248,698)	0.47	0.00%	$ -
210018	MONTGOMERY GENERAL	$79,741,456	0.36	0.44	-0.76%	$ (603,449)	0.48	0.00%	$ -
210033	CARROLL COUNTY	$118,189,180	0.37	0.43	-0.86%	$ (1,022,177)	0.48	0.00%	$ -
210015	FRANKLIN SQUARE	$241,740,018	0.38	0.45	-0.65%	$ (1,568,043)	0.49	0.00%	$ -
210037	EASTON	$82,689,144	0.39	0.47	-0.43%	$ (357,575)	0.50	0.00%	$ -
210016	WASHINGTON ADVENTIST	$155,015,406	0.40	0.47	-0.43%	$ (670,337)	0.50	0.00%	$ -
210011	ST. AGNES	$209,768,089	0.44	**0.51**	0.00%	$ -	0.54	0.00%	$ -
210034	HARBOR	$116,221,680	0.45	0.51	0.00%	$ -	0.55	0.00%	$ -
210055	LAUREL REGIONAL	$53,358,994	0.45	0.53	0.00%	$ -	0.57	0.00%	$ -
210003	PRINCE GEORGE	$163,265,581	0.46	0.52	0.00%	$ -	0.57	0.00%	$ -
210038	UMMC MIDTOWN	$105,819,110	0.46	0.53	0.00%	$ -	0.57	0.00%	$ -
210060	FT. WASHINGTON	$16,249,592	0.50	0.57	0.00%	$ -	0.60	0.00%	$ -
210039	CALVERT	$57,493,422	0.51	0.58	0.00%	$ -	**0.61**	0.07%	$ 41,067
210057	SHADY GROVE	$195,270,023	0.51	0.57	0.00%	$ -	0.61	0.07%	$ 139,479
210028	ST. MARY	$53,846,970	0.52	0.57	0.00%	$ -	0.62	0.14%	$ 76,924
210035	CHARLES REGIONAL	$60,770,370	0.53	0.60	0.00%	$ -	0.64	0.29%	$ 173,630
210056	GOOD SAMARITAN	$172,932,011	0.56	0.63	0.00%	$ -	0.66	0.43%	$ 741,137
210013	BON SECOURS	$70,685,898	0.61	0.66	0.00%	$ -	0.69	0.64%	$ 454,409
210061	ATLANTIC GENERAL	$33,780,340	0.64	0.69	0.00%	$ -	0.71	0.79%	$ 265,417
210017	GARRETT COUNTY	$17,951,439	0.69	0.74	0.00%	$ -	0.76	1.00%	$ 179,514
210045	MCCREADY	$4,512,494	0.71	0.77	0.00%	$ -	0.78	1.00%	$ 45,125
210030	CHESTERTOWN	$26,318,692	0.74	0.79	0.00%	$ -	0.82	1.00%	$ 263,187
Penalty						**-$100,025,306**			**-$11,842,839**
Reward						**$0**			**$2,379,889**