

**FINAL Recommendation for the Maryland
Hospital-Acquired Conditions Program
for Rate Year 2019**

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LIST OF ABBREVIATIONS

CMS	Centers for Medicare & Medicaid Services
CY	Calendar year
DRG	Diagnosis-related group
FFY	Federal fiscal year
FY	State fiscal year
HAC	Hospital-acquired condition
HSCRC	Health Services Cost Review Commission
ICD	International Statistical Classification of Diseases and Related Health Problems
MHAC	Maryland hospital-acquired condition
PPC	Potentially preventable complication
RY	Rate Year

INTRODUCTION

A hospital-acquired condition (HAC) occurs when a patient goes to the hospital for one condition but develops another condition during that hospital stay. The second condition—for example, an adverse drug reaction or an infection at the site of a surgery—is referred to as hospital-acquired.¹ HACs can lead to 1) poor patient outcomes, including longer hospital stays, permanent harm, and death, and 2) increased costs.² Over the past decade, the Centers for Medicare & Medicaid Services (CMS) have implemented several programs to improve the quality of care for Medicare participants, including a program to reduce the frequency of HACs. Because of the state’s long-standing Medicare waiver for its all-payer hospital rate-setting system, special considerations are given to Maryland hospitals, including exemption from the federal Medicare hospital quality programs, one of which is the HAC program. Instead, the Maryland Health Services Cost Review Commission (HSCRC or Commission) implements various Maryland-specific quality-based payment programs, which provide incentives for hospitals to improve their quality performance over time. The HSCRC first implemented the Maryland Hospital-Acquired Conditions (MHAC) program in state fiscal year (FY) 2011.

Maryland entered into a new All-Payer Model Agreement with CMS on January 1, 2014. One of the requirements under this Agreement is for Maryland to reduce the incidence of HACs by 30 percent by 2018. In order to meet this target, the Commission approved several methodological changes to the program for Rate Year (RY) 2016, which are discussed in further detail in the background section of this report. The Commission approved additional revisions to the methodology for RYs 2017 and 2018. The purpose of this report is to provide background information on the MHAC program and to make recommendations for the RY 2019 MHAC methodology and targets. The performance period for the RY 2019 MHAC adjustments is Calendar Year 2017.

In October 2015, health providers transitioned to the 10th version of the International Statistical Classification of Diseases (ICD-10). Since staff is still evaluating the effect of the ICD-10 transition, staff believes it is not possible to set a reasonable target for a statewide improvement rate at this time. Considering these challenges, staff is proposing that the MHAC program adopt a single scale, rather than a contingent scale based on the statewide improvement rate. Staff developed multiple options under a single scale methodology and is discussing these options with the Performance Measurement Work Group. Staff also adjusted the base period for the program to use 12 months of hospital data under ICD-10 (October 2015 to September 2016).

¹ Cassidy, A. (2015, August 6). Health Policy Brief: Medicare’s Hospital-Acquired Condition Reduction Program. *Health Affairs*. Retrieved from http://www.healthaffairs.org/healthpolicybriefs/brief.php?brief_id=142.

² Ibid.

BACKGROUND

Federal HAC Programs

Medicare's system for the payment of inpatient hospital services is called the inpatient prospective payment system. Under this system, patients are assigned to a payment category called a diagnosis-related group (DRG), which is a method of categorizing costs so that Medicare can determine how much to pay for the hospital stay. DRGs are based on a patient's primary diagnosis and the presence of other conditions; patients with higher co-morbidities or complications are categorized into higher-paying DRGs.³ Historically, Medicare payments under this system were based on the volume of services. However, beginning in federal fiscal year (FFY) 2009, CMS stopped assigning patients to higher-paying DRGs if certain conditions were *not* present on the patient's admission, or, in other words, if the condition was acquired in the hospital and could have reasonably been prevented through the application of evidence-based guidelines. CMS identified 11 conditions that are presumed to be acquired in the hospital if the diagnosis is not present on the patient's admission. CMS will not assign these patients to more expensive DRGs, and thus does not pay, for these HACs.⁴ This policy is referred to as the HAC (present on admission indicator) program.⁵ Since non-payment on a case-by-case basis affects only a small fraction of claims, the impact of this program was estimated to be very limited. The program resulted in \$21 million in savings in FFY 2010.⁶ Maryland hospitals were exempt from the payment adjustments under this program.

CMS expanded the use of HACs in payment adjustments in FFY 2015 with a new program entitled the "Hospital-Acquired Condition Reduction Program" under authority of the Affordable Care Act. In this program, CMS ranks hospitals according to performance on a list of HAC quality measures and reduces Medicare payments to the hospitals in the lowest performing quartile. Since the HAC program began, the maximum penalty has been set at 1 percent of total DRG payments. The CMS HAC measures for FFY 2017 are listed in Appendix I of this report and include measures of patient safety developed by the Agency for Healthcare Research and Quality and measures of healthcare-associated infections developed by the Centers for Disease Control and Prevention.⁷ These will be updated to reflect FFY 2018 once 2018 measures and specifications are available. Prior to the new All-Payer Model Agreement, CMS required the HSCRC to submit an annual exemption request demonstrating that the outcomes and cost savings of the Maryland-specific program met or exceeded those of the CMS federal program.

³ Ibid.

⁴ Ibid.

⁵ For more information on the federal HAC Present on Admission program, see

<https://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/HospitalAcqCond/index.html>

⁶ CMS. (2012, December). Report to Congress: Assessing the Feasibility of Extending the Hospital Acquired Conditions (HAC) IPPS Payment Policy to Non-IPPS Settings. Retrieved from

<https://innovation.cms.gov/Files/x/HospAcquiredConditionsRTC.pdf>

⁷ For more information on the federal HAC Reduction program, see <https://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/AcuteInpatientPPS/HAC-Reduction-Program.html>.

Under Maryland's new All-Payer Model agreement, this requirement was replaced by a requirement that Maryland reduce its HACs by at least 30% throughout the duration of the All-Payer Model, as well as a requirement to match the aggregate amount of revenue at risk in quality-based payment adjustments with the amount at risk in the Medicare programs.

Overview of the MHAC Program

Maryland is exempt from the federal HAC programs, and, instead, the HSCRC has implemented the MHAC program since FY 2011. The MHAC program is based on a classification system developed by 3M, using what are called potentially preventable complications (PPCs). PPCs are defined as harmful events that develop after the patient is admitted to the hospital and may result from processes of care and treatment rather than from the natural progression of the underlying illness. Therefore, these events are considered potentially preventable. 3M developed 65 PPC measures that are identified through secondary diagnosis codes that are not present on the patient's admission. Examples of PPCs include accidental puncture/laceration during an invasive procedure or infections related to central venous catheters.

The initial methodology for the MHAC program was in place until FY 2016. This methodology estimated the percentage of inpatient revenue associated with an excess number of PPCs. The excess number of PPCs was estimated by comparing hospitals' observed PPC rate to a statewide average PPC rate, given the diagnoses and severity of illness (or case-mix) of the hospital's patient population. The marginal cost of each PPC was estimated using a statewide regression analysis. Next, the payment adjustment approach penalized hospitals that had higher PPC costs than the statewide average and rewarded hospitals with lower PPC costs than the statewide average. The payment adjustments were proportional to a hospital's difference from the statewide average (this methodology is also known as continuous scaling). Rewards were adjusted to ensure that the final net impact was revenue neutral. In general, the payment adjustment process resulted in fewer hospitals receiving penalties, and consequently limited the amount of revenue available for rewards.

The HSCRC modified the guiding principles of those originally established for the MHAC program to conform to the goals of its new All-Payer Model agreement; they include the following:

- The program must improve care for all patients, regardless of payer.
- The breadth and impact of the program must meet or exceed the Medicare national program in terms of measures and revenue at risk.
- The program should identify predetermined performance targets and financial impact.
- An annual target for the program must be established in the 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 percent cumulative reduction by 2018.
- The program should prioritize PPCs that have high volume, high cost, opportunity for improvement, and are areas of national focus.

- Program design should encourage cooperation and sharing of best practices.
- The scoring method should hold hospitals harmless for a lack of improvement if attainment is highly favorable.
- Hospitals should have the ability to track their progress during the performance period.

The HSCRC modified the program’s methodology to achieve these new goals and guiding principles for performance years beginning with calendar year (CY) 2014, which were applied to rate adjustments beginning in RY 2016.⁸ The key changes to the methodology are listed below (see Appendix II for a more detailed description of the revised methodology).

- Determine hospital scores based on case-mix-adjusted PPC rates rather than excess PPC costs. This change simplified and aligned the measurement with the quality improvement methods, where hospitals focus shifted to the PPC rates rather than the number of excess PPCs and costs.
- Prioritize PPCs that are high cost, high volume, have opportunity to improve, and are of national concern by grouping and weighting the PPCs into tiers according to their level of priority. This tiered approach replaced the previous PPC-specific weighting approach that used marginal costs.
- Use the better of attainment or improvement scores. This change strengthened incentives for low-performing hospitals to improve. Previously, payment adjustments were calculated separately for hospital attainment and improvement rates that were based on a few PPCs.
- To determine payment rewards/penalties, use a preset point scale that can be set prospectively. This change replaced the original payment adjustment determinations, which were calculated based on the relative ranking of hospitals. This change attempted to improve the financial predictability of the MHAC program. In addition, the revised methodology removes the revenue neutrality requirement in scaling payments (i.e., the statewide total amount of rewards can exceed the total amount of penalties) to reward hospitals with better performance adequately.
- Link individual hospital performance with statewide performance by creating a “contingent” payment adjustment scale, where penalties are increased if the state does not reach pre-determined PPC reduction targets. Staff and the hospital industry believe that “contingent” scaling creates a balanced approach by maintaining hospital-level incentives with hospital-specific payment adjustments that are also tied to a statewide improvement goal. In addition to contingent scaling, “hold-harmless zones” were created to focus payment adjustments on better and worse performing hospitals.

The HSCRC used the same methodology for RY 2018, but made adjustments to the tiering system and PPCs. Staff is suggesting additional changes for the RY 2019 policy to accommodate the ICD-10 transition and other stakeholder input, as discussed below.

⁸ The performance period for PPCs is measured on a calendar year basis, and the results of these measures are then used in the hospitals’ rate calculations, which are set on a fiscal year basis.

ASSESSMENT

In order to develop the MHAC methodology for RY 2019, the HSCRC solicited input from many stakeholder groups including consumers, hospitals, payers, researchers, and other industry experts. The Performance Measurement Workgroup discussed pertinent issues and potential changes to Commission policy for RY 2019.⁹ Specifically, the Workgroup reviewed analyses and discussed issues related to 1) statewide PPC trends, 2) the list of PPCs and relevant tiers, 3) the current palliative care exclusion, and 4) the payment adjustment methodology. This section of the report provides an overview of the issues discussed by the Workgroup.

Statewide PPC Trends

The State continued to make significant progress in reducing complications, as measured both in terms of the actual number of PPCs and case-mix adjusted PPC rates in FY 2016. Figure 1 below presents the PPC reduction trends in Maryland between FY 2013 and FY 2016. In this figure, the gray columns labeled “PPC Rates” display the number of PPC complications occurring in each year, the unadjusted PPC rate, and the case-mix adjusted rate of PPC complications, which may be interpreted as the number of PPCs per 1,000 at-risk discharges. The yellow columns in the figure labeled “Annual Change” show the percent change between each year, e.g., from FY 2013 to 2016. Finally, the green column displays the percent change over the entire measurement period of FY 2013 through 2016. Because the goal of the program is to reduce PPCs, the negative percent changes in this figure may be interpreted as a performance improvement. Overall, the number and rate of PPCs decreased significantly, with a cumulative case-mix adjusted improvement rate of 47.8 percent between FY 2013 and 2016. It should be noted that HSCRC contractors are still analyzing whether the ICD-10 transition is impacting the case-mix adjusted PPC rates.

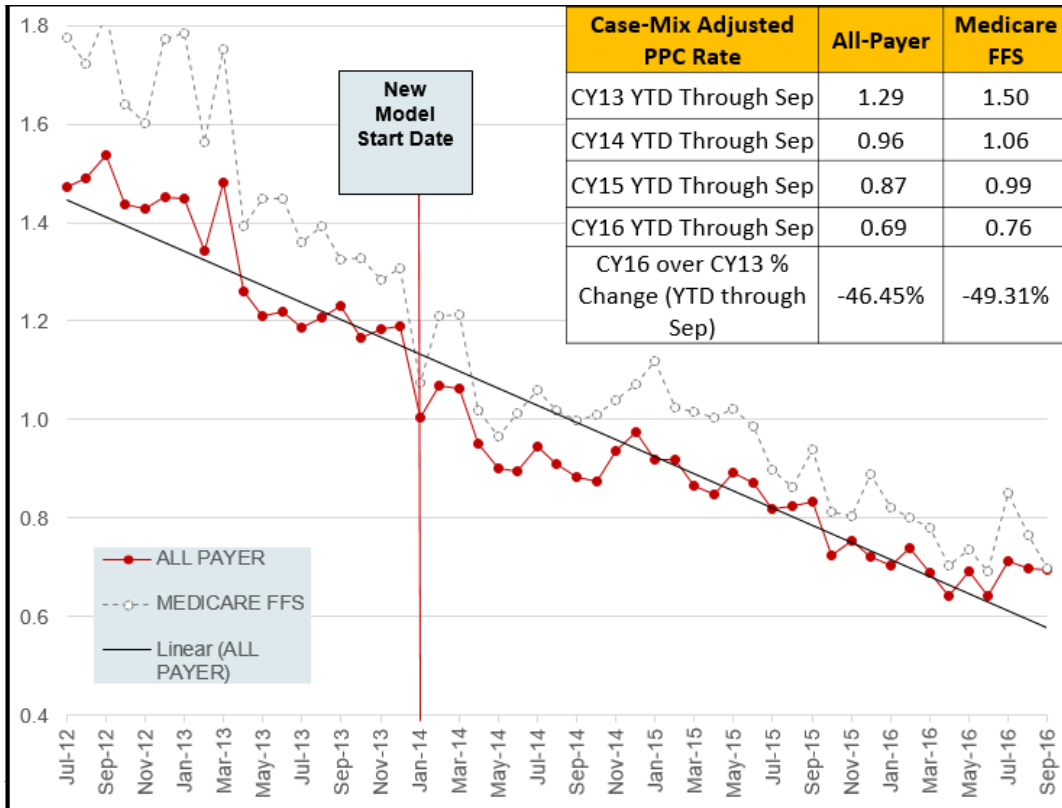
Figure 1. PPC Reduction Trends in Maryland, FY 2013-2016

	PPC RATES				Annual Change			Cumulative Improvement
	FY13	FY14	FY15	FY16	FY13-FY14	FY14-FY15	FY15-FY16	FY13-FY16
TOTAL NUMBER OF COMPLICATIONS	27,934	21,056	17,341	14,508	-24.6%	-17.6%	-16.3%	-48.1%
UNADJUSTED PPC RATE PER 1,000 AT-RISK	1.18	0.94	0.80	0.69	-20.5%	-14.6%	-13.5%	-41.3%
CASE-MIX ADJUSTED COMPLICATION RATE PER 1,000 AT-RISK	1.40	1.09	0.90	0.73	-22.4%	-16.8%	-19.2%	-47.8%

⁹ For more information on the Performance Measurement Workgroup, see <http://hscrc.maryland.gov/hscrc-workgroup-performance-measurement.cfm>.

HSCRC staff also analyzed monthly PPC rates for Medicare fee-for-service and all payers for July 2012 through September 2016 (Figure 2). The dotted gray line in this figure shows the monthly case-mix adjusted PPC rate for Medicare fee-for-service, while the red line shows the monthly PPC rate for all payers, including Medicare fee-for-service patients. Both lines show a fairly consistent downward trend between July 2012 and September 2016.

Figure 2. All-Payer Case-Mix Adjusted PPC Rates FY2013-FY2016 YTD through September



PPC List and Tier Adjustments

Two of the major strengths of the MHAC program compared with the CMS HAC programs is that the MHAC program includes a wide range of complications, and includes all patients who are at risk of developing these complications. For RY 2019 the HSCRC will be using the 3M PPC grouper version 34 (v34), which has been developed to take into account the increased specificity of ICD-10 coding. Hospitals and other stakeholders are very supportive of moving to v34. In order to use v34, the base period will be adjusted forward by one quarter to obtain 12 months of ICD-10 data (October 2015-September 2016). Under v34 many PPC definitions have been updated, and 3M has discontinued some PPCs for clinical reasons. Specifically under v34, 3M removed PPC 12 (cardiac arrhythmia) and PPCs 57 and 58 (OB Lacerations). 3M also made significant clinical changes to PPC 36 (Acute mental health changes) and PPC 66 (Catheter related UTI), such that no Maryland hospital meets minimum inclusion criteria. Two additional changes were made prior to v. 34 1) PPC 24 (Renal Failure without Dialysis) was suspended

from payment policy based on 3M clinical recommendations, and 2) PPC 43 was combined with PPC 42 to make comparable to ICD-9 PPC 42.

As a reminder, in RY 2018, several changes were made to the PPC list and tiering methodology including: 1). Moving from a three-tiered PPC weighting system to a two-tiered weighting system, with tier 1 weighted at 100 percent and tier 2 weighted at 50 percent in the scoring calculations. 2. Combining some PPC measures that are clinically similar for scoring purposes. 3. Moving a small subset of PPCs to a “monitoring” status, suspending their use for payment calculation for FY 2018.

For RY 2019, staff is proposing to keep to the RY 2018 two-tier structure, and make no changes to the combined PPCs, serious reportable events, or monitoring-only PPCs. The only change to PPC tiers is to move PPC 21 (c. Diff) to tier 2 based on 3M clinical input. Thus for RY 2019, there are 53 PPCs (48 with combinations) in the payment program and five monitoring-only PPCs. Appendix III lists the PPCs included in the payment program with the tier, as well as a comparison of the RY 2018 and RY 2019 benchmarks.

Palliative Care Exclusion

Based on input from the work group participants, palliative care cases have been historically excluded from the MHAC program due to clinical concerns that including these cases would incentivize unwarranted care. Throughout the MHAC policy, HSCRC has continued to monitor the validity of the PPC data for any unintended consequences. In the draft policy, staff noted that, since 2012, the percent of discharges with palliative care has steadily increased. Also during that time, the percentage of PPCs counted in the MHAC program has dropped from greater than 95% to around 82% (Appendix IV).

Although these are notable changes, palliative care exclusion appears to have a limited impact on the case-mix adjusted statewide improvement trends. Statewide, the case-mix adjusted PPC rate (including palliative care cases) improves by 41%, compared to 46% when palliative care cases are excluded. This difference does not warrant a policy change in the RY 2019 MHAC policy, given the additional input that has been received, detailed below.

In the draft policy submitted in February 2017, staff proposed to remove the palliative care exclusion, beginning with the RY 2019 program. Upon further discussion and analysis with stakeholders, staff recommends to delay this policy change until staff and other stakeholders are more comfortable with the clinical implications and data modeling (see Appendix VII for stakeholder input on palliative care exclusion policy).

There are many reasons that a delay is warranted. According to guidance from 3M, they recommend to use a present-on-admission (POA) indicator for palliative care to determine when these cases should be excluded. However, the palliative care diagnosis was exempt from POA coding until October 2016 and may not be used consistently at this time. In the absence of this code, 3M recommended to delay including palliative care cases. Additionally, as mentioned in the draft policy, there are substantial coding variations among particular hospitals, and this

variation may be better addressed through individual special audits as opposed to a statewide policy change. Also, concerns about coding validity will not be addressed by including palliative care cases. Finally, the inclusion of palliative care cases has a relatively small impact on the overall statewide PPC reduction trends, reducing the improvement slightly from 46% to 41%. Appendix V shows case-mix adjusted rates and total at-risk with and without palliative care by hospital.

Payment Adjustment Methodology

For RY 2019, staff is proposing several changes to the payment adjustment methodology. First, staff is recommending to remove the two-scale structure that has been used since RY 2016, whereby achievement of a minimum statewide reduction goal determined scale (i.e. the contingent scaling approach). Staff proposes this change for two reasons: a) the State has already achieved the 30% reduction goal, and b) under ICD-10 and v34, staff and work group members agreed that it is difficult to estimate a statewide reduction target. Hospital performance will continue to be scored as the better of the hospital’s attainment or improvement scores, as detailed in Appendix II. Both base year and performance periods will be under ICD-10 v34.

To move to a single scale, staff proposes to set the maximum penalty for the single scale at 2% and maximum reward at 1% of hospital inpatient revenue.

Second, as with the RY 2019 QBR policy, staff proposes to use the full range of scores to set the payment scale, rather than basing the scale on the statewide distribution of scores. The staff built the following models in considering the RY 2019 scaling adjustments using the final RY 2017 scores (see Figure 3 for statewide adjustments and Appendix VI for hospital-specific results):

- Current RY2018 Scale (assuming minimum improvement target met): 20-80% with 36% penalty cutoff and 46% reward threshold (neutral zone)
- Option 1: Full Score Range without Neutral Zone: 0-100% with 50% reward/penalty cutoff
- Option 2: Full Score Range with Neutral Zone: 0-100% with neutral zone from 45% to 55%

Figure 3. RY 2019 MHAC Scaling Models – Statewide Results

MHAC Scaling Models*	Min	Penalty/Reward Cut Point	Max	Statewide Penalties	Statewide Rewards
Current RY18 Scale	20%	36%/46%	80%	-\$1.3M	+27M
Full Range Scale without Neutral Zone	0%	50%	100%	-\$10M	+\$13M
Full Range Scale with Neutral Zone	0%	45%/55%	100%	-\$6M	+\$9M

*These scaling models were created to analyze fiscal impact of different scaling options utilizing final scores from RY 2017, the most recent available final scores.

Staff vetted these options to create a single scale with the performance measurement work group members and recommends using a full score scale that ranges from 0 to 100%, where hospitals scoring below 45% are penalized, and hospitals scoring above 55% are rewarded. Staff recommends the continuation of a revenue-neutral zone for the MHAC program given positive statewide performance. The MHA letter in Appendix VII supports the full scale option and maintenance of the revenue-neutral or hold harmless zone.

RECOMMENDATIONS

Based on this assessment, HSCRC staff recommends the following for RY 2019:

1. Continue to exclude palliative care discharges in program for RY 2019, and perform a special hospital audit on palliative care coding.
2. Modify scaling methodology to be a single payment scale, ranging from 0% to 100%, with a revenue neutral zone between 45% and 55%.
3. Set the maximum penalty at 2% and the maximum reward at 1%.

APPENDIX I. MEASURES FOR THE FEDERAL HAC PROGRAM

CMS HAC Measures Implemented Since FFY 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 Bypass Graft
- 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 Reduction Program Measures Implemented Since FFY 2015

- Domain 1- the Agency for Health Care Research and Quality composite patient safety indicator (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 (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 National Health Safety Network:
 - Central Line-Associated Blood Stream Infection and
 - Catheter-Associated Urinary Tract Infection.

For the FY 2017 CMS HAC Reduction program, CMS decreased the Domain 1 weight from 25 percent to 15 percent and increased the Domain 2 weight from 75 percent to 85 percent.

CMS also expanded the data used for central line-associated blood stream infection and catheter-associated urinary tract infections and will include data from pediatric and adult medical ward, surgical ward, and medical/surgical ward locations, in addition to data from adult and pediatric intensive care unit locations.

APPENDIX II. PPC MEASUREMENT DEFINITION AND POINTS CALCULATION

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 10 points would be assigned for a PPC and is defined as:

Weighted mean of top quartile O/E ratio that include at least 25% of statewide discharges

For PPCs that are serious reportable events, the threshold and benchmark will be set at 0.

Performance Points

Performance points are given based on a range between a “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: $[9 * ((\text{Hospital's performance period score} - \text{threshold}) / (\text{benchmark} - \text{threshold}))] + .5$, where the hospital performance period score falls in the range from the threshold to the benchmark

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

APPENDIX III.
MHAC RY 2019 PPC LIST, TIERS, AND BENCHMARKS

PPC Number	PPC Description	RY 19 Tier	Benchmark RY18 (based on FY15)	Benchmark RY19 (based 10/15-9/16)	Difference RY18 vs RY19
1	Stroke & Intracranial Hemorrhage	2	0.5707	0.4158	-0.1549
3	Acute Pulmonary Edema and Respiratory Failure without Ventilation	1	0.5502	0.5429	-0.0073
4	Acute Pulmonary Edema and Respiratory Failure with Ventilation	1	0.5994	0.4691	-0.1303
5	Pneumonia & Other Lung Infections	1	0.5440	0.4368	-0.1072
6	Aspiration Pneumonia	1	0.5021	0.5082	0.0061
7	Pulmonary Embolism	1	0.3555	0.3841	0.0286
8	Other Pulmonary Complications	2	0.4387	0.4557	0.0170
9	Shock	1	0.5528	0.4757	-0.0771
10	Congestive Heart Failure	2	0.2236	0.2273	0.0037
11	Acute Myocardial Infarction	2	0.5728	0.4924	-0.0804
12	Cardiac Arrhythmias & Conduction Disturbances	NA	0.3270	NA	NA
13	Other Cardiac Complications	2	0.0785	0.1527	0.0742
14	Ventricular Fibrillation/Cardiac Arrest	1	0.6793	0.5130	-0.1663
16	Venous Thrombosis	1	0.3001	0.3006	0.0005
19	Major Liver Complications	2	0.3577	0.1036	-0.2541
21	Clostridium Difficile Colitis	2	0.5634	0.4890	-0.0744
23	GU Complications Except UTI	2	0.2362	0.1740	-0.0622
27	Post-Hemorrhagic & Other Acute Anemia with Transfusion	1	0.5659	0.1540	-0.4119
28	In-Hospital Trauma and Fractures	2	0.0619	0.1741	0.1122
30	Poisonings due to Anesthesia	2	0.0000	0.0000	0.0000
31	Decubitus Ulcer	2	0.0000	0.0000	0.0000
32	Transfusion Incompatibility Reaction	2	0.0000	0.0000	0.0000
34	Moderate Infectious	2	0.3734	0.1614	-0.2120
35	Septicemia & Severe Infections	1	0.4251	0.4095	-0.0156
36	Acute Mental Health Changes	NA	0.2297	NA	NA
37	Post-Operative Infection & Deep Wound Disruption Without Procedure	1	0.4159	0.4868	0.0709
38	Post-Operative Wound Infection & Deep Wound Disruption with Procedure	1	0.5989	0.6453	0.0464
39	Reopening Surgical Site	2	0.0795	0.3162	0.2367
40	Post-Operative Hemorrhage & Hematoma without Hemorrhage Control Procedure or I&D Proc	1	0.6266	0.6280	0.0014
41	Post-Operative Hemorrhage & Hematoma with Hemorrhage Control Procedure or I&D Proc	1	0.2031	0.4585	0.2554
42	Accidental Puncture/Laceration During Invasive Procedure	1	0.4414	0.3882	-0.0532
44	Other Surgical Complication - Mod	2	0.3442	0.4108	0.0666
45	Post-procedure Foreign Bodies	2	0.0000	0.0000	0.0000

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PPC Number	PPC Description	RY 19 Tier	Benchmark RY18 (based on FY15)	Benchmark RY19 (based 10/15-9/16)	Difference RY18 vs RY19
46	Post-Operative Substance Reaction & Non-O.R. Procedure for Foreign Body	2	0.0000	0.0000	0.0000
47	Encephalopathy	2	0.1372	0.1221	-0.0151
48	Other Complications of Medical Care	2	0.3403	0.0770	-0.2633
49	Iatrogenic Pneumothrax	1	0.3514	0.2007	-0.1507
50	Mechanical Complication of Device, Implant & Graft	2	0.3919	0.4279	0.0360
51	Gastrointestinal Ostomy Complications	2	0.3631	0.3189	-0.0442
52	Inflammation & Other Complications of Devices, Implants or Grafts Except Vascular Infection	2	0.5058	0.4051	-0.1007
53	Infection, Inflammation & Clotting Complications of Peripheral Vascular Catheters & Infusions	2	0.1967	0.0890	-0.1077
54	Infections due to Central Venous Catheters	1	0.0877	0.0000	-0.0877
59	Medical & Anesthesia Obstetric Complications	2	0.5325	0.3470	-0.1855
60	Major Puerperal Infection and Other Major Obstetric Complications	2	0.0798	0.4861	0.4063
61	Other Complications of Obstetrical Surgical & Perineal Wounds	2	0.2060	0.1921	-0.0139
62	Delivery with Placental Complications	2	0.3366	0.2627	-0.0739
65	Urinary Tract Infection without Catheter	1	0.5645	0.0000	-0.5645
66	Catheter-Related Urinary Tract Infection	NA	0.0000	NA	NA
Combo 1	General Combination PPC: PPC 25, 26, 63	2	0.2139	0.2819	0.0680
Combo 2	Gastrointestinal Complications: PPC 17 and 18	2	0.4640	0.3313	-0.1327
Combo 3	OB Hemorrhage: PPC 55 and 56	2	0.6396	0.5660	-0.0736
Combo 4	OB Lacerations: PPC 57 and 58	NA	0.5331	NA	NA

APPENDIX IV. PALLIATIVE CARE TRENDS IN MARYLAND, 2012-2016

Figure A. Percent of Total Discharges with Palliative Care, 2012 – March 2016

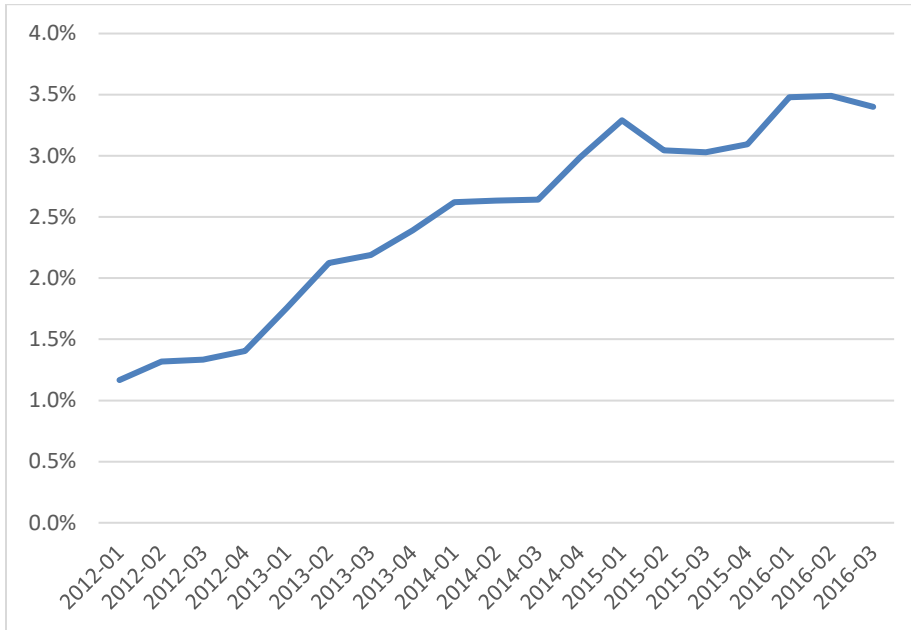
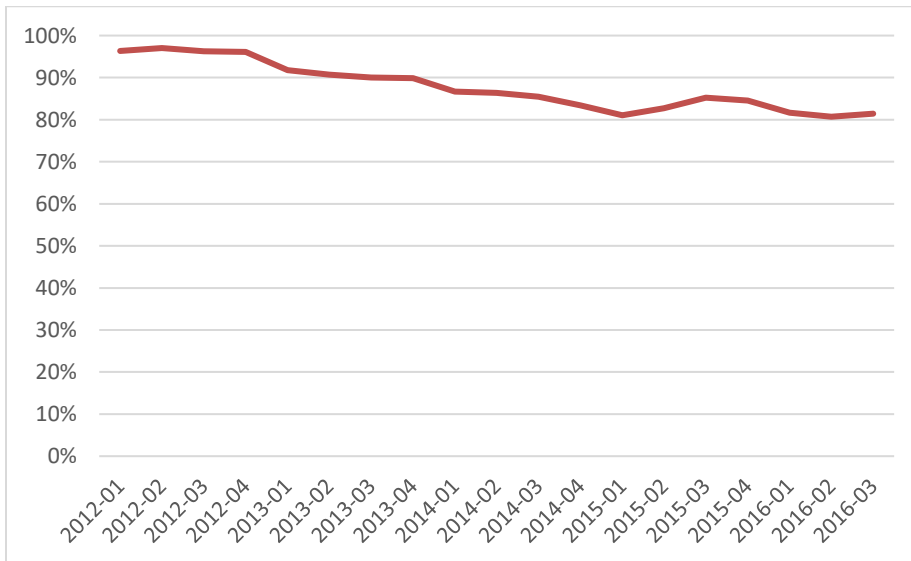


Figure B. Percent of Total PPCs in MHAC Program, 2012 – March 2016



**APPENDIX V.
PPC RATES WITH AND WITHOUT PALLIATIVE CARE**

CY 2016 YTD September		Case Mix Adjusted PPC Rate*			At Risk Discharges*		
Hospital ID		Without PC	With PC	% Difference between with and without PC	Without PC	With PC	% Difference between with and without PC
210001	Meritus	0.71	0.79	11.44%	449,261	458,166	1.98%
210002	UMMC	0.72	0.84	16.44%	597,222	609,480	2.05%
210003	PG Hospital	0.76	0.88	16.37%	338,738	341,217	0.73%
210004	Holy Cross	0.51	0.61	19.83%	802,186	819,225	2.12%
210005	Frederick	0.71	0.85	20.71%	448,923	466,093	3.82%
210006	UM-Harford	0.69	0.84	21.69%	129,436	132,809	2.61%
210008	Mercy	0.61	0.67	10.03%	450,333	452,015	0.37%
210009	Johns Hopkins	0.79	0.97	22.99%	992,480	1,008,774	1.64%
210010	UM- Dorchester	0.68	1.05	54.99%	70,759	72,305	2.18%
210011	St. Agnes	0.59	0.69	16.66%	460,571	469,387	1.91%
210012	Sinai	0.71	0.83	16.53%	542,444	550,036	1.40%
210013	Bon Secours	1.00	1.02	1.65%	111,098	111,792	0.62%
210015	MedStar Fr Square	0.65	0.73	11.58%	596,079	605,869	1.64%
210016	Washington Adventist	0.98	1.09	11.40%	304,336	308,416	1.34%
210017	Garrett	0.54	0.63	18.07%	59,896	61,167	2.12%
210018	MedStar Montgomery	0.73	0.80	8.80%	193,168	197,434	2.21%
210019	Peninsula	0.82	0.98	19.22%	490,191	503,354	2.69%
210022	Suburban	0.66	0.78	18.56%	362,774	378,041	4.21%
210023	Anne Arundel	0.70	0.78	11.30%	823,210	849,224	3.16%
210024	MedStar Union Mem	0.58	0.74	27.32%	345,145	350,046	1.42%
210027	Western Maryland	0.88	1.05	19.95%	324,583	331,871	2.25%
210028	MedStar St. Mary's	0.44	0.53	19.82%	241,036	244,214	1.32%
210029	JH Bayview	0.50	0.53	7.39%	529,866	537,606	1.46%
210030	UM- Chestertown	0.89	1.06	19.63%	43,732	44,877	2.62%
210032	Union of Cecil	0.66	0.74	13.21%	165,087	170,274	3.14%
210033	Carroll	0.71	0.88	23.56%	284,965	292,575	2.67%
210034	MedStar Harbor	0.56	0.76	36.01%	206,612	210,663	1.96%
210035	UM-Charles Regional	0.67	0.76	13.03%	180,982	183,101	1.17%
210037	UM-Easton	0.62	0.78	25.45%	230,143	235,778	2.45%
210038	UMMC Midtown	0.10	0.11	9.62%	116,459	117,083	0.54%
210039	Calvert	0.56	0.59	5.67%	146,475	148,457	1.35%
210040	Northwest	0.52	0.79	50.46%	317,426	324,147	2.12%
210043	UM-BWMC	0.67	0.85	26.94%	486,260	500,814	2.99%

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210044	GBMC	0.93	0.98	5.12%	512,405	517,967	1.09%
210045	McCready	0.24	0.24	0.00%	8,251	8,251	0.00%
210048	Howard County	0.72	0.81	13.76%	509,712	520,528	2.12%
210049	UM-Upper Chesapeake	0.70	0.82	16.87%	336,573	349,182	3.75%
210051	Doctors	0.58	0.76	30.64%	276,776	281,780	1.81%
210055	Laurel Regional	0.58	0.70	20.34%	106,623	108,058	1.35%
210056	MedStar Good Sam	0.58	0.63	8.70%	278,913	282,609	1.33%
210057	Shady Grove	0.80	0.90	12.17%	528,778	534,827	1.14%
210058	UMROI	0.94	0.94	0.00%	64,211	64,211	0.00%
210060	Ft. Washington	0.12	0.14	17.80%	63,439	63,930	0.77%
210061	Atlantic General	0.41	0.48	17.76%	94,316	100,961	7.05%
210062	MedStar Southern MD	0.71	0.83	16.08%	314,039	318,399	1.39%
210063	UM-St. Joe	0.65	0.71	8.78%	488,064	494,568	1.33%
210064	Levindale	2.69	2.78	3.48%	40,202	40,900	1.74%
210065	HC-Germantown	0.58	0.64	10.16%	137,209	140,325	2.27%
210000	Statewide	0.69	0.80	16.52%	15,601,387	15,912,806	2.00%

*Note that when rerunning the MHAC methodology to include palliative care cases, the PPCs included for each hospital may change due to the small sample exclusions (e.g., a PPC for a hospital will be included if the expected is greater than one when palliative care cases are included).

**APPENDIX VI.
REVENUE ADJUSTMENTS – HOSPITAL-SPECIFIC MODELING**

MHAC Hospital Modeling (using RY2017 Final Scores)				RY 2018 Scale		Option 1: Full Scale without Neutral Zone		Option 2: Full Scale with Neutral Zone	
Hospital ID	Hospital Name	FY 16 Permanent Inpatient Revenue	RY 17 Final MHAC score	% Adjustment	\$ Adjustment	% Adjustment	\$ Adjustment	% Adjustment	\$ Adjustment
	MAXIMUM PENALTY			-1.00%	\$	-2.00%	\$	-2.00%	\$
210003	PRINCE GEORGE	\$220,306,426	0.29	-0.44%	\$(963,841)	-0.84%	-\$1,850,574	-0.71%	-\$1,566,623
210016	WASHINGTON ADVENTIST	\$155,199,154	0.32	-0.25%	\$(387,998)	-0.72%	-\$1,117,434	-0.58%	-\$896,706
210062	SOUTHERN MARYLAND	\$156,564,761	0.36	0.00%	\$0	-0.56%	-\$876,763	-0.40%	-\$626,259
210013	BON SECOURS	\$74,789,724	0.40	0.00%	\$0	-0.40%	-\$299,159	-0.22%	-\$166,199
210009	JOHNS HOPKINS	\$1,244,297,900	0.41	0.00%	\$0	-0.36%	-\$4,479,472	-0.18%	-\$2,212,085
210044	G.B.M.C.	\$207,515,795	0.43	0.00%	\$0	-0.28%	-\$581,044	-0.09%	-\$184,458
210051	DOCTORS COMMUNITY	\$132,614,778	0.44	0.00%	\$0	-0.24%	-\$145,035	-0.04%	-\$58,940
210055	LAUREL REGIONAL	\$60,431,106	0.44	0.00%	\$0	-0.24%	-\$318,275	-0.04%	-\$26,858
210027	WESTERN MARYLAND HEALTH SYSTEM	\$167,618,972	0.47	0.03%	\$49,300	-0.12%	-\$264,730	0.00%	\$0
210057	SHADY GROVE	\$220,608,397	0.47	0.03%	\$64,885	-0.12%	-\$201,143	0.00%	\$0
210023	ANNE ARUNDEL	\$291,882,683	0.49	0.09%	\$257,544	-0.04%	-\$64,318	0.00%	\$0
210056	GOOD SAMARITAN	\$160,795,606	0.49	0.09%	\$141,878	-0.04%	-\$116,753	0.00%	\$0
210033	CARROLL COUNTY	\$136,267,434	0.50	0.12%	\$160,315	0.00%	\$0	0.00%	\$0

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MHAC Hospital Modeling (using RY2017 Final Scores)				RY 2018 Scale		Option 1: Full Scale without Neutral Zone		Option 2: Full Scale with Neutral Zone	
Hospital ID	Hospital Name	FY 16 Permanent Inpatient Revenue	RY 17 Final MHAC score	% Adjustment	\$ Adjustment	% Adjustment	\$ Adjustment	% Adjustment	\$ Adjustment
	MAXIMUM PENALTY			-1.00%	\$	-2.00%	\$	-2.00%	\$
210037	EASTON	\$101,975,577	0.50	0.12%	\$119,971	0.00%	\$0	0.00%	\$0
210001	MERITUS	\$190,659,648	0.51	0.15%	\$280,382	0.02%	\$22,843	0.00%	\$0
210024	UNION MEMORIAL	\$238,195,335	0.51	0.15%	\$350,287	0.02%	\$38,132	0.00%	\$0
210040	NORTHWEST	\$114,214,371	0.51	0.15%	\$167,962	0.02%	\$47,639	0.00%	\$0
210005	FREDERICK MEMORIAL	\$190,413,775	0.53	0.21%	\$392,028	0.06%	\$22,650	0.00%	\$0
210048	HOWARD COUNTY	\$165,683,744	0.53	0.21%	\$341,114	0.06%	\$114,248	0.00%	\$0
210061	ATLANTIC GENERAL	\$37,750,252	0.53	0.21%	\$77,721	0.06%	\$99,410	0.00%	\$0
210035	CHARLES REGIONAL	\$67,052,911	0.54	0.24%	\$157,772	0.08%	\$53,642	0.00%	\$0
210022	SUBURBAN	\$193,176,044	0.55	0.26%	\$511,348	0.10%	\$193,176	0.00%	\$0
210038	UMMC MIDTOWN	\$126,399,313	0.57	0.32%	\$408,939	0.14%	\$176,959	0.04%	\$56,177
210012	SINAI	\$415,350,729	0.58	0.35%	\$1,465,944	0.16%	\$664,561	0.07%	\$276,900
210018	MONTGOMERY GENERAL	\$75,687,627	0.59	0.38%	\$289,394	0.18%	\$115,442	0.09%	\$67,278
210058	REHAB & ORTHO	\$64,134,443	0.59	0.38%	\$245,220	0.18%	\$136,238	0.09%	\$57,008
210008	MERCY	\$214,208,592	0.60	0.41%	\$882,035	0.20%	\$475,870	0.11%	\$238,010
210043	BALTIMORE WASHINGTON MEDICAL CENTER	\$237,934,932	0.60	0.41%	\$979,732	0.20%	\$428,417	0.11%	\$264,372
210011	ST. AGNES	\$232,266,274	0.62	0.47%	\$1,093,018	0.24%	\$166,536	0.16%	\$361,303

Final Recommendations for the Maryland Hospital-Acquired Conditions Program for Fiscal Year 2019

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Hospital ID	Hospital Name	FY 16 Permanent Inpatient Revenue	RY 17 Final MHAC score	% Adjustment	\$ Adjustment	% Adjustment	\$ Adjustment	% Adjustment	\$ Adjustment
	MAXIMUM PENALTY			-1.00%	\$	-2.00%	\$	-2.00%	\$
210032	UNION HOSPITAL OF CECIL COUNTY	\$69,389,876	0.62	0.47%	\$326,541	0.24%	\$557,439	0.16%	\$107,940
210015	FRANKLIN SQUARE	\$274,203,013	0.63	0.50%	\$1,371,015	0.26%	\$712,928	0.18%	\$487,472
210063	UM ST. JOSEPH	\$234,223,274	0.65	0.56%	\$1,308,895	0.30%	\$702,670	0.22%	\$520,496
210004	HOLY CROSS	\$316,970,825	0.66	0.59%	\$1,864,534	0.32%	\$435,005	0.24%	\$774,818
210030	CHESTERTOWN	\$21,575,174	0.66	0.59%	\$126,913	0.32%	\$362,383	0.24%	\$52,739
210034	HARBOR	\$113,244,592	0.66	0.59%	\$666,145	0.32%	\$69,041	0.24%	\$276,820
210049	UPPER CHESAPEAKE HEALTH	\$135,939,076	0.66	0.59%	\$799,642	0.32%	\$1,014,307	0.24%	\$332,296
210002	UNIVERSITY OF MARYLAND	\$906,034,034	0.67	0.62%	\$5,596,093	0.34%	\$3,080,516	0.27%	\$2,416,091
210029	HOPKINS BAYVIEW MED CTR	\$343,229,718	0.68	0.65%	\$2,220,898	0.36%	\$1,235,627	0.29%	\$991,553
210019	PENINSULA REGIONAL	\$242,318,199	0.71	0.74%	\$1,781,751	0.42%	\$1,017,736	0.36%	\$861,576
210010	DORCHESTER	\$26,999,062	0.74	0.82%	\$222,345	0.48%	\$332,012	0.42%	\$113,996
210028	ST. MARY	\$69,169,248	0.74	0.82%	\$569,629	0.48%	\$129,595	0.42%	\$292,048
210006	HARFORD	\$45,713,956	0.77	0.91%	\$416,804	0.54%	\$246,855	0.49%	\$223,490
210039	CALVERT	\$62,336,014	0.78	0.94%	\$586,692	0.56%	\$349,082	0.51%	\$318,606
210017	GARRETT COUNTY	\$19,149,148	0.81	1.00%	\$191,491	0.62%	\$118,725	0.58%	\$110,640
210060	FT. WASHINGTON	\$19,674,774	0.90	1.00%	\$196,748	0.80%	\$157,398	0.78%	\$153,026

Final Recommendations for the Maryland Hospital-Acquired Conditions Program for Fiscal Year 2019

MHAC Hospital Modeling (using RY2017 Final Scores)				RY 2018 Scale		Option 1: Full Scale without Neutral Zone		Option 2: Full Scale with Neutral Zone	
Hospital ID	Hospital Name	FY 16 Permanent Inpatient Revenue	RY 17 Final MHAC score	% Adjustment	\$ Adjustment	% Adjustment	\$ Adjustment	% Adjustment	\$ Adjustment
	MAXIMUM PENALTY			-1.00%	\$	-2.00%	\$	-2.00%	\$
210045	MCCREADY	\$2,815,158	1.00	1.00%	\$28,152	1.00%	\$28,152	1.00%	\$28,152
State Total		\$8,796,981,441			\$25,359,237	State Total	\$2,990,533		\$3,644,677
Penalty					(\$1,351,838)	Penalty	(\$10,314,700)		(\$5,738,130)
% Inpatient					0.0%	% Inpatient	-0.1%		-0.1%
Reward					\$26,711,075	Reward	\$13,305,234		\$9,382,806
% Inpatient					0.3%	% Inpatient	0.2%		0.1%

APPENDIX VII.
STAKEHOLDER LETTERS ON RY 2019 MHAC POLICY



Maryland
Hospital Association

February 24, 2017

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

Dear Ms. Schuster:

On behalf of the 64 hospital and health system members of the Maryland Hospital Association (MHA), we appreciate the opportunity to comment on the February *Draft Recommendation for the Maryland Hospital-Acquired Conditions Program for Rate Year 2019*.

Maryland's hospitals have reduced the rates of preventable complications by over 45 percent in the first three years of the All-Payer Demonstration, with double digit reductions each year. In contrast, hospitals have reduced the number of cases that are counted as Prevention Quality Indicators (PQIs) by about four percent over the past three years, with over three-quarters of that reduction occurring between 2015 and 2016. The challenge now is to continue providing the right care, at the right time, in the right setting by expanding hospitals' efforts to work outside their four walls with physicians and other providers. To do that, we believe it is time to reduce the emphasis on Maryland Hospital-Acquired Conditions (MHACs) and focus our resources on alignment with physicians and others outside the hospital.

We support the staff's recommendation to eliminate the statewide improvement target and move to a single payment scale that includes a zone in which no payment adjustments are made. Because the expected values, the average, and the best practice performance standards are updated each year, there remains in the policy a strong incentive for each hospital to keep up with the prior year's statewide improvement just to maintain its prior year score. In addition, the points in the payment scale where penalties and rewards begin generate additional incentives. To reduce the emphasis on this program and provide hospitals the flexibility to build alignment with physicians and others, it is important to maintain a hold harmless zone.

We strongly oppose the recommendation to measure complications for individuals who have elected palliative care. Adding these cases to the measurement of MHACs sends the wrong message to clinicians because people who elect palliative care choose a multi-disciplinary approach focused on relieving the pain, symptoms and stresses of serious illness. These goals may be at cross purposes with interventions to prevent complications. For example, a decision to insert a urinary catheter risks infection but can relieve the dying patient of excess moisture and fouling of pressure ulcers; frequent turning can cause the patient distress and pain in a vain attempt to prevent inevitable pressure sores retaining a central line to provide pain relief also

Alyson Schuster, Ph.D.

February 24, 2017

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risks infection; and administering high doses of narcotics for pain relief can cause hypotension or ileus, which could be counted as an MHAC.

The draft recommendation notes a concern about coding cases as palliative care for the sole purpose of eliminating from MHAC those with complications. If there is a concern about the coding of palliative care cases, the commission should strengthen its current audit procedures.

Palliative care improves the patient and family experience, as well as quality of life. It also reduces emergency department use, admissions, and days in intensive care, all of which align with the goals of the All-Payer Demonstration. Expanded use of palliative care should be encouraged and expected, but the recommendation to measure complications in those receiving palliative care is at odds with these goals.

We appreciate the commission's consideration of our comments and we are happy to discuss our concerns at any time.

Sincerely,



Traci La Valle
Vice President

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

Johns Hopkins Recommendations to Maintain Palliative Care Exclusion

The following is in response to the Maryland Health Services Cost Review Commission's concerns about the proliferation of the palliative care code, its impact on mortality statistics and as a global exclusion for Maryland Hospital Acquired Conditions (MHACs). We want to ensure that the Commission is provided with additional information from a clinical perspective in order to clarify palliative care definition, explain some of the reasons for the increase and provide evidence that the increase in palliative care codes is in line with increased palliative care programs, and penetration (the percentage of inpatients that are seen by palliative care professionals). We strongly urge the HSCRC to maintain the current palliative care global exclusion for MHACs and deaths. We are concerned that penalizing hospitals with robust palliative care programs by taking away the MHAC and mortality exclusion will dampen enthusiasm for palliative care and be contrary to the best interests of the patient.

The evidence of the benefits of palliative care combined with usual care is now incontrovertible. Table 1 shows the cancer studies that compared usual cancer care to usual cancer care plus palliative care. Note that there is always some benefit in improved quality of life, better symptom control, less depression and anxiety, and less caregiver distress. In addition, many studies show a survival benefit, and several show significant cost savings; none show increased costs. Similar data exist for multiple sclerosis, congestive heart failure, etc. and Johns Hopkins Hospital is studying other conditions. We believe palliative care concurrent with usual care is truly "better care at a cost we can afford."

First, we should agree on definitions and metrics. Palliative care, when done as a medical, nursing and social specialty, is a relatively new field. Doctors were only board-certified in Hospice and Palliative Medicine (HPM) in 2006, and received their own CMS billing code as a specialty in 2008. The definitions we use for modern palliative care is that of the Center to Advance Palliative Care (CAPC): "Palliative care is specialized medical care for people with serious illness. It focuses on providing patients with relief from the symptoms, pain and stress of a serious illness – whatever the diagnosis. The goal is to improve quality of life for both the patient and the family." Standards set by the Joint Commission Advanced Certification for Palliative Care state that the core interdisciplinary team should include a physician, an advanced practice registered nurse (APRN) or registered nurse (RN), a social worker, and a chaplain. From 2009 to 2015, the number of U. S. programs reporting a complete interdisciplinary team increased by nearly 50%, from 30% to 44%.

This contrasts with how the PC (v66.7 when we first starting testing it, now Z51.5 in ICD-10-CM) code is applied. It can be applied whenever the coder finds evidence of some aspect of hospice or palliative care: the words "comfort care", "DNR", "DNI" and "palliative care" all can be used to justify adding the code. Use of the code does not require an order for palliative care, or a formal consultation for palliative care. However, it does require that the coder identifies supportive documentation that elements of palliative care were actually delivered.

The growth in Maryland of the palliative coding, parallels the use of formal palliative care programs and consultations nationwide. The growth of palliative care programs has been phenomenal. (Figure 1)

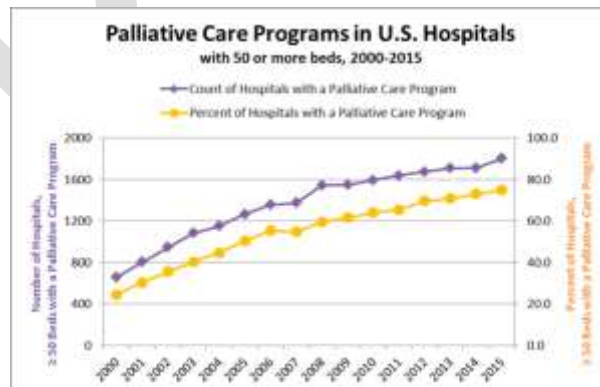


Figure 1: Growth in Palliative Care Programs Nationally

Similarly, the use of palliative care, as measured by penetration (the number of adult non-OB hospital discharges seen by palliative care consultation teams), has grown rapidly. The 2012-2015 growth of 1.8% is similar to the nationwide growth of 1.2%, from 3.6 to 4.8% penetration so, rather than being related to “up-coding” rather, it simply reflects the rapid growth of programs in Maryland. For instance, in 2011, Johns Hopkins Hospital had 300 billable PC consultation visits. In 2016, we had over 6300 billable consultation visits, an additional 800 nurse-led consultations, an additional 900+ pharmacy led consultations, 450 chaplain consultation visits in the Neonatal Intensive Care Unit for neonates with serious and often terminal illnesses.

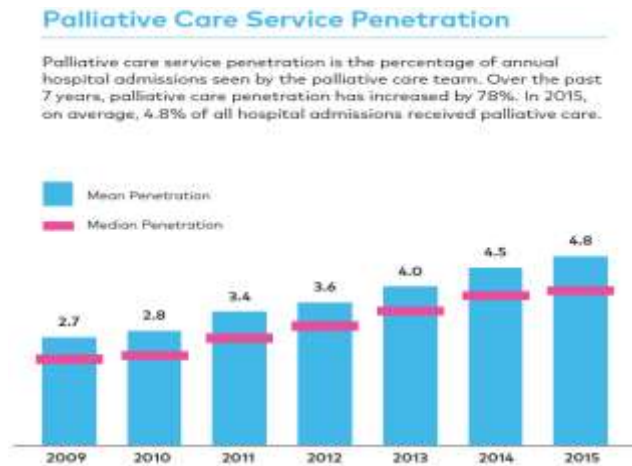


Figure 2: Growth in penetration

We know that there has been a rapid proliferation of Palliative Care Programs in Maryland that could explain much of the growth. Within that is a rapid expansion of actual palliative consults; our data is shown in Figure 3.

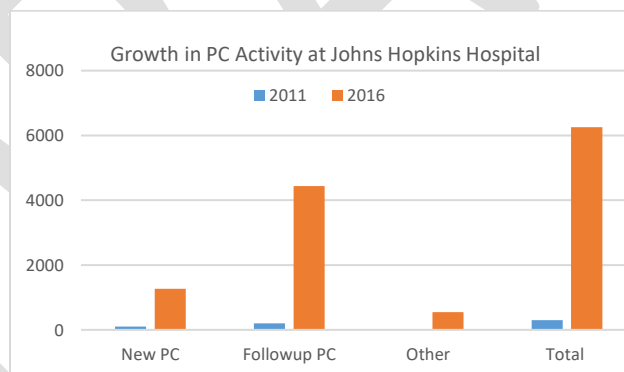


Figure 3: Growth in PC consults at Hopkins

In addition, according to the Directive Decision Memo for Ventricular Assist Devices for Bridge-to-Transplant and Destination Therapy (CAG-00432R) August 1, 2013 from CMMS states that palliative care **MUST** be involved for programs that do Left Ventricular Assist Devices (LVADs, or artificial hearts).

"The team must include, at a minimum, all of the following:

- At least one physician with cardiothoracic surgery privileges and individual experience implanting at least 10 VADs over the course of the previous 36 months with activity in the last year.
- At least one cardiologist trained in advanced heart failure with clinical competence in medical and device-based management including VADs, and clinical competence in the management of patients before and after heart transplant.
- A VAD program coordinator.
- A social worker.
- A palliative care specialist."

This team collaboration was highlighted in our recent accreditation as an LVAD Center of Excellence. In addition, in order to be listed as a Pulmonary Hypertension Association PHA-accredited Center of Comprehensive Care (CCC) or a PHA-accredited Regional Clinical Program (RCP), one must have a palliative care team member and active services.

In conclusion, palliative care, as an increasing clinical specialty can result in expected complications, whether from disease progression or clinical decisions to ameliorate pain, stress, and depression or to allow dignity and improved comfort. Clinical studies have shown that palliative care in many cases increases survival and does not add to the cost of care and can reduce overutilization of costly care. Hospitals should maintain the distinction inherent in the delivery of palliative care.

Following are what we believe to be reasonable options for consideration by the HSCRC. Based on the information and data outlined above, Option 1 is the strongly recommended action.

Option 1: Maintain the current palliative care global exclusion for MHACs and deaths.

Option 2:

Add palliative care as part of the MHAC calculation of the expected by PPC for high mortality DRG groups

Add palliative care as part of the mortality calculation of the expected by PPC for high mortality DRG groups

Option 3: Exclude all palliative care accompanied by a DNR, DNI code

Option 4: Exclude all palliative care with POA "Y" for mortality and MHACs

Thank you for the opportunity to provide this information and recommendations for consideration.

Table 1: Summary of recent studies comparing usual care to UC + PC						
	Patient Experience					
Study and population	QOL	Symptoms	Anxiety Depression	Caregiver Distress	Survival	Cost
Brumley, 2007 (1/3 ca) ⁱ	NM Satisfaction increased	NM	NM	NM	=	-\$7550 per person (p 0.03) More likely to die at home, less likely to visit ED, admit to hospice
Gade, 2008 (1/3 ca) ⁱⁱ	+ p 0.04	NM	NM	NM	=	-\$4885 per person p 0.001. Fewer ICU admissions p 0.04, longer hospice stays p 0.04
Bakitas 2009 (Cancer) ⁱⁱⁱ	+ p 0.02	+ p 0.06	Less depressed mood p 0.02		Longer, 5.5 months, p 0.14 NS	=
Temel 2010 (lung ca) ^{iv}	+ p 0.03	NR What about the 7 symptoms on the FACT-L?	Less depression p 0.01		Longer, 2.7 mon, p 0.02	No change in costs despite the longer survival, as cost per day was \$117 lower. ^v
Farquhar (cancer as cause of breathlessness) ^{vi}	EQ-5D done but I don't see the results	+ reduced patient distress due to breathlessness (P = 0.049)	=	=	=	Total costs £354 less (\$444), better QOL Dominates cost-effectiveness
Zimmermann, 2014 (Cancer) ^{vii}	+ p 0.05	3 months, =, p 0.33 4 months +, p 0.05	NR What about the ESAS scores?	+ p 0.003	=	NR. Anything pending?
Higginson 2014 (dyspnea, most cancer) ^{viii}	=	+mastery of breathlessness p 0.048 Dyspnea =	=	ND?	=	=
Bakitas 2015 (Ca) ^{ix x}	=, p 0.30	=, p 0.09	Mood =	Lower depression and stress, p 0.02 and 0.01, but not QOL	Longer, 6.5 months, 1 yr OS 63% vs 48%, p 0.038	NR; equal resource use
Ferrell, 2015 (Lung Ca) ^{xi xii}	+ p <0.001	+ p <0.001	+ p <0.001	+; better well being and less distress, p 0.001; less burden p 0.008	Longer 6 months, NS	NR; more ADs 44% vs 9%, p <0.001
Grudzen, 2016 (Cancer patients in ED) ^{xiii}	+ p 0.03	ND	=	ND	Longer, 5.2 mons, NS p 0.20	=; note only 25-28% use of hospice in both groups
Temel, 2016 (lung, GI CA) ^{xiv}	= at wk 12 p 0.34, + at wk 24 p 0.01	NR	+ 0.048	NR	Too early to tell	NR; more likely to discuss EOL wishes 30% vs 14.5% p 0.004
El-Jawahri, 2016 (BMT) ^{xv}	+ (Smaller decrease) p 0.045	+ (less increase) p 0.03 at 2 weeks; = at 3 months	+ depression and anxiety p <0.001	No change in QOL or anxiety; less increase in depression p 0.03	Too early to tell	NR
Maltoni, 2016 (Pancreas CA) ^{xvi xvii}	+ p 0.04	NR; FACT-Hep, HCS and TOI all better with PC	=	=	=; OS 32-37% at one year	NR; non-significant improvements in chemo in the last 30 days, hospice LOS, place of death

Key: Ca cancer; QOL quality of life; ED emergency department, GI gastrointestinal, BMT bone marrow transplant, NS not significant, NM not measured, NR not reported; FACT-Hep = Functional Assessment of Cancer Therapy – Hepatobiliary; HCS = Hepatobiliary Cancer Subscale;

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February 23, 2017

Alyson Schuster, PhD, MPH, MBA
Associate Director, Performance Measurement
State of Maryland Department of Health and Mental Hygiene, Health Services Cost Review
Commission

Dear Ms. Schuster,

Maryland stands alone as the only state that does not include hospital deaths on palliative care services as a measure of poor performance. In this light, the proposed HSCRC policy penalizing hospitals for patients who die while under the care of a palliative care service deprives the nation of an important model of quality and cost effective care. We view the proposed policy as short sighted and harmful to Marylanders for whom inpatient palliative care is the optimal means of caring for them in their last days.

Well done, credible research has demonstrated the cost savingsⁱ and patient/family satisfactionⁱⁱ benefits of hospital based palliative care. Thus, as a matter of policy, Maryland should be doing everything within its power to facilitate and support palliative care in its hospitals. A rule such as the one proposed that effectively retards palliative care and penalizes facilities that strive to provide top quality care for the dying is counterproductive to this goal.

While it is true that many patients can be transitioned to hospice care from inpatient care prior to their death, there are those for whom inpatient hospital based terminal palliative care is optimal: Some patients are so medically unstable that they cannot be safely transported to an alternative facility; others have terminal symptoms that are too complex to be effectively managed by local hospices – even with GIP status. There are specific cases where the local hospice cannot manage IV lines in their facility as they do not have 24 hour nursing coverage and, even if they did, have been unable to secure the services of board certified palliative care physicians or similarly qualified advanced practice clinicians qualified to attend to GIP patients in our inpatient hospital facilities.

Given the acute shortage of qualified palliative care cliniciansⁱⁱⁱ it is not realistic to expect that every hospice in Maryland, especially in rural areas, will soon have the capacity to provide optimal palliative care to all terminal patients in a catchment area. The experience of many of our palliative care teams is that many patients and families lack resources to meet caregiving needs at home and are unable as a result, to receive hospice care at home. They are unable to afford the daily “room and board” rate at nursing homes to receive hospice care at such facilities. The hospice facilities are often fully occupied and do not offer alternative options for people to receive hospice care outside of the hospital. The financial information that hospice facilities require to qualify for the sliding scale room and board rate is sometimes overwhelming for patients and families. Despite, our sincere efforts to transition patients with terminal conditions to appropriate community settings, there are multiple barriers that result in a number of such patients receiving end-of-life care in the hospital.

Our patients from the Eastern shore, to inner city Baltimore, up to the Pennsylvania line don't have easy access to inpatient hospice beds. The University of Maryland Medical System has evolved

into a multi-hospital system with academic, community and specialty service missions reaching every part of the state and beyond. While we have a very diverse system, our clinicians can verbalize these same problems everywhere across our sites. Marylanders with complex terminal care needs should not be penalized in this way, nor should the hospitals that provide care to them. We ask you to please consider keeping this patient population excluded from both the mortality and MHAC methodology.

Sincerely,

The UMMS Palliative Care Clinical Performance Improvement Workgroup:

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University of Maryland Shore Regional Health – University of Maryland Shore Medical Center at Easton -
University of Maryland Shore Medical Center at Chestertown - University of Maryland Shore Medical Center at Dorchester •
University of Maryland Charles Regional Medical Center • University of Maryland St. Joseph Medical Center •
University of Maryland Upper Chesapeake Health System – University of Maryland Upper Chesapeake Medical Center –**

ⁱⁱ Impact of an Inpatient Palliative Care Team: A Randomized Controlled Trial

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Journal of Palliative Medicine. March 2008, Vol. 11, No. 2: 180-190

ⁱⁱⁱ Estimate of Current Hospice and Palliative Medicine Physician Workforce Shortage [Dale Lupu, PhD](#), American Academy of Hospice and Palliative Medicine Workforce Task Force^a, American Academy of Hospice and Palliative Medicine, Glenview, Illinois, USA