

**Final Staff Recommendation on QBR and MHAC Magnitudes and  
Scaling for the FY 2013 Update to Hospital Rates**

October 12, 2011

This document represents a final amended recommendation approved by the Commission at the October 12, 2011 meeting.

## Introduction

The HSCRC quality-based scaling methodologies and magnitudes “at risk” are important policy tools for providing strong incentives for hospitals to improve their quality performance over time. This document presents recommendations for the scaling magnitudes and methodologies to translate scores into rate updates for the Quality-based Reimbursement (“QBR”) and Maryland Hospital Acquired Conditions (“MHACs”) initiatives to be applied to FY 2013 rates based on the following hospital performance periods:

- QBR- CY 2011 (year ending December 31, 2011).
- MHAC- FY 2012 (year ending June 30, 2012).

Current HSCRC policy calls for the revenue neutral scaling of hospitals’ position and allocation of rewards and penalties related to performance on the HSCRC’s QBR and MHAC initiatives. The term “scaling” refers to the differential allocation of a pre-determined portion of base hospital revenue based on a distribution of hospital performance related to either relative efficiency or relative quality. The rewards (positive scaled amounts) or penalties (negative scaled amounts) are then applied to each hospital’s update factor for the rate year. The total amounts scaled will be the sum of Reasonableness of Charges (“ROC”), which is *not* addressed in this recommendation, and Quality programs’ scaling results. We also note that ROC scaling permanently impacts a hospital’s revenue base, while the scaling amounts applied for Quality performance are applied on a “one-time” basis.

The reward and penalty allocations for the quality programs are computed on a “revenue neutral” basis for the system as a whole. This means that the net increases in rates for better performing hospitals is funded entirely by net decreases in rates for poorer performing hospitals.

## Background

### *1. QBR and MHAC Measures, Scaling and Magnitude at Risk to Date*

The QBR program uses the Centers for Medicare and Medicaid Services (CMS)/Joint Commission core process measures, –e.g., aspirin is given upon arrival for the patient diagnosed with heart attack--and the newly adopted for this past year “patient experience of care” or Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) measure domains.

The MHAC program currently uses 49 of the 64 Potentially Preventable Complications developed by 3M Health Information Systems, which computes actual versus expected rates of complications adjusted for each patient by the All Patient Refined Diagnosis Related Group (APR DRG) and severity of illness (SOI) category.

For FY 2012 rates, the HSCRC scaled a maximum penalty of 0.5% of base hospital revenue for the QBR (which was the same amount as FYs 2010 and 2011), and 1% for the MHAC program (which was 0.5% in FY 2011), a total of 1.5% of hospital base revenue related to quality. The final scaling magnitudes for the QBR and MHAC programs were previously determined retrospectively at the

end of a particular year because of the hospital industry's preference to see the impact of scaling on individual hospitals in the context of the overall hospital update approved by the Commission.<sup>1</sup>

More recently, the Maryland Hospital Association has proposed that the precise magnitude set aside for quality scaling be determined prospectively. The HSCRC staff is supportive of the prospective establishment of standards and targets.

Therefore, this recommendation for quality performance, relates to rate updates applied with FY 2013 rate orders (effective July 1, 2012).

## ***2. Centers for Medicare & Medicaid Services (CMS) Value Based Purchasing (VBP) Program***

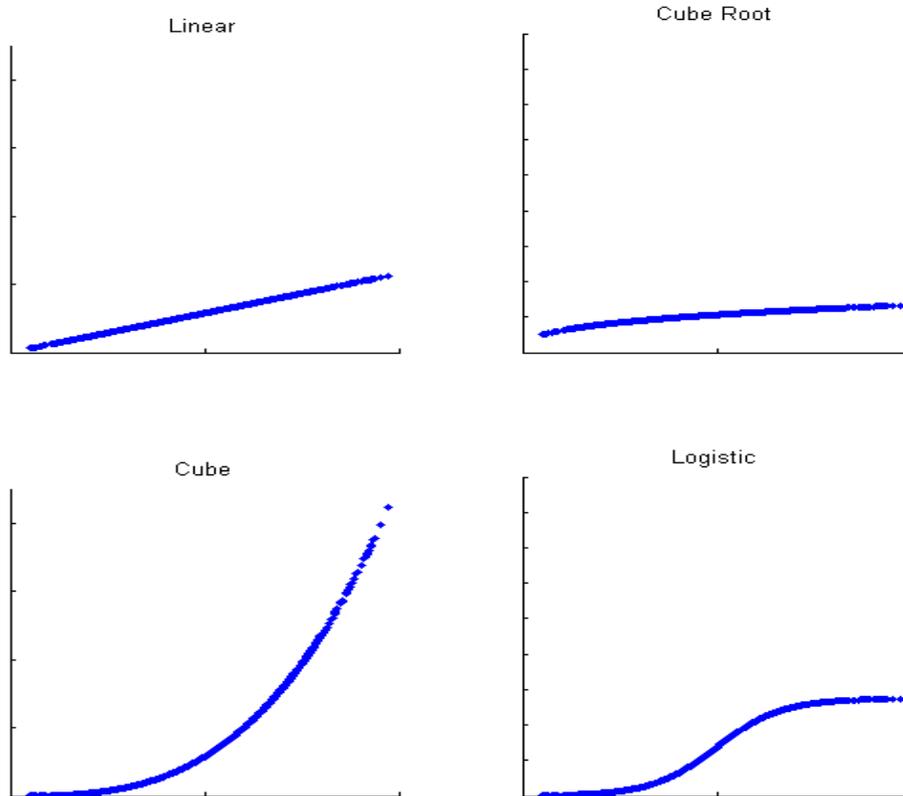
The Patient Protection and Affordable Care Act of 2010 requires CMS to fund the aggregate Hospital VBP incentive payments by reducing the base operating diagnosis-related group (DRG) payment amounts that determine the Medicare payment for each hospital inpatient discharge. The law sets the reduction at one percent in FY 2013, rising to 2 percent by FY 2017. CMS issued its VBP final rule in April 2011, the details of which are summarized below.

- ***Hospital VBP Measures-*** For the federal FY 2013 (which begins on October 1, 2012) Hospital VBP program, CMS will measure hospital performance using two domains: the clinical process of care domain and the patient experience of care domain, which is comprised of the HCAHPS survey measure.
- ***Incentive Payment Calculations-*** CMS indicates in the Final Rule that the exchange function is the means to translate a hospital's total performance score into the percentage of the value-based incentive payment earned by the hospital, and that the selection of the exact form and slope of the exchange function is of critical importance to how the incentive payments reward performance and encourage hospitals to improve the quality of care they provide. CMS considered four mathematical exchange function options: straight line (linear); concave curve (cube root function); convex curve (cube function); and S shape (logistic function) as illustrated in Figure 1 below. In evaluating each option, CMS determined that the linear function moves more aggressively to higher levels for higher performing hospitals than the cube root function, but not as aggressively as the logistic and cube functions, and that the linear exchange function ensures that all hospitals have strong incentives to continually improve the quality of care they provide to their patients. CMS indicated in the final VBP rule they may revisit the issue of the most appropriate exchange function in future rulemaking as they gain more experience under the Hospital VBP program.

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<sup>1</sup> Note: over time, both the staff and the hospital and payer industries have suggested that the Commission consider gradually increasing the amount of revenue at risk for relative quality performance in future years.

**Figure 1: Mathematical Exchanged Function Options Considered by CMS**



**Maryland VBP Exemption-** Inpatient acute care hospitals located in the State of Maryland are not currently paid under the IPPS in accordance with a special waiver provided by section 1814(b)(3) of the Social Security Act. Despite this waiver, Maryland hospitals continue to meet the definition of a “subsection (d) hospital” under section 1886(d)(1)(B) of the Social Security Act and are, therefore, not exempt from the CMS VBP program.

The Health and Human Services Secretary may exercise discretion pursuant to 1886(o)(1)(C)(iv) of the Social Security Act, which states that “the Secretary may exempt such hospitals from the application of this subsection if the State which is paid under such section submits an annual report to the Secretary describing how a similar program in the State for a participating hospital or hospitals achieves or surpasses the measured results in terms of patient health outcomes and cost savings established under this subsection.” As a precursor to future rulemaking on this topic, CMS provides further guidance indicating that:

- The report should be received prior to the Secretary’s consideration of whether to exercise discretion.
- A State shall submit, in writing and electronically, a report pursuant to section 1886(o)(1)(C)(iv) in a timeframe such that allows it to be received no later than October 1, 2011, which is the beginning of the fiscal year prior to FY 2013.
- The report should be as specific as possible in describing the quality (and other) measures included and in describing the results achieved over an applicable time

period, noting that for the initial report the applicable time period would likely be before and after implementation of the state program.

Staff notes that a VBP exemption request which included a report of Maryland's health outcomes and cost savings for the MHAC and QBR programs and a support letter from Secretary Sharfstein, was submitted to HHS Secretary Sebelius on September 30, 2011.

### **3. *Quality Scaling Simulations***

CMS has indicated its future emphasis will increasingly lean toward outcomes in the VBP program. For this reason, using this past year's performance data, staff have modeled increasing magnitudes ranging from 1% (which was used for FY 2012 rate adjustments) to 2% of total revenue in the scaling for the MHAC program, resulting in a range of ~\$12.5M to ~\$25M being redistributed for performance. For the QBR program, staff modeled 0.5% of revenue resulting in ~\$7.5M of revenue being redistributed. A summary of the scaling amounts simulated for the MHAC and QBR programs is presented in Appendix I of this document. The MHAC simulation was discussed with MHA, hospital, and payer representatives in the September 9, 2011 Payment Work Group. The Commission will note that each magnitude scenario modeled varies in terms of the degree of scaling aggressiveness. In general, staff believes that, for the purposes of both improving quality and improving the prospect of receiving a VBP exemption, stronger incentives for improved quality are better than weaker incentives.

For the MHAC initiative, computation of the expected values for each MHAC by APR DRG and SOI cell uses the statewide average value as the benchmark for determining the expected rates. Staff notes there was discussion regarding reducing the benchmarks by 10% (to 90% of state average). However, ultimately, the Commission kept the statewide average standard for FY 2012.

As noted above, the quality scaling for each program is designed to be revenue neutral for the system as a whole. This means that the amounts allocated to better performing hospitals (rewards) must precisely match the penalties applied to poorer performing hospitals. The amount of revenue available for scaling then is a function of both a predetermined maximum amount of penalty (1% for MHAC in FY 2012) and the distribution of the hospitals on the quality index. To translate the hospitals' performance scores into rate adjustments, the scaling is linear, consistent with CMS VBP, with a maximum penalty defined by the total percentage of revenue at risk.

## **Staff Recommendations**

For FY 2013 QBR and MHAC scaling, staff recommends:

1. Allocating 0.5% of hospital approved inpatient revenue for QBR relative performance;
2. Allocating 2.0% of hospital approved inpatient revenue for MHAC relative performance;
3. Using the linear scaling approach adopted by CMS for the VBP program for both the QBR and MHAC programs;
4. Continuing to use the statewide average as the benchmark to establish the expected MHAC values;

5. Scaling the revenue such that the maximum penalty for the poorest performing hospital is the total percent magnitude of revenue scaled for that program on a revenue neutral basis for the system; and,
6. Continuing to monitor performance of MHACs into FY 2012 and considering whether any methodology changes should be considered for FY 2014 rates. Some of the concepts raised by the Payment Work Group participants included:
  - Developing and applying an improvement factor;
  - Considering adding new/additional revenue for high performance (not maintaining revenue neutrality); and,
  - Establishing a “safe zone” for poor performing hospitals.

# Appendix 1

**Table 1. Summary Results of Scaling Simulations for FY 2011 MHAC Data (Benchmark=Statewide Average)**

Updated October 4, 2011

Hospid	Hospital Name	Total CPC Revenue (\$)	% of at Risk Revenue	Maximum Penalty of 2.00% of Hospital Inpatient CPC Revenue		Maximum Penalty of 1.75% of Hospital Inpatient CPC Revenue		Maximum Penalty of 1.50% of Hospital Inpatient CPC Revenue		Maximum Penalty of 1.00% of Hospital Inpatient CPC Revenue	
				Scaled Percent	Scaled Revenue (\$)	Scaled Percent	Scaled Revenue (\$)	Scaled Percent	Scaled Revenue (\$)	Scaled Percent	Scaled Revenue (\$)
				210015	Franklin Square Hospital	251,050,912	1.60%	-2.00%	-5,021,018	-1.75%	-4,393,391
210003	Prince Georges Hospital	171,570,805	1.42%	-1.77%	-3,045,382	-1.55%	-2,664,709	-1.33%	-2,284,036	-0.89%	-1,522,691
210030	Chester River Hospital Center	27,448,470	1.37%	-1.71%	-470,055	-1.50%	-411,298	-1.28%	-352,541	-0.86%	-235,028
210060	Fort Washington Medical Center	22,194,884	1.14%	-1.43%	-316,277	-1.25%	-276,742	-1.07%	-237,208	-0.71%	-158,139
210057	Shady Grove Adventist Hospital	208,746,000	1.00%	-1.25%	-2,609,325	-1.09%	-2,283,159	-0.94%	-1,956,994	-0.62%	-1,304,663
210034	Harbor Hospital Center	130,564,560	0.96%	-1.20%	-1,566,775	-1.05%	-1,370,928	-0.90%	-1,175,081	-0.60%	-783,387
210032	Union Hospital of Cecil County	66,178,058	0.93%	-1.16%	-769,320	-1.02%	-673,155	-0.87%	-576,990	-0.58%	-384,660
210018	Montgomery General Hospital	90,153,792	0.82%	-1.03%	-924,076	-0.90%	-808,567	-0.77%	-693,057	-0.51%	-462,038
210016	Washington Adventist Hospital	186,493,830	0.67%	-0.84%	-1,561,886	-0.73%	-1,366,650	-0.63%	-1,171,414	-0.42%	-780,943
210051	Doctors Community Hospital	110,413,660	0.62%	-0.77%	-855,706	-0.68%	-748,743	-0.58%	-641,779	-0.39%	-427,853
210002	Univ. of Maryland Medical Center	567,218,249	0.58%	-0.73%	-4,112,332	-0.63%	-3,598,291	-0.54%	-3,084,249	-0.36%	-2,056,166
210012	Sinai Hospital	345,854,256	0.52%	-0.65%	-2,248,053	-0.57%	-1,967,046	-0.49%	-1,686,039	-0.33%	-1,124,026
210027	Western Maryland Health System	156,467,241	0.44%	-0.55%	-860,570	-0.48%	-752,999	-0.41%	-645,427	-0.28%	-430,285
210007	St. Josephs Hospital	218,909,250	0.30%	-0.38%	-820,910	-0.33%	-718,296	-0.28%	-615,682	-0.19%	-410,455
210024	Union Memorial Hospital	233,942,808	-0.03%	0.01%	28,124	0.01%	24,609	0.01%	21,093	0.01%	14,062
210023	Anne Arundel General Hospital	234,949,442	-0.24%	0.10%	225,962	0.08%	197,717	0.07%	169,472	0.05%	112,981
210054	Southern Maryland Hospital	145,187,599	-0.25%	0.10%	145,452	0.09%	127,271	0.08%	109,089	0.05%	72,726
210061	Atlantic General Hospital	35,251,727	-0.53%	0.21%	74,870	0.19%	65,511	0.16%	56,152	0.11%	37,435
210001	Meritus Medical Center	132,898,857	-0.61%	0.24%	324,864	0.21%	284,256	0.18%	243,648	0.12%	162,432
210043	Baltimore Washington Medical Center	191,973,170	-0.67%	0.27%	515,425	0.23%	450,997	0.20%	386,569	0.13%	257,713
210055	Laurel Regional Hospital	58,282,350	-0.74%	0.30%	172,830	0.26%	151,226	0.22%	129,623	0.15%	86,415
210009	Johns Hopkins Hospital	772,947,938	-0.86%	0.34%	2,663,785	0.30%	2,330,812	0.26%	1,997,839	0.17%	1,331,893
210048	Howard County General Hospital	143,773,213	-0.89%	0.36%	512,765	0.31%	448,670	0.27%	384,574	0.18%	256,383
210005	Frederick Memorial Hospital	167,617,824	-0.97%	0.39%	651,542	0.34%	570,099	0.29%	488,657	0.19%	325,771
210022	Suburban Hospital Association, Inc	143,236,016	-1.14%	0.46%	654,346	0.40%	572,553	0.34%	490,760	0.23%	327,173
210040	Northwest Hospital Center, Inc.	123,733,548	-1.14%	0.46%	565,253	0.40%	494,596	0.34%	423,940	0.23%	282,626
210044	Greater Baltimore Medical Center	207,786,312	-1.19%	0.48%	990,865	0.42%	867,007	0.36%	743,149	0.24%	495,432
210035	Civista Medical Center	65,638,300	-1.24%	0.50%	326,159	0.43%	285,389	0.37%	244,619	0.25%	163,080
210056	Good Samaritan Hospital	188,747,898	-1.39%	0.56%	1,051,350	0.49%	919,932	0.42%	788,513	0.28%	525,675
210004	Holy Cross Hospital of Silver Spring	277,393,654	-1.56%	0.63%	1,734,090	0.55%	1,517,329	0.47%	1,300,568	0.31%	867,045
210029	Johns Hopkins Bayview Med. Center	240,870,080	-1.72%	0.69%	1,660,206	0.60%	1,452,680	0.52%	1,245,154	0.34%	830,103
210006	Harford Memorial Hospital	53,709,990	-1.73%	0.69%	372,350	0.61%	325,807	0.52%	279,263	0.35%	186,175
210013	Bon Secours Hospital	75,938,096	-1.85%	0.74%	562,966	0.65%	492,595	0.56%	422,224	0.37%	281,483
210039	Calvert Memorial Hospital	58,619,162	-1.89%	0.76%	443,968	0.66%	388,472	0.57%	332,976	0.38%	221,984
210008	Mercy Medical Center, Inc.	186,491,898	-1.95%	0.78%	1,457,287	0.68%	1,275,126	0.59%	1,092,965	0.39%	728,644
210049	Upper Chesapeake Medical Center	117,198,436	-2.02%	0.81%	948,689	0.71%	830,103	0.61%	711,517	0.40%	474,344
210019	Peninsula Regional Medical Center	244,920,000	-2.04%	0.82%	2,002,189	0.72%	1,751,915	0.61%	1,501,641	0.41%	1,001,094
210037	Memorial Hospital at Easton	89,806,444	-2.05%	0.82%	737,755	0.72%	645,535	0.62%	553,316	0.41%	368,877
210011	St. Agnes Hospital	226,412,450	-2.24%	0.90%	2,032,352	0.79%	1,778,308	0.67%	1,524,264	0.45%	1,016,176
210038	Maryland General Hospital	126,233,754	-2.37%	0.95%	1,198,876	0.83%	1,049,017	0.71%	899,157	0.47%	599,438
210033	Carroll County General Hospital	125,397,459	-2.52%	1.01%	1,266,309	0.88%	1,108,021	0.76%	949,732	0.50%	633,155
210010	Dorchester General Hospital	28,735,800	-2.73%	1.09%	314,367	0.96%	275,071	0.82%	235,775	0.55%	157,183
210028	St. Marys Hospital	59,372,280	-2.74%	1.10%	651,906	0.96%	570,418	0.82%	488,929	0.55%	325,953
210045	McCready Foundation, Inc.	4,764,618	-3.05%	1.22%	58,234	1.07%	50,955	0.92%	43,676	0.61%	29,117
210017	Garrett County Memorial Hospital	18,325,164	-3.27%	1.31%	240,130	1.15%	210,114	0.98%	180,097	0.66%	120,065
210058	James Lawrence Kernan Hospital	44,033,418	-3.38%	1.35%	596,417	1.19%	521,864	1.02%	447,312	0.68%	298,208
<b>Statewide Total Scaled Amount</b>					<b>25,181,684</b>		<b>22,033,974</b>		<b>18,886,263</b>		<b>12,590,842</b>

**Table 2. QBR Scaling Simulation based on  
Clinical Process of Care (Opportunity and Appropriateness (.50/.50)) and HCAHPS CY 2010 Data  
Final Score: 70% Clinical Measures and 30% HCAHPS  
Updated on September 19, 2011**

<b>Hospid</b>	<b>Hospital Name</b>	<b>Total CPC Revenue (\$)</b>	<b>Performance Score</b>	<b>Scaled Percent</b>	<b>Scaled Revenue (\$)</b>
210027	Western Maryland Health System	156,467,241	0.2740	-0.50%	-782,336
210003	Prince Georges Hospital	171,570,805	0.2922	-0.47%	-803,847
210044	Greater Baltimore Medical Center	207,786,312	0.3734	-0.33%	-681,712
210012	Sinai Hospital	345,854,256	0.3745	-0.33%	-1,128,110
210019	Peninsula Regional Medical Center	244,920,000	0.3883	-0.30%	-740,425
210038	Maryland General Hospital	126,233,754	0.4117	-0.26%	-330,533
210005	Frederick Memorial Hospital	167,617,824	0.4399	-0.21%	-357,141
210040	Northwest Hospital Center, Inc.	123,733,548	0.4425	-0.21%	-258,073
210016	Washington Adventist Hospital	186,493,830	0.4463	-0.20%	-376,716
210055	Laurel Regional Hospital	58,282,350	0.4555	-0.19%	-108,456
210022	Suburban Hospital Association, Inc	143,236,016	0.4575	-0.18%	-261,590
210051	Doctors Community Hospital	110,413,660	0.4580	-0.18%	-200,692
210045	McCready Foundation, Inc.	4,764,618	0.4590	-0.18%	-8,578
210015	Franklin Square Hospital	251,050,912	0.4764	-0.15%	-376,426
210011	St. Agnes Hospital	226,412,450	0.4796	-0.14%	-326,952
210060	Fort Washington Medical Center	22,194,884	0.4840	-0.14%	-30,362
210057	Shady Grove Adventist Hospital	208,746,000	0.4971	-0.11%	-238,259
210054	Southern Maryland Hospital	145,187,599	0.5095	-0.09%	-134,577
210023	Anne Arundel General Hospital	234,949,442	0.5220	-0.07%	-166,985
210029	Johns Hopkins Bayview Med. Center	240,870,080	0.5223	-0.07%	-169,943
210030	Chester River Hospital Center	27,448,470	0.5302	-0.06%	-15,616
210024	Union Memorial Hospital	233,942,808	0.5495	-0.02%	-55,001
210033	Carroll County General Hospital	125,397,459	0.5752	0.02%	29,972
210056	Good Samaritan Hospital	188,747,898	0.5828	0.04%	73,434
210048	Howard County General Hospital	143,773,213	0.5853	0.04%	63,032
210002	Univ. of Maryland Medical Center	567,218,249	0.5884	0.05%	283,392
210034	Harbor Hospital Center	130,564,560	0.5942	0.06%	80,183
210013	Bon Secours Hospital	75,938,096	0.6104	0.09%	70,923
210043	Baltimore Washington Medical Center	191,973,170	0.6137	0.10%	191,801
210018	Montgomery General Hospital	90,153,792	0.6251	0.12%	110,363
210001	Meritus Medical Center	132,898,857	0.6388	0.15%	198,636
210017	Garrett County Memorial Hospital	18,325,164	0.6400	0.15%	27,824
210039	Calvert Memorial Hospital	58,619,162	0.6400	0.15%	89,003
210035	Civista Medical Center	65,638,300	0.6536	0.18%	117,284
210010	Dorchester General Hospital	28,735,800	0.6584	0.19%	54,069
210004	Holy Cross Hospital of Silver Spring	277,393,654	0.6617	0.19%	540,014
210009	Johns Hopkins Hospital	772,947,938	0.7123	0.29%	2,276,883
210061	Atlantic General Hospital	35,251,727	0.7127	0.30%	104,120
210032	Union Hospital of Cecil County	66,178,058	0.7210	0.31%	206,308
210006	Harford Memorial Hospital	53,709,990	0.7281	0.33%	174,968
210049	Upper Chesapeake Medical Center	117,198,436	0.7461	0.36%	423,439
210007	St. Josephs Hospital	218,909,250	0.7461	0.36%	790,921
210037	Memorial Hospital at Easton	89,806,444	0.7753	0.42%	376,243
210008	Mercy Medical Center, Inc.	186,491,898	0.8072	0.48%	898,756
210028	St. Mary's Hospital	59,372,280	0.8794	0.62%	370,761
<b>Statewide Total Scaled Amount</b>					<b>7,552,330</b>