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**HEALTH SERVICES COST REVIEW COMMISSION**

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January 1, 2013

The Honorable Martin O'Malley  
Governor of Maryland  
100 State Circle  
Annapolis, Maryland 21401-1925

The Honorable Anthony G. Brown  
Lt. Governor of Maryland  
State House  
Annapolis, Maryland 21401-1925

The Honorable Thomas V. Mike Miller, Jr.  
President of the Senate  
H-107 State House  
Annapolis, MD 21401-1991

The Honorable Michael E. Busch  
Speaker of the House  
H-101 State House  
Annapolis, MD 21401-1991

RE: Health Services Cost Review Commission Disparities Report

The Health Services Cost Review Commission (HSCRC) staff respectfully submits to the Governor and Maryland General Assembly our report and recommendations on improving the collection of hospital patient race and ethnicity data and use of these data in hospital quality incentive programs. This submission is required by the Maryland Health Improvement and Disparities Reduction Act of 2012.

Sincerely,

A handwritten signature in black ink, appearing to be 'PR', with a long horizontal line extending to the right.

Patrick Redmon, Ph.D.  
Executive Director

cc: Ben Stutz, Policy Director, Lt. Governor's Office  
Vicki Gruber, Chief of Staff, Senate President's Office  
Kristin Jones, Chief of Staff, House Speaker's Office  
Patrick Dooley, DHMH  
Marie Grant, DHMH

## ***HSCRC Race and Ethnicity Data Disparities Report December 2012***

### **I. Executive Summary**

The Maryland Health Improvement and Disparities Reduction Act of 2012 (“the 2012 Act”) created by Senate Bill 234 and House Bill 439 requires the HSCRC to:

- Study the feasibility of including racial and ethnic performance data tracking in quality incentive programs;
- Report to the General Assembly on or before January 1, 2013, data by race and ethnicity in quality incentive programs where feasible; and,
- Submit a report on or before January 1, 2013, to the Governor and in accordance with §2-1246 of the State Government Article, the General Assembly that explains when data cannot be reported by race and ethnicity and describes necessary changes to overcome those limitations.

In addition, the 2012 Act requires hospitals to include in their community benefit report submissions to the HSCRC a description of the hospital’s efforts to track and reduce disparities in the community services by the hospital.

To meet its charge, beginning in June of 2012, HSCRC staff convened the *Hospital Race and Ethnicity Disparities Work Group* (“*Work Group*”), a multi-stakeholder group of individuals working to improve on disparities in Maryland healthcare; to guide HSCRC staff efforts and work in analyzing the status of hospital patient race and ethnicity data collection; and consider how these data may be used in payment incentive programs for hospitals.

In collaboration with the Work Group, the hospital industry including the Maryland Hospital Association, along with HSCRC staff, developed the key findings and recommendations listed below.

- The HSCRC is able to track racial and ethnic performance data in its quality programs; however, based on analysis of hospital administrative discharge data, quality data, and on information collected through surveying Maryland hospitals, there is wide variation in the race and ethnicity data categories and data collection methods used across hospitals.
- The race data currently collected by hospitals do reveal some statewide differences in hospital quality data for white versus black populations; however, the need for tighter standardization in the data collected and the collection methods used by hospitals is a barrier to making hospital-to-hospital comparisons using the data at the current time.
- HSCRC has developed and recommends targeted activities to improve and standardize hospital race ethnicity data collection, including:
  - Requiring all US Office of Management and Budget (Statistical Policy Directive 15, 1997 revision) race categories be collected (as of July 1, 2012)
  - Convening a statewide meeting of hospital staff on December 12, 2012 to heighten hospitals’ awareness of the importance of accurate and consistent race and ethnicity data collection
  - Convening several training sessions for hospitals throughout the State in the first quarter of calendar year 2013 to improve race and ethnicity data collection
  - Requiring hospitals to collect all discrete racial categories a patient self-identifies as well as the patient’s preferred language when receiving health care and country of origin/ancestry/granular ethnicity

## ***HSCRC Race and Ethnicity Data Disparities Report December 2012***

- HSCRC will continue to analyze race and ethnicity data and monitor data quality using hospital discharge and quality data sets, while simultaneously considering methodology options for use of the data in incentive programs

The Commission's Community Benefit Work Group also met to discuss disparities issues pursuant to the 2012 Act. As a result, the Hospital Community Benefit Reports that will be submitted for FY 13 (due in December 2013) will include additional information on hospitals' community services population by race and ethnicity; identify who was consulted from the respective racial and ethnic groups in the community regarding community health needs; and identify measurable disparities and poor health status of racial and ethnic minority groups relating to hospitals' community health initiatives.

## **II. Background**

### ***Maryland Health Improvement and Disparities Reduction Act of 2012***

The 2012 Act, signed April 10, 2012, establishes a four year, \$4 million per year pilot project to reduce health disparities in the State; to improve health care access and outcomes such as infant mortality, obesity and cancer; and to lower health costs and hospital readmissions. The law also contains a number of permanent provisions aimed at reducing health disparities.

Core aspects of the law include:

- Creating Health Enterprise Zones (HEZs) where health outreach will be targeted, with grants for community nonprofits and government agencies along with tax breaks for health care providers who come to practice in HEZs;
- Establishing a standardized way to collect data on race and ethnicity in health care (both public and private providers), and ensure carriers are working to track and reduce disparities;
- Requiring hospitals to describe their efforts to track and reduce health care disparities; and
- Establishing a process to set criteria for health care providers on cultural competency and health literacy training and continuing education.

As stated in the Executive Summary, the HSCRC was also charged specifically with studying the feasibility of including racial and ethnic performance data tracking for use in its incentive programs, reporting to the General Assembly and the Governor on these data trends, and explaining the necessary changes to overcome limitations on use of these data in incentive programs.

### ***HSCRC Activities to Meet the Requirements of the Disparities Reduction Act of 2012***

Following the passage of the 2012 Act, HSCRC staff formed the *Hospital Race and Ethnicity Disparities Work Group* ("Work Group") to consider the overlapping recommendations from the *Maryland Health Disparities Collaborative Workgroups* (established by the Department of Health and Mental Hygiene), to review and deliberate on HSCRC staff's data analyses and findings, and to advise staff based on their expertise. The Hospital Race and Ethnicity Disparities Work Group comprises a broad array of member stakeholders including individuals serving in hospital clinical quality, case mix/coding and access/admission roles; the Maryland Hospital Association; staff from several state health agencies working to improve disparities in Maryland healthcare; and healthcare disparity experts from academic, research, payer and improvement organizations. Appendix A contains a roster of the Work Group members.

HSCRC staff also undertook several months of best practices review and data analyses of:

- Hospital race and ethnicity data collected and submitted in the HSCRC administrative discharge

## ***HSCRC Race and Ethnicity Data Disparities Report December 2012***

and Quality Based Reimbursement (QBR) data sets;

- Hospital survey data on race and ethnicity data collected and collection practices; and
- External review of best practices and tools that support improved hospital race and ethnicity data collection and reporting.

The results of the data and hospital survey analyses and the external best practices review are detailed in Sections that follow.

### ***Current HSCRC Incentive Programs Linked with Hospital Performance***

In 2008, HSCRC began implementing two quality initiatives very similar to the federal Medicare Value Based Purchasing (VBP) program in the planning stages. These programs include the Quality-Based Reimbursement (QBR) and Maryland Hospital Acquired Conditions (MHAC) programs. In the QBR initiative, hospital reimbursement rates vary depending on each hospital's achievement on specified process of care (e.g., patients having a heart attack receiving aspirin upon arrival to the hospital) and patient experience (e.g., how well patients rated their communication with nurses during their hospitalization) measures. The QBR program utilizes core measures data that hospitals are already reporting to CMS and the state. All measures improved from 2007 to 2010, and variation between hospitals has also decreased substantially in almost all measures.

The MHAC program assesses measures of medical complications and readjusts payment hospital rates accordingly, using administrative data hospitals report to the HSCRC that parallel the claims data submission. Since the program began, there has been a 27.5 percent decrease in the complication rate in Maryland hospitals.

The results of HSCRC staff's initial analyses of race and ethnicity data in the QBR and MHAC programs are provided in Section III below.

### ***Racial Disparity in Hospital Admission Rates and Severity Produce Excess Costs***

The rationale for examining hospital quality measures and performance-based reimbursement data is found in the known Black vs. White disparities in Maryland in Hospital admission rates and admission severity. These disparities generate significant excess health care costs in the State.

- Agency for Healthcare Research and Quality's (AHRQ) State Snapshots documents higher Black admission rates for many Ambulatory Care Sensitive Conditions.  
<http://statesnapshots.ahrq.gov/snaps11/SnapsController?menuId=61&state=MD&action=disparities&level=80&caretype=3>
- Age-adjusted Analysis of all-cause admission rates by the Office of Minority Health and Health Disparities has found that the Black admission rate in 2011 was 1.35 times higher than the White rate. This means that 26% of Black admissions were excess (compared to the expected Black admissions if the Black admission rate was the same as the White rate). These excess admissions cost \$ 767 million (the frequency disparity cost)
- For most age groups, the average cost per Black admission exceeded the White average cost, reflecting higher severity among Black admissions. Applying the average cost difference to the expected Black admissions shows an additional \$ 47 million of excess cost (the severity disparity cost).

## HSCRC Race and Ethnicity Data Disparities Report December 2012

### III. Review of Maryland Hospital Data/Trends on Race and Ethnicity

HSCRC staff conducted a series of analyses of statewide aggregate and individual hospital data and trends in the following areas:

- Patient race and ethnicity composition statewide trends (Figure 1);
- Patient race and ethnicity composition by hospital for FY 2012 (Figures 2 and 3)
- Comparison of race and ethnicity in the QBR and HSCRC discharge data sets for CY 2011 (Figure 4);
- QBR race and ethnicity data statewide trends CY2011 (Figure 5); and,
- MHAC race and ethnicity data statewide trends CY 2011 (Figure 6).

In general, based on review of the data analysis, the HSCRC staff and the Work Group agreed that the degree of variation in the use of “other” and “unknown” categories for race and ethnicity, and inconsistencies in the race categories collected across hospitals, limited our ability to identify true disparities in care within and among hospitals at the present. Data at the Statewide level for Black vs. White comparisons were felt to be sufficient at the present time to examine whether disparities in hospital quality metrics between those two groups exist in the State overall.

The Figures referenced above are provided below along with a brief discussion of each of the analysis findings and its implications.

#### *Hospital Race and Ethnicity Composition Statewide and by Hospital*

Figure 1 below illustrates the statewide changes in patient race and ethnicity as submitted in the HSCRC hospital discharge data set from 2007 to 2012. Of particular note are the substantial increases in the “unknown” (59%) and “biracial” (775%) categories for race as well as the “unknown” category for “ethnicity” (292%), which is a result of dramatic change in FY2012 data.

**Figure 1. Trends in Hospital Discharges by Race and Ethnicity Statewide, FY 07-12**

	FY07	FY08	FY09	FY10	FY11	FY12	FY07- FY12 Change
<b>RACE</b>							
<b>WHITE</b>	454,334	458,373	458,241	445,806	427,708	411,925	<b>-9.33%</b>
<b>AFRICAN AMERICAN</b>	242,924	246,275	249,965	252,358	242,876	235,747	<b>-2.95%</b>
<b>ASIAN/PACIFIC ISLANDER</b>	13,911	14,458	14,881	15,746	15,495	16,024	<b>15.19%</b>
<b>NATIVE AMERICAN</b>	1,745	1,777	1,801	1,629	2,075	2,997	<b>71.75%</b>
<b>OTHER</b>	40,475	42,603	44,835	43,622	39,827	33,855	<b>-16.36%</b>
<b>BIRACIAL</b>	523	802	1,038	1,295	2,441	4,575	<b>774.76%</b>
<b>UNKNOWN</b>	1,371	1,519	1,761	2,084	2,326	2,176	<b>58.72%</b>
<b>ETHNICITY</b>							
<b>NOT SPANISH HISPANIC ORIGIN</b>	706,896	716,874	724,669	709,346	674,282	599,179	<b>-15.24%</b>
<b>SPANISH HISPANIC ORIGIN</b>	28,535	29,592	28,736	29,225	29,894	30,388	<b>6.49%</b>
<b>UNKNOWN</b>	19,852	19,341	19,117	23,969	28,572	77,845	<b>292.13%</b>
<b>TOTAL</b>	<b>755,283</b>	<b>765,807</b>	<b>772,522</b>	<b>762,540</b>	<b>732,748</b>	<b>707,299</b>	<b>-6.35%</b>

***HSCRC Race and Ethnicity Data Disparities Report December 2012***

As illustrated in Figure 2 below, the analysis of hospital-specific coding of race for FY2012 discharges revealed wide variation in hospital coding of “other”—with the lowest hospital at 0% and the highest hospital at 25%—, “two or more”—with the lowest hospital at 0% and the highest hospital at 8%—, and “unknown”—with the lowest at 0% and the highest at 4%.

More strikingly, as shown in Figure 3, the hospital-specific coding of ethnicity of “unknown” (i.e., Hispanic or non-Hispanic as a separate variable) for FY 2012 discharges revealed a range of 0.1% for the lowest hospital and 100% for the highest hospital, with a statewide average of 16%.

*HSCRC Race and Ethnicity Data Disparities Report December 2012*

**Figure 2. Race Coding by Hospital in the HSCRC Discharge Data Set, FY 2012**

HOSPITAL NAME	WHITE	AFRICAN AMERICAN	ASIAN/PACIFIC ISLANDER	NATIVE AMERICAN	OTHER	BIRACIAL	UNKNOWN
GARRETT COUNTY	99.4%	0.3%	0.1%		0.0%	0.1%	
WESTERN MARYLAND HEALTH SYSTEM	96.8%	2.6%	0.1%	0.0%	0.3%	0.1%	0.1%
CARROLL COUNTY	93.1%	3.9%	0.4%	0.2%	2.0%	0.3%	0.2%
ATLANTIC GENERAL	89.5%	9.1%	0.2%		1.0%	0.1%	0.2%
MERITUS	89.4%	7.2%	0.5%	0.1%	2.2%	0.6%	
UNION HOSPITAL OF CECIL COUNTY	88.9%	7.9%	0.4%	0.1%	2.5%	0.2%	
UPPER CHESAPEAKE HEALTH	85.8%	10.8%	0.6%	1.0%	1.6%	0.3%	0.0%
CALVERT	82.0%	16.7%	0.6%	0.1%		0.4%	0.2%
FREDERICK MEMORIAL	81.4%	10.1%	1.8%	0.1%	6.2%	0.4%	
HARFORD	80.6%	17.0%	0.8%	0.4%	1.1%	0.1%	0.0%
ST. JOSEPH	78.5%	16.1%	1.9%	0.1%	3.0%	0.3%	0.1%
CHESTER RIVER HOSP. CENTER	78.5%	17.5%	0.0%	0.0%	3.6%	0.3%	0.0%
ANNE ARUNDEL	78.0%	19.0%	1.5%	0.1%	0.9%	0.2%	0.5%
B.W.M.C	77.8%	16.1%	1.5%	0.4%	3.4%	0.2%	0.6%
FRANKLIN SQUARE	77.5%	17.8%	0.3%	0.1%	3.1%	0.3%	0.9%
MCCREADY	77.5%	22.0%			0.3%	0.3%	
ST. MARY	75.0%	19.9%	0.4%	0.1%	3.6%	1.0%	0.1%
MEMORIAL AT EASTON	74.9%	19.6%	0.3%	0.1%	5.0%	0.1%	0.0%
G.B.M.C.	70.6%	23.6%	2.6%	0.2%	2.6%	0.3%	
MONTGOMERY GENERAL	70.3%	19.1%	4.8%	0.3%	3.5%	1.2%	0.4%
SUBURBAN	70.1%	13.5%	4.7%	0.2%	10.8%		0.6%
PENINSULA GENERAL	69.7%	24.8%		0.3%	5.2%		0.0%
DORCHESTER GENERAL	68.6%	29.5%	0.3%		1.7%		
HARBOR	63.7%	30.6%	0.3%	0.1%	3.3%	0.4%	1.5%
HOPKINS BAYVIEW MED CTR	62.9%	26.0%	1.0%	0.3%	9.6%	0.2%	
CIVISTA	59.5%	34.2%	0.8%	0.1%	5.1%	0.3%	
HOWARD COUNTY	59.4%	22.5%	10.0%	0.1%	7.4%	0.5%	0.0%
KERNAN	57.3%	33.6%	0.7%	0.5%	7.9%		
JOHNS HOPKINS	52.2%	39.1%	2.0%	0.2%	6.2%	0.2%	0.2%
ST. AGNES	52.0%	40.5%	2.8%	0.5%	3.9%	0.1%	0.1%
SHADY GROVE	51.0%	17.9%	12.6%	1.0%	15.3%	1.6%	0.6%
UNIVERSITY OF MARYLAND	48.3%	45.5%	0.8%	0.6%	4.8%		0.0%
UNION MEMORIAL	44.7%	51.7%	0.3%	0.1%	1.9%	0.0%	1.2%
HOLY CROSS	40.7%	39.6%	7.0%	3.6%	0.8%	7.9%	0.4%
GOOD SAMARITAN	40.7%	57.5%	0.2%	0.0%	1.4%	0.1%	0.2%
SINAI	38.4%	56.2%	1.8%	0.3%	3.2%	0.1%	
MERCY	37.8%	58.0%	1.0%	0.1%	2.9%	0.2%	
NORTHWEST	36.7%	60.6%	0.6%	0.3%	1.8%	0.1%	
LAUREL REGIONAL	32.3%	50.8%	1.9%	0.3%	14.7%		
SOUTHERN MARYLAND	25.2%	72.8%	1.7%	0.2%	0.0%		0.0%
WASHINGTON ADVENTIST	21.0%	45.2%	4.3%	0.5%	25.0%		3.9%
BON SECOURS	20.5%	76.1%	0.2%		3.1%	0.0%	0.1%
DOCTORS COMMUNITY	19.2%	73.2%	1.1%	0.0%	6.4%	0.1%	0.0%
MARYLAND GENERAL	17.4%	80.1%	0.5%	0.1%	1.6%		0.2%
FT. WASHINGTON	15.5%	79.5%	3.2%	0.1%	1.7%		
PRINCE GEORGE	11.9%	75.2%	0.8%	0.3%	11.9%		
<b>State Average</b>	<b>60.0%</b>	<b>32.8%</b>	<b>1.8%</b>	<b>0.3%</b>	<b>4.5%</b>	<b>0.5%</b>	<b>0.4%</b>
<b>Highest %</b>	<b>99.4%</b>	<b>80.1%</b>	<b>12.6%</b>	<b>3.6%</b>	<b>25.0%</b>	<b>7.9%</b>	<b>3.9%</b>
<b>Lowest %</b>	<b>11.9%</b>	<b>0.3%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>

*HSCRC Race and Ethnicity Data Disparities Report December 2012*

**Figure 3. Ethnicity Coding by Hospital in the HSCRC Discharge Data Set, FY 2012**

<b>HOSPITAL NAME</b>	<b>Yes</b>	<b>No</b>	<b>Unknown</b>
CALVERT			100.0%
MCCREADY			100.0%
UPPER CHESAPEAKE HEALTH	0.2%	16.5%	83.3%
HARFORD	0.2%	16.6%	83.2%
HOLY CROSS	19.7%		80.3%
SUBURBAN	2.8%	73.2%	24.0%
KERNAN	0.6%	82.9%	16.5%
FRANKLIN SQUARE	0.7%	87.7%	11.6%
UNIVERSITY OF MARYLAND	1.7%	87.4%	11.0%
LAUREL REGIONAL	9.1%	81.5%	9.4%
ST. JOSEPH	1.9%	89.8%	8.3%
JOHNS HOPKINS	1.6%	90.6%	7.8%
UNION HOSPITAL OF CECIL COUNT	1.3%	91.4%	7.4%
MONTGOMERY GENERAL		94.6%	5.4%
MERITUS	1.2%	93.9%	4.9%
HARBOR	7.5%	88.1%	4.5%
SHADY GROVE	9.0%	87.1%	3.9%
ANNE ARUNDEL	3.2%	93.3%	3.5%
BON SECOURS	0.3%	96.9%	2.7%
PRINCE GEORGE	11.5%	85.9%	2.5%
CHESTER RIVER HOSPITAL CENTER	19.9%	78.3%	1.9%
CIVISTA	2.7%	95.6%	1.7%
MEMORIAL AT EASTON	22.1%	76.1%	1.7%
BALTIMORE WASHINGTON MEDICAL CENTER	3.2%	95.4%	1.5%
DORCHESTER GENERAL	16.8%	82.4%	0.9%
UNION MEMORIAL	1.5%	97.7%	0.9%
DOCTORS COMMUNITY	3.4%	95.9%	0.8%
MERCY	0.9%	98.5%	0.7%
ST. AGNES	3.5%	96.0%	0.6%
MARYLAND GENERAL	1.1%	98.4%	0.5%
CARROLL COUNTY	0.6%	99.0%	0.3%
WESTERN MARYLAND HEALTH SYSTEM	0.2%	99.6%	0.2%
ATLANTIC GENERAL	0.4%	99.4%	0.2%
GOOD SAMARITAN	1.0%	98.8%	0.2%
ST. MARY	2.2%	97.7%	0.1%
GARRETT COUNTY	0.1%	99.8%	0.1%
FREDERICK MEMORIAL	4.5%	95.5%	
SINAI	1.1%	98.9%	
WASHINGTON ADVENTIST	26.4%	73.6%	
PENINSULA GENERAL	2.3%	97.8%	
HOPKINS BAYVIEW MED CTR	2.7%	97.3%	
NORTHWEST	0.9%	99.2%	
G.B.M.C.	1.1%	99.0%	
HOWARD COUNTY	4.6%	95.4%	
SOUTHERN MARYLAND	2.1%	97.9%	
FT. WASHINGTON	1.4%	98.6%	
<b>State Average</b>	<b>4.6%</b>	<b>88.8%</b>	<b>16.2%</b>
<b>Highest %</b>	<b>26.4%</b>	<b>99.8%</b>	<b>100.0%</b>
<b>Lowest %</b>	<b>0.1%</b>	<b>16.5%</b>	<b>0.1%</b>



## HSCRC Race and Ethnicity Data Disparities Report December 2012

### *QBR and MHAC by Race and Ethnicity*

As an initial step to attempt to validate race and ethnicity coding, HSCRC staff examined the correlation of these variables between the QBR process of care clinical measures and the HSCRC discharge data sets. QBR data record the race and ethnicity variables from the medical charts, while HSCRC discharge data sets may have different sources of this information. However, one would expect 100% compatibility between these two data sets as race and ethnicity information should be uniform in all hospital records. Nonetheless, there is still the possibility that the race and ethnicity information is incorrect on both data sets. As Figure 4 illustrates, using CY 2011 data, there was an overall high matching rate of 96% for race and 95% for ethnicity, but there is quite a wide variation between hospitals and between race and ethnicity categories, with an overall lowest hospital match rate of 81% for race and 22% for ethnicity.

**Figure 4. Comparison of Race Coding from Clinical Process of Care (QBR) Measures and HSCRC Inpatient Data Set-CY2011**

Race/Ethnicity Category in Clinical Process of Care Measures	Total Number of Patients	Percent of Patients with Matching Race/Ethnicity	Lowest Hospital Match Rate
<b>Race</b>			
WHITE	36,714	98.74%	71.14%
AFRICAN AMERICAN	16,882	99.19%	93.68%
ASIAN/PACIFIC ISLANDER	736	75.27%	19.05%
NATIVE AMERICAN	193	50.26%	8.33%
UNKNOWN	1,371	7.80%	1.61%
OVERALL	55,899	96.16%	81.59%
<b>Ethnicity</b>			
SPANISH HISPANIC ORIGIN	879	80.09%	20.00%
NOT SPANISH HISPANIC ORIGIN	55,019	95.73%	17.77%
OVERALL	55,899	95.48%	22.36%

Note: Records are linked using Hospital ID, Date of Birth, Sex, Zip code of Residence, Admission Date and Discharge Date.

### *Analysis of Race and Ethnic Differences in QBR and MHAC Data*

HSCRC staff analyzed current hospital quality information used in the performance based incentive programs by race and ethnicity. Given the concern about data reliability (see matching results above), the HSCRC conducted this analysis for illustrative purposes. While the data quality is good (not great) for the white and black categories on an overall statewide basis, the HSCRC would expect this to improve over time as best practices become more prevalent. Further, due to the variation among hospitals, hospital-by-hospital analyses would not be appropriate at this time. As data quality improves and collection practices are standardized across the State; however, HSCRC would expect to conduct similar analyses on a hospital-by-hospital basis.

An analysis of CY 2011 racial and ethnic differences in the clinical process of care measure scores used in the QBR program produced mixed results. As Figure 5 illustrates below, there is variation in

## ***HSCRC Race and Ethnicity Data Disparities Report December 2012***

black/white differences when reviewed measure by measure with, for example, blacks scoring 5% lower in the AMI 8A measure (Heart Attack Patients Receiving Primary Percutaneous Coronary Intervention within 90 minutes), and scoring 8% higher on the CAC 3 measure (Home management plan given for child with asthma). Although the information on race categories other than white/black and ethnic groups is provided in the analysis, the rates for these racial and ethnic groups are not reliable due to a small number of patients in each clinical measure, and due to inconsistencies in data collection for these particular minorities.

HSCRC staff analyzed trends in the MHAC complication rates statewide for the black and white populations from FY 2010 to FY 2012. As Figure 6 shows, based on data currently available, blacks had lower raw and risk adjusted rates of complications than whites, although the raw rate difference of -15% was much higher than the risk adjusted rate of -5% in FY2012. Since the program started in FY2010, complication rates declined much faster for blacks than whites resulting in increased black and white differences over time. However, HSCRC's current risk adjustment method may be limited to measure racial and ethnic differences in complication rates as it is based on the severity of illness of the patient by the diagnosis related group (using APR-DRGs). As further analysis is done in the future, the Commission will consider adding other risk adjustment factors such as age, and source of admission. Further work to determine which approaches to risk adjustment are best suited to disparity analysis needs to be done.

In both quality programs, statewide racial and ethnic differences in quality of hospital care reflect two dimensions of disparity: within hospital variation (different racial and ethnic groups receiving different quality of care in the same hospital), and across hospital variation (minority groups receiving their care in lower performing hospitals). HSCRC will continue to analyze race and ethnicity data using hospital discharge and quality data sets, while simultaneously considering methodologies for incentive programs differentiating these two dimensions of disparity in hospital quality.

*HSCRC Race and Ethnicity Data Disparities Report December 2012*

**Figure 5. QBR Process of Care Measures by Race and Ethnicity, CY 2011**

Measure	White	Black/African American	American Indian	Asian	Hawaiian	UTD	Black-White Difference	Hispanic_ Yes	Hispanic_ No	Hispanic Difference
AMI-8a - Primary PCI Received Within 90 Minutes of Hospital Arrival	91.5	86.5	100	97.1	100	100	-5.0	91.3	91.3	0.0
PN-7 Influenza vaccination	95.1	92.3	100	92.8	100	95.2	-2.8	95.1	94.3	0.8
PN-2 Pneumococcal vaccination	96.5	94.1	91.7	91.6	100	95.2	-2.4	95.7	95.9	-0.2
PN-3b Blood culture before first antibiotic – Pneumonia	95.4	93.4	96.8	98	100	95.3	-2.0	96.6	94.8	1.8
SCIP INF 4- Cardiac Surgery Patients with Controlled 6 A.M. Postoperative Serum Glucose	93.9	91.9	94.4	96.8	100	93.1	-2.0	97.6	93.5	4.1
AMI-1 Aspirin at Arrival	99.1	97.5	100	100	100	100	-1.6	100	98.8	1.2
AMI-2 Aspirin prescribed at discharge	99.3	98	93.9	99.3	100	99.6	-1.3	100	99	1.0
SCIP CARD 2 Surgery Patients on Beta-Blocker Therapy Prior to Admission Who Received a Beta-Blocker During the Perioperative Period	95.3	94.5	78.8	92.4	100	96.7	-0.8	92.8	95.1	-2.3
SCIP INF 2- Antibiotic selection	98.1	97.3	97.3	96.4	96.3	98.2	-0.8	97.7	97.9	-0.2
AMI-5 Beta blocker prescribed at discharge	98.9	98.2	97.1	100	100	98.6	-0.7	98.9	98.7	0.2
SCIP INF 3- Antibiotic discontinuance within appropriate time period postoperatively	96.7	96	95.5	96.6	96.3	97.5	-0.7	96.3	96.6	-0.3
PN-6 Initial Antibiotic Selection for CAP in Immunocompetent Patient	95.8	95.3	91.3	96.3	100	95.2	-0.5	97.2	95.6	1.6
AMI-4 Adult smoking cessation advice/counseling	99.2	98.9	88.9	100	100	100	-0.3	100	99.1	0.9
HF-1 Discharge instructions	90.8	90.5	94.6	93.2	92.3	92.8	-0.3	93.8	90.7	3.1
SCIP VTE 1- Surgery Patients with Recommended Venous Thromboembolism Prophylaxis Ordered	97.2	96.9	94.7	95.3	95.5	98.3	-0.3	97	97.1	-0.1
HF-2 Left ventricular systolic function (LVSF) assessment	99	98.8	100	100	100	99.6	-0.2	99.5	98.9	0.6
AMI-3 ACEI or ARB for LVSD	97.4	97.3	100	100	100	96.8	-0.1	100	97.4	2.6
CAC-1a - Relievers for Inpatient Asthma (age 2 through 17 years) – Overall Rate	100	100	100	100	100	100	0.0	100	100	0.0
SCIP INF 6- Surgery Patients with Appropriate Hair Removal	99.8	99.8	100	100	100	99.8	0.0	99.8	99.8	0.0
PN-4 Adult smoking cessation advice/counseling	98.5	98.6	100	100	100	97.5	0.1	97	98.6	-1.6
SCIP INF 1- Antibiotic given within 1 hour prior to surgical incision	97.2	97.3	90	97.1	92.6	98.5	0.1	98	97.3	0.7
SCIP VTE 2 - Surgery Patients with Recommended Venous Thromboembolism Prophylaxis Given 24 hours prior and after surgery	96.3	96.4	94.7	95.3	95.5	97.9	0.1	96.7	96.4	0.3
HF-3 ACEI or ARB for LVSD	96.3	96.5	100	97.8	100	96.1	0.2	97.5	96.4	1.1
CAC-2a - Systemic Corticosteroids for Inpatient Asthma (age 2 through 17 years) – Overall Rate	99.4	99.9	100	100	100	99.3	0.5	100	99.7	0.3
HF-4 Adult smoking cessation advice/counseling	98.6	99.1	100	100	100	100	0.5	100	98.9	1.1
CAC-3-Home Management Plan of Care (HMPC) Document Given to Patient/Caregiver	76.4	84.5	94.7	88.2	57.1	83.7	8.1	83.1	82.1	1.0

## *HSCRC Race and Ethnicity Data Disparities Report December 2012*

**Figure 6. Trends in Hospital Complication Rates, Black Vs. White, FY 2010-12**

<b>Rates</b>	<b>Race Group</b>	<b>FY2010</b>	<b>FY2011</b>	<b>FY2012</b>	<b>% Change</b>
Observed State PPC Rates	White	2.14	2.05	1.90	-11.19%
	Black	1.81	1.74	1.59	-12.33%
	% Difference in Rate for Blacks	-15.40%	-15.43%	-16.50%	
Risk Adjusted State PPC Rates	White	2.11	1.97	1.81	-14.15%
	Black	2.05	1.91	1.71	-16.61%
	% Difference in Rate for Blacks	-2.60%	-3.13%	-5.38%	

PPC Rate: Potentially Preventable Complication Rate per 1,000 at risk. Patients can be at risk of multiple complications.

Risk Adjusted for the severity of the patients using APR-DRG Severity of Illness categories.

### *Hospital Survey Results on Race and Ethnicity Data, Collection Practices, and Training*

At the recommendation of the Work Group, in July of 2012, HSCRC staff surveyed hospital access staff on race and ethnicity data elements collected, data collection practices, and training of staff on data collection. The survey yielded the results below.

- 37 of Maryland's 46 hospitals responded.
- All respondents indicated they collect Black and White categories, and nearly all collect Asian and American Indian/Native Alaskan.
- There is wide variation in data collection when a patient identifies as being more than one race, with some hospitals collecting each race, some collecting "biracial," some collecting "multiracial", etc.
- 30 hospitals reported they collect race and ethnicity data elements separately, and 7 reported they collect them combined.
- Most hospital respondents collect preferred language and most do not collect country of origin.
- All but one hospital indicated they use patient self-reported data for race/ethnicity, and 15 of 37 hospitals also indicated they use staff observation.
- Content and timing of staff training on race and ethnicity data collection varied greatly.
- Tools and resources are not widely used by hospitals to support accurate and complete race and ethnicity data collection.
- Half of hospital respondents identified areas of training or support from which the hospital would benefit.

As a result of the survey findings, the Work Group recommended changes in data collection requirements as well as training sessions for frontline hospital staff across the State on best practices in collecting race and ethnicity data.

#### **IV. Changes in HSCRC Hospital Patient Race and Ethnicity Data Requirements**

In their discussions, the Work Group supported HSCRC staff's recommendation to require hospitals to collect race categories consistent with the US Office of Management and Budget categories. Table 5 below indicates the HSCRC-imposed changes that were effective for discharges beginning July 1, 2012.

**Figure 7. Updated Race Categories Beginning with Discharges FY 2013 (July 1, 2012)**

Old Race Categories			Revised Race Categories		
	Category	Code		Category	Code
(a)	White	1	(a)	White	1
(b)	African American	2	(b)	<b>Black or</b> African American	2
(c)	Asian or Pacific Islander	3	(c)	Asian	3
(d)	American Indian/Eskimo/Aleut	4	(d)	American Indian <b>or Alaska Native</b>	4
(e)	Other	5	(e)	Other	5
(f)	Biracial	6	(f)	<b>Two or more races</b>	6
(g)	Unknown	9	(g)	<b>Native Hawaiian or Other Pacific Islander</b>	<b>7</b>
			(h)	Unknown	9

In addition to the changes above, the Work Group recommended that hospitals begin to collect all discrete race categories that apply to a patient as well as country of origin and preferred language beginning with July 1, 2013 discharges. HSCRC will require this as of the recommended date.

**V. Best practices training on collecting race and ethnicity data from patients**

The Work Group discussed the available tools to support better data collection, including the training developed by the Center for Health Disparities and the Guide entitled, *Improving Health Equity Through Data Collection AND Use: A Guide for Hospital Leaders* developed by the Health Research and Educational Trust in partnership with the American Hospital Association. All agreed such tools were a valuable resource that could be more aggressively and uniformly used by hospitals to more accurately collect race and ethnicity data.

HSCRC is collaborating with the Maryland Hospital Association (MHA) and Maryland Healthcare Education Institute (MHEI) to support improvement in patient race and ethnicity data collection, and ultimately improvement in disparities in health and hospital care. A statewide meeting was convened on December 12, 2012 to heighten hospitals’ awareness of the current status of disparities data collection and to inform hospitals of the three regional training sessions that will be convened during the first quarter of CY 2013 on data collection best practices. The target audiences of these training sessions are hospital staff with responsibility for ensuring that frontline access, including quality and other staff that collect patient race and ethnicity data, do so accurately and appropriately.

## *HSCRC Race and Ethnicity Data Disparities Report December 2012*

### **VI. Conclusion**

As the Maryland Health Improvement and Disparities Reduction Act of 2012 requires that HSCRC consider use of race and ethnicity data in hospital payment incentive programs, HSCRC recognizes, through its data analyses and Work Group deliberations, that it is not currently feasible to use the race and ethnicity data collected by hospitals for performance comparisons linked with incentives. Further, it is crucial that all hospitals participate in the statewide training sessions planned by HSCRC in conjunction with MHA and MHEI. The sessions will be convened through the first quarter of calendar year 2013. Hospitals are invited to send individuals who will train frontline staff in the following areas:

- The importance of accurate race and ethnicity data collection:
  - Compliance with the US OMB race categories (required by HSCRC as of July 2012).
  - Collection and storage of all discrete racial categories that the patient indicates applies to them (will be added July 2013).
  - Collection of ethnicity data separate from race (currently required by HSCRC).
  - Collection of new data elements including language preference and country of origin/ancestry/granular ethnicity (HSCRC will begin adding these elements July 2013).
- How hospitals can inform/educate the public as to why this information is collected, including assurances of individual data confidentiality.
- Best practices of having patients self-identify their race and ethnicity, e.g., a standardized written document for patients to self-identify, available in multiple languages.
- Conflict management at collection for frontline staff.
- Guidelines/best practices for patients who are not capable of answering, for example, unconscious or disoriented patients.

HSCRC staff will continue to analyze race and ethnicity data submitted in the administrative discharge data as well as the array of quality of measures collected, analyzed, and used for its performance initiatives linked with payment. As race and ethnicity reporting and data quality improve, the Commission will consider adding race and ethnicity elements into its quality programs as feasible and appropriate. HSCRC staff will continue working with the Department of Health and Mental Hygiene on the most efficacious method to accomplish this goal.

**Appendix A**  
**Hospital Race and Ethnicity Disparities Work Group**  
*(Updated June 6, 2012)*

**ROSTER**

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Johns Hopkins Health System, Director of Case Mix Management

Barbara Blum  
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***HSCRC Race and Ethnicity Data Disparities Report December 2012***

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