State of Maryland
Department of Health and Mental Hygiene

John M. Colmers
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Jack C. Keane

Bernadette C. Loftus, M.D.

Thomas R. Mullen

Health Services Cost Review Commission
4160 Patterson Avenue, Baltimore, Maryland 21215
Phone: 410-764-2605 · Fax: 410-358-6217
Toll Free: 1-888-287-3229
hscrc.maryland.gov

Donna Kinzer
Executive Director

Stephen Ports
Principal Deputy Director
Policy and Operations

David Romans
Director
Payment Reform and Innovation

Gerard J. Schmith
Deputy Director
Hospital Rate Setting

Sule Gerovich, Ph.D.
Deputy Director
Research and Methodology

October 16, 2015

The Honorable Lawrence J. Hogan, Jr.
Governor of Maryland
100 State Circle
Annapolis, Maryland 21401

The Honorable Thomas V. Mike Miller, Jr.
President of the Senate
H-101 State House
Annapolis, MD 21401-1991

The Honorable Michael E. Busch
Speaker of the House
H-107 State House
Annapolis, MD 21401-1991

The Honorable Van T. Mitchell
Secretary of DHMH
201 W. Preston Street
Baltimore, MD 21201

RE: Monitoring Maryland's All-Payer Model: Biannual Report
Health General Article §19-207(b)(9)

Dear Governor Hogan, President Miller, Speaker Busch, and Secretary Mitchell;

I am pleased to provide you with the second biannual Monitoring of Maryland's All-Payer Model Biannual Report, prepared relative to Section 19-207(b)(9) of the Health-General Article of the Annotated Code of Maryland. This report discusses the State's progress during the period from January 1, 2014 through July 1, 2015, the first eighteen months of Maryland's new agreement with the Center for Medicare & Medicaid Innovation (CMMI).

Effective January 1, 2014, the State of Maryland and CMMI entered into a new initiative to modernize Maryland's unique all-payer rate-setting system for hospital services. This initiative, replacing Maryland's 36-year-old Medicare waiver, allows Maryland to adopt new and innovative policies aimed at reducing per capita hospital expenditures and improving patient health outcomes. More information on the Health Services Cost Review Commission ("HSCRC") and Maryland hospital activities can be found on the HSCRC's website: http://www.hscrc.state.md.us/

Please contact me if you any questions about this report, or you may contact Steve Ports, HSCRC Director of the Center for Engagement and Alignment, at steve.ports@maryland.gov.

Sincerely,

Donna Kinzer
Executive Director

Monitoring of Maryland's New All-Payer Model

Biannual Report

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

October 2015

Executive Summary

Introduction

Effective January 1, 2014, the State of Maryland and the Center for Medicare & Medicaid Innovation (CMMI) entered into a new initiative to modernize Maryland's unique all-payer rate-setting system for hospital services. This initiative, replacing Maryland's 36-year-old Medicare waiver, allows Maryland to adopt new and innovative policies aimed at reducing per capita hospital expenditures and improving patient health outcomes. This biannual report, prepared in accordance with Maryland law,[1] contains a summary of implementation, monitoring, and other activities during the time period from January 1, 2014, through September 30, 2015. The purpose of this report is to inform the Maryland General Assembly on the status of the New Maryland All-Payer Model.

Highlights

The following bullets highlight the Maryland Health Services Cost Review Commission's (HSCRC's) progress in the nine reporting areas required by law.[2]

- **Inpatient and Outpatient Hospital Per Capita Cost Growth -** CMMI requires Maryland to limit the annual growth in all-payer hospital per capita revenue for Maryland residents to 3.58 percent. To date, Maryland has met this target, with a growth rate of 1.47 percent between calendar years (CYs) 2013 and 2014 and 2.28 percent between CYs 2014 and 2015 (as of July).
- **Aggregate Medicare Savings -** CMMI requires Maryland to achieve an aggregate savings in Medicare spending that is greater than or equal to $330 million over the five years of the agreement. During this reporting period, the HSCRC gained access to preliminary CMMI data and secured a contractor to perform analytics to validate the aggregate Medicare savings calculated by CMMI. Finalized CMMI data on this measure are not yet available, but analysis of HSCRC data shows that Medicare fee-for-service (FFS) per capita revenue decreased by 1.12 percent between CYs 2013 and 2014. This suggests that Maryland is making progress toward this target.
- **Shifting from a Per-Case Rate System to a Global Budget –** CMMI requires Maryland to shift at least 80 percent of hospital revenue to global or population-based budgets. Maryland exceeded this target and has shifted 95 percent of hospital revenues under global budget structures.
- **Reducing the Readmission Rate among Medicare Beneficiaries** – While the readmission rate in Maryland has decreased over the last several years, Maryland's readmission rate for Medicare beneficiaries remains higher than the national average. Under the New All-Payer Model, CMMI requires Maryland's Medicare FFS hospital admission rate to be at or below the national readmission rate by 2018. Although finalized data for this measure are not yet available from CMMI, the HSCRC has been working with CMMI to refine the calculation methodology and is monitoring progress with its own data. Preliminary analysis of HSCRC data show that Medicare FFS readmissions decreased by 5.28 percent in CY 2015, suggesting that Maryland is making progress toward this target.

[1] Health-General Article §19-207(b)(9) Maryland Annotated Code.
[2] *Id.*

- **Reducing Hospital-Acquired Conditions (HACs)** – CMMI requires Maryland to reduce the cumulative rate of HACs by 30 percent by 2018. HSCRC measures HACs using 65 Potentially Preventable Complications (PPCs).[3] To date, Maryland has exceeded this target, with a 35.66 percent reduction in all-payer case-mix adjusted PPCs by June of CY 2015. This reduction in the PPCs was even higher for Medicare FFS at 38.46 percent.
- **Work Group Activities –** The HSCRC continues to implement a broad stakeholder engagement approach, convening an Advisory Council and six Work Groups— Payment Models, Physician Alignment and Engagement, Performance Measurement, Care Coordination, Consumer Engagement and Outreach, and the newly formed Innovation in Graduate Medicaid Education Work Groups. More than 100 stakeholders representing consumers, businesses, payers, providers, physicians, nurses, other health care professionals, and experts have participated in these Work Groups. All Work Group meetings are conducted in public sessions, and comments from the public are solicited at each meeting. All Work Groups have submitted various reports and recommendations to the HSCRC, which staff are working on implementing.
- **Actions to Promote Alternative Methods of Rate Determination and Payment** – The New All-Payer Model agreement allows Maryland to develop alternative methods of rate determination. During the first six months of the performance period, HSCRC developed the Global Budget Revenue (GBR) reimbursement model and moved 95 percent of acute hospital revenue under global budgets. Other than these global budgets, the HSCRC is not developing any new alternative methods of rate determination at this time. The HSCRC may consider augmenting the existing global budget concept with a new, population-based arrangement in the future.
- **Reports to CMMI** – To date, the HSCRC has met all of CMMI's reporting requirements. See Appendix 1 for HSCRC's most recent draft report to CMMI. This report is draft pending CMMI approval.
- **Reporting Adverse Consequences** – The HSCRC has not observed any adverse consequences occurring as a result of the implementation of the New Maryland All-Payer Model at this time. The HSCRC will continue to develop monitoring tools, measure performance, and engage stakeholders in order to identify and resolve any adverse consequences that may arise as quickly as possible.

[3] 3M Health Information Systems developed PPCs. The PPC software relies on "present on admission" indicators from administrative data to calculate the actual versus expected number of complications for each hospital.

Introduction

Effective January 1, 2014, the State of Maryland and the Center for Medicare & Medicaid Innovation (CMMI) entered into a new initiative to modernize Maryland's unique all-payer rate-setting system for hospital services. This initiative, replacing Maryland's 36-year-old Medicare waiver, allows Maryland to adopt new and innovative policies aimed at reducing per capita hospital expenditures and improving patient health outcomes. Success of the New All-Payer Model will reduce cost to purchasers of care—businesses, patients, insurers, Medicare, and Medicaid—and improve the quality of the care that patients receive both inside and outside of the hospital. In the past 21 months, the State, in close partnership with providers, payers, and consumers, has made significant progress in this modernization effort.

State and Federal Status Reporting Requirements for Maryland's New All-Payer Model

State Reporting Requirements for Maryland's New All-Payer Model

This report contains a summary of implementation, monitoring, and other activities to inform the Maryland General Assembly on the status of the New Maryland All-Payer Model. This New Maryland All-Payer Model Biannual Report, prepared in accordance with Maryland law,[4] discusses the State's progress during the period from January 1, 2014, through September 30, 2015, based on the information available at the time. The Maryland Health Services Cost Review Commission (HSCRC, or Commission) will produce an updated report every six months. Figure 1 provides an overview of the reporting required by law[5] for the first 12 months under the New Maryland All-Payer Model.

Figure 1. State Biannual Reporting of Maryland's New All-Payer Model

Section	Achievement Requirement	Metric Finding to Date	Ongoing Activities
I.1.	Limit the annual growth in all-payer hospital per capita revenue for Maryland residents to 3.58% growth rate	Per capita revenue for Maryland residents grew 1.47% between calendar year (CY) 2013 and CY 2014. CY 2015 per capita revenue growth through July is up 2.28% over the same period in CY 2014.	• Ongoing monthly measurement • Expecting continued favorable performance for CY 2015
I.2.	Achieve aggregate savings in Medicare spending equal to or greater than $330 million over 5 years	*Finalized data not yet available from CMMI*	• HSCRC gained access to preliminary CMMI data and began work with an analytics contractor to examine the calculation of the per beneficiary amounts and growth rates
I.3.	Shift at least 80% of hospital revenue to a population-based	95% of hospital revenue shifted to global budgets	• All hospitals are engaged in global budgets under Global Budget

[4] Health-General Article §19-207(b)(9) Maryland Annotated Code.
[5] *Id.*

Section	Achievement Requirement	Metric Finding to Date	Ongoing Activities
	payment structure (such as global budgets)		Revenue (GBR) and Total Patient Revenue (TPR) agreements • HSCRC is continuing to refine the TPR and GBR methodologies
I.4.	Reduce the hospital readmission rate for Medicare beneficiaries to below the national rate over the 5-year period of the agreement	*Finalized data not yet available from CMMI*	• HSCRC and CMMI are refining the calculation methodology for the final readmission measure • HSCRC gained access to some CMMI readmission data, and the analytics contractor has replicated the calculation of the interim Medicare readmission rate • Monitoring progress within Maryland using data collected from hospitals by HSCRC; however national data for 2015 will not be available to the contractor until the end of the year • The HSCRC Readmission Reduction Incentive Program (RRIP) was updated for state fiscal year (SFY) 2017 to increase hospital focus on reducing readmissions, and readmissions decreased in CY 2015
I.5.	Cumulative reduction in hospital acquired conditions by 30% over 5 years	Reduction of greater than 30% has been achieved	• HSCRC staff continue to review and audit these findings and prepare for ICD-10 conversion • HSCRC staff set a statewide reduction target of 7%, comparing SFY 2014 with CY 2015 • Expecting continued favorable performance for CY 2015
Section	**Description**	**Report**	**Status**
II	Work Group actions	• All original Work Groups have reported to the HSCRC • HSCRC is convening one additional Work Group: Innovations in Graduate Medical Education	• Active Work Groups have continued to meet on a regular basis • Care Coordination Work Group reported to the Commission in April 2015 • Consumer Engagement & Outreach and Care Coordination Work Groups reported to the Commission in September 2015 • Staff are implementing the Model based on recommendations from the Work Groups
III	New alternative methods of rate determination	95% of hospital revenue is now under global budget arrangements, implemented in accordance with policies approved by the Commission	• Global budget agreements are published on HSCRC's website • New policies are being developed to refine and advance the GBR methodology

Section	Achievement Requirement	Metric Finding to Date	Ongoing Activities
IV	Ongoing reporting to CMMI of relevant policy development and implementation	See Appendix 1 for the Annual Monitoring Report provided to CMMI in July 2015. This is a draft pending CMMI approval.	• HSCRC provided reports to CMMI on an ongoing basis

Federal Reporting Requirements for Maryland's New All-Payer Model

Maryland's New All-Payer Model agreement with CMMI establishes a number of requirements that the State must fulfill. CMMI must evaluate and provide an annual report on Maryland's calendar year performance. The HSCRC submitted the Model's first Annual Monitoring Report to CMMI in July 2015.[6] In addition to the annual report, the HSCRC provides ongoing reporting to CMMI on relevant policy and implementation developments. If Maryland fails to meet selected requirements, CMMI must provide notification, and Maryland will have the opportunity to provide information and a corrective action plan if warranted. At this time, CMMI has not provided any failure notifications to Maryland.

Section I

1. Inpatient and Outpatient Hospital Per Capita Cost Growth

The New Maryland All-Payer Model agreement requires the State to limit the average annual growth in all-payer hospital per capita revenue for Maryland residents to the average growth in per capita gross state product (GSP) for the 2002-2012 period (a 3.58 percent growth rate). Per capita revenue for Maryland residents increased by 1.47 percent between CYs 2013 and 2014 and by 2.28 percent between CYs 2014 and 2015 (as of July). Continued favorable performance is expected as global budgets (discussed at greater length in Section III) result in predictable statewide revenue performance, enabling the HSCRC to actively manage compliance with the 3.58 percent target.

2. Aggregate Medicare Savings

The New Maryland All-Payer Model Agreement requires the State to achieve an aggregate savings in Medicare spending equal to or greater than $330 million over the five years of the agreement. Savings are calculated by comparing the rate of increase in Medicare hospital payments per Maryland beneficiary with the national rate of increase in payments per beneficiary. Currently, CMMI completes this calculation and provides an aggregate monthly report to the HSCRC. However, the data are considered preliminary and have not yet been approved for public release by CMMI.

The HSCRC gained access to certain CMMI claims datasets for the purposes of Model monitoring and evaluation and secured a Medicare analytics contractor to validate the aggregate Medicare savings calculation conducted by CMMI. It is in the interest of both parties that the calculation correctly captures hospital payments made on behalf of Medicare beneficiaries who are Maryland residents. The HSCRC's vendor

[6] Initial Model metrics were due to CMMI on May 1, 2015, and the complete annual report was due June 30, 2015.

successfully replicated CMMI's analysis of Maryland's data for 2013 and 2014. Analysis of the national data should be complete by the end of October 2015.

HSCRC has been tracking Medicare fee-for-service (FFS) per capita cost trends from its own Maryland data. Based on these data, the Medicare FFS per capita revenue declined by 1.12 percent between CYs 2013 and 2014.

3. Shifting from a Per-Case Rate System to Global Budgets

As discussed in the April 2015 New Maryland All-Payer Model Biannual Report, 95 percent of Maryland hospital revenues are in global budget structures. This exceeds the New Maryland All-Payer Model agreement requirement of shifting at least 80 percent of hospital revenue to global or population based budgets. All regulated Maryland hospitals that were not already under a Total Patient Revenue (TPR) agreement now operate under a Global Budget Revenue (GBR) agreement, through policies approved by the Commission. The remaining 5 percent that is not under global budgets is excluded, out-of-state revenue for five hospitals. These hospitals are otherwise engaged in global budgeting. Global budget agreements are available on the Global Budget Web Page of the HSCRC website.

In the past six months, the HSCRC continued to work with stakeholder Work Groups to refine the GBR methodology and develop a number of policies discussed in Section III.

4. Reducing the Hospital Readmission Rate among Medicare Beneficiaries

Reducing hospital inpatient readmission rates has been an aim of the HSCRC since 2011. While the readmission rate in Maryland has fallen over the last several years, Maryland's readmission rate for Medicare beneficiaries remains higher than the national average. The New Maryland All-Payer Model agreement requires Maryland's hospital readmission rate for Medicare FFS beneficiaries to be at or below the national readmission rate by 2018. Each year beginning in 2014, the Maryland readmission rate must keep up with national improvements and close the gap between Maryland and the nation by 1/5th. This metric uses national Medicare data.

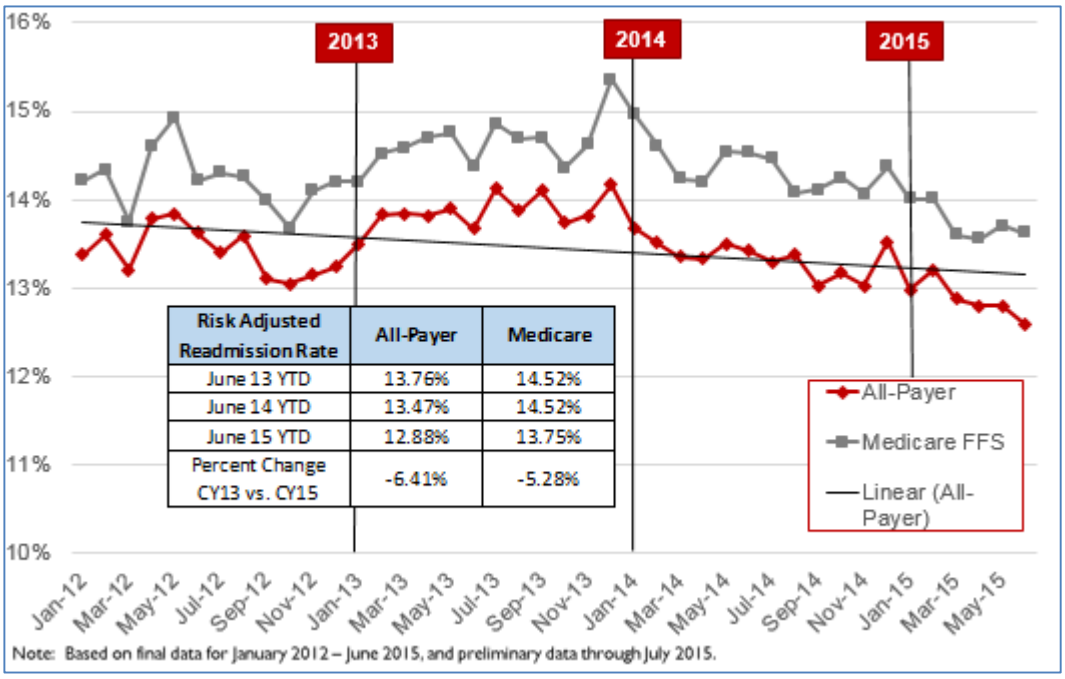
Since the last report in April of 2015, the HSCRC gained access to some of the CMMI claims datasets to calculate Medicare readmissions and validated the results for Maryland with those provided on a monthly basis by CMMI. However, the current readmission methodology is considered an interim measure applicable to Year 2 of the new waiver only, and national data for 2014 are incomplete because they require data from January 2015. The HSCRC staff are currently reviewing the proposed methodology from CMMI for the final waiver target readmission measure. The methodology involves some changes to the transfer logic and potential exclusions for psychiatric and rehabilitation patients in Maryland, since these patients are not included in national data for acute hospitals.

Based on preliminary data calculated by the HSCRC analytics contractor for the interim readmission measure, the reduction in the readmission rate between CY 2013 and CY 2014 may be insufficient for achieving the annual goal (final national rates for December 2014 are not available), although preliminary evidence suggests

that the gap between Maryland and national average declined in the first year. However, since the measure was not finalized until late 2014, CMMI is not going to assess readmission performance during Year 1 of the new Model. Regardless, due to concerns about progress, the HSCRC strengthened the Readmission Reduction Incentive Program (RRIP) for SFY 2017 to include scaled penalties of up to 2 percent and to increase and scale rewards up to 1 percent. The minimum improvement goal to avoid penalties in CY 2015, compared with CY 2013, is a 9.3 percent reduction in the all-payer case-mix adjusted readmission rate.

Overall, HSCRC's hospital data show that the monthly case-mix adjusted readmission rate for January through June 2015 is trending lower than the rate for the same time period in CY 2013 or CY 2014 (Figure 2). This analysis includes all Maryland inpatient stays, including Medicare FFS. Based on these available HSCRC data, the all-payer case-mix adjusted readmission rate in CY 2015 year-to-date (YTD) was 12.88 percent, compared with 13.76 percent during the same time period in 2013, a 6.41 percent reduction. The corresponding readmission reduction for Medicare FFS beneficiaries was lower (5.28 percent), and this reduction occurred only in CY 2015. In fact, there has been a greater readmission rate reduction for both the all-payer and Medicare FFS populations in Maryland in CY 2015. The reduction highlights the difficulty and time involved in achieving readmission reductions, as it requires significant effort, investment, and coordination across providers. In addition, staff believe that the addition of penalties to the RRIP is providing strong incentives to reduce readmissions compared with the SFY 2016 program that only had rewards. Finally, the Commission's focus on care coordination in Year 2 should improve the infrastructure for care coordination for high needs and complex patients and reduce the risks related to chronic conditions. Implementation of infrastructure, care coordination, and integration strategies will help create more comprehensive and sustainable approaches to reduce avoidable hospitalizations and readmissions. To help readmission reduction efforts, HSCRC focused on enhancing readmission reporting capability by leveraging resources available in the state health information exchange and providing timely, monthly, patient-specific data to hospitals.

Figure 2. All-Payer and Medicare FFS Case-Mix Adjusted Readmission Rates, CY 2013-2015



5. Cumulative Reduction in Hospital Acquired Conditions

Maryland hospitals must achieve a 30 percent cumulative rate of reduction in hospital-acquired conditions (HACs) by 2018 to comply with the New Maryland All-Payer Model agreement. Maryland measures HACs using 65 Potentially Preventable Complications (PPCs).[7] PPCs are defined as harmful events (e.g., accidental laceration during a procedure) or negative outcomes (e.g., hospital-acquired pneumonia) that may result from the process of care and treatment rather than from a natural progression of underlying disease.

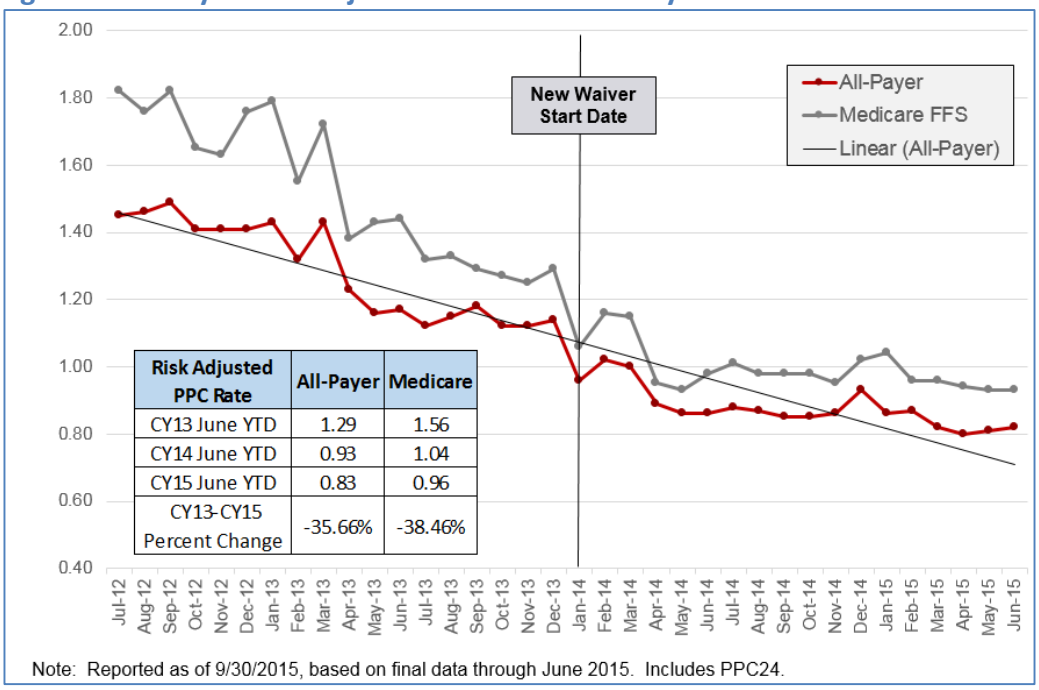
As discussed in the October 2014 New Maryland All-Payer Model Biannual report, the HSCRC approved major revisions to the Maryland Hospital Acquired Conditions (MHAC) program in April 2014 in order to support the goal of reducing PPCs. The MHAC program calculates hospital rewards and penalties for rates of PPCs adjusted for patient mix. Specifically, these calculations now use observed-to-expected ratios as the basis of the measurement for all of the 65 PPCs and preset positions on a scale constructed using the base year scores for all PPCs to determine penalties and rewards. Figure 3 shows the all-payer and Medicare FFS case-mix-adjusted PPC/complication rates by month for January through June of CY 2013, CY 2014, and CY 2015. In June of CY 2015, the YTD all-payer case-mix adjusted PPC rate was 0.83 per 1,000, compared with 1.29 per 1,000 for June CY 2013 YTD, which is a 35.66 percent reduction. The reduction in the case-mix adjusted complication rate for Medicare FFS was even higher at 38.46 percent. While this reduction in the case-mix adjusted complication rate exceeds the new waiver target of a 30 percent reduction by 2018, the HSCRC will continue to set annual improvement targets for hospitals to

[7] 3M Health Information Systems developed PPCs. The PPC software relies on "present on admission" indicators from administrative data to calculate the actual versus expected number of complications for each hospital.

further reduce PPCs and to ensure that Maryland hospitals will continue to have a waiver from the Centers for Medicare & Medicaid Services (CMS) HAC program. The HSCRC staff review annual audits of approximately ten hospitals to ensure coding accuracy with the medical record documentation. Based on initial SFY 2014 auditing results and additional follow-up with one hospital, there are currently no significant concerns regarding the accuracy of the coding in the case-mix data that hospitals submit to the HSCRC. The HSCRC is also working closely with 3M, the Maryland Hospital Association (MHA), and the hospital industry around the International Classification of Diseases – 10th Edition (ICD-10) implementation that may result in significant changes in PPC rates.

For the SFY 2017 performance period, the HSCRC set a 7 percent statewide PPC reduction target comparing SFY 2014 with CY 2015, with 3 percent of hospital revenue at risk for performance relative to achieving the reduction target.

Figure 3. All-Payer Risk-Adjusted PPC Rates January – June CY 2013 vs. CY 2015



Risk Adjusted PPC Rate	All-Payer	Medicare
CY13 June YTD	1.29	1.56
CY14 June YTD	0.93	1.04
CY15 June YTD	0.83	0.96
CY13-CY15 Percent Change	-35.66%	-38.46%

Note: Reported as of 9/30/2015, based on final data through June 2015. Includes PPC24.

Section II

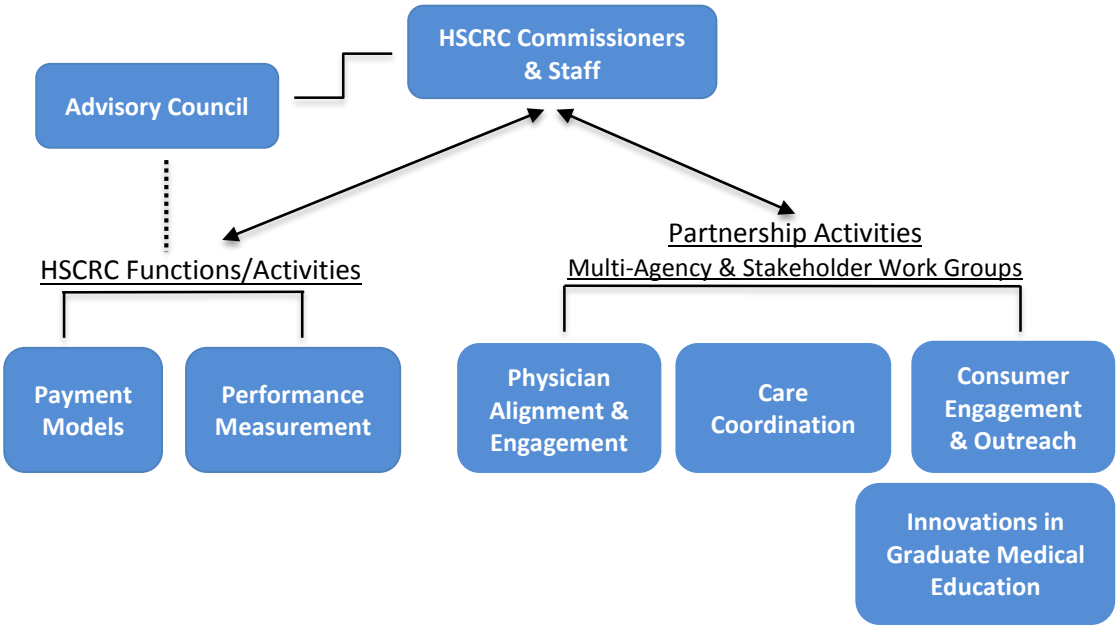
Work Group Actions

The HSCRC continued to implement a broad stakeholder engagement approach. More than 100 stakeholders representing consumers, businesses, payers, providers, physicians, nurses, other health care professionals, and experts have participated in these Work Groups. All Work Group meetings were conducted in public sessions, and comments from the public were solicited at each meeting.

Figure 4 depicts the current structure of stakeholder engagement. The HSCRC added one additional Work Group over the past nine months: the Innovations in Graduate Medical Education Work Group. The HSCRC also continued to facilitate a number of

sub-work group meetings to work through technical, data-driven matters related to specific policies.

Figure 4. Existing Stakeholder Engagement Structure



1. Advisory Council on Modernization of the Maryland All-Payer Waiver

The purpose of the Advisory Council is to provide the HSCRC with senior-level stakeholder input on guiding principles for the overall implementation of population-based and patient-centered payment systems. The Advisory Council consists of a broad representation of hospitals, payers, physicians, providers, the Department of Health and Mental Hygiene (DHMH), and health care experts. The Advisory Council suggested guiding principles for the HSCRC to consider as it addresses key challenges and possible strategies over the next two years of Model implementation. The Council has temporarily recessed to allow HSCRC staff time to work on these suggestions.

November 2014 Advisory Council Recommendations

- Focus on meeting the early Model requirements
  - Focus on all-payer and Medicare tests
  - Start with global budgets
  - Reduce avoidable utilization
- Meet budget targets, invest in infrastructure, and provide flexibility for private sector innovation
- Focus on HSCRC's role as a regulator, catalyst, and advocate
- Involve consumers in planning and implementation
- Align physicians and other providers
- Be transparent and use the public engagement process
- Strengthen efforts to educate consumers about the New Maryland All-Payer Model and strive to communicate model goals and implementation steps

- Strike a balance between meeting the targets of the New Maryland All-Payer Model and investing in infrastructure
- Continue progress toward physician alignment
- Be transparent about the savings of the New Maryland All-Payer Model and how they are apportioned
- Pay more attention to social determinants
- Collaborate on care management

2. The Payment Models Work Group

The Payment Models Work Group is charged with vetting potential recommendations for HSCRC consideration on the structure of payment models and how to balance its approach to payment updates. Over the past six months, the following issues have been considered:

1. Market Shift Adjustment: Review of staff work in developing a policy to adjust hospital global budgets for shifts in service volume from one hospital to another/others.
2. Transfer Case Payment Adjustment: Review of staff work in developing a policy to adjust hospital global budgets for changes in the volume of patients transferred from one hospital to another/others.
3. Aggregate Revenue at Risk for Quality-Based Payment Programs for SFY 2018 Policy: This fall, the Payment Models Work Group will review staff work in determining the amount of revenue to potentially reward or penalize hospitals based on performance in the Maryland quality-based payment programs.
4. Uncompensated Care Policy for FY 2016: Review of the impact of the Affordable Care Act's coverage expansion on uncompensated care levels at Maryland hospitals and the level of uncompensated care that should be included in hospital rates for FY 2016.
5. Impact of Medicaid Expansion on Utilization of Hospital Services: Review of staff work to determine whether hospital rates should be adjusted for the temporary and ongoing impact on utilization of the January 2014 Medicaid expansion.
6. Update to Rates for FY 2016: Review of staff work on the appropriate rate update for FY 2016.

3. Physician Alignment and Engagement Work Group

The Physician Alignment and Engagement Work Group is charged with recommending strategies to align and engage with physicians and other health care providers in partnership with patients to achieve the goals of the New Maryland All-Payer Model. The Work Group is still in recess to allow HSCRC staff time to work with partner agencies in building off of the Work Group's June 2014 recommendations, which are outlined below.

June 2014 Physician Engagement and Alignment Work Group Recommendations
▪ Consider an Integrated Care Network (ICN) infrastructure to coordinate care and align financial incentives of different providers to improve care, particularly for the Medicare FFS population not already enrolled in an Accountable Care Organization (ACO) or Medicare Advantage plan ○ Explore whether existing ACOs could make use of this infrastructure ○ Identify necessary waivers to support shared savings or gain sharing arrangements within the ICN ○ Align with the effort to create a dual eligible ACO led by Maryland Medicaid
▪ Expand access to pay-for-performance models that are designed to improve care delivery and care coordination by providing payments from hospitals to community-based providers when quality is improved ○ Explore additional models with other providers ○ Identify waivers to support extension of pay for performance models
▪ Support the development of a gain sharing model by the hospital and physician communities to encourage savings for specific services provided in inpatient settings with leadership of this effort undertaken by MHA in coordination with the Maryland State Medical Society (MedChi)

In preparation for reconvening the Work Group, the HSCRC began work with consulting resources to support the activities of this group and worked with the Maryland Health Care Commission (MHCC), DHMH, and other agencies to lay out preliminary alignment approaches for the Work Group to consider. The Chesapeake Regional Information System for our Patients (CRISP) also worked with HSCRC staff to develop criteria for the technological infrastructure that may be needed to support such alignment models.

The Commission is in the process of reconstituting this Work Group or establishing a sub-group to allow for stakeholder input on specific alignment payment methods, infrastructure, and functions.

4. Performance Measurement Work Group

The Performance Measurement Work Group develops recommendations for HSCRC consideration on measures that are reliable, informative, and practical for assessing a number of important quality and efficiency issues.

HSCRC staff convened a special session of this Work Group in June 2015. Members were joined by key national and state stakeholders, leaders, and experts to help determine key objectives and needed ongoing stakeholder involvement to develop a statewide, incentive-based performance measurement strategy that supports better care coordination, population health, and patient-centered care. HSCRC staff will continue to work with key stakeholders to develop this strategic plan.

5. Care Coordination Work Group

The purpose of the Care Coordination Work Group is to facilitate multi-stakeholder discussions regarding efficient and effective implementation of population-based and patient-centered care coordination to support the New Maryland All-Payer Model. The Care Coordination Work Group met with a focus on exploring successful

care coordination models and considering shared infrastructure and common strategies.

In April 2015, the Care Coordination Work Group submitted a series of findings and recommendations in a final report to the Commission. The Work Group found the following:

1. Numerous care coordination activities are already underway in Maryland, led by hospitals, payers, medical groups, community-based organizations, health departments, and other groups. Smart public investments can support these promising initiatives and help bring them to scale.
2. Given the large number of individuals and providers involved in care management, it is important to develop shared tools, such as reports on high-utilizing patients, risk stratification, care gap analyses, strategies for coordinating the managers, and shared patient care profiles. New investment in this infrastructure will reduce duplication of effort, increase efficiency, and improve health outcomes.
3. The challenge is to create opportunities to cooperate even while healthcare organizations compete in other ways.
4. There is a consensus on pursuing the care coordination approach of beginning with high-needs patients in the Medicare FFS system and developing care innovations to include shared care profiles to reduce potentially avoidable utilization (PAU).
5. The approach should capitalize on and support medical homes and other primary care providers in serving high-needs patients and leverage funding from Medicare's new Chronic Care Management payment, which generally offers an additional per-member-per-month sum for providing enhanced services to patients with multiple chronic conditions.
6. To better serve this population by moving toward reliability and efficiency, the Work Group recommends a dual-track process of data acquisition: (1) organizing, synthesizing, and using existing data, and (2) acquiring more timely and identified data from CMS.
7. A three-step sequence to care coordination can prove valuable: (1) an effective risk stratification approach to identify people with complex medical and social needs; (2) the development of health risk assessments to ascertain patients' needs; and (3) the formation of patient-driven care profiles and plans addressing the medical and social needs of patients.
8. Key ingredients of an effective care coordination strategy include immediate alerts to notify a patient's medical home and any other care managers about emergency department visits and hospitalizations; face-to-face interaction between care managers and patients on a regular basis; designating a primary care manager for patients to avoid duplication of services; medication management; data sharing; patient engagement and education for self-care; the integration of behavioral and physical health care; support of medical care in post-acute and long-term care settings; integration of medical and supportive services; smooth transitions between care settings; ensuring an adequate supply and quality of social services; and the use of health information technology to promote data sharing and help providers better serve patients.
9. Partnerships at the regional and local levels are critical to effective care coordination. Success requires a global approach that engages both ambulatory and

community partners. Ambulatory partners (e.g., clinics, health centers, and physician offices) and community partners (e.g., public health, community-based, and faith-based organizations) must address non-medical factors affecting health and build community interest and support.

10. Encouraging the development of adequate patient care plans, mobilizing services to the home, and ensuring adequate supply and quality of services to support very fragile people in the community are essential to improving health outcomes for high-need patients.
11. HSCRC needs to ensure that other players are involved, such as commercial payers and Medicaid managed care organizations (MCOs). With all of the potential funding sources for the many health care initiatives that are being explored and implemented across the State, HSCRC also needs to avoid duplication of effort and carefully coordinate the various initiatives. Regional collaborative initiatives can pursue this goal.
12. It is important to design care coordination initiatives in a way that yields a positive rate of return on the infrastructure development called for in this report. Many of the recommendations in this report can help ensure a positive rate of return.

In response to these findings, the Work Group recommended the following to the HSCRC:

1. **Engage Maryland healthcare leadership** – The conclusions of the Care Coordination Work Group and the recommendations included in the Work Group's report have potentially far-reaching implications for Maryland's health care delivery system. It will be critical to engage Maryland's healthcare leaders, including hospital leadership, ambulatory providers, payers, and consumers in understanding the proposed direction and gaining support, particularly as more specific implementation plans and funding needs are developed.
2. **Develop specific budget estimates and implementation plans** – Initial estimates of the potential budget provided Work Group members with a broad sense of the potential range of start-up and ongoing funding needs. This is critical planning work that will be needed in the short term. These implementation plans should also address the timeline for implementation.
3. **Initiate data process** – Enhance data privacy procedures to enable the analysis and sharing of existing data, as well as Medicare data, in support of care coordination.
4. **Tap CRISP to organize data** – Designate CRISP to serve in the role of a "general contractor" in the data synthesis, acquisition, cleaning, and storage process. By engaging and overseeing the work of various subcontractors, or vendors, CRISP can also support other promising care coordination initiatives already underway.
5. **Build data infrastructure and identify target populations** – Build and secure a data infrastructure to facilitate the identification and risk stratification of individuals who would benefit most from care coordination. This will permit the identification of the patients with the most complex needs. The investment in data acquisition, along with a parallel effort to organize and synthesize the data already in hand, will allow acceleration of the process of creating individualized care profiles in a standardized format.
6. **Designate CRISP to identify consistent information that can be shared among providers and support different care management platforms—**Enhance data

sharing capabilities already built into the CRISP Health Information Exchange (HIE). This holds the promise of ultimately connecting the various provider and payer care coordination initiatives.

7. **Design standardized care profiles** – Encourage patient-centered care through the development of readily visible and usable patient care profiles. These profiles would possess standard data elements and should be made visible across the continuum of care. Key elements in the care profiles would include patients' problem lists; medication lists; medical history; and allergies. A longer-term activity involves using the data elements in the care profiles to develop a workflow that generates actual care plans and aggregates them usefully for local system management.
8. **Establish consumer outreach strategy** – Promote patient engagement and self-care through various strategies, including patient education and ability to view data. Adequate resources should be devoted to produce statewide, simplified patient education materials to reduce confusion and patient concerns about this care coordination process. Such an effort could go a long way to encourage patient participation in the care management process. State and county health departments can play a role in this outreach process, bolstered by leadership from the major State health care agencies, such as DHMH. Consumer groups and other stakeholders should also be involved. The HSCRC patient engagement task force may be a good place to start this effort, but it would need resources as well.
9. **Care coordination programmatic efforts** – Encourage (a) health system collaboration by avoiding duplication of resources across provider entities, (b) the use of Medicare's new Chronic Care Management payments, and (c) increased integration between physical and behavioral health. Connect a wide range of providers, including those in ambulatory and long-term care settings, to the data infrastructure.
10. **Develop a plan for sustainability of care coordination infrastructure** – including operating costs of the model and helping providers obtain chronic care management (CCM) payments.

HSCRC staff have been working to implement many of these recommendations to pave a way for the success of the All-Payer Model. For instance, DHMH, in collaboration with the HSCRC, held a competitive application process to establish *Regional Partnerships for Health System Transformation*, focusing on collaborating on analytics, targeting services based on patient and population needs, and planning and developing care coordination and population health improvement approaches. On February 9, 2015, DHMH and the HSCRC released a request for proposals (RFP) for funding to support planning, development initiatives, and operational plans for regional partnerships for health system transformation. Applications were received by April 15, 2015. Pursuant to the Budget Reconciliation and Financing Act of 2015 (BRFA) language, DHMH and the HSCRC established a multi-stakeholder review committee to evaluate applications. In May 2015, DHMH and HSCRC approved an adjustment in rates of $2.5 million for eight regional planning grantee hospitals. These partnerships have been working on their plans while also receiving technical assistance (e.g., one-on-one consulting, webinars, and collaborative educational sessions) to assist them in their initiatives over the past five months. The HSCRC received interim reports from the regional partnership

grantees by September 1, 2015. The regional partnership grantees will submit final reports by December 7, 2015.

In June 2015, as part of its update factor process, the Commission approved setting aside up to 0.25 percent in hospital rates in FY 2016 to provide competitive grants to exemplary hospitals for implementing and expanding innovative care coordination, provider alignment, and population health strategies. Hospitals will submit proposals to the Commission by December 7, 2015. Funding will only be provided to projects that are ready to be implemented immediately in CY 2016, are focused on major opportunities to reduce PAU in a patient-centered manner, and create a return on investment for the hospital and purchasers of hospital care.

BRFA funding has also been used to implement some of the critical statewide infrastructure that the Care Coordination Work Group has deemed necessary to ensure that care is patient-centered and coordinated. Some of the priorities for such funding have been:

- Building/securing data infrastructure needed to facilitate identification of individuals who would benefit from care coordination.
- Encouraging patient-centered care and patient engagement, including sharing common information regarding patient care among providers and care coordinators.
- Encouraging collaboration among providers (including social services, behavioral health, long-term care, and post-acute care providers) and those engaged in patient advocacy, public health, and faith-based initiatives.
- Connecting providers to CRISP.

6. Consumer Engagement and Outreach Work Group

The Consumer Engagement and Consumer Outreach Work Group consists of two task forces: the Consumer Engagement Task Force and the Consumer Outreach Task Force. The purpose of these consumer-focused Task Forces is to help ensure that people who are using Maryland's health system understand the State's health system transformation and what it means to them, and have the information and resources to become more actively involved in their individual health and in improving the health of the community.

Consumer Engagement Task Force (CETF)

In September 2015, the CETF submitted a series of findings and recommendations in a final report to the Commission. The overarching themes and concepts that emerged during the research phase largely informed the CETF's recommendations. The themes include the following:

1. Consumer engagement efforts must offer a clear call to action. Consumers' continued engagement is dependent on their input and perception that their actions have an impact.
2. Because individuals' motives are different than institutions' motives, successful engagement efforts must ascertain the motivating factors for both groups.
3. Health care information should be disseminated and consumer engagement activities should be led by sources that consumers trust.

4. Sensitivity to diversity and the multitude of cultural differences are critical in engagement efforts.
5. Consumer engagement requires extraordinary commitment from health care leadership at all levels.
6. Ideally, consumers should be engaged both prior to and at the point of contact with the health care system.
7. A more robust and consumer-friendly feedback process (i.e., concerns, complaints, and commendations) is needed.
8. Advanced directives planning is indicative of consumer engagement.

In response to these findings, the CETF recommended the following to the HSCRC:

1. Allow for a meaningful, ongoing role for consumers at the HSCRC through continued representation of Commissioner(s) with primary consumer interest and through a newly created standing advisory committee (SAC) with diverse representation.
2. In collaboration with key stakeholders, develop a statewide public education campaign specific to the New All-Payer Model that is part of a broader campaign to promote health and wellness.
3. Convene an interagency task force that allows consumers to participate in the design and implementation of a statewide public education campaign
4. Provide options and opportunities that support regular, longitudinal, and effective consumer engagement in the development of policies, procedures, and programs by hospitals, health care providers, health care payers, and government.
5. In coordination with the HSCRC SAC, the MHCC, and other key stakeholders, consider the development of a Consumer Gold Star system for hospitals based on consumer engagement standards.
6. Define community benefit dollars to include consumer engagement initiatives and promote these dollars for this use, particularly for those supporting vulnerable populations.
7. Continue to encourage and incentivize independent and collaborative approaches to support people who are at risk of becoming high utilizers.
8. Encourage hospitals to provide current, consistent, and transparent information on average procedure costs using the data made readily available by MHCC (www.marylandqmdc.org) and other new pricing transparency tools being created, and make this information available on the New All-Payer Model's website and/or other appropriate websites.
9. Include discussions about patient and family decision-making and preferences about advanced directives in the context of consumer engagement and educating consumers.

Consumer Outreach Task Force (COTF)

As the leader of the COTF, the Maryland Citizens' Health Initiative Education Fund, Inc. (MCHI) collaborated with Local Health Improvement Coalitions (LHICs), health departments, hospitals, local community and faith leaders, and MHA to hold 11 public forums all across the State about health system transformation from January through July 2015. Over 800 Marylanders representing over 300 community, health,

faith, business, government, union, and policy organizations have heard the message that their local hospitals, healthcare providers, and community-based organizations are working together to help Marylanders be as healthy as possible. Feedback shows that Marylanders are unaware of the State's unique and long-standing all-payer system or of the New All-Payer Model that is further transforming the health system in Maryland. Once informed, however, consumers are eager to be engaged. They want a clear call to action and follow-up steps for ongoing collaboration.

In September 2015, the COTF submitted a series of findings and recommendations in a final report to the Commission. The COTF recognized that the forums were an exciting and productive first step in engaging consumers in health system transformation. Based on the COTF's experience with the public forums, it recommended that the State and local organizations continue this work by collaborating to provide easy-to-understand information that is consistent and available in a wide variety of formats, and to continuously integrate and respond to consumers' experiences. The unifying message should emphasize that health care providers are working together to keep the public healthy and that it is empowering to learn how the health care system can help consumers with health and costs.

In order for the State to build on these forums and ensure that the consumer voice is heard in health system transformation in Maryland, the COTF recommended the following to the HSCRC:

1. Periodically convene stakeholders and consumers to provide updates on the progress of health system transformation.
2. Continue to give consumers a voice in the transformation of Maryland's health system.
3. Encourage local leaders to develop and join a dynamic Faith Community Health Network.
4. Collaborate to educate primary care providers on—and engage them in—health system transformation.
5. Maximize communications with consumers via traditional and new media.

The HSCRC staff are working on implementing many of the recommendations from both the CETF and COTF to provide a comprehensive picture of the current state of consumer outreach and engagement and specific guidance for engaging consumers and creating a health care environment that supports consumers' full, informed participation in managing their health and health care.

7. Innovation in Graduate Medical Education Work Group

The Innovation in Graduate Medical Education (IGME) Work Group was convened in early 2015 to oversee the development of a five-year plan to advance innovations in medical education as required under the new Model agreement with CMS. For long-term success in this new Model, physicians and other health professionals must be trained to both thrive and lead in this new environment. Therefore, graduate medical education in Maryland must be innovative and forward-thinking to produce

a workforce with these skills. A report detailing recommendations on changes to medical education is due to CMS by January 1, 2016.

Given the nature of the task at hand, the IGME Work Group is being led by interests broader than the HSCRC. DHMH played a key role in establishing the Work Group. Details on Work Group members and meetings can be found on the DHMH website. To obtain a wide range of stakeholder input, the IGME Work Group and DHMH co-sponsored an all-day summit with the University of Maryland and the Johns Hopkins School of Medicine on the future of graduate medical education. The summit brought together over 100 graduate medical education and healthcare experts from around the State to discuss what the goals of a new graduate medical education model should be and steps that would be needed to reform graduate medical education in Maryland.

Based on Work Group discussions and input from the summit, the draft recommendations focus on the following five goals and provide recommendations to achieve these goals:

1. Achieving the three part aim
2. Focusing on population health
3. Equitable and efficient funding
4. Augment what's good about graduate medical education today
5. Optimal workforce distribution

The Work Group will submit the draft report to DHMH before final submission from DHMH to CMS.

Section III

1. Alternative Methods of Rate Determination

The Maryland All-Payer Model agreement affords the State the ability to innovate by developing alternative methods of rate determination. During the first six months of the New Maryland All-Payer Model, the HSCRC developed the GBR reimbursement model and engaged all hospitals not already under a TPR agreement in GBR, as discussed in Section I of this report. While some revenue is outside of the global budget (such as revenue from some out-of-state referrals), approximately 95 percent of acute hospital revenue is currently under a global budget.

The GBR and TPR methodologies are central to achieving the three part aim set forth in the Maryland All-Payer Model: promoting better care, better health, and lower cost for all Maryland patients. In contrast to the previous Medicare waiver that focused on controlling increases in Medicare inpatient payments per case, the New Maryland All-Payer Model focuses on controlling increases in total hospital revenue per capita. GBR and TPR agreements prospectively establish a fixed annual revenue cap for each hospital to encourage hospitals to focus on care improvement and population-based health management.

Under GBR and TPR contracts, each hospital's total annual revenue is known at the beginning of each fiscal year. Annual revenue is determined from a historical base period that is adjusted to account for inflation updates, infrastructure requirements for GBR hospitals,[8] demographic driven volume increases, performance on quality-based or efficiency-based programs, changes in payer mix, and changes in levels of approved uncompensated care. Annual revenue may also be modified for changes in service levels, market shift, population growth, or shifts of services to unregulated settings.

While the HSCRC may consider augmenting the existing global budget concept with new population–based arrangements in the future, it is important to first evaluate the effectiveness of the existing global budget mechanism. Other than global budgets, there are no other new general alternative methods of rate determination or experimental rate methods being developed at this time. The Commission considered whether it should participate in Medicare's Comprehensive Care for Joint Replacement Payment Model, a mandatory bundled payment initiative for single-joint total hip and knee replacements. After consideration, the Commission found that the State is not yet prepared for this initiative because timely total cost of care Medicare data would be critical for success of such a bundled payment program. The Commission is instead focusing on integrated care incentives, such as integrated care networks, pay-for-performance programs, and gain sharing programs to achieve the same goals as bundled payments, but on a broader statewide basis. The HSCRC will continue to innovate payment policy and will report any future innovations in this section of the Biannual Report.

2. Refining Global Budget Methodologies

While the majority of Maryland hospitals transitioned to global budgets during the first six months of the New Maryland All-Payer Model, a number of essential policies had not yet been finalized to address issues such as adjusting global budgets for market shifts or changes to inter-hospital transfer rates, establishing rates for new hospitals, and providing hospitals flexibility to achieve annual GBR revenue while reducing PAU. As shown in this report, HSCRC staff have worked closely with the Payment Models Work Group, as well as a number of technical sub-work groups to develop policies to address these issues. Additionally, HSCRC staff and Work Group members have emphasized that these policies will continually progress as underlying data resources improve and the New Maryland All-Payer Model evolves.

a. Global Budget Charge Corridors

A unique feature of global budgets that has been refined in the past six months is the capacity of a GBR hospital to increase or decrease its approved unit rates to achieve its overall approved global revenue. This mechanism allows a hospital the flexibility to compensate for fluctuations in service volume over the course of the year and still reach its annual revenue target. The hospital must vary these unit rates in unison and within a defined charge corridor or be subject to penalties. If a hospital is experiencing significant volume declines as a result of reduced PAU, it may submit

[8] TPR hospitals were previously provided allowances at the initiation of their agreements.

a request to expand this corridor so that it can achieve the approved global revenue necessary for financial stability and population health investment. HSCRC staff review charge corridor requests to determine the cause of hospital volume increases and the impact of the charge corridor expansion on the patient population, surrounding hospitals, and other factors related to the goals and requirements of the New Maryland All-Payer Model.

b. GBR Infrastructure Reporting

A vital step in evaluating charge corridor expansion requests is evaluating the efforts a hospital has taken to improve care delivery, population health, and care management, as those efforts will reduce PAU. HSCRC staff finalized a template that each hospital must submit annually to report on investments to improve care delivery, population health, and care management. The template includes program descriptions, expenditures, and results.

The first round of these reports was due at the end of September 2015. The HSCRC and DHMH staff are currently reviewing these reports and assessing that the investments reported meet the report criteria. The information in these reports will be utilized during global budget updates and charge corridor expansion requests to understand the magnitude and impact of a hospital's investments. The report will also inform the HSCRC and other stakeholders of the amount and types of investments Maryland hospitals are making over time and how effective these investments are in reducing PAUs as well as improving care delivery and population health.

c. Transfer Case Payment Adjustment Implementation

An early concern with the expansion of global budgets was the possibility that transfer rates to academic medical centers (AMCs) would increase as high cost care would leave community hospitals with the associated revenue for cases that had been transferred. Global budget hospitals are encouraged to reduce PAU and promote care management and quality improvement. This could result in hospitals transferring a greater number of complex cases to AMCs in order to both provide patients with the advanced care they need as well as to reduce the high costs associated with such cases. The Transfer Case Adjustment addresses these concerns by ensuring that receiving hospitals have the capacity to take on a possible influx of complex cases without facing financial penalties under a global budget. The HSCRC accomplished this objective by establishing a process to monitor and adjust for changes in transfer rates to AMCs and from sending hospitals on a periodic basis. The Transfer Case Adjustment Policy is being implemented for SFY 2016.

d. Market Shift Adjustment (MSA) Development

HSCRC staff and the Payment Models Work Group continued to make considerable progress on the Market Shift Adjustment (MSA). The purpose of the MSA is to provide a mechanism to appropriately shift revenue between hospitals when utilization shifts from one hospital to another/others. Hospital GBRs are adjusted at

50 percent of the variable cost (i.e., hospitals that receive additional volume due to market shifts receive GBR incentives at 50 percent of the associated costs of the additional volume, while hospitals that lose volume due to market shift lose 50 percent of the revenue associated with this lost volume). HSCRC staff finalized the calculations for MSAs for all inpatient and outpatient services, except for radiation therapy, infusion, and chemotherapy, for inclusion in rate year 2016 global budgets. These adjustments relate to shifts occurring during the six months ending on December 31, 2014, as compared with the same six month period in the preceding year. These calculations were finalized after staff received corrections of outpatient encounter data from hospitals and made some modifications to the outpatient weights based on input received through the process, in addition to other refinements. Staff are working on reviewing radiation therapy, infusion, and chemotherapy MSAs with stakeholders.

Section IV

Reports Submitted to CMMI

The All-Payer Model agreement requires HSCRC to report to CMMI on relevant policy and implementation developments. To date, the HSCRC has met all of the reporting requirements outlined in the All-Payer Model agreement by submitting the following information to CMMI.

- Maryland All-Payer Model Monitoring Report: This draft report was submitted to CMMI in July 2015. It contains preliminary data for performance year 2014 and 2013 baseline measures (see Appendix 1). This is a draft pending CMMI Approval.

Section V

Reporting Adverse Consequences

At this time, the HSCRC has not observed any adverse consequences occurring as a result of the implementation of the New Maryland All-Payer Model.

A number of policies developed in this first 12 months of implementation guard against adverse consequences that HSCRC staff and stakeholder Work Groups identified as possible unintended outcomes of implementation. The GBR agreements initiated by HSCRC for implementation of the global budgets contain consumer protection clauses. The HSCRC, in conjunction with the Payment Models Work Group, developed the Transfer Adjustment Policy and a Market Shift Policy to help ensure that "the money will follow the patient" when shifts in utilization occur between hospitals or other health care settings. These policies aim to guard against hospitals inappropriately limiting the number of high-cost, high-risk cases admitted and to provide open access and resources when patients need to be transferred to receive highly specialized care offered in AMCs.

Additionally, the HSCRC is continuing to develop tools to monitor changes in patterns of service, particularly shifts in utilization and expenditures across all

healthcare providers. This includes a Total Cost of Care Reporting Template through which a group of public and private healthcare payers have agreed to submit both hospital and non-hospital claims data. Some of these data may become available through the All Payer Claims Data (APCD) collected by MHCC. The HSCRC will work with MHCC and payers to obtain the needed data in the most efficient and timely manner possible. The HSCRC will use this reporting tool to assess the growth and shifts that occur within the regulated and unregulated hospital markets, as well as those changes that occur among non-hospital healthcare providers.

The HSCRC also focused on engaging consumers through the Consumer Engagement and Outreach Work Group as described in Section II. In addition, consumer advocates participate in each of the HSCRC stakeholder Work Group panels. Consumer advocacy organizations have described the HSCRC stakeholder engagement process as a model for consumer engagement in a major policy endeavor. The HSCRC has made significant efforts to be as transparent as possible in its initiatives and policy developments by making these Work Group meetings open to the public and by posting the meeting materials and recordings on the HSCRC's website (http://www.hscrc.maryland.gov/index.cfm)

Contact and More Information

For questions about this report or more information, please contact Steve Ports, the HSCRC Director of the Center for Engagement and Alignment, at Steve.Ports@maryland.gov.

More information is available on HSCRC's website:
http://www.hscrc.maryland.gov/index.cfm

Appendix 1

Maryland All-Payer Model
Monitoring Report

June 30, 2015

Heath Services Cost Review Commission

This draft report contains performance year 2014 and 2013 baseline measures is submitted by the Health Services Cost Review Commission (HSCRC) to the Center for Medicare & Medicaid Innovation (CMMI), in compliance with the Maryland All-Payer Model Agreement.

Please note that this is a draft report pending CMMI approval.

Table of Contents

1.0 Introduction

On January 10, 2014, the Center for Medicare & Medicaid Innovation (CMMI) approved the implementation of a new All-Payer Model for Maryland, which shifts hospital reimbursement from a volume- to a value-based approach. Under the new payment model, Maryland's long-standing hospital rate-setting system is replaced by global or population-based budgets. The success of the All-Payer Model is premised on the assumption that a payment system that holds hospitals accountable for the total cost of care on a per capita basis is an effective model for advancing population health by raising the quality of health care delivery, improving population health, and reducing cost. Moreover, when compared to payment and delivery systems in other states, the All-Payer payment model is expected to have greater sustainability and impact.

Under the Waiver Agreement between the state of Maryland and CMMI, the state is required to make progress in meeting the three-part aim of promoting better care, better health, and lower cost for all Maryland patients, as demonstrated by meeting the following goals:

- All-payer per capita total hospital revenue growth is limited to 3.58 percent per year over the first 3 years of the Agreement;
- Five-year Medicare per beneficiary total hospital cost savings must equal or exceed $330 million;
- The aggregate Medicare 30-day all-cause readmission rate is cut to at or below the national average;
- Cumulative reduction of 30 percent in the rate of 65 hospital-acquired conditions (HACs).

In addition to the above-listed goals, the Maryland Waiver Agreement requires that the state submit to the Centers for Medicare & Medicaid Services (CMS) an annual monitoring report on June 30th following the end of each performance year. This report is intended to catalogue state performance with respect to quality and financial goals outlined in Appendix 7 of the Agreement. This document contains the data needed to meet these financial and quality monitoring requirements for performance year 2014.

2.0 Monitoring

Measures that are tracked in the annual Monitoring Report correspond to three domains: (1) patient experience of care, (2) population health, and (3) health care costs.

- ***Patient experience of care measures***: Patient satisfaction, the effectiveness of care transitions, physician participation in public programs, processes of care, high priority complication rates, prevention quality indicators, and readmissions;

- ***Population Health Measures***: Life expectancy, hospitalizations for ambulatory care sensitive conditions, primary and secondary prevention for cardiovascular disease, and behavioral health emergencies;

- ***Health Care Cost Measures*:** Overuse of diagnostic imaging, inpatient and outpatient cost trends, and total cost of care for all residents, and for specific payers, including Medicare, Medicaid, and private insurance.

Patient Experience of Care, Population Health, and Health Care Cost Goals for the State of Maryland

Patient Experience of Care

Goal 1: *Increase patient satisfaction with hospital*
Goal 2: *Increase patient satisfaction with home health*
Goal 3: *Increase patient satisfaction with nursing homes*
Goal 4: *Increase patient satisfaction with ambulatory care*
Goal 5: *Enhance hospital care transitions*
Goal 6: *Enhance short-stay nursing home transitions*
Goal 7*: Enhance care transitions – coordination with primary care*
Goal 8: *Sustain high physician participation in public programs*
Goal 9: *Broaden engagement in innovative models of care*
Goal 10: *Improve inpatient process of care*
Goal 11: *Improve outpatient process of care*
Goal 12: *Reduce high priority hospital complications*
Goal 13: *Reduce home health readmissions*
Goal 14: *Reduce nursing home readmissions*
Goal 15: *Reduce hospital readmission*

Population Health

16: *Improve life expectancy*
Goal 17: *Reduce rate of hospitalization for ambulatory care sensitive conditions*
Goal 18: *Improve cancer control*
Goal 19: *Improve primary prevention of infectious diseases*
Goal 20: *Improve prevention for diabetes and cardiovascular disease*
Goal 21: *Improve prevention for asthma*
Goal 22: *Promote behavioral health integration in primary care*
Goal 23: *Promote health through safe physical environments*

Health Care Costs

Goal 24: *Reduce overuse of diagnostic imaging*
Goal 25: *Control hospital expenditure growth*
Goal 26: *Control all services expenditure*

Experience of care, population health, and health care cost measures included in the June 2015 Monitoring Report are grouped under one of 26 financial or quality monitoring goals that the state is tracking as part of the Waiver Agreement (see sidebar). Data on each of the measures have been compiled from publicly available National and State secondary sources (e.g., CMS Hospital and Home Health Compare, Maryland Vital Statistics) as well as private-sector resources (e.g., Joint Commission Quality Check). In addition, several measures were constructed using utilization and financial data derived from claims-based files obtained from CMS (e.g., Research Identifiable Files) or Maryland (e.g., HSCRC Hospital Abstract Data).

A description of each measure, including the data source used to derive individual measures and measure specifications, are summarized in Appendix A of this report.

To the extent permitted by existing data sources, measures reported in the Calendar Year 2015 Maryland Monitoring Report include historical data (from CY 2011) and the most recently available data for both Maryland and the United States, ideally data for 2014. For some measures, complete 2014 data were unavailable. The measures where 2014 data is not yet available, or is only available for partial year (preliminary results), will be provided in an updated version of this report toward the end of CY 2015.

The inclusion of historical data enables tracking of trends over time. Inclusion of national averages (where available) enables comparison of state performance to that of the nation. However, comparisons over time and between Maryland and the United States on individual measures should be made with caution. For several measures, the identified source used a population sample to obtain

estimates. In many cases, data necessary to determine statistical significance (e.g., standard errors) were unavailable, and it was not possible to perform significance testing to ascertain the extent to which differences over time or across populations were statistically significant.

The 2015 annual report continues to build on the recommendations of the Data and Infrastructure Workgroup recommendations, incorporating additional measures as data sources have become available. The Health Services Cost Review Commission (HSCRC) also plans to add new measures to this report as they are developed (such as additional efficiency measures or other new measures developed by CMS). The HSCRC aims to ensure that CMMI has the data it needs to show that this new All-Payer Model is effective at achieving the three-part aim, and the state will continue to work collaboratively with CMMI to establish benchmarks or targets for other high-priority measures that are currently being monitored or that will be developed in the future.

3.0 Key Findings

This section presents estimates of state performance on each of the financial and quality measures that, under the provisions of the Maryland All-Payer Model Agreement, the state is required to provide on an annual basis. Measures are organized according to domain—patient experience of care, population health, and health care costs—as well as each of the 26 monitoring goals. Where appropriate, and where data are available, performance on these measures is presented over time and/or relative to that of the national average. Text and graphs included in this section highlight state performance on a subset of measures. Table 2 includes estimates for all goals and measures. Supplemental information used to construct specific measures and data sources used in estimating measures are contained in Appendix A and B.

3.1 Patient Experience of Care

Maryland believes that an all-payer model that makes providers accountable for the total cost of care can improve the quality of care and the patient's experience of care. Through the All-Payer Model, Maryland expects to enhance care transitions, sustain high levels of physician participation in public programs, and broaden provider engagement in innovative models of care. Through these efforts, as well as through ongoing initiatives to reduce complications and readmissions, Maryland will increase quality outcomes and patient satisfaction.

3.1.1 Goal 1: Increase Patient Satisfaction with Hospital

Patient satisfaction with hospital care is monitored using the Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) survey. The HCAHPS survey is a standardized survey that allows comparisons across hospitals for public reporting and is used by CMS as part of its Value-Based Purchasing (VBP) program. The HSCRC also uses the HCAHPS results to reward or penalize hospitals for patient satisfaction or dissatisfaction as part of its state-level Quality-Based Reimbursement (QBR) program. For FY 2017 rates, the percent of revenue at risk for the QBR program has been increased to 2 percent, and the weighting for the HCAHPS domain has been increased to 45 percent due to concerns about Maryland lagging behind the nation on patient satisfaction. For this report, we include results on overall satisfaction with the hospital, as well as the composite scores for communication with doctors and communication with nurses.

Measurement Methodology

HCAHPS Survey Questions

- Overall patient satisfaction:

This is a global item with one survey question. The measure is the percentage of survey respondents reporting a "9" or "10" when asked, "Using any number from 0 to 10, where 0 is the worst hospital possible and 10 is the best hospital possible, what number would you use to rate this hospital during your stay?".

- Doctors always communicated well:

This is a composite measure combining responses from three survey questions. The measure is the percentage of survey respondents reporting "always" for each of the following questions:

  - During this hospital stay, how often did doctors treat you with courtesy and respect?
  - During this hospital stay, how often did doctors listen carefully to you?
  - During this hospital stay, how often did doctors explain things in a way you could understand?

- Nurses always communicated well:

This is a composite measure combining responses from three survey questions. The measure is the percentage of survey respondents reporting "always" for each of the following questions:

  - During this hospital stay, how often did nurses treat you with courtesy and respect?
  - During this hospital stay, how often did nurses listen carefully to you?
  - During this hospital stay, how often did nurses explain things in a way you could understand?

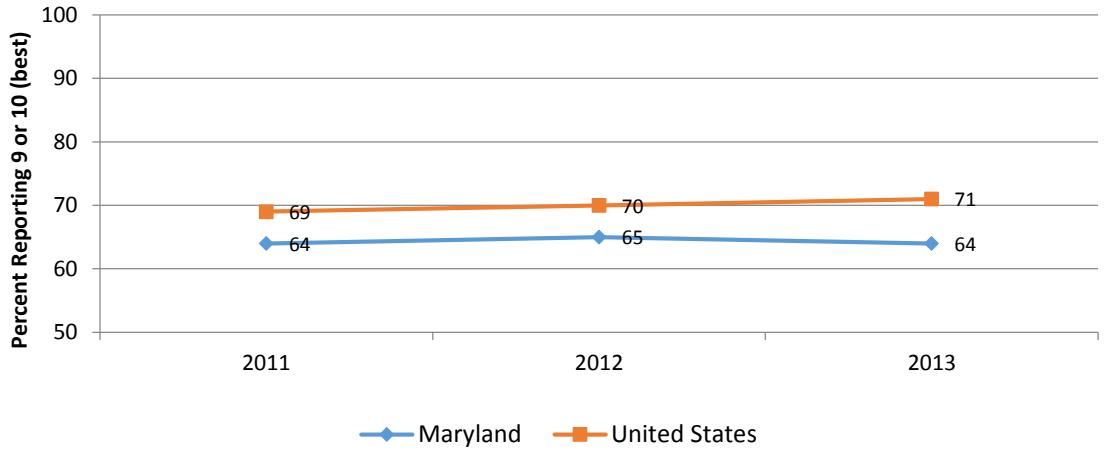
Additional information on the HCAHPS survey (e.g., number of surveys collected, survey methods, exclusion criteria) and each of the three areas can be found at: http://www.hcahpsonline.org/home.aspx.

Monitoring Results

- Maryland and National data for Calendar year 2014 cannot be presented for this measure due to a lag in public data availability from CMS.

- Across all years (2011–2013), patients in Maryland indicated lower levels of hospital satisfaction than did patients across the United States. When asked to measure their level of satisfaction on a scale from 0 to 10, with 10 being the highest, approximately 64 percent of Maryland patients (in 2013) rated their hospital experience as a "9" or "10", compared to 71 percent of patients in the U.S. (Figure 1).
- Patient satisfaction with physician communication was also higher in the U.S. than in Maryland. In 2013, about 77 percent of Maryland patients expressed a high level of satisfaction with the way their physician communicated; this compares to 82 percent of patients across the United States. Satisfaction with physician communication changed little—for either Maryland or U.S. residents—between 2011 and 2013.
- Satisfaction with the way that nurses communicate also changed little between 2011 and 2013, increasing by only one percentage point for patients in both Maryland (from 74 percent to 75 percent) and the U.S. (78 percent to 79 percent).

Figure 1: Patient Satisfaction with Hospital, Maryland and United States, 2011-2013



Source: Centers for Medicare and Medicaid Services, Hospital Compare, 2011-2014.

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Goal 1: Increase Patient Satisfaction with Hospital

Measures	Population	2011	2012	2013	2014
Patient's rating of hospital: Percentage of survey respondents reporting a 9 or 10 (10 being best)	**Maryland**	64%	65%	64%	N/A
	National	69%	70%	71%	N/A
Communication with doctors: Percentage of survey respondents reporting "always" on three questions (composite measure)	**Maryland**	78%	78%	77%	N/A
	National	81%	81%	82%	N/A
Communication with nurses: Percentage of survey respondents reporting "always" on six questions (composite measure)	**Maryland**	74%	75%	75%	N/A
	National	78%	78%	79%	N/A

3.1.2 Goal 2: Increase Patient Satisfaction with Home Health

Patient satisfaction with home health care is assessed using the Home Health Care Consumer Assessment of Healthcare Providers and Systems (CAHPS) Survey (HHCAHPS). As with the hospital survey, the HHCAHPS is a standardized survey that allows comparisons across home health agencies for public reporting. For this report, we include results on overall satisfaction with home health, as well as the composite score for communication with the home health team.

Measurement Methodology

Survey Questions

Overall patient satisfaction with home health agency:

This is a global item with one survey question. The measure is the percentage of survey respondents reporting a "9" or "10" when asked, "Using any number from 0 to 10, where 0 is the worst home health care possible and 10 is the best home health care possible, what number would you use to rate your care from this agency's home health providers?".

Home health team always communicated well:

This is a composite measure combining responses from six survey questions. The measure is the percentage of survey respondents reporting "always" to each of the following questions:

- When you first started getting home health care from this agency, did someone from the agency tell you what care and services you would get?
- In the last 2 months of care, how often did home health providers from this agency keep you informed about when they would arrive at your home?
- In the last 2 months of care, how often did home health providers from this agency explain things in a way that was easy to understand?
- In the last 2 months of care, how often did home health providers from this agency listen carefully to you?
- In the last 2 months of care, when you contacted this agency's office did you get the help or advice you needed?
- When you contacted this agency's office, how long did it take for you to get the help or advice you needed?

Additional information on the HHCAHPS survey (e.g., number of surveys collected, survey methods, exclusion criteria) and each measurement area can be found at: https://homehealthcahps.org/Home.aspx.

Monitoring Results

- U.S. and Maryland patients' ratings of their home health experiences differed by only 2 percentage points. In 2013, 82 percent of Maryland residents indicated that they received the best home health care possible (a "9" or "10" on a scale from 0 to 10, with "10" indicating the best possible care) compared to 84 percent of U.S. residents.
- Maryland and U.S. residents' rating of satisfaction with the home health team's communication was identical. In 2013, 85 percent of both Maryland and U.S. residents reported a high level of satisfaction with their home health care providers' communication.

Goal 2: Increase Patient Satisfaction with Home Health

Measures	Population	2011	2012	2013	2014
Patient's rating of home health agency: percentage of survey respondents reporting a 9 or 10 (10 being the best)	**Maryland**	83%	83%	82%	N/A
	National	84%	84%	84%	N/A
Communication with home health team: percentage of survey respondents reporting "always" on six questions	**Maryland**	86%	86%	85%	N/A
	National	85%	85%	85%	N/A

3.1.3 Goal 3: Increase Patient Satisfaction with Nursing Home

Patient satisfaction with short-term nursing home care is assessed using a state-administered survey, the Maryland Nursing Facility Short Stay Resident Survey, which is similar to the Nursing Home CAHPS (NHCAHPS). Short-term nursing home stays are defined as stays lasting between 5 and 100 days.

Measurement Methodology

Survey Questions

Overall rating of nursing home:

The measure is the average score on the question, "Using any number from 0 to 10, where 0 is the worst nursing home possible and 10 is the best nursing home possible overall, what number would you use to rate the nursing home?".

Data Source/Survey Methodology:

The results were obtained from the Maryland Nursing Facility Short Stay Resident Survey. The Short Stay Resident Survey was completed for 77 nursing facilities in Maryland that had one or more residents with a stay of between 5 and 100 days. Each facility provided a list with at least one resident who met the length of stay criteria and was discharged alive during the measurement period. The mode of administration was via the mail; residents in the sample were sent a packet explaining the purpose of the survey and a request for their participation along with the actual questionnaire, as well as a postage-paid business reply envelope.

Additional information on the Maryland nursing home survey can be found at: http://mhcc.dhmh.maryland.gov/ltc/Documents/longtermcare/2013_Maryland_Nursing_Facility_Short_Stay_Statewide_Report.pdf

As stated in the Waiver Contract, Maryland will consider transitioning to the NHCAHPS within the first 3 years of the model.

Monitoring Results

- Maryland data on patient satisfaction with nursing homes is not yet available for 2014.
- In 2012, the average rating of nursing homes averaged 8.3 on a scale from 0–10, in which 10 is the best rating.
- In 2013, Maryland nursing homes had an average satisfaction rating of 8.0.

Goal 3: Increase Patient Satisfaction with Nursing Home

Measures	Population	2011	2012	2013	2014
Patient's rating of nursing home: Average rating of 0-10 (10 being best)	**Maryland**	N/A	8.3	8.0	N/A
	National	N/A	N/A	N/A	N/A

3.1.4 Goal 4: Increase Patient Satisfaction with Ambulatory Care

Measures from the Clinician and Group CAHPS (CG-CAHPS) file were used to assess patient satisfaction with ambulatory care. Estimates for the state of Maryland are not reported separately and are not specifically presented in this report. Rather, Maryland patients' assessment of ambulatory care satisfaction is represented in data for the Southern region of the United States. Data in this monitoring report are the "top box" scores for patients' ratings of their providers, by region of the country. Top box scores are estimated as the percentage of responses in the most positive or "excellent" category.

Measurement Methodology

Survey Questions

Getting Appointments and Health Care When Needed in the last 12 months…

- When you called this doctor's office to get an appointment for care you needed right away, how often did you get an appointment as soon as you thought you needed it?
- When you made an appointment for a check-up or routine care with this doctor, how often did you get an appointment as soon as you thought you needed it?
- When you phoned this doctor's office during regular office hours, how often did you get an answer to your medical question that same day?
- When you phoned this doctor's office after regular office hours, how often did you get an answer to your medical question as soon as you needed?
- *[Wait time includes time spent in the waiting room and exam room.]* How often did you see this doctor within 15 minutes of your appointment time?

How Well Doctors Communicated in the last 12 months…

- How often did this doctor explain things in a way that was easy to understand?
- How often did this doctor listen carefully to you?
- How often did this doctor give you easy-to-understand instructions about taking care of these health problems or concerns?
- How often did this doctor seem to know the important information about your medical history?
- How often did this doctor show respect for what you had to say?
- How often did this doctor spend enough time with you?

Courteous and Helpful Office Staff in the last 12 months…

- How often were clerks and receptionists at this doctor's office as helpful as you thought they should be?
- How often did clerks and receptionists at this doctor's office treat you with courtesy and respect?

Global Ratings

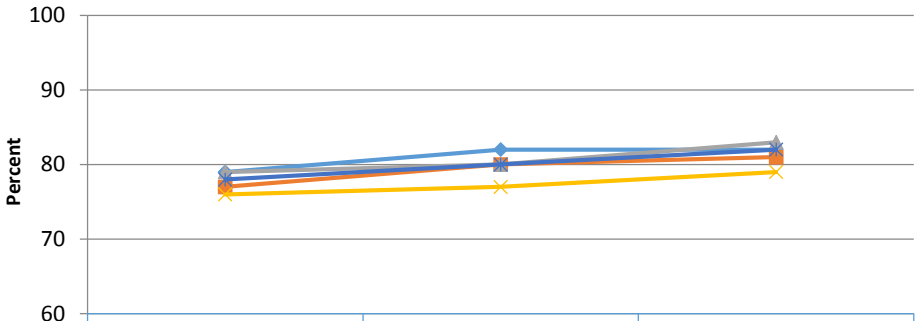
- Using any number from 0 to 10, where 0 is the worst doctor possible and 10 is the best doctor possible, what number would you use to rate this doctor?

Additional information on the CG-CAHPS database is available here:
https://www.cahpsdatabase.ahrq.gov/CGSurveyGuidance.aspx

Monitoring Results

Patients' rating of satisfaction with ambulatory care in 2013 was comparable for patients in the Southern region and the U.S.—82 percent. This represents an increase from 2011—up from 79 percent for patients in the Southern region and 78 percent for patients across the U.S. (Figure 2).

Figure 2: Patient Satisfaction with Ambulatory Care, "Top Box" Scores, by Region and United States, 2011-2013



	2011	2012	2013
Southern Region (Maryland)	79	82	82
Northeast Region	77	80	81
Midwest Region	79	80	83
Western Region	76	77	79
United States	78	80	82

Source: Agency for Healthcare Research and Quality, Clinician and Group Consumer Assessment of Healthcare Providers and Systems, Consumer Assessment of Healthcare Providers and Systems, 2011–2013.

Goal 4: Increase Patient Satisfaction with Ambulatory Care

Measures	Population	2011	2012	2013	2014
Patient's rating of provider: percent with top box scores	**Maryland (South)[1]**	79%	82%	82%	N/A
	Northeast[2]	77%	80%	81%	N/A
	Midwest[3]	79%	80%	83%	N/A
	West[4]	76%	77%	79%	N/A
	National	78%	80%	82%	N/A

[1] South Region: Alabama, Arkansas, Delaware, DC, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia, and West Virginia.

[2] Northeast Region: Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Puerto Rico, Rhode Island, and Vermont.

[3] Midwest Region: Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, South Dakota, and Wisconsin.

[4] West Region: Alaska, Arizona, California, Colorado, Guam, Hawaii, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, and Wyoming.

3.1.5 Goal 5: Enhance Care Transitions – Hospital

Three-Item Care Transition Measure (CTM-3): CTM-3 is a three-item survey on patient experiences on the quality of hospital care transitions. It measures three major domains that patients have identified in qualitative studies as critically important to their experience, with successful transitions including: 1) patients' understanding of their role in self-care, 2) patients' understanding of their medications' purpose, and 3) patients' perception that their preferences and those of their families were taken into account when discharge plans were being made.

These three items were added to the HCAHPS survey, and hospitals began reporting them in January 2014, along with the other hospitals in the nation.

Measurement Methodology

Survey Questions

- During this hospital stay, the hospital staff took my preferences and those of my family or caregiver into account in deciding what my health care needs would be when I left the hospital.
- When I left the hospital, I had a good understanding of the things I was responsible for in managing my health.
- When I left the hospital, I clearly understood the purpose for taking each of my medications.

Response Categories

- Q1 and Q2: There are four response options for Q1 and Q2: Strongly Disagree = 1, Disagree = 2, Agree = 3, Strongly Agree = 4.
- Q3: There are five response options for Q3: Strongly Disagree = 1, Disagree = 2, Agree = 3, Strongly Agree = 4, I was not given any medication when I left the hospital = 5.

Numerator: The numerator is the hospital-level percentage of patients that responded "Strongly Agree" to each of the three CTM-3 questions for all eligible sampled patients.

Denominator: The denominator includes the number of eligible sampled adult patients discharged from a general acute care hospital.

Exclusions:
- Pediatric patients under age 18 years.
- Patients who died in the hospital.
- Patients who did not stay at least one night in the hospital.
- Other patients as required by law or regulation in the state in which the hospital operates.

Time Period for Data: The time period is within 30 days of patient discharge from the hospital.

Additional information on the **Three-Item Care Transition Measure (CTM-3)** can be found at: http://www.caretransitions.org/documents/CTM_FAQs.pdf.

Monitoring Results

- Data to assess hospital care transitions, which are included in the HCAHPS survey, were not available for inclusion in the 2015 Report. These measures will be incorporated in future reports as they become available.

Goal 5: Enhance Care Transitions – Hospital

Measures	Population	2011	2012	2013	2014
Three-item care transition measure	**Maryland**	N/A	N/A	N/A	N/A
	National	N/A	N/A	N/A	N/A

3.1.6 Goal 6: Enhance Care Transitions – Short-Stay Nursing Home

Patient experience with short-stay nursing home transitions is measured using data from the Maryland Nursing Facility Short Stay Resident Survey. Specifically, the percentage of positive ("yes") responses to the following four items are reported: (1) whether nursing home staff spoke to the patient about help needed after discharge; (2) whether the nursing home provided the patient with written information on the symptoms/health problems he or she needed to look for after discharge; (3) whether nursing home staff informed the patient about the purpose of medications; and (4) whether the patient understood the purpose of each prescribed medication.

Measurement Methodology

Survey Questions

Short-Stay Nursing Home Resident's Discharge Needs Met

[Removed from 2013 Maryland Health Care Commission (MHCC) Survey and not included in this Monitoring Report.]

Short-Stay Nursing Home Resident's Discharge Planning and Information about Medicine and Symptoms

- Before leaving the nursing home, did the nursing home staff talk with you about whether you would have the help you needed after you left? (Scored %Yes)
- Before leaving the nursing home, did you get information in writing about what symptoms or health problems to look out for? (Scored %Yes)
- Before leaving the nursing home, did the nursing home staff tell you what your medicines were for? (Scored %Yes)
- When I left the nursing home, I clearly understood the purpose for taking each of my medications? (Scored %Yes)

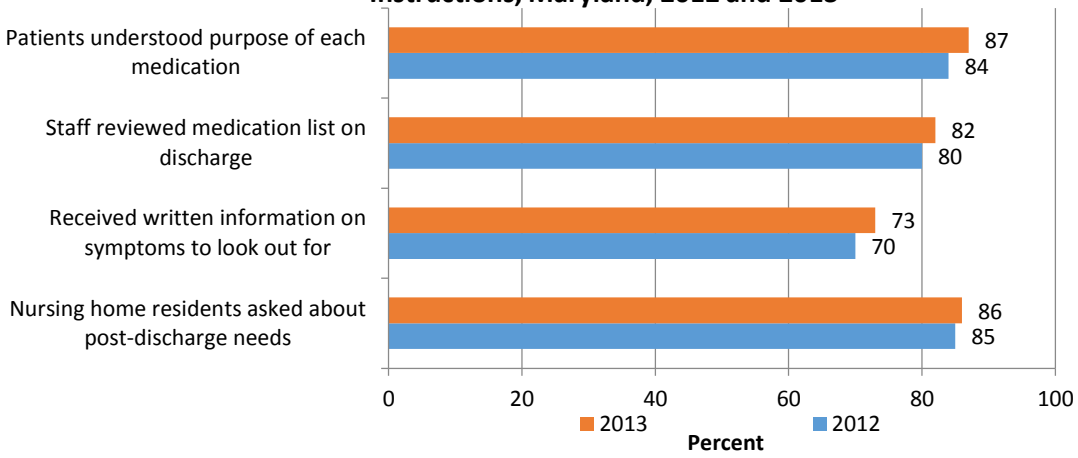
Survey details available at: http://mhcc.dhmh.maryland.gov/ltc/Documents/longtermcare/2013_Maryland_Nursing_Facility_Short_Stay_Statewide_Report.pdf

Source: Maryland Nursing Facility Short Stay Resident Survey, 2013

Monitoring Results

- In 2013, about 82 percent of short-stay nursing home patients surveyed indicated that nursing home staff provided them with information on the purpose of each prescribed medication. This represents an increase of 2 percentage points from 2012.
- Approximately 87 percent of patients indicated that they understood the purpose of each of the medications they had been prescribed (Figure 3). This represents an increase of 3 percentage points from 2012.
- Approximately one in four short-stay nursing home patients discharged in 2013 indicated that, before they left the nursing home, staff spoke with them about the help they would require upon discharge. This represents an increase of 3 percentage points from 2012.
- Data to assess patient experiences using the Maryland Nursing Facility Short Stay Resident Survey was not available for inclusion in the June 2015 Monitoring Report. Results for 2014 will be incorporated in future reports as they become available.

Figure 3: Short-Stay Nursing Home Patients' Receipt of Discharge Instructions, Maryland, 2012 and 2013



Goal 6: Enhance Care Transitions – Short-Stay Nursing Homes

Measures	Population	2011	2012	2013	2014
Short-stay nursing resident's discharge needs met[5]	**Maryland**	N/A	N/A	N/A	N/A
	National	N/A	N/A	N/A	N/A
Percent reporting "Yes" that nursing home talked with resident about help needed after discharge	**Maryland**	N/A	85%	86%	N/A
	National	N/A	N/A	N/A	N/A
Percent reporting "Yes" that nursing home provided written info on symptoms/health problems to look for	**Maryland**	N/A	70%	73%	N/A
	National	N/A	N/A	N/A	N/A
Percent reporting "Yes" that nursing home told him or her what medications were for	**Maryland**	N/A	80%	82%	N/A
	National	N/A	N/A	N/A	N/A
Percent reporting "Yes" that he or she clearly understood purposes for each medication	**Maryland**	N/A	84%	87%	N/A
	National	N/A	N/A	N/A	N/A

[5] Measure removed from 2013 survey.

3.1.7 Goal 7: Enhance Care Transitions – Coordination with Primary Care

Management of transitions of care—from the hospital to a post-acute care provider or to home—including appropriate and timely outpatient physician follow-up is a key strategy to reduce hospital readmissions. Two measures are included in this report to assess post-hospitalization coordination with primary care; these include: (1) the rate of physician follow-up within 7 days after discharge from the hospital, and (2) the percentage of hospital discharges where the principal provider was notified.

Measurement Methodology

Survey Questions

Rate of physician follow-up after discharge

- Percentage of patients with (1) heart failure, (2) pneumonia, (3) ischemic vascular disease, or (4) chronic obstructive pulmonary disease that had a face-to-face visit with a health care provider within 7 days of hospital discharge. Additionally, an all-diagnosis rate is included in this report.[6]

Numerator: Subset of the denominator with a face-to-face visit within 7 days of hospital inpatient discharge. Face-to-face visits include all of the following visit types: office, long-term care/assisted living, home care visits, visits with a specialist, or visits with a care coordinator or nurse, with the following Evaluation and Management (E & M) CPT Codes used to identify face-to-face visit.

- E & M Codes: 99201–99205, 99211–99215
- Preventive Codes: 99384–99397
- Office Consultation: 99241–99245
- Individual Counseling: 99401–99404
- Group Counseling: 99411–99412
- Other Preventive Medicine Services: 99420, 99429
- Unlisted E & M Codes: 99499

Denominator: Denominator includes patients age 18+, who were hospitalized with an inpatient discharge date within the measurement year, and had a primary or secondary diagnosis of heart failure, pneumonia, ischemic vascular disease, or chronic obstructive pulmonary disease.

Exclusions:

- Patient died during hospital stay.
- Patient was transferred from a hospital discharge to another acute-care facility.

[6] Measure is supported by the Institute for Healthcare Improvement (IHI) State Action on Avoidable Rehospitalization (STAR) initiative. Measure specification was adapted from the Minnesota Community Measurement and Minnesota Department of Human Services, "HCH Care Coordination Measure: Follow-up after Discharge." Measure is currently in pilot phase. For additional information refer to the following resources:
http://www.health.state.mn.us/healthreform/homes/outcomes/documents/carecoorddocs/ccrfpfuvms.pdf;
Minnesota Department of Health, Health Care Homes Performance Measurement and Evaluation, Updated April 20, 2015.
http://www.health.state.mn.us/healthreform/homes/outcomes/care_cordination_grant.html

The HSCRC is working to obtain access to ambulatory care data from Medicare and the All-Payer Claims Database to calculate these measures.

Discharges with Principal Provider Notified

The Data and Infrastructure Workgroup recommendation for obtaining this data builds on a solution already being deployed in Maryland to support hospital efforts to meet meaningful use requirements (Stage 2 Summary of Care/Transitions of Care Measure). Chesapeake Regional Information System for Our Patients (CRISP) currently operates an Electronic Notification Service (ENS), which sends admission and discharge information on a real-time basis to providers. ENS works by gathering patient panels directly from providers rather than relying on self-reported data from patients during the admission process, which is known to be unreliable in Maryland as well as nationally.

CRISP has recently started providing a service to send discharge summaries to providers who subscribe to the ENS. Providers can choose to receive different notifications through CRISP, such as ER registration events, inpatient admissions, and inpatient discharges. HSCRC staff use data from CRISP on the number of discharges for which there is an associated ENS alert to a provider. Additionally, this data source will allow us to provide information on the number of discharges where a discharge summary was sent. While this measure is not exactly consistent with CMS requirement, there is a strong case to be made that this measure is a better indicator of supporting transitions in care and more consistent with meaningful use requirements. Thus, the HSCRC is proposing that the measure in the contract be modified, and that we will work with CRISP to obtain baseline data for this measure.

Slightly fewer discharge-specific notifications compared to overall notifications are generally observed because, in certain circumstances, a notification can be triggered as a patient transfers to other care settings.

CRISP encourages organizations to update their panels at least monthly. To avoid sending out notifications for patients who are no longer being treated at a certain practice, CRISP reaches out to organizations that have not submitted a recent panel to encourage them to update their panel.

Monitoring Results

- Nearly one-third of Maryland residents with Medicare who were discharged from the hospital in 2014 had a visit to their physician within 7 days of discharge.
- In 2014, physicians received discharge notification for 37.43 percent of hospital discharges. This represents nearly a four-fold increase from 2013, when discharge notifications were received for only 9.7 percent of hospital discharges.
- National data on physician notification following patients' inpatient discharge are unavailable.

Goal 7: Enhance Care Transitions – Coordination with Primary Care

Measures	Population	2011	2012	2013	2014
Rate of physician follow-up after discharge in Maryland, Medicare[7]	**All Diagnoses**	N/A	N/A	N/A	32.3%
	COPD	N/A	N/A	N/A	29.8%
	Ischemic Heart Disease	N/A	N/A	N/A	31.0%
	Pneumonia	N/A	N/A	N/A	33.9%
	Heart Failure	N/A	N/A	N/A	33.9%
Discharges with principal provider notified in Maryland	**Any Notification**	N/A	N/A	10.22%	39.56%
	Discharge Notification	N/A	N/A	9.68%	37.43%

[7] 2013 data to be calculated for subsequent reports

3.1.8 Goal 8: Sustain High Physician Participation in Public Programs

In an effort to ensure high physician participation in public programs, the state of Maryland monitors: (1) Maryland Medicare physician participation rate and (2) the Maryland Medicaid physician participation rate.

Measurement Methodology

Medicaid-Participating Physicians per Medicaid Enrollee

HSCRC obtained a counting of Medicaid-participating physicians in SFY 2014 directly from the Maryland Department of Mental Health and Hygiene (DHMH). The number of Medicaid beneficiaries was obtained from the Hilltop Institute at UMBC. The count of beneficiaries includes enrollees in Fee-for-Service (FFS) Medicaid, HealthChoice (Medicaid Managed Care), and Maryland's Primary Adult Care (PAC) program. Medicare-Medicaid Dual-Eligibles are excluded from this counting (but are included in the Medicare enrollment count). The count of Medicaid beneficiaries is averaged over the 12 months of the state fiscal year running from July 2013 to June 2014.

Calculation: Medicaid Participating Physicians per Medicaid Enrollee =

Number of physicians / Number of Enrollees (obtained from Hilltop for non-Dual-Eligible Medicaid Population)* 1,000

Medicare-Participating Physicians per 1,000 Medicare Enrollees

A list of providers in the state of Maryland serving Medicare FFS beneficiaries was obtained directly from CMS/CMMI. Only providers enrolled before the end of 2014 were included in that year. Out of 17,296 providers, 16,701 were enrolled on or before December 31, 2014. The count of Medicare enrollees in 2014 is derived from reports that track Maryland's performance on the Medicare waiver sent to HSCRC by CMMI, which include separate enrollment estimates for Part A and Part B on a monthly basis. These enrollment figures are averaged across Part A and B over the calendar year. The number of Medicare providers is divided by the average number of Part A and Part B beneficiaries, as shown in the calculation below.

Calculation: Medicare Participating Physicians per Medicare Enrollee =

Number of providers / Number of Enrollees (obtained by average Part A and Part B numbers from CMMI) * 1,000

Monitoring Results

- Medicare physician participation rate for Maryland approximated 22 per 1,000 Medicare beneficiaries in 2014.
- Medicaid physician participation rate for Maryland approximated 29 per 1,000 Medicaid enrollees in 2014.

Goal 8: Sustain High Physician Participation in Public Programs

Measures	Population	2011	2012	2013	2014
Medicare-participating physicians per 1,000 Medicare Enrollees	**Maryland**	N/A	N/A	N/A	21.57
	National	N/A	N/A	N/A	N/A
Medicaid-participating physicians per Medicaid Enrollee[8]	**Maryland**	N/A	N/A	N/A	29.1
	National	N/A	N/A	N/A	N/A

[8] 2014 data are preliminary and include the period from 6/2013–7/2014.

3.1.9 Goal 9: Broaden Engagement in Innovative Models of Care

The All-Payer Demonstration model requires the continued participation of providers in healthcare reform initiatives such as accountable care organizations (ACOs) and bundled payments. This monitoring report contains data on (1) number of providers with National Committee for Quality Assurance (NCQA) patient-centered medical home (PCMH) accreditation or participating in other private payer PCHM-like initiatives (reported separately); (2) providers participating in ACOs; and (3) providers participating in bundled payment initiatives.

Measurement Methodology

Provider Participation in Patient-Centered Medical Home Initiatives

The Physician Alignment Workgroup recommended relying on the information available through the national accrediting organizations (primarily NCQA). Although NCQA will not capture all the providers participating in PCMH, it will allow HSCRC, in the short term, to monitor trends that may reflect the broader PCMH environment.

The following website was used to get the count of providers and practices in PCMH: http://recognition.ncqa.org/index.aspx. Limitations and concerns about these data are that there may be duplication, and they do not capture all PCMH programs, such as those by CareFirst. Future versions of this report will have CareFirst data on the number of PCMH providers with whom they have a contract.

Provider Participation in ACOs

The HSCRC staff obtained the number of ACOs located in Maryland using the following website:

https://data.cms.gov/ACO/Medicare-Shared-Savings-Program-Accountable-Care-O/x5qt-6kt3?

Provider Participation in Bundled Payment Initiatives

The HSCRC has had several alternative payment models for hospitals, including alternative rate-setting arrangements, the admission-readmission revenue (ARR) bundled payment initiative, total payment revenue (TPR), and more recently global budget revenue (GBR) arrangements. In 2014, all hospitals were either paid under TPR or GBR arrangements. In addition, as reported below, there were additional alternative rate-setting methodologies approved by to HSCRC.

The Alternative Rate-setting Methodology (ARM) was developed to encourage innovative and cost-saving payment arrangements without compromising the Commission's long-standing principles of equity and access. There are two types of ARM arrangements:

- Capitation: This type involves significant risk to the hospital for a broad range of services, including regulated hospital services.
- Global or Fixed Price: This type encompasses not only the hospital rates associated with a case but also the professional services provided during the course of treatment, usually negotiated between a hospital and a physician group as a joint venture.

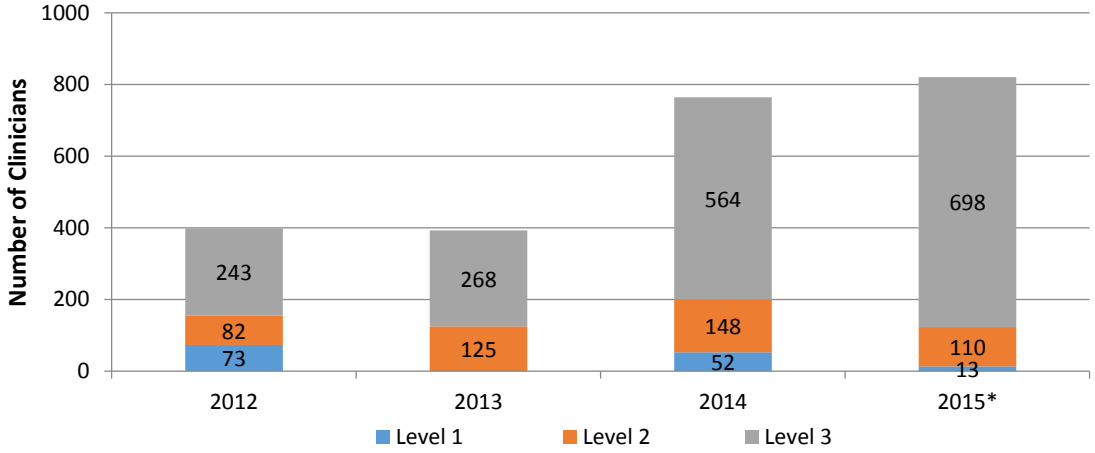
The HSCRC is reporting the number of ARMs that became effective in each Calendar year.

Monitoring Results

- Between 2012 and 2014, the number of Maryland clinicians who received Level 1, Level 2, or Level 3 PCMH recognition from NCQA increased from a total of 398 to 764. This represents nearly a two-fold increase (Figure 4).
- Preliminary estimates for 2014 suggest that approximately 74 percent of clinicians achieved Level 3 recognition.
- During the same time period, the number of Maryland practices that received NCQA PCMH recognition increased by 56 percent, from a total of 82 practices in 2012 to 128 practices in 2014. Roughly 74 percent of practices achieved Level 3 PCMH recognition by 2014.

In 2014, there a total of 36 alternative rate-setting methodologies (ARMs) became effective; this represents a more than 12 percent increase compared to 2013, when there were 32 ARMs.

Figure 4: Number of Clinicians with NCQA PCMH Recognition, Maryland, 2012-2015*



*Data are collected at a point in table. Data for 2015 are collected in April 2015.
Source: National Committee for Quality Assurance, 2015.

Goal 9: Broaden Engagement in Innovative Models of Care

Measures	Population		2011	2012	2013	2014
Participation of Maryland clinicians in NCQA accredited patient-centered medical homes	By Clinician	Level 1	N/A	73	0	52
		Level 2	N/A	82	125	148
		Level 3	N/A	243	268	564
		Total	**N/A**	**398**	**393**	**764**
	By Practice	Level 1	N/A	19	0	7
		Level 2	N/A	18	28	26
		Level 3	N/A	45	45	95
		Total	**N/A**	**82**	**73**	**128**
			2011	**2012**	**2013**	**2014**
Participation of providers in accountable care organizations[9]	**Maryland ACO's**		N/A	N/A	N/A	21
	Maryland Providers		N/A	N/A	N/A	482
	National ACO's		N/A	N/A	N/A	406
	National Providers		N/A	N/A	N/A	15,782
Participation of providers in alternative rate setting methodologies	**Maryland**		31.0	38.0	32.0	36.0
	National		N/A	N/A	N/A	N/A

[9] Current as of January 2015.

3.1.10 Goal 10: Improve Process of Care – Inpatient

Inpatient process of care measures report how often hospitals delivered recommended care processes in the following areas: heart attack (acute myocardial infarction or AMI), congestive heart failure (CHF), pneumonia, surgical care, and blood clot prevention (venous thromboembolism or VTE) and treatment. HSCRC gathered data on these measures—which have undergone extensive validation and reliability testing—from the Joint Commission's Quality Check. The Joint Commission's specifications for these measures align with CMS' Hospital Inpatient Quality Reporting measure specifications.

Measurement Methodology

These measures report how often hospitals delivered recommended care processes in the following four areas: heart attack (AMI), heart failure (CHF), pneumonia, surgical care improvement (Surgical Care Improvement Project or SCIP), and blood clot prevention and treatment.

The CMS Inpatient Quality Reporting (IQR) measures specifications are aligned with those of the Joint Commission's for the same measures. HSCRC derived the heart attack, heart failure, pneumonia, and surgical care improvement measure statewide average results for discharges for calendar years 2011 to 2013 from Medicare's hospital compare website (see appendix B for link to datasets). Data presented as 2013 extends from March 1, 2013 to April 31, 2014. Calendar year 2013 was not available from CMS in the hospital compare archives due to a system malfunction.

HSCRC notes that Maryland hospitals were no longer required by the state to report and submit Children's Asthma Care (CAC) measures, a voluntary set of measures for CMS and the Joint Commission, beginning with January 2013 discharges, so the data are not provided in the report. In addition, many of the measures reported here have very high rates and may be discontinued in the future due to being "topped-off" and some fluctuations in these measures may not be statistically significant.

Although not included in the contract monitoring requirements, HSCRC notes that the blood clot prevention and treatment measures, also voluntary for the IQR program, are currently reported on Hospital Compare.

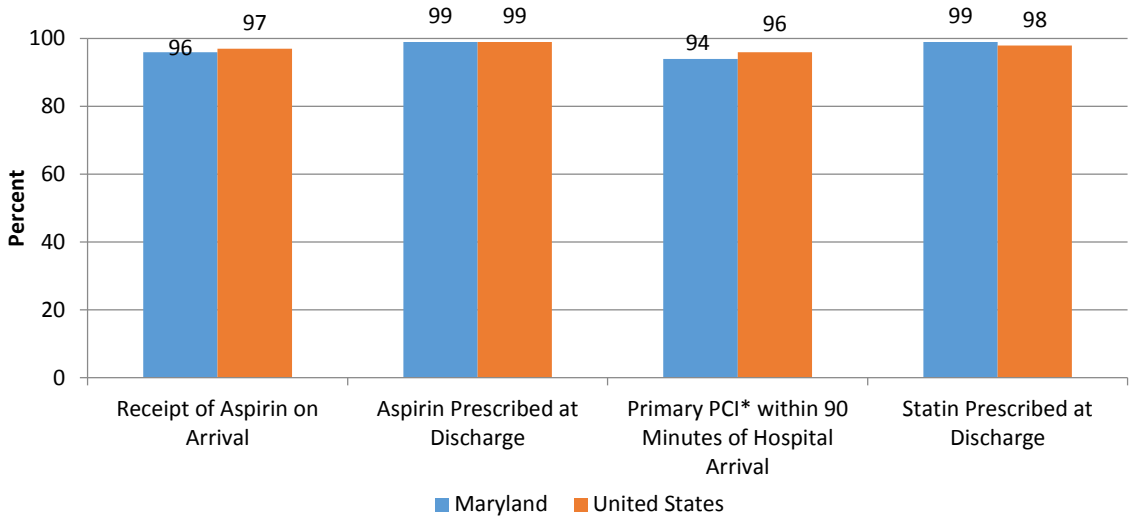
Monitoring Results

Heart Attack

Heart attack inpatient process of care measures, including measures indicative of receipt of aspirin upon hospital arrival, aspirin prescribed at discharge, statin prescribed at discharge, left ventricular ejection fraction (LVF) assessment, and receipt of angiotensin receptor blocker (ACE) inhibitor or angiotensin receptor blocker (ARB) for left ventricular systolic dysfunction (LVSD) at discharge neared 100 percent in

2013, for both Maryland and the U.S. overall (Figure 5).

Figure 5: Performance on Heart Attack Processes of Care, Maryland and United States, 2013



Source: Joint Commission Quality Check, 2013.
*Percutaneous Coronary Intervention.

Heart Failure

- Approximately 92 percent of Maryland residents with a heart failure discharge received instructions upon hospital discharge, compared to 95 percent of those in the U.S., a 3 percentage point difference.
- Almost all—99 percent—of both Maryland and U.S. patients with heart failure received an LVF assessment, as appropriate. Similarly, a relatively comparable proportion of Maryland (97 percent) and U.S. (97 percent) patients with a heart failure discharge, and for whom it was clinically appropriate, received an ACE inhibitor or ARB for LVSD at discharge.

Surgical Care

- Maryland and U.S. performance on each of the SCIP measures differed little in 2013. Performance on all measures was estimated at 98 percent or higher for both Maryland and the U.S., except for one measure (patients having surgery who received medicine to prevent infection within 1 hour before the skin was surgically cut), where Maryland was estimated at 96 percent compared to 99 percent for the United States.

Children with Asthma

- For 2013, estimates of performance on measures that examined the use of relievers and use of systemic corticosteroids for children hospitalized with asthma were 100 percent for both Maryland and the United States.
  - Maryland did perform better than the U.S. on a measure of whether patients received a written home management care plan. Approximately 97 percent of children in Maryland, for whom this

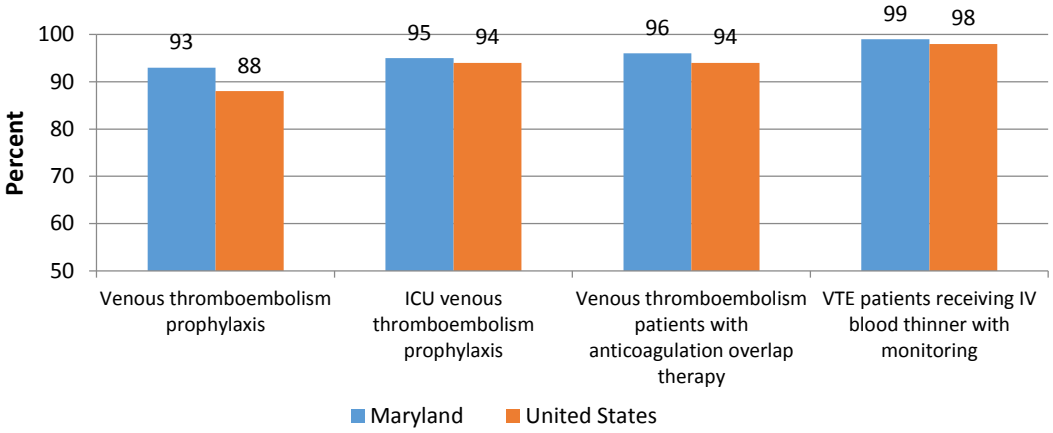
measure was applicable, received a written plan of care compared to 90 percent of children in the overall United States.

Venous Thromboembolism

- Maryland performance on measures of blood clot prevention was comparable or better to that of the national average. The largest difference in performance was observed for VTE or blood clot prophylaxis on the day of surgery. In 2013, 93 percent of surgical patients in Maryland, compared to 88 percent of surgical patients in the U.S, for whom VTE prophylaxis was appropriate, received blood clot-prevention treatment on the day or day after hospital admission (Figure 6).

The proportion of patients with potentially preventable VTE was also lower for Maryland than the U.S. Approximately 5 percent of Maryland patients and 8 percent of patients across the U.S. did not receive VTE prophylaxis and developed VTE during their hospital stay.

Figure 6: Venous Thromboembolism Prevention, Proportion of Patients Receiving Appropriate Care, Maryland and United States, 2013



Source: Centers for Medicare and Medicaid Services, Hospital Compare, 2013.

Goal 10: Improve Process of Care – Inpatient[10]

Measures	Population	2011	2012	2013	2014
Heart attack care - aspirin at arrival*	**Maryland**	99%	99%	96%	N/A
	National	99%	97%	97%	N/A
Heart attack care - aspirin prescribed at discharge*	**Maryland**	99%	99%	99%	N/A
	National	99%	99%	99%	N/A
Heart attack care - primary PCI received within 90 minutes of hospital arrival*	**Maryland**	91%	91%	94%	N/A
	National	94%	95%	96%	N/A
Heart attack care - statin prescribed at discharge*	**Maryland**	97%	98%	99%	N/A
	National	97%	98%	98%	N/A

[10] 2013 data are not a full calendar year and include the period of 4/1/2013—3/31/2014.

Goal 10: Improve Process of Care – Inpatient[10]

Measures	Population	2011	2012	2013	2014
Heart failure care - discharge instructions*	**Maryland**	91%	94%	92%	N/A
	National	92%	94%	95%	N/A
Heart failure care - LVF assessment*	**Maryland**	99%	99%	99%	N/A
	National	99%	99%	99%	N/A
Heart failure care - ACE inhibitor or ARB for LVSD at discharge*	**Maryland**	N/A	97%	97%	N/A
	National	96%	97%	97%	N/A
Pneumonia Care - Initial antibiotic selection for CAP in immunocompetent - patient (both ICU and non-ICU)*	**Maryland**	96%	96%	97%	N/A
	National	95%	95%	96%	N/A
Pneumonia Care - Blood cultures for pneumonia patients admitted through Emergency Department*	**Maryland**	95%	97%	N/A	N/A
	National	97%	97%	N/A	N/A
Surgical Care Improvement (SCIP) - Cardiac surgery patients taking a beta-blocker before hospital admission who received a beta-blocker in the time frame of 24 hours before surgery through the time they were in the recovery room.*	**Maryland**	95%	97%	98%	N/A
	National	96%	97%	98	N/A
Surgical care improvement (SCIP) - infection prevention-urinary catheter removed*	**Maryland**	94%	96%	98%	N/A
	National	94%	96%	98%	N/A
Surgical care improvement (SCIP) - infection prevention-SCIP Inf-1-Patients having a surgery who received medicine to prevent infection (an antibiotic) within one hour before the skin was surgically cut*	**Maryland**	97%	98%	96%	N/A
	National	98%	99%	99%	N/A
Surgical care improvement (SCIP) - infection prevention-SCIP Inf-2-Patients having a surgery who received appropriate medicine (antibiotic) which is shown to be effective for the type of surgery performed*	**Maryland**	98%	98%	99%	N/A
	National	98%	99%	99%	N/A
Surgical care improvement (SCIP) - infection prevention-SCIP Inf-3-Patients having a surgery who received appropriate medicine (antibiotic) that prevents infection and the antibiotic was stopped within 24 hours after the surgery ended*	**Maryland**	97%	98%	98%	N/A
	National	97%	98%	98%	N/A
Surgical care improvement (SCIP)-venous thromboembolism (VTE) - Patients having surgery who received the appropriate treatment to prevent blood clots which is shown to be effective for the type of surgery performed; Note: treatment may be medication, stockings, or mechanical devices for excursing the legs*	**Maryland**	97%	99%	98%	N/A
	National	98%	98%	99%	N/A
Children's Asthma Care (CAC) - home management plan of care (HMPC) document given to patient/caregiver*	**Maryland**	N/A	N/A	97%	N/A
	National	84%	87%	90%	N/A
Children's Asthma Care (CAC) - use of relievers for inpatient asthma overall rate, age 2-17*	**Maryland**	N/A	N/A	100%	N/A
	National	100%	100%	100%	N/A
Children's Asthma Care (CAC) - use of systemic corticosteroids for inpatient asthma overall rate, age 2-17*	**Maryland**	N/A	N/A	100%	N/A
	National	100%	100%	100%	N/A
Blood Clot Prevention - patients who got treatment to prevent blood clots on the day or day after hospital admission or surgery [VTE-1]	**Maryland**	N/A	N/A	93%	N/A
	National	N/A	N/A	88%	N/A

Goal 10: Improve Process of Care – Inpatient[10]

Measures	Population	2011	2012	2013	2014
Blood Clot Prevention - patients who got treatment to prevent blood clots on the day or day after being admitted to the intensive care unit (ICU) [VTE-2]	**Maryland**	N/A	N/A	95%	N/A
	National	N/A	N/A	94%	N/A
Blood Clot Prevention - patients who developed a blood clot while in the hospital who did not get treatment that could have prevented it [VTE-6]	**Maryland**	N/A	N/A	5%	N/A
	National	N/A	N/A	8%	N/A
Blood Clot Treatment - patients with blood clots who got the recommended treatment, which included using two different blood thinner medicines at the same time [VTE-3]	**Maryland**	N/A	N/A	96%	N/A
	National	N/A	N/A	94%	N/A
Blood Clot Treatment - patients with blood clots who were treated with an intravenous blood thinner, and then were checked to determine if the blood thinner was putting them patient at an increased risk of clotting [VTE-4]*	**Maryland**	N/A	N/A	99%	N/A
	National	N/A	N/A	98%	N/A
Blood Clot Treatment - patients with blood clots who were discharged on a blood thinner medicine and received written instructions about that medicine [VTE-5]	**Maryland**	N/A	N/A	89%	N/A
	National	N/A	N/A	82%	N/A
Measures marked with an asterisk (*) have been retired or are no longer available.					

3.1.11 Goal 11: Improve Process of Care – Outpatient

Measures to assess outpatient process of care improvement are comparable to those identified in Goal 24, which measures reduction in overuse of diagnostic imaging. Refer to Goal 24 for data on Maryland performance on outpatient process improvement.

Measurement Methodology

Prior to January 1, 2014, when the Maryland hospital rate setting was subject to the terms of the previous CMS Waiver, Maryland hospitals did not participate in the Medicare Outpatient Prospective Payment System (OPPS) and therefore were not subject to the Outpatient Quality Reporting (OQR) requirements. However, in January 2013, HSCRC and the MHCC jointly communicated with hospitals the agencies' requirements regarding hospital-based outpatient quality data reporting. Hospitals were notified that Maryland's reporting would be modeled after CMS Hospital OQR data requirements, and hospitals were required to participate in the CMS OQR program. Each hospital was required to complete and submit the Hospital OQR Program Online Notice of Participation through My QualityNet (QualityNet.org) by February 28, 2013. After acceptance of the online Notice of Participation (i.e., Outpatient Pledge of Participation), hospitals' outpatient chart abstracted data would be transmitted to CMS on a quarterly basis in accordance with the established data submission schedule. Upon successful completion of the CMS Outpatient Pledge requirements, the MHCC and HSCRC would also be able to access outpatient claims based measures (OP-8, OP-9, OP-10, OP-11, OP-13, OP-14, OP-15).

Monitoring Results

- Data for outpatient process of care improvement measures are not available for 2014. Data will be incorporated into future monitoring reports as they become available.

Goal 11: Improve Process of Care – Outpatient[11]

Measures	Population	2011	2012	2013	2014
	Maryland	N/A	N/A	N/A	N/A
	National	N/A	N/A	N/A	N/A

[11] The data for goal 11 are not currently available; 2014 data are to be posted to hospital compare in the next year.

3.1.12 Goal 12: Reduce High-Priority Hospital Complications

Progress in reducing high-priority hospital complications is assessed with two measures: (1) the potentially preventable complication (PPC) rate and (2) the central-line acquired bloodstream infection (CLABSI) standardized infection ratio (SIR). PPCs are defined as harmful events or negative outcomes that may result from the process of care and treatment rather than from a natural progression of underlying disease. Under the Waiver contract, Maryland is expected to achieve an aggregate 30 percent reduction across all 65 potentially preventable conditions that comprise the Maryland Hospital Acquired Condition Program. (A more detailed PPC report that examines each PPC by payer has been submitted to CMMI.) CLABSIs are serious infections that significantly increase the length of stay, hospital costs, and mortality. CLABSIs can be prevented though proper insertion and management of the central line. The SIR is used in this report to measure CLABSIs; a SIR greater than 1.0 means that more infections were observed in the state than predicted, and a SIR less than 1.0 means there were fewer infections observed than predicted. A score of 0, meaning no infections, is best.

Measure Methodology

Measurement of PPCs & Calculation of PPC Rate:

The PPC grouper is run with HSCRC patient-level data for acute care hospitals, which provides the following classifications for each of the 65 PPCs:

- PPC at risk
- PPC assigned

The program excludes cases with any of the following conditions since the state excludes these patients from the MHAC program: (1) hospice Palliative Care Patients (defined as cases with ICD-9 code = V66.7) and (2) patients with more than six PPCs.

Patients at risk for each PPC are identified, and the count of at-risk population is counted for all PPCs for each year. The unadjusted PPC rate is estimated as the total number of PPC cases divided by total at risk for each year.

Case-mix adjusted PPC rates are estimated as follows: The base-year observed rates are calculated by dividing total PPC cases by total at risk cases for each admission APRDRG SOl category using base-year data. The base-year observed PPC rate is then calculated by dividing statewide total count of PPC cases by total count of at-risk cases using base-year data. Expected PPC cases in the performance year are calculated by multiplying the count of at-risk cases by base-year observed rate for each admission APRDRG SOl and summing for each PPC. The risk adjustment ratio is then calculated by dividing total observed PPC counts in the performance year by the expected number of PPCs. The risk-adjusted rate of PPCs in the performance year is calculated by multiplying the risk adjustment ratio by the base-year observed PPC rate.

CLABSI

CLABSI cases are identified as a laboratory-confirmed bloodstream infection (LCBI), where a central line (CL) or umbilical catheter (UC) was in place for >2 calendar days on the date of event, with day of device placement being Day 1,

AND

A CL or UC was in place on the date of event or the day before. If a CL or UC was in place for >2 calendar days and then removed, the date of event of the LCBI must be the day of discontinuation or the next day. If the patient is admitted or transferred into a facility with an implanted central line (port) in place, and that is the patient's only central line, day of first access in an inpatient location is considered Day 1. "Access" is defined as line placement, infusion, or withdrawal through the line. Such lines continue to be eligible for CLABSI once they are accessed until they are either discontinued or on the day after patient discharged (as per the Transfer Rule). Note that the "de-access" of a port does not result in the patient's removal from CLABSI surveillance. The following are excluded:

- Pacemaker wires and other non-lumened devices inserted into central blood vessels or the heart are excluded as central lines.
- Peripheral intravenous lines are excluded from this measure.

Measure calculation: SIR of healthcare-associated CLABSIs calculated among patients in the ICU.

- Numerator: Total number of observed healthcare-associated CLABSI among patients in ICUs, NICUs, SCAs, and other acute care hospital locations where patients reside overnight.
- Denominator: Total number of expected CLABSIs, calculated by multiplying the number of central line device days for each location under surveillance for CLABSI during the period by the CLABSI rate for the same types of locations obtained from the standard population. Central line device day denominator data that are collected differ according to the location of the patients being monitored. [See 2a.8.]

An SIR greater than 1.0 means that more healthcare-associated infections were observed in a facility or state than predicted, and a SIR less than 1.0 means there were fewer healthcare-associated infections observed than predicted. A score of 0, meaning no infections, is best.

Appendix A includes a list of hospitals not reporting CLASBIs and the reason for exclusion from Maryland estimates.

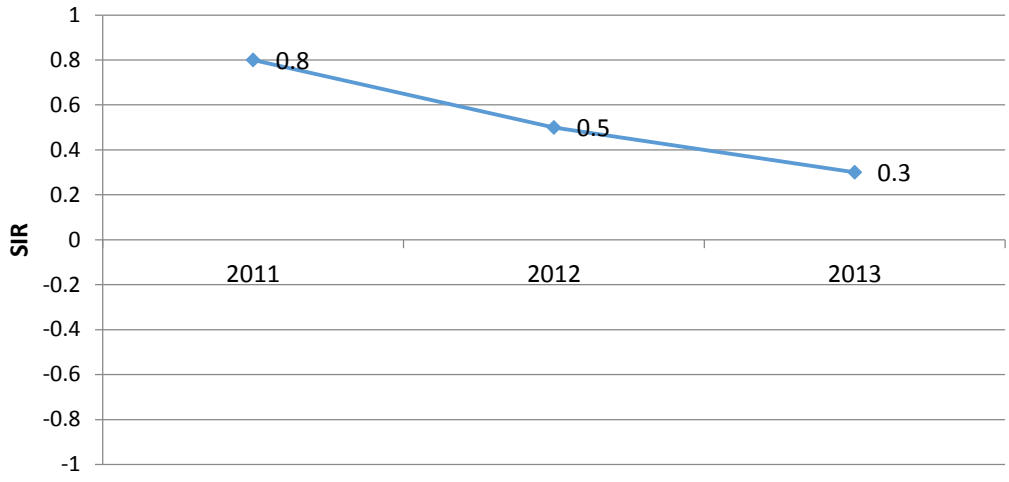
Additional information on CLABSI can be found at:
http://www.cdc.gov/nhsn/pdfs/pscmanual/4psc_clabscurrent.pdf.

Monitoring Results

- Between 2013 and 2014, the unadjusted Maryland rate of potentially preventable complications decreased by 26.2 percent, from 1.26 per 1,000 at-risk population to 0.93 per 1,000 at-risk population.

Between 2011 and 2013, central line bloodstream SIR in the state of Maryland decreased from 0.8 to 0.3 (Figure 7).

Figure 7: CLABSI SIR, Maryland, 2011-2013



Source: CDC via the National Healthcare Safety Network tool, drawn from Hospital Compare 2011-2013.

Goal 12: Reduce High Priority Hospital Complications

Measures	Population	2011	2012	2013	2014
Potentially preventable complications rate per 1,000 at-risk discharges (all 65 PPCs)	**Maryland**	N/A	N/A	1.26	0.93
	National	N/A	N/A	N/A	N/A
Central-line Acquired Bloodstream Infection (CLABSI) standardized infection ratio[12,13] (1= National Average)	**Maryland**	0.8	0.5	0.3	N/A
	National	1.0	1.0	1.0	N/A

[12] Refer to Appendix A for a list of Maryland hospitals not included in CLABSI standardized infection ratio.
[13] 2014 data are preliminary and include the period from 7/1/2013-6/30/2014

3.1.13 Goal 13: Reduce Readmissions – Home Health

Home health agencies may be able to assist hospitals in reducing potentially avoidable inpatient and emergency department (ED) utilization. For example, hospitals could collaborate with home health agencies to avoid unnecessary care by having home health staff remind patients to call the home health agency first for non-life threatening emergencies. In addition, it is important to monitor admissions from home health agencies to identify potential quality of care issues. Home Health Compare publicly reports the quality of care provided by Medicare-certified home health agencies, including measures on admission rates to acute inpatient hospitals and unplanned urgent visits to the ED for those receiving home health care.

Measures of home health readmission included: (1) the percent of home health patients who had to be admitted to the hospital and (2) the percent of home health patients who had an unplanned urgent visit to an ED.

Measure Methodology

Data to estimate these measures were obtained from CMS Home Health Compare.

Exclusions included:

- Pediatric home health patients.
- Home health patients receiving maternity care only.
- Home health clients receiving non-skilled care only.
- Home health patients for whom the payment source is neither Medicare nor Medicaid.
- Medicare beneficiaries enrolled in a Part C (Medicare Advantage) plan.
- Medicaid beneficiaries who are not also enrolled in Medicare.

Measure Calculation: Percent of home health patients who had to be admitted to the hospital:

Numerator: Number of home health episodes of care for which the assessment completed at the conclusion of the episode indicates the patient was admitted to a hospital for a reason other than a scheduled treatment or procedure.
Denominator: Number of home health episodes of care ending with a discharge or transfer to inpatient facility during the reporting period, other than those covered by generic or measure-specific exclusions.
Exclusions: Home health episodes of care that end in patient death.

Percent of home health patients who had an unplanned urgent visit to an ED:

Numerator: Number of home health episodes of care where Medicare claims indicate the patient required emergency medical treatment from a hospital emergency department during the first 60 days of home health care, but that the patient was not admitted to the hospital as an inpatient.

Denominator: Number of home health episodes of care beginning during the reporting period, other than those covered by generic or measure-specific exclusions.

Exclusions: 1) Home health stays for patients who are not continuously enrolled in fee-for-service Medicare for the 6 months before or 60 days after the start of the home health stay or until death; 2)

Home health stays that begin with a Low Utilization Payment Adjustment (LUPA) claim; 3) Home health stays in which the patient receives service from multiple agencies during the first 60 days.

Additional information on Home Health Compare can be found at: http://www.medicare.gov/homehealthcompare/search.html.

Monitoring Results

- Between 2012 and 2014, the admission rate from home health agencies to hospital remained stable at 17 percent. The admission rate for the U.S. was comparable in 2012 (17 percent) and declined slightly, by one percentage point, in 2013 and 2014.
- Maryland home health patients' rate of unplanned urgent care visits to the ED remained unchanged at 11 percent between 2012 and 2014. The national rate also remained unchanged at 12 percent during the same time period.

Goal 13: Reduce Readmissions – Home Health

Measures	Population	2011	2012	2013	2014
Admission rate from home health agencies to acute inpatient hospital	**Maryland**	N/A	17%	17%	17%
	National	N/A	17%	16%	16%
Unplanned urgent visits to the ED for patients receiving home health	**Maryland**	N/A	11%	11%	11%
	National	N/A	12%	12%	12%

3.1.14 Goal 14: Reduce Readmissions – Nursing Home

In part, readmissions among patients discharged to a nursing home are high due to the medical complexity of these patients; many nursing home patients are elderly and affected by multiple chronic conditions and physical limitations. In addition to their medical complexity, however, readmissions may increase due to patients being discharged from the hospital earlier than recommended by best practices or due to deficiencies in post-discharge quality of care. Coordination between the hospital and nursing home prior to discharge or transfer is expected to reduce potentially avoidable readmissions.

Measurement Methodology

Measure: 30-Day, All-Cause, All Maryland Hospital Readmission Rate for Patients Discharged to a Nursing Home.

Data Source: HSCRC discharge abstract data with CRISP unique patient enterprise identifiers (EIDs).

Population: All-payer inpatient discharges eligible for readmission that were discharged to a nursing home. Please note that the discharge disposition code on the HSCRC case-mix data is known to be unreliable for some hospitals but was added to hospital audits in 2014 to ensure increased accuracy of this data. In addition, as with all readmission measures in this report calculated using HSCRC case-mix data, readmissions to hospitals outside of Maryland are not captured.

Exclusion Criteria:

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

- Planned readmissions are excluded from the numerator based upon CMS Planned Readmission Algorithm V. 2.1. The HSCRC has added all vaginal and C-section deliveries as planned using the APR-DRGs rather than principal diagnosis (APR-DRGs 540, 541, 542, 560). Planned admissions are counted in the denominator because they could have an unplanned readmission.
- Hospitalization within 30 days of a hospital discharge where a patient dies is counted as a readmission; however, the readmission is removed from the denominator because there cannot be a subsequent readmission.
- Admissions that result in transfers, defined as cases where the discharge date of the admission is on the same day as the admission date of the subsequent admission, are removed from the denominator counts. Thus only one admission is counted in the denominator and that is the admission to the transfer hospital; it is this discharge date that is used to calculate the 30-day readmission window.
- Discharges from rehabilitation hospitals (provider ids 213028, 213029, 210333).
- In addition, the following data cleaning edits are applied:
  a. Cases with null or missing CRISP EIDs
  b. Duplicates
  c. Negative interval days

Calculation: Readmission Rate for Patients Discharged to a Nursing Home =

Number of Readmissions / Number of Discharges to a Nursing Home Eligible for a Readmission

Monitoring Results

- Between 2012 and 2014, the percentage of Maryland nursing home patients who were readmitted to a hospital declined from 21.2 percent in 2013 to 20.6 percent in 2014. This represents a 3.0 percent reduction in nursing home readmissions.

Goal 14: Reduce Readmissions – Nursing Homes

Measures	Population	2011	2012	2013	2014
Readmission rates for inpatient discharges to nursing homes	**Maryland**	N/A	22.9%	21.2%	20.6%
	National	N/A	N/A	N/A	N/A

3.1.15 Goal 15: Reduce Readmissions – Hospital

Hospital readmissions rates for Medicare beneficiaries are higher in Maryland than in the rest of the nation. The new All-Payer Model is required to reduce Medicare readmissions in Maryland to at or below the national rate by 2018. The costs of readmissions also are included in the HSCRC measure of potentially avoidable utilization, which is used to adjust global budgets. The HSCRC has a Readmission Shared Savings program and a Readmission Reduction Incentive program designed to incentivize hospitals to invest resources to reduce readmissions. In addition to the all-payer measures reported below, CMMI provides the HSCRC with the Medicare-specific readmission rate for Maryland that includes readmissions that occur outside of the state.

Measurement Methodology

Measures:

a. 30-Day, All-Cause, All Hospital Readmission Rate
b. 30-Day, All-Cause, All Maryland Hospital Readmissions per 1,000 Maryland Residents
c. 30-Day, All-Cause, All Maryland Hospital Condition Specific Readmission Rate for index admissions:
    i. Heart Failure
    ii. Acute Myocardial Infarction (MI)
    iii. Pneumonia
    iv. Chronic Obstructive Pulmonary Disease (COPD)
    v. Hip/Total Knee Arthroplasty

Data Source: HSCRC discharge abstract data with CRISP EIDs.

Population: All-payer inpatient discharges eligible for readmission.

Exclusion Criteria:

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

- Planned readmissions are excluded from the numerator based upon CMS Planned Readmission Algorithm V.2.1. The HSCRC has also added all vaginal and C-section deliveries as planned using the APR-DRGs rather than principal diagnosis (APR-DRGs 540, 541, 542, 560). Planned admissions are counted in the denominator because they could have an unplanned readmission.
- Hospitalizations within 30 days of a hospital discharge where a patient dies is counted as a readmission, however the readmission is removed from the denominator because there cannot be a subsequent readmission.
- Admissions that result in transfers, defined as cases where the discharge date of the admission is on the same day as the admission date of the subsequent admission, are removed from the denominator counts. Thus only one admission is counted in the denominator and that is the admission to the transfer hospital, and it is this discharge date that is used to calculate the 30-day readmission window.

- Discharges from rehabilitation hospitals (provider IDs 213028, 213029, 210333).
- In addition the following data cleaning edits are applied:
  a. Cases with null or missing CRISP EIDs
  b. Duplicates
  c. Negative interval days

Calculation of each of the 30-Day, All-Cause, All Maryland Hospital Readmission Measures:

Readmission Percent =
Number of Readmissions / Number of Discharges Eligible for a Readmission

Readmissions per 1,000 Maryland Residents =
(Number of Readmissions x 1,000)/ Maryland Population

Condition Specific Readmission Rates =
Number of Readmissions / Number of Condition Specific Discharges Eligible for a Readmission[14]

Monitoring Results

- Maryland all-cause and condition-specific percentages of hospitalizations with a 30-day, all-Maryland hospital readmission are presented in Figure 8, for 2012 through 2014. Across all conditions, approximately 13.5 percent of hospitalizations resulted in a readmission in 2014, this is down slightly from 14.2 percent in 2012 (a 4.9 percent reduction).
- Readmission rates were highest for patients with heart failure. In 2012, approximately one in four patients with a heart failure hospitalization were readmitted within 30 days. Heart failure readmissions declined by 7.5 percent in 2014, to 23.3 percent.
- The largest reduction in readmissions was observed for hip/total knee arthroplasty, for which readmission declined by nearly 22 percent between 2012 and 2014, from 4.6 percent to 3.6 percent.

[14] Readmission if principal ICD-9= ICD_HF (Heart Failure), ICD_AMI (Acute Myocardial Infarction), ICD_PNUEM (Pneumonia), ICD_COPD (Chronic Obstructive Pulmonary Disease), ICD_STROK (Ischemic Stroke), ICD_THA (Primary Total Hip (THA) and Knee (TKA) Arthroplasty Relieve Pain).

Table 15: Reduce Readmissions - Hospitals

Measures	Population	2011	2012	2013	2014
30-day all-hospital, all-cause readmission	**Maryland**	N/A	14.20%	13.9%	13.4%
	National	N/A	N/A	N/A	N/A
Readmissions per 1,000 Maryland residents	**Maryland**	N/A	14.2	13.1	12.1
	National	N/A	N/A	N/A	N/A
Heart failure readmission rate	**Maryland**	N/A	25.23%	23.80%	23.31%
	National	N/A	N/A	N/A	N/A
Pneumonia readmission rate	**Maryland**	N/A	16.45%	15.53%	15.25%
	National	N/A	N/A	N/A	N/A
Acute myocardial infarction readmission rate	**Maryland**	N/A	14.23%	13.83%	13.53%
	National	N/A	N/A	N/A	N/A
Chronic obstructive pulmonary disease readmission rate	**Maryland**	N/A	22.73%	21.96%	21.24%
	National	N/A	N/A	N/A	N/A
Hip/total knee arthroplasty readmission rate	**Maryland**	N/A	4.59%	4.11%	3.59%
	National	N/A	N/A	N/A	N/A

Source: Derived from HSCRC Inpatient Abstract Data, 2012-2014.

3.2 Population Health

Maryland believes that an all-payer model that is accountable for the total cost of care can establish incentives that improve population health outcomes and reduce health disparities.

3.2.1 Goal 16: Improve Life Expectancy

Monitoring Results

- Average life expectancy in the state of Maryland increased modestly between 2011 and 2013, from 79.5 years to 79.7 years.
- An increase in life expectancy was also observed among Black residents of Maryland, with average life expectancy increasing from 77.1 years in 2011 to 77.4 years in 2013. Minimal change was recorded for Whites.
- Data on life expectancy for 2014 were not available for inclusion in the 2015 Maryland Monitoring Report. Results for this measure will be incorporated into future reports as they become available.

Goal 16: Improve Life Expectancy

Measures	Population	2011	2012	2013	2014
Average life expectancy at birth (in years)	**Maryland**	79.5	79.7	79.7	N/A
	White (MD)	80.3	80.4	80.3	N/A
	Black (MD)	77.1	77.3	77.4	N/A
	National	78.7	78.8	78.8	N/A
	White (MD)	79.0	79.1	79.1	N/A
	Black (MD)	75.3	75.5	75.5	N/A

Additional information on the Maryland Vital Statistics Annual reporting on life expectancy can be found here: http://dhmh.maryland.gov/vsa/Documents/12annual.pdf.

3.2.2 Goal 17: Reduce the Rate of Hospitalization for Ambulatory Sensitive Conditions

PQIs are a set of measures developed by the Agency for Healthcare Research and Quality (AHRQ). The PQI measures flag hospitalizations that are for ambulatory care sensitive conditions. Patients should not require hospitalizations for these conditions or their associated complications if they have access to high-quality outpatient care; examples of these conditions include hypertension, diabetes and its associated complications, and perforated appendix. Thus, PQIs can be used as a screening tool to identify possible access and/or quality of care issues outside of the hospital setting. The 13 individual PQI measures roll up into three composite measures (overall, acute, and chronic), are population based, and are adjusted for covariates such as age and sex. The HSCRC uses the PQI overall composite measure as one way to identify potentially avoidable utilization (PAU) and costs for hospital care; performance on PAUs are used to adjust hospital global budgets. The goal is to incentivize hospitals to work within their communities to improve quality of care coordination outside the hospital and thus reduce potentially avoidable hospital utilization.

Measurement Methodology

Measure: PQI (overall, acute, and chronic) risk-adjusted rate per 100,000 Maryland Residents (includes data for Maryland hospitals only).

Data Source: HSCRC discharge abstract data.

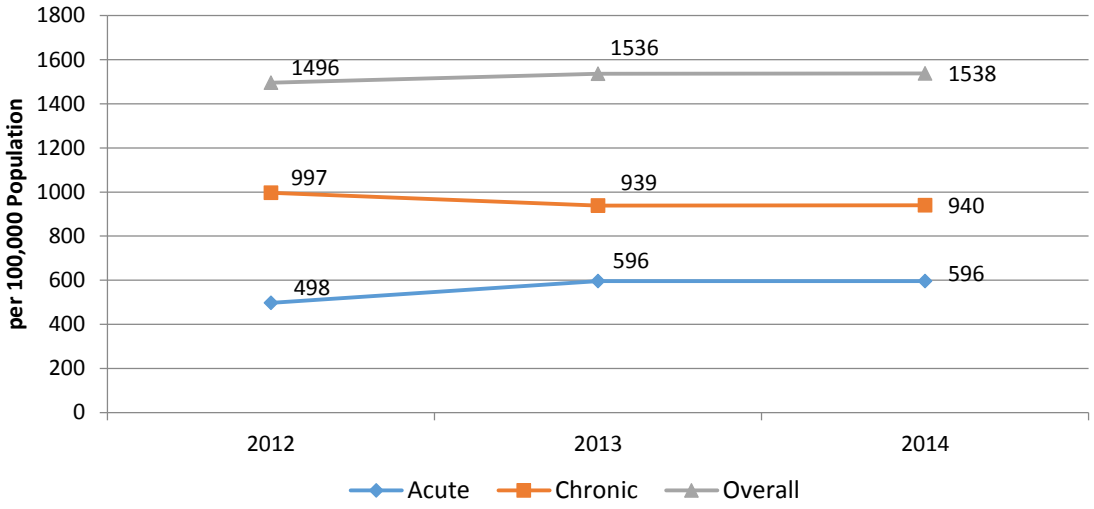
Additional information on numerator, denominator, exclusions, and codes used to calculate the PQI rate can be found on the AHRQ website: http://www.qualityindicators.ahrq.gov/modules/pqi_resources.aspx.

Monitoring Results

- Between 2012 and 2014, Maryland hospitalizations for ambulatory care sensitive conditions (ACSC) increased by 2.8 percent, from an overall rate of 1,496 hospitalizations per 100,000 population to 1,538 hospitalizations per 100,000 population (Figure 9).
- The increase in overall ACSC hospitalizations appears to have been driven largely by growth in hospitalizations for acute ACSCs, which increased from 498 per 100,000 population in 2012 to 596 per 100,000 population in 2014, an increase of nearly 20.0 percent. HSCRC is exploring reasons for this increase, including historical events (e.g., flu outbreaks).

Between 2012 and 2014, chronic ACSC hospitalization rates for Maryland fell by about 5.7 percent.

Figure 9: Acute, Chronic, and Overall Adjusted Rate of Hospitalization for Ambulatory Care Sensitive Conditions, Maryland, 2012-2014



Source: Derived from HSCRC Inpatient Abstract Data, 2012–2014.

Goal 17: Reduce the rate of hospitalization for ambulatory care sensitive conditions

Measures	Population	2011	2012	2013	2014
Adjusted preventive quality indicator (PQI) acute composite rate per 100,000 population, age 18 and over[15]	**Maryland**		498.2	596.2	596.4
	National	N/A	N/A	N/A	N/A
Adjusted preventive quality indicator chronic composite rate per 100,000 population, age 18 and over	**Maryland**		996.8	939.3	940.0
	National	N/A	N/A	N/A	N/A
Adjusted preventive quality indicator overall composite rate per 100,000 population, age 18 and over	**Maryland**		1495.6	1536.3	1538.5
	National	N/A	N/A	N/A	N/A

[15] HSCRC is exploring using HCUP data for this measure when 2014 data are available in order to allow for a national comparison.

3.2.3 Goal 18: Improve Cancer Control

Cigarette smoking is the cause of almost 6,800 Maryland deaths each year, and 150,000 residents suffer from diseases/cancers caused by cigarette smoking. Reducing adults who smoke and preventing youth from using any tobacco product are critical to improving the health of Marylanders. The Maryland State Health Improvement Process (SHIP) monitors the percent of adults who are current smokers and youth who use any kind of tobacco product.

Measurement Methodology

Measures: (1) Percent of Adults who are Current Smokers and (2) Percent of Youth Using Any Kind of Tobacco Product.

Data Source: Maryland DHMH Behavioral Risk Factor Surveillance System (BRFSS) and MD Youth Tobacco Survey (www.marylandbrfss.org).

Additional information about Maryland's SHIP can be found here: http://dhmh.maryland.gov/ship/SitePages/Home.aspx.

Monitoring Results

- The percentage of Maryland adults who smoke declined by 14 percent between 2011 and 2013, from 19.1 percent to 16.4 percent of adults.
- Use of tobacco products among children in the state of Maryland declined modestly between 2011 and 2013, from 12.5 percent in 2011 to 11.9 percent in 2013. A greater reduction in tobacco use among youth was observed for the U.S.; 18.1 percent of children in the U.S. reported using a tobacco product in 2011 compared to 15.7 percent in 2013.
- Data on adult smoking and tobacco use among children for 2014 was not available for inclusion in the 2015 Maryland Monitoring Report. Results for this measure will be incorporated into future reports as they become available.

Goal 18: Improve Cancer Control

Measures	Population	2011	2012	2013	2014
Percent of adults who are current smokers	**Maryland**	19.1%	16.2%	16.4%	N/A
	National	21.1%	19.6%	N/A[16]	N/A
Percent of youth using any kind of tobacco product	**Maryland**	N/A	N/A	16.9%	N/A
	National	N/A	N/A	N/A	N/A

[16] National data for 2013 not currently available.

3.2.4 Goal 19: Improve Primary Prevention of Infectious Diseases

The Maryland SHIP monitors the percent of people vaccinated annually for seasonal influenza and children with recommended vaccinations, as well as rate of new HIV infections.

Measure Methodology

Influenza Vaccination

This indicator shows the percentage of children and adults who are vaccinated annually against seasonal influenza. Coverage estimates are for all persons over 6 months of age. Coverage estimates are for persons interviewed September through June of the next year who reported being vaccinated August through May.

Numerator: National Immunization Survey (NIS) and BRFSS respondents who reported that they received an influenza vaccination in the past 12 months.

Denominator: NIS and BRFSS respondents.

Source: Centers for Disease Control BRFSS and NIS

Additional information can be found here:

http://dhmh.maryland.gov/ship/PDFs/Objective%2024%20influenza%20vaccination%20WEBSITE%202%20pager%20(added%20updated%20data%20for%202011-2012).pdf.

Childhood Immunizations

Measure Description: This indicator shows the percentage of children (19–35 months) who received the recommended vaccines. Vaccines are among the most cost-effective clinical preventive services and are a core component of any preventive services package. Increasing vaccination rates can reduce preventable infectious diseases among young children.

Numerator: Number of children aged 19–35 months old who received four doses DTP/DT/DTaP vaccine (diphtheria, tetanus toxoids, and pertussis vaccine; diphtheria and tetanus toxoids vaccine; and diphtheria, tetanus toxoids, and acellular pertussis vaccine), three doses of poliovirus vaccine, one dose of any measles-containing vaccine, three doses of HepB, one dose of varicella vaccine, and four doses of pneumococcal conjugate vaccine (PCV). Haemophilus influenzae type b vaccine is excluded.

Denominator: Number of children.

Source: Centers for Disease Control National Immunization Survey (NIS).

Additional information can be found here: http://dhmh.maryland.gov/ship/PDFs/Objective%2023.pdf.

New HIV Infections

Measure Description: This indicator shows the rate of adult/adolescent cases (age 13+) diagnosed with HIV (per 100,000 population). HIV is a significant and preventable public health problem. An estimated

21% of people with HIV are undiagnosed. We have the knowledge and tools needed to slow the spread of HIV infection and improve the health of people living with HIV.

Numerator: Number of reported HIV diagnoses among persons age 13 and older during a calendar year (including those reported up to one full year after).

Denominator: Number of persons age 13 and over (population).

Source: Maryland DHMH Infectious Disease Bureau, Center for HIV Surveillance and Epidemiology.

Additional information can be found here:

http://dhmh.maryland.gov/ship/PDFs/Objective%2020.pdf.

Monitoring Results

Influenza Vaccination

- Between 2011 and 2013, the number of Maryland residents who received a seasonal influenza vaccination increased from 41 percent to nearly 45 percent.

Childhood Immunizations

- Maryland performance on the measure of childhood vaccination was higher than that of the overall U.S. The percent of Maryland children who received all recommended vaccinations increased from 74 percent in 2011 to 76 percent in 2013. Across the nation, 70 percent of children received all recommended vaccinations, an increase of nearly 2 percentage points from 2011 (Figure 10).

New HIV Infections

- A small increase in the rate of new HIV infections was noted in Maryland. The rate of new HIV infections among adolescents and adults increased from 26.9 per 100,000 population in 2011 to 28.1 per 100,000 population in 2013.
- Data to assess performance on primary prevention of infectious disease measures were not available for 2014. These data will be included in future Monitoring Reports as data become available.

Goal 19: Improve Primary Prevention of Infectious Disease

Measures	Population	2011	2012	2013	2014
Annual seasonal influenza vaccination rate	**Maryland**	41.0%	41.4%	44.6%	N/A
	National	N/A	N/A	N/A	N/A
Percent of children with recommended vaccinations	**Maryland**	73.8%	67.1%	75.8%	N/A
	National	68.5%	68.4%	70.4%	N/A
New HIV infection rate among adults and adolescents rate per 100,000 population	**Maryland**	26.9	28.7	28.1	N/A
	National	N/A	N/A	N/A	N/A

Source: Center for Disease Control National Immunization Survey, CDC Sortable Statistics, 2011–2013.

3.2.5 Goal 20 and 21: Improve Prevention for Diabetes, Cardiovascular Disease, and Asthma

Obesity in children is a risk factor for the development of diabetes and hypertension. The Maryland SHIP monitors obesity rates in children and encourages the development of Local Health Improvement Coalitions to address the issue. Maintaining a healthy weight reduces the risk for the development of diabetes and hypertension. ED visits for diabetes and hypertension may indicate that these conditions are not well controlled and, as with PQIs, may represent poor quality outpatient care.

Emergency department visits for asthma may indicate that these conditions are not well controlled and, as with PQIs, may represent poor quality outpatient care.

The SHIP monitors diabetes, cardiovascular, and asthma measures of population health and encourages the development of Local Health Improvement Coalitions to address these issues.

Measurement Methodology

- *Percent of Children Who Are Considered Obese*

Measures: Percent of population that were obese (≥95th percentile BMI) by age and sex, based on reference data.

Data Source: HSCRC outpatient data.

Population: Maryland residents who had an ED visit to a Maryland Hospital.

Calculation: (Number of adolescents ages 12 to 19 attending public school who have a Body Mass Index equal to or above the 95th percentile for age and gender/population)*100

- *Percent of Adults Who Are at a Healthy Weight*

Measures: Percent of people with BMI of less than 25 kg/m^2.

Data Source: CDC National Health and Nutrition Examination Survey.

Population: Maryland residents.

Calculation: Percent of adults who are at Healthy Weight =

(Number of Respondents with BMI less than 25 kg/m^2) / Number of Persons) * 100

- *Diabetes-Related and Hypertension-Related Emergency Department Visits*

Measures: (1) ED visit rate due to diabetes per 100,000 population and (2) ED visit rate due to hypertension per 100,000 population

Data Source: HSCRC outpatient data.

Population: Maryland residents who had an ED visit to a Maryland Hospital.

Calculation: ED Rate for Diabetes = (Number of ED Visits with ICD 9 Primary Diagnosis of 250.xx) / Number of Maryland Residents) * 100,000

ED Rate for Hypertension = (Number of ED Visits with ICD 9 Primary Diagnosis of 401.x) / Number of Maryland Residents) * 100,000

Asthma

Measures: Emergency Department Visit Rate Due to Asthma per 100,000 Population

Data Source: HSCRC outpatient data.

Population: Maryland residents who had an ED visit to a Maryland Hospital.

Calculation: ED Rate for Asthma =

(Number of ED Visits with ICD 9 Primary Diagnosis of 493.xx) / Number of Maryland Residents) * 100,000

Monitoring Results

Obesity and Healthy Weight

- In 2013, nearly 14 percent of Maryland children were considered obese and only 36 percent of the adult population was at a healthy weight.

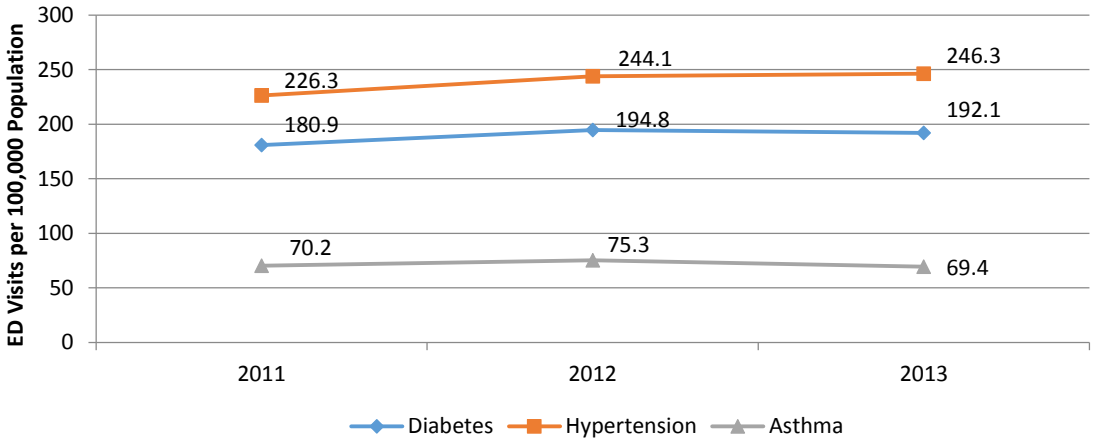
Diabetes and Cardiovascular Disease Prevention

- Data to assess performance on measures of diabetes and cardiovascular disease prevention are not available for 2014. These data will be incorporated into future Monitoring Reports as they become available.

Asthma

Despite a slight increase to 75.3 visits per 100,000 population in 2012, Maryland asthma-related ED visit rate remained relatively unchanged in 2011 and 2013, approximating 70 visits per 100,000 population in 2011 and 69 visits per 100,000 population in 2013 (Figure 11).

Figure 11: Diabetes, Hypertension, and Asthma-Related Emergency Department Visit Rate, Maryland, 2011-2013



Source: Maryland State Health Improvement Process, 2011–2013.

Goal 20 and 21: Improve Prevention for Diabetes and Cardiovascular Disease

Measures	Population	2011	2012	2013	2014
Diabetes-related ED visit rate per 100,000 population	**Maryland**	180.9	194.8	192.1	N/A
	National	N/A	N/A	N/A	N/A
Hypertension-related ED visit rate per 100,000 population	**Maryland**	226.3	244.1	246.3	N/A
	National	N/A	N/A	N/A	N/A
Percent of children considered obese[17]	**Maryland**	12.0%	N/A	11.0%	N/A
	National	13.0%	N/A	13.7%	N/A
Percent of adults at a healthy weight	**Maryland**	35.6%	36.2%	35.8%	N/A
	National	N/A	N/A	N/A	N/A
Asthma-related emergency department visit rate per 100,000 population	**Maryland**	70.2	75.3	69.4	N/A
	National	N/A	N/A	N/A	N/A

[17] Measure taken from CDC BRFSS database instead of Maryland SHIP in order to accommodate national comparison.

3.2.6 Goal 22: Promote Behavioral Health in Primary Care

The Maryland SHIP monitors mental health and substance abuse-related ED visits and encourages the development of local Health Improvement Coalitions to address these issues.

Measurement Methodology

Measures:

a. Emergency Department Visit Rate Due to Mental Health per 100,000 population
b. Emergency Department Visit Rate Due to Substance Abuse per 100,000 population

Data Source: HSCRC outpatient data.

Population: Maryland residents who had an ED visit to a Maryland Hospital.

Calculation: ED Rate for Mental Health/Substance Abuse =

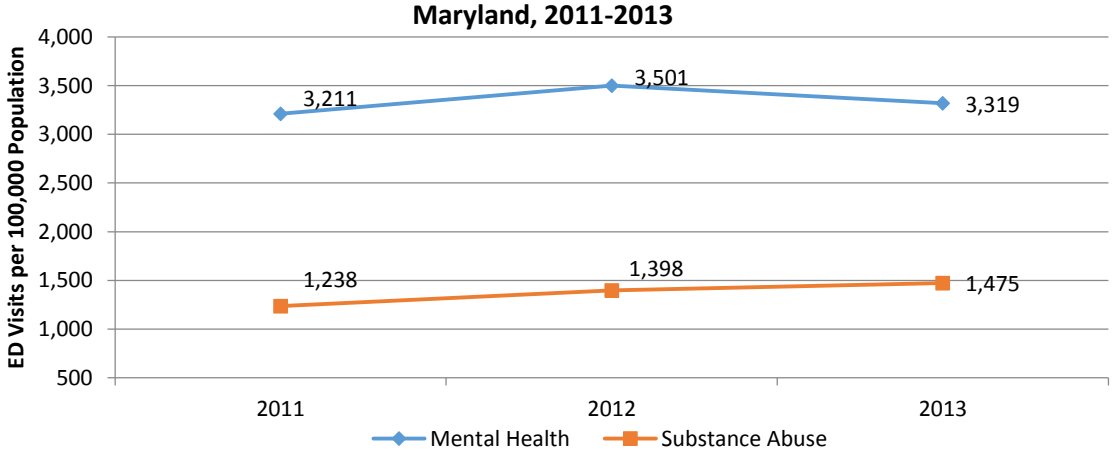
(Number of ED Visits with ICD 9 Primary Diagnosis of a Mental Health or Substance Abuse Issue as Defined by the Healthcare Cost and Utilization Project) / Number of Maryland Residents) * 100,000

Additional information about Maryland's SHIP can be found here: http://dhmh.maryland.gov/ship/SitePages/Home.aspx.

Monitoring Results

- Substance abuse-related ED visits in Maryland increased by 19.1 percent between 2011 and 2013 from over 1,237 per 100,000 population to nearly 1,475 per 100,000 population.
- The rate of mental health-related ED visits increased from 3,211 per 100,000 population to 3,319 per 100,000 population between 2011 and 2013, an increase of 3.3 percent (Figure 12).

Figure 12: Mental Health and Substance Abuse-Related ED Visit Rate, Maryland, 2011-2013



Source: Maryland State Health Improvement Process, 2011–2013.

Goal 22: Promote Behavioral Health Integration in Primary Care

Measures	Population	2011	2012	2013	2014
Mental health-related emergency department visit rate per 100,000 population	**Maryland**	3211.2	3500.6	3318.5	N/A
	National	N/A	N/A	N/A	N/A
Substance abuse-related emergency department visit rate per 100,000 population	**Maryland**	1237.5	1398.2	1474.6	N/A
	National	N/A	N/A	N/A	N/A

3.2.7 Goal 23: Promote Health through Safe Physical Environments

Accidents were the fifth leading cause of death in Maryland in 2012, with motor vehicle accidents and falls accounting for about a third of all accidental deaths. However, fall-related deaths in the state have increased over the last decade by 70 percent, while motor vehicle accidents have decreased by 26 percent. The Maryland Patient Safety Center, supported in part financially and through data sharing by HSCRC, is currently conducting the Safe from Falls Learning Network, targeted at reducing falls and falls with injuries in hospitals and in long-term care settings.

Measurement Methodology

Calculation: Fall-related death rate = (Count of fall related deaths / Count of Maryland Residents) * 100,000

The Maryland Vital Statistics Annual report contains the number of fall-related deaths. The 2012 Maryland Vital Statistics Annual report can be found here: http://dhmh.maryland.gov/vsa/Documents/12annual.pdf.

Monitoring Results

- The rate of fall-related deaths in the state of Maryland approximated that of the U.S. in 2011 and 2012. In 2011 the rate of fall-related deaths was 8.8 per 100,000 population for both Maryland and the U.S. The rate of fall-related deaths was 9.1 per 100,000 population in Maryland and 9.2 per 100,000 population in the U.S. in 2012.
- The Maryland fall-related death rate in 2013 was estimated at 9 per 100,000 population. Comparable data for the U.S. was not available for inclusion in the Monitoring Report. Data will be incorporated into future report as data become available.

Goal 23: Promote Health Through Safe Physical Environments

Measures	Population	2011	2012	2013	2014
Fall-related death rate per 100,000 population[18]	**Maryland**	8.8	9.1	9.0	N/A
	National	8.8	9.2	N/A	N/A

[18] Calculated using data from Maryland and National Vital Statistics Reports and Population estimates from the United States Census.

3.3 Costs and Efficiency

Maryland believes that an all-payer model accountable for the total cost of care can control the growth in health care expenditures at a reasonable level and has the potential for shared savings beneath a hard expenditure ceiling. The goal is to achieve meaningful savings for all payers, including to Medicare, Medicaid, and CHIP.

3.3.1 Goal 24: Reduce Overuse of Diagnostic Testing/Imaging

Advances in diagnostic imaging have allowed physicians to diagnose health problems at earlier stages and monitor therapy progress more precisely, resulting in improved patient care. Medicare Part B expenditures for diagnostic imaging has doubled between the reporting years of 2000–2006 reaching $14 billion, with much of the rapid increase in billing attributed to complex and costly procedures of CT scans, MRIs, and nuclear medicine. Although there are benefits to appropriate utilization of these procedures, they do come at a health risk that includes increased exposure to radiation and contrast materials that can have adverse effects., The CMS has established imaging efficiency core measures, these include: (1) MRI lumbar spine for lower back pain, (2) mammography follow-up rates, (3) abdomen CT with contrast, (4) thorax with contrast, (5) cardiac imaging for preoperative risk assessment for non-cardiac low risk surgery, and (6) simultaneous use of brain CT and sinus CT.

Additional information on these measures is available at:
http://www.medicare.gov/HospitalCompare/data/Measures-Displayed.html#UMI.

Monitoring Results

- Measures are currently not available and will be included in future monitoring reports as they become available.

3.3.2 Goal 25: Control Expenditure Growth – Hospitals

Controlling hospital expenditure growth is one of the primary metrics on which the Maryland All-Payer Model is to be assessed. Data on hospital expenditure growth is available across all payers, as well as for Medicare FFS (including dual-eligibles), Medicaid (including dual-eligible), dual-eligibles separately, and for those with private insurance only. The data for each category captures in-State spending on Maryland residents.

Measurement Methodology

All-Payer Maryland Hospital Per Capita Total Charges for MD Residents: Charges are from the HSCRC Financial Data; Population estimates are from the MD Department of Planning

Medicare Maryland Hospital Per Capita Total Charges for MD Residents: Charges are from HSCRC inpatient and outpatient claims abstract data and Medicare Population Estimates from CMMI (average of Part A and B Benes).

Medicaid Maryland Hospital Per Capita Total Charges for MD Residents: Charges are from the HSCRC Inpatient and Outpatient claims abstract data; Population estimates for the Dual-eligibles are from UMBC Hilltop website (http://www.chpdm-ehealth.org/index.htm)

Private Payer Maryland Hospital Per Capita Total Charges for MD Residents: Data source: Charges are from the HSCRC Inpatient and Outpatient claims abstract data; Population estimates are from the 2011-2013 American Community Survey 1-year estimates of Maryland residents by insurance status. The privately-insured population is defined as the total civilian non-institutionalized population less the estimated number with public insurance or uninsured.

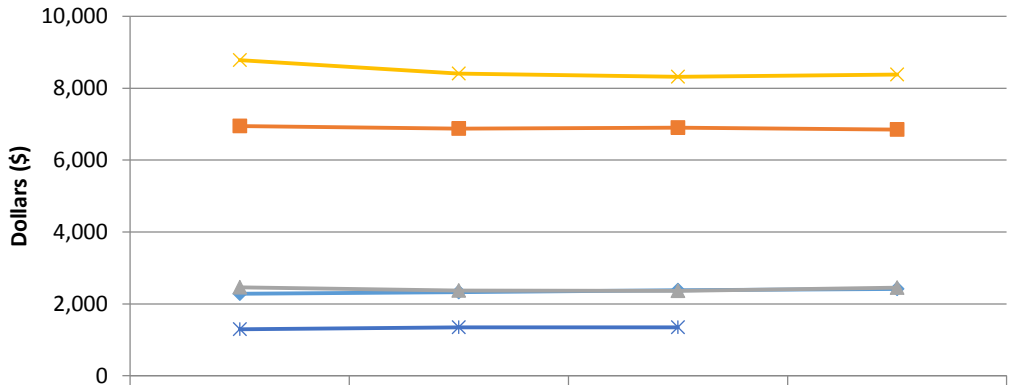
Medicare/Medicaid Dual Eligibles Maryland Hospital Per Capita Total Charges for MD Residents: Data source: Charges are from the HSCRC Inpatient and Outpatient claims abstract data; Population estimates are from UMBC Hilltop website (http://www.chpdm-ehealth.org/index.htm).

Monitoring Results

- Estimated all-payer hospital total charges approximated $2,279 per capita in 2011, $2,331 in 2012, $2,379 in 2013 and $2,414 in 2014. (Figure 13) The rate of growth of all-payer hospital expenditure per capita was 2.27 percent in 2012, 2.06 percent in 2013, and 1.47 percent in 2014, the first performance year of the All Payer Model agreement. The 2014 growth is well below the agreement's per capita hospital growth ceiling of 3.58 percent. (Figure 13.1)
- Medicare FFS hospital expenditures per capita dropped by -0.76 percent in 2014. Growth rates for 2013 and 2012 were 0.41 percent and -1.0 percent respectively. **CMMI generated data shows Maryland beating the national growth rate in 2014 by about two percentage points generating savings of $116 million for Medicare.**
- Medicaid per beneficiary hospital expenditures declined 3.77 percent in 2012 and then declined by 0.40 percent again in 2013 before rising by 4.00% percent in 2014. The higher 2014 growth rate reflects the impact of Maryland's January 2014 Medicaid expansion which enrolled more than 200,000 adults during the year - many with significant health care needs.

Per capita hospital expenditure growth for the privately-insured is only available for 2012 and 2013. In 2012, expenditures per capita increased 4.60 percent, but in 2013 growth was -0.17 percent

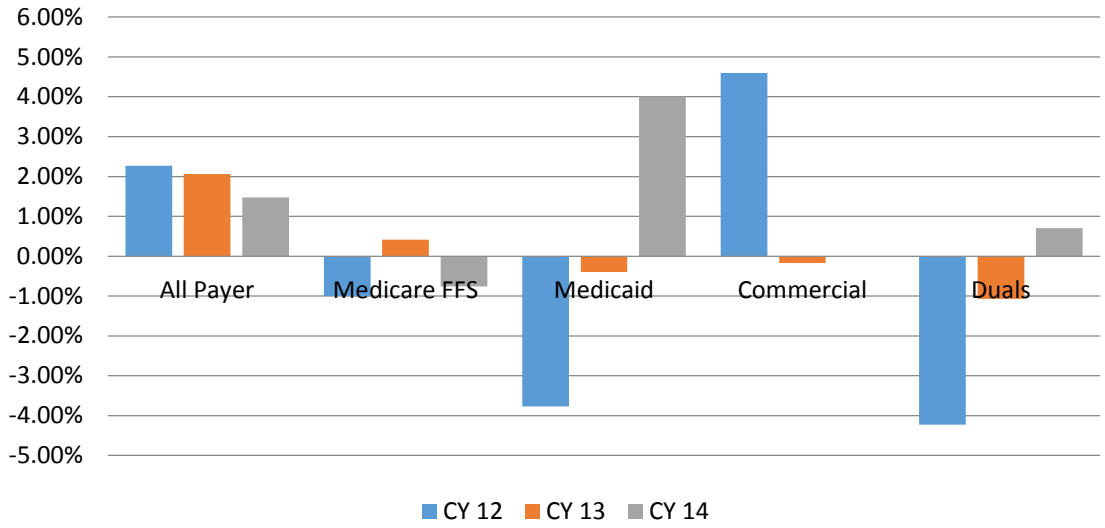
Figure 13: Estimated Hospital per Capita Total Charges, by Payer, Maryland 2011-2013



	2011	2012	2013	2014
All Payer	2,279	2,331	2,379	2,414
Medicare	6,945	6,875	6,904	6,852
Medicaid	2,463	2,370	2,361	2,455
Dual Eligibles	8,779	8,408	8,318	8,376
Private	1,291	1,351	1,348	

Notes: Charges associated with self-pay and Medicare Advantage are not included in any of the categories except "All Payer". Charges for dual-eligibles are reported separately; however, Medicare and Medicaid estimates also include charges for the dual-eligible population. Private insurance data are not available for 2014.
Source: Hospital Expenditures: HSCRC Inpatient and Outpatient Abstract, except All-Payer Expenditure from 2013-2014 comes from the HSCRC Financial Database. Population Estimates: All-Payer (MD Dept of Planning), Medicare (CMMI), Medicaid and Dual Eligible (UMBC Hilltop Institute), Private-insured (calculated by Social & Scientific Systems, Inc. using American Community Survey data – U.S. Census Bureau)

Figure 13.1 Trends in Per Capita Hospital Charges by Payer
Maryland 2012-2014



Notes: Charges associated with self-pay and Medicare Advantage are not included in any of the categories except "All Payer". Charges for dual-eligibles are reported separately; however, Medicare and Medicaid estimates also include charges for the dual-eligible population. Private insurance data are not available for 2014.
Source: Hospital Expenditures: HSCRC Inpatient and Outpatient Claims Abstract, except All-Payer Expenditure from 2013-2014 comes from the HSCRC Financial Database. Population Estimates: All-Payer (MD Dept of Planning), Medicare (CMMI), Medicaid and Dual Eligible (UMBC Hilltop Institute), Private-insured (calculated by Social & Scientific Systems, Inc. using American Community Survey data – U.S. Census Bureau)

Goal 25: Control Expenditure Growth - Hospitals

Measures		2011	2012	2013	2014
All-payer Maryland Hospital per capita total charges for MD residents	**Expenditure**	$2,279	$2,331	$2,379	$2,414
	Growth	N/A	2.27%	2.06%	1.47%
Medicare Maryland hospital per capita total charges for MD residents	**Expenditure**	$6,945	$6,875	$6,904	$6,852
	Growth	N/A	-1.00%	0.41%	-0.76%
Medicaid Maryland hospital per capita total charges for MD residents	**Expenditure**	$2,463	$2,370	$2,361	$2,455
	Growth	N/A	-3.77%	-0.4%	4.00%
Private payer Maryland hospital per capita total charges for MD residents	**Expenditure**	$1,291	$1,351	$1,348	N/A
	Growth	N/A	4.60%	-0.17%	N/A
Medicare/Medicaid dual eligible Maryland hospital per capita total charges for MD residents	**Expenditure**	$8,779	$8,408	$8,318	$8,376
	Growth	N/A	-4.23%	-1.07%	0.70%

3.3.3 Goal 26: Control Expenditure Growth – All Health Services

Total health expenditure growth is used to monitor potential shifting of costs between categories of health services under this waiver agreement.

Measurement Methodology

Data source: Medicare Total Cost of Care was obtained from CMMI reports using all Part A and Part B services expenditures; Medicare population estimates are from CMMI reports (average of Part A and B Beneficiaries over the calendar year).

Data (2011-2014) for the following measures are presently not available:

- All Payer per Capita Health Expenditure Growth
- Medicaid/CHIP per Capita Health Expenditure Growth
- Dual Eligible per Capita Health Expenditure Growth

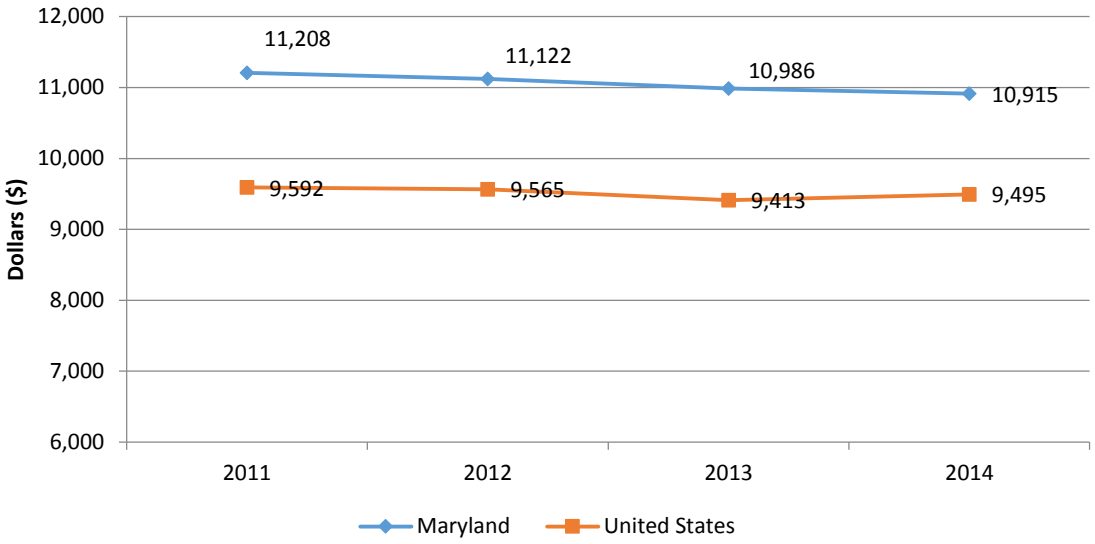
Data for these measures will be incorporated into future monitoring reports as data become available.

Monitoring Results

- In 2014, the first performance year of the All Payer Model agreement, Medicare expenditure per capita declined in Maryland, from $10,986 in 2013 to $10,915 in 2014, a growth rate of -0.64 percent. During the same period national growth was 0.88 percent per capita, increasing from $9.413 in 2013 to $9,295 in 2014. (Figure 14.). Medicare total expenditure per capita growth in Maryland prior to the agreement was negative with -0.77 percent in 2012 and -1.22 percent in 2013 (Figure 14.1).

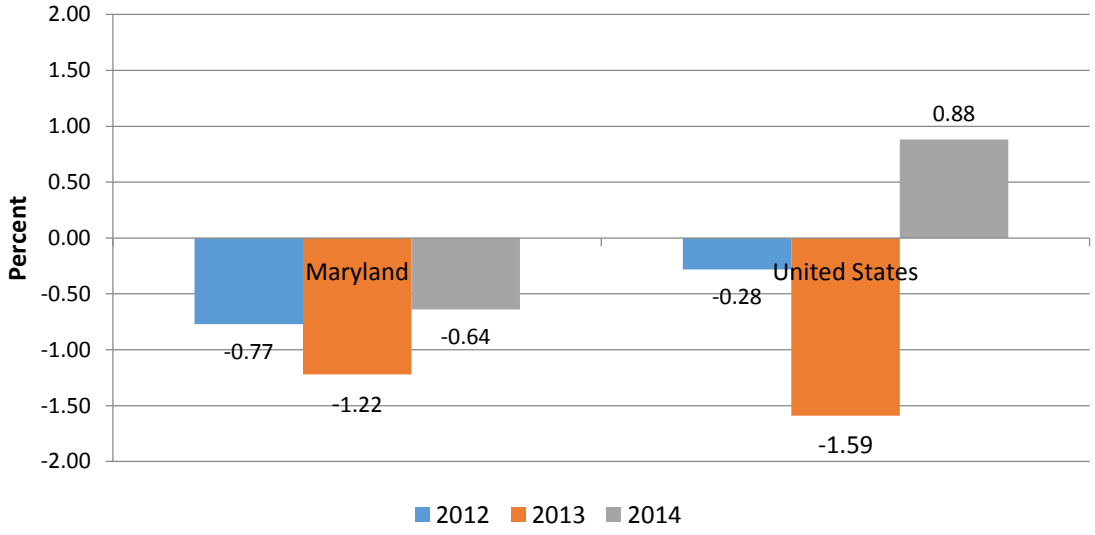
Over the two years prior to the agreement (2012 and 2013), Maryland and National Medicare costs growth per capita were similar, but during the first performance year Maryland's growth rate has been 1.52 percentage points *below* the national rate. By holding Maryland's Medicare per beneficiary expenditure growth rate below the national rate, Maryland saved Medicare $133 million in 2014.

Figure 14: Estimated Total per Capita Health Expenditures, Maryland and United States, 2011-2013



Source: CMMI Financial Reports: Total Cost of Care, V15 methodology, (2011-2014). May 5, 2015

Figure 14.1: Growth in Total Cost of Care, Medicare, Maryland and United States, 2012-2014



Source: CMMI Financial Reports: Total Cost of Care, V15 methodology, (2011-2014). May 5, 2015

Goal 26: Control Expenditure Growth - All Services

Measures	Population	2011	2012	2013	2014
All-payer per capita total expenditure	**Maryland**	N/A	N/A	N/A	N/A
	National	N/A	N/A	N/A	N/A
Medicare per capita total expenditure	**Maryland**	$11,208	$11122	$10,987	$10,916
	National	$9,593	$9565	$9,413	$9,496
	Maryland % growth	N/A	-0.77%	-1.22%	-0.64%
	National % growth	N/A	-0.28%	-1.59%	0.88%
Medicaid per capita total expenditure	**Maryland**	N/A	N/A	N/A	N/A
	National	N/A	N/A	N/A	N/A
Private payer per capita total expenditure[19]	**Per capita**	$3,020	$3,174	$3,616[2021]	N/A
	% growth	5%	3.8%	2.1%[16]	N/A
Medicare/Medicaid dual eligibles per capita total expenditure	**Maryland**	N/A	N/A	N/A	N/A
	National	N/A	N/A	N/A	N/A

[19] All Service Expenditure for private payer is based on the fully-insured employer population (excludes self-insured plan enrollees), the small-employer CSHBP enrollees, individual market, Maryland Health Insurance Plan. The expenditure includes prescription drugs and out-of-pocket spending excluded from Medicare expenditure growth calculations.

[20] Data for 2013 includes both full-year and part-year enrollees, whereas data from 2011 and 2012 include only full-year enrollees.

[21] Cost data used in calculations were drawn from MHCC annual reports that utilized the APCD.

Table 2: Summary Results for All Goals and Measures[22]

	Population	2011	2012	2013	2014
Goal 1: Increase Patient Satisfaction with Hospital					
Patient's rating of hospital: Percentage of survey respondents reporting a 9 or 10 (10 being best)	**Maryland**	64%	65%	64%	N/A
	National	69%	70%	71%	N/A
Communication with doctors: Percentage of survey respondents reporting "always" on three questions (composite measure)	**Maryland**	78%	78%	77%	N/A
	National	81%	81%	82%	N/A
Communication with nurses: Percentage of survey respondents reporting "always" on six questions (composite measure)	**Maryland**	74%	75%	75%	N/A
	National	78%	78%	79%	N/A
Goal 2: Increase Patient Satisfaction with Home Health					
Patient's rating of home health agency: percentage of survey respondents reporting a 9 or 10 (10 being the best)	**Maryland**	83%	83%	82%	N/A
	National	84%	84%	84%	N/A
Communication with home health team: percentage of survey respondents reporting "always" on six questions	**Maryland**	86%	86%	85%	N/A
	National	85%	85%	85%	N/A
Goal 3: Increase Patient Satisfaction with Nursing Homes					
Patient's rating of nursing home: average rating of 0-10 (10 being best)	**Maryland**	N/A	8.3	8.0	N/A
	National	N/A	N/A	N/A	N/A
Goal 4: Increase Patient Satisfaction with Ambulatory Care					
Patient's rating of provider: percent with top box scores	**Maryland (South)[23]**	79%	82%	82%	N/A
	North-East[24]	77%	80%	81%	N/A
	Midwest [25]	79%	80%	83%	N/A
	West [26]	76%	77%	79%	N/A
	National	78%	80%	82%	N/A

[22] Refer to Appendix B for additional information on measure specification and data source.
[23] South Region: Alabama, Arkansas, Delaware, DC, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia, West Virginia
[24] North East Region: Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Puerto Rico, Rhode Island, Vermont
[25] Midwest Region: Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, South Dakota, Wisconsin
[26] West Region: Alaska, Arizona, California, Colorado, Guam, Hawaii, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, Wyoming

	Population	2011	2012	2013	2014
Goal 5: Enhance Care Transitions- Hospital					
Three item care transition measure	**Maryland**	N/A	N/A	N/A	N/A
	National	N/A	N/A	N/A	N/A
Goal 6: Enhance Care Transitions - Short Stay Nursing Homes					
Short stay nursing resident's discharge needs met[27]	**Maryland**	N/A	N/A	N/A	N/A
	National	N/A	N/A	N/A	N/A
Percent reporting "Yes" that nursing home talked with resident about help needed after discharge	**Maryland**	N/A	85%	86%	N/A
	National	N/A	N/A	N/A	N/A
Percent reporting "Yes" that nursing home provided written info on symptoms/health problems to look for	**Maryland**	N/A	70%	73%	N/A
	National	N/A	N/A	N/A	N/A
Percent reporting "Yes" that nursing home told them what medications were for	**Maryland**	N/A	80%	82%	N/A
	National	N/A	N/A	N/A	N/A
Percent reporting "Yes" that they clearly understood purposes for each medication	**Maryland**	N/A	84%	87%	N/A
	National	N/A	N/A	N/A	N/A
Goal 7: Enhance Care transitions - Coordination with Primary Care					
Rate of physician follow up after discharge in Maryland	**All diagnoses**	N/A	N/A	N/A	32.3%
	COPD	N/A	N/A	N/A	29.8%
	Ischemic heart disease	N/A	N/A	N/A	31.0%
	Pneumonia	N/A	N/A	N/A	33.9%
	Heart failure	N/A	N/A	N/A	33.9%
Discharges with principal provider notified in Maryland	**Any Notification**	N/A	N/A	10.22%	39.56%
	Discharge Notification	N/A	N/A	9.68%	37.43%
Goal 8: Sustain High Physician Participation in Public Programs					
Medicare participating physicians per 1,000 Medicare Enrollees	**Maryland**	N/A	N/A	N/A	21.57
	National	N/A	N/A	N/A	N/A
Medicaid participating physicians per Medicaid Enrollee[28]	**Maryland**	N/A	N/A	N/A	29.1

[27] Measure removed from 2013 survey

[28] 2014 data are preliminary and include the period from 6/2013-7/2014

	Population		2011	2012	2013	2014
	National		N/A	N/A	N/A	N/A
Goal 9: Broaden Engagement in Innovative Models of Care						
Participation of Maryland clinicians in NCQA accredited patient centered medical homes	**By Clinician**	**Level 1**	N/A	73	0	52
		Level 2	N/A	82	125	148
		Level 3	N/A	243	268	564
		Total	**N/A**	**398**	**393**	**764**
	By Practice	**Level 1**	N/A	19	0	7
		Level 2	N/A	18	28	26
		Level 3	N/A	45	45	95
		Total	**N/A**	**82**	**73**	**128**
Participation of providers in accountable care organizations	**Maryland ACOs**		N/A	N/A	N/A	21
	Maryland Providers		N/A	N/A	N/A	482
	National ACOs		N/A	N/A	N/A	406
	National Providers		N/A	N/A	N/A	15,782
Participation of providers in ARMs	**Maryland**		31.0	38.0	32.0	36.0
	National		N/A	N/A	N/A	N/A
Goal 10: Improve Process of Care - Inpatient[29]						
Heart attack care-aspirin at arrival*[30]	**Maryland**		99%	99%	96%	N/A
	National		99%	97%	97%	N/A
Heart attack care-aspirin prescribed at discharge*	**Maryland**		99%	99%	99%	N/A
	National		99%	99%	99%	N/A
Heart attack care-primary PCI received within 90 minutes of hospital arrival*	**Maryland**		91%	91%	94%	N/A
	National		94%	95%	96%	N/A

Goal 10: Improve Process of Care - Inpatient					
Heart attack care- statin prescribed at discharge*	**Maryland**	97%	98%	99%	N/A
	National	97%	98%	98%	N/A

[29] 2013 data are not a full calendar year and include the period of 4/1/2013-3/31/2014

[30] Measures marked with an Asterisk (*) have been retired or are no longer available.

	Population	2011	2012	2013	2014
Heart failure care-discharge instructions*	**Maryland**	91%	94%	92%	N/A
	National	92%	94%	95%	N/A
Heart failure care-LVF assessment*	**Maryland**	99%	99%	99%	N/A
	National	99%	99%	99%	N/A
Heart failure care-ACE inhibitor or ARB for LVSD at discharge*	**Maryland**	N/A	97%	97%	N/A
	National	96%	97%	97%	N/A
Pneumonia Care - Initial antibiotic selection for CAP in immunocompetent - patient (both ICU and non-ICU)*	**Maryland**	96%	96%	97%	N/A
	National	95%	95%	96%	N/A
Pneumonia Care - Blood cultures for pneumonia patients admitted through Emergency Department*	**Maryland**	95%	97%	N/A	N/A
	National	97%	97%	N/A	N/A
Surgical Care Improvement (SCIP) - Cardiac surgery patients taking a beta-blocker before hospital admission who received a beta-blocker in the time frame of 24 hours before surgery through the time they were in the recovery room.*	**Maryland**	95%	97%	98%	N/A
	National	96%	97%	98%	N/A
Surgical care improvement (SCIP)- infection prevention-urinary catheter removed*	**Maryland**	94%	96%	98%	N/A
	National	94%	96%	98%	N/A
Surgical care improvement (SCIP)- infection prevention- SCIP Inf-1-Patients having a surgery who received medicine to prevent infection (an antibiotic) within one hour before the skin was surgically cut.*	**Maryland**	97%	98%	96%	N/A
	National	98%	99%	99%	N/A
Surgical care improvement (SCIP)-infection prevention- SCIP Inf-2-Patients having a surgery who received appropriate medicine (antibiotic) which is shown to be effective for the type of surgery performed.*	**Maryland**	98%	98%	99%	N/A
	National	98%	99%	99%	N/A
Surgical care improvement (SCIP)-infection prevention- SCIP Inf-3-Patients having a surgery who received appropriate medicine (antibiotic) that prevents infection and the antibiotic was stopped within 24 hours after the surgery ended.*	**Maryland**	97%	98%	98%	N/A
	National	97%	98%	98%	N/A
Goal 10: Improve Process of Care – Inpatient					
Surgical care improvement (SCIP)-venous thromboembolism (VTE)- Patients having surgery who received the appropriate treatment to prevent blood clots	**Maryland**	97%	99%	98%	N/A

	Population	2011	2012	2013	2014
which is shown to be effective for the type of surgery performed. Note: treatment may be medication, stockings, or mechanical devices for excursing the legs.*	National	98%	98%	99%	N/A
Children's Asthma Care (CAC)- home management plan of care (HMPC) document given to patient/caregiver*	Maryland	N/A	N/A	97%	N/A
	National	84%	87%	90%	N/A
Children's Asthma Care (CAC)- use of relievers for inpatient asthma overall rate, age 2-17*	Maryland	N/A	N/A	100%	N/A
	National	100%	100%	100%	N/A
Children's Asthma Care (CAC)- use of systemic corticosteroids for inpatient asthma overall rate, age 2-17*	Maryland	N/A	N/A	100%	N/A
	National	100%	100%	100%	N/A
Blood Clot Prevention- patients who got treatment to prevent blood clots on the day or day after hospital admission or surgery [VTE-1]	Maryland	N/A	N/A	93%	N/A
	National	N/A	N/A	88%	N/A
Blood Clot Prevention- patients who got treatment to prevent blood clots on the day or day after being admitted to the intensive care unit (ICU). [VTE-2]	Maryland	N/A	N/A	95%	N/A
	National	N/A	N/A	94%	N/A
Blood Clot Prevention- patients who developed a blood clot while in the hospital who did not get treatment that could have prevented it. [VTE-6]	Maryland	N/A	N/A	5%	N/A
	National	N/A	N/A	8%	N/A
Blood Clot Treatment- patients with blood clots who got the recommended treatment, which included using two different blood thinner medicines at the same time. [VTE-3]	Maryland	N/A	N/A	96%	N/A
	National	N/A	N/A	94%	N/A
Blood Clot Treatment- patients with blood clots who were treated with an intravenous blood thinner, and then were checked to determine if the blood thinner was putting them patient at an increased risk of clotting. [VTE-4]*	Maryland	N/A	N/A	99%	N/A
	National	N/A	N/A	98%	N/A
Blood Clot Treatment- patients with blood clots who were discharged on a blood thinner medicine and received written instructions about that medicine. [VTE-5]	Maryland	N/A	N/A	89%	N/A
	National	N/A	N/A	82%	N/A
Goal 11: Improve Process of Care - Outpatient[31]					
	Maryland	N/A	N/A	N/A	N/A
	National	N/A	N/A	N/A	N/A
Goal 12: Reduce High Priority Hospital Complications					
Potentially preventable complications rate per 1,000 discharges (all 65 PPCs)	Maryland	N/A	N/A	1.26	0.93
	National	N/A	N/A	N/A	N/A

[31] The data for goal 11 is not currently available. 2014 data is to be posted to hospital compare in the next year.

	Population	2011	2012	2013	2014
Central-line Acquired Bloodstream Infections (CLABSI) standardized infection ratio[32], (1= National Average)	**Maryland**	0.8	0.5	0.3	N/A
	National	1.0	1.0	1.0	N/A
Goal 13: Reduce Readmissions - Home Health					
Admission rate from home health agencies to acute inpatient hospital	**Maryland**	N/A	17%	17%	17%
	National	N/A	17%	16%	16%
Unplanned urgent visits to the ED for patients receiving home health	**Maryland**	N/A	11%	11%	11%
	National	N/A	12%	12%	12%
Goal 14: Reduce Readmissions - Nursing Homes					
Readmission rates for inpatient discharges to nursing homes	**Maryland**	N/A	22.9%	21.2%	20.6%
	National	N/A	N/A	N/A	N/A
Goal 15: Reduce Readmissions - Hospitals					
30-day all hospital, all cause readmission	**Maryland**	N/A	14.20%	13.9%	13.4%
	National	N/A	N/A	N/A	N/A
Readmissions per 1000 MD residents	**Maryland**	N/A	14.22%	13.86%	13.43%
	National	N/A	N/A	N/A	N/A
Heart failure readmission rate	**Maryland**	N/A	25.23%	23.80%	23.31%
	National	N/A	N/A	N/A	N/A
Pneumonia readmission rate	**Maryland**	N/A	16.45%	15.53%	15.25%
	National	N/A	N/A	N/A	N/A
Acute myocardial infarction readmission rate	**Maryland**	N/A	14.23%	13.83%	13.53%
	National	N/A	N/A	N/A	N/A
Chronic obstructive pulmonary disease readmission rate	**Maryland**	N/A	22.73%	21.96%	21.24%
	National	N/A	N/A	N/A	N/A
Hip/total knee arthroplasty readmission rate	**Maryland**	N/A	4.59%	4.11%	3.59%
	National	N/A	N/A	N/A	N/A
Goal 16: Improve Life Expectancy					
Average life expectancy at birth	**Maryland**	79.5	79.7	79.7	N/A

[32] Refer to Appendix B for list of Maryland hospitals not included in CLABSI standardized infection ratio

	Population	2011	2012	2013	2014
(in years)	**White (MD)**	80.3	80.4	80.3	N/A
	Black (MD)	77.1	77.3	77.4	N/A
	National	78.7	78.8	78.8	N/A
	White (National)	79.0	79.1	79.1	N/A
	Black (National)	75.3	75.5	75.5	N/A
Goal 17: Reduce the rate of hospitalization for ambulatory care sensitive conditions					
Adjusted preventive quality indicator (PQI) acute composite rate per 100,000 population, age 18 and over	**Maryland**	N/A	498.2	596.2	596.4
	National	N/A	N/A	N/A	N/A
Adjusted preventive quality indicator chronic composite rate per 100,000 population, age 18 and over	**Maryland**	N/A	996.8	939.3	940.0
	National	N/A	N/A	N/A	N/A
Adjusted preventive quality indicator overall composite rate per 100,000 population, age 18 and over	**Maryland**	N/A	1495.6	1536.3	1538.5
	National	N/A	N/A	N/A	N/A
Goal 18: Improve Cancer Control					
Percent of adults who are current smokers	**Maryland**	19.1%	16.2%	16.4%	N/A
	National	21.1%	19.6%	N/A[33]	N/A
Percent of Youth Using any Kind of Tobacco Product	**Maryland**	N/A	N/A	16.9%	N/A
	National	N/A	N/A	N/A	N/A
Goal 19: Improve Primary Prevention of Infectious Disease					
Annual seasonal influenza vaccination rate	**Maryland**	41.0%	41.4%	44.6%	N/A
	National	N/A	N/A	N/A	N/A
Percent of children with recommended vaccinations	**Maryland**	73.8%	67.1%	75.8%	N/A
	National	68.5%	68.4%	70.4%	N/A
New HIV infection rate among adults and adolescents rate per 100,000 population	**Maryland**	26.9%	28.7%	28.1%	N/A
	National	N/A	N/A	N/A	N/A
Goal 20: Improve Prevention for Diabetes and Cardiovascular Disease					
Diabetes-related ED visit rate per 100,000 population	**Maryland**	180.9	194.8	192.1	N/A
	National	N/A	N/A	N/A	N/A

[33] National data for 2013 not currently available

	Population	2011	2012	2013	2014
Hypertension-related ED visit rate per 100,000 population	**Maryland**	226.3	244.1	246.3	N/A
	National	N/A	N/A	N/A	N/A
Percent of children considered obese[34]	**Maryland**	12.0%	N/A	11.0%	N/A
	National	13.0%	N/A	13.7%	N/A
Percent of adults at a healthy weight	**Maryland**	35.6%	36.2%	35.8%	N/A
	National	N/A	N/A	N/A	N/A
Goal 21: Improve Prevention for Asthma					
Asthma-related emergency department visit rate per 100,000 population	**Maryland**	70.2	75.3	69.4	N/A
	National	N/A	N/A	N/A	N/A
Goal 22: Promote Behavioral Health Integration in Primary Care					
Mental health-related emergency department visit rate per 100,000 population	**Maryland**	3211.2	3500.6	3318.5	N/A
	National	N/A	N/A	N/A	N/A
Substance abuse-related emergency department visit rate per 100,000 population	**Maryland**	1237.5	1398.2	1474.6	N/A
	National	N/A	N/A	N/A	N/A
Goal 23: Promote Health Through Safe Physical Environments					
Fall-related death rate per 100,000 population[35]	**Maryland**	8.8	9.1	9.0	N/A
	National	8.8	9.2	N/A	N/A
Goal 24: Reduce Overuse of Diagnostic Testing-Imaging[36]					
OP-8: MRI lumbar spine for lower back pain	**Maryland**	N/A	N/A	N/A	N/A
	National	N/A	N/A	N/A	N/A
OP-9: Mammography follow-up rates	**Maryland**	N/A	N/A	N/A	N/A
	National	N/A	N/A	N/A	N/A
OP-10: Abdomen CT Use of Contrast Material	**Maryland**	N/A	N/A	N/A	N/A
	National	N/A	N/A	N/A	N/A
OP-11: Thorax use of contrast materials	**Maryland**	N/A	N/A	N/A	N/A
	National	N/A	N/A	N/A	N/A

[34] Measure taken from CDC BRFSS database instead of MD SHIP in order to accommodate national comparison
[35] Calculated using data from Maryland and National Vital Statistics Reports and Population estimates from the United States Census
[36] 2013 data are not a full calendar year and include the period of 7/1/2012-6/30/2013

	Population	2011	2012	2013	2014
OP-13: Cardiac imaging for preoperative risk assessment for non-cardiac low risk surgery	**Maryland**	N/A	N/A	N/A	N/A
	National	N/A	N/A	N/A	N/A
OP-14: Simultaneous use of brain computed tomography and sinus computed tomography	**Maryland**	N/A	N/A	N/A	N/A
	National	N/A	N/A	N/A	N/A
Goal 25: Control Expenditure Growth - Hospitals					
All-payer Maryland Hospital per capita total charges for MD residents	**Expenditure**	$2,279	$2,331	$2,379	$2,414
	Growth	N/A	2.27%	2.06%	1.47%
Medicare Maryland hospital per capita total charges for MD residents	**Expenditure**	$6,945	$6,875	$6,904	$6,852
	Growth	N/A	-1.00%	0.41%	-0.76%
Medicaid Maryland hospital per capita total charges for MD residents	**Expenditure**	$2,463	$2,370	$2,361	$2,455
	Growth	N/A	-3.77%	-0.4%	4.00%
Private payer Maryland hospital per capita total charges for MD residents	**Expenditure**	$1,291	$1,351	$1,348	N/A
	Growth	N/A	4.60%	-0.17%	N/A
Medicare/Medicaid dual eligible Maryland hospital per capita total charges for MD residents	**Expenditure**	$8,779	$8,408	$8,318	$8,376
	Growth	N/A	-4.23%	-1.07%	0.70%
Goal 26: Control Expenditure Growth - All Services					
All-payer per capita total expenditure	**Maryland**	N/A	N/A	N/A	N/A
	National	N/A	N/A	N/A	N/A
Medicare per capita total expenditure	**Maryland**	$11,208	$11122	$10,987	$10,916
	National	$9,593	$9565	$9,413	$9,496
	Maryland % growth	N/A	-0.77%	-1.22%	-0.64%
	National % growth	N/A	-0.28%	-1.59%	0.88%
Medicaid per capita total expenditure	**Maryland**	N/A	N/A	N/A	N/A
	National	N/A	N/A	N/A	N/A
Private payer per capita total expenditure	**Maryland**	$3,020	$3,174	$3,616	N/A
	% growth	5%	3.8%	2.1%	N/A
Medicare/Medicaid dual eligibles per capita total expenditure	**Maryland**	N/A	N/A	N/A	N/A
	National	N/A	N/A	N/A	N/A

Appendix A: CLABSI Reporting

2013 Hospitals not reporting CLABSI Measure

Hospital ID	Hospital Name	Reason for Exclusion
210060	Fort Washington Hospital	Results cannot be calculated for this reporting period
210045	Edward McCready Memorial Hospital	This measure does not apply to this hospital for this reporting period
210043	UMD Balto Washington Medical Center	Results are not available for this reporting period
210039	Calvert Memorial Hospital	Results cannot be calculated for this reporting period
210032	Union Hospital of Cecil County	Results are based on a shorter time period than required, 8 – The lower limit of confidence interval cannot be calculated if the number of observed infections equals zero
210063	UMD St. Joseph medical Center	Results are not available for this reporting period
210013	Bon Secours Hospital	The lower limit of confidence interval cannot be calculated if the number of observed infections equals zero
210006	UM Harford Memorial Hospital	Results cannot be calculated for this reporting period
210037	UMD Shore Medical Center at Easton	Results are not available for this reporting period
210017	Garrett County Memorial Hospital	Results cannot be calculated for this reporting period
210028	Medstar Saint Mary's Hospital	The lower limit of confidence interval cannot be calculated if the number of observed infections equals zero
210023	Anne Arundel Medical Center	Results are not available for this reporting period
210030	UMD Shore Medical Center at Chestertown	Results cannot be calculated for this reporting period
210049	UMD Upper Chesapeake Medical Center	The lower limit of confidence interval cannot be calculated if the number of observed infections equals zero
210018	Medstar Montgomery Medical Center	The lower limit of confidence interval cannot be calculated if the number of observed infections equals zero
210027	Western Maryland Regional Medical Center	The lower limit of confidence interval cannot be calculated if the number of observed infections equals zero
210034	Medstar Harbor Hospital	The lower limit of confidence interval cannot be calculated if the number of observed infections equals zero
210038	UMD Medical Center Midtown Campus	The lower limit of confidence interval cannot be calculated if the number of observed infections equals zero
210062	Medstar Southern Maryland Hospital	Results are based on a shorter time period than required

2012 Hospitals not reporting CLABSI Measure

Hospital ID	Hospital Name	Reason for Exclusion
210060	Fort Washington Hospital	Results cannot be calculated for this reporting period
210045	Edward McCready Memorial Hospital	This measure does not apply to this hospital for this reporting period
210043	UMD Balto Washington Medical Center	Results are not available for this reporting period
210039	Calvert Memorial Hospital	Results cannot be calculated for this reporting period
210032	Union Hospital of Cecil County	The lower limit of confidence interval cannot be calculated if the number of observed infections equals zero
210063	UMD St. Joseph medical Center	Results are not available for this reporting period
210006	UM Harford Memorial Hospital	Results cannot be calculated for this reporting period
210037	UMD Shore Medical Center at Easton	Results are not available for this reporting period
210017	Garrett County Memorial Hospital	Results cannot be calculated for this reporting period
210028	Medstar Saint Mary's Hospital	Results cannot be calculated for this reporting period
210023	Anne Arundel Medical Center	Results are not available for this reporting period
210030	UMD Shore Medical Center at Chestertown	Results cannot be calculated for this reporting period
210034	Medstar Harbor Hospital	The lower limit of confidence interval cannot be calculated if the number of observed infections equals zero
210038	UMD Medical Center Midtown Campus	The lower limit of confidence interval cannot be calculated if the number of observed infections equals zero
210040	Northwest Hospital Center	The lower limit of confidence interval cannot be calculated if the number of observed infections equals zero
210051	Doctors' Community Hospital	The lower limit of confidence interval cannot be calculated if the number of observed infections equals zero
210033	Carrol Hospital Center	The lower limit of confidence interval cannot be calculated if the number of observed infections equals zero

Appendix B: Measure Sources

Goal 1: Increase Patient Satisfaction with Hospital				
Measure	**Year**	**Measurement Period**	**Data source**	**Citation**
All Measures	2011	CY2011	Hospital CAHPS	Center for Medicare & Medicaid Services. (2012). HOS Archive_20121001-1[Data file]. Retrieved from https://data.medicare.gov/data/archives/hospital-compare
	2012	CY2012		Center for Medicare & Medicaid Services. (2013). HOS Archive_20131001[Data file]. Retrieved from https://data.medicare.gov/data/archives/hospital-compare
	2013	CY2013		Center for Medicare & Medicaid Services. (2014). HOS Archive_20141218[Data file]. Retrieved from https://data.medicare.gov/data/archives/hospital-compare
	2014	N/A		Not currently available
Goal 2: Increase Patient Satisfaction with Home Health				
Measure	**Year**	**Measurement Period**	**Data source**	**Citation**
All Measures	2011	2011 Q1-Q4	Home health CAHPS	Center for Medicare & Medicaid Services. (2012). HHCArchive_20120701[Data file]. Retrieved from https://data.medicare.gov/data/data/home-hospital-compare
	2012	2012 Q1-Q4		Center for Medicare & Medicaid Services. (2013). HHCArchive_20130701[Data file]. Retrieved from https://data.medicare.gov/data/data/home-hospital-compare
	2013	2013 Q1-Q4		Center for Medicare & Medicaid Services. (2014). HHCArchive_20140717[Data file]. Retrieved from https://data.medicare.gov/data/data/home-hospital-compare
	2014	N/A		Not currently available
Goal 3: Increase Patient Satisfaction with Nursing Homes				
Measure	**Year**	**Measurement Period**	**Data source**	**Citation**
Patient's rating of nursing home: average rating of 0-10 (10 being best)	2011	N/A	Maryland Nursing Facility Short Stay Resident Survey	Survey Not Administered
	2012	2012 Report		2012 Maryland Nursing Facility Family Survey. (2012). Retrieved May 29, 2015, from http://mhcc.dhmh.maryland.gov/ltc/Documents/sp.mhcc.maryland.gov/longtermcare/2012_mhcc_family_survey_statewide_report_public_release_20121001.pdf
	2013	2013 Report		2013 Maryland Nursing Facility Family Survey. (2013). Retrieved May 29, 2015, from http://mhcc.dhmh.maryland.gov/ltc/Documents/longtermcare/2013_Maryland_Nursing_Facility_Short_Stay_Statewide_Report.pdf
	2014	N/A		Data Available Mid-July

Goal 4: Increase Patient Satisfaction with Ambulatory Care				
Measure	**Year**	**Measurement Period**	**Data source**	**Citation**
Patient's rating of provider: percent with top box scores	2011	2011 Report	Clinician and Group CAHPS	Clinician and Group CAHPS. (n.d.). Retrieved May 29, 2015, from https://cahpsdatabase.ahrq.gov/CAHPSIDB/Public/CG/CG_Topscores.aspx
	2012	2012 Report		
	2013	2013 Report		
	2014	N/A		
Goal 5: Enhance Care Transitions- Hospitals				
Measure	**Year**	**Measurement Period**	**Data source**	**Citation**
Patient's rating of provider: percent with top box scores	2011	N/A	Hospital CAHPS	Currently unavailable. Hospitals began reporting in January
	2012	N/A		
	2013	N/A		
	2014	N/A		
Goal 6: Enhance Care Transitions - Short Stay Nursing Homes				
Measure	**Year**	**Measurement Period**	**Data source**	**Citation**
All Measures	2011	N/A	Hospital CAHPS	2013 Maryland Nursing Facility Family Survey. (2013). Retrieved May 29, 2015, from http://mhcc.dhmh.maryland.gov/ltc/Documents/longtermcare/2013_Maryland_Nursing_Facility_Short_Stay_Statewide_Report.pdf
	2012	2013 report		
	2013	2013 report		
	2014	N/A		
Goal 7: Enhance Care Transitions - Coordination with Primary Care				
Measure	**Year**	**Measurement Period**	**Data source**	**Citation**
Rate of physician follow up after discharge	2012	N/A		
	2013	N/A		
	2014	CY2014		
	2015	N/A		
	2012	N/A		Chesapeake Regional Information System, 2015
	2013	CY2013		

Discharges with principal provider notified	2014	CY2014		
	2015	CY2015		

Goal 8: Sustain High Physician Participation in Public Programs

Measure	Year	Measurement Period	Data source	Citation
Medicare Providers per 1,000 FFS beneficiaries	2011	N/A	CMS/CMMI Reports	Measure derived using CMMI reports.
	2012	N/A		
	2013	N/A		
	2014	CY2014		
Medicaid Providers per 1,000 beneficiaries	2011	N/A	DHMH/ Hilltop Institute	Measures derived using CMMI reports and data from DHMH.
	2012	N/A		
	2013	N/A		
	2014	July 2013-June 2014		

Goal 9: Broaden Engagement in Innovative Models of Care

Measure	Year	Measurement Period	Data source	Citation
Participation of Clinicians in NCQA accredited patient centered medical homes	2011	CY2011	MHCC Report	Measures derived from HSCRC Inpatient Abstract Data and provide by HSCRC.
	2012	CY2012		
	2013	CY2013		
	2014	CY2014		
Participation of providers in accountable care organizations	2011	N/A	CMS	Medicare Shared Savings Program Accountable Care Organizations - Participants | Data.CMS.Gov. (n.d.). Retrieved June 19, 2015, from https://data.cms.gov/ACO/Medicare-Shared-Savings-Program-Accountable-Care-O/pfam-u3vp
	2012	N/A		
	2013	N/A		
	2014	Current as of January 2015		
Participation of providers in bundled payment initiatives	2011	CY2011	HSCRC Rate-Setting	Measure derived from HSCRC rate setting methodology
	2012	CY2012		
	2013	CY2013		
	2014	CY2014		

Goal 10: Improve Process of Care				
Measure	**Year**	**Measurement Period**	**Data source**	**Citation**
All Measures	2011	CY2011	Drawn from Hospital Compare	Center for Medicare & Medicaid Services. (2012). HOS Archive_20121001-1[Data file]. Retrieved from https://data.medicare.gov/data/archives/hospital-compare
	2012	CY2012		Center for Medicare & Medicaid Services. (2013). HOS Archive_20131001[Data file]. Retrieved from https://data.medicare.gov/data/archives/hospital-compare
	2013	4/1/2013-3/31/2014		Center for Medicare & Medicaid Services. (2014). HOS Archive_20141218[Data file]. Retrieved from https://data.medicare.gov/data/archives/hospital-compare
	2014	N/A		Not currently available
Goal 11: Improve Process of Care				
Measure	**Year**	**Measurement Period**	**Data source**	**Citation**
All Measures	2011	N/A	N/A	Collection of data began in 2014 and will not be available for another year
	2012	N/A		
	2013	N/A		
	2014	N/A		
Goal 12: Reduce High Priority Hospital Complications				
Measure	**Year**	**Measurement Period**	**Data source**	**Citation**
Potentially preventable complications rate per 1,000 discharges (all 65 PPCs)	2011	N/A	HSCRC Inpatient Abstract data	Not Yet Available
	2012	N/A		Not Yet Available
	2013	CY2013		Measures derived from HSCRC Inpatient Abstract Data and provide by HSCRC.
	2014	CY2014		Measures derived from HSCRC Inpatient Abstract Data and provide by HSCRC.
Central-line Acquired Bloodstream Infections (CLABSI) standardized infection ratio (1= National Average)	2011	CY2011	CDC NHSN	Center for Medicare & Medicaid Services. (2012). HOS Archive_20121001-1[Data file]. Retrieved from https://data.medicare.gov/data/archives/hospital-compare
	2012	CY2012		Center for Medicare & Medicaid Services. (2013). HOS Archive_20131001[Data file]. Retrieved from https://data.medicare.gov/data/archives/hospital-compare
	2013	CY2013		Center for Medicare & Medicaid Services. (2014). HOS Archive_20141218[Data file]. Retrieved from https://data.medicare.gov/data/archives/hospital-compare
	2014	N/A		Not currently available

Goal 13: Reduce Readmissions - Home Health				
Measure	**Year**	**Measurement Period**	**Data Source**	**Citation**
All Measures	2011	N/A	Home Health CAHPS	Not Available
	2012	CY2012		Center for Medicare & Medicaid Services. (2013). HHCArchive_20130601[Data file]. Retrieved from https://data.medicare.gov/data/data/home-hospital-compare
	2013	CY2013		Center for Medicare & Medicaid Services. (2014). HHCArchive_20140717[Data file]. Retrieved from https://data.medicare.gov/data/data/home-hospital-compare
	2014	7/1/2013-6/30/2014		Center for Medicare & Medicaid Services. (2015). HHCArchive_20150122[Data file]. Retrieved from https://data.medicare.gov/data/data/home-hospital-compare
Goal 14: Reduce Readmissions - Nursing Homes				
Measure	**Year**	**Measurement Period**	**Data source**	**Citation**
Readmission Rates for Inpatient Discharges to Nursing Homes	2011	N/A	HSCRC Inpatient Abstract Data	Measures derived from HSCRC Inpatient Abstract Data and provide by HSCRC.
	2012	CY2012		
	2013	CY2013		
	2014	CY2014		
Goal 15: Reduce Readmissions – Hospitals				
Measure	**Year**	**Measurement Period**	**Data source**	**Citation**
All Measures	2011	N/A	HSCRC Inpatient Abstract Data	Measures derived from HSCRC Inpatient Abstract Data and provide by HSCRC.
	2012	CY2012		
	2013	CY2013		
	2014	CY2014		

Goal 16: Improve Life Expectancy				
Measure	**Year**	**Measurement Period**	**Data source**	**Citation**
Average life expectancy at birth MD	2011	2011	MD Vital Statistics	Maryland Vital Statistics Annual report 2013. (n.d.). Retrieved June 5, 2015, from http://www.dhmh.maryland.gov/vsa/Documents/13annual.pdf
	2012	2012		
	2013	2013		
	2014	N/A		
Average life expectancy at birth national	2011	2011	National Vital Statistics	National Vital Statistics Report, Deaths Final Data for 2013. (n.d.). Retrieved June 5, 2015, from http://www.cdc.gov/nchs/data/nvsr/nvsr64/nvsr64_02.pdf
	2012	2012		
	2013	2013		
	2014	N/A		

Goal 17: Reduce the Rate of Hospitalization for Ambulatory Care Sensitive Conditions				
Measure	**Year**	**Measurement Period**	**Data source**	**Citation**
All Measures	2011	N/A	HSCRC Inpatient Abstract Data	Measures derived from HSCRC Inpatient Abstract Data and provide by HSCRC.
	2012	CY2012		
	2013	CY2013		
	2014	CY2014		

Goal 18: Improve Cancer Control				
Measure	**Year**	**Measurement Period**	**Data source**	**Citation**
Percent of adults who are current smokers (MD)	2011	CY2011	Behavioral Risk Factor Surveillance System (BRFSS)	Maryland State Health Improvement Process. (n.d.). Retrieved June 4, 2015, from http://dhmh.maryland.gov/ship/SitePages/home.aspx
	2012	CY2012		
	2013	CY2013		
	2014	N/A		
Percent of adults who are current smokers (National)	2011	CY2011		CDC - Sortable Stats. (n.d.). Retrieved June 4, 2015, from http://wwwn.cdc.gov/sortablestats/
	2012	CY2012		
	2013	CY2013		
	2014	N/A		

Goal 18: Improve Cancer Control				
Measure	**Year**	**Measurement Period**	**Data source**	**Citation**
Percent of Youth Using any Kind of Tobacco Product (MD)	2011	N/A	Maryland Youth Tobacco Survey	Maryland State Health Improvement Process. (n.d.). Retrieved June 4, 2015, from http://dhmh.maryland.gov/ship/SitePages/home.aspx
	2012	N/A		
	2013	CY2013		
	2014	N/A		
Percent of Youth Using any Kind of Tobacco Product (National)	2011	N/A		
	2012	N/A		
	2013	CY2013		
	2014	N/A		
Goal 19: Improve Primary Prevention of Infectious Diseases				
Measure	**Year**	**Measurement Period**	**Data source**	**Citation**
Annual seasonal influenza vaccination rate	2011	CY2011	BRFSS	Maryland State Health Improvement Process. (n.d.). Retrieved June 4, 2015, from http://dhmh.maryland.gov/ship/SitePages/home.aspx
	2012	CY2012		
	2013	CY2013		
	2014	N/A		
percent of children with recommended vaccinations	2011	CY2011	National Immunization Survey (NIS)	CDC - Sortable Stats. (n.d.). Retrieved June 4, 2015, from http://wwwn.cdc.gov/sortablestats/
	2012	CY2012		
	2013	CY2013		
	2014	N/A		
New HIV infection rate among adults and adolescents rate per 100,000	2011	CY2011	Center for HIV Surveillance and Epidemiology	Maryland State Health Improvement Process. (n.d.). Retrieved June 4, 2015, from http://dhmh.maryland.gov/ship/SitePages/home.aspx
	2012	CY2012		
	2013	CY2013		
	2014	N/A		

Goal 20: Improve Prevention for Diabetes and Cardiovascular Disease				
Measure	**Year**	**Measurement Period**	**Data source**	**Citation**
Diabetes-related ED visit rate per 100,000 population	2011	CY2011	HSCRC Outpatient Data Files	Maryland State Health Improvement Process. (n.d.). Retrieved June 4, 2015, from http://dhmh.maryland.gov/ship/SitePages/home.aspx
	2012	CY2012		
	2013	CY2013		
	2014	N/A		
Hypertension-related ED visit rate per 100,000 population	2011	CY2011	HSCRC Outpatient Data Files	Maryland State Health Improvement Process. (n.d.). Retrieved June 4, 2015, from http://dhmh.maryland.gov/ship/SitePages/home.aspx
	2012	CY2012		
	2013	CY2013		
	2014	N/A		
Percent of children considered obese	2011	CY2011	Youth Risk behavior Surveillance System (YRBSS)	CDC - Sortable Stats. (n.d.). Retrieved June 4, 2015, from http://wwwn.cdc.gov/sortablestats/
	2012	N/A		
	2013	CY2013		
	2014	N/A		
Percent of adults at a healthy weight	2011	CY2011	BRFSS	Maryland State Health Improvement Process. (n.d.). Retrieved June 4, 2015, from http://dhmh.maryland.gov/ship/SitePages/home.aspx
	2012	CY2012		
	2013	CY2013		
	2014	N/A		

Goal 21: Improve Prevention of Asthma				
Measure	**Year**	**Measurement Period**	**Data source**	**Link to Datasets**
Asthma-related ED visit rate per 100,000 population	2011	CY2011	HSCRC Outpatient Data Files	Maryland State Health Improvement Process. (n.d.). Retrieved June 4, 2015, from http://dhmh.maryland.gov/ship/SitePages/home.aspx
	2012	CY2012		
	2013	CY2013		
	2014	N/A		
Goal 22: Promote Behavioral Health Integration in Primary Care				
Measure	**Year**	**Measurement Period**	**Data source**	**Link to Datasets**
All Measures	2011	CY2011	HSCRC Outpatient Data Files	Maryland State Health Improvement Process. (n.d.). Retrieved June 4, 2015, from http://dhmh.maryland.gov/ship/SitePages/home.aspx
	2012	CY2012		
	2013	CY2013		
	2014	N/A		
Goal 23: Promote Health Through Safe Physical Environments				
Measure	**Year**	**Measurement Period**	**Data source**	**Citation**
Fall related death rate per 100,000 population (MD)	2011	CY2011	Maryland Vital Statistics & US Census	Maryland Vital Statistics Annual report 2011. (n.d.). Retrieved June 5, 2015, from http://www.dhmh.maryland.gov/vsa/Documents/11annual.pdf
	2012	CY2012		Maryland Vital Statistics Annual report 2012. (n.d.). Retrieved June 5, 2015, from http://www.dhmh.maryland.gov/vsa/Documents/12annual.pdf
	2013	CY2013		Maryland Vital Statistics Annual report 2013. (n.d.). Retrieved June 5, 2015, from http://www.dhmh.maryland.gov/vsa/Documents/13annual.pdf
	2014	N/A		N/A
Fall related death rate per 100,000 population (National)	2011	CY2011	National Vital Statistics & US Census	National Vital Statistics Report, Deaths Final Data for 2011. (n.d.). Retrieved June 5, 2015, from http://www.cdc.gov/nchs/data/nvsr/nvsr63/nvsr63_03.pdf
	2012	CY2012		National Vital Statistics Report, Deaths Final Data for 2012. (n.d.). Retrieved June 5, 2015, from http://www.cdc.gov/nchs/data/nvsr/nvsr63/nvsr63_09.pdf
	2013	N/A		N/A
	2014	N/A		N/A

Goal 23: Promote Health Through Safe Physical Environments				
Measure	**Year**	**Measurement Period**	**Data source**	**Citation**
Population Data	2011	CY2011	MD Department of Planning	Maryland Department of Planning. (2014). Total Resident Population for Maryland's Jurisdictions, April 1, 2010 thru July 1, 2014[Data file]. Retrieved from http://planning.maryland.gov/msdc/Pop_estimate/Estimate_14/county/table1A.pdf
	2012	CY2012		
	2013	CY2013		
	2014	N/A		
Goal 24: Reduce Overuse of Diagnostic Testing-Imaging				
Measure	**Year**	**Measurement Period**	**Data source**	**Citation**
All Measures	2011	CY2011	Hospital Compare	Center for Medicare & Medicaid Services. (2013). HOS Archive_20131001[Data file]. Retrieved from https://data.medicare.gov/data/archives/hospital-compare
	2012	N/A		N/A
	2013	7/1/2012-6/30/2013		Center for Medicare & Medicaid Services. (2014). HOS Archive_20141218[Data file]. Retrieved from https://data.medicare.gov/data/archives/hospital-compare
	2014	N/A		N/A
Goal 25: Control expenditure growth-Hospital -- per capita				
Measure	**Year**	**Measurement Period**	**Data source**	**Citation**
All-payer Maryland Hospital per capita total charges for MD residents	2011	CY2011	HSCRC Abstract Database / MD Dept. of Planning Pop. Estimate	Measures derived by HSCRC.
	2012	CY2012		
	2013	CY2013	HSCRC Financial Database / MD Dept. of Planning Pop. Estimate	
	2014	CY2014		

Medicare Maryland hospital per capita total charges for MD residents	2011	CY2011	HSCRC Abstract Database / CMMI Average of Part A & Part B Enrollment	Measures derived by HSCRC.
	2012	CY2012		
	2013	CY2013		
	2014	CY2014		
Medicaid Maryland hospital per capita total charges for MD residents	2011	CY2011	HSCRC Abstract Database / Hilltop Institute Estimate of Medicaid Population (inc. Duals)	Measures derived by HSCRC.
	2012	CY2012		
	2013	CY2013		
	2014	CY2014		

Goal 25: Control expenditure growth-Hospital -- per capita

Measure	Year	Measurement Period	Data Source	Citation
Private payer Maryland hospital per capita total charges for MD residents	2011	CY2011	HSCRC Abstract Database / ACS Estimate of Privately Insured	Measures derived by HSCRC.
	2012	CY2012		
	2013	CY2013		
	2014	CY2014		
Medicare/Medicaid dual eligibles Maryland hospital per capita total charges for MD resident	2011	CY2011	HSCRC Abstract Database / Hilltop Institute Estimate of Medicare-Medicaid Duals	Measures derived by HSCRC.
	2012	CY2012		
	2013	CY2013		
	2014	CY2014		

Goal 26: Control expenditure growth-all services -- per capita

Measure	Year	Measurement Period	Data Source	Citation
Percent Growth Medicare TCOC per Capita	2011	CY2011	CMMI (via GDIT)	Measures derived by HSCRC.
	2012	CY2012		
	2013	CY2013		
	2014	CY2014		