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Getting Health Care Costs Under Control While Improving Quality of Care:

The Maryland Way

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I. INTRODUCTION

The cost of health care in the United States has soared to astronomical amounts that are unsustainable.[1] In 2017 national healthcare spending reached $3.5 trillion dollars, the per capita was $10,739, and the largest percentage of this money was spent on hospital services.[2,3] CMS's Office of the Actuary has predicted that national health care spending will grow by 5.5 percent for each year from 2017-2026.[4]

While one can debate what has caused health care costs to rise year after year, the fact remains that health care costs are projected to continue to rise.[5] Controlling the rising costs of healthcare, along with how to reform the U.S. health care system, is continuously being debated at both a national and state level, and has been for decades.[6] While the debates will continue, many states are taking initiatives to develop state health care delivery systems that states hope will, or have led, to reductions in health care costs, in addition to improving quality of care and the health of their population; with any one of these states possibly having the answer to transforming health care.[7]

The passage of the Patient Protection and Affordable Care Act (PPACA), in 2010, brought a renewed interest in achieving the "'Triple Aim': improving the individual experience of care; improving the health of populations; and reducing the per capita costs of care for populations."[8] While achieving the Triple Aim may seem far reaching to some, 38 states were awarded funding from the Centers for Medicare and Medicaid Services (CMS), between 2013 and 2014, to either design, test, or implement health care delivery systems that deliver better care, improve quality, and reduce health care costs.[9] Three of the states awarded funding, Maryland, Vermont, and

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[1] "Historical." *Centers for Medicare & Medicaid Services,* www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/NationalHealthExpendData/NationalHealthAccountsHistorical.html. Accessed 3 Mar. 2019.

[2] "CMS National Health Expenditures 2017 Highlights." *Centers for Medicare & Medicaid,* www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/NationalHealthExpendData/downloads/highlights.pdf. Accessed 3 Mar. 2019.

[3] "National Health Expenditures by type of service and source of funds, CY 1960-2017". *Centers for Medicare and Medicaid Services,* https://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/NationalHealthExpendData/Downloads/PieChartSourcesExpenditures.pdf. Accessed 3 March 2019.

[4] "CMS Office of the Actuary releases 2017 – 2026 Projections of National Health Expenditures." *Centers for Medicare & Medicaid,* 14 Feb. 2018, www.cms.gov/newsroom/press-releases/cms-office-actuary-releases-2017-2026-projections-national-health-expenditures. Accessed 6 Nov. 2018.

[5] "CMS Office of the Actuary releases 2017 – 2026 Projections of National Health Expenditures." *Centers for Medicare & Medicaid,* 14 Feb. 2018, www.cms.gov/newsroom/press-releases/cms-office-actuary-releases-2017-2026-projections-national-health-expenditures. Accessed 6 Nov. 2018.

[6] "Timeline: History of Health Reform in the U.S." *Kaiser Family Foundation,* kaiserfamilyfoundation.files.wordpress.com/2011/03/5-02-13-history-of-health-reform.pdf. Accessed 6 Nov. 2018.

[7] "State Innovation Models Initiative: General Information." *Centers for Medicare & Medicaid Services,* https://innovation.cms.gov/initiatives/state-innovations/. Accessed 6 Nov. 2018.

[8] Berwick, Donald M., et al. "The Triple Aim: Care, Health, And Cost." *Health Affairs,* vol.27, no. 3, 2008, p.760, www.healthaffairs.org/doi/10.1377/hlthaff.27.3.759. Accessed 14 Nov. 2018.

[9] "State Innovation Models Initiative: General Information." *Centers for Medicare & Medicaid Services,* innovation.cms.gov/initiatives/state-innovations/. Accessed 29 Oct. 2018.

Pennsylvania, have implemented their models.[10] While all three of these models are different, the Maryland All-Payer Model stands out since it is a model that was built upon Maryland's previous all-payer hospital rate setting system.[11]

The Maryland All-Payer Model is a CMS alternative payment model (APM), a payment model that incentivizes providers to "provide high-quality and cost-efficient care", that has been successful in controlling health care costs and improving quality of care through hospital rate setting and global budgets. [12,13,14] While this model cannot be replicated completely, due to its unique history, other states would benefit greatly from implementing a similar alternative payment model.

In Section II, this paper will provide the history of Maryland's unique rate setting system, review the terms of the Maryland All-Payer Model, and briefly discuss Maryland's plans for further transformation. In Section III, this paper will analyze the successes of Maryland's unique rate setting system, including the Maryland All-Payer Model; discuss the elements of Maryland's rate setting system that are key for other states to successfully implement a model like the Maryland All-Payer Model; and will discuss why other states could benefit from implementing an alternative payment model similar to the Maryland All-Payer Model. In Section IV, this paper will discuss challenges that other states may face when implementing a model like Maryland's All Payer Model and how those challenges may be overcome.

II: BACKGROUND

Maryland's unique health care delivery system dates to 1971. In 1971, Maryland passed legislation, with support from the Maryland Hospital Association (MHA)[15], which is led by hospital trustees, who are chief leaders from each member hospital or health system.[16] This legislation was primarily driven out of concern for increasing hospital costs, but more so for what Maryland saw as a factor in driving the increase; specifically the cost to the hospitals for providing uncompensated care and potential access issues for these patients.[17] The goals of the legislation

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[10] "Innovation Models." *Centers for Medicare & Medicaid Services,* innovation.cms.gov/initiatives/index.html#views=mod. *Maryland All-Payer Model; Vermont All-Payer ACO Model; Pennsylvania Rural Health Model.* Accessed 29 Oct. 2018.

[11] "Maryland All-Payer Model." *Centers for Medicare & Medicaid,* innovation.cms.gov/initiatives/Maryland-All-Payer-Model/. Accessed 11 Nov. 2018.

[12] Quality Payment Program APMs Overview. *Centers for Medicare & Medicaid,* qpp.cms.gov/apms/overview. Accessed 24 Nov. 2018.

[13] "HSCRC All-Payer Model Results, CY 2014 – 2017." T*he Maryland Health Services Cost Review Commission,* www.hscrc.state.md.us/Documents/Modernization/Updated%20APM%20results%20through%20PY4.pdf. Accessed 18 Oct. 2018.

[14] Haber ScD, Susan, et. al. "Evaluation of the Maryland All-Payer Model First Annual Report." *Centers for Medicare & Medicaid Services,* Oct. 2016, pp. 42-48, https://downloads.cms.gov/files/cmmi/marylandallpayer-firstannualrpt.pdf. Accessed 30 Nov. 2018.

[15] Murray, Robert. "Setting Hospital Rates to Control Costs And Boost Quality: The Maryland Experience." *Health Affairs,* vol. 28, no.5, 2009, p. 1395, www.healthaffairs.org/doi/pdf/10.1377/hlthaff.28.5.1395. Accessed 18 Oct. 2018.

[16] "MHA's Governance." *Maryland Hospital Association,* http://www.mhaonline.org/about-mha/governance. Accessed 30 Nov. 2018.

[17] Cohen, Harold A. "Maryland's All-Payor Hospital Payment System." *The Maryland Health Services Cost Review Commission,* p. 2, www.hscrc.state.md.us/Documents/pdr/GeneralInformation/MarylandAll-PayorHospitalSystem.pdf. Accessed 10 Oct. 2018.

were to contain hospital costs, ensure equity in rate setting, ensure financial stability, and maximize access to care.[18] To achieve these goals, the legislation established the Health Services Cost Review Commission (HSCRC).[19]

The HSCRC is an independent State agency that consists of seven Commissioners who are appointed by the Governor.[20] The Commissioners are not paid for their duties, have varying health care backgrounds, and hold positions such as President and CEO of a Maryland hospital, a Maryland private practicing physician, and careers with experience in Maryland and federal health care policy.[21,22] The Commissioners are supported by an Executive Director, approximately 35 plus staff members, and Maryland's Health Information Exchange (HIE), Chesapeake Regional Information System for our Patients (CRISP).[23,24] The HSCRC has its own budget that is funded through user fees, which are fees assessed on and collected from any hospital for which the HSCRC sets rates.[25] The HSCRC has many responsibilities over hospitals in Maryland, such as collecting, reviewing, and disclosing hospital financial information; establishing and maintaining uniform accounting and financial reporting requirements; and its focus is on setting, reviewing, and approving hospital rates (rate setting).[26]

The HSCRC's first act was to create uniform accounting and reporting standards, for all hospitals to follow.[27] Although the HSCRC was granted the authority to set hospital rates from the beginning, it wasn't until 1974 that the HSCRC officially began setting hospital rates.[28] However, the HSCRC could not require federal payers to reimburse these rates since Medicare and Medicaid had their own reimbursement structure.[29] In 1977, to address this road block, Maryland obtained a

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[18] Cohen, Harold A. "Maryland's All-Payor Hospital Payment System." *The Maryland Health Services Cost Review Commission,* p. 2, www.hscrc.state.md.us/Documents/pdr/GeneralInformation/MarylandAll-PayorHospitalSystem.pdf. Accessed 28 Oct. 2018.

[19] Cohen, Harold A. "Maryland's All-Payor Hospital Payment System." *The Maryland Health Services Cost Review Commission,* p. 1, www.hscrc.state.md.us/Documents/pdr/GeneralInformation/MarylandAll-PayorHospitalSystem.pdf. Accessed 28 Oct. 2018.

[20] Md. HEALTH-GENERAL Code Ann. § 19-203

[21] "General Description of Commission." *The Maryland Health Services Cost Review Commission,* www.hscrc.state.md.us/Pages/commission.aspx. Accessed 30 Nov. 2018.

[22] "Commissioners." *The Maryland Health Services Cost Review Commission,* www.hscrc.state.md.us/Pages/commissioners.aspx. Accessed 30 Nov. 2018.

[23] "Staff Directory." *The Maryland Health Services Cost Review Commission,* www.hscrc.state.md.us/Pages/staff.aspx. Accessed 30 Nov. 2018.

[24] "CRISP." *CRISP,* www.crisphealth.org/. Accessed 30 Nov. 2018.

[25] Md. HEALTH-GENERAL Code Ann. § 19-111

[26] Md. HEALTH-GENERAL Code Ann. § 19-207, §19-211, §19-222

[27] Anderson, Rhonda, et. al. "Maryland Hospital Association, Achievement, Access, and Accountability: Maryland's All-Payor Hospital Payment Systems." *The Maryland Health Services Cost Review Commission,* 2007, p. 7, hscrc.state.md.us/Documents/pdr/GeneralInformation/AshbyReport2007.pdf. Accessed 26 Jan. 2019.

[28] Cohen, Harold A. "Maryland's All-Payor Hospital Payment System." *The Maryland Health Services Cost Review Commission,* p. 2, www.hscrc.state.md.us/Documents/pdr/GeneralInformation/MarylandAll-PayorHospitalSystem.pdf. Accessed 28 Oct. 2018.

[29] Cohen, Harold A. "Maryland's All-Payor Hospital Payment System." *The Maryland Health Services Cost Review Commission,* p. 2, www.hscrc.state.md.us/Documents/pdr/GeneralInformation/MarylandAll-PayorHospitalSystem.pdf. Accessed 28 Oct. 2018.

waiver from CMS's Medicare and Medicaid reimbursement requirements and began setting rates for federal payers.[30]

The HSCRC implemented hospital rate setting systems and made many adjustments to these systems between 1977 and 2000.[31] These systems included the Inflation Adjustment System in 1977, the Guaranteed Inpatient Revenue System (GIR) in 1979, Scaling Approach in 1991, Procedure based Pricing (PBM) in 1996, and Alternative Rate Methodology (ARM) in 1996.[32] Despite the implementation of all of these systems and adjustments to the hospital rate setting system, "by 1996, Maryland's cost per admission exceeded the national average."[33] Even with additional actions taken by HSCRC to reduce Maryland's cost per admission, Maryland found itself in jeopardy of losing the CMS waiver by 1999; and in 2001, Maryland implemented a redesigned rate setting system. [34]

Maryland operated their all-payer hospital rate setting system under the CMS waiver until 2014, when Maryland recognized that the waiver would hinder the state's efforts to achieve the Triple Aim, since it was focused on volume rather than value.[35] In 2014, Maryland signed a new five year agreement with the Center for Medicare & Medicaid Innovation (CMMI or the Innovation Center), called the Maryland All-Payer Model.[36] This new model aimed to improve the quality of care and reduce health care expenditures.[37] This model continued all-payer hospital rate setting, a waiver from the Medicare inpatient and outpatient prospective payment systems, and implemented global budget revenue (GBR).[38]

Prior to the Maryland All-Payer Model, the HSCRC was essentially testing global budgets with ten hospitals (community and rural) utilizing the methodology of the total patient revenue system (TPR).[39] Of these ten hospitals, two began operating under TPR in FY 2008 and the other

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[30] Murray, Robert. "Setting Hospital Rates to Control Costs And Boost Quality: The Maryland Experience." *Health Affairs,* vol. 28, no.5, 2009, p. 1396, www.healthaffairs.org/doi/pdf/10.1377/hlthaff.28.5.1395. Accessed 18 Oct. 2018.

[31] Anderson, Rhonda, et. al. "Maryland Hospital Association, Achievement, Access, and Accountability: Maryland's All-Payor Hospital Payment Systems." *The Maryland Health Services Cost Review Commission,* 2007, pp. 38-40, hscrc.state.md.us/Documents/pdr/GeneralInformation/AshbyReport2007.pdf. Accessed 26 Jan. 2019

[32] Anderson, Rhonda, et. al. "Maryland Hospital Association, Achievement, Access, and Accountability: Maryland's All-Payor Hospital Payment Systems." *The Maryland Health Services Cost Review Commission,* 2007, pp. 38-40, hscrc.state.md.us/Documents/pdr/GeneralInformation/AshbyReport2007.pdf. Accessed 26 Jan. 2019.

[33] Anderson, Rhonda, et. al. "Maryland Hospital Association, Achievement, Access, and Accountability: Maryland's All-Payor Hospital Payment Systems." *The Maryland Health Services Cost Review Commission,* 2007, pp. 18, hscrc.state.md.us/Documents/pdr/GeneralInformation/AshbyReport2007.pdf. Accessed 26 Jan. 2019.

[34] Anderson, Rhonda, et. al. "Maryland Hospital Association, Achievement, Access, and Accountability: Maryland's All-Payor Hospital Payment Systems." *The Maryland Health Services Cost Review Commission,* 2007, pp. 10, 18, hscrc.state.md.us/Documents/pdr/GeneralInformation/AshbyReport2007.pdf. Accessed 26 Jan. 2019.

[35] Maryland Department of Health and Mental Hygiene. "The Maryland All-Payer Model Progression Plan." *The Maryland Health Services Cost Review Commission,* 2016, p. 4, www.hscrc.state.md.us/documents/md-maphs/pr/Maryland-All-Payer-Model-Progression-Plan.pdf. Accessed 23 Sept. 2018.

[36] "Maryland All-Payer Model." *Centers for Medicare & Medicaid Services,* p. 3, innovation.cms.gov/initiatives/Maryland-All-Payer-Model/. Accessed 11 Nov. 2018.

[37] "Maryland All-Payer Model." *Centers for Medicare & Medicaid Services,* p. 1, innovation.cms.gov/initiatives/Maryland-All-Payer-Model/. Accessed 11 Nov. 2018.

[38] "Maryland All-Payer Model." *Centers for Medicare & Medicaid Services,* pp. 1-4, 11, innovation.cms.gov/initiatives/Maryland-All-Payer-Model/. Accessed 11 Nov. 2018.

[39] "TPR Rate Setting Methodology." *The Maryland Health Services Cost Review Commission,* www.hscrc.state.md.us/Pages/init_tpr.aspx. Accessed 30 Nov. 2018.

eight began in FY 2011.[40] The TPR methodology was developed by the HSCRC under the authority granted to the HSCRC by Maryland legislation passed in 1971.[41] Per the HSCRC, "The basic concept embodied in the TPR is the assurance of a certain amount of revenue each year, independent of the number of patients treated and the amount of services provided to these patients. The hospital, therefore, had the incentive to reduce length of stay, ancillary testing, unnecessary admissions and readmissions, as well as improve efficiency in the provision of services while treating patients in a manner consistent with appropriate, high quality medical care."[42]

Under the Maryland All-Payer Model agreement, implemented in 2014, 80 percent of hospital revenue was required to be under TPR or GBR, which was an extension of TPR, by year five of the model.[43,44] Global budgets were set for each hospital by the HSCRC at the beginning of the fiscal year utilizing data specific to each hospital that was historical in nature.[45] Maryland also agreed to move away from limiting cost growth on an inpatient admission basis to a Medicare per capita total hospital cost growth basis, but could not exceed 3.58 percent of the Medicare annual growth of costs; to generate cumulative savings of $330 million by the end of the five-year agreement (2018); to achieve specific quality targets through incentives aimed at reducing readmissions and hospital acquired conditions; and was required to submit annual reports regarding population health.[46] In addition, Maryland agreed to develop a new model based on total per capita cost of care that would be in place by the beginning of 2019.[47] If Maryland failed to meet the requirements of the agreement, CMS had the authority to force Maryland to transition to the CMS inpatient and outpatient prospective payment systems.[48]

Although the Maryland hospitals had been successful in meeting all performance measure targets through 2016, under the Maryland All-Payer Model, Maryland recognized the need for hospitals to align with other providers, such as physicians and those delivering post-acute care, to

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[40] "TPR Rate Setting Methodology." *The Maryland Health Services Cost Review Commission,* www.hscrc.state.md.us/Pages/init_tpr.aspx. Accessed 30 Nov. 2018.
[41] "TPR Rate Setting Methodology." *The Maryland Health Services Cost Review Commission,* www.hscrc.state.md.us/Pages/init_tpr.aspx. Accessed 30 Nov. 2018.
[42] "TPR Rate Setting Methodology." *The Maryland Health Services Cost Review Commission,* www.hscrc.state.md.us/Pages/init_tpr.aspx. Accessed 30 Nov. 2018.
[43] Kinzer, Donna. "Monitoring Maryland's New All-Payer Model Biannual Report." *The Maryland Health Services Cost Review Commission,* April 2016, p. 2, hscrc.maryland.gov/documents/legal-legislative/reports/HSCRC-Biannual-Report-on-All-Payer-Model-April-2016.pdf. Accessed 30 Nov. 2018.
[44] "TPR Rate Setting Methodology." *The Maryland Health Services Cost Review Commission,* www.hscrc.state.md.us/Pages/init_tpr.aspx. Accessed 30 Nov. 2018.
[45] "Global Budget Revenue Adjustments." *The Maryland Health Services Cost Review Commission,* www.hscrc.state.md.us/Pages/gbr-adjustments.aspx. Accessed 30 Nov. 2018.
[46] "Maryland All-Payer Model." *Centers for Medicare & Medicaid Services,* innovation.cms.gov/initiatives/Maryland-All-Payer-Model/. Accessed 11 Nov. 2018.
[47] "The Maryland All-Payer Model Progression Plan 2016." *Maryland Department of Health and Mental Hygiene,* 16 Dec. 2016, p. 1, www.hscrc.state.md.us/documents/md-maphs/pr/Maryland-All-Payer-Model-Progression-Plan.pdf. Accessed 23 Sept. 2018.
[48] "Maryland All-Payer Model." *Centers for Medicare & Medicaid Services,* innovation.cms.gov/initiatives/Maryland-All-Payer-Model/. Accessed 11 Nov. 2018.

further transform the delivery of health care. [49,50] In May of 2017, an amendment was made to the Maryland All-Payer Model which allowed for the inclusion of a new voluntary program, the Care Redesign Program (CRP).[51] According to CMS, "The CRP provides hospitals participating in the Maryland All-Payer Model the opportunity to partner with and provide incentives and resources to certain providers and suppliers in exchange for their performance of activities and processes that aim to improve quality of care and reduce the growth in total cost of care for Maryland Medicare beneficiaries."[52] While this program started with only Medicare beneficiaries, the intent was to open it to all patients in the future.[53] The program began in July of 2017, with 16 hospitals participating.[54] This program was designed to run through the end of 2018, but is included in Maryland's new Total Cost of Care Model (TCOC), which will begin in January of 2019.[55]

Maryland's new Total Cost of Care Model fulfills the Maryland All-Payer Model requirement for a new plan to have been developed and in place by January 2019.[56] According to the Maryland All-Payer Model Progression Plan, "Maryland's vision for the next term of the Model is to achieve person-centered care, foster clinical innovation and excellence in care, improve population health, and moderate the growth in costs, on a statewide basis and in the all-payer environment through the transformation of the health care delivery system."[57] The details of the Total Cost of Care Model will not be discussed in this paper.

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[49] "HSCRC All-Payer Model Results, CY 2014 – 2017." T*he Maryland Health Services Cost Review Commission,* www.hscrc.state.md.us/Documents/Modernization/Updated%20APM%20results%20through%20PY4.pdf. Accessed 18 Oct. 2018.

[50] "The Maryland All-Payer Model Progression Plan 2016." *Maryland Department of Health and Mental Hygiene,* 16 Dec. 2016, p. 10, www.hscrc.state.md.us/documents/md-maphs/pr/Maryland-All-Payer-Model-Progression-Plan.pdf. Accessed 23 Sept. 2018.

[51]"The Maryland All-Payer Model Progression Plan 2016." *Maryland Department of Health and Mental Hygiene,* 16 Dec. 2016, p. 13, www.hscrc.state.md.us/documents/md-maphs/pr/Maryland-All-Payer-Model-Progression-Plan.pdf. Accessed 23 Sept. 2018.

[52] "Maryland All-Payer Model." *Centers for Medicare & Medicaid Services,* innovation.cms.gov/initiatives/Maryland-All-Payer-Model/. Accessed 11 Nov. 2018.

[53]"The Maryland All-Payer Model Progression Plan 2016." *Maryland Department of Health and Mental Hygiene,* 16 Dec. 2016, p. 11, www.hscrc.state.md.us/documents/md-maphs/pr/Maryland-All-Payer-Model-Progression-Plan.pdf. Accessed 23 Sept. 2018.

[54] "The Maryland All-Payer Model Progression Plan 2016." *Maryland Department of Health and Mental Hygiene,* 16 Dec. 2016, p. 14, www.hscrc.state.md.us/documents/md-maphs/pr/Maryland-All-Payer-Model-Progression-Plan.pdf. Accessed 23 Sept. 2018.

[55]"The Maryland All-Payer Model Progression Plan 2016." *Maryland Department of Health and Mental Hygiene,* 16 Dec. 2016, p. 23, www.hscrc.state.md.us/documents/md-maphs/pr/Maryland-All-Payer-Model-Progression-Plan.pdf. Accessed 23 Sept. 2018.

[56] "The Maryland All-Payer Model Progression Plan 2016." *Maryland Department of Health and Mental Hygiene,* 16 Dec. 2016, p. 1, www.hscrc.state.md.us/documents/md-maphs/pr/Maryland-All-Payer-Model-Progression-Plan.pdf. Accessed 23 Sept. 2018.

[57] "The Maryland All-Payer Model Progression Plan 2016." *Maryland Department of Health and Mental Hygiene,* 16 Dec. 2016, p. 1, www.hscrc.state.md.us/documents/md-maphs/pr/Maryland-All-Payer-Model-Progression-Plan.pdf. Accessed 23 Sept. 2018.

III. Analysis of Maryland's Hospital Payment System

A. Maryland All-Payer Rate Setting Prior to 2014

Maryland's all-payer rate setting for hospitals has been evolving for decades.[58] However, it appears that the HSCRC's persistence to succeed early on, and which has continued overtime, in addition to stakeholders' continued participation and support over the decades, particularly from the hospitals, has allowed Maryland's rate setting process to be successful in controlling hospital costs.[59]

While the 1971 legislation created the HSCRC to set hospital rates, it did not provide the details or any methodology for hospital rate setting, but rather gave the HSCRC broad authority to develop, implement, and regulate the hospital rate setting system for Maryland hospitals.[60] However, the rate setting system had to align with the legislative goals: contain hospital costs, ensure equity in rate setting, ensure financial stability, and maximize access to care.[61] The legislation established the jurisdiction for the HSCRC's authority, which was over hospital outpatient and inpatient services.[62] In addition, the legislation provided for public accountability, requiring the HSCRC to publicly disclose hospital financial information.[63]

The HSCRC's first several years of existence were spent on developing the foundation for hospital rate setting.[64] The foundation, a hospital budget review process, provided a uniform approach to set rates for all hospitals.[65] As part of this process, all hospitals were required to submit hospital data utilizing the Uniform Accounting and Reporting System (UARS), a system that established standardized reporting requirements and accounting principles utilizing cost centers.[66] Utilizing the UARS, the HSCRC was able to collect data related to each hospital regarding costs,

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[58] Cohen, Harold A. "Maryland's All-Payor Hospital Payment System." *The Maryland Health Services Cost Review Commission,* p. 2, www.hscrc.state.md.us/Documents/pdr/GeneralInformation/MarylandAll-PayorHospitalSystem.pdf. Accessed 28 Oct. 2018.

[59] Anderson, Rhonda, et. al. "Maryland Hospital Association, Achievement, Access, and Accountability: Maryland's All-Payor Hospital Payment Systems." *The Maryland Health Services Cost Review Commission,* 2007, p. 21, hscrc.state.md.us/Documents/pdr/GeneralInformation/AshbyReport2007.pdf. Accessed 26 Jan. 2019.

[60] "About Us." *The Maryland Health Services Cost Review Commission,* hscrc.state.md.us/Pages/About-Us.aspx. Accessed 30 Nov. 2018.

[61] Cohen, Harold A. "Maryland's All-Payor Hospital Payment System." *The Maryland Health Services Cost Review Commission,* p. 2, www.hscrc.state.md.us/Documents/pdr/GeneralInformation/MarylandAll-PayorHospitalSystem.pdf. Accessed 28 Oct. 2018.

[62] Md. HEALTH-GENERAL Code Ann. § 19-211(a)

[63] Md. HEALTH-GENERAL Code Ann. § 19-207(a)(6)

[64] Anderson, Rhonda, et. al. "Maryland Hospital Association, Achievement, Access, and Accountability: Maryland's All-Payor Hospital Payment Systems." *The Maryland Health Services Cost Review Commission,* 2007, p. 28, hscrc.state.md.us/Documents/pdr/GeneralInformation/AshbyReport2007.pdf. Accessed 26 Jan. 2019.

[65] Anderson, Rhonda, et. al. "Maryland Hospital Association, Achievement, Access, and Accountability: Maryland's All-Payor Hospital Payment Systems." *The Maryland Health Services Cost Review Commission,* 2007, p. 28, hscrc.state.md.us/Documents/pdr/GeneralInformation/AshbyReport2007.pdf. Accessed 26 Jan. 2019.

[66] Anderson, Rhonda, et. al. "Maryland Hospital Association, Achievement, Access, and Accountability: Maryland's All-Payor Hospital Payment Systems." *The Maryland Health Services Cost Review Commission,* 2007, p. 7, hscrc.state.md.us/Documents/pdr/GeneralInformation/AshbyReport2007.pdf. Accessed 26 Jan. 2019.

revenue, output measures related to each cost center, and discharge information (termed "case-mix"), which allowed the HSCRC to have a complete picture of the hospitals.[67]

The reviews, specific to each hospital, were focused on operating and capital costs, but also incorporated in the rate setting methodology, limited allowances for bad debt and charity care (uncompensated care), and discounts provided to various payers.[68] The HSCRC assessed and compared hospital costs with other similar hospitals in Maryland to determine if they seemed reasonable.[69] This process allowed the HSCRC to successfully complete setting the first rates (base unit rates) for each hospital by 1977.[70]

To address the rise in hospital costs associated with uncompensated care, and to meet the goal of the legislation of maximizing access to care, the HSCRC incorporated uncompensated care costs in the rate setting methodology from the beginning.[71] Inclusion of these costs in the rates disincentivized the hospitals to transfer patients to another hospital based on the fact that the patient could not pay for services.[72] In addition, because everyone essentially pays a share of these costs, anyone can seek care at any Maryland hospital.[73]

Obtaining a waiver from CMS in 1977, was a significant accomplishment by the HSCRC. The waiver allowed for Maryland hospitals to be paid by Medicare and Medicaid for hospital services based on rates set by the HSCRC and for the HSCRC to "experiment" with various rate setting methodologies to contain hospital costs.[74] In 1980, the waiver was incorporated into section 1814(b)(3) of the Social Security Act and placed Maryland at risk for losing the waiver if Medicare

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[67] Anderson, Rhonda, et. al. "Maryland Hospital Association, Achievement, Access, and Accountability: Maryland's All-Payor Hospital Payment Systems." *The Maryland Health Services Cost Review Commission,* 2007, p. 7, hscrc.state.md.us/Documents/pdr/GeneralInformation/AshbyReport2007.pdf. Accessed 26 Jan. 2019.

[68] Anderson, Rhonda, et. al. "Maryland Hospital Association, Achievement, Access, and Accountability: Maryland's All-Payor Hospital Payment Systems." *The Maryland Health Services Cost Review Commission,* 2007, p. 29, hscrc.state.md.us/Documents/pdr/GeneralInformation/AshbyReport2007.pdf. Accessed 26 Jan. 2019.

[69] Anderson, Rhonda, et. al. "Maryland Hospital Association, Achievement, Access, and Accountability: Maryland's All-Payor Hospital Payment Systems." *The Maryland Health Services Cost Review Commission,* 2007, p. 28, hscrc.state.md.us/Documents/pdr/GeneralInformation/AshbyReport2007.pdf. Accessed 26 Jan. 2019.

[70] Anderson, Rhonda, et. al. "Maryland Hospital Association, Achievement, Access, and Accountability: Maryland's All-Payor Hospital Payment Systems." *The Maryland Health Services Cost Review Commission,* 2007, pp. 4, 16, 28-29, hscrc.state.md.us/Documents/pdr/GeneralInformation/AshbyReport2007.pdf. Accessed 26 Jan. 2019.

[71] Murray, Robert. "Setting Hospital Rates to Control Costs And Boost Quality: The Maryland Experience." *Health Affairs,* vol. 28, no.5, 2009, p. 1397, www.healthaffairs.org/doi/pdf/10.1377/hlthaff.28.5.1395. Accessed 18 Oct. 2018.

[72] Murray, Robert. "Setting Hospital Rates to Control Costs And Boost Quality: The Maryland Experience." *Health Affairs,* vol. 28, no.5, 2009, p. 1397, www.healthaffairs.org/doi/pdf/10.1377/hlthaff.28.5.1395. Accessed 18 Oct. 2018.

[73] Murray, Robert. "Setting Hospital Rates to Control Costs And Boost Quality: The Maryland Experience." *Health Affairs,* vol. 28, no.5, 2009, p. 1397, www.healthaffairs.org/doi/pdf/10.1377/hlthaff.28.5.1395. Accessed 18 Oct. 2018.

[74] Anderson, Rhonda, et. al. "Maryland Hospital Association, Achievement, Access, and Accountability: Maryland's All-Payor Hospital Payment Systems." *The Maryland Health Services Cost Review Commission,* 2007, p. 29, hscrc.state.md.us/Documents/pdr/GeneralInformation/AshbyReport2007.pdf. Accessed 26 Jan. 2019.

payments per inpatient admission grew more rapidly than the national growth rate.[75] Maryland met this requirement for "18 of the first 20 years".[76]

Over the decades, the HSCRC was highly attentive to the changing health care environment and continuously pursued modifications to rate setting methodology.[77] These modifications included various financial incentives, penalties, and adjustments to address factors such as inflation, volumes, efficiency and quality, which affected the hospital costs.[78] While not every modification had a positive impact, the attentiveness and persistence of the HSCRC can be attributed to Maryland continuing its rate setting system for as long as it has.[79]

Maryland faced many challenges during the 1980s through the 1990s with maintaining a hospital rate setting system that allowed Maryland to meet the CMS waiver requirement and which allowed the hospitals to remain financially stable.[80] In the 1980s, Maryland hospital operating margins were just about non-existent.[81] The HSCRC worked with stakeholders and made adjustments to the hospital rate setting system and margins improved.[82] Unfortunately, managed care had taken hold and was severely affecting hospital revenue across the country.[83] By 1996, Maryland's cost per admission exceeded the national average and despite the HSCRC making adjustments, Maryland found itself at risk for losing the CMS waiver by 1999.[84] Although the possibility of losing the waiver existed, the hospitals supported retaining the "Maryland all-payor system- if it was reinvented."[85]

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[75] Social Security Act §1814(b)(3)

[76] Anderson, Rhonda, et. al. "Maryland Hospital Association, Achievement, Access, and Accountability: Maryland's All-Payor Hospital Payment Systems." *The Maryland Health Services Cost Review Commission,* 2007, p. 4, hscrc.state.md.us/Documents/pdr/GeneralInformation/AshbyReport2007.pdf. Accessed 26 Jan. 2019.

[77] Anderson, Rhonda, et. al. "Maryland Hospital Association, Achievement, Access, and Accountability: Maryland's All-Payor Hospital Payment Systems." *The Maryland Health Services Cost Review Commission,* 2007, p. 21, hscrc.state.md.us/Documents/pdr/GeneralInformation/AshbyReport2007.pdf. Accessed 26 Jan. 2019.

[78] Anderson, Rhonda, et. al. "Maryland Hospital Association, Achievement, Access, and Accountability: Maryland's All-Payor Hospital Payment Systems." *The Maryland Health Services Cost Review Commission,* 2007, pp. 28-37, hscrc.state.md.us/Documents/pdr/GeneralInformation/AshbyReport2007.pdf. Accessed 26 Jan. 2019.

[79] Anderson, Rhonda, et. al. "Maryland Hospital Association, Achievement, Access, and Accountability: Maryland's All-Payor Hospital Payment Systems." *The Maryland Health Services Cost Review Commission,* 2007, p. 21, hscrc.state.md.us/Documents/pdr/GeneralInformation/AshbyReport2007.pdf. Accessed 26 Jan. 2019.

[80] Anderson, Rhonda, et. al. "Maryland Hospital Association, Achievement, Access, and Accountability: Maryland's All-Payor Hospital Payment Systems." *The Maryland Health Services Cost Review Commission,* 2007, pp. 18-19, hscrc.state.md.us/Documents/pdr/GeneralInformation/AshbyReport2007.pdf. Accessed 26 Jan. 2019.

[81] Anderson, Rhonda, et. al. "Maryland Hospital Association, Achievement, Access, and Accountability: Maryland's All-Payor Hospital Payment Systems." *The Maryland Health Services Cost Review Commission,* 2007, p. 32, hscrc.state.md.us/Documents/pdr/GeneralInformation/AshbyReport2007.pdf. Accessed 26 Jan. 2019.

[82] Anderson, Rhonda, et. al. "Maryland Hospital Association, Achievement, Access, and Accountability: Maryland's All-Payor Hospital Payment Systems." *The Maryland Health Services Cost Review Commission,* 2007, p. 18, hscrc.state.md.us/Documents/pdr/GeneralInformation/AshbyReport2007.pdf. Accessed 26 Jan. 2019.

[83] Anderson, Rhonda, et. al. "Maryland Hospital Association, Achievement, Access, and Accountability: Maryland's All-Payor Hospital Payment Systems." *The Maryland Health Services Cost Review Commission,* 2007, pp. 18, 35, hscrc.state.md.us/Documents/pdr/GeneralInformation/AshbyReport2007.pdf. Accessed 26 Jan. 2019.

[84] Anderson, Rhonda, et. al. "Maryland Hospital Association, Achievement, Access, and Accountability: Maryland's All-Payor Hospital Payment Systems." *The Maryland Health Services Cost Review Commission,* 2007, p. 18, hscrc.state.md.us/Documents/pdr/GeneralInformation/AshbyReport2007.pdf. Accessed 26 Jan. 2019.

[85] Anderson, Rhonda, et. al. "Maryland Hospital Association, Achievement, Access, and Accountability: Maryland's All-Payor Hospital Payment Systems." *The Maryland Health Services Cost Review Commission,* 2007, p. 18, hscrc.state.md.us/Documents/pdr/GeneralInformation/AshbyReport2007.pdf. Accessed 26 Jan. 2019.

Redesigning the system was an extreme undertaking which was accomplished in just over two years.[86] The HSCRC created a Redesign Work Group, which was critical to the success of redesigning the system and included stakeholders from across the Maryland healthcare industry, including the hospitals, HSCRC Commissioners, and payers.[87] The redesigned system was implemented in July of 2001.[88] The redesign resulted in the cost per admission remaining in the range of 3 to 6 percent below the national average from 1999-2004.[89] The redesign also improved hospital finances by 2005.[90]

The CMS waiver requirement did not include any metrics for Maryland to meet regarding hospital volumes.[91] The HSCRC recognized early on that increases in hospital volumes correlated to increases in hospital costs.[92] To slow the growth of costs associated with increased volumes, the HSCRC implemented volume adjustments, where adjustments were made to variable costs associated with volume changes.[93] In 2000, the volume adjustments were removed as part of Maryland's redesign of the hospital rate setting system, with the "expectation that managed care would control volume growth."[94] However, instead of volumes decreasing, volumes increased at an average rate of 2.7 percent each year between 2001 and 2007, which was higher than the national rate.[95] Volume adjustments were reintroduced in 2008 and volume rate of growth decreased, thus indicating that volume control was a necessary part of the rate setting methodology.[96]

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[86] Anderson, Rhonda, et. al. "Maryland Hospital Association, Achievement, Access, and Accountability: Maryland's All-Payor Hospital Payment Systems." *The Maryland Health Services Cost Review Commission,* 2007, pp. 9-10, hscrc.state.md.us/Documents/pdr/GeneralInformation/AshbyReport2007.pdf. Accessed 26 Jan. 2019.
[87] Anderson, Rhonda, et. al. "Maryland Hospital Association, Achievement, Access, and Accountability: Maryland's All-Payor Hospital Payment Systems." *The Maryland Health Services Cost Review Commission,* 2007, p. 10, hscrc.state.md.us/Documents/pdr/GeneralInformation/AshbyReport2007.pdf. Accessed 26 Jan. 2019.
[88] Anderson, Rhonda, et. al. "Maryland Hospital Association, Achievement, Access, and Accountability: Maryland's All-Payor Hospital Payment Systems." *The Maryland Health Services Cost Review Commission,* 2007, p. 10, hscrc.state.md.us/Documents/pdr/GeneralInformation/AshbyReport2007.pdf. Accessed 26 Jan. 2019.
[89] Anderson, Rhonda, et. al. "Maryland Hospital Association, Achievement, Access, and Accountability: Maryland's All-Payor Hospital Payment Systems." *The Maryland Health Services Cost Review Commission,* 2007, p. 19, hscrc.state.md.us/Documents/pdr/GeneralInformation/AshbyReport2007.pdf. Accessed 26 Jan. 2019.
[90] Anderson, Rhonda, et. al. "Maryland Hospital Association, Achievement, Access, and Accountability: Maryland's All-Payor Hospital Payment Systems." *The Maryland Health Services Cost Review Commission,* 2007, p. 20, hscrc.state.md.us/Documents/pdr/GeneralInformation/AshbyReport2007.pdf. Accessed 26 Jan. 2019.
[91] Social Security Act §1814(b)(3)
[92] Anderson, Rhonda, et. al. "Maryland Hospital Association, Achievement, Access, and Accountability: Maryland's All-Payor Hospital Payment Systems." *The Maryland Health Services Cost Review Commission,* 2007. p. 30, hscrc.state.md.us/Documents/pdr/GeneralInformation/AshbyReport2007.pdf. Accessed 26 Jan. 2019.
[93] Anderson, Rhonda, et. al. "Maryland Hospital Association, Achievement, Access, and Accountability: Maryland's All-Payor Hospital Payment Systems." *The Maryland Health Services Cost Review Commission,* 2007, pp. 29-30, hscrc.state.md.us/Documents/pdr/GeneralInformation/AshbyReport2007.pdf. Accessed 26 Jan. 2019.
[94] Murray, Robert. "Setting Hospital Rates to Control Costs And Boost Quality: The Maryland Experience." *Health Affairs,* vol. 28, no.5, 2009, p. 1399, www.healthaffairs.org/doi/pdf/10.1377/hlthaff.28.5.1395. Accessed 18 Oct. 2018.
[95] Murray, Robert. "Setting Hospital Rates to Control Costs And Boost Quality: The Maryland Experience." *Health Affairs,* vol. 28, no.5, 2009, p. 1399, www.healthaffairs.org/doi/pdf/10.1377/hlthaff.28.5.1395. Accessed 18 Oct. 2018.
[96] Murray, Robert. "Setting Hospital Rates to Control Costs And Boost Quality: The Maryland Experience." *Health Affairs,* vol. 28, no.5, 2009, pp. 1399-1400, www.healthaffairs.org/doi/pdf/10.1377/hlthaff.28.5.1395. Accessed 18 Oct. 2018.

The HSCRC kept a close eye on the inpatient per case charge growth for Maryland by assessing what the future would look like if "the national Medicare inpatient per case charges did not grow at all."; known as the "waiver cushion".[97] From fiscal year 1998 through fiscal year 2008, Maryland's "waiver cushion" had been eroding.[98] By mid-fiscal year 2009 the "waiver cushion" was increasing, but began to erode significantly by fiscal year 2011 (see Appendix A).[99] The HSCRC responded by reintroducing volume adjustments in 2008, implementing quality based reimbursement in 2009, and global budgets (TPR) for two rural hospitals in 2008 and eight more rural hospitals in 2010.[100,101,102]

Maryland's quality initiatives were implemented long before CMS implemented their Value-Based Purchasing (VBP) program in 2012.[103] Maryland's Quality Based Reimbursement (QBR) programs incentivized hospitals to improve the quality of care.[104] The QBR programs that Maryland implemented were Admissions Readmissions Reduction (ARR), Maryland Hospital Preventable Re-Admissions (MHPR), and Readmission Shared Savings Program (RSSP).[105]

TPR paved the way for Maryland to propose a new model to CMS. Under TPR, the hospitals operated under a global budget, which guaranteed a set amount of revenue and provided incentives to improve quality and reduce volumes.[106] To be successful under TPR, the hospitals had to stay within their budgets, not shift costs, and had to improve quality and delivery of care.[107]

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[97] Sharfstein M.D., Joshua. Letter. *2012 Joint Chairmen's Report, Page 67-68, M00Q01.01 – Report on Medicare Waiver and Approved Hospital Financial Target.,* p. 1, https://mmcp.health.maryland.gov/Documents/medicarewaiverJCRfinal12-12.pdf. Accessed 30 Nov. 2018.

[98] Sharfstein M.D., Joshua. Letter. *2012 Joint Chairmen's Report, Page 67-68, M00Q01.01 – Report on Medicare Waiver and Approved Hospital Financial Target.,* p. 1, https://mmcp.health.maryland.gov/Documents/medicarewaiverJCRfinal12-12.pdf. Accessed 30 Nov. 2018.

[99] Sharfstein M.D., Joshua. Letter. *2012 Joint Chairmen's Report, Page 67-68, M00Q01.01 – Report on Medicare Waiver and Approved Hospital Financial Target,* p. 1, https://mmcp.health.maryland.gov/Documents/medicarewaiverJCRfinal12-12.pdf. Accessed 30 Nov. 2018.

[100] Murray, Robert. "Setting Hospital Rates to Control Costs And Boost Quality: The Maryland Experience." *Health Affairs,* vol. 28, no.5, 2009, pp. 1399-1400, www.healthaffairs.org/doi/pdf/10.1377/hlthaff.28.5.1395. Accessed 18 Oct. 2018.

[101] "Quality Based Reimbursement (QBR)." *The Maryland Health Services Cost Review Commission,* hscrc.state.md.us/Pages/init_qi_qbr.aspx. Accessed 30 Nov. 2018.

[102] "TPR Rate Setting Methodology." *The Maryland Health Services Cost Review Commission,* hscrc.state.md.us/Pages/init_tpr.aspx. Accessed 30 Nov. 2018.

[103] "Quality Based Reimbursement (QBR)." *The Maryland Health Services Cost Review Commission,* hscrc.state.md.us/Pages/init_qi_qbr.aspx. Accessed 30 Nov. 2018.

[104] "Quality Based Reimbursement (QBR)." *The Maryland Health Services Cost Review Commission,* hscrc.state.md.us/Pages/init_qi_qbr.aspx. Accessed 30 Nov. 2018.

[105] "Archived Quality Initiatives." *The Maryland Health Services Cost Review Commission,* hscrc.state.md.us/Pages/Archived-Quality-Initiatives.aspx. Accessed 26 Jan. 2019.

[106] "TPR Rate Setting Methodology." *The Maryland Health Services Cost Review Commission,* hscrc.state.md.us/Pages/init_tpr.aspx. Accessed 30 Nov. 2018.

[107] "Redefining the H The Maryland Total Patient Revenue Experience." *The Maryland Hospital Association,* Slide titled Measures of Success, www.mhaonline.org/docs/default-source/presentations-and-talking-points/redefining-the-h---the-maryland-tpr-experience.pdf?sfvrsn=769adc0d_2. Accessed 26 Jan. 2019.

TPR was a success for the ten rural hospitals.[108] According to the MHA, from 2010-2012, TPR hospitals decreased total admissions, Medicare admissions, and length of stay.[109] In addition, TPR hospitals also reduced readmissions.[110] Attributable to the success are strategies such as care management redesign, ED RN case management around the clock, hospice and palliative care expansion, patient safety rounds, discharging patients with medications, patient family centered care, clinical documentation improvement programs, hospital EMR access given to community providers, and creation of care coordinators, which TPR hospitals implemented.[111] In addition, the HSCRC partnered with the Chesapeake Regional Information System for our Patients (CRISP), Maryland's Health Information Exchange (HIE), to develop the infrastructure to support hospital admission and discharge data reporting requirements.[112] According to the MHA, the hospitals under TPR "became different organizations by focusing on a value-based care delivery system and one that has been able to embrace the components of the Triple Aim of health care reform."[113]

Maryland's hospital rate setting system has kept cost shifting from occurring.[114] In Maryland, the HSCRC marks up charges through rate setting, which is applicable to all payers, and therefore, all payers and self-pay patients pay the same rates.[115] Appendix B, illustrates that Maryland has kept markups of charges way below the markups in the rest of the United States.[116]

According to Former Governor Martin O'Malley, Maryland's hospital rate setting system saved approximately $52.8 billion, kept the rate of costs per admission below the national rate, shared uncompensated care costs equally with all payers, including those uninsured, and eliminated cost shifting.[117] Maryland moved to the Maryland All-Payer Model in 2014 as a result

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[108] "Redefining The H The Maryland Total Patient Revenue Experience." *The Maryland Hospital Association.* Slide Key Findings, mhaonline.org/docs/default-source/presentations-and-talking-points/redefining-the-h---the-maryland-tpr-experience.pdf?sfvrsn=769adc0d_2. Accessed 26 Jan. 2019.

[109] "Redefining The H The Maryland Total Patient Revenue Experience." *The Maryland Hospital Association.* Slide Key Findings, mhaonline.org/docs/default-source/presentations-and-talking-points/redefining-the-h---the-maryland-tpr-experience.pdf?sfvrsn=769adc0d_2. Accessed 26 Jan. 2019.

[110] "Redefining The H The Maryland Total Patient Revenue Experience." *The Maryland Hospital Association.* Slide Same Hospital Readmissions as a % of Total Admissions, mhaonline.org/docs/default-source/presentations-and-talking-points/redefining-the-h---the-maryland-tpr-experience.pdf?sfvrsn=769adc0d_2. Accessed 26 Jan. 2019.

[111] "Redefining The H The Maryland Total Patient Revenue Experience." *The Maryland Hospital Association.* Slide Successful Strategies Under TPR, mhaonline.org/docs/default-source/presentations-and-talking-points/redefining-the-h---the-maryland-tpr-experience.pdf?sfvrsn=769adc0d_2. Accessed 26 Jan. 2019.

[112] "HIE Work group Meeting Documents." "HSCRC-CRISP." *The Maryland Health Services Cost Review Commission,* hscrc.state.md.us/Pages/init_hie.aspx. Accessed 26 Jan. 2019.

[113] "Redefining The H The Maryland Total Patient Revenue Experience." *The Maryland Hospital Association.* Slide Concluding Thought, mhaonline.org/docs/default-source/presentations-and-talking-points/redefining-the-h---the-maryland-tpr-experience.pdf?sfvrsn=769adc0d_2. Accessed 26 Jan. 2019.

[114] Murray, Robert. "Setting Hospital Rates to Control Costs And Boost Quality: The Maryland Experience." *Health Affairs,* vol. 28, no.5, 2009, p. 1401, www.healthaffairs.org/doi/pdf/10.1377/hlthaff.28.5.1395. Accessed 18 Oct. 2018.

[115] Murray, Robert. "Setting Hospital Rates to Control Costs And Boost Quality: The Maryland Experience." *Health Affairs,* vol. 28, no.5, 2009, p. 1401, www.healthaffairs.org/doi/pdf/10.1377/hlthaff.28.5.1395. Accessed 18 Oct. 2018.

[116] Murray, Robert. "Setting Hospital Rates to Control Costs And Boost Quality: The Maryland Experience." *Health Affairs,* vol. 28, no.5, 2009, p. 1401, www.healthaffairs.org/doi/pdf/10.1377/hlthaff.28.5.1395. Accessed 18 Oct. 2018.

[117] "Maryland All-Payer Model Agreement." *The Maryland Health Services Cost Review Commission,* Letter after Appendix 1, hscrc.state.md.us/documents/md-maphs/stkh/MD-All-Payer-Model-Agreement-%28executed%29.pdf. Accessed 23 Sept. 2018.

of the previous hospital rate setting being outdated and keeping the state from achieving "the goals of delivering better care, better health, and lower costs."[118]

B. Maryland All-Payer Model

The implementation of the Maryland All-Payer Model in 2014 "effectively changed the way Maryland hospitals care for patients and the way that hospital care is financed."[119] This model was built upon Maryland's previous all-payer rate setting system and shifted the focus away from financial performance focused on per admission to holding the hospitals accountable for the total cost of hospital care on a per capita basis.[120] This model added focus on improving the quality of care.[121]

Under the Maryland All-Payer Model, all payers and hospitals participated, hospital revenue was fixed through global budgets (included inpatient and outpatient services), uncompensated care (UCC) was factored in, and hospitals participated in pay-for-performance initiatives.[122] There were incentives and penalties for hospitals to operate within their budgets; to meet performance and quality measures; and, there was the expectation that there would be a transition to a new model, based on total per capita cost of care, by 2019.[123]

The Maryland All-Payer Model also maintained Maryland's previous rate setting system and included a waiver from the CMS reimbursement systems.[124] In addition, CMS waived Maryland from the Medicare payment systems (IPPS and OPPS), Medicare Readmissions Reduction Program, Medicare Hospital Acquired Conditions Program, and Medicare Value Based Purchasing.[125]

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[118] "The Maryland All-Payer Model Progression Plan." *The Maryland Health Services Cost Review Commission,* 16 Dec. 2016, p. 4, https://hscrc.state.md.us/documents/md-maphs/pr/Maryland-All-Payer-Model-Progression-Plan.pdf. Accessed 23 Sept. 2018.
[119] "The Maryland All-Payer Model Progression Plan." *The Maryland Health Services Cost Review Commission,* May 2018, p. 5, hscrc.state.md.us/Documents/Modernization/05-30-18%20Maryland%20All-Payer%20Model%20Progression%20Plan%27.pdf. Accessed 30 Nov. 2018.
[120] Health Services Cost Review Commission. "Monitoring of Maryland's New All-Payer Model Biannual Report." *The Maryland Health Services Cost Review Commission,* Apr. 2018, p. 1, hscrc.maryland.gov/Documents/legal-legislative/reports/April%202018%20Biannual%20Report%20FINAL%20051118.pdf. Accessed 30 Nov. 2018.
[121] Health Services Cost Review Commission. "Monitoring of Maryland's New All-Payer Model Biannual Report." *The Maryland Health Services Cost Review Commission,* Apr. 2018, p. 3, hscrc.maryland.gov/Documents/legal-legislative/reports/April%202018%20Biannual%20Report%20FINAL%20051118.pdf. Accessed 30 Nov. 2018.
[122] Haber ScD, Susan, et. al. "Evaluation of the Maryland All-Payer Model First Annual Report." *Centers for Medicare & Medicaid Services,* Oct. 2016, pp. 29-30, https://downloads.cms.gov/files/cmmi/marylandallpayer-firstannualrpt.pdf. Accessed 30 Nov. 2018.
[123] Haber ScD, Susan, et. al. "Evaluation of the Maryland All-Payer Model First Annual Report." *Centers for Medicare & Medicaid Services,* Oct. 2016, pp. 29-30, 33-34, https://downloads.cms.gov/files/cmmi/marylandallpayer-firstannualrpt.pdf. Accessed 30 Nov. 2018.
[124] "Maryland All-Payer Model Agreement." *The Maryland Health Services Cost Review Commission,* p. 6, hscrc.state.md.us/documents/md-maphs/stkh/MD-All-Payer-Model-Agreement-%28executed%29.pdf. Accessed 23 Sept. 2018.
[125] "Maryland All-Payer Model Agreement." *The Maryland Health Services Cost Review Commission,* pp. 3-4, hscrc.state.md.us/documents/md-maphs/stkh/MD-All-Payer-Model-Agreement-%28executed%29.pdf. Accessed 23 Sept. 2018.

Under the Maryland All-Payer Model agreement, Maryland was incentivized to meet the performance measures or face possible termination of the agreement.[126] The Model allowed for CMS to issue warnings and required the hospital to submit a corrective action plan if CMS determined a triggering event occurred, as outlined in the Maryland All-Payer agreement terms.[127] The agreement also allowed for CMS to terminate the agreement if the triggering event was related to any of the Medicare Payment Waivers included in the agreement.[128] Maryland did not have any triggering events.[129]

The Maryland All-Payer Model did not include a playbook, detailing all steps for implementation and success, rather the HSCRC had to create policies for the hospitals to follow and the hospitals had to develop their own strategies for how they would implement the model within their hospital, such as hiring staff to focus on quality measures.[130] The HSCRC created an Advisory Council, which was in place from 2013-2015, to help guide them in implementing the Model.[131] The Advisory Council meetings were held publicly and provided a way for stakeholders to discuss issues and possible solutions for the HSCRC to consider.[132] The Advisory Council's membership consisted of representation from across Maryland's health care industry.[133]

In addition to the Advisory Council, the HSCRC also created the following workgroups: Payment Models, Performance Measurement, Physician Alignment and Engagement, Care Coordination, and Data and Infrastructure (see Appendix C).[134] The workgroups focused on providing recommendations to the HSCRC and stakeholders regarding payment model structure; metrics for measuring performance for utilization, value-based payment, and patient experience and patient-centered outcomes programs; how the Maryland All-Payer Model should align and engage other providers; support for care improvement strategies; and data and infrastructure

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[126] "Maryland All-Payer Model Agreement." *The Maryland Health Services Cost Review Commission,* pp. 18-19, hscrc.state.md.us/documents/md-maphs/stkh/MD-All-Payer-Model-Agreement-%28executed%29.pdf. Accessed 23 Sept. 2018.
[127] "Maryland All-Payer Model Agreement." *The Maryland Health Services Cost Review Commission,* pp. 17-19, hscrc.state.md.us/documents/md-maphs/stkh/MD-All-Payer-Model-Agreement-%28executed%29.pdf. Accessed 23 Sept. 2018.
[128] "Maryland All-Payer Model Agreement." *The Maryland Health Services Cost Review Commission,* pp. 18, 3-4, hscrc.state.md.us/documents/md-maphs/stkh/MD-All-Payer-Model-Agreement-%28executed%29.pdf. Accessed 23 Sept. 2018.
[129] "Monitoring of Maryland's New Maryland All-Payer Model Biannual Report." *The Maryland Health Services Cost Review Commission,* Apr. 2018, pp. 19-20, https://hscrc.state.md.us/Documents/legal-legislative/reports/April%202018%20Biannual%20Report%20FINAL%20051118.pdf. Accessed 30 Nov. 2018.
[130] Haber ScD, Susan, et. al. "Evaluation of the Maryland All-Payer Model First Annual Report." *Centers for Medicare & Medicaid Services,* Oct. 2016, p. ES-2, https://downloads.cms.gov/files/cmmi/marylandallpayer-firstannualrpt.pdf. Accessed 30 Nov. 2018.
[131] "All Payer Hospital System Modernization 2013-2015 Advisory Council." *The Maryland Health Services Cost Review Commission,* https://hscrc.state.md.us/Pages/hscrc-advisory-council-2013-2015.aspx. Accessed 30 Nov. 2018.
[132] "All Payer Hospital System Modernization 2013-2015 Advisory Council." *The Maryland Health Services Cost Review Commission,* https://hscrc.state.md.us/Pages/hscrc-advisory-council-2013-2015.aspx. Accessed 30 Nov. 2018.
[133] "All Payer Hospital System Modernization 2013-2015 Advisory Council." *The Maryland Health Services Cost Review Commission,* https://hscrc.state.md.us/Pages/hscrc-advisory-council-2013-2015.aspx. Accessed 30 Nov. 2018.
[134] "Completed Workgroups." *The Maryland Health Services Cost Review Commission,* https://hscrc.state.md.us/Pages/Completed-Workgroups.aspx. Accessed 30 Nov. 2018.

need.[135] In 2015, the HSCRC created workgroups for Consumer Engagement, Outreach, and Education.[136] These workgroups focused on developing education to help consumers understand the Maryland All-Payer model, strategies to engage consumers, and communications for the public.[137] All of these workgroups allowed for significant stakeholder engagement and helped shape the Maryland All-Payer Model for success.[138]

The Maryland All-Payer Model has shown great success since it was implemented in 2014, by meeting or exceeding all performance measure targets; and in some cases, meeting the performance measure target early.[139] Please note that as of this writing, data for 2018, the last year of the Maryland All-Payer Model was not available. Below is an analysis of the success Maryland has had under the performance metrics for the Maryland All-Payer Model.

Regulated Hospital Revenue to Global or Population-Based Revenue

A very early success for Maryland was the transition of 95 percent of hospital revenues to TPR (total patient revenue) or GBR (global budget revenue) by July of 2014.[140] The performance measure target was for greater than or equal to 80 percent of regulated hospital revenue to be moved to either global (based on historical hospital information) or population based revenue (based on a specific population or specific residents) by year five of the model.[141] Maryland was incentivized to meet this metric since there were incremental requirements that had to be met, starting with year two of having moved 50 percent, which was also met early.[142] By April of 2017, all hospital revenues had been transitioned to GBR.[143] This early success can be attributed to yearly

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[135] "HSCRC Implementation of Population-Based and Patient-Centered Payment Systems Workgroup Descriptions." *The Maryland Health Services Cost Review Commission,* 13, Jan. 2014, hscrc.state.md.us/Documents/md-maphs/wg/hscrc-workgroups-descriptions-2014-01-13.pdf. Accessed 30 Nov. 2018.
[136] "Monitoring of Maryland's New Maryland All-Payer Model Biannual Report." *The Maryland Health Services Cost Review Commission,* 1 Apr. 2015, p. 13, https://hscrc.state.md.us/Documents/legal-legislative/reports/HSCRC-Biannual-Report-on-All-Payer-Model-April-2015.pdf. Accessed 30 Nov. 2018.
[137] "Monitoring of Maryland's New Maryland All-Payer Model Biannual Report." *The Maryland Health Services Cost Review Commission,* 1 Apr. 2015, p. 13, https://hscrc.state.md.us/Documents/legal-legislative/reports/HSCRC-Biannual-Report-on-All-Payer-Model-April-2015.pdf. Accessed 30 Nov. 2018.
[138] "Completed Workgroups." *The Maryland Health Services Cost Review Commission,* https://hscrc.state.md.us/Pages/Completed-Workgroups.aspx. Accessed 30 Nov. 2018.
[139] "HSCRC All-Payer Model Results, CY 2014 -2017." *The Maryland Health Services Cost Review Commission,* hscrc.maryland.gov/Documents/Modernization/Updated%20APM%20results%20through%20PY4.pdf. Accessed 30 Nov. 2018.
[140] Haber ScD, Susan, et. al. "Evaluation of the Maryland All-Payer Model First Annual Report." *Centers for Medicare & Medicaid Services,* Oct. 2016, p. ES-2, downloads.cms.gov/files/cmmi/marylandallpayer-firstannualrpt.pdf. Accessed 30 Nov. 2018.
[141] "Maryland All-Payer Model Agreement." *The Maryland Health Services Cost Review Commission,* p. 12, hscrc.state.md.us/documents/md-maphs/stkh/MD-All-Payer-Model-Agreement-%28executed%29.pdf. Accessed 23 Sept. 2018.
[142] "Maryland All-Payer Model Agreement." *The Maryland Health Services Cost Review Commission,* p. 12, hscrc.state.md.us/documents/md-maphs/stkh/MD-All-Payer-Model-Agreement-%28executed%29.pdf. Accessed 23 Sept. 2018.
[143] "Monitoring of Maryland's New Maryland All-Payer Model Biannual Report." *The Maryland Health Services Cost Review Commission,* 1 Apr. 2018, p. 13, https://hscrc.maryland.gov/Documents/legal-legislative/reports/April%202018%20Biannual%20Report%20FINAL%20051118.pdf. Accessed 30 Nov. 2018.

requirements under the model, but also to the relationship that the HSCRC had with the hospitals and the hospitals' desire to be successful under the model.[144]

All-Payer Total Inpatient and Outpatient Hospital Cost Growth Per Capita

The performance measure target was to limit cumulative hospital cost per capita growth to 3.58 percent for Maryland residents.[145] Maryland limited the growth per capita to 1.47 percent for 2014, 2.31 percent for 2015, 0.80 percent for 2016, and 3.54 percent in 2017, all under the performance measure target.[146] Success of maintaining the hospital cost growth per capita under 3.58 percent can be attributed mainly to the effect that global budgets had on hospitals.[147] Global budgets are set by the HSCRC prior to the start of a fiscal year; which allowed each hospital to know what their total revenue was for the fiscal year.[148] Having this information allowed hospitals to develop strategies focused on the goals of the Maryland All-Payer Model of "promoting better care, better health, and lower cost for all Maryland patients."[149]

In the first three years of the model, the HSCRC provided financial support ($200 million) to the hospitals which allowed them to invest in programs for "1) disease management; 2) post-discharge and transitional care; 3) community care coordination; 4) case management, and 5) consumer education and engagement." [150] In addition, the HSCRC allowed the hospitals to "compensate" for volume changes by allowing the hospital to adjust their unit rates throughout the fiscal year without HSCRC approval as long as they stayed within the HSCRC approved "charge corridor", allowing the hospital to meet their global budget revenue by the end of the fiscal year.[151] The hospitals were incentivized to meet their global budget or they faced severe penalties, which increased depending on the percent they were over or under; however, hospitals could be over or

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[144] Haber ScD, Susan, et. al. "Evaluation of the Maryland All-Payer Model First Annual Report." *Centers for Medicare & Medicaid Services,* Oct. 2016, p. 143, https://downloads.cms.gov/files/cmmi/marylandallpayer-firstannualrpt.pdf. Accessed 30 Nov. 2018.
[145] "Maryland All-Payer Model Agreement." *The Maryland Health Services Cost Review Commission,* p. 8, hscrc.state.md.us/documents/md-maphs/stkh/MD-All-Payer-Model-Agreement-%28executed%29.pdf. Accessed 23 Sept. 2018.
[146] "HSCRC All-Payer Model Results, CY 2014 – 2017." T*he Maryland Health Services Cost Review Commission.* www.hscrc.state.md.us/Documents/Modernization/Updated%20APM%20results%20through%20PY4.pdf. Accessed 18 Oct. 2018.
[147] "Monitoring of Maryland's New Maryland All-Payer Model Biannual Report." *The Maryland Health Services Cost Review Commission,* 1 Apr. 2018, p. 14, https://hscrc.maryland.gov/Documents/legal-legislative/reports/April%202018%20Biannual%20Report%20FINAL%20051118.pdf. Accessed 30 Nov. 2018.
[148] "Monitoring of Maryland's New Maryland All-Payer Model Biannual Report." *The Maryland Health Services Cost Review Commission,* 1 Apr. 2018, p. 14, https://hscrc.maryland.gov/Documents/legal-legislative/reports/April%202018%20Biannual%20Report%20FINAL%20051118.pdf. Accessed 30 Nov. 2018.
[149] "Monitoring of Maryland's New Maryland All-Payer Model Biannual Report." *The Maryland Health Services Cost Review Commission,* 1 Apr. 2018, p. 14, https://hscrc.maryland.gov/Documents/legal-legislative/reports/April%202018%20Biannual%20Report%20FINAL%20051118.pdf. Accessed 30 Nov. 2018.
[150] "Monitoring of Maryland's New Maryland All-Payer Model Biannual Report." *The Maryland Health Services Cost Review Commission,* 1 Apr. 2018, p. 15, https://hscrc.maryland.gov/Documents/legal-legislative/reports/April%202018%20Biannual%20Report%20FINAL%20051118.pdf. Accessed 30 Nov. 2018.
[151] "Monitoring of Maryland's New Maryland All-Payer Model Biannual Report." *The Maryland Health Services Cost Review Commission,* 1 Apr. 2018, p. 14, hscrc.maryland.gov/Documents/legal-legislative/reports/April%202018%20Biannual%20Report%20FINAL%20051118.pdf. Accessed 30 Nov. 2018.

under budget by 0.0 – 0.5 percent and not be penalized.[152] These penalties were placed on hold for the fiscal year 2014 to allow for hospitals to adjust to the new model.[153]

Medicare per Beneficiary Total Hospital Cost Growth

Maryland was required to save $330 million cumulatively over the five year model agreement.[154] As per the Maryland All-Payer Model Agreement, each year had a specific minimum of cumulative savings that had to be met: year one $0, year two $49.5 million, year three $132 million, year four $247.5 million, and year five $330 million.[155] Within the first year of the Maryland All-Payer Model, Maryland met the cumulative savings for years one and two by saving $120 million and by 2016 had exceeded the year five performance target with $586 million in cumulative savings.[156] By 2017, the cumulative savings were $916 million.[157] According to the Third Annual Report from RTI International, which evaluated the first three years of the Maryland All-Payer Model, cumulative savings were attributed to reductions in hospital expenses for outpatient services, particularly ED visits and observation stays.[158]

Medicare Savings per Beneficiary Total Cost of Care Growth

Maryland's agreement required Maryland to maintain a growth rate for total cost of care that was lower than the national rate and to determine the savings.[159] The savings were calculated by CMS, using 2013 expenses as the baseline to make comparisons and determine the savings

[152] Haber ScD, Susan, et. al. "Evaluation of the Maryland All-Payer Model First Annual Report." *Centers for Medicare & Medicaid Services,* Oct. 2016, p. 7, downloads.cms.gov/files/cmmi/marylandallpayer-firstannualrpt.pdf. Accessed 30 Nov. 2018.

[153] Haber ScD, Susan, et. al. "Evaluation of the Maryland All-Payer Model First Annual Report." *Centers for Medicare & Medicaid Services,* Oct. 2016, p. 43, downloads.cms.gov/files/cmmi/marylandallpayer-firstannualrpt.pdf. Accessed 30 Nov. 2018.

[154] "Maryland All-Payer Model Agreement." *The Maryland Health Services Cost Review Commission,* p. 9, hscrc.state.md.us/documents/md-maphs/stkh/MD-All-Payer-Model-Agreement-%28executed%29.pdf. Accessed 23 Sept. 2018.

[155] "Maryland All-Payer Model Agreement." *The Maryland Health Services Cost Review Commission,* p. 9, hscrc.state.md.us/documents/md-maphs/stkh/MD-All-Payer-Model-Agreement-%28executed%29.pdf. Accessed 23 Sept. 2018.

[156] "HSCRC All-Payer Model Results, CY 2014 – 2017." T*he Maryland Health Services Cost Review Commission.* www.hscrc.state.md.us/Documents/Modernization/Updated%20APM%20results%20through%20PY4.pdf. Accessed 18 Oct. 2018.

[157] "HSCRC All-Payer Model Results, CY 2014 – 2017." T*he Maryland Health Services Cost Review Commission.* www.hscrc.state.md.us/Documents/Modernization/Updated%20APM%20results%20through%20PY4.pdf. Accessed 18 Oct. 2018.

[158] Haber ScD, Susan, et. al. "Evaluation of the Maryland All-Payer Model Third Annual Report." *Centers for Medicare & Medicaid Services,* Mar. 2018, p. ES-1, https://downloads.cms.gov/files/cmmi/md-all-payer-thirdannrpt.pdf. Accessed 30 Nov. 2018.

[159] "Maryland All-Payer Model Agreement." *The Maryland Health Services Cost Review Commission,* p. 10, hscrc.state.md.us/documents/md-maphs/stkh/MD-All-Payer-Model-Agreement-%28executed%29.pdf. Accessed 23 Sept. 2018.

from year to year.[160] Maryland remained below the national average growth rate from 2014-2017, which resulted in cumulative savings of $599 million.[161]

Maryland Readmission Reductions for Medicare Patients

Maryland was required to be at or below the national readmissions rate by the end of the five year model agreement (2018).[162] Reducing readmissions has been a part of Maryland rate setting since 2011.[163] Maryland's Readmission Reduction Incentive Program (RRIP) incentivized the hospitals to reduce unnecessary readmissions.[164] This program included both rewards and penalties for each hospital's performance in meeting the metrics.[165] Maryland began the Maryland All-Payer Model with a readmission rate of 18.16 percent compared to the national rate of 16.29 percent.[166] By 2017, Maryland's readmission rate was 15.24 percent and the nation's was 15.43 percent.[167]

The third annual evaluation report of the Maryland All-Payer Model, by RTI International, identified many strategies that Maryland hospitals were taking to prevent readmissions during the first three years of the model.[168] From the report, it was identified that hospitals were utilizing data to identify, track, and trend patients who had been readmitted or were at risk for readmission.[169] From this data the hospitals identified causes of the readmissions such as social factors, post-acute care facilities not managing their patients, and access issues to behavioral health services; and developed strategies to prevent readmissions for these causes.[170] Strategies that hospitals implemented were discharge planning at the start of the patient's admission, utilizing care

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[160] "Maryland All-Payer Model Agreement." *The Maryland Health Services Cost Review Commission,* p. 10, hscrc.state.md.us/documents/md-maphs/stkh/MD-All-Payer-Model-Agreement-%28executed%29.pdf. Accessed 23 Sept. 2018.

[161] "HSCRC All-Payer Model Results, CY 2014 – 2017." *The Maryland Health Services Cost Review Commission.* www.hscrc.state.md.us/Documents/Modernization/Updated%20APM%20results%20through%20PY4.pdf. Accessed 18 Oct. 2018.

[162] "Maryland All-Payer Model Agreement." *The Maryland Health Services Cost Review Commission,* p. 12, hscrc.state.md.us/documents/md-maphs/stkh/MD-All-Payer-Model-Agreement-%28executed%29.pdf. Accessed 23 Sept. 2018.

[163] "Admission-Readmission Revenue (ARR)." *The Maryland Health Services Cost Review Commission,* https://hscrc.state.md.us/Pages/init_arr.aspx. Accessed 30 Nov. 2018.

[164] "Readmission Reduction Incentive Program (RRIP)." *The Maryland Health Services Cost Review Commission,* https://hscrc.state.md.us/Pages/init-readm-rip.aspx. Accessed 30 Nov. 2018.

[165] "Readmission Reduction Incentive Program (RRIP)." *The Maryland Health Services Cost Review Commission,* https://hscrc.state.md.us/Pages/init-readm-rip.aspx. Accessed 30 Nov. 2018.

[166] "Monitoring of Maryland's New Maryland All-Payer Model Biannual Report." *The Maryland Health Services Cost Review Commission,* 1 Apr. 2018, p. 7, https://hscrc.maryland.gov/Documents/legal-legislative/reports/April%202018%20Biannual%20Report%20FINAL%20051118.pdf. Accessed 30 Nov. 2018.

[167] "Monitoring of Maryland's New Maryland All-Payer Model Biannual Report." *The Maryland Health Services Cost Review Commission,* 1 Apr. 2018, p. 7, https://hscrc.maryland.gov/Documents/legal-legislative/reports/April%202018%20Biannual%20Report%20FINAL%20051118.pdf. Accessed 30 Nov. 2018.

[168] Haber ScD, Susan, et. al. "Evaluation of the Maryland All-Payer Model Third Annual Report." *Centers for Medicare & Medicaid Services,* Mar. 2018, p. 13, downloads.cms.gov/files/cmmi/md-all-payer-thirdannrpt.pdf. Accessed 30 Nov. 2018.

[169] Haber ScD, Susan, et. al. "Evaluation of the Maryland All-Payer Model Third Annual Report." *Centers for Medicare & Medicaid Services,* Mar. 2018, p. 19, downloads.cms.gov/files/cmmi/md-all-payer-thirdannrpt.pdf. Accessed 30 Nov. 2018.

[170] Haber ScD, Susan, et. al. "Evaluation of the Maryland All-Payer Model Third Annual Report." *Centers for Medicare & Medicaid Services,* Mar. 2018, pp. 17-22, downloads.cms.gov/files/cmmi/md-all-payer-thirdannrpt.pdf. Accessed 30 Nov. 2018.

managers and social workers to identify a patient's needs outside of the hospital prior to their discharge, hired care coordinators to assist patients with getting care after discharge, and in some cases, the hospital provided patients with transportation, food and other general necessities.[171] According to the RTI third annual report, one hospital reported that telemonitoring was implemented to allow for the hospital to check on patients who had congestive heart failure, but had been discharged.[172]

Maryland Hospital Acquired Conditions Program

Maryland was required to achieve a 30 percent reduction for all 65 potentially preventable conditions (PPCs) that were established under this program.[173] Maryland achieved this metric early, in 2015, with a 34 percent reduction since 2013 and by 2017 the reduction since 2013 was calculated to be 53 percent.[174]

Overall model results for CY 2014 -2017 are available in Appendix D. These results list the performance measures and targets agreed to under the model and shows that Maryland hospitals met those measures and targets for CY 2014-2017 (data for 2018 was not available at the time of this writing).[175]

C. Key Elements of Maryland Rate Setting for Other States to Consider

When one looks at Maryland's lengthy history of rate setting, the reasons why Maryland has been successful with hospital rate setting do not necessarily standout. However, when it comes to other states looking at Maryland, as a possible model to not only control healthcare costs, but also to achieve the "Triple Aim", it is important for those states to understand certain elements that have allowed Maryland to successfully continue setting rates for the hospitals and control hospital costs for decades. [176]

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[171] Haber ScD, Susan, et. al. "Evaluation of the Maryland All-Payer Model Third Annual Report." *Centers for Medicare & Medicaid Services,* Mar. 2018, pp. 18-22, https://downloads.cms.gov/files/cmmi/md-all-payer-thirdannrpt.pdf. Accessed 30 Nov. 2018.

[172] Haber ScD, Susan, et. al. "Evaluation of the Maryland All-Payer Model Third Annual Report." *Centers for Medicare & Medicaid Services,* Mar. 2018, p. 22, https://downloads.cms.gov/files/cmmi/md-all-payer-thirdannrpt.pdf. Accessed 30 Nov. 2018.

[173] "Maryland All-Payer Model Agreement." *The Maryland Health Services Cost Review Commission,* p. 13, hscrc.state.md.us/documents/md-maphs/stkh/MD-All-Payer-Model-Agreement-%28executed%29.pdf. Accessed 23 Sept. 2018.

[174] HSCRC. "HSCRC All-Payer Model Results, CY 2014 – 2017." *The Maryland Health Services Cost Review Commission.,*www.hscrc.state.md.us/Documents/Modernization/Updated%20APM%20results%20through%20PY4.pdf. Accessed 18 Oct. 2018.

[175] HSCRC. "HSCRC All-Payer Model Results, CY 2014 – 2017." T*he Maryland Health Services Cost Review Commission.* www.hscrc.state.md.us/Documents/Modernization/Updated%20APM%20results%20through%20PY4.pdf. Accessed 18 Oct. 2018.

[176] Berwick, Donald M., et al. "The Triple Aim: Care, Health, And Cost." *Health Affairs,* vol.27, no. 3, 2008, p.760, www.healthaffairs.org/doi/10.1377/hlthaff.27.3.759. Accessed 14 Nov. 2018.

Legislative Support, Vision, and Enacting Legislation

Maryland has had significant legislative support from the start, in addition to support from the Maryland hospitals and the Maryland Hospital Association.[177] When Maryland first set out on this unique journey, the state had concerns regarding increasing hospital costs within the state, which continued to rise after Medicare and Medicaid came into existence in 1965, and with the impact that hospitals would face by providing services to individuals who could not afford to pay for their care.[178] With these two concerns, Maryland's legislature created a vision "(1) to constrain hospital growth; (2) to ensure that hospitals would have the financial ability to provide efficient, high quality service to all Marylanders; and (3) to increase the equity or fairness of hospital financing."[179]

To support the vision, Maryland's legislature adopted eight principles: 1. A Maryland Solution; 2. Social Mission; 3. Fairness and Equity; 4. Solvency Must Be Earned; 5. Regulation; 6. Public Accountability; 7. Trust and Cooperation; and 8. Prospective Payment.[180] These principles together set the stage for the creation of a state hospital cost control solution that would regulate hospital services on a prospective basis.[181] The solution incorporated elements to address uncompensated care and graduate medical expenses, payers' financial share of uncompensated care, allow hospitals to operate in "an efficient and effective manner.", and which would foster an environment of trust and cooperation between all stakeholders, with accountability to the public.[182] These eight principles were the foundation for Maryland's hospital rate setting system that the HSCRC developed and regulates.[183]

HSCRC Authority and Flexibility

The HSCRC is the heart of Maryland's unique hospital rate setting system. It is the HSCRC's responsibility to design and regulate the Maryland rate setting system.[184] It is important to

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[177] Anderson, Rhonda, et. al. "Maryland Hospital Association, Achievement, Access, and Accountability: Maryland's All-Payor Hospital Payment Systems." *The Maryland Health Services Cost Review Commission,* 2007, p. 6, hscrc.state.md.us/Documents/pdr/GeneralInformation/AshbyReport2007.pdf. Accessed 26 Jan. 2019.

[178] Cohen, Harold A. "Maryland's All-Payor Hospital Payment System." *The Maryland Health Services Cost Review Commission,* p. 2, www.hscrc.state.md.us/Documents/pdr/GeneralInformation/MarylandAll-PayorHospitalSystem.pdf. Accessed 28 Oct. 2018.

[179] Cohen, Harold A. "Maryland's All-Payor Hospital Payment System." *The Maryland Health Services Cost Review Commission,* p. 2, www.hscrc.state.md.us/Documents/pdr/GeneralInformation/MarylandAll-PayorHospitalSystem.pdf. Accessed 28 Oct. 2018.

[180] Cohen, Harold A. "Maryland's All-Payor Hospital Payment System." *The Maryland Health Services Cost Review Commission,* pp. 3-4, www.hscrc.state.md.us/Documents/pdr/GeneralInformation/MarylandAll-PayorHospitalSystem.pdf. Accessed 28 Oct. 2018.

[181] Cohen, Harold A. "Maryland's All-Payor Hospital Payment System." *The Maryland Health Services Cost Review Commission,* pp. 3-4, www.hscrc.state.md.us/Documents/pdr/GeneralInformation/MarylandAll-PayorHospitalSystem.pdf. Accessed 28 Oct. 2018.

[182] Cohen, Harold A. "Maryland's All-Payor Hospital Payment System." *The Maryland Health Services Cost Review Commission,* pp. 3-4, www.hscrc.state.md.us/Documents/pdr/GeneralInformation/MarylandAll-PayorHospitalSystem.pdf. Accessed 28 Oct. 2018.

[183] Cohen, Harold A. "Maryland's All-Payor Hospital Payment System." *The Maryland Health Services Cost Review Commission,* p. 4, www.hscrc.state.md.us/Documents/pdr/GeneralInformation/MarylandAll-PayorHospitalSystem.pdf. Accessed 28 Oct. 2018.

[184] Murray, Robert. "Setting Hospital Rates to Control Costs And Boost Quality: The Maryland Experience." *Health Affairs,* vol. 28, no.5, 2009, p. 1396. www.healthaffairs.org/doi/pdf/10.1377/hlthaff.28.5.1395. Accessed 18 Oct. 2018.

highlight that the HSCRC, through the 1971 legislation, was created as an independent agency of the Maryland Department of Health and that it has the authority to develop the method by which it sets hospital rates.[185,186] Therefore, the HSCRC has the responsibility to ensure that the rate setting methodology is successful in meeting CMS waiver requirements.[187] The HSCRC also has flexibility in changing rate setting methodology and when changes are necessary, does not have to go through the Maryland legislative process for approval of the changes.[188]

Stakeholders

The success of Maryland's rate setting system would not be possible without the support of the stakeholders. As described previously, there was significant Maryland legislative support from the beginning.[189] Throughout the previous hospital rate setting model, the HSCRC not only engaged the stakeholders, but also had support from them, particularly when changes to the hospital rate setting structure needed to be made.[190] As discussed earlier, under the Maryland All-Payer Model, the HSCRC formed various work groups to shape the new model to succeed (see Appendix C).[191] According to the HSCRC's October 2015 Biannual Report on the Monitoring of Maryland's New All-Payer Model, "More than one hundred stakeholders representing consumers, businesses, payers, providers, physicians, nurses, other health care professionals, and experts have participated in these Work Groups."[192]

Transparency

The HSCRC, by Maryland law, is obligated to collect and "publicly disclose information on the cost and financial position of hospitals".[193] The HSCRC is also required, by law, to submit an annual report, to the Governor, Secretary of the Maryland Department of Health, and as applicable, to the Maryland General Assembly, regarding the operations and activities of the HSCRC.[194] In addition, all of the meetings that the HSCRC holds and the Work Group meetings, are public and public comments are welcomed.[195] Therefore, there is a significant amount of transparency related

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[185] Md. HEALTH-GENERAL Code Ann. § 19-203
[186] Md. HEALTH-GENERAL Code Ann. § 19-211(c)
[187] Md. HEALTH-GENERAL Code Ann. § 19-219, §19-220, §19-221, §19-222
[188] Md. HEALTH-GENERAL Code Ann. § 19-219, §19-220, §19-221, §19-222
[189] Anderson, Rhonda, et. al. "Maryland Hospital Association, Achievement, Access, and Accountability: Maryland's All-Payor Hospital Payment Systems." *The Maryland Health Services Cost Review Commission,* 2007, p. 6, hscrc.state.md.us/Documents/pdr/GeneralInformation/AshbyReport2007.pdf. Accessed 26 Jan. 2019.
[190] Anderson, Rhonda, et. al. "Maryland Hospital Association, Achievement, Access, and Accountability: Maryland's All-Payor Hospital Payment Systems." *The Maryland Health Services Cost Review Commission,* 2007, p. 21, hscrc.state.md.us/Documents/pdr/GeneralInformation/AshbyReport2007.pdf. Accessed 26 Jan. 2019.
[191] "Monitoring of Maryland's New Maryland All-Payer Model Biannual Report." *The Maryland Health Services Cost Review Commission,* Oct. 2015, p. 11, https://hscrc.maryland.gov/Documents/legal-legislative/reports/HSCRC-Biannual-Report-All-Payer-Model-2015-10-22.pdf. Accessed 30 Nov. 2018.
[192] "Monitoring of Maryland's New Maryland All-Payer Model Biannual Report." *The Maryland Health Services Cost Review Commission,* Oct. 2015, p. 10, https://hscrc.maryland.gov/Documents/legal-legislative/reports/HSCRC-Biannual-Report-All-Payer-Model-2015-10-22.pdf. Accessed 30 Nov. 2018.
[193] Anderson, Rhonda, et. al. "Maryland Hospital Association, Achievement, Access, and Accountability: Maryland's All-Payor Hospital Payment Systems." *The Maryland Health Services Cost Review Commission,* 2007, p. 6, hscrc.state.md.us/Documents/pdr/GeneralInformation/AshbyReport2007.pdf. Accessed 26 Jan. 2019.
[194] Md. HEALTH-GENERAL Code Ann. § 19-207(b)(6)
[195] "Stakeholder Engagement and Workgroups." *The Maryland Health Services Cost Review Commission,* https://hscrc.state.md.us/Pages/Workgroups-Home.aspx. Accessed 26 Jan. 2019.

not only to the financial picture of Maryland hospitals, but also with regard to the workings of the HSCRC and the stakeholders.[196]

Data

Hospital data is a crucial element for hospital rate setting and quality programs; and without access to the data any hospital rate setting system would fail.[197] Data must be collected, analyzed, and reported on in a standard way.[198] The Maryland All-Payer Model not only requires the hospitals to submit financial data, but the HSCRC also needs access to patient level detail in order to monitor the hospitals' progress with the QBR programs.[199] The HSCRC has leveraged Maryland's HIE provider, CRISP, to support their data needs, but also to develop data sharing capabilities with the hospitals.[200]

CMS Waiver

The catalyst to Maryland's success is the CMS waiver.[201] Prior to 1983, Medicare paid hospitals on a "retrospective cost basis".[202] Beginning in 1983, Medicare began paying inpatient services under IPPS, which was based on Diagnosis Related Groups (DRGs),[203] and in 2000, outpatient services under OPPS, which was based on Ambulatory Payment Classifications (APCs).[204] Initially, Maryland obtained a temporary waiver, but it wasn't until 1980 that federal law allowed for the waiver to become permanent, thus allowing Maryland to continue to be reimbursed under HSCRC's rate setting methodology.[205] Without this waiver, the HSCRC would

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[196] Anderson, Rhonda, et. al. "Maryland Hospital Association, Achievement, Access, and Accountability: Maryland's All-Payor Hospital Payment Systems." *The Maryland Health Services Cost Review Commission,* 2007, p. 6, hscrc.state.md.us/Documents/pdr/GeneralInformation/AshbyReport2007.pdf. Accessed 26 Jan. 2019.

[197] "Data and Infrastructure Work Group Report to the Commission: Recommendations on Data Requirements for Monitoring the All-Payer Model." *The Maryland Health Services Cost Review Commission,* p. 3, .https://hscrc.state.md.us/Documents/commission-meeting/2014/05-14/Post/04-hscrc-data-infrastructure-report-to-commission-recommendations-on-data-requirements-2014-05-14.pdf. Accessed 26 Jan. 2019.

[198] "Data and Infrastructure Work Group Report to the Commission: Recommendations on Data Requirements for Monitoring the All-Payer Model." *The Maryland Health Services Cost Review Commission,* pp. 4-10, .https://hscrc.state.md.us/Documents/commission-meeting/2014/05-14/Post/04-hscrc-data-infrastructure-report-to-commission-recommendations-on-data-requirements-2014-05-14.pdf. Accessed 26 Jan. 2019.

[199] "HIE Work group Meeting Documents." "HSCRC-CRISP." *The Maryland Health Services Cost Review Commission.* hscrc.state.md.us/Pages/init_hie.aspx. Accessed 26 Jan. 2019.

[200] "HIE Work group Meeting Documents." "HSCRC-CRISP." *The Maryland Health Services Cost Review Commission.* hscrc.state.md.us/Pages/init_hie.aspx. Accessed 26 Jan. 2019.

[201] Anderson, Rhonda, et. al. "Maryland Hospital Association, Achievement, Access, and Accountability: Maryland's All-Payor Hospital Payment Systems." *The Maryland Health Services Cost Review Commission,* 2007, p. 4, hscrc.state.md.us/Documents/pdr/GeneralInformation/AshbyReport2007.pdf. Accessed 26 Jan. 2019.

[202] Guterman Stuart, et al. "Impact of the Medicare Prospective Payment System for Hospitals." *Health Care Financing Review*, vol. 7, no. 3, 1986, p. 97, https://www.cms.gov/Research-Statistics-Data-and-Systems/Research/HealthCareFinancingReview/Downloads/CMS1191951dl.pdf. Accessed 13 Feb. 2019.

[203] Guterman Stuart, et al. "Impact of the Medicare Prospective Payment System for Hospitals." *Health Care Financing Review*, vol. 7, no. 3, 1986, p. 97, https://www.cms.gov/Research-Statistics-Data-and-Systems/Research/HealthCareFinancingReview/Downloads/CMS1191951dl.pdf. Accessed 13 Feb. 2019.

[204] "Hospital Outpatient Prospective Payment System." *Centers for Medicare and Medicaid,* Dec. 2017, pp.3, 6. www.cms.gov/Outreach-and-Education/Medicare-Learning-Network-MLN/MLNProducts/downloads/hospitaloutpaysysfctsht.pdf. Accessed 13 Feb. 2019.

[205] Anderson, Rhonda, et. al. "Maryland Hospital Association, Achievement, Access, and Accountability: Maryland's All-Payor Hospital Payment Systems." *The Maryland Health Services Cost Review Commission,* 2007, p. 4, hscrc.state.md.us/Documents/pdr/GeneralInformation/AshbyReport2007.pdf. Accessed 26 Jan. 2019.

not have been able to move forward with rate setting that would effectively fulfill Maryland's legislative vision and principles; since federal law established how Medicare would reimburse hospital services.[206] As Robert Murray, former Executive Director of the HSCRC, indicated, "The Medicare waiver is the lynchpin for the system and a galvanizing force for all stakeholders."[207]

Incentives and Penalties

The HSCRC has a history of utilizing various incentives and penalties to encourage the hospitals to control costs and improve quality.[208] Both Maryland's original hospital rate setting system, prior to 2014, and the Maryland All-Payer Model contained financial incentives and penalties to encourage the hospitals to be more efficient and effective in how they operated.[209,210] Two examples where incentives or penalties were utilized, are the Maryland Admission-Readmission Revenue (ARR) program, which provided financial incentives to reduce readmissions; and global budgets (GBR), which assessed penalties if a hospital was over budget.[211,212]

D. Model for Other States

Maryland's All-Payer Model is unique, yet it has resulted in successful control of costs, improved quality of care, and provided financial stability for the hospitals.[213] While other states could benefit from implementing this model, it does not appear to be a model that other states can completely replicate, due to Maryland's history with hospital rate setting. The infrastructure to support the Maryland All-Payer Model began prior to 1971 with the drafting of the legislation that was passed in 1971, that created the HSCRC and began the lengthy

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[206] Guterman Stuart, et al. "Impact of the Medicare Prospective Payment System for Hospitals." *Health Care Financing Review*, vol. 7, no. 3, 1986, p. 97, https://www.cms.gov/Research-Statistics-Data-and-Systems/Research/HealthCareFinancingReview/Downloads/CMS1191951dl.pdf. Accessed 13 Feb. 2019.

[207] Murray, Robert. "Setting Hospital Rates to Control Costs And Boost Quality: The Maryland Experience." *Health Affairs,* vol. 28, no.5, 2009, p. 1396. www.healthaffairs.org/doi/pdf/10.1377/hlthaff.28.5.1395. Accessed October 18, 2018.

[208] "Maryland All-Payer Model Agreement." *The Maryland Health Services Cost Review Commission,* pp. 3-4, hscrc.state.md.us/documents/md-maphs/stkh/MD-All-Payer-Model-Agreement-%28executed%29.pdf. Accessed 23 Sept. 2018.

[209] Anderson, Rhonda, et. al. "Maryland Hospital Association, Achievement, Access, and Accountability: Maryland's All-Payor Hospital Payment Systems." *The Maryland Health Services Cost Review Commission,* 2007, pp. 30, 32, hscrc.state.md.us/Documents/pdr/GeneralInformation/AshbyReport2007.pdf. Accessed 26 Jan. 2019.

[210] Haber ScD, Susan, et. al. "Evaluation of the Maryland All-Payer Model First Annual Report." *Centers for Medicare & Medicaid Services,* Oct. 2016, pp.7, 49-50, downloads.cms.gov/files/cmmi/marylandallpayer-firstannualrpt.pdf. Accessed 30 Nov. 2018.

[211] "Archived Quality Initiatives." *The Maryland Health Services Cost Review Commission,* hscrc.state.md.us/Pages/Archived-Quality-Initiatives.aspx. Accessed 26 Jan. 2019.

[212] Haber ScD, Susan, et. al. "Evaluation of the Maryland All-Payer Model First Annual Report." *Centers for Medicare & Medicaid Services,* Oct. 2016, p. 7, downloads.cms.gov/files/cmmi/marylandallpayer-firstannualrpt.pdf. Accessed 30 Nov. 2018.

[213] HSCRC. "HSCRC All-Payer Model Results, CY 2014 – 2017." T*he Maryland Health Services Cost Review Commission.* www.hscrc.state.md.us/Documents/Modernization/Updated%20APM%20results%20through%20PY4.pdf. Accessed 18 Oct. 2018.

journey of hospital rate setting for Maryland.[214] Since that time, Maryland has not made any changes to the infrastructure and the Maryland hospitals and other stakeholders continue to support hospital rate setting and the HSCRC.

All-payer rate setting, which was accomplished through a waiver from CMS's inpatient and outpatient prospective payment systems, allowed for hospital rates to be set for all payers, including self-pay patients.[215] Global budgets essentially forced hospitals to find ways to effectively manage operations and stay within budget.[216] Quality care programs incentivized the hospitals to meet quality metrics; which in turn, forced hospitals to evaluate and implement processes to keep patients from being readmitted and to prevent potentially preventable complications.[217] The Care Redesign Program, while having been implemented in the last few years of the model, allowed for hospitals to align with other providers to work together to ensure patients receive care in the right setting.[218] All of these elements could help other states to transform their health care delivery system and move toward achieving the "Triple Aim".[219]

Other states should examine the Maryland All-Payer Model for consideration of implementing parts of the model, such as global budgets and quality programs that incentivize hospitals to prevent readmissions to the hospital or that incentivize hospitals to reduce potentially preventable complications.[220] In addition, other states can apply operational changes that some Maryland hospitals have made, such as implementing case management in the EDs and implementing processes to address social issues that could cause a patient to be readmitted to the hospital.[221] Other states can also learn from Maryland's history, such as the challenges that Maryland faced with hospital volumes.[222]

Vermont and Pennsylvania are two states that have examined what Maryland has accomplished under the Maryland All-Payer Model, but neither of these states have completely

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[214] Anderson, Rhonda, et. al. "Maryland Hospital Association, Achievement, Access, and Accountability: Maryland's All-Payor Hospital Payment Systems." *The Maryland Health Services Cost Review Commission,* 2007, p. 6, hscrc.state.md.us/Documents/pdr/GeneralInformation/AshbyReport2007.pdf. Accessed 26 Jan. 2019.

[215] Anderson, Rhonda, et. al. "Maryland Hospital Association, Achievement, Access, and Accountability: Maryland's All-Payor Hospital Payment Systems." *The Maryland Health Services Cost Review Commission,* 2007, p. 4, hscrc.state.md.us/Documents/pdr/GeneralInformation/AshbyReport2007.pdf. Accessed 26 Jan. 2019.

[216] Haber ScD, Susan, et. al. "Evaluation of the Maryland All-Payer Model First Annual Report." *Centers for Medicare & Medicaid Services,* Oct. 2016, p. 35, https://downloads.cms.gov/files/cmmi/marylandallpayer-firstannualrpt.pdf. Accessed 30 Nov. 2018.

[217] Haber ScD, Susan, et. al. "Evaluation of the Maryland All-Payer Model Third Annual Report." *Centers for Medicare & Medicaid Services,* Mar. 2018, pp. 17-22, downloads.cms.gov/files/cmmi/md-all-payer-thirdannrpt.pdf. Accessed 30 Nov. 2018.

[218] "Maryland All-Payer Model." *Centers for Medicare & Medicaid Services,* innovation.cms.gov/initiatives/Maryland-All-Payer-Model/. Accessed 11 Nov. 2018.

[219] Berwick, Donald M., et al. "The Triple Aim: Care, Health, And Cost." *Health Affairs,* vol.27, no. 3, 2008, p.760, www.healthaffairs.org/doi/10.1377/hlthaff.27.3.759. Accessed 14 Nov. 2018.

[220] "Maryland All-Payer Model Agreement." *The Maryland Health Services Cost Review Commission,* pp. 1-14, hscrc.state.md.us/documents/md-maphs/stkh/MD-All-Payer-Model-Agreement-%28executed%29.pdf. Accessed 23 Sept. 2018.

[221] Haber ScD, Susan, et. al. "Evaluation of the Maryland All-Payer Model Third Annual Report." *Centers for Medicare & Medicaid Services,* Mar. 2018, pp. 18-20, https://downloads.cms.gov/files/cmmi/md-all-payer-thirdannrpt.pdf. Accessed 30 Nov. 2018.

[222] Anderson, Rhonda, et. al. "Maryland Hospital Association, Achievement, Access, and Accountability: Maryland's All-Payor Hospital Payment Systems." *The Maryland Health Services Cost Review Commission,* 2007. p. 30, hscrc.state.md.us/Documents/pdr/GeneralInformation/AshbyReport2007.pdf. Accessed 26 Jan. 2019.

replicated the Maryland All-Payer Model.[223,224] Both states signed agreements with the Center's for Medicare and Medicaid Innovation Center to test alternative payment models.[225,226] However, both models differ in structure from Maryland and from each other, but incorporate pieces of the Maryland All-Payer Model and from Maryland's history of rate setting such as, global hospital budgets.[227,228]

IV. Challenges for Other States

Maryland's unique and extremely extensive history of experimenting with hospital rate setting, global budgets, and quality programs has played a monumental role in Maryland moving to the Maryland All-Payer Model. However, Maryland's history, including: the legislation passed in 1971; establishment of the HSCRC; the authority the HSCRC has had; the flexibility of the HSRC to make changes to the hospital rate setting structure; the uniformity in reporting; the support and participation of the stakeholders; the CMS waivers; as well as, transparency regarding hospital information and HSCRC operations, is what established the infrastructure that allowed Maryland to develop and implement the Maryland All-Payer Model. Unfortunately, Maryland's infrastructure poses challenges for other states seeking to completely replicate the Maryland All-Payer Model.

Other states would be challenged to establish legislative and other stakeholder buy-in and support, to pass legislation that would allow for a state commission to have such broad authority to develop and regulate a hospital rate setting system, to develop systems for uniform data reporting and analysis, to obtain a waiver from CMS, and to obtain access to extensive hospital data.[229] For decades, Maryland has had the support of the Maryland legislature, State Governors, hospitals, the Maryland Hospital Association and other stakeholders.[230] Legislation passed in 1971 established an independent state commission (HSCRC) to develop, regulate, and administer Maryland's hospital rate setting system.[231] Standard accounting and reporting

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[223] "Vermont All-Payer ACO Model." *Centers for Medicare & Medicaid Services*, https://innovation.cms.gov/initiatives/vermont-all-payer-aco-model/. Accessed 11 Nov. 2018.

[224] "Pennsylvania Rural Health Model." *Centers for Medicare & Medicaid Services*, https://innovation.cms.gov/initiatives/pa-rural-health-model/. Accessed 11 Nov. 2018.

[225]"Vermont All-Payer ACO Model." *Centers for Medicare & Medicaid Services*, https://innovation.cms.gov/initiatives/vermont-all-payer-aco-model/. Accessed 11 Nov. 2018.

[226] "Pennsylvania Rural Health Model." *Centers for Medicare & Medicaid Services*, https://innovation.cms.gov/initiatives/pa-rural-health-model/. Accessed 11 Nov. 2018.

[227] "Vermont All-Payer Model Framework." *State of Vermont Green Mountain Care* Board, pp. 13-15, https://gmcboard.vermont.gov/sites/gmcb/files/files/payment-reform/ACOAll_Payer_Payment_Model_Framework_Final_Version_2015_12_31.pdf. Accessed 11 Nov. 2018.

[228] "Pennsylvania Rural Health Model." *Centers for Medicare & Medicaid Services*, https://innovation.cms.gov/initiatives/pa-rural-health-model/. Accessed 11 Nov. 2018.

[229] Anderson, Rhonda, et. al. "Maryland Hospital Association, Achievement, Access, and Accountability: Maryland's All-Payor Hospital Payment Systems." *The Maryland Health Services Cost Review Commission,* 2007. pp.4, 6-7, hscrc.state.md.us/Documents/pdr/GeneralInformation/AshbyReport2007.pdf. Accessed 26 Jan. 2019.

[230] Anderson, Rhonda, et. al. "Maryland Hospital Association, Achievement, Access, and Accountability: Maryland's All-Payor Hospital Payment Systems." *The Maryland Health Services Cost Review Commission,* 2007, p. 6, hscrc.state.md.us/Documents/pdr/GeneralInformation/AshbyReport2007.pdf. Accessed 26 Jan. 2019.

[231] "About Us." *The Maryland Health Services Cost Review Commission,* hscrc.state.md.us/Pages/About-Us.aspx. Accessed 30 Nov. 2018.

requirements were established to provide for uniformity in data.[232] A waiver from CMS's hospital inpatient and outpatient prospective payment systems allowed for Maryland to set hospital rates for all payers, providing for uniformity.[233] Access to Maryland hospital financial and other data allowed the HSCRC to set hospital rates.[234]

Having the right support from stakeholders, creating a well thought out infrastructure, and obtaining a waiver from CMS's reimbursement systems is critical to any state's success with the Maryland All-Payer Model. Other states should assess their state's environment to determine if it would support creating the aforementioned elements of Maryland's rate setting infrastructure that allowed Maryland to create, implement, and be successful with the Maryland All-Payer Model.

For states that do not quite have the buy-in from stakeholders, these states should seek opportunities to meet with stakeholders from Maryland and utilize information gained to seek buy-in from individual stakeholders in their state. In addition, CMS should grant waivers from the inpatient and outpatient prospective payment systems to any state seeking to implement a state alternative payment system.[235]

V. Conclusion

It is well known that the cost of health care continues to rise and that there has not been a one-size-fits-all solution to control health care costs. However, any innovative state alternative payment model, such as the Maryland All-Payer Model, could become the solution to transform the delivery of health care that would lead to health care cost control and improvement in quality of care in all states. Unfortunately, the Maryland All-Payer Model will most likely not be completely replicated in other states, due to its complexity and the decades it has taken Maryland to form the infrastructure to support such a system and be successful.

Maryland's All-Payer Model has shown great success.[236] The decades of Maryland's unique history with all-payer hospital rate setting has played a considerable part in the success that Maryland has had with the Maryland All-Payer Model. Although the Maryland All-Payer Model will likely not be completely replicated, other states can learn from Maryland's success

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[232] Anderson, Rhonda, et. al. "Maryland Hospital Association, Achievement, Access, and Accountability: Maryland's All-Payor Hospital Payment Systems." *The Maryland Health Services Cost Review Commission,* 2007, p. 7, hscrc.state.md.us/Documents/pdr/GeneralInformation/AshbyReport2007.pdf. Accessed 26 Jan. 2019.
[233] Murray, Robert. "Setting Hospital Rates to Control Costs And Boost Quality: The Maryland Experience." *Health Affairs,* vol. 28, no.5, 2009, p. 1396, www.healthaffairs.org/doi/pdf/10.1377/hlthaff.28.5.1395. Accessed 18 Oct. 2018.
[234] Anderson, Rhonda, et. al. "Maryland Hospital Association, Achievement, Access, and Accountability: Maryland's All-Payor Hospital Payment Systems." *The Maryland Health Services Cost Review Commission,* 2007, p. 7, hscrc.state.md.us/Documents/pdr/GeneralInformation/AshbyReport2007.pdf. Accessed 26 Jan. 2019.
[235] Anderson, Rhonda, et. al. "Maryland Hospital Association, Achievement, Access, and Accountability: Maryland's All-Payor Hospital Payment Systems." *The Maryland Health Services Cost Review Commission,* 2007, p. 4, hscrc.state.md.us/Documents/pdr/GeneralInformation/AshbyReport2007.pdf. Accessed 26 Jan. 2019.
[236] HSCRC. "HSCRC All-Payer Model Results, CY 2014-2017." *The Maryland Health Services Cost Review Commission,* *https://hscrc.state.md.us/Documents/Modernization/Updated%20APM%20results%20through%20PY4.pdf*. Accessed 18 Oct. 2018.

and should examine the model in consideration of implementing a similar alternative payment model.

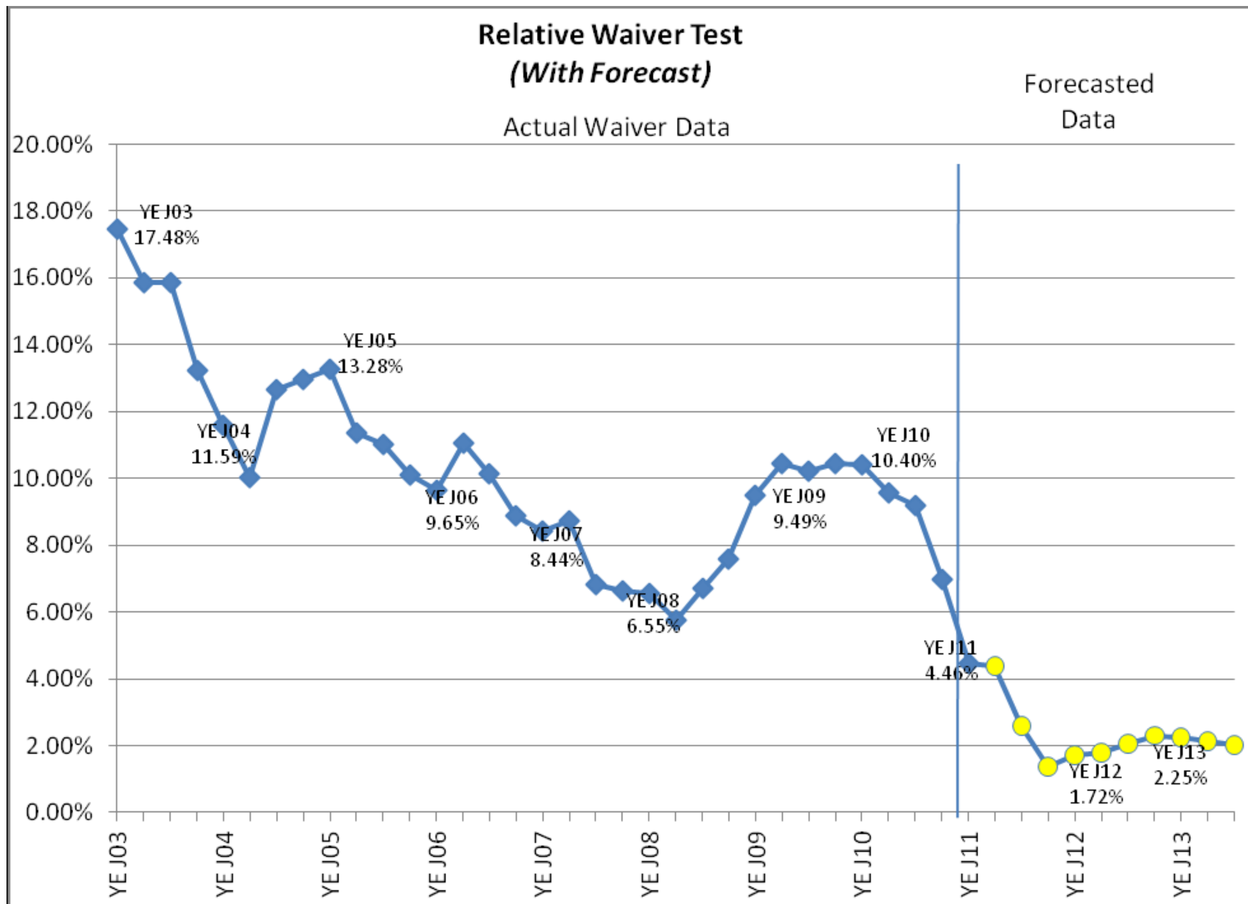
The Maryland All-Payer Model has produced results, as previously discussed, that indicate states can effectively reduce hospital costs, while improving the quality of care by transforming how hospitals deliver care through: hospital all-payer rate setting, global hospital budgets, quality of care programs, and care redesign.[237] The model demonstrates the importance of obtaining a waiver from CMS payment systems; all-payer rate setting; stakeholder engagement and collaboration; an independent state commission with extensive authority and flexibility to regulate and administer the model; access to vast amounts of data; transparency; incentives and penalties to drive hospitals to meet performance metrics; and hospital volume control. The model also demonstrates that design and implementation take years, if not decades.

For states considering implementation of a model similar to the Maryland All-Payer Model, careful consideration should be given to stakeholder support and involvement, the design of the model, and the availability of immense support for all stakeholders during and after implementation. Since the Maryland All-Payer Model agreement with CMS contained a second phase, moving to a total cost of care model, it will be imperative to monitor how Maryland implements the new model, along with the results.[238]

[237] "Monitoring of Maryland's New Maryland All-Payer Model Biannual Report." *The Maryland Health Services Cost Review Commission,* 1 Apr. 2018, pp. 3-11, 13-14, https://hscrc.maryland.gov/Documents/legal-legislative/reports/April%202018%20Biannual%20Report%20FINAL%20051118.pdf. Accessed 30 Nov. 2018

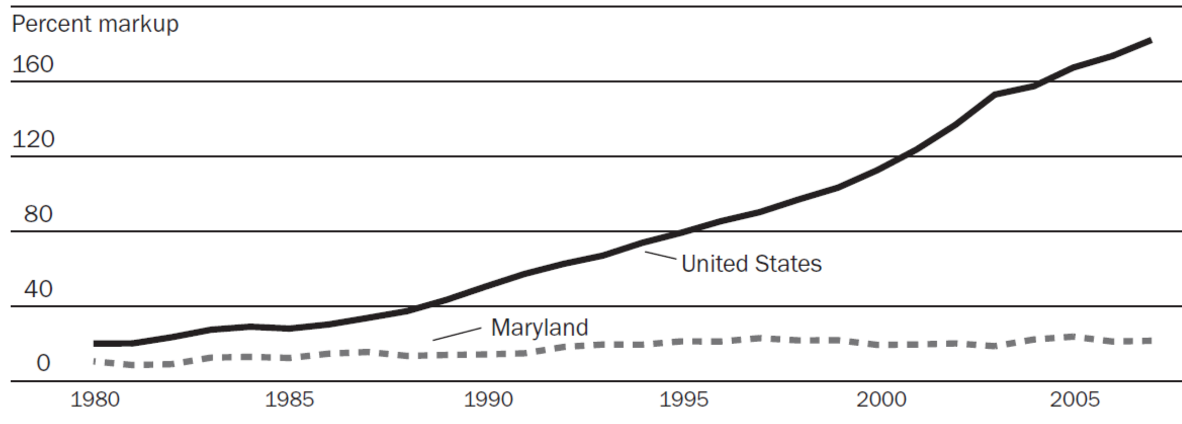
[238] "Maryland All-Payer Model Agreement." *The Maryland Health Services Cost Review Commission,* p. 3, hscrc.state.md.us/documents/md-maphs/stkh/MD-All-Payer-Model-Agreement-%28executed%29.pdf. Accessed 23 Sept. 2018.

Appendix A: Medicare Waiver Cushion Test, FY 1998-2013[239]



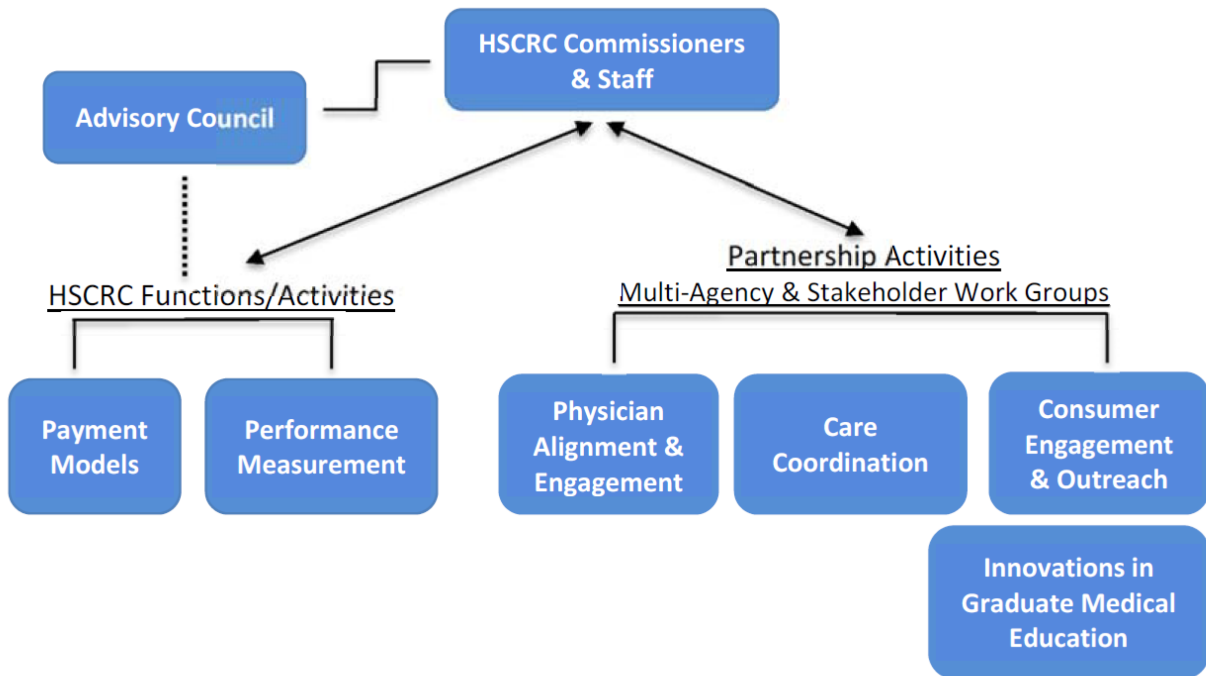
[239] Sharfstein M.D., Joshua. Letter. *2012 Joint Chairmen's Report, Page 67-68, M00Q01.01 – Report on Medicare Waiver and Approved Hospital Financial Target,* p. 1, https://mmcp.health.maryland.gov/Documents/medicarewaiverJCRfinal12-12.pdf. Accessed 30 Nov. 2018.

Appendix B: Maryland Hospital Markups Compared with the United States 1980-2007[240]



[240] Murray, Robert. "Setting Hospital Rates to Control Costs And Boost Quality: The Maryland Experience." *Health Affairs,* vol. 28, no.5, 2009, p. 1401, www.healthaffairs.org/doi/pdf/10.1377/hlthaff.28.5.1395. Accessed 18 Oct. 2018.

Appendix C: HSCRC's Stakeholder Work Groups[241]



[241] "Monitoring of Maryland's New Maryland All-Payer Model Biannual Report." *The Maryland Health Services Cost Review Commission,* Oct. 2015, p. 11, https://hscrc.maryland.gov/Documents/legal-legislative/reports/HSCRC-Biannual-Report-All-Payer-Model-2015-10-22.pdf. Accessed 30 Nov. 2018.

Appendix D: HSCRC All-Payer Model Results, CY 2014 - 2017[242]

HSCRC
Health Services Cost Review Commission

All-Payer Model Results, CY 2014- 2017

Performance Measures	Targets	2014 Results	2015 Results	2016 Results	2017 Results
All-Payer Hospital Revenue Growth	≤ 3.58% per capita annually	1.47% growth per capita	2.31% growth per capita	0.80% growth per capita[1]	3.54% growth per capita
Medicare Savings in Hospital Expenditures	**≥ $330m cumulative over 5 years** (Lower than national average growth rate from 2013 base year)	**$120 m** (2.21% below national average growth)	**$155m** **$275 cumulative** (2.63% below national average growth since 2013)	**$311m** **$586m cumulative[1]** (5.50% below national average growth since 2013)	**$330m** **$916m cumulative** (5.63% below national average growth since 2013)
Medicare Savings in Total Cost of Care	**Lower than the national average growth rate for total cost of care from 2013 base year**	**$142m** (1.62% below national average growth)	**$121m** **$263m cumulative** (1.31% below national average growth since 2013)	**$198m** **$461m cumulative[1]** (2.08% below national average growth since 2013)	**$138m** **$599m cumulative** (1.36% below national average growth since 2013)
All-Payer Quality Improvement Reductions in PPCs under MHAC Program	**30% reduction over 5 years**	**25%** reduction	**34%** reduction since 2013	**44%** reduction since 2013	**53%** reduction since 2013
Readmissions Reductions for Medicare	**≤ National average over 5 years**	**19%** reduction in gap above nation	**58%** reduction in gap above nation since 2013	**79%** reduction in gap above nation since 2013	**116% reduction in gap above nation since 2013** (Currently 0.19% lower than National RR)
Hospital Revenue to Global or Population-Based	**≥ 80% by year 5**	**95%**	**96%**	**100%**	**100%**

[1]During the last six months of CY 2016 (July – December of 2016), Hospitals undercharged their Global Budget Revenue mid-year targets by approximately 1 percent ($25M dollars). The measures reported have been adjusted to 'add back' the undercharge to the period of July – December 2016 to offset the decline in savings for January – June 2017.

- The "Targets" are from the All-Payer Model Agreement, with the exception of the "Medicare Savings in Total Cost of Care" measure, which is a limitation of the Agreement.
- For the All Payer Hospital Growth measure, the data is from the HSCRC monthly hospital volume and revenue data.
- The MHAC data is derived from Maryland's All Payer Hospital Acquired Conditions Program results.
- For the other measures, Maryland calculated the data from CMS monitoring data, which were included in final reports for the applicable years.

[242] HSCRC. "HSCRC All-Payer Model Results, CY 2014 – 2017." *The Maryland Health Services Cost Review Commission,* www.hscrc.state.md.us/Documents/Modernization/Updated%20APM%20results%20through%20PY4.pdf. Accessed 18 Oct. 2018.