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Statewide Integrated Health Improvement Strategy

Annual Report

January 2023

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Executive Summary

In 2019, the State of Maryland collaborated with the Center for Medicare and Medicaid Innovation (CMMI) to establish the domains of health care quality and delivery that the State could impact under the Total Cost of Care (TCOC) Model. The Statewide Integrated Health Improvement Strategy (SIHIS) aligns statewide efforts across three domains that are interrelated and, if addressed successfully, have the potential to make significant improvement in not just Maryland's healthcare system, but in the health outcomes of Marylanders.

- Domain 1: Hospital Quality
- Domain 2: Care Transformation Across the System
- Domain 3: Total Population Health

This annual report summarizes efforts to achieve statewide population health improvement, details official performance on the official 2021 SIHIS milestones, and provides information on broad stakeholder engagement activities in 2022 to achieve success under SIHIS. Additionally, this report also highlights the State's efforts to achieve health equity and provides data on racial disparities across all domains. The State is pleased to report that all 2021 milestones, except for one goal, have been met. Performance results are summarized in Table 1 below.

Table 1. SIHIS Goals and 2021 Milestone Progress

Domain Area	Goal(s)	Milestones Met
Domain 1 – Hospital Quality	Reduce avoidable admissions and readmissions	2021 Milestones Met
Domain 2 – Care Transformation Across the System	(1) Increase the amount of Medicare TCOC or number of Medicare beneficiaries under Care Transformation Initiatives (CTIs), Care Redesign Program, or successor payment model (2) Improve care coordination for patients with chronic conditions	2021 Milestone 1 Met 2021 Milestone 2 Not Met
Domain 3 – Total Population Health "Diabetes"	Reduce the mean Body Mass Index (BMI) for adult Maryland residents	2021 Milestones Met
Domain 3 - Total Population Health "Opioid Use Disorder"	Improve overdose mortality	2021 Milestones Met

Domain 3 - Total Population Health "Maternal and Child Health"	Reduce severe maternal morbidity rate Decrease asthma-related emergency department visit rates for ages 2-17	2021 Milestones Met

Implications of COVID-19 on SIHIS

Maryland is closely monitoring the effects of COVID-19 on SIHIS performance. The SIHIS goals developed in the summer and fall of 2020 utilized pre-pandemic data. At that time, staff could not predict the extended impact that COVID-19 would have on performance and long-term outcomes. Based on available data, COVID-19 has had clear deleterious or artificial effects on progress towards some SIHIS goals, particularly those associated with hospital-based settings of care, such as hospital avoidable admissions and readmissions, the severe maternal morbidity rate, and childhood-asthma emergency department (ED) rates. The State will continue to monitor these trends and communicate with CMMI if negative trends continue, or performance does not recover to pre-COVID levels. The unpredictable nature of the COVID-19 pandemic on the healthcare system and health disparities may continue to impact SIHIS performance and could threaten Maryland's ability to meet 2023 interim targets. Additional context on COVID-19's impact on specific goals is provided further in this report.

Background

The State of Maryland is leading a transformative effort to improve care and lower healthcare spending growth through the Maryland TCOC Model. The TCOC Model builds on the successes of the All-Payer Model, a five-year demonstration project with the CMMI that established global budgets for hospitals and ended December 31, 2018. In 2019, the State of Maryland launched the TCOC Model with the goal of "testing whether statewide healthcare delivery transformation, in conjunction with population-based hospital payments, improves population health and care outcomes for individuals, while controlling the growth of Medicare Total Cost of Care."[1] Thus, the TCOC Model continued the hospital global budgets of the All-Payer Model, while also introducing additional responsibility and flexibility for the State to limit growth of Medicare total cost of care. Given the TCOC Model's broader mandate, the State and CMMI recognized that success under the new agreement would require more focus beyond hospital walls.

The TCOC Model agreement did not include specific targets for hospital quality and population health, in recognition of the broader work and engagement needed to develop goals, measures and targets. In 2019, the State collaborated with CMMI to establish the broad domains for goals that the State would impact

[1] Maryland Total Cost of Care Model Agreement. https://hscrc.maryland.gov/Documents/Modernization/TCOC-State-Agreement-CMMI-FINAL-Signed-07092018.pdf

under the Total Cost of Care Model. The collaboration also included an agreed-upon process and timeline by which the State would submit proposed goals, measures, milestones, and targets to CMMI. As a result of the collaboration with CMMI, the State entered into an MOU that required Maryland to provide a proposal for the SIHIS to CMMI by December 31, 2020. The State submitted its proposal to CMMI on December 14, 2020. CMMI formally approved the proposal as submitted in March 2021.

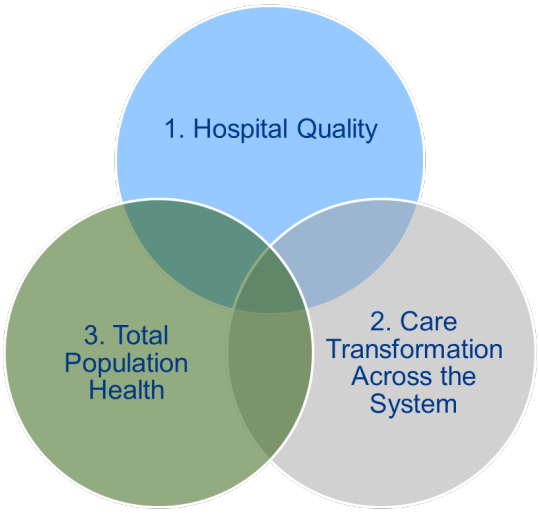
The MOU established the SIHIS proposal requirements and required the State to provide at least one goal for each of the three domains. Within each domain, the SIHIS proposal provided a Model Year 3 milestone that is measured on CY 2021 data, a Model Year 5 interim target that will be measured on CY 2023 data, and a Model Year 8 final target that will be measured on CY 2026 data. The MOU also set forth guiding principles that Maryland should use to develop the SIHIS. These guiding principles include the following:

- Maryland's strategy should fully maximize the population health improvement opportunities made possible by the TCOC Model;
- Goals, measures, and targets should be specific to Maryland and established through a collaborative public process;
- Goals, measures, and targets should reflect an all-payer perspective;
- Goals, measures, and targets should capture statewide improvements, including improved health equity;
- Goals for the three domains of the integrated strategy should be synergistic and mutually reinforcing;
- Measures should be focused on outcomes whenever possible; milestones, including process measures, may be used to signal progress toward the targets; and
- Maryland's strategy must promote public and private partnerships with shared resources and infrastructure.

Using the principles established in the SIHIS MOU, Maryland is expanding efforts to transform health care delivery across the State, developing value-based payment programs, and launching initiatives designed to improve population health outcomes. Collectively, these initiatives will improve the overall health of Marylanders while controlling the growth of healthcare costs both in the short and long term.

As part of the SIHIS, Maryland's efforts span three interrelated domains and, if successful, Maryland's efforts have the potential to make significant improvement in not just the State's healthcare system, but also the health outcomes of Marylanders.

Figure 1. SIHIS Domains



- *Hospital Quality* – Enhanced hospital quality and value-based performance targets will build on historical performance targets to drive continued improvement in quality of care.
- *Care Transformation Across the System* – System-wide care transformation activities and value-based payment models will improve care quality and reduce costs.
- *Total Population Health* – Key health priorities and the statewide mobilization of public and private resources will improve health outcomes for Marylanders.

Performance on 2021 milestones and highlights of ongoing initiatives throughout 2022 to improve population health and health equity are detailed below.

State Commitment to Health Equity

The success of SIHIS is integrally linked to achieving health equity and reducing healthcare disparities across all population health priority areas. Addressing health disparities is a core component of SIHIS and Maryland is prioritizing health equity through a variety of pathways. In addition to specific interventions that target vulnerable individuals, Maryland is focusing on health equity through the efforts of a statewide commission that sets health policy, through funding opportunities designed to address social determinants of health (SDOH), and through provider data collection and reporting strategies.

The Maryland Commission of Health Equity (MCHE) was established under the Shirley Nathan Pulliam Health Equity Act of 2021. The purpose of this multi-agency Commission is to determine ways for state and local governments to work collaboratively to implement policies and laws that reduce health disparities therefore increasing health equity across the state. Using a health equity framework, MCHE will advise on issues of racial, ethnic, cultural, and socioeconomic health disparities; develop a comprehensive health

equity plan to address the social determinants of health; and set goals for achieving health equity in alignment with other statewide planning activities. Staff at the Maryland Department of Health (MDH) and MCHE are working collaboratively to ensure alignment between this newly formed health equity commission and SIHIS efforts. MCHE met six times throughout late 2021 and 2020. The Commission is supported by a Data Advisory Subcommittee and Health Equity Policy Subcommittee that drives progress towards the goals of the Commission. The annual report on 2022 activities will be available on the MCHE website in 2023. More details on the MCHE can be found here: https://health.maryland.gov/mche/Pages/default.aspx. The Commission will continue to meet in 2023.

The Maryland Health Equity Resource Act, approved during the 2021 legislative session, provides significant new grant funding and state resources for local communities to reduce health disparities and improve health outcomes. The Maryland Community Health Resource Commission (CHRC) has launched the Pathways to Health Equity grant program which provides $13 million in cumulative two-year funding for programs that will: 1) reduce health disparities; 2) improve health outcomes; 3) improve access to primary care; 4) promote primary and secondary prevention services; and 5) reduce healthcare costs and hospital admissions and readmissions. The Pathways to Health Equity Program lays the foundation for 5-year Health Equity Resource Communities (HERC) grants which will emphasize long-term interventions to address social determinants of health such as housing, transportation, employment, and food security.

In February 2022, the CHRC Commissioners issued nine grants totaling $13.5 million, supporting three new programs in Baltimore City, three in Prince George's County, and three in rural areas. Of the nine projects, five have targeted diabetes as a clinical focus. Another project in Baltimore City focuses on addressing disparities associated with maternal and child health and another project in Prince George's County expands access to sickle cell treatment services. The nine grantees are receiving ongoing technical assistance from the CHRC, HERC Advisory Board, and the state health information exchange, Chesapeake Regional Information System for our Patients (CRISP). A summary of these grants is attached as Appendix 1. The CHRC is planning to release a second Call for Proposals for additional funding in the fall of 2023.

The Maryland Health Services Cost Review Commission (HSCRC) collects and audits data from hospitals, producing one of the most robust hospital data sources in the country in terms of scope and accuracy. This data was determined to be accurate enough to report publicly for the purpose of improving statewide health disparities. Many of the reports provided to hospitals include socio-demographic data which allows for stratification to identify health disparities.

This data allows the HSCRC to stratify results of the quality measures by race, neighborhood disadvantage via the Area Deprivation Index (ADI), and payer. In RY 2023 (CY 2021 performance), the HSCRC implemented the Readmissions Disparity Gap Program which is a reward-only program that incentivizes reductions in racial, neighborhood disadvantage, and payer disparities in readmission rates. In the Summer

of 2022, the HSCRC Quality Team established the Health Equity Workgroup to allow stakeholders to provide their input on how to stratify quality measures and incentivize hospitals to address health disparities. Analyses performed for this workgroup uncovered racial, neighborhood deprivation, and payer disparities in the HSCRC quality programs. In CY 2023, staff will continue to work with stakeholders to develop hospital incentives for addressing health disparities similar to the Readmission Disparity Gap Program.

In August of 2022, HSCRC staff sent out a Health Equity Survey to better understand hospital efforts in regard to health equity. The HSCRC is committed to assisting hospitals address health equity, and this survey will be used as an environmental scan to gather information about the state of addressing health equity at each of the hospitals. The results of this survey will be aggregated across hospitals and may be presented to the Commission; individual hospitals will not be identified, and the results will in no way be used to penalize hospitals. Addressing health equity is a priority of the State, so it is important to understand the current state of addressing health equity in our hospitals. The HSCRC will share the results of this survey with CMMI in early 2023. More information on this work is described in the Domain 1: Hospital Quality section of this report.

Additionally, the State tracks racial disparities as part of its ongoing SIHIS monitoring activities. During 2021, MDH, HSCRC, and CRISP staff collaborated to construct the SIHIS Directional Indicators Dashboard to support oversight of progress against the SIHIS Total Population Health goals. In addition to the aggregated performance, each measure is broken down by race and ethnicity and includes a racial disparity index to illustrate disparity gaps in outcomes. MDH leadership reviews this dashboard monthly to consider the State's progress and actions needed to work towards 2023 and 2026 SIHIS targets. In 2022, CRISP completed the dashboard with the addition of the Hospital Quality and Care Transformation Across the System domain goals. Each goal also has performance disaggregated by race and ethnicity. The State is seeing mixed performance in disparity improvement which varies across each of the domains and population health priority areas.

Broad Public-Private Sector Engagement Strategy

Consistent with the guiding principles used by the State when developing its SIHIS proposal, the State is employing a strategy that leverages public and private partnerships with shared resources and infrastructure to achieve its goals. Engaging new and unlikely partners, beyond traditional public health stakeholders, will also be key to realizing success under SIHIS. Throughout 2022, the State has led a broad stakeholder engagement approach to achieve the goals of SIHIS and provide oversight of ongoing work.

Secretary's Vision Group and Population Health Management Group

In 2021, the State established a governance structure to guide SIHIS implementation and provide accountability through the Secretary's Vision Group (SVG) and the Population Health Management Group (PHMG). The SVG, led by Maryland Department of Health (MDH) Secretary Dennis Schrader, is comprised of "C-suite" public and private sector healthcare industry leaders in Maryland, including representatives from State agencies, hospitals, payers, long-term care providers, and physician practices. The group meets every other month to discuss Maryland's overarching performance on SIHIS, strategies that can improve population health priority areas, and continued opportunities for operational alignment and engagement. In Spring 2021, Secretary Schrader requested that SVG member organizations develop and share the specific activities they would undertake to support the State's goals under SIHIS. The Secretary requested SVG member organizations provide updates on those pledges and ongoing activities to support SIHIS in Fall 2022. Specific highlights of stakeholder activities are included later in the report.

The Population Health Management Group (PHMG) is a sub-group of the SVG. It is a working group composed of a diverse group of stakeholders across State agencies and includes hospital, physician, and payer representatives. The PHMG serves as the official oversight body for the Total Population Health domain under SIHIS. The PHMG meets every other month to review performance on the population health goals, receives reports on State-led initiatives for each priority area, and discusses broad strategies to impact SIHIS targets.

Building Strategic Partnerships

Department of Housing and Community Development

In 2021 and 2022, State staff collaborated to develop a framework to address SDOH including risk and protective factors that are shared across the health priority areas and can impact Total Population Health domain goals. Staff identified housing as a shared risk and protective factor that has cross-cutting impact across all population health priority areas. Staff engaged the Department of Housing and Community Development (DHCD) to discuss areas of collaboration and shared goals that could improve population health outcomes under SIHIS. Staff had existing areas of collaboration on housing related to lead and childhood asthma. MDH and DHCD Staff are now collaborating on opportunities for grant alignment and customization, incorporating public health into grant award criteria, and integrating SIHIS population health goals into strategic planning to address homelessness. Additionally, DHCD also designated representatives to the PHMG to support SIHIS oversight.

Engaging the Business Community

While hospitals, physicians, payers, and public health advocates have long been engaged in addressing population health, the State also knows there are untapped stakeholders who have an interest in creating

healthier communities. During 2021, MDH began discussions with the Department of Commerce (DOC) on strategies to engage the business community and communicate the role SIHIS can play in creating a healthier workforce. Payers, such as CareFirst, are already working with employers to improve employee health and are also supporting this SIHIS initiative to engage the business community. Through Maryland's Healthiest Business Program, part of the Diabetes Action Plan, MDH engages with approximately 400 employers on initiatives to address diabetes in the workplace for high-risk employees, particularly through promoting the National Diabetes Prevention Program (DPP). Maryland is also a member of the National Association of Chronic Disease Directors (NACDD) Employer Learning Collaborative which has a focus on engaging employers to support DPP participation.

MDH is eager to engage with business groups and the new administration at DOC in 2023 to further engagement strategies on how employers can improve the health of their employees around each of the population health priority areas.

Leveraging CRISP to Drive Progress

Across each SIHIS domain, the State is leveraging the analytic capabilities and robust clinical tools offered by CRISP to measure progress and meaningfully enhance patient care to achieve SIHIS goals. To support ongoing SIHIS monitoring efforts, the State collaborated with CRISP to build a "SIHIS Directional Indicators Dashboard" that includes key indicators to help the State measure progress. In 2021, staff prioritized the development of Total Population Health domain dashboard which uses either the official SIHIS population health goal measures or proxy measures if the official data source for the measure is heavily lagged. CRISP completed the dashboard in early 2022 with the inclusion of the remaining SIHIS goals under the Hospital Quality and Care Transformation Across the System domains. The dashboard also breaks down performance by race and ethnicity to illustrate health disparities present. The Total Population Health reports are provided to SVG and PHMG members prior to meetings so that strategies can be discussed to address trends reflected in the data. In addition, the dashboard is accessible to local health departments (LHDs), hospitals, and practices to promote alignment and accountability across the State and delivery system. In 2022, CRISP hosted webinars on the SIHIS Directional Indicators Dashboard for CRISP users and included tutorials on complementary reporting tools to support analytics for geographical areas or individual hospitals. The most recent reports from the dashboard and user guide are attached in Appendix 7 and described in this report. Examples of provider tools that directly support the population health goals of SIHIS are also referenced later in this report.

Domain 1: Hospital Quality

Maryland hospitals made significant quality improvements under the All-Payer Model, achieving reductions in hospital-acquired complication and readmissions rates. Under the TCOC Model, Maryland hospitals must maintain these achievements and match any national quality improvement in these areas. While specific quality targets were not included in the contract, Maryland recognizes the need to make further progress in hospital quality, consistent with the broader care coordination, primary care, and population health aims of the TCOC Model. The Hospital Quality domain focuses on reducing avoidable utilization through two measures - reducing avoidable admissions and improving readmission rates by reducing within-hospital disparities. These goals align with the care coordination, primary care, and population health aims of the TCOC Model, as it requires Maryland hospitals to work with ambulatory providers and in their communities to address ambulatory care sensitive conditions as well as social determinants of health.

Goal 1: Reduce avoidable admissions

Maryland hospitals continue to work towards reducing avoidable admissions through prioritizing case management and care coordination for hospitalized patients. Furthermore, to meet this goal, the Maryland Primary Care Program (MDPCP) provides whole person, data-driven, team-based care and care management and is an essential component of the TCOC Model for both hospitalized and non-hospitalized patients. Thus, improvements in potentially avoidable admissions are anticipated under the TCOC Model.

The metric used for assessing avoidable admissions is the Agency for Healthcare Research and Quality (AHRQ) Prevention Quality Indicator 90 (PQI-90). The PQI-90 composite measure captures the rate of potentially avoidable admissions in a population for those ages 18 years and older. The PQI-90 (version 2020) measure specifically includes hospital admissions for one of the following conditions: diabetes with short-term complications, diabetes with long-term complications, uncontrolled diabetes without complications, diabetes with lower-extremity amputation, chronic obstructive pulmonary disease, asthma, hypertension, heart failure without a cardiac procedure, community-acquired pneumonia, or urinary tract infection. The TCOC Model provides hospital, primary care, and population health incentives to reduce these types of admissions across all-payers through improvements in post-discharge care coordination and enhanced primary care resources.

Table 2 shows that on an all-payer basis Maryland had more than a 25 percent improvement in avoidable admissions from CY 2018 to CY 2021. This improvement exceeds the CY 2021 Year 3 milestone of an 8 percent improvement, which was calculated using pre-COVID data. Furthermore, the recent quantitative evaluation of the TCOC Model shows similar findings, i.e., during the first three years of the TCOC Model there was a statistically significant reduction in potentially preventable admissions that exceeded what was seen in the All-Payer Model.[2] However, there have been large declines in avoidable admissions both in

[2] Evaluation of the Maryland Total Cost of Care Model: Quantitative-Only Report for the Model's First Three Years (2019 to 2021), December 2022 https://innovation.cms.gov/data-and-reports/2022/md-tcoc-qor2

Maryland and nationally during the COVID public health emergency (PHE) due to challenges such as access issues. As discussed in a recent CMMI report on its strategic plan implementation, the targets for avoidable admissions have not been updated to reflect the impact of COVID.[3] Specifically, CMMI stated in their report that "PQI #90 composite results are expected to increase towards pre-pandemic levels or potentially reflect the impact of delayed care during the pandemic before reducing over time with new initiatives." Thus, while Maryland has achieved its CY 2021 target, there is concern that PQI rates will increase in the near future and as to whether the timing of those increases will impact the ability of the State to hit future targets.

Table 2. Hospital Quality - Goal #1

Goal 1: Reduce avoidable admissions		
Measure	AHRQ Risk-Adjusted PQIs	
2018 Baseline[4]	1324 admits per 100,000	**Actual Performance**
2021 Year 3 Milestone (Milestone Met)	8 percent improvement 1218 admits per 100,000	**25.19 percent improvement** **990 admits per 100,000**
2023 Year 5 Target	15 percent improvement 1125 admits per 100,000	TBD
2026 Year 8 Final Target	25 percent improvement 993 admits per 100,000	TBD

An important goal of an advanced primary care program is the reduction of avoidable hospital utilization. To achieve this goal, primary care practices must identify and care for patients in a timely manner, and in the most effective and efficient setting. As discussed in Appendix 2, the CY 2021 results for the Medicare FFS population indicate that those enrolled and participating in MDPCP practices have higher rates of improvement in avoidable admissions and emergency department visits than non-participating Medicare beneficiaries. As MDPCP continues to add new practices in 2023 and 2024, continued reductions in PQI events is anticipated, and this will serve to improve the overall statewide performance on these measures. Also, as MDPCP practices continue to benefit from the State's advanced primary care health information

[3] Person-Centered Innovation – An Update on the Implementation of the CMS Innovation Center's Strategy – Supplemental Document. https://innovation.cms.gov/data-and-reports/2022/cmmi-strategy-refresh-imp-tech-report

[4] Recalculated using AHRQ PQI v2020; results vary somewhat from the older PQI rate of 1,335 per 100,000 reported in the original SIHIS proposal.

technology (HIT) and ongoing educational programs, MDPCP overall performance will continue to improve, further benefiting statewide overall performance.

Another critical opportunity to reduce avoidable admissions will be for Maryland to address disparities in these types of admissions. Table 3 includes a disparity index wherein a value over 1 indicates **negative** performance on the measure when compared to non-Hispanic (NH) White performance.

Table 3. PQI by Race & Ethnicity, Baseline & 2021 Performance

Race	2018 Baseline	2021 Performance	Disparity Index
NH White	1120	813	1.00
NH Black	2144	1571	1.93
Hispanic	755	610	0.75
NH Asian	306	247	0.30
Other	2277	2044	2.51
Total	1335[5]	985	1.21

Source: HSCRC Casemix Data

Over the coming year, the HSCRC will be evaluating disparities in avoidable admissions in Maryland by race, insurance status, neighborhood deprivation, and other factors with data, and to assess opportunities for additional financial incentives for hospital global budgets to drive equity. Furthermore, the MDPCP Health Equity Advancement Resource and Transformation (HEART) payments also provide incentives for primary care providers to provide targeted resources to address the social needs contributing to avoidable admissions in patients most at risk. Both the HSCRC and MDPCP also provide CRISP reports to hospitals and practices that allow them to break down avoidable admissions by demographics including age, sex and race.

Goal 2: Improve readmission rates by reducing within-hospital disparities

In March 2020, the Commission approved the nation's first program to provide financial incentives to hospitals that are able to reduce socioeconomic disparities in readmissions. The program assesses patient-level socioeconomic exposure using the Patient Adversity Index (PAI), a measure that reflects exposure to poverty, structural racism, and neighborhood deprivation. Due to the pandemic's impact on hospital utilization, rewards were suspended for Rate Year (RY) 2022 (CY 2020 performance period) but were reapproved and implemented in RY 2023 (CY 2021 performance period). The HSCRC remains

[5] Table 3 uses the PQI baseline of 1,335 per 100,000 reported in the original SIHIS proposal.

concerned about the impacts of the pandemic on hospital performance under the measure, especially because the current measure assesses improvement from CY 2018 (i.e., pre-pandemic). However, in RY 2023, nine hospitals met the minimum improvement goal in the disparity gap and received commensurate financial rewards.

The CY 2021 milestone was to establish and monitor a measurement methodology and payment incentive for reducing within hospital readmission disparities and to set a CY 2023 and CY 2026 target. Table 4 provides the targets that were submitted to CMMI indicating that by the end of CY 2026 half of hospitals in Maryland will have a 50 percent improvement in disparity. Improvement is currently being measured using a CY 2018 baseline, and it is estimated using data through August 2022 that ten Maryland hospitals are on track to meet the CY 2026 target. However, as work continues in the State to develop readmission improvement targets post-COVID, the base period for assessing improvement for both readmissions and the disparity gap may be updated. At that time, the State will evaluate if the current CY 2026 disparity target is still reasonable although our expectation is that the hospitals can still achieve the current target post COVID since it is a relative improvement target (i.e., 50 percent reduction from base).

Table 4. Hospital Quality - Goal #2

Goal #2: Improve Readmission Rates by Reducing Within-Hospital Disparities	
Measure	Readmission disparity gap
2018 Baseline	Hospital-specific risk difference for readmissions across levels of Patient Adversity Index (PAI)
2021 Year 3 Milestone	Establish and monitor a measurement methodology and payment incentive for reducing within hospital readmission disparities and set a 2023 and 2026 target *Given current trends through August 2022, 10 Maryland hospitals are on track to meet the 2026 target.*
2023 Year 5 Target	Half of eligible hospitals achieving 25% improvement in disparity
2026 Year 8 Final Target	Half of eligible hospitals achieving 50% improvement in disparity

In conclusion, Maryland met the CY 2021 Year 3 milestone for this goal. Furthermore, the State remains committed to ensuring the disparity payment incentive remains in the Readmission Reduction Incentive Program (RRIP) policy and extending this methodology to other outcomes where disparities exist. The ability to set hospital payment incentives specifically for advancing health equity is an important hallmark of the TCOC Model and exemptions from national quality programs.

Domain 2: Care Transformation Across the System

Goal 1: Total Cost of Care or Beneficiaries under Care Transformation Initiatives, the Care Redesign Program, or Successor Payment Models

Under the All-Payer Model, the delivery system in Maryland began moving away from the traditional fee-for-service payment systems and towards value-based care. The State moved more than 95 percent of all hospital payments to a population-based payment system. Under the TCOC Model, the State continues to accelerate the transition towards value-based care and move all payments – regardless of setting of care – to a value-based payment arrangement. The State already has significant delivery system reform efforts beyond the hospitals, including Care Redesign Programs (CRP) and the Maryland Primary Care Program (MDPCP). In addition to these "formal" programs, there are numerous endogenous care transformation efforts that hospitals have deployed in response to the incentives of the All-Payer Model and the global budgets. While these initiatives have helped the State to reduce the TCOC and the unnecessary hospitalization rate, the accountability for managing Medicare beneficiaries remains fragmented across many different providers in different settings of care. The State established the goals and targets, seen in Table 5, to address this fragmentation and further grow efforts to move towards a value-based care system that stretches beyond hospital walls. For 2021, the State has measured performance based on the amount of TCOC or number of Medicare beneficiaries captured under Care Transformation Initiatives (CTIs) or the Episode Care Improvement Program (ECIP) track under CRP. Additional programs, such as the Episode Quality Improvement Program (EQIP) and Track 3 of MDPCP, will be used to measure performance starting in 2022 and 2023, respectively. Maryland is pleased to report it met both 2021 milestones for this goal.

Table 5. Care Transformation Across the System - Goal #1

Goal: Increase the amount of Medicare TCOC or number of Medicare beneficiaries under Care Transformation Initiatives (CTIs), Care Redesign Program, or successor payment model		
Measure	Percent of TCOC under Care Transformation	Number of beneficiaries under Care Transformation
2018 Baseline	$0	0
2021 Year 3 Milestone (Both Met)	12.5% of Medicare TCOC under a CTI or CRP or successor payment model **Actual Performance:** 33.01%	7.5% of Medicare Beneficiaries covered under a CTI or CRP or successor payment model **Actual Performance:** 25.62%
2023 Year 5 Target	37% of Medicare under a CTI or CRP or successor payment model	22% of Medicare Beneficiaries covered under a CTI or CRP or successor payment model

2026 Year 8 Final Target	50% of Medicare TCOC under a CTI or CRP or successor payment model	30% of Medicare Beneficiaries covered under a CTI or CRP or successor payment model

Quantitative Performance

Beneficiaries Under Care Transformation Programs

Maryland set a goal to move 7.5 percent of Medicare beneficiaries under a care transformation program. As shown in Table 6, Maryland moved 25.62 percent of Medicare TCOC under a care transformation program in 2021. This exceeds the State's 2021 milestone by 25.51 percent and 2023 interim target by 3.62 percent.

Table 6. Medicare Beneficiaries Under Care Transformation Programs, 2021

	2021 Performance	2021 Milestone	Difference from Milestone
Percent	25.62%	7.5%	25.51%
Beneficiaries Under Care Transformation	209,483		
Total Medicare Beneficiaries	817,585		

Source: CCLF Data

Maryland also tracks performance by race and ethnicity. Table 7 includes a disparity index wherein a value over 1 indicates **positive** performance on the measure when compared to NH White performance. Currently, the percent of NH White beneficiaries under care transformation programs exceeds all other race/ethnic populations. However, each group has exceeded the 2021 milestone goal and, with the exception of the Hispanic population, exceeded the 2023 interim target (22 percent). The State will strive for improvement in 2022 and is seeing growth across all populations in early 2022 preliminary data.

Table 7. Medicare Beneficiaries Under Care Transformation Programs by Race/Ethnicity, 2021

Race	Bene Count	Total Medicare Beneficiaries	% of Benes in Care Transformation Programs	Disparity Index
NH White	145,941	544,362	26.81%	1.00
NH Black	46,688	198,458	23.53%	0.88
Hispanic	1,769	11,611	15.25%	0.57
NH Asian	5,329	23,705	22.48%	0.84
Other	9,756	39,449	24.73%	0.92
Total	209,483	817,585	25.62%	0.96

Source: CCLF Data

Total Cost of Care Under Care Transformation Programs

Maryland set a goal to move 12.5 percent of Medicare TCOC under a care transformation program. As shown in Table 8, Maryland moved 33.01 percent of Medicare TCOC under a care transformation program in 2021. This exceeds the State's 2021 milestone by 20.51 percent and brings Maryland within 4 percent of its 2023 interim target (37 percent).

Table 8. Medicare TCOC Under Care Transformation Programs, 2021

	2021 Performance	2021 Milestone	Difference from Milestone
Percent	33.01%	12.5%	20.51%
Beneficiaries Under Care Transformation	$3,292,115,915		
Total Medicare Beneficiaries	$9,973,497,354		

Source: CCLF Data

Care Transformation Programs

As discussed above, 2021 performance captures TCOC amounts and Medicare beneficiaries currently under CTIs and ECIP. A description of each program is provided below.

Care Transformation Initiatives

In FY 2022, the HSCRC launched Care Transformation Initiatives (CTI), a new value-based payment program. CTIs assign Medicare beneficiaries to hospitals that have enrolled those beneficiaries in a care management program. The CTI holds hospitals accountable for the TCOC for those beneficiaries assigned to them and rewards hospitals for any savings created by their care management programs. The program ensures that a single entity is accountable for managing patient care across the delivery system and that providers are paid on a population specific-basis, rather than on fee-for-service. The program allows HSCRC to develop a systematic understanding of best practices for improving care, account for the savings and improvements attributed to care transformation, incentivize initiatives that produce savings under the TCOC Model, and articulate Maryland's success stories in transforming care. HSCRC staff regularly receive feedback from the Care Transformation Steering Committee, which prioritizes, develops, and finalizes each CTI proposed by hospitals. To date, the Steering Committee has approved five CTI categories: (1) Transitions of Care, (2) Palliative Care, (3) Primary Care Transformation, (4) Community-Based Care, and (5) Emergency Care. Forty-three hospitals participated in a cumulative total of 92 CTIs in FY 2022 and 99 CTIs in FY 2023.

Care Redesign Program – Episode Care Improvement Program

CRP is a voluntary program that focuses on care redesign and aligning financial incentives across hospitals and other partner providers. ECIP aims to support effective care management and population health activities and deliver high quality, efficient, well-coordinated episodes of care, with a focus on high and rising-risk populations. ECIP, which is modeled off of CMS' Bundled Payments for Care Improvement Advanced (BPCI-Advanced) program, allows hospitals to link payments to providers across certain clinical episodes of care. This episode payment approach aligns incentives across hospitals, physicians, and post-acute care facilities to generate savings and improve quality by enhancing care management during episodes, eliminating unnecessary care, and reducing post-discharge emergency department visits and hospital readmissions. In 2021, 21 hospitals participated in ECIP with an average number of 2.7 clinical episode selections per hospital. At the end of 2021, there were 4,207 unique ECIP care partners, including 27 facility care partners. Sepsis, congestive heart failure, and orthopedic clinical episode categories were the most common categories selected. Hospitals initiated 2,902 episodes in the first half of CY 2021 and 2,849 during the second half of the year.

Future Programs

In 2022, performance on this goal will include TCOC and beneficiaries captured under the Episode Quality Improvement Program (EQIP) which launched in January 2022. EQIP is a voluntary program that engages specialist physicians who treat Maryland Medicare beneficiaries in care transformation and value-based payment through an episode-based approach. EQIP will hold participants accountable for achieving cost and quality targets for one or more clinical episodes. The first Performance Year (PY) of EQIP began on January 1, 2022, and focused on the specialty areas of cardiology, gastrointestinal, and orthopedics. Participation in PY1 of EQIP included 1,979 providers. In 2023, this goal will also encompass care captured under Track 3 of MDPCP.

Goal 2: Improve care coordination for patients with chronic conditions

The Maryland TCOC Model provides incentives to improve care transitions by prioritizing and expanding case management for high-risk patients. Specifically, Maryland aims to improve timely follow-up for Medicare beneficiaries who have an exacerbation of a chronic condition. Leveraging CRISP tools, such as care alerts and encounter notification services (ENS), and enhancing communication between hospitals, PCPs, and other healthcare providers are key strategies for success under this goal.

Table 9 shows the interim milestones and the final target for this SIHIS goal.[6] Table 10 shows annual performance for 2018 through 2021 for Maryland and the nation.[7] As shown in these tables, in CY 2021 Maryland had a timely follow-up rate of 70.07 percent and did not meet the milestone of 72.38 percent. However, timely follow-up in Maryland remained higher than the nation by 2.39 percent, equating to 732 additional follow-up visits in Maryland than would have occurred if Maryland had the same rate of follow-up as the nation.

Table 9. Care Transformation Across the System - Goal #2

Goal: Improve care coordination for patients with chronic conditions	
Measure	Timely Follow-up After Acute Exacerbations of Chronic Conditions (NQF#3455)
2018 Baseline	70.85%
2021 Year 3 Milestone (Milestone Not Met)	72.38% 2.16 percent improvement **Actual Performance:** 70.07%
2023 Year 5 Target	73.42% 3.62 percent improvement
2026 Year 8 Final Target	75.00% 5.86 percent improvement or 0.50 percent better than the national rate

Table 10. Timely Follow-Up, Maryland vs. Nation, CY 2018 - CY 2021

	CY 2018	CY 2019	CY 2020	CY 2021
Maryland	70.85%	71.45%	67.90%	70.07%
Nation	66.82%	69.00%	64.75%	67.68%
Simple Difference	4.03%	2.45%	3.15%	2.39%

[6] The SIHIS baseline and targets have been updated since the SIHIS proposal was submitted. This resulted in lower CY 2018 baseline rates. However, the final target of 75 percent or 0.50 percent better than the nation was not adjusted.

[7] Maryland rates were calculated using the CCLF data provided to the HSCRC. National rates were calculated using the 5% sample in the Chronic Conditions Warehouse (CCW).

Source: CCLF (Maryland) and CCW (National)

Maryland also tracks performance by race and ethnicity. Table 11 includes a disparity index wherein a value over 1 indicates **positive** performance on the measure when compared to non-Hispanic (NH) White performance.

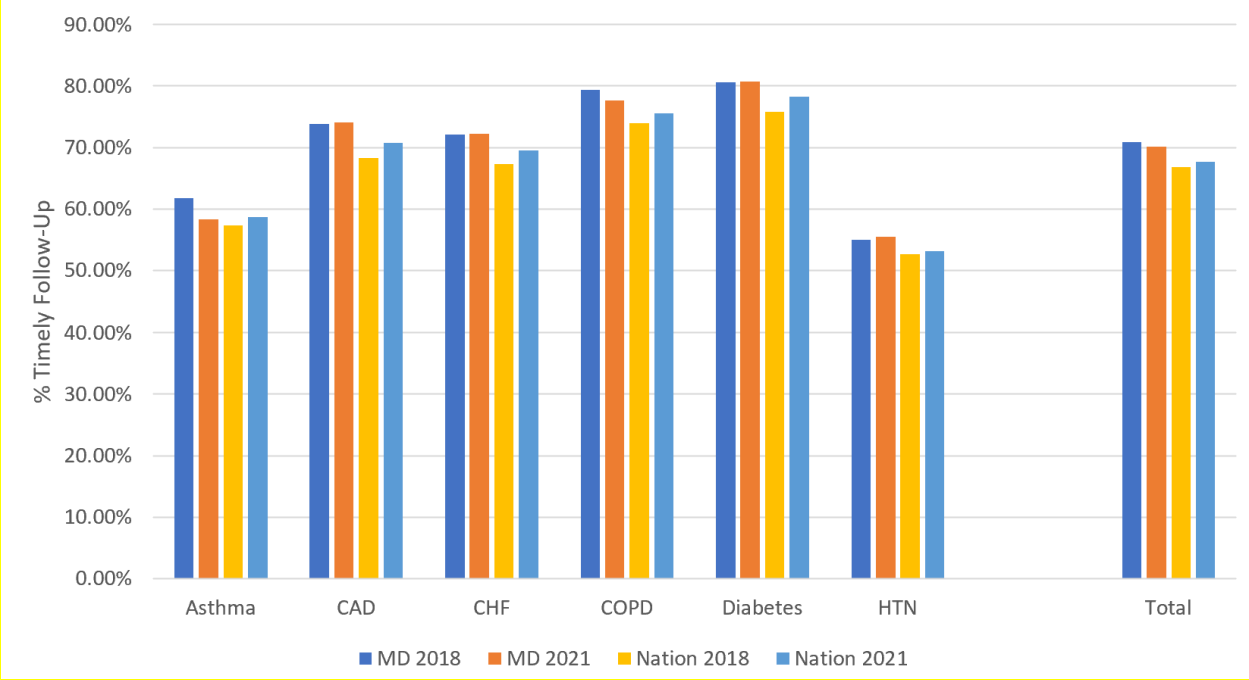
Table 11. Timely Follow-Up Rate by Race/Ethnicity and Disparity Index

Race	2018 Baseline	2021 Performance	Disparity Index
NH White	75.17%	73.67%	1.00
NH Black	64.44%	64.24%	0.87
Hispanic	67.07%	65.19%	0.88
NH Asian	70.01%	71.62%	0.97
Other	72.73%	72.14%	0.98
Total	70.85%	70.07%	0.95

Source: CCLF Data

Both Maryland and the nation had drops in timely follow-up during the COVID-19 PHE. And while the drop from 2019 to 2020 was smaller in Maryland (-3.55 percent) than the nation (-4.25 percent), the rebound in CY 2021 was higher nationally than in Maryland. Thus from 2018 to 2021, the follow-up rate for Maryland is down by -0.78 percent but nationally the follow-up rate increased by 0.86 percent. Figure 2 provides the change in follow-up by condition from CY 2018 to CY 2021 for Maryland and the nation. This shows that the follow-up rate in Maryland increased for coronary artery disease (CAD), congestive heart failure (CHF), diabetes, and hypertension, but those increases were offset by larger decreases in timely follow-up for asthma and chronic obstructive pulmonary disease (COPD). Furthermore, while the nation had increases for all six conditions, somewhat lower improvements were seen for asthma and chronic obstructive pulmonary disease (COPD). This could indicate that those with respiratory-related chronic conditions were more cautious about returning for office visits due to the ongoing threat of infection due to COVID. These patients may also have been cared for through audio-only telehealth follow-ups, which may not have been fully captured in insurance claims. Supplemental content on this goal can be found in Appendices 4 and 5. In conclusion, while Maryland has a higher follow-up rate than the nation, the State did not meet the CY 2021 Year 3 milestone, although these rates may have been impacted by the COVID PHE and resulting changes in patient and provider behavior.

Figure 2. % Timely Follow-Up by Condition, MD and Nation, CY 20182021



Source:

Despite the reduction in timely follow-up during the COVID PHE, Maryland remains committed to achieving the CY 2026 final target of 75 percent or 0.50 percent better than the nation. Appendix 3 provides a memo on actions that the State is taking to ensure that the CY 2023 milestone and CY 2026 final target are met.

Domain 3a: Total Population Health – Diabetes

Diabetes has been a statewide population health priority for Maryland since 2019. MDH has targeted overweight, obese, prediabetic, and diabetic populations to implement interventions that align with the Diabetes Action Plan (DAP). Approximately 11.1 percent of Maryland adults were informed they had diabetes in 2021.[8] According to the Centers for Disease Control and Prevention (CDC), 38 percent of adults are thought to have prediabetes, which equates to approximately 1.8 million adults in Maryland with prediabetes. Overweight and obesity are top risk factors for prediabetes and diabetes; over 68 percent of Maryland adults are overweight or obese.[9] The goals, milestones, and interim and final targets for the diabetes priority area are shown in Table 12.

Table 12. Total Population Health - Diabetes Goal

[8] 2021 Behavioral Risk Factor Surveillance System (BRFSS) Data. https://www.cdc.gov/brfss/index.html
[9] 2021 BRFSS Data.

Goal: Reduce the mean body mass index (BMI) for adult Maryland residents[10]	
Measure	Mean BMI in the population of adult Maryland residents
2018 Baseline	28.13 kg/m^2
2021 Year 3 Milestone **(All Met)**	Delaware, Virginia, Mississippi, and Washington, DC were selected as the cohort of states to serve as the control group to measure progress. Launched the Diabetes Prevention and Management Program track of the HSCRC Regional Partnership Catalyst Program. Incorporated a quality measure for all MDPCP practices requiring BMI measurement for all patients, and for patients with an elevated BMI, requiring documentation of a follow-up plan (applying inclusion/exclusion criteria from MIPS measure 128). Expanded the CRISP Referral Tool to Regional Partnerships to increase patient referrals for Diabetes Prevention Programs.
2023 Year 5 Target	Achieve a more favorable change from baseline mean BMI than a group of control states
2026 Year 8 Final Target	Achieve a more favorable change from baseline mean BMI than a group of control states

Quantitative Performance

Performance Against Cohort of States

Maryland set 2023 and 2026 targets that require Maryland to achieve a more favorable change from baseline mean BMI than a group of control states. HSCRC selected three states and Washington, DC to serve as the synthetic control group: Delaware, Virginia, Mississippi, and Washington, DC. To identify synthetic control states, Maryland relied on multiple years of BMI data from the CDC's Behavioral Risk Factor Surveillance Survey (BRFSS). States in the control group are assigned the following weights which are used to calculate final performance. A description of the process to develop the synthetic control group is detailed in the 2021 SIHIS annual report.

Table 13. Diabetes Synthetic Control Group Weights

State	Weight
Virginia	0.362
Delaware	0.279

[10] Mean BMI is determined using the results of the BRFSS.

Washington, DC	0.25
Mississippi	0.108

While performance against the cohort of other states was not a 2021 milestone, the State **DID** achieve a more favorable change from the 2018 baseline mean BMI than the control group by 0.05 BMI. Maryland's adult mean BMI in 2021 was 28.54.

Performance by Race & Ethnicity

Adult mean BMI by race and ethnicity is shown below in Table 14. The State acknowledges that health disparities in BMI persist in 2021. However, increased enrollment by non-Hispanic (NH) Black Marylanders in National Diabetes Prevention Programs (National DPP) as shown in Table 16 and Figure 4 should translate in the near future to positive BMI outcomes as the State continues to implement SIHIS.

Table 14. Maryland Adult Mean BMI by Race/Ethnicity, 2018 & 2021

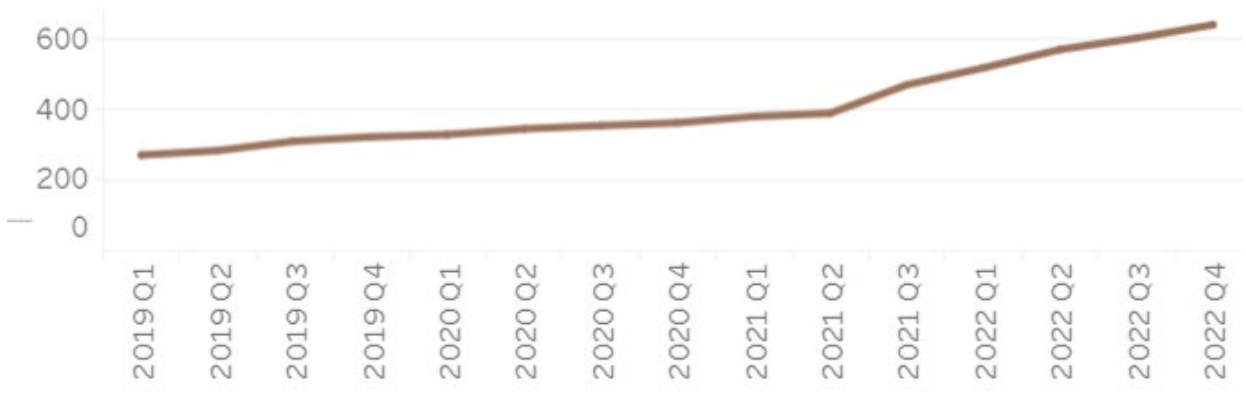
Race	2018 Average BMI (95% Confidence Interval)	2019 Average BMI (95% Confidence Interval)	2020 Average BMI (95% Confidence Interval)	2021 Average BMI (95% Confidence Interval)
NH White	27.9 (27.7, 28.1)	27.7 (27.6 - 27.9)	27.7 (27.5 - 27.9)	28.2 (28.0 - 28.4)
NH Black	29.3 (29, 29.7)	29.9 (29.5 - 30.2)	29.5 (29.1 - 29.9)	29.7 (29.4 - 30.1)
NH Asian	25 (24.4, 25.5)	25.0 (24.5 - 25.6)	24.8 (24.3 - 25.3)	25.8 (25.1 - 26.6)
American Indian/Alaskan Native	28.6 (27.2, 30)	29.5 (27.5 - 31.5)	27.7 (25.7 - 29.6)	29.6 (26.4 - 32.9)
Hispanic	28.9 (28.1, 29.6)	28.3 (27.7 - 28.8)	28.3 (27.8 - 28.7)	29.0 (28.4 - 29.5)
Other	28 (27.2, 28.9)	28.6 (27.8 - 29.4)	28.2 (27.4 - 29.0)	27.9 (27.1 - 28.8)
Maryland	**28.2 (28.0 - 28.4)**	**28.3 (28.1 - 28.4)**	**28.1 (28.0 - 28.3)**	**28.5 (28.4 - 28.7)**

Source: 2018 - 2021 Behavioral Risk Factor Surveillance Survey

Statewide Diabetes Prevention Program Enrollment

As discussed further in this report, Maryland is making substantial investments to support the expansion of the National DPP. To support SIHIS monitoring efforts, the State, in collaboration with CRISP, developed a SIHIS Directional Indicators Dashboard which includes key indicators to track performance towards SIHIS goals. Because BRFSS data that is used to measure BMI is only available annually and heavily lagged, the State uses National DPP enrollment as a proxy measure in the dashboard for the diabetes priority area. The dashboard uses data from the CDC on Diabetes Prevention Recognition Programs (DPRP). Between 2018 and October 2022, there was a steady incline in cumulative enrollment in Maryland National DPPs (161.2 percent); this outpaces national enrollment (93.1 percent).

Figure 3. Cumulative Enrollment Rate in DPP, 2019-October 2022



Source: CDC Programmatic Data

Table 15. Cumulative DPP Enrollment Compared to National Average, 2019-October 2022

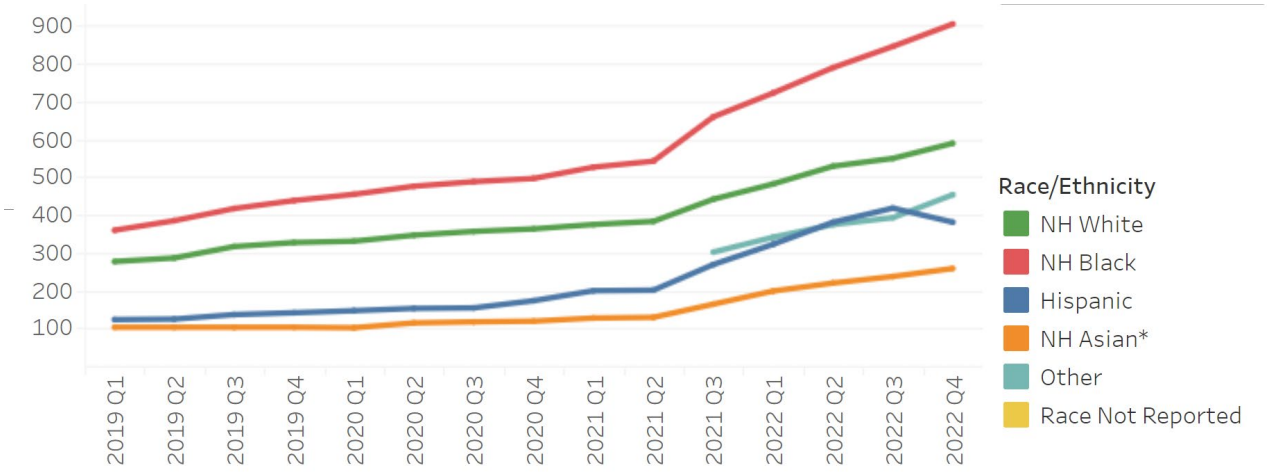
	2018 Baseline	Most Recent Rolling 12 Months	Percent Change	National Comparison Change
Rates per 100K	269.9	704.9	161.2%	93.1%
Total Count	4,328	11,316	161.5%	112.8%

Source: CDC Programmatic Data

The dashboard also shows performance broken down by race and ethnicity, as shown in Figure 4 and Table 16. Table 16 includes a Disparity Index, wherein a value over 1 indicates **positive** performance on the measure when compared to NH White performance. As shown below, NH Black enrollment in DPP is

outpacing NH White enrollment. There is room for improvement on DPP enrollment for the Hispanic and NH Asian population, although enrollment is growing faster for those populations than NH White.

Figure 4. Cumulative DPP Enrollment Rate by Race/Ethnicity, 2019-October 2022



Source: CDC Programmatic Data

Table 16. Cumulative DPP Enrollment Rates per 100K by Race/Ethnicity, 2018-Q3 2022

Race/Ethnicity	2018 Baseline	Most Recent Rolling 12 Months	Percent Change	Disparity Index
NH White	276.2	589.2	113.3%	1.0
NH Black	359.0	905.1	152.1%	1.5
Hispanic	122.5	380.3	210.5%	0.6
NH Asian	102.1	257.8	152.4%	0.4
Other	N/A	453.1	N/A	0.8
Statewide Total	269.9	704.9	161.2%	1.2

Source: CDC Programmatic Data

Statewide Diabetes Self-Management Education and Supports (DSMES) Participation

The State also receives annual reports from the CDC on DSMES participation, based on data reported by the American Diabetes Association (ADA) and Association of Diabetes Care and Education Specialists (ADCES). Since 2019, Maryland has seen 69 percent growth in DSMES participants through 2021, compared to 7 percent growth nationally. ADA and ADCES do not report race and ethnicity data.

Table 17. DSMES Participation Growth, Maryland vs. Nation, 2019-2021

State	2019 Encounters	2020 Encounters	2021 Encounters	Percent Growth
Maryland	11,403	11,705	19,270	69%
Nation	975,417	928,895	1,042,253	7%

Source: American Diabetes Association (ADA) and Association of Diabetes Care and Education Specialists (ADCES)

Updates on 2021 Milestones

As reported in the 2021 annual report on SIHIS activities and shown in Table 12, Maryland met all of the 2021 milestones for the diabetes priority area. Progress on milestones and additional activities underway to address diabetes burden are detailed below.

Milestone 1: Identify cohort of states for synthetic control group

HSCRC selected three states and Washington, DC to serve as the synthetic control group: Delaware, Virginia, Mississippi, Washington, DC. A description of the approach to develop the synthetic control group can be found in the 2021 SIHIS Annual Report.

Milestone 2: Regional Partnership Catalyst Program – Diabetes Prevention & Management Track

The Health Services Cost Review Commission (HSCRC) is issuing $157.6 million in five-year cumulative funding for the Regional Partnership Catalyst Program to support population health investments. The Regional Partnership Catalyst Program provides funding to hospital-led teams that work across statewide geographic regions to build infrastructure for interventions that align with the SIHIS total population health goals. The Regional Partnership Catalyst Program funds program development focused on two priorities: diabetes prevention and management programs and behavioral health crisis programming. For diabetes, the Regional Partnership Catalyst Program supports the implementation of the National DPP and DSMES.

The HSCRC funding is intended as seed funding, an initial investment in program development and growth. The HSCRC expects Regional Partnership programs to develop sustainable funding streams to support the programs after the HSCRC funding ends on December 31, 2025.

The HSCRC has allocated $78.5 million to six Regional Partnerships to provide diabetes prevention and management activities across Maryland.[11] The award recipients self-selected ZIP codes with disproportionate rates of diabetes or in vulnerable communities more likely to have higher rates of prediabetes. The awardees and funding amounts are listed below.

Table 18. Regional Partnership (Diabetes) Jurisdictions and Funding Amounts

Regional Partnership	Jurisdiction	Total Funding
Baltimore Metropolitan Diabetes Regional Partnership	Baltimore City	$43,299,986
Western Regional Partnership	Allegany, Frederick, and Washington Counties	$15,717,413
Nexus Montgomery	Montgomery County	$4,121,123
Totally Linking Care - Maryland	Prince George's, Charles, and St. Mary's Counties	$7,379,620
St. Agnes and LifeBridge Health Diabetes Care Collaborative	Baltimore City/County	$5,962,333
Full Circle Wellness for Diabetes in Charles County	Charles County	$2,054,382

In 2021 and 2022, Regional Partnerships began planning, building relationships, and developing infrastructure to expand DPP and DSMES. In 2021, Regional Partnerships had a variety of accomplishments including launching 32 new DPP cohorts and expanding DSMES programs. Regional Partnerships utilized different strategies to expand DPP as each had different starting points in running programs. This included expanding existing programs already offered, partnering with current community-based lifestyle change program providers, and establishing new programs in service areas.

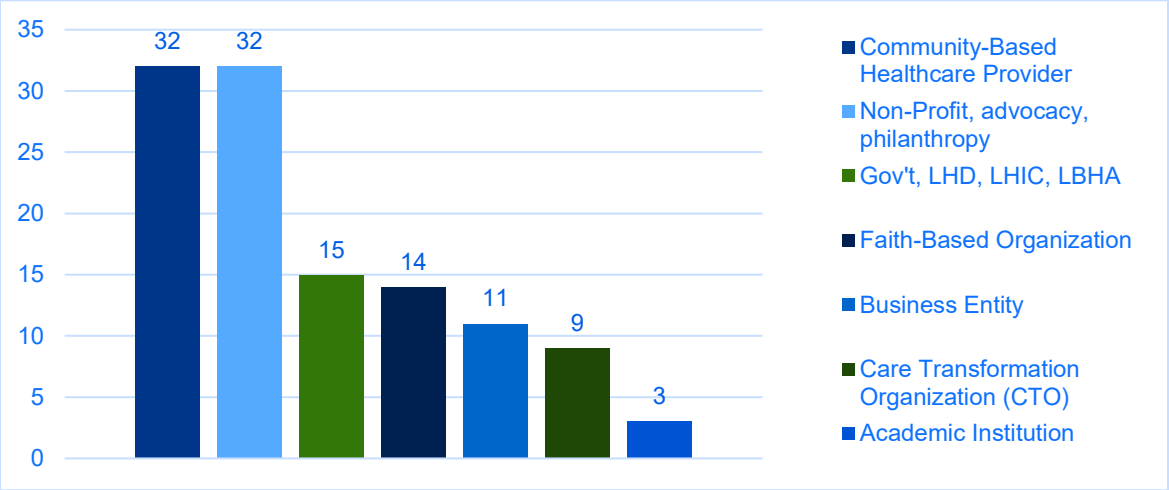
[11] The HSCRC discontinued one Regional Partnership's participation in the program at the end of 2022. Funding amounts have been adjusted to reflect those changes.

To support National DPP expansion, Regional Partnerships established and scaled a variety of patient referral strategies. Strategies included leveraging health information technology (HIT), establishing referral workflows with primary care providers (PCPs), and engaging with managed care organizations (MCOs) and community-based organizations (CBOs). Regional Partnerships also offered wrap-around services through community partnerships to maximize patient success in DPP. These services included food access programs, exercise programs, and transportation.

Many Regional Partnership hospitals have been operating DSMES programs for several years. Regional Partnerships worked to increase DSMES uptake by expanding the number of certified diabetes care and education specialists (CDCES) and practice sites, enhancing referral platforms, and hiring new staff, and engaging primary care and endocrinology practices to generate referrals and support program retention and completion.

A core goal of the Regional Partnership Catalyst Program is to foster widespread collaboration between hospitals and community partners. Under this program, hospitals are partnering with neighboring hospitals and diverse community organizations including local health departments (LHDs), MCOs, provider organizations, and CBOs to implement diabetes interventions and expand behavioral health crisis services infrastructure that are intended to aid in improving population health. Regional Partnerships receiving diabetes funding identified a total of 116 community partners to support the implementation of National DPP and DSMES in their communities. The two most common types of organizations are community-based healthcare providers and non-profit advocacy or philanthropy organizations.

Figure 5. Regional Partnership - Diabetes Community Partners



Regional Partnerships also prioritized establishing a billing infrastructure to support long-term program sustainability for DPP and DSMES. All Regional Partnerships bill Medicare for DSMT[12] or will begin billing in early 2023. Most are billing commercial payers for DSMES as well. Regional Partnerships are also establishing a billing infrastructure for DPP and will have Medicare and/or Medicaid billing established by early 2023, if not already in place. Some Regional Partnerships are in the process of developing umbrella hub arrangements to support community-based DPP providers with billing.

Regional Partnerships will submit their 2022 annual reports in Spring 2023. HSCRC will continue to closely monitor Regional Partnership program activities and success in expanding DPP and DSMES programs. Regional Partnerships continue to scale their DPP and DSMT programs in 2023 and continue to build towards self-sustaining programs that will continue beyond 2025 when Regional Partnership funding ends.

Milestone 3: Expansion of CRISP Referral Tool

In 2021, the State prioritized expanding the use of a bi-directional DPP e-referral tool for use by a wide range of providers, including clinicians, HSCRC Regional Partnerships, managed care organizations (MCOs), health plans, and DPP providers. The tool is designed to allow for electronic referrals at the point of care and permits the community organization to accept and send back information on the status of the referral. All Regional Partnerships that received funding to implement DPP were onboarded to the tool. While the official 2021 milestone only refers to expanding the tool to Regional Partnerships, CRISP has also onboarded seven of the nine MCOs that offer HealthChoice DPP. The MDPCP Program Management Office PMO also hosted educational webinars for MDPCP practices outlining how to use the tool, encouraging referrals to DPP, and promoting use of the referral tool as well. In addition to the referral tool, providers use a variety of strategies to generate DPP referrals, including customizing health information technology (HIT), leveraging additional CRISP tools such as SMART alerts, and building relationships with other providers and community-based organizations.

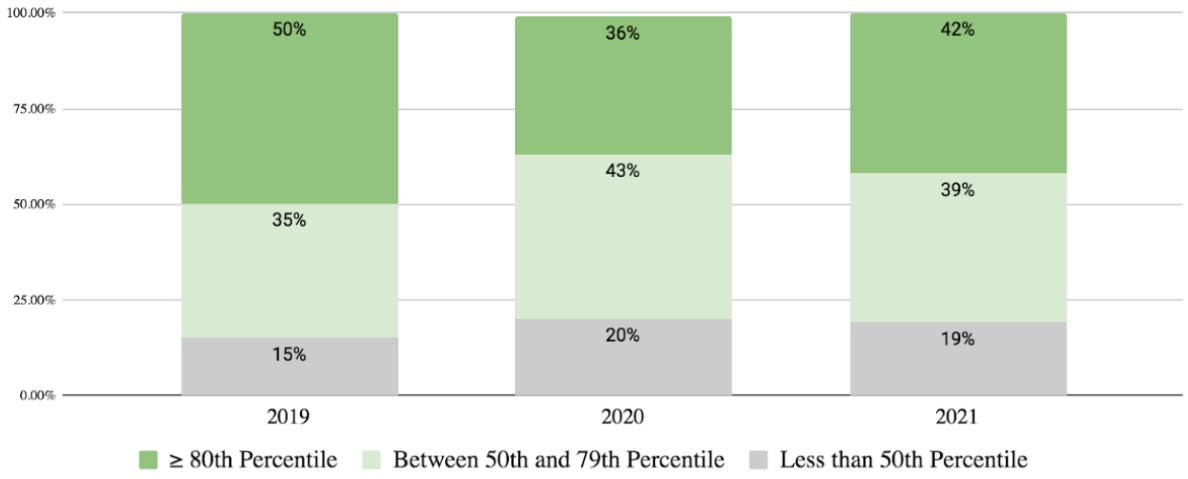
Milestone 4: Maryland Primary Care Program – BMI Quality Measure

MDPCP has also aligned on reducing BMI and diabetes incidence. All MDPCP practices tracked electronic clinical quality measures (eCQM) related to BMI screening and follow-up plan (CMS69) and diabetes control (CMS122) in 2021. Figure 6 shows 2019-2021 diabetes control rates for all patients in MDPCP practices compared to the national median of reporting providers. MDPCP practices performed well, despite the COVID-19 pandemic with 81 percent of practices scoring at or above the national median for A1c including 42 percent greater than the 80th percentile. Figure 7 shows 2021 performance for all patients

[12] Diabetes Self-Management Education and Support (DSMES) is an umbrella term to describe accredited diabetes self-management programs. Diabetes Self-Management Training (DSMT) is a Medicare-specific term that falls underneath the DSMES umbrella.

in MDPCP practices on BMI screening and follow-up plan.[13] Practices are focused on managing patient weight and providing patients with support to reduce the risk of developing diabetes through strategies such as referrals to DPP. Many MDPCP practices have partnered with hospitals that are funded through HSCRC's Regional Partnership Catalyst Program, discussed above. Additionally, the PMO has been working closely with CareFirst to plan a coordinated strategy to address diabetes in practices participating in both MDPCP and the CareFirst patient-centered medical homes (PCMH) programs.

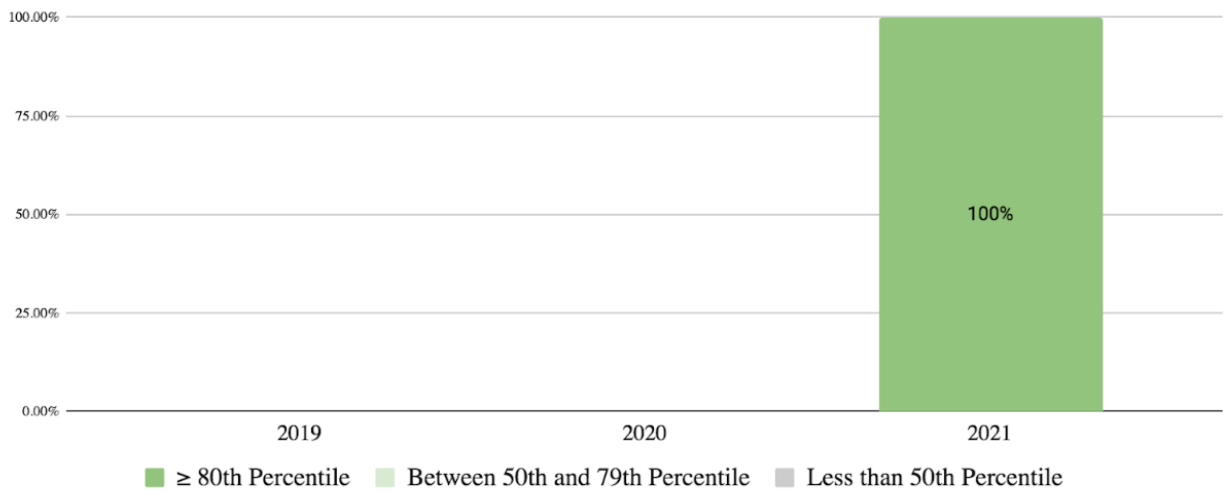
Figure 6. Percent of MDPCP Practices above the National Median in HbA1c Control (CMS122)



Source: Annual MDPCP Practice eCQM Reporting to CMS

[13] *Note that this measure was nationally suppressed for 2021. All practices received full credit.

Figure 7. MDPCP Practices' Performance Against Benchmark BMI Screening and Follow-Up Plan (CMS69).



Source: Annual MDPCP Practice eCQM Reporting to CMS

Moreover, the PMO has established partnerships with entities across the state that are working to address weight and to implement lifestyle change programs. The PMO reached out to community-based organizations with the capability and capacity to accept additional referrals from MDPCP practices and established a pilot referral process via CRISP. The PMO organized meetings to introduce these partners to MDPCP practices in their service regions. These partners include Giant Food Nutrition, MAC Living Well Center of Excellence, Bethesda Newtrition and Wellness Services, and Meals on Wheels of Central Maryland. The PMO also works collaboratively and meets regularly with the PreventionLink program in Southern Maryland, the Maryland Department of Aging, and its Area Agencies on Aging, and the MDH Center for Chronic Disease Prevention and Control to develop education and best practices communications for participating practices.

The PMO is also working closely with CRISP to roll out data tools to assist practices in identifying prediabetes and refer patients to evidence-based programs including the DPP. In Fall 2022, the PMO and CRISP began a Prediabetes SMART Alerts-Roster pilot. Working with several groups of practices around the State, the pilot is testing out the efficacy of providing alerts through CRISP when a patient is identified as potentially having prediabetes based on lab and diagnosis data. Practices will be able to provide a roster of their patients for comparison against CRISP data; once alerted practices can more fully investigate the patient's health status and initiate discussions with the patient which may include a referral to DPP or other evidence-based programs. At the same time, the PMO is developing guidance documents for practices on how to then refer patients, if appropriate. Referrals may include using the CRISP e-referral tool, working with a Regional Partnership, or other avenues.

Education and technical assistance is a central component of MDPCP efforts to reduce mean BMI and diabetes incidence. Starting in 2021 and moving forward, the PMO will continue to implement the following initiatives:

- Monthly newsletter features in the *MDPCP Today* newsletter - highlight resources for BMI and diabetes prevention and management, as well as spotlight practices that are succeeding in this work
- DPP resources - provide list of DPPs on MDPCP website and Connect as well as develop additional primers for practices
- "State of the MDPCP" All-Practice Calls - announce awards for practices that are doing outstanding work in the area of diabetes
- ADA Diabetes INSIDE 2.0 - three MDPCP practices participate in the year-long quality improvement program
- Quality Improvement (QI) initiatives - translate lessons learned from the BMI eCQM and Diabetes PQIs Plan-Study-Do-Act (PDSA) pilots to identify technical assistance going forward

Additional Programs & Interventions to Address Diabetes

Maryland Department of Health (MDH) Programs & Initiatives

Diabetes Prevention Efforts

MDH oversees a Diabetes Prevention Program Network, which supports Diabetes Prevention Recognition Program (DPRP) lifestyle change program providers in Maryland. The network supports the 81 DPRP providers by providing an online referral and data tracking system (Workshop Wizard). MDH worked with CRISP to link the referral system for smart alerts and to ease referrals with providers. MDH implemented the HALT Diabetes platform in March 2020 for Maryland DPRPs to provide their program virtually; 30 DPRPs use this platform (through June 2022, 38 cohorts were initiated, with 438 participants). MDH also holds quarterly Network meetings, with an average attendance of 65. MDH provides skill training for lifestyle coaches, such as motivational interviewing, improving enrollment and sustaining programs.

The Employer Engagement Initiative continued to work with large Maryland employers (500+ employees) and influencers to address the burden of diabetes in the workplace. This initiative reached out to Maryland-based employers to address prevention of type 2 diabetes by incorporating the National DPP as a wellness or health benefit. The MDH, Cancer and Chronic Disease Bureau continued to work closely with the National Association of Chronic Disease Directors (NACDD) and the CDC to create and disseminate diabetes prevention messaging to Maryland-based employers.

Diabetes Self-Management Education Services (DSMES)

MDH oversees a DSMES Network which provides education and skill building programming for diabetes educators in DSMES programs in Maryland. MDH has a contract with a DSMES subject-matter expert to provide ongoing support to DSMES program staff, using monthly "office hours," with an average attendance of four DSMES per session. The subject matter expert assisted three new sites in securing accreditation in FY 2022. MDH provided 11 skill-based trainings for DSMES providers, including motivational interviewing and health literacy, to over 400 participants (and 166 viewers of the training recordings). The DSMES Network meets quarterly. MDH worked with the MDPCP to implement eight training sessions to encourage referrals to diabetes community programs, with over 248 participants (and 178 viewers of the training recordings).

Evidence-Based Weight Programs

In addition to the National DPP, which is considered an evidence-based weight management program, MDH is standing up the Taking Pounds Off Sensibly (TOPS) program, an evidence-based community program that offers tools and programs for healthy living and weight management for adults who are overweight or obese. In FY 2022, two early adopters, Charles and Garrett County health departments, launched new TOPS chapters, and served 19 new members and 28 new members, respectively. MDH released a campaign encouraging healthy lifestyles for women of childbearing age in 2022. The social media reach was over 4.9 million impressions and over 42,000 ad clicks.[14]

Whole Health Approach

MDH uses the term "whole health" to focus on aligning common goals between Tobacco and Chronic Disease. This model embraces integration and collaboration to improve public health in local jurisdictions. As part of this approach, MDH is utilizing new state tobacco funding received from a tobacco tax increase to support LHDs to enhance chronic disease evidence-based programming in their communities. Depending on the community chronic disease burden, the LHDs were provided between $43,000-80,000 to implement at least one of three evidence programs (National DPP, TOPS, and/or Healthy Heart Ambassador). The grant contracts initiated between October and December 2022, with 11 National DPP, eight TOPS and two Healthy Heart Ambassador programs.

Medicaid Initiatives

HealthChoice DPP

Medicaid continues to expand and refine implementation of its National DPP coverage under the HealthChoice DPP across all nine MCOs. To support these efforts, Medicaid has invested $92 million to

[14] https://health.maryland.gov/phpa/ccdpc/Pages/healthy-women.aspx

increase Evaluation and Management (E&M) rates for FY 2022 and $60 million for FY 2023 and provides $5 million per year in the HealthChoice Diabetes Prevention Program. During 2022, Medicaid has developed, and enhanced, the following resources in its efforts to sustainably support its National DPP coverage.

Population Health Incentive Program

Medicaid has also included a diabetes measure (HbA1c poor control) in the Population Health Incentive Program. This program provides financial incentives to MCOs that demonstrate high-quality care based on standardized measures of performance. MCOs may also share the incentives with the providers allowing them to improve performance. The Department prioritized the SIHIS Total Population Health areas including diabetes, in addition to measures prioritized by CMS through the Core Sets and Medicaid and CHIP Scorecard. As such, adding the diabetes measure to the incentive program encourages further prioritization of diabetes prevention as well as incentives MCOs to improve performance. This measure also is a priority measure under MDPCP.

CRISP Partnership

Medicaid partnered with CRISP to develop an algorithm for Care Alerts and Smart Alerts and onboarding MCOs onto the CRISP Referral Tool .

SMART Alerts: These are reports of Care Alerts generated for Medicaid beneficiaries in their electronic health record. Providers receive a notification that the member may meet eligibility criteria for prediabetes prevention programs. Providers can use these reports and notifications to enroll members in a DPP outreach campaign, such as sending text messages to a member, and they support DPP providers in outreaching eligible members for DPP and connecting them to additional programs and resources as appropriate.

CRISP Referral Tool: Each participating MCO is established as an DPP intermediary to manage the workflow for Medicaid member DPP referrals from Care Management and Provider Liaisons (who refer on behalf of providers) to the DPP program coordinator. This tool also allows providers to document referrals made outside of CRISP, integrates a cumulative report of DPP referrals, and onboards and trains the Care Management and Provider Liaisons.

MCO DPP Retention Efforts

MCOs have incorporated a number of approaches to increase retention in DPP, including:

1. Offering small incentives throughout the program to encourage retention
2. Partnering with Hungry Harvest to provide food-based delivery options to eligible HealthChoice members

3. Providing members with promotional items such as cutting boards, food scales, measuring spoons/cups, and portion- controlled plates
4. Transportation, *e.g.,* cab service or Uber. Childcare reimbursements were also provided when that barrier to care was identified. Make-up sessions for members who missed classes
5. Member and provider services development trainings

Local Innovations

Local Health Improvement Coalitions (LHICs)

The University of Maryland School of Public Health, Horowitz Center for Health Literacy continued to provide technical assistance to 20 local health improvement coalitions (LHICs) to prioritize diabetes in their communities. In 2022, LHICs focused on solidifying a statewide Community of Practice learning collaborative, continued capacity building, implementation of diabetes strategies, connections with providers and payers, and incorporation of evaluation planning into the LHICs' current activities. The Horowitz Center continued to provide monthly one-on-one check-ins, biweekly office hours, and monthly convenings to support the LHICs and their efforts to better serve individual communities with diabetes prevention and control messaging. Monthly convening topics included Diabetes Outcome and Strategies, Community Engagement, Evaluation and Your Diabetes Strategies, Progress on Payer/Provider Relationships, and accessing community level data. MDH will continue to provide technical assistance to the LHICs to support diabetes initiatives as the contract with the Horowitz Center ended in September 2022.

Local Health Departments (LHDs)

MDH Cancer and Chronic Disease Bureau issued funding to 12 local health departments (LHDs) to support diabetes prevention strategies with a focus on overweight and obesity control. The LHDs focused on four domains: Food Security, Physical Activity, Community-Wide Health Initiatives, and Health Promotion. Through these activities, LHDs distributed fresh produce boxes to community members, supported food banks and pantries to supply fresh produce, established community and school gardens, implemented walking groups and physical activity classes in the community, supported weight loss strategies, and aided in two community-wide initiatives that included a focus on weight loss to lower community-wide BMI. Additional funding to local health departments included an overweight and obesity initiative centered in dental settings. Through this initiative, 5,496 BMI screenings occurred in 2022 with 53 percent of the screenings among people who were overweight and obese. The overweight and obese patients were referred to lifestyle intervention programs focused on physical activity and nutrition.

In addition, a joint Tobacco/Chronic Disease Initiative offered funding to the 24 LHDs, requiring at least 33 percent of their activities to include at least one of three determined chronic disease evidence-based programs.

Diabetes Quality Task Force (DQTF)

The Diabetes Quality Task Force (DQTF) continued to work through 2022 to address quality assurance, clinical guidelines, and standard messaging for diabetes prevention and management. The DQTF consists of three committees: Community Clinical Linkages workgroup, Health Systems Intervention workgroup, and the Data, Surveillance, and Epidemiology workgroup. These workgroups continue to work on prioritizing strategies and activities to improve quality in diabetes care for all populations, with an emphasis on minority and rural communities. The workgroups worked collaboratively to establish clinical and population measures to post on a public facing data dashboard that will be updated on an annual basis. The Community Clinical Linkages developed a diabetes resource guide for providers, patients, and community-based organizations to be included in the MDH, Cancer and Chronic Disease Bureau website.

SVG Stakeholder Highlights

As mentioned earlier in this report, Secretary Schrader requested that SVG member organizations develop and share the specific activities they would undertake to support the State's goals under SIHIS. Select highlights of stakeholder activities to address diabetes are below.

CareFirst

CareFirst's Place-Based Diabetes Grants Program is partnering with 26 LHICs and community organizations to support community-driven interventions. CareFirst has committed $1.71 million in funding to support organizations in developing place-based approaches for diabetes. These programs are designed and led by local community members and directly benefit the people in those communities. The grants are intended to increase access to diabetes prevention and management resources, create food pharmacy programs, and establish community gardens and gathering spaces. CareFirst also offers numerous programs and policies for members with diabetes and at risk for diabetes, including a Diabetes Virtual Care Program and DPP.

Leveraging CRISP to Drive Progress

As part of the SIHIS initiative, CRISP is offering two different tools to recognize patients who likely have prediabetes using Encounter Notification Service (ENS) panels. Within ENS PROMPT, a tool used to monitor real-time hospital and emergency department (ED) encounters, CRISP developed a filter to recognize patients with prediabetes to assist staff in follow-up for DPP and other types of assistance. Additionally, CRISP users can request a prediabetes comparison panel based on their ENS panel, which is a subset of all patients on their panel for whom CRISP data shows potential prediabetes. These tools were piloted in 2022 with University of Maryland (UM) Midtown and UM Medical Center staff and the pilot has expanded for use by MDPCP practices, as well as Ascension St Agnes and Tidal Health systems.

CY 2023 Priorities

MDH plans to continue partnering with local jurisdictions to develop overweight and obesity activities to include increase and expansion of National DPPs, DSMES, Taking off Pounds Sensibly (TOPS), and Healthy Heart Ambassador programs, and county-wide weight loss initiatives. MDH is also expanding efforts with the development of a Maryland CornerStore Initiative focusing on rural communities to expand fruits and vegetables and offer an increase in healthier options at corner stores. MDH plans to launch a Provider learning collaborative to support primary care providers needing access to specialty care for diabetes. Focus areas will include overweight, obesity, prediabetes, nutrition, and addressing diabetes complications.

Domain 3b. Total Population Health – Opioids

SIHIS presents a unique opportunity for the State to address the opioid crisis in Maryland. In 2015, the Lt. Governor Rutherford convened the Maryland Heroin and Opioid Emergency Taskforce, which highlighted the opioid crisis as a critical health priority for the state. In 2017, Governor Hogan declared a State of Emergency, establishing the Opioid Operational Command Center (OOCC) and the Inter-Agency Heroin and Opioid Coordinating Council (IOCC). The specific goal, measure, milestones, and targets for the opioids priority area are below.

Table 19. Total Population Health - Opioids Goal

Goal: Improve overdose mortality[15]	
Measure	Annual change in overdose mortality as compared to a cohort of states with historically similar overdose mortality rates and demographics.
2018 Baseline	Age-adjusted death rate of 37.2/100,000
2021 Year 3 Milestones ***All Milestones Complete***	Identify the cohort of states that will serve as the synthetic control group to measure progress. Launch the Behavioral Health Crisis Programs grants track of the HSCRC Regional Catalyst Grants Program. Expand Screening Brief Intervention and Referral to Treatment (SBIRT) to 200 practices participating in the Maryland Primary Care Program (MDPCP)
2023 Year 5 Target	Achieve a more favorable trend in overdose mortality rate as compared to the weighted average of control states.

[15] Maryland uses CDC data that measure age-adjusted overdose rates based on ICD-10 codes.

2026 Year 8 Final Target	Achieve a more favorable trend in overdose mortality rate as compared to the weighted average of control states

Quantitative Performance

Overdose Mortality - Performance Against Cohort of States

Maryland set 2023 and 2026 targets that require Maryland to achieve a more favorable change from baseline overdose mortality than a group of control states. HSCRC selected three states and Washington, DC to serve as the synthetic control group: Massachusetts, New Jersey, Delaware, and Washington, DC. To identify synthetic control states, Maryland relied on multiple years of age-adjusted overdose mortality data from the CDC. States in the control group are assigned the following weights (Table 20) which are used to calculate final performance. A description of the process to develop the synthetic control group is detailed in the 2021 SIHIS annual report.

Table 20. Opioids Synthetic Control Group Weights

State	Weight
Massachusetts	0.372
New Jersey	0.231
Washington, DC	0.231
Delaware	0.166

In 2021, the State **did not** achieve a more favorable change from the 2018 baseline rate, ending the year with an overdose mortality rate 0.6 above the control group. The State continues to work diligently towards its 2023 and 2026 targets and monitors various other data sets that show promising progress.

Overdose Fatalities

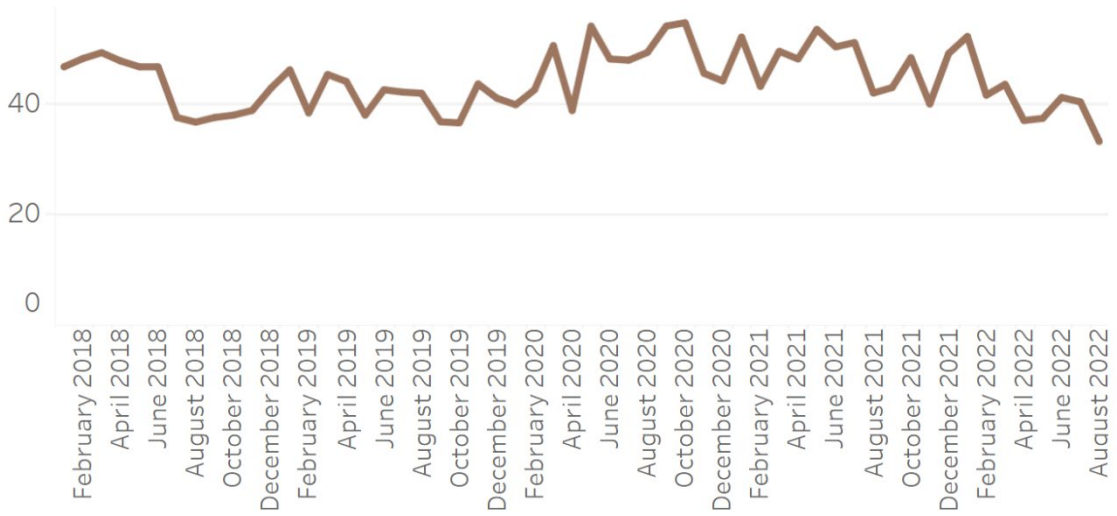
In addition to the official overdose mortality measure, Maryland monitors overdose fatalities as a proxy measure through the SIHIS Directional Indicators Dashboard. The proxy measure uses data from the Office of the Chief Medical Examiner (OCME) and the Maryland Department of Planning. As shown in Table 21 and Figure 8, Maryland experienced a 3.0 percent reduction in the overdose fatality rate per 100K, compared to a national rate increase of 49.5 percent.

Table 21. Overdose Fatalities Compared to National Average, 2018-August 2022

	2018 Baseline	Most Recent Rolling 12 Months	Percent Change	National Comparison Change
Rates per 100K	42.63	41.33	-3.0%	49.5%
Total Count	2,406	2,503	4.0%	51.0%

Source: Office of the Chief Medical Examiner (OCME) and Maryland Department of Planning

Figure 8. Overdose Fatality Rate by Month, 2018-August 2022



Source: Office of the Chief Medical Examiner (OCME) and Maryland Department of Planning

Performance by Race & Ethnicity

The CDC National Vital Statistics data used to measure the official SIHIS goal for overdose mortality does not provide performance by race. Maryland monitors disparities for the opioids priority area using the overdose fatalities proxy measure. Table 22 includes 2018 baseline values, performance through July 2022, and a Disparity Index, wherein a value over 1 indicates **negative** performance on the measure when compared to non-Hispanic (NH) White performance.

As shown below, overdose disparities persist for the NH Black population and there has been significant growth in the overdose fatality rate for the Hispanic population. The State's Inter-Agency Heroin and Opioid Coordinating Council recently concluded a Racial Disparities in Overdose Task Force which produced a series of recommendations to close overdose disparities. The recommendations produced by the Task Force are discussed later in this report.

Table 22. Overdose Fatality Rates per 100K: Race/Ethnicity & Disparity Index, 2018-August 2022

	2018 Baseline	Most Recent Rolling 12 Months	Percent Change	Disparity Index
NH White	48.47	41.75	-13.9%	1.0
NH Black	45.59	57.50	26.1%	1.4
Hispanic	10.80	20.78	92.5%	0.5
NH Asian	0	4.42	NA	0.1
Other	22.10	28.27	27.9%	0.7
Statewide Total	42.63	41.33	-3.0%	1.0

Source: Office of the Chief Medical Examiner (OCME) and Maryland Department of Planning

The State also tracks a robust number of additional measures on fatal and non-fatal overdoses through a publicly-available dashboard operated by the OOCC.[16]

Updates on 2021 Milestones

As reported in last year's annual report on SIHIS activities and shown in Table 19, Maryland met all of its 2021 milestones for the opioids priority area. Progress on milestones and additional activities underway to address opioids use are detailed below.

Milestone 1: Identify cohort of states for synthetic control group

HSCRC selected three states and Washington, DC to serve as the synthetic control group: New Jersey, Massachusetts, Delaware, and Washington, DC. A description of the approach to develop the synthetic control group can be found in the 2021 SIHIS Annual Report.

Milestone 2: Regional Partnership Catalyst Program – Behavioral Health Track

The Regional Partnership Catalyst Grant Program, discussed above in the diabetes section of this report, also supports the implementation and expansion of behavioral health crisis management models as described in the "Crisis Now: Transforming Services is Within Our Reach" action plan developed by the National Action Alliance for Suicide Prevention. Funding recipients are implementing and expanding at least one of the three main elements of the CrisisNow Model: 1) crisis call centers and "Air Traffic Control" services, 2) community-based mobile crisis teams, and 3) short-term, "sub-acute" residential stabilization

[16] https://beforeitstoolate.maryland.gov/oocc-data-dashboard/

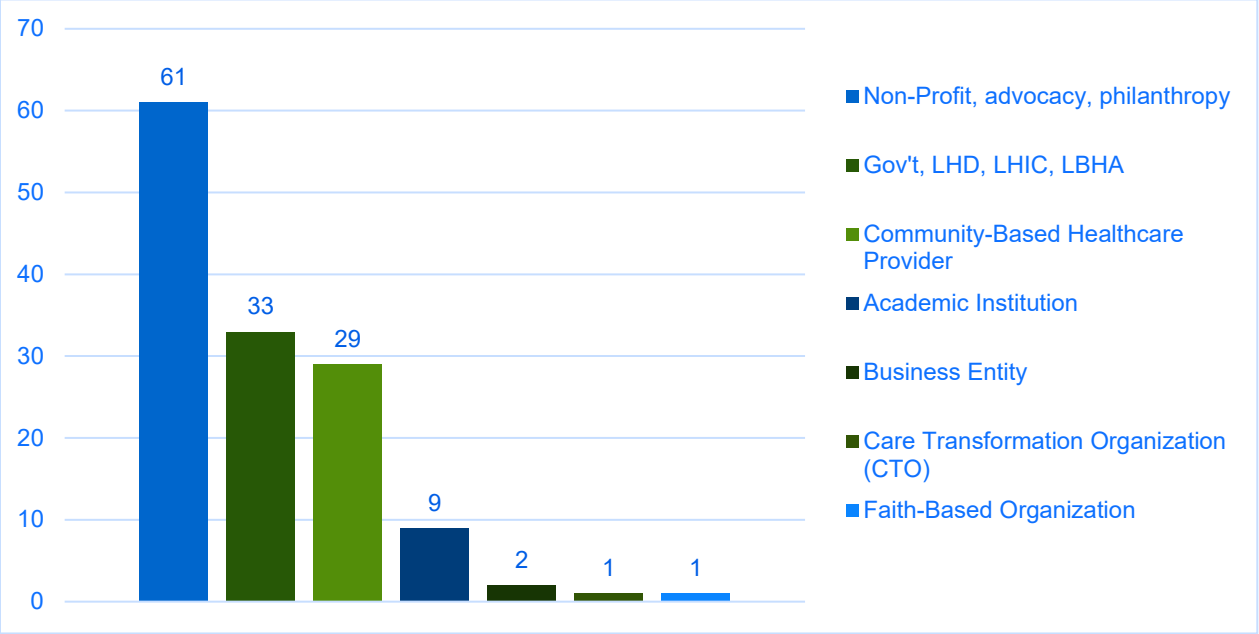
programs. The HSCRC allocated $79.1 million to three Regional Partnerships to implement and expand behavioral health crisis services infrastructure. The awardees and funding amounts are shown in Table 23.

Table 23. Regional Partnership (Behavioral Health) Jurisdictions and Funding Amounts

Regional Partnership	Jurisdiction	5 Year Funding Amount
Greater Baltimore Regional Integrated Crisis System (G-BRICS)	Baltimore City/County, Howard, Carroll Counties	$44,862,000
Totally Linking Care (TLC)	Prince George's County	$22,889,722
Tri-County Behavioral Health Engagement (TRIBE)	Lower Eastern Shore	$11,316,332

Regional Partnerships are expected to partner with diverse community organizations including LHDs, provider organizations, and non-profits to implement and expand behavioral health crisis services. The three Regional Partnerships receiving behavioral health funding reported collaborating with a total of 136 community partners to support the expansion of behavioral health crisis services in their communities. The largest category was non-profit, advocacy, or philanthropy organizations, followed by local public entities, and community-based healthcare providers (Figure 9).

Figure 9. Regional Partnership (Behavioral Health) Community Partners



The three Regional Partnerships undertook a number of activities as part of infrastructure planning and development during CY 2021. This included establishing formal structures for governance, accountability, meeting cadence, and sub-groups that included representation of a wide array of stakeholders.

Care Traffic Control (CTC) Activities

The Catalyst Program is funding two Regional Partnerships to develop CTC capabilities as a hub for deployment of mobile and other crisis services. CY 2021 coincided with ongoing planning for the national launch of the 988 Crisis and Suicide Lifeline. Consequently, Regional Partnership decisions regarding implementation of CTC were dependent on progress of the national 988 system. With guidance from MDH and collaboration between the two Regional Partnerships, the same vendor—Behavioral Health Link—was procured by both Regional Partnerships in CY 2021. The vendor provides software in support of the comprehensive call center as well as deployment and coordination of crisis services in real time. As of Fall 2022, both Regional Partnerships have deployed CTC which is being actively used by existing and new mobile crisis teams.

Mobile Crisis Teams (MCT)

Two Regional Partnerships are engaged in developing mobile crisis teams. A major focus of CY 2021 was the development of mobile crisis team standards in collaboration with stakeholders. Standards were incorporated into the process to procure and expand service providers for CY 2022. New and expanded

mobile crisis team services launched in Fall of 2022 and have been serving patients with the use of CTC software.

Crisis Centers

Two Regional Partnerships reported on activities to develop crisis centers in CY 2021. One Regional Partnership is developing two crisis stabilization center sites: a primary site which opened in August 2022 and a secondary site which opened in January 2022. Both sites are across from emergency departments (EDs) to facilitate alternative access to emergency care. During CY 2021 progress was made on centralizing existing crisis response services and the following activities:

- Building infrastructure;
- Renovating buildings, including instituting safety and risk assessment recommendations;
- Recruiting, hiring, and training staff, including a full-time on-site psychiatrist at the primary center and additional general and pediatric tele-psychiatry providers;
- Developing policies and procedures;
- Securing necessary IT and medical equipment; and
- Creating and deploying a marketing strategy and community outreach campaign.

One Regional Partnership has focused on expanding same day access to care through an Open Access Pilot. Participating sites have grown throughout 2022 and are offering same day appointments to patients.

Milestone 3: Maryland Primary Care Program (MDPCP) – SBIRT Implementation

To help primary care practices combat Maryland's statewide opioid epidemic, the PMO engages a contractor, Mosaic Group (referenced as "Mosaic"), that is experienced in integrating Screening, Brief Intervention, and Referral to Treatment (SBIRT), an evidence-based protocol, into primary care. The PMO has been working with Mosaic since 2019. The SIHIS goal for SBIRT implementation among MDPCP practices in 2021 was 200 practices. As of December 2021, 319 MDPCP practice sites, including seven Federally-Qualified Health Center (FQHCs), had implemented SBIRT to identify, provide brief intervention, and appropriately refer patients with substance use disorders (SUD) to services and treatment.

Since 2021, the PMO, in partnership with the Behavioral Health Administration (BHA), has implemented a three-fold strategy to use SBIRT to drive reductions in opioid use disorder (OUD). The following elements are components of this strategy:

- **SBIRT implementation in hot spot OUD areas:** The PMO prioritizes the implementation of SBIRT in opioid use disorder hot spots including Anne Arundel, Baltimore, Montgomery, Prince George's, Washington and Harford counties, and Baltimore City. The State is focused on increasing the number of practices using SBIRT statewide but focuses particularly on recruiting practices to use

this strategy in these hot spots. Concentration of practices in hot spot counties is shown in Appendix 6.

- **Practice improvement**: The PMO, through a contractor, actively reviews data reported by MDPCP practices to ensure the practices are meeting performance targets related to the use of SBIRT. Practices that have implemented SBIRT are provided with a report on the assessment of their data and actions that the practice could take to improve their use of SBIRT. As of December 2021, over 40 practices were working with the contractor to review SBIRT-related data, assess their current workflows, and identify the action steps to improve the use of SBIRT within the practice.
- **SBIRT data in CRISP**: As of December 2021, 199 practices had uploaded SBIRT data into a CRISP tool built to capture each practice's progress. Table 24 displays the number of SBIRT screenings, positive screens, and brief interventions for the August to December 2021 time period. The PMO is working with additional practices to increase the number of practices reporting SBIRT data through CRISP. Since SBIRT reporting is voluntary, practices' support of this work has been critical. Accordingly, the State does not anticipate all practices that have implemented SBIRT will report in any given month.

Table 24. Number of SBIRT Screenings, Positive Screens, and Brief Interventions for MDPCP Practices, August 2021 - December 2021

SBIRT Screenings	Positive Screens	Brief Interventions
154,916	9,295	3,132

Source: Monthly MDPCP Practice Reporting to CRISP[17]

Additional Programs and Interventions Addressing Opioids

MDH & BHA – Led Initiatives

Reverse the Cycle

Reverse the Cycle is a program by Mosaic Group, utilizing State Opioid Response (SOR) funding to provide universal screening of all patients that present to the hospital emergency department which allows the hospital to identify individuals with SUD. The program integrates SBIRT, the Opioid Overdose Survivors Outreach Program, and medication initiation in the ED. All components rely heavily on the work of peer recovery specialists. To date, the Reverse the Cycle program has been implemented at 31 hospital EDs,

[17] MDPCP practices have been voluntarily reporting SBIRT data to MDH since August 2021.

with plans to add two additional hospitals in the next month or so. With SOR 3 funding, the State is planning to expand the Reverse the Cycle program to four crisis stabilization centers across the state.

988 Launch

The Maryland Department of Health recently launched 988, the new national suicide and crisis hotline. 988 provides callers with direct connections to support for mental health or substance use concerns, thoughts of suicide, or concern for another person who may need support. MDH has created a publicly available 988 toolkit to support implementation.[18]

Crisis Bed Expansion

BHA awarded $810,372 in House Bill (HB) 1092 grant funds to Howard County Local Behavioral Health Authority for the expansion of mental health residential crisis bed capacity. Through this award, Sheppard Pratt will provide start-up activities and enhanced mental health residential crisis services for five existing mental health residential crisis beds. To support sustainability, four crisis beds, operated through Southern Maryland Community Network, were transferred into the fee-for-service payment structure. Previously, these crisis beds were paid for through a grant.

Naloxone Distribution & Saturation

The Center for Harm Reduction Services (CHRS) within MDH administers the Overdose Response Program (ORP), which provides resources to train bystanders to administer naloxone in the event of an opioid overdose. MDH authorizes local entities as ORPs, allowing them to provide overdose education and dispense naloxone through partnerships with prescribers.

Providing naloxone to individuals who are at the highest risk for overdose is a critical strategy for reducing overdose-related mortality. Targeted naloxone distribution programs work best when: 1) naloxone is provided to people at high risk of experiencing or witnessing overdose; 2) outreach workers, harm reduction staff, and trusted clinicians are properly educated and comfortable distributing naloxone to those using illicit opioids or receiving a high-risk opioid prescription; and 3) people who use drugs and first responders are well informed as to the potential effects and actions of naloxone. Comfort with carrying and administering naloxone is crucial.

To better understand how local jurisdictions are reaching people at the highest risk for overdose with naloxone, CHRS developed a naloxone saturation formula based on previous research that demonstrated the effectiveness of naloxone distribution in reducing opioid-related mortality. One study showed that when naloxone was distributed to people at risk for overdose at 9-20 times greater than the number of overdose deaths, there was a 20 to 30 percent reduction in overdose-related deaths. Applying the naloxone

[18] https://health.maryland.gov/bha/Pages/988Toolkit.aspx

saturation formula provides a framework for how to best address naloxone distribution in communities. Technical assistance and resource allocation can be provided to jurisdictions to ensure that jurisdictions are able to reach people at greatest risk for overdose with naloxone and to ensure that naloxone is distributed at levels where it can contribute to the greatest possible decrease in overdose fatalities.

STOP Act

CHRS and OOCC collaborated to pass the Statewide Targeted Overdose Prevention (STOP) Act, as an administration bill during the 2022 legislative session. The STOP Act will help increase access to naloxone across Maryland by authorizing EMS personnel to distribute naloxone to individuals after they experience a non-fatal overdose, and requiring certain providers, such as treatment programs, hospitals, and homeless services organizations to provide naloxone free of charge to people at risk of a drug overdose. MDH is currently drafting the regulations for this legislation.

OOCC – Led Initiatives

Data-Informed Overdose Risk Mitigation (DORM) Initiative

The Data-Informed Overdose Risk Mitigation (DORM) initiative was created in response to legislation passed in 2018 that requires MDH to develop an annual report that links individual-level death records from overdose decedents to public health and public safety records for the purposes of developing overdose risk profiles.[19] To date, findings from the DORM initiative have underscored the need to take immediate action to address growing disparities in overdose outcomes among NH Black Marylanders. These findings were a key factor in Lt. Governor Boyd Rutherford's decision to create the Racial Disparities in Overdose Task Force as an extension of the Inter-Agency Heroin & Opioid Coordinating Council (IACC). Additionally, data from the DORM initiative also helped inform the STOP Act of 2022. Currently, the DORM project team is in the process of determining the study questions for Year 3.

Local Efforts - Opioid Intervention Teams

Opioid Intervention Teams (OITs) are multi-agency coordinating bodies within each jurisdiction that coordinate the local response to the opioid and overdose crisis. Each OIT develops a local strategic plan that addresses the needs of their jurisdiction with regards to opioid and substance use disorder and works to identify and fill programmatic gaps and through collaboration and the use of OOCC block grant funds.[20]

[19] Maryland Department of Health. *Data-Informed Overdose Risk Mitigation (DORM) 2020 Annual Report.* September 2021. https://beforeitstoolate.maryland.gov/wp-content/uploads/sites/34/2021/10/Data-Informed-Overdose-Risk-Mitigation-DORM-2020-Annual-Report-%E2%80%93-Revised-9-20-2021.pdf

[20] OOCC FY 2023 Block Grant Allocations. https://beforeitstoolate.maryland.gov/wp-content/uploads/sites/34/2022/07/FY-2023-OOCC-Block-Grant-Program-Awards.pdf

HB116 Grant and Coordinator

The Opioid Use Disorder Examination and Treatment Act of 2019 (HB 116) requires all local detention centers, by January 2023, to screen individuals for mental health and substance use disorders, make all three forms of FDA-approved medications to treat opioid use disorder available, and to provide on-site peer recovery support, in addition to other services. In 2022, the OOCC created the Examination and Treatment Act grant program and released a notice of funding opportunity for $8 million to support local detention centers in meeting the requirements of the bill. Funding was awarded to 17 jurisdictions. Additionally, the OOCC collaborated with the Governor's Office of Crime Prevention, Youth, and Victim Services to create a staff position responsible for coordinating efforts.

Workgroups and Task Forces

Racial Disparities in Overdose Task Force

Between 2017-2019 overdose mortality declined by 11 percent for NH White Marylanders, while increasing by nearly 40 percent for NH Black Marylanders. To respond to this growing disparity, the IACC, chaired by Lt. Governor Boyd Rutherford, formed the Racial Disparities in Overdose Task Force. The charge of the task force was to identify contributing factors leading to the acceleration in overdose deaths in the Black community and to identify policies and programs that can be implemented immediately to reduce overdose death among NH Black Marylanders. The workgroup was composed of a diverse group of stakeholders, including but not limited to state and local government, providers, the advocacy community, and individuals with lived experience. The task force reported intervention opportunities and recommended actions to the IACC in October 2022.[21] Intervention opportunities include expanding low-barrier and holistic access to treatment services, reducing stigma for people who use drugs, increasing harm-reduction in non-traditional settings, and increasing transparency in state and local resource allocation. The IACC and OOCC will work with partners at the state and local level to promote the adoption of these recommendations. The full report can be found here.

Opioid Restitution Fund Advisory Council

The Opioid Restitution Fund (ORF) was established through HB 1274, which passed during the 2019 legislative session. The ORF is a special, non-lapsing fund that was created to hold the funds received by Maryland from settlements with the opioid industry.

The Fund may only be used to support certain programs, including:

[21] Racial Disparities in Overdose Task Force. *Policy and Programmatic Recommendations for Addressing widening Disparities in Overdose Outcomes among Black Marylanders.* October 2022. https://beforeitstoolate.maryland.gov/wp-content/uploads/sites/34/2022/10/Racial-Disparities-in-Overdose-Task-Force-Policy-and-Programmatic-Recommendations.pdf

- Improving access to naloxone and other medications proven to prevent or reverse an opioid overdose
- Peer support programs and SBIRT for hospitals, correctional facilities and other high-risk populations
- Increasing access to medications that support recovery from SUD
- Expanding the Heroin Coordinator Program
- Expanding access to crisis beds and residential treatment services
- Expanding and establishing Safe stations, mobile crisis-response systems, and crisis-stabilization centers
- Supporting the health crisis hotline
- Organizing primary and secondary school education campaigns to prevent opioid use
- Enforcing laws regarding opioid prescriptions and sales
- Research and training for treatment and overdose prevention
- Supporting and expanding other evidence-based interventions for overdose prevention and substance use treatment.

The ORF Advisory Council was established during the 2022 legislative session, with the passage of HB 794. This legislation charges advisory council members with providing specific findings and recommendations on the use of ORF funds that consider the impacts of the overdose crisis on our state, available resources for individuals with substance use disorders, and disparities in access to care and health outcomes. The council met for the first time in November 2022 and will meet again in January 2023.

Additional MDPCP Initiatives

MDPCP supports the State's efforts to address substance use in the community, with a focus on opioids. One of the core features of the advanced primary care model within MDPCP is integration of behavioral health services within the primary care setting to respond proactively to patients' behavioral health needs. In addition to supporting the implementation of SBIRT, MDPCP provides practices with a menu of evidence-based methods to include behavioral health integration in their delivery of healthcare.

Medication for Opioid Use Disorder (MOUD) Planning and Implementation

The PMO is also working with BHA to secure additional funding to help practices implement Medication for Opioid Use Disorder (MOUD). The current grant proposal intends to expand the incorporation of SBIRT in MDPCP practices, while initiating work to address the shortage of primary care MOUD providers. The

initiative will also have a health equity focus, ensuring that SBIRT and MOUD are accessible to a diverse set of practices serving Marylanders that includes minority and vulnerable populations. While continuing to build and improve the broad network of practices implementing SBIRT, the PMO seeks to implement a program to expand access to MOUD. The tactics for accomplishing this goal will include provider education, marketing of MOUD implementation to practices, technical support, financial support for implementation and data driven process improvement.

Provider Engagement and Education

The PMO, in partnership with Mosaic Group, provides continuing education to providers on behavioral health integration (BHI), particularly on SUD and SBIRT. The State anticipates partners like Mosaic Group and the Maryland Addiction Consultation Services (MACS) will offer support on MOUD education. Overall general education will be provided by the MDPCP Learning team at the PMO.

Data Sharing

The PMO is working on several pilots with CRISP. CRISP has launched a new consent tool, which enables SUD providers who have executed an agreement to share data protected by 42 CFR Part 2 through the HIE upon patient consent. This tool aims to improve care coordination between SUD providers and other health care providers including primary care practices. Piloting the tool with primary care practices will allow CRISP and the PMO to better strengthen continuity of care for patients throughout SUD treatment levels and ease workflow burden when obtaining consent and disclosing information. The PMO has also launched a non-fatal overdose SMART Alert pilot with CRISP. The pilot helps practices identify patients who have had a non-fatal overdose and were either treated by EMS or visited the ED. MDPCP strongly encourages participating practices to monitor non-fatal overdoses within their patient population and provide appropriate comprehensive care in order to reduce overdose deaths,.

Medicaid Initiatives

Outpatient Mental Health Clinic (OMHC) Expansion to Provide Crisis Stabilization Services Project

The OOCC provided funding to Medicaid for two years (FY 2021-22) to support Outpatient Mental Health Clinic (OMHC) expansion to provide Crisis Stabilization Facility (OMHC-CSF) Services. The primary objectives of this work included engaging stakeholders and performing various analyses to inform future steps in OMHC expansion to provide OMHC-CSF Services. The OMHC-CSF grant work ceased at the end of FY 2022 as the BHA took on leadership of this work. Deliverables created as part of this effort are being used to guide future planning for a comprehensive crisis care network in Maryland. Over the course of these two years the project accomplished the following.

1. Convened stakeholders with a focus on determining how the state could undertake the process of allowing OMHCs to expand to provide Crisis Stabilization Services including rates, licensing, physical plant, locations with greatest need and costs to start up and maintain the service line.
2. Performed and published an environmental scan of how other states have successfully expanded to provide crisis stabilization services and analyze the efforts that would need to be undertaken in Maryland given the current regulations, rates and licensing requirements for OMHCs.
3. Performed and published a data analysis, in coordination with Maryland Institute for Emergency Medical Services Systems (MIEMSS), CRISP, the HSCRC, the Hilltop Institute at UMBC, the Office of Health Care Quality (OHCQ), and BHA, focusing on four outcomes:
    a. Current use of acute care for behavioral health crisis, including ED and inpatient hospitalization by SUD vs MHD;
    b. Determining prospective pilot locations for OMHCs that could expand to provide crisis services by performing GIS mapping of the co-location of OMHCs, OTPs and hospitals providing the most acute care for behavioral health crisis in relationship to areas with the highest 9-11 calls for Behavioral Health Crisis;
    c. Application of the MIEMSS protocol for transportation to an alternative destination for behavioral health crisis to one year's worth of EMS transportation data in order to determine the proportion of EMS transports to acute care facilities that could potentially have been treated instead at a crisis stabilization facility if it had been available; and
    d. Patterns in EMS transportation for behavioral health crisis by day of the week and hour of the day.
4. Performed a business case analysis utilizing information from local crisis providers, national labor statistics, Maryland real estate costs and other inputs to determine startup and maintenance costs for OMHCs as they expand to provide Crisis Stabilization Services including 16-hour/seven-days-a-week and 24-hour/seven-days-a-week models, which included:
    a. Estimates of the numbers of persons served by number of crisis chairs available;
    b. Square footage required
    c. Staffing required; and
    d. Cost to purchase, lease, or remodel space in order to expand to provide crisis stabilization services.

These efforts culminated in the creation of a small grant program open to OMHCs interested in technical assistance to further develop their own tailored business plan for expanding to provide Crisis Stabilization Services. The Medicaid program selected four OMHCs under this opportunity and worked over the course of eight months with the participating centers to develop business plans allowing awardees to determine next steps for hiring, physical plant needs, additional medical and office equipment, and other logistics.

Medicaid Reimbursement for Services Provided in Institutions for Mental Disease (IMD)

In addition to covering specialty SUD treatment in institutions of mental diseases (IMDs), Medicaid now offers coverage to adults aged 21 to 64 who have a severe mental illness (SMI) diagnosis and are residing in a private IMD. This expansion was approved effective January 1, 2022 under Maryland's §1115 waiver renewal. Medicaid received final CMS approval of its implementation plan for the expansion in July 2022.

Mobile Crisis and Crisis Stabilization

The crisis care continuum is critical for those experiencing a behavioral health crisis. The Department is developing a statewide crisis system to include MCTs and crisis stabilization centers (CSCs) in an effort to develop a comprehensive, integrated behavioral health crisis care continuum.

MCTs will include two-person crisis stabilization teams operating on a 24-hour/seven-day-per-week basis. These teams will respond to crises on-scene and attempt to stabilize the individual. Maryland Medicaid will begin reimbursing for mobile crisis services in July 2023 (FY 2024). As Maryland shifts to Medicaid reimbursement, MDH expects MCTs in the State to increase from 37 grant-funded providers to 45 teams.

CSCs provide up to 23-hour care for people experiencing behavioral health crises in lieu of an emergency department or hospital. Maryland Medicaid will reimburse CSCs beginning July 2023 (FY 2024).

Reimbursement for Certified Peer Recovery Specialists

Beginning in March 2023, the Department will initiate coverage of certified peer recovery specialists services for the treatment of individuals experiencing substance use disorder.

Maternal Opioid Misuse (MOM) Model

The MOM Model funds Medicaid MCOs to provide enhanced case management services for pregnant and postpartum individuals with OUD; funding also supports IT investments and building provider capacity to treat this population. Among other required screenings, the model requires screening and referral for anxiety and depression. This program started as a pilot program in St. Mary's County in FY 2022 and was scaled to additional jurisdictions, becoming available statewide in CY 2023. (Additional information on the MOM model can be found in the Supporting Maternal Health section, below.)

The Maryland Quality Innovation Program (M-QIP)

Led by Maryland Medicaid, the Maryland Quality Innovation Program (M-QIP) is a state-directed risk-based payment aimed at three focus areas, one of which is SUD providers offering somatic/medical wrap-around services at the treatment center. This program increases access to medical care for individuals receiving SUD treatment. Participating providers receive risk-based payments based on achievements on quality metrics. This program began in 2020 and runs through 2024.

SVG Stakeholder Activity Highlights

As mentioned earlier in this report, Secretary Schrader requested that SVG member organizations develop and share the specific activities they would undertake to support the State's goals under SIHIS. Select highlights of stakeholder activities to address opioid use are below.

CareFirst

CareFirst has a team of care managers specifically dedicated to behavioral health transitions to improve patient outcomes. The team works collaboratively with patients, their providers, and community resources to provide support, care coordination and, when necessary, discharge planning from behavioral health facilities. CareFirst also has a comprehensive opioid management strategy to address inappropriate and high-dose opioid use, as well as a program to address potential overutilization of controlled substances and high-risk behavior. They have also partnered with WBAL Peace of Mind campaign to reduce stigmas and increase education associated with mental illness. CareFirst also supports provider education and training to expand SBIRT in primary and specialty care practices. In partnership with 7 Cups, CareFirst Behavioral Health Digital Resource provides members access to a variety of support options, including trained volunteer listeners, growth paths, community support and licensed professionals.

MedChi

MedChi promotes the Prescription Drug Monitoring Program (PDMP) and runs the PDMP hotline. MedChi also partners with the Maryland School of Pharmacy to provide continuing medical education (CMEs) to dispensing physicians. In addition to providing CMEs, MedChi works with other state medical societies on opioid education and prescribing best practice tools.

Leveraging CRISP to Drive Progress

CRISP allows prescribers to see a full history of Controlled Dangerous Substance dispenses through the Prescription Drug Monitoring Program (PDMP) within the CRISP portal or Electronic Health Record (EHR). Using hospital and EMS data, CRISP generates suspected overdose alerts which can alert clinicians if a patient has a history of substance misuse and may need treatment. CRISP also operates tools to support

clinicians such as Overdose Fatality Review, Morphine Milligram Equivalent conversions, multi-patient search, and self-prescriber audits.

In 2021, CRISP implemented a consent registry and management tool that enables provider mediated workflows for the registration of 42 CFR Part 2 compliant consents to allow patients to share their SUD information. This tool allows SUD providers covered under 42 CFR Part 2 to partner with CRISP to share substance use disorder treatment information with patient care teams through the HIE. In 2022, CRISP trained more behavioral health and somatic care providers, including PCPs and FQHCs, to use the consent tool to register consent. In 2023, CRISP plans to make necessary policy and technology changes to take advantage of the new regulations that better align 42 CFR Part II with HIPAA, recently released in a Notice of Proposed Rulemaking (NPRM) at the end of 2022. In addition, CRISP will work with payers to enable them to work with their members to register consent so that the payer team can also view SUD information.

CY 2023 Priorities

In 2023, the State will continue to expand SBIRT in ED and primary care settings to identify individuals with SUD. In parallel, the State will continue to work to expand access to MOUD in the hospital and primary care setting so that individuals who are identified as having an opioid use disorder can be connected to treatment. Additionally, Maryland will continue to expand its robust community-based naloxone distribution program. The State will increase efforts to ensure that healthcare providers, including opioid treatment programs, hospitals, homeless services providers, and emergency medical systems, are able to distribute naloxone directly to those at greatest risk for overdose. Finally, the ORF Advisory Council will continue to meet and produce recommendations on use of ORF funds.

Domain 3c. Total Population Health – Maternal Health

Severe maternal morbidity (SMM) events are unexpected outcomes of labor and delivery. According to the CDC, SMM has increased in the past several years.[22] The increase may be due to overall population health changes in birthing individuals such as increasing maternal age, pre-pregnancy obesity, pre-existing chronic medical conditions, and cesarean deliveries.[23] Below are the submitted goal, measure, milestones, and targets of reduction of severe maternal morbidity rates and stratified goals in percentages.

[22] Centers for Disease Control and Prevention. Severe Maternal Morbidity in the United States. https://www.cdc.gov/reproductivehealth/maternalinfanthealth/severematernalmorbidity.html Accessed 30 November 2021.
[23] Centers for Disease Control and Prevention. Severe Maternal Morbidity in the United States. https://www.cdc.gov/reproductivehealth/maternalinfanthealth/severematernalmorbidity.html Accessed 30 November 2021.

Table 25. Total Population Health - Maternal Health Goal

Goal: Reduce severe maternal morbidity rate	
Measure	Severe Maternal Morbidity Rate per 10,000 delivery hospitalizations
2018 Baseline	243.1 SMM Rate per 10,000 delivery hospitalizations
2021 Year 3 Milestone (All Met)	Re-launch the Perinatal Quality Collaborative. Pilot a Severe Maternal Morbidity Review Process with eight Birthing hospitals. Complete Maryland Maternal Strategic Plan. Launch Regional Partnership Catalyst Grant for MCH, if funding is available.
2023 Year 5 Target	9.5% decrease in SMM Rate per 10,000 delivery hospitalizations (219.3 SMM Events per 10,000 delivery hospitalizations)
2026 Year 8 Final Target	18.7% decrease in SMM Rate per 10,000 delivery hospitalizations (197.1 SMM Rate Events per 10,000 delivery Hospitalizations)

Table 26. Race/Ethnicity Disparities in Maryland SMM Rate, 2018 Baseline and SIHIS Targets

Race	2018	2023 Year 5 Target	2026 Year 8 Target
Total	242.5	9.6% decrease	18.7% decrease
NH White	183.6	7.5% decrease	15% decrease
NH Black	328.5	10% decrease	20% decrease
Hispanic	236.9	10% decrease	20% decrease
NH Asian	241.9	10% decrease	20% decrease
Other	227.3	10% decrease	20% decrease

To generate Maryland's SMM rate, the State uses administrative hospital discharge data and International Classification of Diseases (ICD) diagnosis codes and procedure codes. Federal partners such as the Health Resource Service Administration (HRSA), AHRQ, CDC, and other subject matter experts, review and update the SMM indicators annually. The updated SMM indicators are then published in the Federally Available Data (FAD) Resource Document and on the Alliance for Innovation on Maternal Health (AIM) Data resource webpage. Previously, the State indicated its approach to using updated formulas to align with national SMM calculations, which included blood transfusion. Recently, SMM indicators were updated by federal partners to exclude blood transfusions, due to its lack of specificity. The SMM definition used for

SIHIS includes blood transfusions. Given that preliminary analysis demonstrates that blood transfusions contribute to approximately 65 percent of the SMM events in Maryland, the State will examine the impact of this update during the next year.

Quantitative Performance

While performance improvement was not a milestone, the 2021 SMM rate per 10,000 was 286.2, which is 17.7 percent higher than the 2018 baseline. Maryland is providing the most recently available performance information in Figure 10 and Table 27. Based on data through October 2022, Maryland had 288.5 SMM-related hospitalizations per 10,000 delivery discharges over the prior 12 months. This is 18.6 percent higher or 45.4 hospitalizations per 10,000 higher than the 2018 baseline, and 31.5 percent higher or 69.19 hospitalizations per 10,000 higher than the 2023 target (219.3).

Figure 10. SMM Hospitalizations for Rolling 12-Months, 2018-October 2022

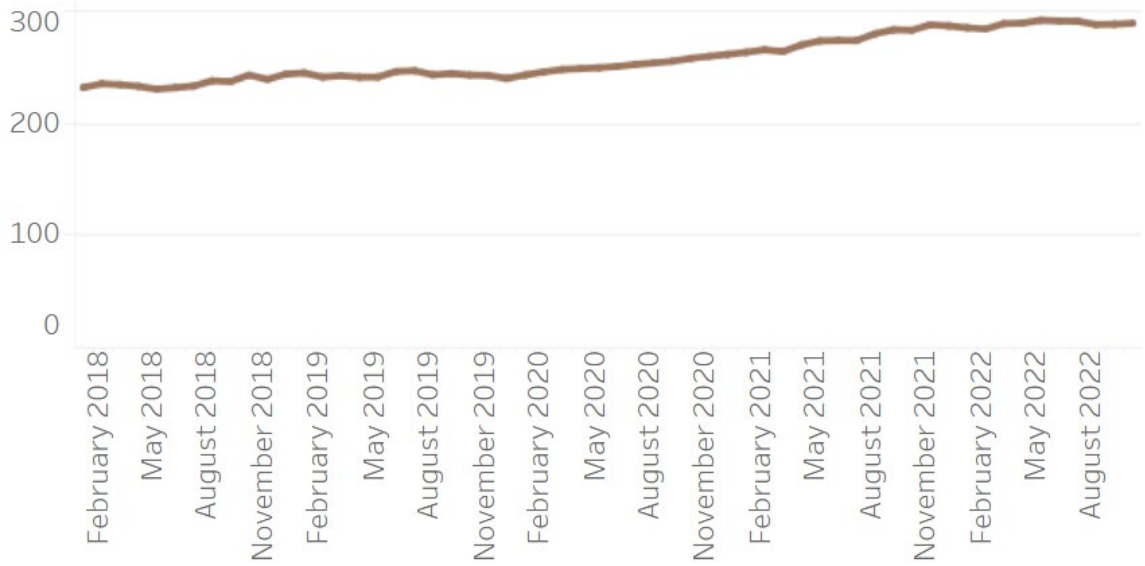


Table 27. SMM Hospitalizations Compared to 2023 Targets, 2018-October 2022

	2018 Baseline	Most Recenter 12 Months	2023 Target	Difference – Most Recent 12 Months to Target
Rates per 10K	243.1	288.5	219.3	69.19
SMM Events	1,585	1,793		
Eligible Deliveries	65,199	62,152		

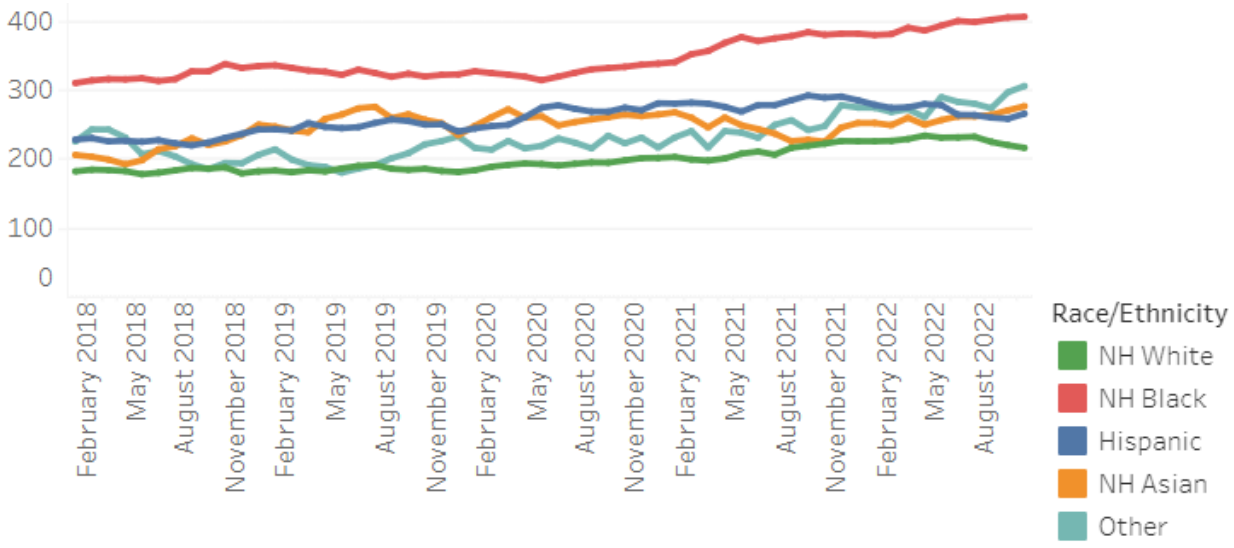
Performance by Race & Ethnicity

Health disparities are also increasing due to challenges discussed in this report. Table 28 includes 2018 baseline values, performance through October 2022, and a Disparity Index, wherein a value over 1 indicates **negative** performance on the measure when compared to non-Hispanic (NH) White performance.

Table 28. SMM Hospitalizations Rates by Race/Ethnicity, 2018-October 2022

Race/Ethnicity	2018 Baseline	Most Recent 12 Months	2023 Target	Difference – Most Recent 12 Months to Target	Disparity Index
NH White	181.4	215.4	169.8	45.6	1.0
NH Black	334.2	405.8	295.7	110.1	1.9
Hispanic	242.0	265.1	213.2	51.9	1.2
NH Asian	249.0	275.9	217.7	58.2	1.3
Other	205.2	305.3	204.6	100.7	1.4
Statewide Total	243.1	288.5	219.3	69.2	1.3

Figure 11. SMM Hospitalizations for Rolling 12-Months by Race/Ethnicity, 2018-October 2022



Impact of COVID-19 on Performance

The State is closely monitoring monthly performance on SMM rates, which were negatively impacted by the COVID-19 pandemic. Previous internal analysis from 2021 Maryland data demonstrated that there was an increase in respiratory conditions contributing to SMM, particularly in cases requiring ventilation. The rate of SMM requiring ventilation among COVID-19 positive SMM cases was 43 percent higher than among COVID-19 negative SMM cases. Although COVID-19 vaccination rates have increased in the State, the SMM rates continue to be elevated. These are most likely due to the long-lasting impact of COVID-19 that is beyond the acute infections but also has affected stress, access to health care, employment, transportation, childcare, and other social determinants of health.

Elevations in SMM and maternal deaths in Maryland are in line with national findings. According to an article published by the Journal of the American Medical Association (JAMA), which analyzed the National Center for Health Statistics mortality and natality files, the maternal mortality rate increased substantially (33.3 percent) after March 2020, corresponding with the start of the COVID-19 pandemic. The increase in maternal deaths during the pandemic may involve "conditions directly related to COVID-19 (respiratory or viral infection) or conditions exacerbated by COVID-19 or other health care disruptions (diabetes or cardiovascular disease)".[24] Maternal deaths are the most severe complication on the maternal morbidity spectrum, and continue to disproportionately affect non-Hispanic Black women and Hispanic women at higher rates.[25] The authors of the article found a late relative increase in maternal mortality rates of 74.2 percent among Hispanic women, and 40.2 percent among non-Hispanic Black women, and 17.2 percent among non- Hispanic White women. Hispanic and non-Hispanic Black women continue to experience maternal death and morbidity at a disproportionate rate than other ethnic groups. Similar to maternal mortality, SMM rates are greater among racial and ethnic minorities, particularly among non-Hispanic Black women.[26] Moreover, a considerable increase in maternal deaths is attributed to deaths occurring 42 days to 1 year postpartum including those to cardiovascular disease, mental health and SUD.[27] Undoubtedly, there is a need to guarantee medical care after delivery and during postpartum care especially to ethnic groups that are disproportionately affected by SMM events.

A separate retrospective cohort analysis of 1.6 million pregnant patients across 463 US hospitals published in JAMA indicated a small but significant increase in pregnancy related complications and maternal deaths

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[24] Thoma ME, Declercq ER. All-Cause Maternal Mortality in the US Before vs During the COVID-19 Pandemic. *JAMA Netw Open.* 2022;5(6):e2219133. doi:10.1001/jamanetworkopen.2022.19133

[25] https://www.cdc.gov/reproductivehealth/maternal-mortality/pregnancy-mortality-surveillance-system.htm&sa=D&source=docs&ust=1666624662110373&usg=AOvVaw0CWMyJAiPshG9R-G779wfo

[26] Centers for Disease Control and Prevention.Severe Maternal Morbidity after Delivery Discharge among U.S. Women, 2010-2014. https://www.cdc.gov/reproductivehealth/maternalinfanthealth/smm/smm-after-delivery-discharge-among-us-women/index.htm. Accessed 19 October 2022.

[27] Rivara FP, Fihn SD. Severe Maternal Morbidity and Mortality: JAMA Network Open Call for Papers. JAMA Netw Open. 2020;3(1):e200045. doi:10.1001/jamanetworkopen.2020.0045

during delivery hospitalization were observed.[28] The rate of pregnancy complications included hypertensive disorders and hemorrhage.[29] Prior to the pandemic, 15.3 percent of patients had a pregnancy-related hypertensive disorder compared with 16.6 percent during the pandemic; 5.1 percent of patients experienced hemorrhage, compared with 5.5 percent during the pandemic.[30] Research has demonstrated that SMM is an important risk factor for maternal death, as it refers to a life-threatening diagnosis or the need to undergo potentially lifesaving procedures in close proximity to birth.

The State will continue to monitor performance throughout 2023 and communicate with CMMI regarding trends. In addition, the State will also review the updated federal SMM definition and adjust Maryland's SMM definition as necessary. Healthcare providers and stakeholders continue to work diligently to expand and implement interventions to improve maternal health and reduce SMM in Maryland.

Updates on 2021 Milestones

As reported in last year's annual report on SIHIS activities and shown in Table 25, Maryland met all 2021 milestones for the maternal health priority area. Progress on milestones and additional activities underway to address SMM are detailed below.

Milestone 1: Re-launch the Maryland Perinatal Quality Collaborative (MDPQC)

Perinatal Quality Collaboratives are state networks of teams working to improve the quality of care for parents and babies. The mission of the Maryland Perinatal Neonatal Quality Collaborative (MDPQC) is to make Maryland a safer and more equitable place to give birth across all levels of care. The MDPQC brings delivery hospitals from across Maryland together to focus on implementing safety bundles from the Alliance for Innovation in Maternal Health (AIM), which is a national data-driven maternal safety and quality improvement initiative.

The MDPQC Steering Committee, which consists of perinatal care providers and public health professionals, selected maternal hypertension as the focus of the current MDPQC initiative, which began in January 2021. The SIHIS 2021 Annual Report discussed MDPQC's focus on maternal hypertension, including that 17-21 percent of the SMM events were related to pre-eclampsia, eclampsia and hypertension related events.[31],[32]

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[28] Molina RL, Tsai TC, Dai D, et al. Comparison of Pregnancy and Birth Outcomes Before vs During the COVID-19 Pandemic. JAMA Netw Open. 2022;5(8):e2226531. doi:10.1001/jamanetworkopen.2022.26531

[29] Molina RL, Tsai TC, Dai D, et al. Comparison of Pregnancy and Birth Outcomes Before vs During the COVID-19 Pandemic. JAMA Netw Open. 2022;5(8):e2226531. doi:10.1001/jamanetworkopen.2022.26531

[30] Molina RL, Tsai TC, Dai D, et al. Comparison of Pregnancy and Birth Outcomes Before vs During the COVID-19 Pandemic. JAMA Netw Open. 2022;5(8):e2226531. doi:10.1001/jamanetworkopen.2022.26531

[31] Calculated by Maternal and Child Health Bureau Epidemiology with Health Services Cost Review Commission (HSCRC) data

[32] Calculated by the Maternal and Child Health Bureau Epidemiology with HSCRC data. Hypertension-related Severe Maternal Morbidity was defined as having 1 or more of the following conditions: acute renal failure, cardiac arrest/ventricular fibrillation, heart failure during procedure or surgery, conversion of cardiac rhythm, acute myocardial infarction, pulmonary edema, disseminated

All 32 Maryland birthing hospitals participate in the MDPQC. The MDPQC supports efforts at each hospital to implement the AIM Severe Hypertension in Pregnancy patient safety bundle through direct technical assistance, monthly office hours, sharing quarterly benchmarking reports specific to each hospital, and assisting with data submission to the AIM database. In addition, the MDPQC hosted *"What are the Ingredients for Maternal Safety Bundle Implementation? Lessons from theory and practice in Maryland Perinatal Quality Improvement Collaborative."* There were 47 attendees at the event, which featured Steering Committee member Dr. Jennifer Callaghan-Koru. Compared to the three months before the maternal hypertension initiative began, hospitals have reported an increase in EHR integration of the hypertension bundle (59 percent increase), use of multidisciplinary case reviews (44 percent increase), use of debriefs (27 percent increase), and an existence of a unit policy focused on maternal hypertension (27 percent increase). There has also been an increase in the implementation of hypertension education for providers and nurses. This work has culminated in a 42 percent increase in the rate of timely treatment of hypertension for pregnant persons who receive care at Maryland's delivery hospitals.

In addition, during 2022, the MDPQC hosted a Summer Conference on June 10th that included content on patient advocacy, providing respectful care to patients, and reducing disparities. MDPQC also hosted office hours on the revised AIM Hypertension Bundle and providing respectful care. Additionally, several events and webinars were held on maternal safety bundles, health equity, and addressing implicit bias. Provider education will continue to be a key strategy to address SMM in Maryland.

Milestone 2: Updates on the Maternal Mortality Review Program

Maternal mortality and maternal morbidity are critical indicators of maternal and community health. In previous years, the Maryland Maternal Mortality Rate (MMR) had consistently been higher than the national rate. For the period from 2009 to 2013, the Maryland MMR was 7 percent higher than the national rate. However, for the period from 2014 to 2018, the Maryland MMR was 12 percent less than the national rate. Both the U.S. and Maryland rates remain above the Healthy People 2030 Objective MICH-4 target of 15.7 maternal deaths per 100,000 live births.[33] There is also a large disparity between the MMR rates among Black non-Hispanic and White non-Hispanic women. In Maryland the 2014-2018 Black non-Hispanic MMR was four times the White non-Hispanic MMR. In 2021, Maryland piloted a maternal morbidity review program with eight birthing hospitals. An update on activities under the program is below.

The Maryland Maternal Mortality Review Program (the Program) was established by Health-General Article, §13-1201 through §13-1207, Annotated Code of Maryland in 2000. The overall mission of the Program is to review the pregnancy-associated deaths that occur in the state, to identify interventions that could have

intravascular coagulation, thrombotic embolism, puerperal cerebrovascular disorders, eclampsia, or aneurysm. This was defined by the Centers for Disease Control and Prevention. https://www.cdc.gov/pcd/issues/2019/19_0045.htm#T1_down

[33] https://health.gov/healthypeople/objectives-and-data/browse-objectives/pregnancy-and-childbirth/reduce-maternal-deaths-mich-04

prevented these deaths, and to promote change among individuals, health care systems, and communities in order to prevent future maternal deaths, reduce maternal morbidities, and improve population health. The Program drives change through annual recommendations that it makes in a report to the Governor.

Through the support from the CDC Enhancing Reviews and Surveillance to Eliminate Maternal Mortality (ERASE MM) program, Maryland moved towards a multi-disciplinary review team to conduct comprehensive case reviews in line with national best practices. In partnership with Maryland Medical Professional Society, the Program put out a call for member applications for the multidisciplinary Maternal Mortality Review Team (MMRT) to build upon the clinical expertise of the previous Committee in July 2022. In alignment with recommendations for multidisciplinary mortality reviews, the application sought experts with clinical (i.e. obstetrics, gynecology, community nursing) and non-clinical (i.e. public health, community health, community birth work, quality improvement) experience. This new team has a more diverse membership as it relates to race, ethnicity, geography, and professional background. The MMRT will begin reviewing 2021 pregnancy-associated death cases in Spring 2023.

The Program is also committed to supporting community-led approaches to reduce maternal mortality. MDH has received funding to support these efforts and will continue to plan on how best to approach this opportunity in collaboration with partners across the State.

Milestone 3: Progress Under the Maryland Maternal Health Strategic Plan

The Maryland Maternal Health Task Force (the Task Force) is a statewide task force that is part of the Maryland Maternal Health Innovation Program (MDMOM). The Task Force, which first met in 2020, brings together a diverse group of key stakeholders, including officials from state health governing bodies, departments, and agencies; professional organizations; maternity health care providers; insurance payers; patient advocacy groups; and local community organizations. The Task Force is responsible for developing a statewide strategic plan for improving maternal health by addressing racial disparities and leveraging existing resources.

Drawing on the expertise of its members, the Task Force has six duties:

1. Coordinate activities and programs that aim to improve the health and well-being of pregnant and postpartum individuals in the state of Maryland;
2. Identify state-specific gaps in the following areas: maternal health data, delivery of and access to quality perinatal health care services, and relevant laws and health policies for pregnant and postpartum individuals;
3. Develop a five-year Strategic Plan to improve maternal health in Maryland, building on the 2020 Maryland Title V Needs Assessment, work plans of ongoing maternal health programs in the state, and available maternal health case review and population-level surveillance data;

4. Engage, support, and monitor implementation of maternal health programs in Maryland;
5. Assist with dissemination of maternal health program evaluation findings and lessons learned in Maryland and beyond;
6. Develop a Sustainability Plan to ensure continuity of work towards improving maternal health in the State of Maryland.

The Task Force meets quarterly; due to the COVID-19 pandemic meetings are typically held virtually. As of early October 2022, the Task Force has held three quarterly meetings in 2022 and optional in-person meetings. At the end of CY 2021, the Task Force elected two co-chairs to provide strategic leadership and guidance. The co-chairs began their terms at the beginning of CY 2022, and have championed efforts to better understand the landscape of maternal health partners and aligning the Task Force membership to better reflect the diversity of the state.

For 2022 and 2023, the Task Force has identified centering reproductive justice and understanding the maternal health landscape across the state as priorities for their work. Members have specifically expressed interest in mapping partners and organizations who support birthing people, to facilitate collaboration across networks. The Task Force and MDH are working together to implement this project, which is expected to be finalized in early 2023.

The Maryland Maternal Health Strategic Plan (the Plan), which was drafted by members of the Maternal Health Improvement Task Force, was released in Fall 2021.[34] The Plan outlined five key goals to reduce maternal mortality and support the health and well-being of birthing people in Maryland, focused on promoting equity, addressing health across the life course, and addressing the public health infrastructure that underpins high quality services. The Plan also lists several objectives and tactics undertaken by various partners, including MDH, non-profit organizations, health systems and health care providers, academic institutions, and payor organizations. A full status update on the Plan will be available in Spring 2023.

Milestone 4: Launch MCH Funding Initiative

In May 2021, the HSCRC approved $40 million in cumulative funding to support MCH interventions. The funding initiative directs $10 million annually (FY 2022-2025) to Medicaid and the Public Health Services (PHS) under MDH to support statewide expansions of evidence-based and promising practices to promote MCH. Funding is split between Medicaid and PHS under which $8 million is issued to Medicaid and $2 million is issued to PHS annually. Activities led by Medicaid and PHS are detailed below.

[34] Maryland Maternal Health Improvement Task Force Strategic Plan. *Raising Hope by Birthing Change.* Fall 2021. https://mdmom.org/public/docs/Taskforce-Report-12522.pdf

Programs and Interventions Supporting Maternal Health

MDH – Led Initiatives

Home Visiting and CenteringPregnancy Expansion

Through additional funding through HSCRC, competitive procurement was pursued to expand evidence-based and promising practice home visiting as well as to increase CenteringPregnancy, a group-based prenatal care program. Evidence-based home visiting programs offer a proven track record in addressing or at least mitigating disparities in healthcare quality and health outcomes by coordinating care, providing education programs, and continuing findings suggest how home visiting can be a mechanism to improve maternal health and reduce maternal morbidity.[35] CenteringPregnancy is an evidence-based model group for prenatal care that brings patients out of the exam room and into a group setting where they learn from their provider and each other.

SIHIS Home Visiting Expansion

After a competitive procurement process, the Maternal and Child Health Bureau (MCHB) funded the expansion of four home visiting programs.[36] This funding opportunity complements the existing Maternal, Infant, Early Childhood Home Visiting (MIECHV) Home Visiting Program and Medicaid Reimbursement for Home Visiting. The following organizations received funding in August 2022: Montgomery County Health Department, Washington County Health Department, Baltimore Healthy Start, and The Family Tree. After their start up period, it is anticipated that these additional home visiting programs will service an additional 100-120 families per year. Below is a description of the sites and the home visiting programs that will be expanded.

- **Montgomery County Health Department** will expand the *Babies Born Healthy (BBH)* program using the *March of Dimes Becoming Mom (BAM)* curriculum. *BAM* improves maternal knowledge through a community-based collaborative model of care, prenatal education and quality prenatal care. *BBH* will serve approximately 40 high-risk pregnant people beginning at any stage in their pregnancy and follow the mother and infant until the child turns six-months of age in the following high-risk. The program will place priority and focus on the following zip codes 20903, 20904, 20906 and 20912 and prioritize ethnic groups, as data indicates that NH Black people are disproportionately affected by SMM rates.[37]

[35] Jennifer A. Callaghan-Koru et. al. Maternal Warning Signs Education During Home Visiting From a Formative Evaluation in Maryland. Mary Ann Liebert, Inc. https://www.liebertpub.com/doi/full/10.1089/whr.2022.0027
[36] Addressing Racial and Ethnic Disparities in Maternal and Child Health Through Home Visiting Programs https://www.chcs.org/resource/addressing-racial-and-ethnic-disparities-in-maternal-and-child-health-through-home-visiting-programs/
[37] Centers for Disease Control and Prevention.Severe Maternal Morbidity after Delivery Discharge among U.S. Women, 2010-2014. https://www.cdc.gov/reproductivehealth/maternalinfanthealth/smm/smm-after-delivery-discharge-among-us-women/index.htm. Accessed 19 October 2022.

- **Washington County Health Department** will expand existing home visiting services through the local program affiliate to *Healthy Families America*. The program will offer services to 50 additional families starting prenatally over the course of three years and continuing through the child's fifth birthday. Participating families will have the option of families to graduate early when the focus child turns three years old and has met the criteria set for graduation by Healthy Families America.
- **Baltimore Healthy Start (BHS)** will partner with Chase Brexton Glen Burnie Health Center to expand home visiting services to postpartum women in Anne Arundel County, particularly in the following zip codes 20724, 21060,21061, 212225, 21226. The program will use the *Great Kids* curriculum, designed for home visits beginning in the gestational stage of pregnancy. Families will be offered standard BHS case management and care coordination services through the Chase Brexton-based Medication Assisted Treatment for Substance Use Disorder program. The program intends to provide services to 40 additional families annually.
- **The Family Tree** will expand home visiting services in Baltimore City through the *Parents as Teachers (PAT)* model. Home visitors make regular visits from prenatal through kindergarten age. The *PAT* curriculum focuses on mental health, nutrition, maternal depression, substance use and domestic violence. The program intends to provide home visiting services to 20 additional families annually.

CenteringPregnancy

The CenteringPregnancy prenatal care group model follows the recommended schedule of 10 prenatal visits, but each visit is 90 minutes to two hours long. Thus, this model gives women 10 times more time with their provider and allows for the patient to take their own weight and blood pressure and to record their own health data with private time with their provider. After the health assessment is completed 8-10 women gather with a provider to be a part of interactive activities designed to address important and timely health topics.[38] The success of CenteringPregnancy is shown to be most effective among populations of color, who disproportionately experience adverse maternal health outcomes. In response to the disproportionate SMM rates that affect particularly the Black community MCHB has devoted funds to implement CenteringPregnancy model of group prenatal care in five additional sites across Maryland.

Mercy Medical Center has received funding for FY 2022 and 2023 to implement the CenteringPregnancy model group prenatal care at their Mead Building location in Baltimore City. The program will serve patients from their downtown Metropolitan OB/GYN practice, which serves a high number of individuals that are disproportionately affected by severe maternal morbidity.

[38] Centering Healthcare Institute. https://centeringhealthcare.org/what-we-do/centering-pregnancy. Accessed 19 October, 2022.

Another vendor will be selected to recruit four sites in priority jurisdictions and provide administrative support for the implementation of CenteringPregnancy model of group prenatal care, and provide continual technical assistance to sites during their two year implementation phase.

Family Planning/Reproductive Health

The mission of the Maryland Family Planning Program (MFPP) within MDH is to reduce unintended pregnancies and to improve pregnancy outcomes by ensuring access to quality, comprehensive family planning services for those individuals with incomes below 250 percent of the Federal Poverty Level (FPL). Services include: a broad range of family planning methods, breast and cervical cancer screening, prevention and treatment of sexually transmitted infections, HIV testing and prevention education, infertility and preconception services, and health education/counseling and referrals to community resources. There are 62 family planning sites. In Fiscal Year 2022, there were a total of 49,440 clients and 58,302 visits.

In FY 2023, the MFPP is also implementing a telehealth expansion project. Funds will be used to increase the capacity of nine local health departments and three non-profit clinic systems to provide family planning services using telehealth modalities. These services are expected to provide more equitable access to services for individuals who experience barriers to in-person care and to enable clinics to prioritize appointments for more complex services.

Thrive By Three Prenatal Care Access and Care Coordination

During the 2021 Maryland legislative session, SB777 / HB1349 was passed to increase the scope and funding of the Maryland Thrive by Three program. The legislation dictates the implementation of programs that increase access to prenatal care, including behavioral and oral health, to those who would otherwise not have access, including pregnant people who cannot access care due to their citizenship status. In fall 2021, the MCHB hosted a town hall to learn about challenges and needs of Maryland communities in regard to prenatal care access. Jurisdictions shared unique challenges that the pregnant population in their community faced when attempting to access prenatal care; however, all jurisdictions shared that both the uninsured and undocumented pregnant population faced the most significant barriers to accessing prenatal care.

In July 2022, three local health departments and two organizations in Maryland received funding to implement programs that increase access to prenatal care and care coordination, specifically for underserved populations.

Referrals to Perinatal Care Coordination through the Postpartum Infant and Maternal Referral (PIMR) Form

Connections to community care, particularly within LHDs, is a way to make sure to provide additional navigational services to the birthing individuals and their families. The Maryland Postpartum Infant and

Maternal Referral (PIMR) form is intended for use by Maryland birthing hospitals to refer high-risk infants and parents at hospital discharge to their LHD for community-based services. The form is recommended to be used for the following conditions and circumstances: teen mother, no prenatal care, substance use, mental/behavioral health, intimate partner violence, unstable housing/homelessness, previous infant death, previous preterm birth, very low birthweight (<1500 grams), or any other circumstance deemed to be a serious risk for the parent or infant.

To increase the utilization of the PIMR form and linkages to care, the MCHB has partnered with CRISP to make the form available electronically. In 2022, a pilot was conducted in partnership with Talbot County Health Department and UM Shore Medical Easton, to test the new electronic PIMR workflow. During FY 2023 and FY 2024, MCHB will continue to explore the statewide rollout of the electronic PIMR form in partnership with CRISP.

Medicaid – Led Initiatives

Medicaid supports a suite of evidence-based and promising practices to improve maternal and child health outcomes in partnership with its MCOs, including:

1. Referrals through the Prenatal Risk Assessments
2. Home Visiting Services (HVS) pilot expansion
3. Reimbursement for doula services
4. Enhanced reimbursement for CenteringPregnancy
5. Enhanced reimbursement for Healthy Steps, a clinic-based intensive prenatal and postpartum case management framework
6. Maternal Opioid Misuse (MOM) model expansion

Referrals through the Prenatal Risk Assessments

The Maryland Prenatal Risk Assessment (MPRA or PRA) helps to identify patients who may have medical and psychosocial predictors of poor birth outcomes, and the information gathered is used by local health departments to link patients to resources. Maryland Medicaid supports a pilot with prenatal care clinics to integrate the PRA into their electronic health records, to make data capture and referrals more easily and efficiently.

Home Visiting Expansion

Medicaid operated a Home Visiting Services (HVS) pilot from 2017 through June 2022 via its §1115 waiver, which has enabled an expansion of evidence-based home visiting services to Medicaid-eligible high-risk pregnant individuals and children up to age three. The HVS pilot program operated in Garrett and Harford

Counties and is aligned with two evidence-based models focused on the health of pregnant individuals. The Nurse Family Partnership (NFP) model is designed to reinforce maternal behaviors that encourage positive parent-child relationships and maternal, child and family accomplishments. The Healthy Families America (HFA) model targets parents facing issues such as single parenthood, low income, childhood history of abuse, substance use disorder, mental health issues or domestic violence. The financing structure of the HVS pilot, which required local lead government entities to provide a local match through an intergovernmental transfer, garnered limited participation from additional lead entities because of the requirement to secure local matching dollars for the annual budget from non-federal funding sources. Both Medicaid and Garrett and Harford counties successfully unwound the HVS pilot and transitioned to the new benefit's regulatory authority.

HVS coverage became a statewide benefit, effective January 13, 2022. Medicaid met all key milestones and stakeholder engagement to create this coverage pathway including:

1. Created regulations for HVS coverage. These include the requirements for HVS participation with Medicaid, including accreditation standards and the proposed reimbursement model, among other coverage details;
2. Established a new HVS provider type in electronic Provider Revalidation and Enrollment Portal (ePREP);
3. Hosting multiple provider enrollment training webinars;
4. Hosting ongoing stakeholder meetings with MCOs including a regularly updated FAQ document;
5. MDH has maintained communications with HVS stakeholders (such as LHDs) and met weekly with the MCHB staff throughout the year. The main focus of meetings was to discuss implementation progress, communications and collaboration opportunities to help ensure a successful rollout of this benefit and confirm how programs that receive funding from other local and federal sources, such as the Maryland State Department of Education, Department of Social Services and the Maternal, Infant, and Early Childhood Home Visiting (MIECHV) program respond to Medicaid coverage.

As of November 2022, eleven out of nineteen eligible HVS providers have enrolled as Maryland Medicaid providers.

Doula Reimbursement

Doulas are trained to provide continuous physical, emotional, and informational support to a mother before, during and shortly after childbirth. Key to a doula's function are the provision of emotional support and a constant presence during labor; encouraging laboring individuals and their families; and communicating between birthing individuals and medical professionals. Potential benefits of working with a doula include reductions in C-sections, instrumental vaginal births, and the need for oxytocin augmentation, in addition to shortened durations of labor. Doula care has demonstrated a stronger impact for individuals who are

socially-disadvantaged, low-income, unmarried, pregnant persons for the first time, giving birth in a hospital without a companion or had experienced language or cultural barriers.

Effective February 21, 2022, doula coverage became a covered benefit, available to all pregnant and postpartum Medicaid participants, both those covered by fee-for-service (FFS) and those enrolled in MCOs. Medicaid has met the key milestones required for new benefit, including:

1. Promulgation of regulations for doula coverage which describe certification standards and the proposed reimbursement model, among other coverage details;
2. Creation of a new doula provider type in the MMIS system;
3. Holding two provider enrollment training webinars for both individual doulas and doula groups;
4. Providing consistent updates to stakeholders, including MCOs, doulas, and hospitals, through meetings, office hours, email updates, and written guides;
5. The State Plan Amendment (SPA) was accepted by CMS with an effective date of January 1, 2022.

As of November 2022, four individual doulas and three doula groups have enrolled in the state's ePREP to become Medicaid providers. In an effort to increase the number of enrolled doula providers statewide, the State will allow MCOs to enter into single case agreements (SCAs), while waiting for more doulas to complete the ePREP enrollment process. The State is also working to expand the regulations to include additional training organizations, increasing the number of eligible doulas.

CenteringPregnancy Reimbursement

CenteringPregnancy was described previously in the "MDH-Led Initiatives" section. Evidence suggests CenteringPregnancy reduces costs, improves outcomes, and leads to high satisfaction, with one study showing a reduction in risk of premature birth by 36 percent, with an average cost savings of $22,667, in the rate of low birthweight by 44 percent (average savings of $29,627) and NICU stays (average savings of $27,249). MDH worked with Centering Healthcare Institute, Inc., the national parent organization of CenteringPregnancy and researched CenteringPregnancy implementation as a Medicaid covered service in other states.

Effective January 1, 2023, Medicaid will reimburse CenteringPregnancy providers at accredited or pending accreditation practices an enhanced payment for perinatal care as defined in the Professional Services Provider Manual. The enhanced payment will support the overall operations and sustainability of CenteringPregnancy practices. Medicaid created a new category of service and activated code 99078 for billing within the MMIS and our provider Medicaid (ePREP) systems. This code will be billed alongside a typical perinatal visit code.

MDH has partnered with MCOs to implement CenteringPregnancy services and provide the enhanced payment to providers effective January 2023.

HealthySteps Reimbursement

HealthySteps, a program of the ZERO TO THREE organization, is a pediatric primary care model that promotes positive parenting and healthy development for babies and toddlers. Under the model, all children up to age four and their families are screened and placed into a tiered model of services of risk-stratified supports, including care coordination and on-site intervention. The HealthySteps Specialist, a child development expert, joins the pediatric primary care team to ensure universal screening, provide successful interventions, referrals, and follow-up to the whole family. HealthySteps has demonstrated a 204 percent average annual return on investment.

Effective January 1, 2023, the Department will reimburse an enhanced payment for evaluation and management services rendered by providers at an accredited or pending accreditation HealthySteps practice.

Similar to CenteringPregnancy, the enhanced payment will support the overall operations of HealthySteps practices, including the salary of the HealthySteps Specialist. The Department created a new category of service and activated code H0025 for billing within the MMIS and our provider Medicaid (ePREP) systems. This code reimburses the practice for overall support of the benefit and will be billed alongside a typical pediatric visit code (either a well-child visit or an appropriate evaluation and management code). This benefit is limited to outpatient offices and outpatient hospital clinics.

The Department received technical assistance and subject-matter expertise from the national parent organization, ZERO TO THREE, to develop and design the HealthySteps benefit. The Department also worked with Maryland-based HealthySteps providers to alert them of the new funding mechanism for these services.

There are two anticipated eligible providers in Maryland (University of Maryland Pediatrics Associates) and three in the District of Columbia (MedStar Georgetown, MedStar Medical Group at Fort Lincoln, and Children's National - Children's Health Center, THEARC and Anacostia locations).

Maternal Opioid Misuse (MOM) Model

As part of a CMMI demonstration waiver, the MOM model addresses fragmentation in the care of pregnant and postpartum Medicaid participants diagnosed with opioid use disorder (OUD) through enhanced case management services. With over 21,000 individuals of childbearing age diagnosed with an OUD in Maryland, substance use is a leading cause of maternal death and has a significant impact on the approximately 1,500 infants born to Medicaid beneficiaries with OUD in Maryland per year. Utilizing HealthChoice MCOs as care delivery partners, the MOM model focuses on improving clinical resources and

enhancing care coordination to Medicaid beneficiaries with OUD during and after their pregnancies. Under the Maryland MOM model, HealthChoice MCOs receive a per member, per month (PMPM) payment to provide a set of enhanced case management services, standardized social determinants of health screenings and care coordination, as well as to encourage appropriate somatic and behavioral health care utilization, such as prenatal care and behavioral health counseling. While initially covered by CMMI funds, in FY 2022 these PMPM payments transitioned to the MCH Population Health Improvement Fund, with federal matching dollars authorized under the §1115 HealthChoice demonstration. Model services started on July 1, 2021 as a pilot in St. Mary's County, continuing for one year. Starting in FY 2023, after the culmination of the pilot, the model expanded into Baltimore City, Anne Arundel, Baltimore, Cecil, Garrett, and Harford Counties. Starting January 1, 2023, the MOM model will expand to be completely statewide, available to all eligible HealthChoice members.

Additional Efforts to Address SMM

The section of the report highlights additional initiatives the State and stakeholders are implementing to address severe maternal morbidity and improve maternal health outcomes. The initiatives described are not an exhaustive list of ongoing and planned activities but are key drivers of progress under SIHIS.

State Investments in Post-Partum Coverage

1) Coverage initiatives:

   a) 12-month postpartum coverage expansion.

      During the 2021 Maryland Legislative Session, Senate Bill 923 was enacted, expanding the period of time a pregnant person is eligible for Medicaid to 12 months following the end of the pregnancy. Prior to SB 923, Medicaid coverage was available for two months postpartum to pregnant individuals with a family income between 139 to 264-percent of the FPL. The benefit was effective April 1, 2022. The Department estimates that this extended coverage will benefit approximately 4,000 members annually.

   b) HB 1080/unborn child (will cover pregnancy and postpartum for undocumented).

      During the 2022 Maryland Legislative Session, House Bill 1080 was enacted, expanding Medicaid eligibility to non-citizen pregnant people who would be eligible for the program, except for their immigration status, and to their children up to the age of 1 year. Medical care, in addition to behavioral health and dental care will be made available to this population. The effective date for this expansion is July 1, 2023. The Department estimates this will extend coverage for approximately 6,000 people annually.

Pritzker Key Collaboration

Building Better Beginnings (B3) is a prenatal to three coalition whose mission is to establish, enhance, and expand high-quality programs and services for at-risk, expectant families and those with young children across Maryland. B3 also plans to increase awareness of the critical importance of early life experiences in achieving lifelong health and well-being. During the past year, B3 has worked on the publication of the Prenatal to Three Equity Report, hosted the National Prenatal to Three Meeting that showcased some of Maryland's accomplishments including the Statewide Integrated Health Improvement Strategy.

Maryland Maternal Health Innovation Program (MDMOM)

The Maryland Maternal Health Innovation Program (MDMOM),) is a five-year program (2019-2024) to improve maternal health across the state of Maryland by coordinating innovation in the areas of maternal health data availability and utilization; training of perinatal health providers in birthing hospitals and of home visitors across home visiting programs in the state; and perinatal telehealth and telementoring. MDMOM is a collaboration between Johns Hopkins University, MDH, and the Maryland Patient Safety Center (MPSC); and funded by Health Resources and Services Administration.

MDMOM has accomplished a significant number of items to improve SMM rates across the State during 2022. MDMOM developed and shared with stakeholders two data briefs to: 1) summarize nine years of state-level pregnancy-associated mortality data (2010-2018) and Maternal Mortality Review Committee recommendations; and 2) present data from the pilot SMM Surveillance and Review Program implemented in six hospitals. In April of 2022, it expanded the SMM Surveillance and Review Program to include 14 additional participating hospitals for a total of 20 hospitals representing more than 70 percent of the births in the State.

A series of three trainings have been offered to perinatal health providers in birthing hospitals:

1. *Breaking Through Implicit Bias in Maternal Healthcare* developed by the March of Dimes (~2,700 trainees across 32 hospitals);
2. *Learnings from Adverse Maternal Events in Maryland* developed by MDMOM with expert consultants (~400 trainees across 26 of 32 hospitals); and
3. *Managing Bias in the Care of Patients with Substance Use Disorders* developed by MDMOM with expert consultants (~200 trainees across 6 of 32 hospitals).

Furthermore, MDMOM developed two one-hour, synchronous skill building sessions with expert consultants to complement the online training addressing implicit bias in maternal healthcare that has been offered in 19 of 32 birthing hospitals (32 sessions reached ~750 providers). Additionally, a one-hour training on maternal warning signs developed by MDMOM in collaboration with the Baltimore Healthy Start has been offered to

staff in 30 home visiting programs (~120 staff trained); program staff meet monthly to share experiences and learning through a community of practice model.

During the Summer of 2022, MDMOM and the Hatcher Group launched a media campaign building on the materials available on a dedicated MDMOM microsite:. MDMOM's maternal warning signs video has 2,368 views on YouTube; several hospitals and obstetric practices are showing the warning signs video in their waiting rooms and during patient education. In addition, the bus/metro public awareness campaign conducted in Baltimore City and Prince George's County generated over 50 million impressions.

To improve access to maternal-fetal medicine (MFM) consults for women who live outside metropolitan areas in Maryland, the State is working with UMMC. MFMs at UMMC have offered peer-mentoring in relation to more than 300 patients working with peers in hospitals within the University of Maryland Medical System (UMMS) and three Chase-Brexton clinics. To address the burden of severe hypertension in pregnancy and in line with work coordinated via the MDPQC, the State designed a statewide Preeclampsia Telehealth Initiative to distribute blood pressure (BP) cuffs to patients through the 32 birthing hospitals. This initiative was introduced during the MDPQC meeting in May 2022. Twenty-six hospitals elected to participate, and in-service visits were conducted in 18 of these hospitals; the BP cuff distribution will start in October 2022. MDMOM rigorously monitors and evaluates all its activities to inform their potential for use at scale in future years. MDMOM published three manuscripts on its findings in peer-reviewed literature.

Secretary's Vision Group Highlights

As mentioned earlier in this report, Secretary Schrader requested that SVG member organizations develop and share the specific activities they would undertake to support the State's goals under SIHIS. Select highlights of stakeholder activities to address maternal health are below.

Maryland Hospitals

Maryland hospitals are implementing system-wide changes to infrastructure and practices to improve health equity. Hospitals are identifying race and ethnicity differences in clinical processes and outcomes, as well as screening for and addressing SDOH. They are also committed to building a more diverse workforce and are collecting data on hiring, retention, and promotion by race and ethnicity. Hospitals are also participating in a Birth Outcomes and Accountability group that is facilitated by the Maryland Hospital Association (MHA). Birthing hospitals will also participate in an obstetric hemorrhage collaborative, in addition to an existing maternal hypertension collaborative. Select hospitals are also participating in MDMOM and have or will implement a SMM review process, both discussed earlier in this report.

Hospitals are also working to enroll ED and PCPs in the BIRTH Equity Program, a program developed by MHA and MPSC. The BIRTH Equity Program provides educational tools for non-obstetric providers to address health disparities in the maternal morbidity rate for NH Black women. The program provides

information to providers and patients not just on clinical issues, but also on identifying and addressing implicit biases that may impact patient care.

CY 2023 Priorities

Severe maternal morbidity is an important risk factor for maternal deaths, which is a key indicator for the health and well-being of a society. It has become more evident that focusing on reducing SMM rates is crucial to improve the health of Marylanders as there is indication that COVID-19 has been one of the factors of the increase in elevated SMM rates.[39] SMM rates are greater among people of underrepresented racial and ethnic groups, including NH Black and Indigenous populations.[40] Therefore in 2023, the State will continue to invest towards the projects mentioned above that not only focus on reducing SMM rates but are strategically designed to provide services to underserved populations and those who are at greater risk of being affected by SMM. The State will provide support to the home visiting sites by developing tools and resources to increase awareness of services and provide opportunities for collaboration between home visiting sites and healthcare organizations. Additionally, the State will examine the impact of updating the SMM indicators to align with the national SMM Calculations. As previously stated, SMM indicators were updated by federal partners to exclude blood transfusions, due to its lack of specificity. Given that preliminary analysis demonstrates that blood transfusions contribute to approximately 65 percent of the SMM events in Maryland, this will in turn have a significant impact. The State will also continue strengthening our networks both internally and externally to advance maternal and child health.

Domain 3d. Total Population Health – Child Health

Asthma, which has one of the largest racial and ethnic disparities in terms of ED visit rates, is responsible for more ED visits than many other major chronic diseases, such as hypertension and diabetes. Additionally, pediatric asthma contributes to increased healthcare utilization and spending, missed school days, and sub-optimal overall health and well-being in Maryland children. Pediatric asthma also has a significant impact on parental productivity. The specific goal, measure, milestones, and targets for the child health priority area are below, as well as 2018 baselines broken down by race and ethnicity.

Table 29. Total Population Health - Child Health Goal

Goal: Decrease asthma-related emergency department visit rates for ages 2-17	
Measure	Annual ED visit rate per 1,000 for ages 2-17
2018 Baseline	9.2 ED visit rate per 1,000 for ages 2-17

[39] Molina RL, Tsai TC, Dai D, et al. Comparison of Pregnancy and Birth Outcomes Before vs During the COVID-19 Pandemic. JAMA Netw Open. 2022;5(8):e2226531. doi:10.1001/jamanetworkopen.2022.26531

[40] Rivara FP, Fihn SD. Severe Maternal Morbidity and Mortality: JAMA Network Open Call for Papers. JAMA Netw Open. 2020;3(1):e200045. doi:10.1001/jamanetworkopen.2020.0045

2021 Year 3 Milestone **(All Milestones Met)**	Obtain Population Projections. Development of Asthma Dashboard. Launch Regional Partnership Catalyst Grant for MCH, if funding available. Asthma-related ED visit is a Title V State Performance Measure and shift some of the Title V funds for Asthma-related interventions.
2023 Year 5 Target	Achieve a rate reduction from 2018 baseline to 7.2 in 2023 for ages 2-17
2026 Year 8 Final Target	Achieve a rate reduction from the 2018 baseline to 5.3 in 2026 for ages 2-17

Table 30. Race/Ethnicity Disparities in Childhood Asthma ED Rate, 2018 Baseline

Race	2018	2023 Year 5 Target	2026 Year 8 Target	Absolute Change	Relative Percentage Change
Total	9.2	7.2	5.3	3.9	42%
NH White	4.1	3.5	3.0	1.1	26%
NH Black	19.1	14.36	9.6	9.6	50%
Hispanic	5.4	4.7	4.0	1.4	25%
NH Asian	2.7	2.6	2.5	0.2	9%
Other	10.6	7.30	5.5	5.1	48%

Quantitative Performance

Based on data through October 2022, Maryland had 7.1 asthma-related emergency department visits per 1,000 children over the prior 12 months. This rate is 0.10 visits per 1,000 children lower than the 2023 target.

Figure 12. Childhood Asthma-Related ED Visits for Rolling 12-Months, 2018-October 2022

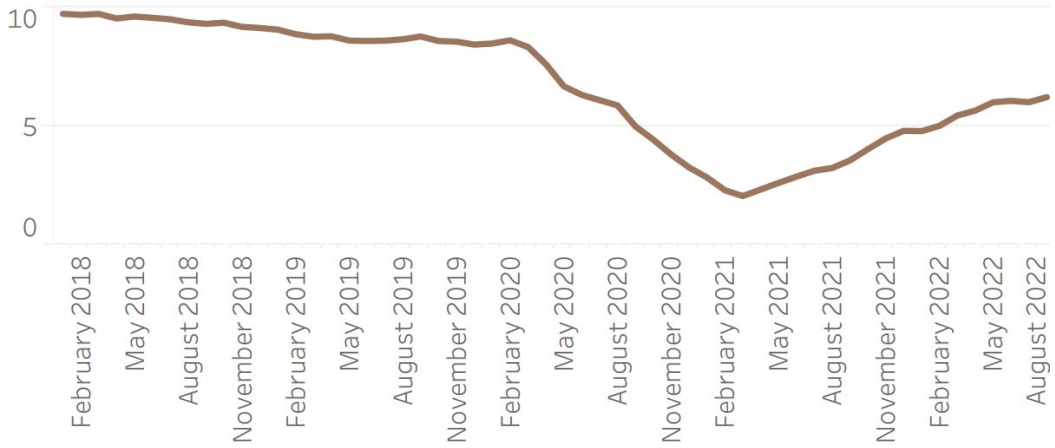


Table 31. Childhood Asthma-Related ED Visits Compared to 2023 Target, 2018-August 2022

	2018 Baseline	Most Recent 12 Months	2023 Target	Difference – Most Recent 12 Months to Target
Rate per 1K	9.2	7.1	7.2	-0.1
Total Count	10,974	8,495		

Performance by Race & Ethnicity

As with the SMM rate, the impacts of COVID-19 have had a deleterious impact on health disparities, most notably with the non-Hispanic Black population. Continued investment in initiatives and programs as described here to address childhood asthma is critical to eliminating these disparities and reaching the improvement goals set under SIHIS. Table 32 includes 2018 baseline values, performance through August 2022, and a Disparity Index, wherein a value over 1 indicates **negative** performance on the measure when compared to NH White performance.

Figure 13. Childhood Asthma-Related ED Visits for Rolling 12-Months by Race/Ethnicity, 2018-October 2022

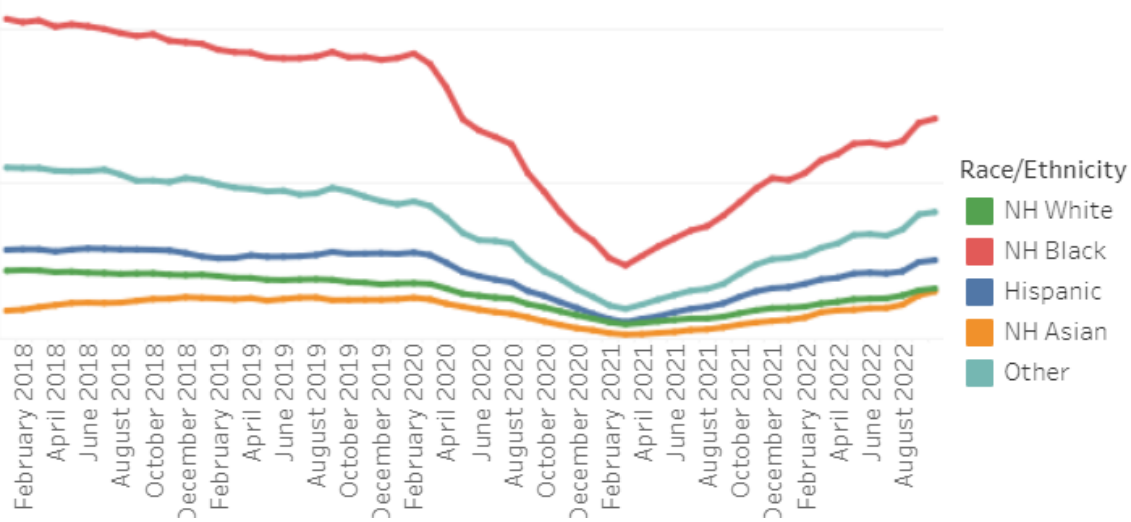


Table 32. Childhood Asthma-Related ED Visit Rates by Race/Ethnicity, 2018-October 2022

Race/Ethnicity	2018 Baseline	Most Recent 12 Months	2023 Target	Difference	Disparity Index
NH White	4.1	3.2	3.5	-0.4	1.0
NH Black	19.1	14.2	14.36	-0.5	4.4
Hispanic	5.5	5.0	4.70	0.2	1.6
NH Asian	2.6	3	2.60	0.1	0.9
Other	10.3	8.0	7.30	0.7	2.5
Statewide Total	9.2	7.1	7.2	-0.3	2.2

Impact of COVID-19 on Performance

As is true for hospitals nationally, Maryland hospitals saw sharp declines in ED volumes in 2020 and early 2021. Understandably, Maryland's asthma-related ED visit rate for ages 2-17 declined during this period. While 2022 volumes are trending back to 2018 baselines, they are still artificially low. Despite these low ED volumes, the State believes that the underlying dynamics of childhood asthma in Maryland have not changed. In some cases, childhood asthma may be exacerbated as patients avoided seeking healthcare entirely, potentially worsening racial disparities. The State will continue to monitor performance throughout

2022 and evaluate the impact of COVID-19 on progress. In the meantime, the State continues to expand interventions and identify opportunities to address and reduce childhood asthma and health disparities.

Updates on 2021 Milestones

As reported in last year's annual report on SIHIS activities and shown in Table 29, Maryland met all of its 2021 milestones for the child health priority area. Progress on milestones and additional activities underway to address childhood asthma are detailed below.

Milestone 1: Check population projections

To achieve milestone one, further analysis was conducted to understand the Asthma-related ED visits. An average of 97.2 percent of all ED visits for asthma for children enrolled in Medicaid are in hospitals in Maryland (2013 - 2019).

Through Medicaid and HSCRC, the Environmental Health Bureau (EHB) obtained details of calendar year 2018 ED visits for the Medicaid population aged 2-17 years. These data showed that 424 children residing in Maryland had a total of 505 ED visits in hospitals outside of Maryland. The vast majority of these children (300) were treated in Washington, DC. Thus, while the overall impact of cross-border treatment for asthma on SIHIS is likely negligible, there may be regional impacts and/or impacts on the state's disparities goals, depending on which children are not being treated in Maryland. Analysis of the data is continuing to understand exactly what these impacts might be and possible strategies to address them. In addition, EHB has engaged with IMPACT DC at Children's National Hospital, to discuss potential collaborations on home visiting and asthma management for children living in Maryland who are treated at Children's National Hospital in Washington, DC.

Milestone 2: Development of Asthma Dashboard

Maryland's Environmental Public Health Tracking project in the EHB provides a display of asthma data by relevant geographies across the State. A dashboard for the SIHIS initiative will be included in the Environmental Public Health Tracking public portal, which will include the asthma measures adopted through the SIHIS process and will also include links to LHDs and other partners participating in the asthma interventions. The dashboard was completed in December 2021 and was released publicly in mid-2022.[41]

Milestone 3: Asthma-related ED visit as a Title V State Performance Measure and shift some of the Title V funds for Asthma-related interventions.

Title V is a federal block grant that supports promoting and improving the health and well-being of the nation's mothers, children, including children with special needs, and their families. The Title V Program seeks to strengthen the MCH infrastructure and to ensure the availability, accessibility, and quality of

[41] MDH Environmental Public Health Tracking. Asthma Dashboard. https://maps.health.maryland.gov/ephtportal/asthma

primary and specialty care services for women, infants, children, and adolescents. Through the Title V Maternal and Child Health Services Block Grant, Maryland is able to provide core public health funding to all 24 jurisdictions (23 counties and Baltimore City) in the state to advance vital maternal and child health services and initiatives that are specific to the needs of each community. Funding is used for direct and enabling services for maternal health and children/youth with special health care needs. Additionally, funds are used for population-based services through community education of emerging public health issues and through the continued development and advancement of public health infrastructure to ensure the health and well-being of Title V eligible populations.

For the State Fiscal Year 22, LHDs were allowed to use their core public health funding to address asthma. Activities include asthma home visiting program or school-based asthma programs, providing healthcare education opportunities on asthma management, developing an asthma regional collaborative to coordinate asthma-related activities, partnering with the health exchange to strengthen linkages to care. For State Fiscal Year 22, three LHDs participate in asthma activities through Title V.

Milestone 4: Launch MCH Funding Initiative

As mentioned earlier in this report, the HSCRC approved $40 million in cumulative funding to support maternal and child health interventions. The funding initiative will direct $10 million annually (FY 2022-2025) to Medicaid and PHS under MDH to support statewide expansions of evidence-based and promising practices to promote maternal and child health. Of the $10 million in annual funding, $1.25 million will directly support interventions to address childhood asthma through home visiting programs.

Progress and Interventions to Address Childhood Asthma

Childhood Lead Poisoning and Asthma Prevention Environmental Case Management Program Expansion

Home visiting programs have been shown to improve asthma, including adolescent asthma, as it offers tailored services to address a family's specific needs. Below is a description of the efforts of the Department to improve childhood asthma outcomes. The Department has utilized funds, including funds provided through the HSCRC in support of SIHIS, to support and expand the Asthma Home Visiting Program (The Asthma HV Program) that now operates in eleven jurisdictions (Anne Arundel, Baltimore, Charles, Dorchester, Frederick, Harford, Montgomery, Prince George's, St. Mary's and Wicomico Counties and Baltimore City). The Asthma HV Program provides up to six home visits for children with moderate to severe asthma by a LHD community health worker (CHW) and/or supervising case manager. These visits include an evaluation of environmental triggers, parent education and provision of supplies shown to reduce asthma severity, including a HEPA vacuum cleaner and other interventions demonstrated to improve outcomes for children with moderate to severe asthma. The Asthma HV Program also ensures care

coordination amongst all providers who interact with the child through the use of asthma action plans. In FY 2022, more than 600 children with lead poisoning or asthma received services through this program. In support of the SIHIS and Departmental goal of addressing health disparities, 80.3 percent of the children with asthma served in the program were NH Black.

COVID-19 continued to limit the ability of LHDs to conduct home visits in 2021 and much of 2022, but LHDs have persisted in their efforts to improve childhood asthma outcomes. In FY 2022, 353 children with asthma were enrolled at some point for home visiting by LHDs – 201 of those children were newly enrolled in that fiscal year. The remaining children were enrolled in a different fiscal year but were in the program at some point in FY 2022.

Improving Referrals to Local Health Department Asthma Home Visiting Programs

EHB and Medicaid have collaborated with CRISP and with health care providers, health care organizations, and payors to improve and increase referrals to home visiting programs and case management. After working with EHB to develop and validate logic to select appropriate cases, CRISP began to send Care Alerts to health care providers whose patients might be eligible for home visiting in early 2022. Through November 2022, more than 5,700 alerts had been sent to health care providers.

On March 10, 2022, the CRISP clinical committee approved the asthma use case in which children potentially eligible for home visiting services under the Medicaid CHIP-HSI who are identified through admission, discharge, or transfer (ADT) data seen in Maryland hospitals may now be sent electronically to LHDs with home visiting services through the REDCap home visiting data base. This is a major milestone for the SIHIS asthma project, since it now allows LHDs to receive notifications of children with acute exacerbations within a month of their discharge, thus increasing the value of the home visiting service to eligible families and the likelihood of enrollment in the program. On September 8, 2022, the first direct electronic referrals of children with recent emergency department visits or hospitalizations due to asthma were from CRISP to LHDs and have continued at the rate of 10 children per LHD per week.

Community-Based and Other Programs Focused on Asthma

In addition to the $1 million from the MCH Population Health Improvement Fund used to strengthen the LHD home visiting program, the Department issued a $250,000 competitive request for applications for community-based programs to address pediatric asthma. The Green and Healthy Homes Initiative, Inc. (GHHI) received funding for two programs, one in Baltimore City, the other in Prince George's County. These funds will allow GHHI to address asthma through both educational interventions and home-based interventions and will also expand the number of children and families in the state who may be eligible for services.

The most recent GHHI interim report for Prince George's County summarizes the performance measures and progress to date:

- 210 children in total will be enrolled in the Program over 42 months (3.5 years). In the initial 6 months, GHHI was planned to enroll and serve 30 asthma diagnosed children and their households. After the initial 6 months conclude, GHHI will enroll and provide services to 60 clients annually thereafter for the next 36 months (3 years). In total, 210 children will receive full services including in-home asthma prevention resident education and case management, asthma trigger environmental assessment, and Tier I Plus and Tier II asthma trigger reduction housing interventions.
- Interim Report Update: GHHI received 2,300 referrals of Prince George's County children ages 2-17 who are diagnosed with asthma and whose asthma is deemed to be uncontrolled. GHHI has commenced the scheduling of asthma resident educations and environmental assessments with the Amerigroup client referrals and other referrals from GHHI marketing and outreach and healthcare and other partner referrals. GHHI fully expects to complete all services for 90 asthma resident educations and environmental assessments for asthma triggers as well as asthma trigger reduction housing interventions for higher level intervention (where applicable) client units by June 30, 2023, in meeting the performance measures for the first 18 months of the Program.

GHHI's reports summarize progress for its Baltimore City program:

- 280 children in total will be enrolled in the Program over 42 months (3.5 years). In the initial 6 months, GHHI was planned to enroll and serve 40 asthma diagnosed children and their households. After the initial 6 months concludes, GHHI will enroll and provide services to 80 clients annually thereafter for the next 36 months (3 years). In total, 280 children will receive full services including in-home asthma prevention resident education and case management, asthma trigger environmental assessment, and Tier I Plus and Tier II asthma trigger reduction housing interventions.
- Interim Report Update: GHHI received 1,900 referrals of Baltimore City children ages 2-17 who are diagnosed with asthma and whose asthma is deemed to be uncontrolled. GHHI has commenced the scheduling of asthma resident educations and environmental assessments with the Amerigroup client referrals and other referrals from GHHI marketing and outreach and healthcare and other partner referrals. GHHI expects to complete all services for 120 asthma resident educations and environmental assessments for asthma triggers as well as asthma trigger reduction housing interventions for higher level intervention (where applicable) client units by June 30, 2023, in meeting the performance measures for the first 18 months of the Program.

Asthma Community of Practice (CoP) and Provider Education

The Asthma Community of Practice (CoP) was created by the PHPA/EHB with the vision that all people and families living with asthma in the State of Maryland receive the best possible care so that asthma does not affect their quality of life, and with the mission of improving practice through information and resource sharing. The purpose of the Asthma CoP is to:

1. Serve as a forum to exchange best practices and information regarding asthma treatment, management, and prevention;
2. Improve collaboration among stakeholders involved in asthma care; and
3. Ensure that Marylanders with asthma get the best possible care and access to prevention services.

The first Asthma CoP meeting was held on March 31, 2022. Attendees included LHDs and asthma stakeholders across the state, including the GHHI, Johns Hopkins School of Medicine Department of Pediatrics, local community organizations and payers. Items discussed in the first meeting included the purpose of Asthma CoP, asthma management in Maryland, and practices and strategies to address populations with the greatest need. The Asthma CoP met again on July 13, 2021; Tere H. Dickson, MD, MPH (Physician Advisor for Medicaid's Medical Benefits Management Administration), presented a model for Improving Asthma Outcomes in New York City. The final CoP meeting was held on November 2, 2022 and included presentations by the ImpactDC asthma program based at National Children's Hospital, and a discussion about how to improve the design and use of Asthma Action Plans used across Maryland. EHB plans to conduct three Asthma CoP Meetings annually.

Secretary's Vision Group Highlights

As mentioned earlier in this report, Secretary Schrader requested that SVG member organizations develop and share the specific activities they would undertake to support the State's goals under SIHIS. Select highlights of stakeholder activities to address childhood asthma are below.

University of Maryland Medical System (UMMS) and CRISP

UMMS collaborated with MDH and CRISP on the project to generate electronic referrals to asthma home-visiting programs. The referral system went live across UMMS in August 2022. In addition, hospital discharge paperwork for pediatric patients also provides QR codes that directs patients to more information on asthma home visiting consults.

CY 2023 Priorities

In 2023, the State will continue to operate the expanded asthma home visiting program in eleven jurisdictions in partnership with Medicaid and grow referrals to local programs through CRISP. The State will also continue to support the two community-based asthma home visiting projects in Baltimore City and

Prince George's County. EHB will be looking more closely at how well local health departments and the community-based provider are addressing disparities in implementing their programs. Finally, the State will also continue to prioritize provider education through a CoP initiative.

Conclusion

The Statewide Integrated Health Improvement Strategy presents Maryland with a unique opportunity to improve hospital quality, foster care transformation, and advance population health. SIHIS has created a unified agenda that is galvanizing both public and private stakeholders to collaborate on and invest in improving health, addressing disparities, and reducing healthcare costs. In addition, SIHIS has presented opportunities to engage new and unlikely partners in addressing public health, creating new avenues to improve the health and lives of Marylanders.

Across each SIHIS domain, Maryland was careful to consider goals, measures, and targets in its 2020 proposal that are realistic and achievable during the SIHIS performance period. However, the long-lasting impacts of COVID-19 on the healthcare system could ultimately affect the State's ability to achieve some or all of the goals under SIHIS. The State will continue to monitor performance across all SIHIS goals and will communicate with CMMI about the ongoing impact of COVID-19 on outcomes as additional data becomes available. Despite these challenges, Maryland is proud of the work accomplished to date and is enthusiastic to continue this work in 2023. The State of Maryland looks forward to further discussions with CMMI on 2022 activities and ongoing efforts in 2023 to achieve interim SIHIS targets.

STATE OF MARYLAND
Community Health Resources Commission
45 Calvert Street, Room 336 • Annapolis, Maryland 21401

Larry Hogan, Governor - Boyd Rutherford, Lt. Governor
Edward J. Kasemeyer, Chair – Mark Luckner, Executive Director

February 16, 2022

Pathways to Health Equity -- Grants Awarded by the Maryland Community Health Resources Commission

Baltimore Healthy Start (Baltimore City; total award: $875,000). This project will address disparities in hypertension, Substance Use Disorder (SUD), Low Birth Weight, and Severe Maternal Morbidity for pregnant and postpartum women and their infants in the Druid Heights and Walbrook areas of Baltimore City (zip codes 21216 and 21217). The project will expand existing service coordination and home-visiting projects and facilitate access to primary care and substance use treatment through referrals. Interventions include hypertension education administered by trained CHWs, home BP monitoring and tracking, peer support groups, and care coordination addressing clients' acute stressors and SDOH needs.

Greater Baltimore Medical Center (Baltimore City; total award: $1,500,000). This project will address disparities in diabetes and hypertension among the African American population in the Greenmount East, Harbor East/Little Italy, Inner Harbor/Federal Hill, Midtown, Oldtown/Middle East, and Waverly areas of Baltimore (zip codes 21202 and 21218). Key interventions include an expansion of the number of patients treated at GBMC Jonestown Clinic, where patients will receive comprehensive primary and preventive care services including vaccinations and screenings; disease management and care coordination services; at-home care for elderly participants; and support to address Social Determinants of Health (SDOH) needs. The project will also conduct public screenings and education at community events, and healthy lifestyle interventions such as community walks/runs, education workshops, patient support groups, peer challenges to support water and protein intake goals, and healthy cooking demonstrations.

University of Maryland School of Nursing (Baltimore City; total award: $2,400,000). This project will address disparities in hypertension, mental health, and social isolation in West Baltimore (zip codes 21201, 21217, 21223, and 21229). Key interventions include: establishing a learning collaborative, using nurse-managed health centers, leveraging mobile health care, and enhancing care coordination through a community health worker model. Targeted outcomes include decreasing the number of patients with uncontrolled hypertension and increasing participation in social support groups.

Johns Hopkins School of Medicine (Prince George's County; total award: $2,000,000). This project will address disparities associated with the high prevalence of sickle cell disease (SCD) and lack of access to a local comprehensive sickle cell project in Prince George's County, with specific focus on Upper Marlboro, Laurel and Capital Heights (zip codes 20773, 20707, and 20743). This project aims to reduce the number of adults who present to UMCP hospital for acute pain requiring hospital admission, and to improve access to SCD modifying treatment and transition services for adolescents and young adults to reduce hospitalizations. This comprehensive sickle cell project includes a new infusion clinic at UM Capital Region Medical Center. CHWs will identify participants who lack resources to facilitate access, coordinate their care, and provide SCD education. A nurse navigator will facilitate interventions to address SDOH needs, and a nutritionist will develop a food plan for each participant.

Prince George's County Health Department (Prince George's County; total award: $1,600,000). This project will address disparities in heart disease and diabetes in the Capitol Heights, Bladensburg, Hyattsville, and Riverdale areas (zip codes 20710, 20737, 20743, and 20785). Key interventions include Community Health Worker (CHW)-driven outreach and care coordination, bi-directional e-referrals among health and social service providers, and technical assistance to improve providers' ability to bill for care coordination. The project will promote delivery of culturally and linguistically sensitive services, and utilize EMR, CRISP, and telehealth services including through telehealth hubs. Targeted outcomes include reductions in disparities related to heart disease and diabetes, improved diabetic control as measured by A1c or blood glucose levels, and increased access to primary care.

La Clínica del Pueblo (Montgomery & Prince George's Counties; total award: $1,500,000). This project will address disparities in diabetes for the Hispanic population in areas of Montgomery and Prince George's Counties (zip codes 20703, 20706, 20710, 20712, 20722, 20737, 20740, 20770, 20781, 20782, 20783, 20784, 20785, 20901, 20903, and 20912). Interventions will include remote diabetes monitoring, peer-led diabetes self-management, diabetes health screenings via the Luminis mobile clinic, navigation to primary care, addressing barriers to access such as lack of insurance and transportation, access to fresh produce, peer-led walking groups, health system navigation and legal services support, medical interpretation, and a comprehensive community health education, awareness and outreach campaign.

St. Mary's County Health Department (St. Mary's County; total award: $1,600,000). This project will address disparities in Behavioral Health (mental health and SUD) and heart disease in the Lexington Park area (zip codes 20634, 20653, 20667). Key interventions include the opening of a new facility to provide primary care, counseling, and other Behavioral Health services; law enforcement referrals and ED diversions; case management to connect clients to partner organizations addressing SDOH; and respite care post-hospital discharge. Target outcomes include a reduction in ED admissions for chronic conditions and mental health and substance use disorders, increased access to primary and preventative care, decreased recidivism in the criminal justice system, and a reduction in overdoses.

Tidal Health (Somerset, Wicomico & Worcester Counties; total award: $1,100,00). This project will address disparities in diabetes experienced by the Black and Haitian population on the Lower Shore (zip codes 21801, 21804, 21822, 21853, 21851, and 21863). Key interventions identified include expansion of Mobile Integrated Health, connections with primary care, expansion of culturally linguistic and evidenced-based diabetes programming, and deployment of CHWs. Target outcomes include reduced rates of uncontrolled diabetes and hypertension among Black adults (18+) in the prioritized zip codes.

Horizon Goodwill Industries (Washington County; total award: $925,000). This project will address health disparities in diabetes and mental health in the Hagerstown area (zip code 21740). The project will provide on-site access to dietary and diabetic educators, healthcare navigation, wrap-around case management, and job training services; walk-in testing for diabetes (HgA1c) and retinal neuropathy; and referrals to mental health services. The goal is to decrease the rate of ED utilization for ambulatory care sensitive conditions, improve management of diabetes, and help reduce the rate of new diabetes diagnoses.

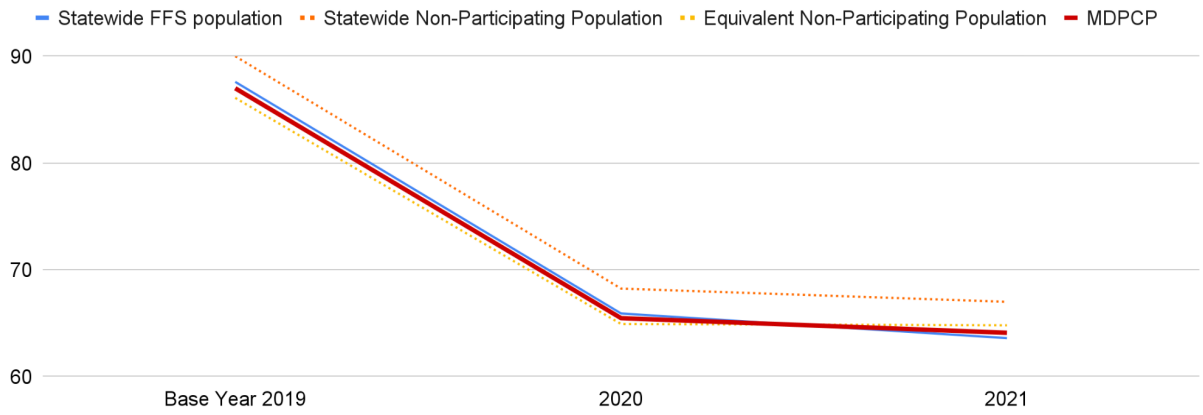
Appendix 2. Hospital Quality - MDPCP Potentially Avoidable Admissions Analysis

Table 1. Comparison Group Characteristics, 2021.

Population	Beneficiary Count	Description
MDPCP	335,779	Represents all beneficiaries attributed to MDPCP participating practices.
Statewide FFS (Fee for Service) Population	751,590	Represents the entire State's Medicare fee-for-service beneficiary population with both Part A and B coverage. This is comprised of three distinct sub-groups: 1) beneficiaries participating in MDPCP, 2) beneficiaries eligible for MDPCP and attributed to a provider, but not participating in the program, and 3) beneficiaries who are either not eligible for the program or are not able to be attributed to a provider due to the lack of a) available claims or b) a treatment relationship with a provider.
Statewide Non-Participating Population	252,287	Represents all Medicare FFS beneficiaries who are eligible for MDPCP, but are not attributed to a primary care provider participating in MDPCP.
Equivalent Non-Participating Population	93,214	Represents a subset of a non-participating MDPCP population that meet the eligibility criteria to participate in MDPCP but are attributed to providers not participating in MDPCP. This Statewide Non-Participating Population is demographically matched to the participating MDPCP population in a selected attribution quarter on the distribution of age band, race, sex, dual eligibility, and county of residence.

In 2021, there was a decrease in PQI-like events (Figure 14) for MDPCP beneficiaries. PQIs are potentially preventable complications which can be reduced through access to high-quality outpatient care. PQIs are identified using hospital discharge data, and PQI-like utilization reflects IP admissions or ED visits that fall into one of the eleven PQI classifications based on the AHRQ specification. Utilization trends for beneficiaries attributed to MDPCP practices were evaluated against several comparison groups that had different characteristics (see Table 34).

Figure 1. PQI-like Events Performance



Source:

In 2021, there were 64 PQI-like events per every 1,000 MDPCP-attributed beneficiaries, a decrease of 2.1 percent compared to the previous year (Table 34). This trend follows the prior two years in which PQI-like events decreased. However, unlike prior years, there was greater variation in performance in this metric amongst the aforementioned comparison groups. There was a 2.1 percent decrease in PQI-like events for MDPCP-attributed beneficiaries, while there was a 0.2 percent decrease for the equivalent non-participating population.

Table 2. PQI-Like Events per K, HCC Risk Adjusted

PQI-Like Events, 2019-2021					
Population		**Base Year 2019**	**2020**	**2021**	**Total Percentage Change**
Statewide FFS		88	66	64	-27.4%
	% Change from Prior Year	N/A	-25%	-4%	
Statewide Non-Participating		90	68	67	-25.6%
	% Change from Prior Year	N/A	-24%	-2%	
Equivalent Non-Participating		86	65	65	-24.7%
	% Change from Prior Year	N/A	-25%	0%	
MDPCP		87	65	64	-26.3%
	% Change from Prior Year	N/A	-25%	-2%	

Appendix 3. Memo on Strategies to Achieve Timely Follow-Up

As discussed in the main report, Maryland did not achieve the CY 2021 Year 3 milestone for Timely Follow-Up among Medicare FFS beneficiaries. Specifically, the CY 2021 timely follow-up rate was 70.05 percent and did not meet the milestone of 72.38 percent. However, timely follow-up in Maryland remained higher than the nation by 2.4 percent. Despite the reduction in timely follow-up during the COVID public health emergency, Maryland remains committed to achieving the CY 2026 final target of 75 percent or 0.50 percent better than the nation. This memo outlines several strategies that the State will use to achieve the final target.

maryland
health services
cost review commission

To: Hospital CFOs

Cc: Case Mix Liaisons, Hospital Quality Contacts

From: HSCRC Quality Team

Date: October 21, 2022

Re: CY 2021 Timely Follow-Up Performance

This memorandum summarizes the statewide performance and statewide racial and sociodemographic disparities in Timely Follow-Up After Acute Exacerbation of Chronic Conditions (TFU) for CY 2021.

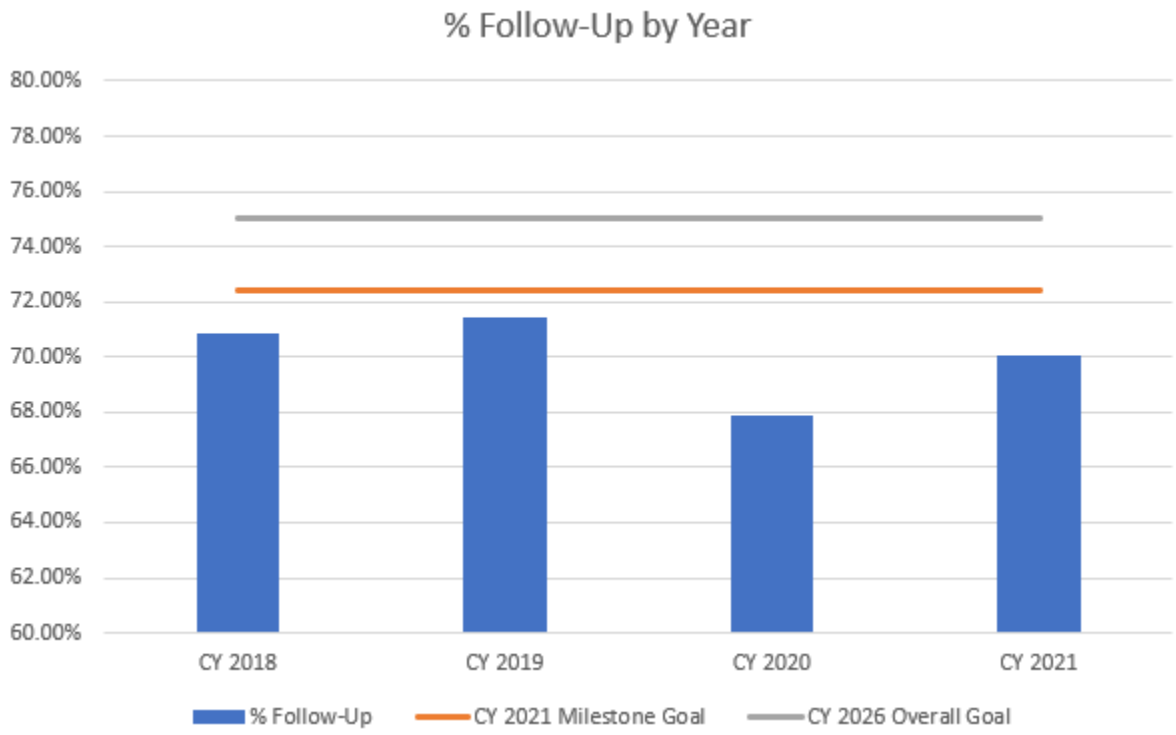
The Timely Follow-Up measure is a NQF-endorsed health plan measure that looks at the percentage of emergency department visits, observation stays, and inpatient admissions for six conditions- Asthma, Coronary Artery Disease (CAD), Chronic Obstructive Pulmonary Disease (COPD), Diabetes, Hypertension, and Heart Failure (HF)- that received a follow-up visit within the time frame recommended by clinical practice

The TFU measure is included in the Statewide Integrated Health Improvement Strategy (SIHIS), which is part of the Total Cost of Care (TCOC) model through a memorandum of understanding with CMMI[1]. The goal is to achieve a Medicare follow-up rate of 75 percent or 0.5 percent better than the nation, whichever is higher, by the end of CY 2026 (TCOC model year 8). To achieve this goal, the state set interim targets for CY2021 and CY2023. With a baseline performance of 70.85% in 2018, the CY 2021 interim target was 72.38 percent. Figure 1 shows the TFU rates for CY 2018 through CY 2021, along with the CY 2021 milestone and CY 2026 overall goal. **This indicates that the CY 2021 statewide TFU milestone goal of 72.38% was not met, with hospitals instead achieving a TFU rate of 70.07%.** This is 0.78 percentage points

[1] Additional information about the Statewide Integrated Health Improvement Strategy that was developed during 2019 and 2020, and approved by CMMI in March of 2021 can be found here: https://hscrc.maryland.gov/Pages/Statewide-Integrated-Health-Improvement-Strategy-.aspx

lower than the baseline TFU rate in 2018, and reflects the significant impact of the COVID-19 public health emergency on healthcare utilization. However, data on TFU for July 2021-June 2022 shows the statewide rate is 69.90 percent, which indicates that there is still much work to be done to improve TFU. As part of the annual report to CMMI that is due at the end of December, staff must address the missed SIHIS target and provide CMMI with information on how the state will work to still achieve the final goal of 75 percent.

Figure 1: TFU Rates CY 2018- CY 2021



In accordance with the Commission's commitment to health equity, HSCRC staff conducted analyses to glean disparities in the HSCRC's hospital quality programs. These analyses provided evidence of significant TFU disparities by race, dual eligibility, and neighborhood deprivation as measured by the Area Deprivation Index (ADI)[2] (see Appendix A). The analyses cover CY 2018- CY 2021 and risk-adjusts for age and sex.

[2] ADI includes factors for the theoretical domains of income, education, employment, and housing quality to rank neighborhoods by socioeconomic disadvantage at the national level.

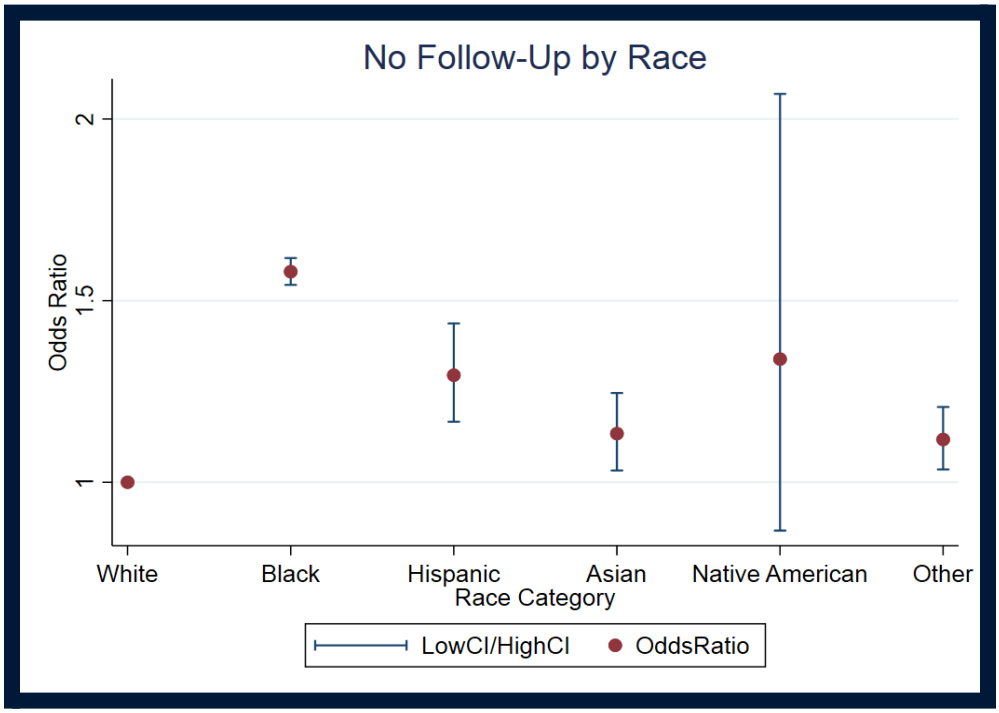
Addressing the disparities uncovered by these analyses should improve the overall TFU rate and will likely help the state to meet its CY 2026 goal. For example, **in CY 2021, if all races received the same TFU rate as Whites (73.67%), the state would have surpassed the CY 2021 milestone.** Instead, in CY 2021, all non-White groups (except those classified as Other) had a lower TFU rate than Whites (see Appendix B). Further, the risk-adjusted analyses showed that Blacks have a 58 percent higher odds of not receiving follow-up compared to Whites. Similar trends were seen where people dually eligible for Medicare and Medicaid and those with higher area deprivation had a higher odds of not receiving follow-up.

In the RY 2024 QBR Program, TFU rates are 5% of the overall QBR score and, due to previous data constraints, are based solely on TFU rates for the Medicare population. Beginning in CY 2022, with the assistance of CRISP and Maryland Medicaid, hospitals are now able to access their Medicaid TFU rates on the CRS portal. Staff found that Medicaid patients have lower timely follow-up visit rates compared to the Medicare population (see Appendix C). To drive improvement, staff is recommending that Medicaid be added to the QBR payment program by dividing the 5% currently designated to the TFU measure evenly between the Medicaid and Medicare populations beginning in RY 2025 (i.e., Medicaid TFU rates and Medicare TFU rates will each comprise 2.5% of the QBR program). As with the Medicare data, staff plans to analyze whether there are disparities in TFU for the Medicaid population.

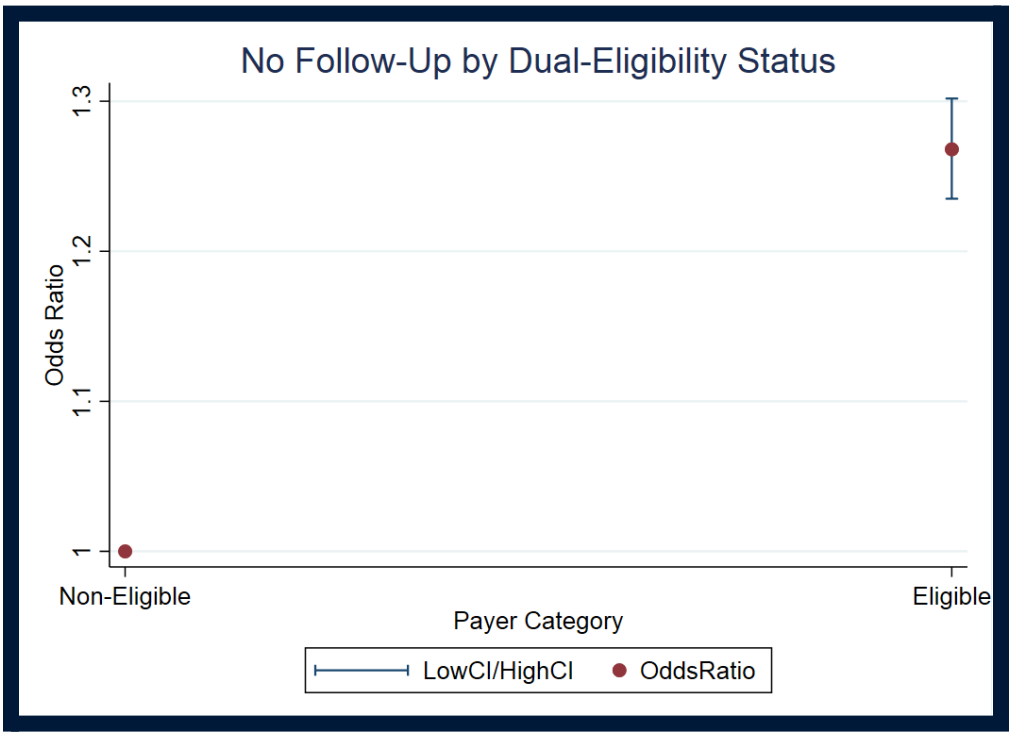
To improve the state's TFU rates and meet the CY 2023 milestone (72.42 percent) and CY 2026 overall goal, the HSCRC urges hospitals to understand the disparities found in their patient populations. Eliminating disparities is an opportunity to improve the hospital's overall quality of care provided to their patients. For disparities on the SIHIS measures, the SIHIS Dashboard on the CRS portal provides hospital-level and statewide measure performance by race and other factors relevant to the specific measure.

Please contact the HSCRC quality team with any questions or concerns hscrc.quality@maryland.gov.

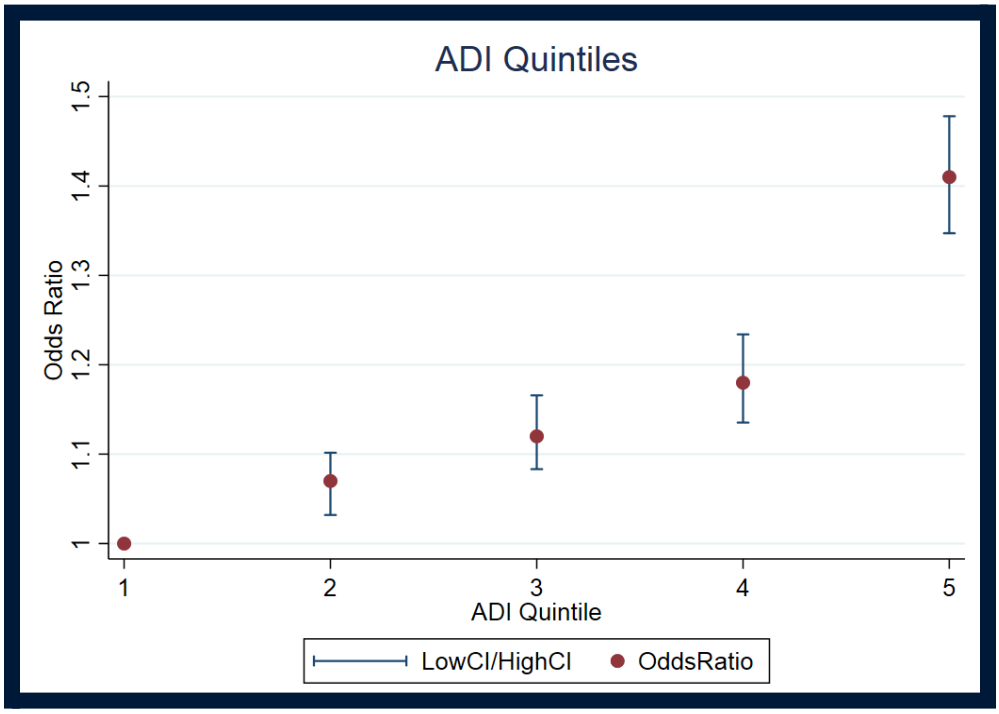
Appendix A: Disparity Analysis Results



Black, Hispanic, Asian, Native American, and Other race beneficiaries have 58%, 29%, 13%, 34%, and 12% higher odds of not receiving follow-up compared to white beneficiaries, respectively. These disparities are all statistically significant, except for Native Americans which is likely due to the small sample size.



Patients insured by both Medicaid and Medicare have a 27% higher odds of not receiving follow-up compared to patients not insured by Medicaid.



Patients who live in an area that was assigned an Area Deprivation Index (ADI) score of 21-40, 41-60, 61-80, and 81-100 have 7%, 12%, 18%, and 41% higher odds of not receiving follow-up compared to patients who live in an area that was assigned an ADI score of 1-20, respectively.

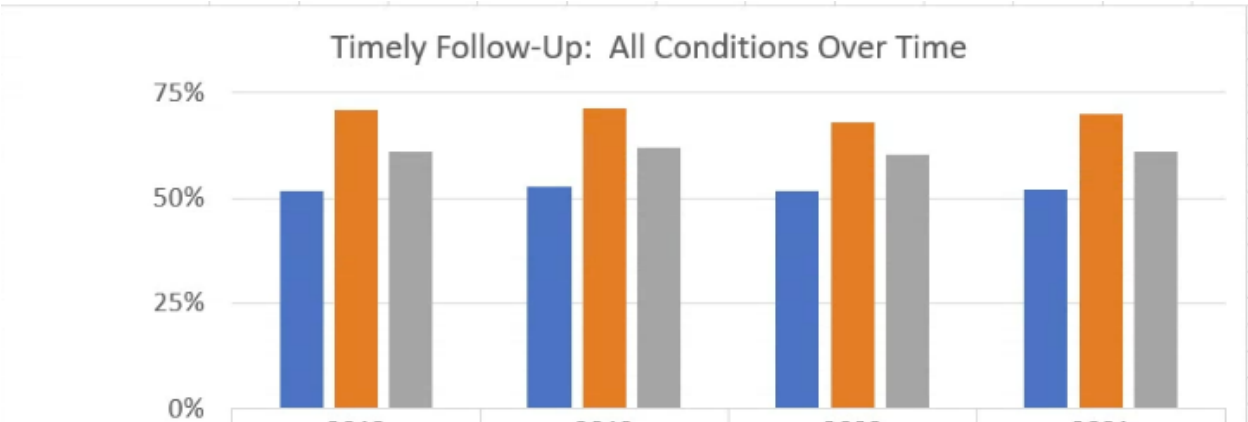
Appendix B: Statewide TFU Rates by Race

2021 TFU by Race	No Follow-Up	Follow-Up	Total	% Follow-Up
Asian	130	328	458	71.62%
Black	3998	7183	11181	64.24%
Hispanic	118	221	339	65.19%
North Native	9	18	27	66.67%
Other	95	275	370	74.32%
Unknown	137	331	468	70.73%
White	4700	13147	17847	73.67%
Total	9187	21503	30690	70.07%

2018-2021 TFU by Race	No Follow- Up	Follow-Up	Total	% Follow-Up
Asian	627	1595	2222	71.78%
Black	20657	36843	57500	64.07%
Hispanic	535	1144	1679	68.14%
North Native American	30	64	94	68.09%
Other	442	1148	1590	72.20%
Unknown	510	1308	1818	71.95%
White	22524	64893	87417	74.23%
Total	45325	106995	152320	70.24%

The “Other” population has a relatively small sample size and also may not comprise the same individuals over time.

Appendix C: Statewide TFU Rates for Medicaid vs Medicare



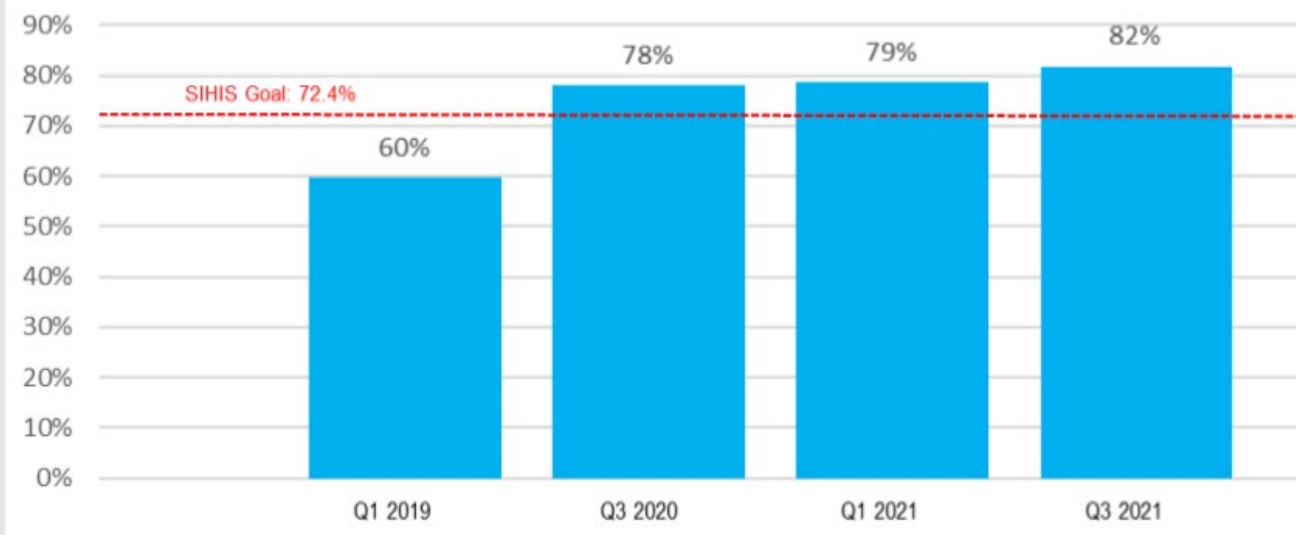
	2018	2019	2020	2021
Medicaid	51.69%	52.75%	51.72%	52.13%
Medicare FFS	0.7085	0.7145	0.679	0.7007
Combined	61.18%	62.16%	60.52%	60.99%

Appendix 4. MDPCP Timely Follow-Up Supplemental Data

MDPCP practices are required as a condition of participation to provide follow-up and reporting on patients after hospital and emergency department visits. To facilitate follow-up, MDPCP practices are also required to participate in the state HIE and update their Event Notification System (ENS) panels at least every 90 days. The ENS alerts practices to their patients ED and hospital admissions and discharges. These systems provide enhanced ability to ensure prompt follow-up of patients and continuity of care.

The MDPCP data is for all cause admissions and may under-represent the percentage of patients followed up for the SIHIS specific conditions. MDPCP also has set the interval for follow-up at 2 days, significantly shorter than the SIHIS intervals. As shown in Figure 15 and Figure 16, MDPCP beneficiaries have had a steady increase in follow-up and exceed both the Year 3 milestone of 72.4 percent and the Year 6 final target of 75 percent. As MDPCP continues to add new practices in 2023 and 2024 and practices leverage HIT tools and ongoing educational programs, the State anticipates that higher levels of follow up after hospitalizations will serve to improve the overall statewide performance on these measures.

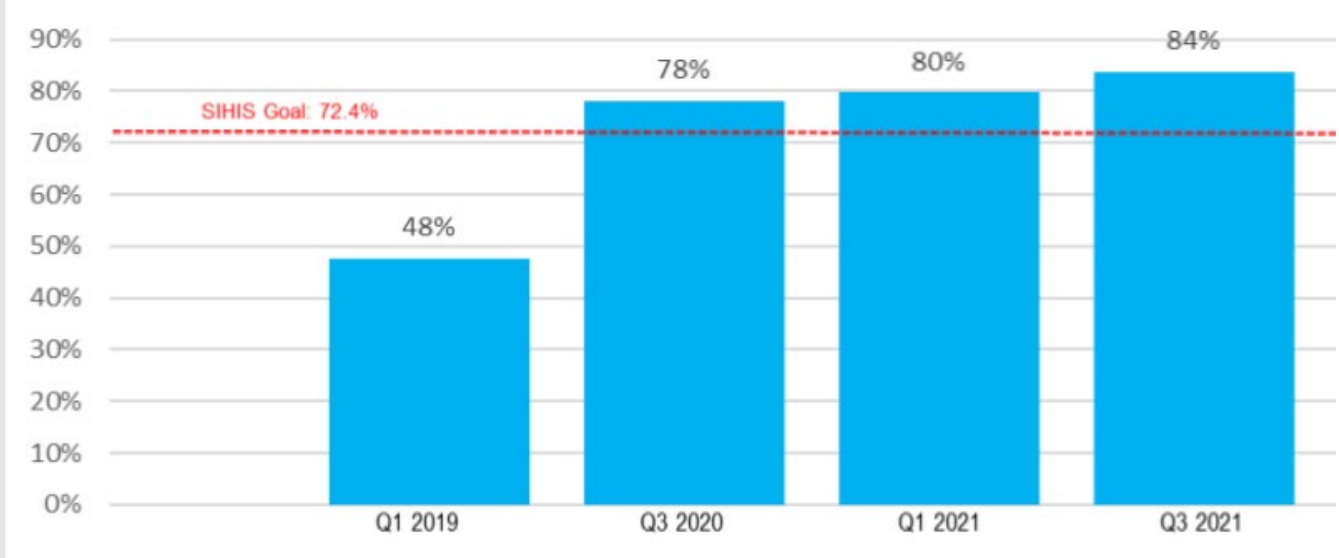
Figure 1. Percent of Beneficiaries with Follow-up after Hospital Admissions within Two Business Days



Source: MDPCP Practice Semi-Annual Care Transformation Reporting[1]

[1] *Data for Percent of Beneficiaries with Hospital and Emergency Department follow up is taken from semi-annual Care Transformation Reporting. MDPCP practices were not required to report data for quarters not shown in graphs above. 2022 data is pending.

Figure 2. Percent of Beneficiaries with Follow-Up after ED Visits within One Week, 2019- Q3 2021



Source: MDPCP Practice Semi-Annual Care Transformation Reporting[2]

[2] *Data for Percent of Beneficiaries with Hospital and Emergency Department follow up is taken from semi-annual Care Transformation Reporting. MDPCP practices were not required to report data for quarters not shown in graphs above. 2022 data is pending.

Appendix 5. HSCRC, Timely Follow-Up Supplemental Data

Quality-Based Reimbursement Incentive

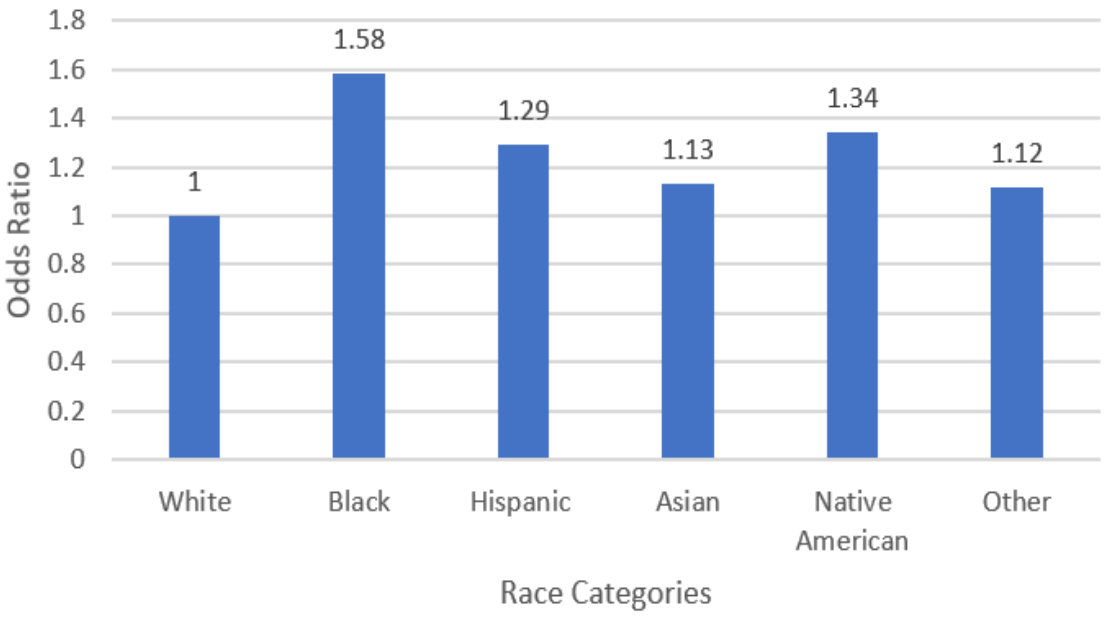
In order to achieve the timely follow-up SIHIS targets, the HSCRC approved adding the Medicare timely follow-up measure to the QBR program in RY 2024 (i.e., CY 2022 performance period). Monitoring reports and hospital pay-for-performance incentives are important for encouraging focus on different aspects of quality, in this case better care coordination for those with chronic conditions. Using data through October 2022, 74 percent of hospitals in the QBR program had an increase in timely follow-up compared to CY 2020. Starting in RY 2025, Medicaid timely follow-up has been added to the QBR program. While this reduces the percent focused on Medicare, it expands the focus of this measure to a wider population. The HSCRC believes that all-payer or multi-payer incentives are stronger than Medicare only targets. In conclusion, the inclusion of timely follow-up in the QBR program is an important strategy for achieving the SIHIS target.

Focus on Disparities

The State remains committed to reducing health disparities and increasing health equity. In CY 2022, the HSCRC established its own Health Equity Workgroup to provide stakeholder input on how to stratify hospital-related quality measures and identify areas that HSCRC should monitor and/or consider for payment incentives. This workgroup identified that there are timely follow-up disparities by race, dual eligibility, and neighborhood deprivation as measured by the Area Deprivation Index (ADI) as shown in Figure 17, Figure 18, and Figure 19.[1] Consequently, focusing on disparities in timely follow-up is a key strategy for achieving the SIHIS targets.

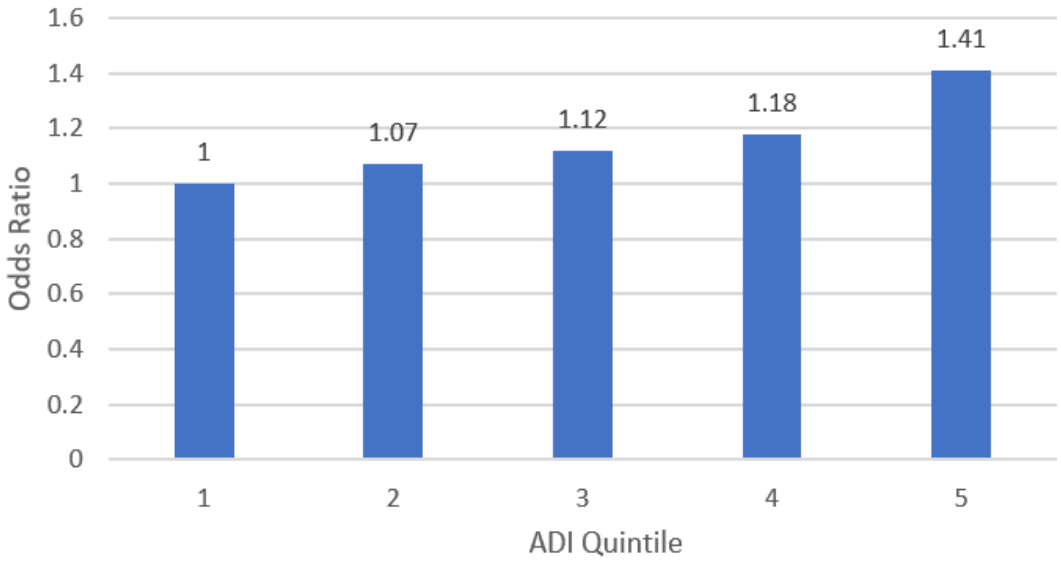
[1] ADI includes factors for the theoretical domains of income, education, employment, and housing quality to rank neighborhoods by socioeconomic disadvantage at the national level.

Figure 1. Odds Ratio of Not Receiving Follow-Up by Race



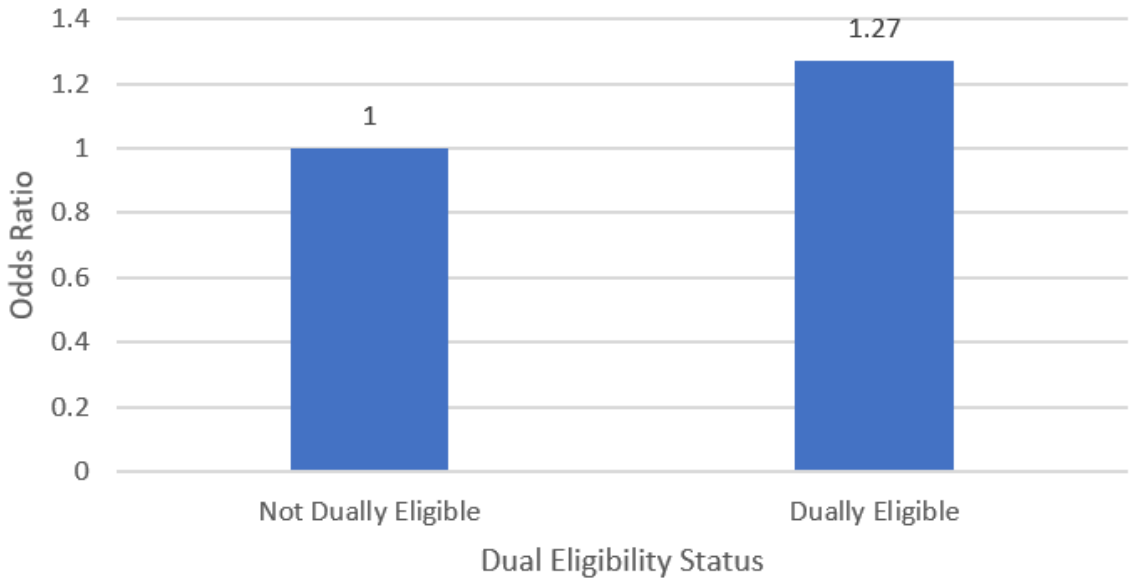
Source: CCLF Data

Figure 2. Odds Ratio of Not Receiving Follow-Up by ADI Quintiles



Source: CCLF Data

Figure 3. Odds Ratio of Not Receiving Follow-Up by Dual Eligibility Status

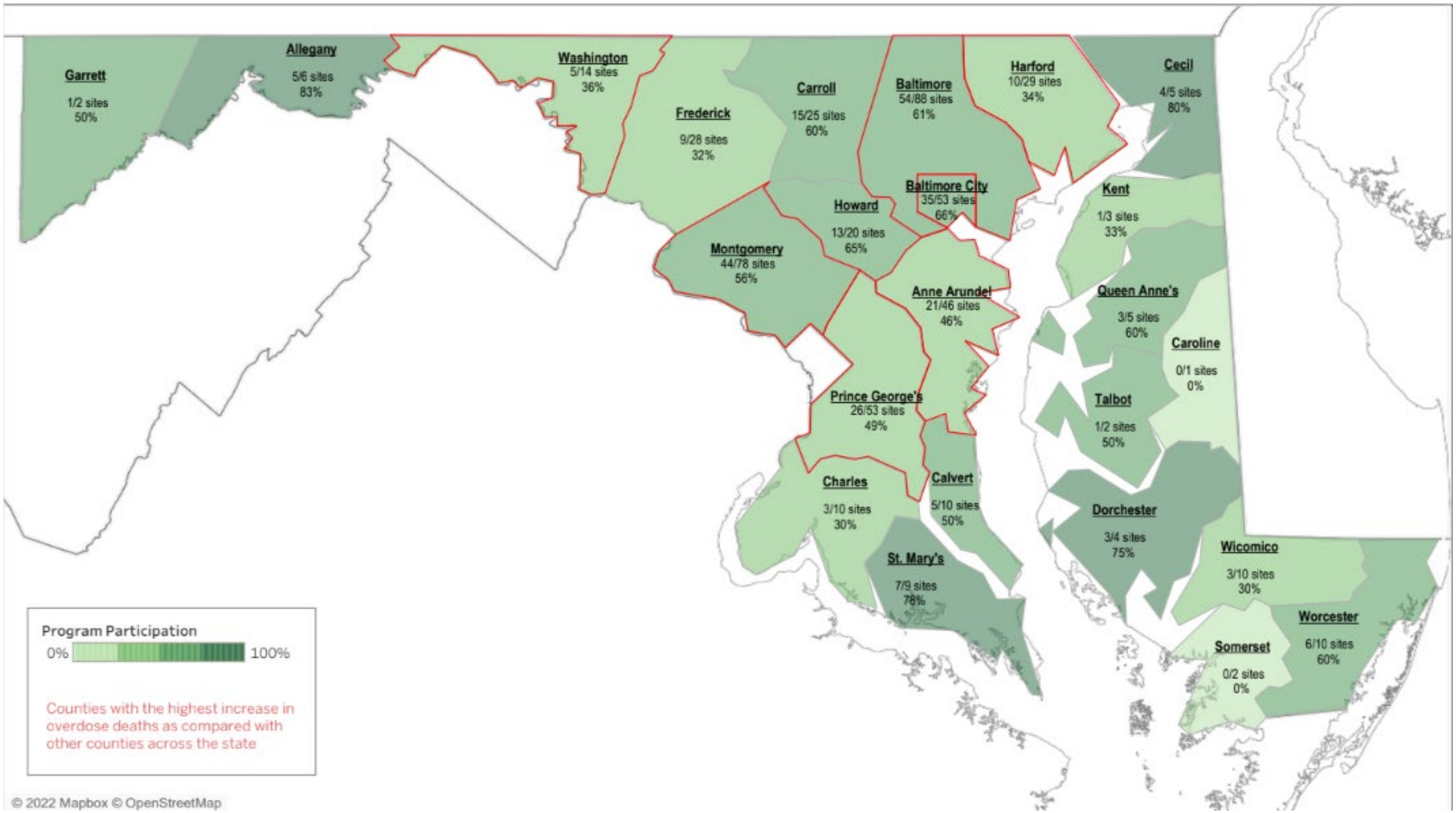


Source: CCLF Data

Specifically, the workgroup analyses found that those who are NH Black, dually-eligible for Medicaid and Medicare, and living in highly disadvantaged neighborhoods are statistically significantly less likely to receive timely follow-up compared to those who are White, Medicare-only beneficiaries, and live in more affluent neighborhoods. Furthermore, during CY 2021, if all races received the same timely follow-up as Whites (73.67 percent), the state would have surpassed the CY 2021 milestone. Based on these findings, the HSCRC sent out a memo in October of 2022 urging hospitals to understand and address the disparities found in their patient populations. [2] During CY 2023, the HSCRC will finalize a methodology and recommend that the Commission approve a Timely Follow-Up disparity gap measure to be included in the QBR program. Advancing equity in timely follow-up is an opportunity to improve the hospital's care coordination for chronically ill patients, which should lead to improvements in population health, and lead to the state achieving the SIHIS target.

[2] The Timely Follow-Up Memo can be found here:
https://hscrc.maryland.gov/Documents/Quality_Documents/QBR/RY2024/RY24%20TFU%20Memo.pdf

Appendix 6. Total Population Health – Opioids - MDPCP Practices – SBIRT Use



CRISP

STATEWIDE INTEGRATED HEALTH IMPROVEMENT STRATEGY (SIHIS):

SIHIS DIRECTIONAL INDICATORS REPORT USER GUIDE

User Guide 2.1

September 28, 2022

hMetrix

TABLE OF CONTENTS

1 BACKGROUND & INTRODUCTION

In 2019, the State of Maryland collaborated with the Center for Medicare and Medicaid Innovation (CMMI) to establish the domains of health care quality and delivery that the State could impact under the Total Cost of Care (TCOC) Model. The collaboration also included an agreed upon process and timeline by which the State would submit proposed goals, measures, milestones, and targets to CMMI. As a result of the collaboration with CMMI, the State entered into a Memorandum of Understanding (MOU) that required Maryland to provide a proposal for the Statewide Integrated Health Improvement Strategy (SIHIS) to CMMI by December 31, 2020. The SIHIS aligns statewide efforts across three domains that are interrelated and, if addressed successfully, have the potential to make significant improvement in not just Maryland's healthcare system, but in the health outcomes of Marylanders. CMMI approved the State's SIHIS proposal in March 2021

SIHIS contains five goals across three domains. The domains and associated goals are presented in the figure below. Each goal has a baseline measured on 2018 data, an interim target that will be measured on CY 2023 data, and a final target that will be measured on CY 2026 data.

Domain Area	Goal(s)
Domain 1 – Hospital Quality	Reduce avoidable admissions and readmissions
Domain 2 – Care Transformation Across the System	Increase the amount of Medicare TCOC or number of Medicare beneficiaries under Care Transformation Initiatives (CTIs), Care Redesign Program, or successor payment model Improve care coordination for patients with chronic conditions
Domain 3 – Total Population Health "Diabetes"	Reduce the mean Body Mass Index (BMI) for adult Maryland residents
Domain 3 - Total Population Health "Opioid Use Disorder"	Improve overdose mortality
Domain 3 - Total Population Health "Maternal and Child Health"	Reduce severe maternal morbidity rate Decrease asthma-related emergency department visit rates for ages 2-17

Many of the data sources used for official SIHIS monitoring are calculated annually on delayed data sources. Therefore, when needed, CRISP and hMetrix partnered together with HSCRC and MDH to develop a series of reports using proxy measures and available data sources. As such, this reporting suite is referred to as "directional indicators" for the SIHIS measures.

The SIHIS Directional Indicator reports include either proxy or actual measures for all of the SIHIS goals. The SIHIS reporting suite has separate modules for each domain: Hospital Quality; Care Transformation across the System; and Population Health.

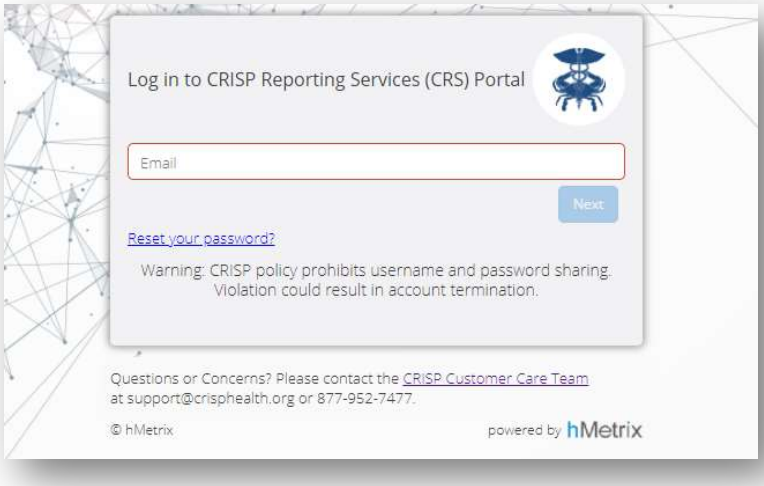
1.1 Software Requirements

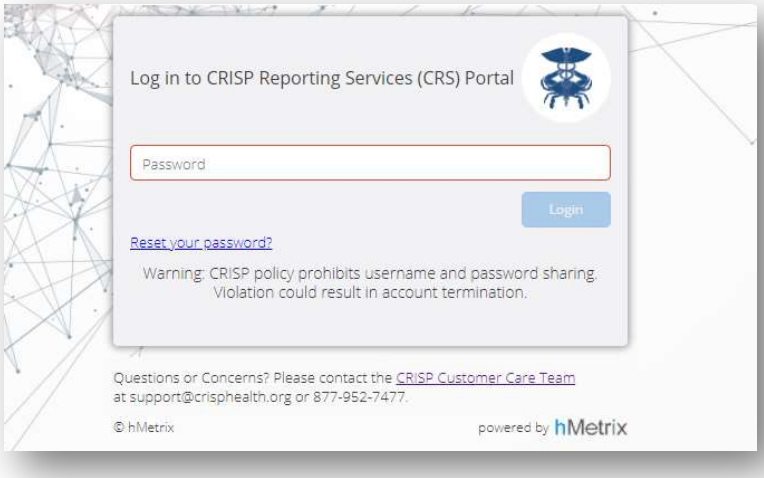
The SIHIS reports are available through a web-based application accessible using a modern browser: Google Chrome 57 or higher, Internet Explorer 11 or higher, Firefox 52 or higher, and Safari 9 or higher.

1.2 Launching SIHIS Reports

To access the SIHIS reports, a user must first login to the CRISP Hospital Reporting Portal. Once in the portal, the user shall click the Card labeled "Public Health." The following screen shots represent the user's workflow.

Step 1: Log into the CRISP Hospital Reporting Portal using the user id and password provided for the portal - https://reports.crisphealth.org/





Step 2: Click the Card named "Public Health" within the Portal

Step 3: After clicking the card, users will see a menu with links to various Public Health reports. From this menu, select “SIHIS.”

Step 4: Upon selecting SIHIS, users can then navigate to the SIHIS Directional Indicators report.

Step 5: Once the reporting suite opens, users can access reports across all domains using the left-side menu.

2 CARE TRANSFORMATION ACROSS THE SYSTEM

The Care Transformation Across the System module of the SIHIS Directional Indicators reports includes reporting for the following measures:

1. Medicare TCOC or beneficiaries under Care Transformation Program
2. Care coordination for patients with chronic conditions (timely follow-up after discharge)

In this section, we present the construct of the formal measure.

2.1 Care Transformation: Total Cost of Care

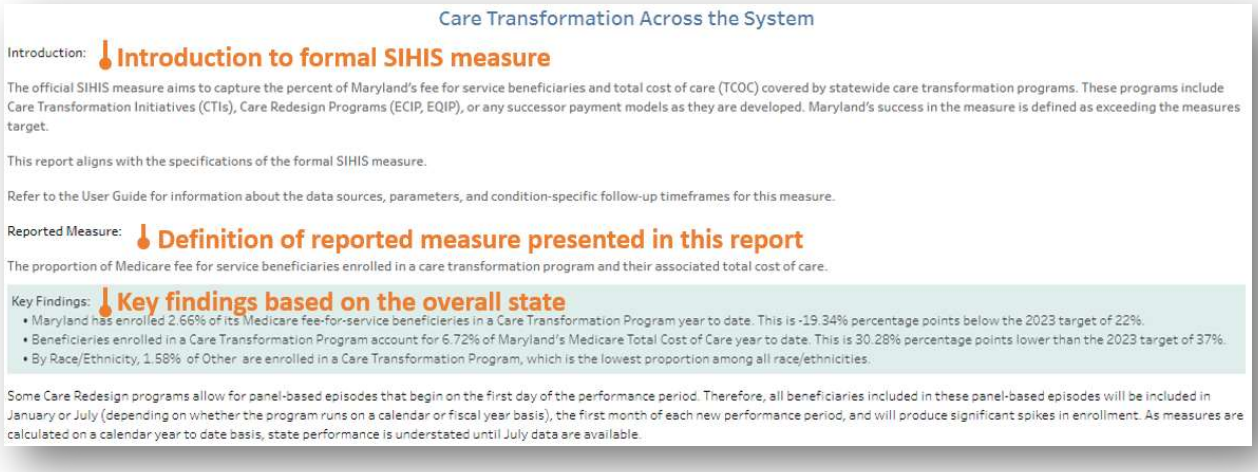
A description of the formal measure is presented in the table below.

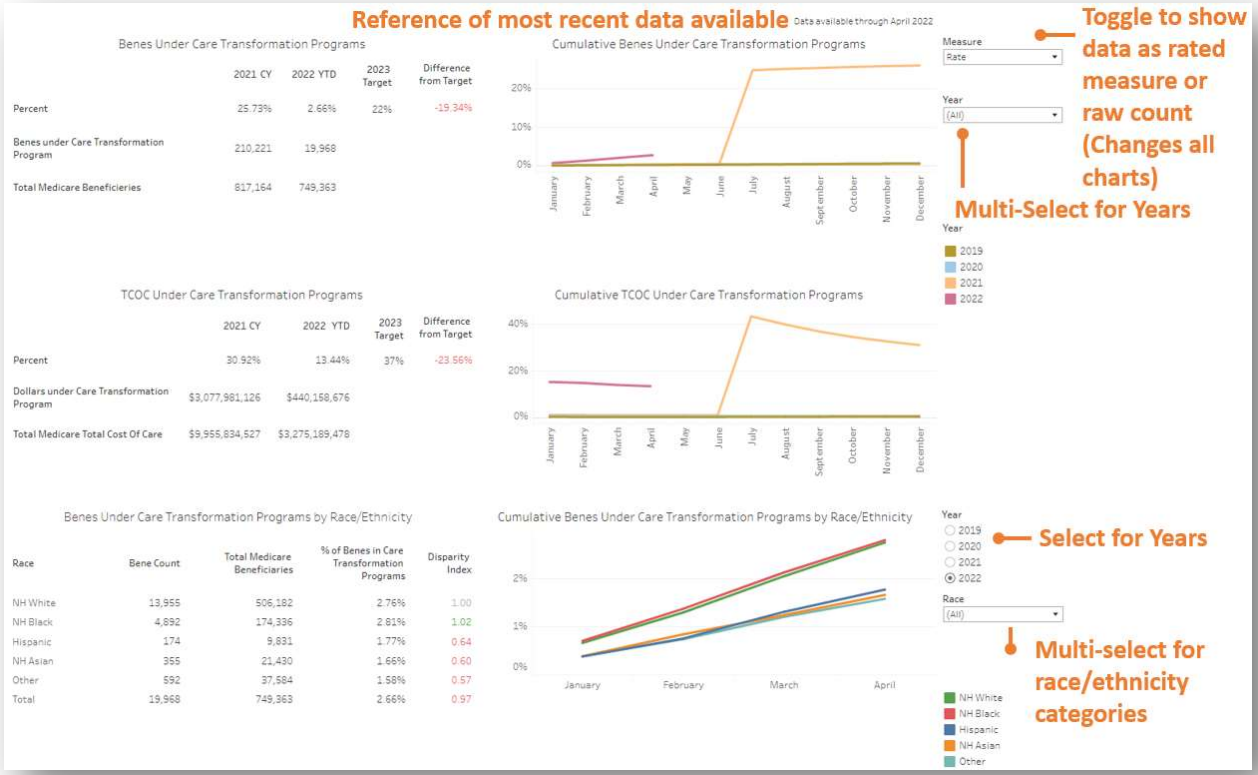
Element	Formal Measure
Measure	Increase amount of Medicare TCOC or number of Medicare beneficiaries under Care Transformation Initiatives (CTIs), Care Redesign Programs, or successor payment models.
Comparison/Trend	Medicare payments and count of Medicare FFS beneficiaries enrolled in Care Transformation Initiatives (CTIs), Care Redesign Programs, or successor payment models compared to measure targets. Annual measure whereas completed calendar year is compared to measure targets.
Data Sources (Numerator & Denominator)	Medicare Claim and Claim Line Feed data (CCLF)
Time Period for Baseline	Statewide as of December 31, 2018
Time Period for Measurement Period	Updated monthly for the full calendar year
Population	Maryland Medicare FFS beneficiaries

2.1.1 Care Transformation Total Cost of Care Report Design and Function

The Total Cost of Care report is designed with the following features:

1. An introduction to the formal measure
2. Key findings related to overall measure performance and current racial/ethnicity disparities across the State
3. Tabular and graphic depiction of measure performance over time by year. Chart x-axis shows one calendar year (January through December); chart lines allow for comparison of performance year over year by selecting years of interest from drop down. Chart can be shown in counts (beneficiaries or dollars) or rates (percent of total beneficiaries of dollars)
4. Tabular and graphic depiction of measure performance by year, race/ethnicity.
5. Ability to print the report to PDF for distribution outside of the application
6. The figure below highlights key aspects of the report.


Care Transformation Across the System
Introduction:
Introduction to formal SIHIS measure
The official SIHIS measure aims to capture the percent of Maryland's fee for service beneficiaries and total cost of care (TCOC) covered by statewide care transformation programs. These programs include Care Transformation Initiatives (CTIs), Care Redesign Programs (ECIP, EQIP), or any successor payment models as they are developed. Maryland's success in the measure is defined as exceeding the measures target.
This report aligns with the specifications of the formal SIHIS measure.
Refer to the User Guide for information about the data sources, parameters, and condition-specific follow-up timeframes for this measure.
Reported Measure:
Definition of reported measure presented in this report
The proportion of Medicare fee for service beneficiaries enrolled in a care transformation program and their associated total cost of care.
Key Findings:
Key findings based on the overall state
• Maryland has enrolled 2.66% of its Medicare fee-for-service beneficiaries in a Care Transformation Program year to date. This is -19.34% percentage points below the 2023 target of 22%.
• Beneficiaries enrolled in a Care Transformation Program account for 6.72% of Maryland's Medicare Total Cost of Care year to date. This is 30.28% percentage points lower than the 2023 target of 37%.
• By Race/Ethnicity, 1.58% of Other are enrolled in a Care Transformation Program, which is the lowest proportion among all race/ethnicities.
Some Care Redesign programs allow for panel-based episodes that begin on the first day of the performance period. Therefore, all beneficiaries included in these panel-based episodes will be included in January or July (depending on whether the program runs on a calendar or fiscal year basis), the first month of each new performance period, and will produce significant spikes in enrollment. As measures are calculated on a calendar year to date basis, state performance is understated until July data are available.


Reference of most recent data available
Data available through April 2022
Benes Under Care Transformation Programs
2021 CY
2022 YTD
2023 Target
Difference from Target
Percent
25.73%
2.66%
22%
-19.34%
Benes under Care Transformation Program
210,221
19,968
Total Medicare Beneficiaries
817,164
749,363
Cumulative Benes Under Care Transformation Programs
20%
10%
0%
January
February
March
April
May
June
July
August
September
October
November
December
Measure
Rate
Year
(All)
Toggle to show data as rated measure or raw count (Changes all charts)
Multi-Select for Years
Year
2019
2020
2021
2022
TCOC Under Care Transformation Programs
2021 CY
2022 YTD
2023 Target
Difference from Target
Percent
30.92%
13.44%
37%
-23.56%
Dollars under Care Transformation Program
$3,077,981,126
$440,158,676
Total Medicare Total Cost Of Care
$9,955,834,527
$3,275,189,478
Cumulative TCOC Under Care Transformation Programs
40%
20%
0%
Benes Under Care Transformation Programs by Race/Ethnicity
Race
Bene Count
Total Medicare Beneficiaries
% of Benes in Care Transformation Programs
Disparity Index
NH White
13,955
506,182
2.76%
1.00
NH Black
4,892
174,336
2.81%
1.02
Hispanic
174
9,831
1.77%
0.64
NH Asian
355
21,430
1.66%
0.60
Other
592
37,584
1.58%
0.57
Total
19,968
749,363
2.66%
0.97
Cumulative Benes Under Care Transformation Programs by Race/Ethnicity
2%
1%
0%
January
February
March
April
Year
2019
2020
2021
2022
Select for Years
Race
(All)
Multi-select for race/ethnicity categories
NH White
NH Black
Hispanic
NH Asian
Other

2.2 Care Transformation: Timely Follow Up After Discharge

A description of the formal measure is presented in the table below.

Element	Formal Measure
Measure	Timely follow up (within the timeframe recommended by clinical practice guidelines) after an acute exacerbation of chronic conditions [1] • Acute exacerbation is defined as an emergency Room [ED], observation hospital stay or inpatient hospital stay • Chronic conditions include hypertension, asthma, heart failure (HF), coronary artery disease (CAD), chronic obstructive pulmonary disease (COPD), or diabetes
Comparison/Trend	Change in rate from 2018 baseline compared to national measure targets
Data Sources (Numerator & Denominator)	Medicare Claim and Claim Line Feed data (CCLF)
Time Period for Baseline	Statewide cumulative annual average timely follow-up rate across all conditions as of December 31, 2018
Time Period for Measurement Period	Updated annually for the full calendar year
Population	Maryland Medicare beneficiaries with an inpatient admission, ER visit or observation hospital stay for an acute exacerbation of one of the chronic conditions of interest.

The recommended follow-up times following an acute exacerbation of an event are:

Chronic Condition	Recommended Follow-up after Discharge
Hypertension	7 days
Asthma	14 days
Heart Failure	14 days
Coronary Artery Disease	14 days
Chronic Obstructive Pulmonary Disease	30 days
Diabetes	30 days

The Timely Follow Up After Discharge measure was developed according to a health plan measure designed by IMPAQ International on behalf of CMS. According to IMPAQ specifications, acute events for which the calendar year ends before the follow-up window ends are excluded from the measure.

More detail on the measure specifications can be found here: https://impaqint.com/measure-information-timely-follow-after-acute-exacerbations-chronic-conditions

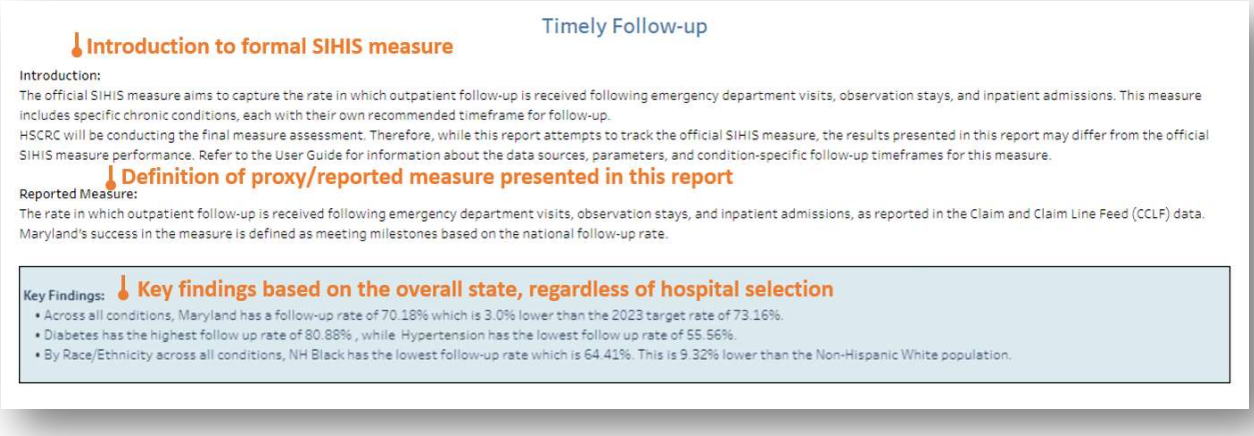
2.2.1 Care Transformation Timely Follow-Up Report Design and Function

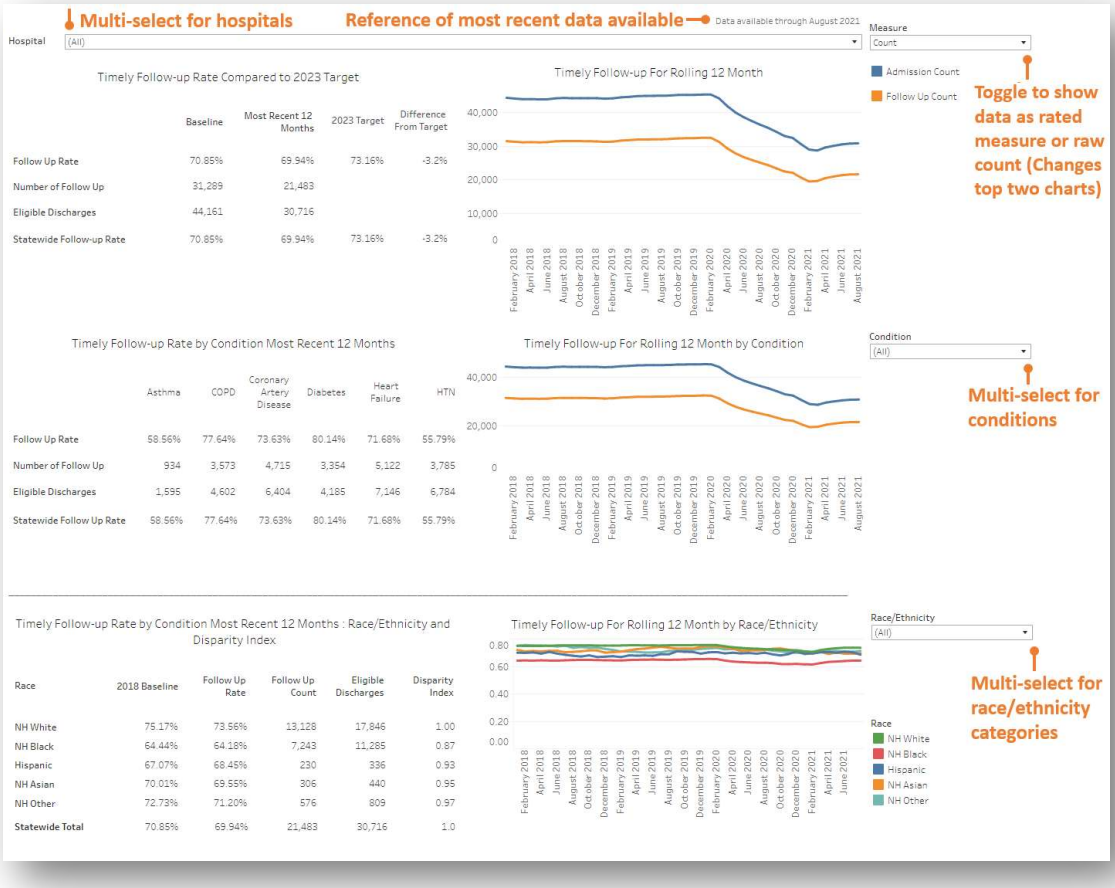
[1] Final Recommendation for QBR Policy, from which the measure is developed: https://hscrc.maryland.gov/Documents/Quality_Documents/QBR/RY2023/QBR%20RY23%20FINAL%202020-12-02%20FINAL%20Final_%20For%20Web.pdf

The Timely Follow-Up report is designed with the following features:

1. An introduction to the formal measure
2. Key findings related to overall measure performance and current racial/ethnicity disparities across the State
3. Tabular and graphic depiction of measure performance over time in total and by chronic condition, by hospital or for the state overall
4. Tabular and graphic depiction of measure performance in total by race/ethnicity.
5. Ability to print the report to PDF for distribution outside of the application

The figure below highlights key aspects of the report.





Each report allows for printing the current view of the report to a PDF document.

3 POPULATION HEALTH

The Population Health module of the SIHIS reports includes reporting for the following measures within the Population Health Domain:

1. Opioid Use Disorder
2. Diabetes
3. Maternal and Child Health

3.1 Comparison of Formal SIHIS and Proxy Measures

Due to data availability, CRISP is not able to present results for all of the Population Health formal measures. In these instances, CRISP worked with the HSCRC and MDH content leads to identify proxy measures that would suggest directional performance for the formal SIHIS measure. In this section, we present the construct of the formal measure, as well as the proxy measure presented in these Population Health reports.

3.1.1 Opioid Use Disorder Domain: Overdose Fatalities

A comparison of the formal and proxy measure is presented in the table below. For purpose of this measure, mortality and fatality is used interchangeably.

Element	Formal Measure	Proxy Measure
Measure	• Drug overdose mortality rate per 100,000 Maryland Residents • Age-adjusted • Includes all drugs/substances	• Drug overdose fatality rate per 100,000 Maryland Residents • Not age-adjusted • Includes all drugs/substances
Comparison/Trend	Change in rate from 2018 baseline compared to cohort of states with similar mortality rates and demographics. As of report release, the methodology for identifying and quantifying the overdose fatality rate for the comparison states is not available.	Change in rate from 2018 baseline compared to national change from 2018 baseline
Data Sources Numerator	**Maryland & Cohort**: National Vital Statistics System, available through Center for Disease Control (CDC) Wonder Database[2]	**Maryland**: Office of the Chief Medical Examiner (OCME) Enhanced Data **Nation:** National Vital Statistics Rapid Release Provisional Data[3]
Data Sources Denominator	**Maryland & Cohort**:[4]	**Maryland:** MD Department of Planning Maryland population estimates[5]

[2] https://www.cdc.gov/drugoverdose/deaths/2019.html
[3] https://www.cdc.gov/nchs/nvss/vsrr/drug-overdose-data.htm
[4] https://www.cdc.gov/drugoverdose/deaths/2019.html
[5] https://planning.maryland.gov/MSDC/Pages/pop_estimate/CensPopEst.aspx

Element	Formal Measure	Proxy Measure
Time Period for Baseline	**Maryland & Cohort**: 12-month rolling average as of December 31, 2018	**Maryland & Nation**: 12-month rolling average as of December 31, 2018
Time Period for Measurement Period	**Maryland & Cohort**: Updated annually, approximately a 2-year delay in reporting	**Maryland**: Updated monthly, approximately 2-month delay in reporting **Nation**: Updated monthly, approximately 7-month delay in reporting
Population	Residents of Maryland	Deaths that occurred in Maryland regardless of residency

3.1.2 Diabetes Domain: Diabetes Prevention Recognition Program (DPRP)

A comparison of the formal and proxy measure is presented in the table below.

Element	Formal Measure	Proxy Measure
Measure	Reduction in mean body mass index (BMI) for adult Maryland residents	Cumulative enrollment of adult Maryland residents in diabetes prevention recognition programs
Comparison/Trend	Change in rate from 2018 baseline compared to cohort of states. As of report release, the methodology for identifying and quantifying the overdose fatality rate for the comparison states is not available	Change in cumulative enrollment from 2018 baseline compared to national change from 2018 baseline
Data Sources Numerator	**Maryland & Cohort**: Behavioral Risk Factor Surveillance Survey (BRFSS)[6]	**Maryland & Nation**: Centers for Disease Control (CDC) programmatic data
Data Sources Denominator	**Maryland & Cohort**: Behavioral Risk Factor Surveillance Survey (BRFSS)	**Maryland & Nation:** MD Department of Planning Maryland population estimates for ages 18 and over[7] Estimate of individuals with pre-diabetes based on Maryland Diabetes Action Plan (34% of adult population)[8]
Time Period for Baseline	**Maryland & Cohort**: Statewide average BMI for 12-month rolling average as of December 31, 2018	**Maryland & Nation**: Cumulative enrollment as of December 31, 2018
Time Period for Measurement Period	**Maryland & Cohort**: Updated annually, approximately 18-month delay in reporting	**Maryland & Nation**: Updated quarterly, approximately 1-month delay in reporting
Population	Maryland residents over 18 years old	Maryland residents over 18 years old with pre-diabetes

[6] https://www.cdc.gov/brfss/annual_data/annual_2020.html
[7] https://planning.maryland.gov/MSDC/Pages/pop_estimate/CensPopEst.aspx
[8] https://health.maryland.gov/phpa/ccdpc/Documents/Diabetes%20Action%20Plan%20documents/Diabetes%20Action%20Plan%20June%201%202020.pdf

3.1.3 Maternal and Child Health: Severe Maternal Morbidity Hospitalizations

A description of the formal measure is presented in the table below. As the Case Mix data is readily available and updated, the results presented for this measure are consistent with the formal measure.

Element	Formal Measure
Measure	Severe maternal morbidity (SMM) rate per 10,000 delivery hospitalizations for women ages 12-55 years old
Comparison/Trend	Rate of SMM delivery hospitalizations compared to measure targets
Data Sources Numerator	HSCRC Case Mix Data; SMM indicators based on guidance from the Alliance for Innovation on Maternal Health[9] and Federal Available Data logic; includes Blood Transfusions[10]
Data Sources Denominator	HSCRC Case Mix Data; Delivery hospitalization indicators based on guidance from Federally Available Data Logic
Time Period for Baseline	Statewide average annual rate of SMM hospitalizations as of December 31, 2018
Time Period for Measurement Period	Statewide average rate of SMM hospitalizations for the most recent rolling 12 months
Population	Maryland residents ages 12-55 with a delivery hospitalization

3.1.4 Maternal and Child Health: Childhood Asthma-Related ED visits

A description of the formal measure is presented in the table below. As the Case Mix data is readily available and updated, the results for this measure are consistent with the formal measure.

Element	Formal Measure
Measure	Childhood asthma-related emergency department visits per 1,000 children ages 2 – 17 years old
Comparison/Trend	Rate of asthma-related emergency department visits compared to measure targets
Data Sources Numerator	HSCRC Case Mix Data; Asthma defined according to AHRQ CCS category
Data Sources Denominator	MD Department of Planning Maryland population estimates for ages 2 - 17[11]
Time Period for Baseline	Statewide average annual rate of childhood asthma-related emergency department visits as of December 31, 2018
Time Period for Measurement Period	Statewide average rate of childhood asthma-related emergency department visits for the most recent rolling 12 months
Population	Maryland residents ages 2-17

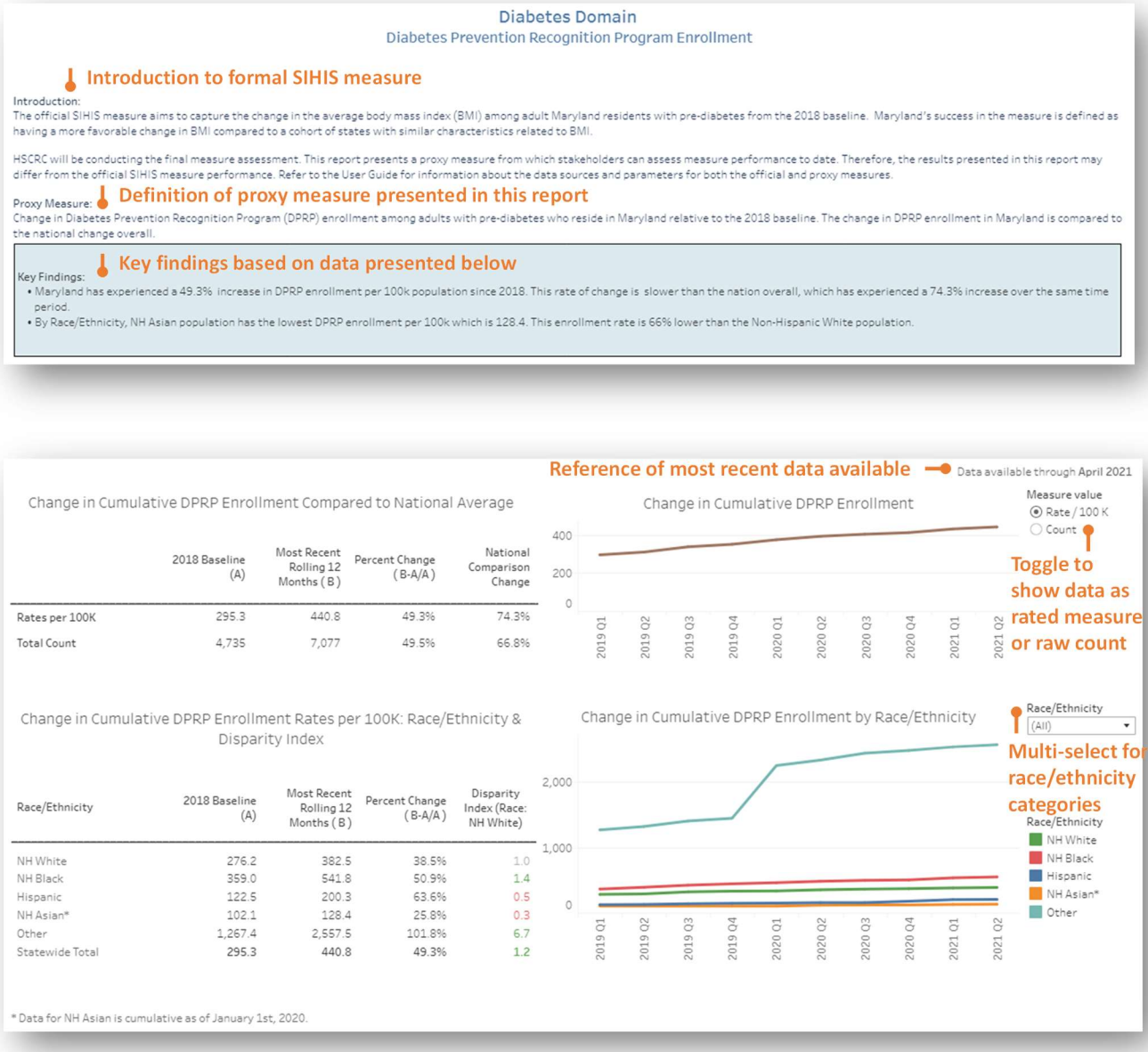
[9] https://safehealthcareforeverywoman.org/aim/resources/aim-data-resources/
[10] https://mchb.tvisdata.hrsa.gov/uploadedfiles/TvisWebReports/Documents/FADResourceDocument.pdf
[11] https://planning.maryland.gov/MSDC/Pages/pop_estimate/CensPopEst.aspx

3.2 Report Design and Function

All reports in this reporting suite are designed with a consistent format and design. Each Population Health report contains:

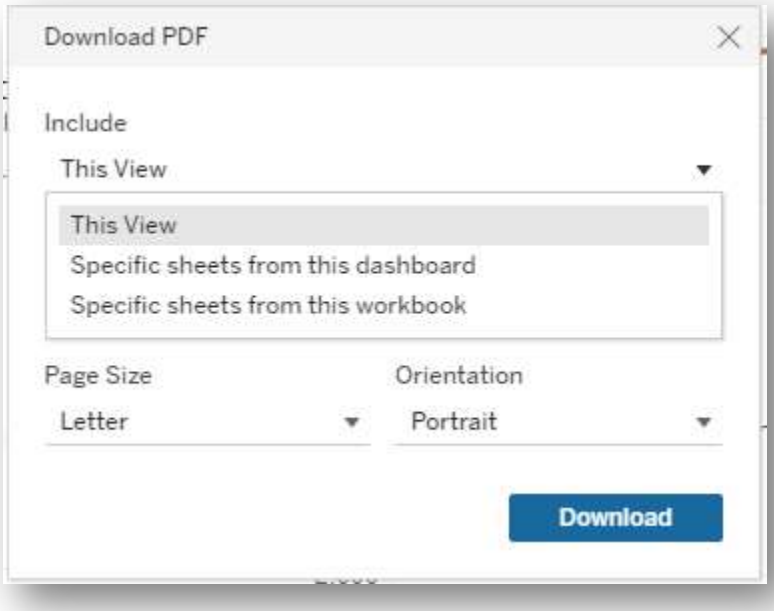
1. An introduction to the formal and proxy measure
2. Key findings related to overall measure performance and current racial/ethnicity disparities
3. Tabular and graphic depiction of overall performance over time as well as performance by race/ethnicity
4. Ability to print the report to PDF for distribution outside of the application

The figure below highlights key aspects of the reports, using the Diabetes Domain as an example.



Each report allows for printing the current view of the report to a PDF document.

Clicking Print when selecting “This View” will result in the below prompt. The default settings will create a PDF will all of the graphs and tables presented in the currently viewed report. **Users can select “Specific sheets from this workbook” to download more than one report at a time**. Click "Download" to generate the PDF.



4 HOSPITAL QUALITY

The Hospital Quality module of the SIHIS reports includes reporting for the following measures within the Hospital Quality Domain:

1. Avoidable Admissions
2. Readmission Disparity Gap

In this section, we present the constructs of the formal measures.

4.1 Hospital Quality: Reduce Avoidable Admissions

A description of the formal measure is presented in the table below.

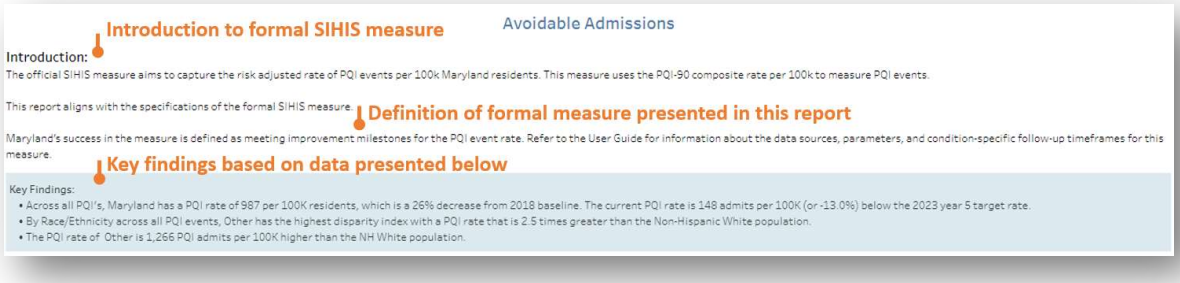
Element	Formal Measure
Measure	Avoidable admissions based on Risk-Adjusted PQI-90 Rates
Comparison/Trend	Change in rate from 2018 baseline compared to measure targets
Data Sources Numerator	HSCRC Case-Mix Data run through AHRQ PQI Software; Discharges for patients ages 18 years and older that meet inclusion and exclusion rules for each of the specific PQI Admissions (observed PQIs)
Data Sources Denominator	HSCRC Case-Mix Data run through AHRQ PQI Software; Expected PQI admissions based on the Maryland population ages 18 years and older. The observed to expected ratio is multiplied by the national PQI rate to get risk-adjusted PQI rate.
Time Period for Baseline	Statewide average PQI rate as of December 31, 2018
Time Period for Measurement Period	Statewide average PQI rate for the most recent rolling 12 months
Population	All-Payer Maryland Residents 18 years or older admitted to Maryland hospitals

4.1.1 Hospital Quality: Reduce Avoidable Admissions Report Design and Function

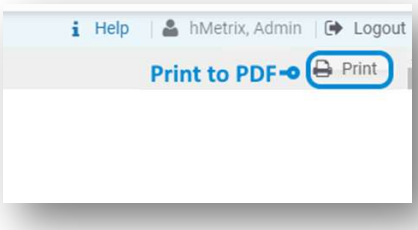
The Avoidable Admissions report is designed with the following features:

1. An introduction to the formal and proxy measure
2. Key findings related to overall measure performance and current racial/ethnicity disparities
3. Tabular and graphic depiction of overall performance over time as well as performance by race/ethnicity
4. A PQI Category selection box
5. Ability to print the report to PDF for distribution outside of the application

The figures below highlight key aspects of the reports, using the Avoidable Admissions as an example.



Each report allows for printing the current view of the report to a PDF document.



4.2 Hospital Quality: Readmission Disparity Gap

A description of the formal measure is presented in the table below.

Element	Formal Measure
Measure	Readmission rates based on Patient Adversity Index (PAI) as defined by HSCRC
Comparison/Trend	Reduce hospital readmission disparities by 50% or more relative to baseline
Data Sources Numerator	Number of Maryland hospitals that have attained a reduction of 50% or more in their Patient Adversity Index relative to baseline
Data Sources Denominator	All Maryland hospitals
Time Period for Baseline	Readmission rates for 2018 (January – December)
Time Period for Measurement Period	The most recent rolling 12 months
Population	All Maryland hospitals

4.2.1 Hospital Quality: Reduce Readmission Disparity Gap Report Design and Function

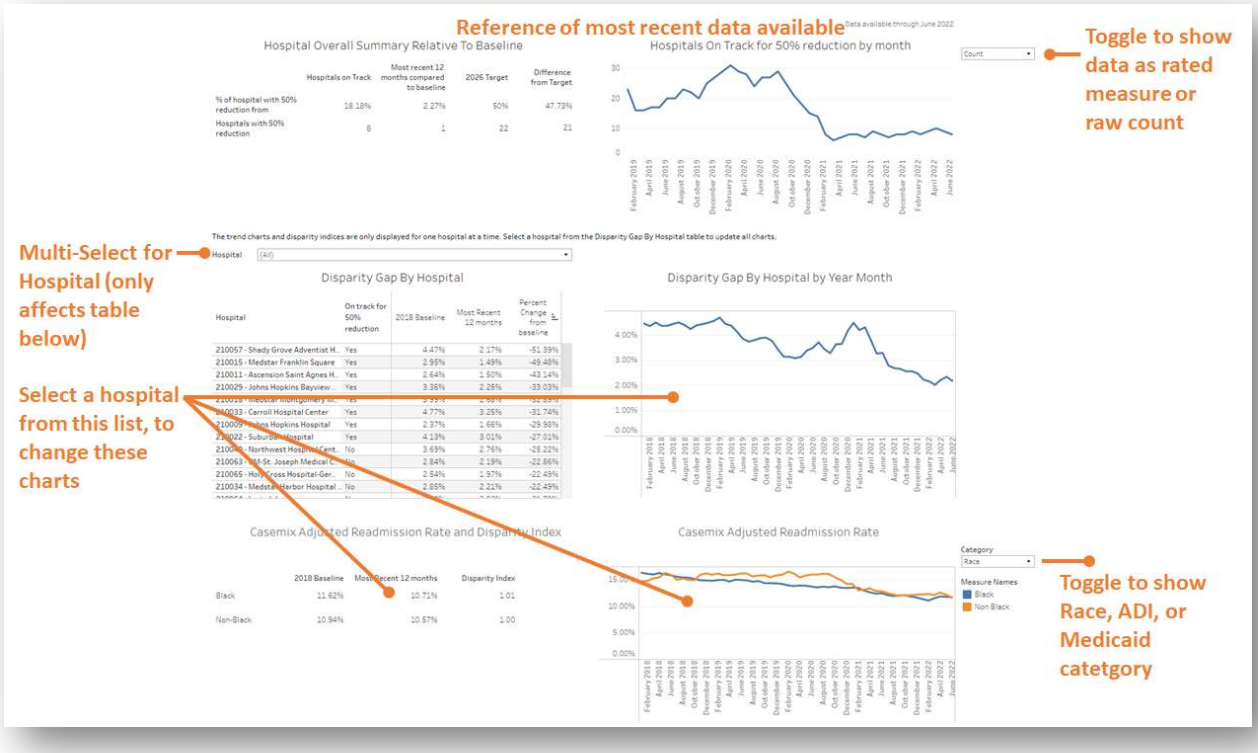
The Reduce Readmission Disparity Gap report is designed with the following features:

1. An introduction to the formal measure
2. Key findings related to overall measure performance and current disparities
3. Tabular and graphic depiction of overall measure performance over time as well as performance by hospital, race/ethnicity, ADI, and Medicaid (Category selection box)
4. Ability to print the report to PDF for distribution outside of the application

Per the HSCRC PAI policy, the categories below have the following options:

1. Area Deprivation Index (ADI)
    a. High ADI – Greater than or equal to the 85th ADI percentile
    b. Low ADI – Less than 85th ADI percentile
2. Medicaid
    a. Non-Medicaid
    b. Medicaid
3. Race
    a. Black
    b. Non-Black

The figures below highlight key aspects of the reports.


Reference of most recent data available
Hospital Overall Summary Relative To Baseline
Hospitals On Track for 50% reduction by month
Toggle to show data as rated measure or raw count
Multi-Select for Hospital (only affects table below)
Select a hospital from this list, to change these charts
Disparity Gap By Hospital
Disparity Gap By Hospital by Year Month
Casemix Adjusted Readmission Rate and Disparity Index
Casemix Adjusted Readmission Rate
Toggle to show Race, ADI, or Medicaid catetgory

Diabetes Domain

Diabetes Prevention Recognition Program Enrollment

Introduction:

The official SIHIS measure aims to capture the change in the average body mass index (BMI) among adult Maryland residents from the 2018 baseline. Maryland's success in the measure is defined as having a more favorable change in BMI compared to a cohort of states with similar characteristics related to BMI.

HSCRC will be conducting the final measure assessment. This report presents a proxy measure from which stakeholders can assess measure performance to date. Therefore, the results presented in this report may differ from the official SIHIS measure performance. Refer to the User Guide for information about the data sources and parameters for both the official and proxy measures.

Proxy Measure:

Change in Diabetes Prevention Recognition Program (DPRP) enrollment among adults with pre-diabetes who reside in Maryland relative to the 2018 baseline. The change in DPRP enrollment in Maryland is compared to the national change overall.

Key Findings:

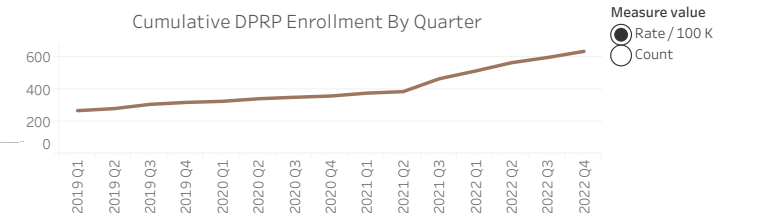
- Maryland has experienced a 161.2% increase in DPRP enrollment per 100k population since 2018. This rate of change is faster than the nation overall, which has experienced a 93.1% increase over the same time period.
- By Race/Ethnicity, NH Asian population has the lowest DPRP enrollment per 100k which is 257.8. This enrollment rate is 56% lower than the Non-Hispanic White population.

Data available through **October 2022**

Cumulative DPRP Enrollment Compared to National Average

	2018 Baseline (A)	Most Recent Rolling 12 Months (B)	Percent Change (B-A/A)	National Comparison Change
Rates per 100K	269.9	704.9	161.2%	93.1%
Total Count	4,328	11,316	161.5%	112.8%

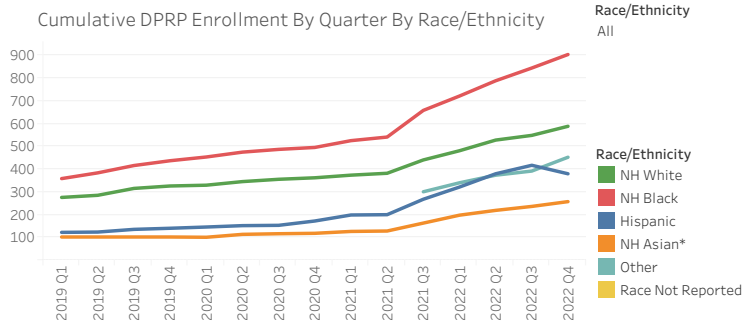
Cumulative DPRP Enrollment By Quarter



Cumulative DPRP Enrollment Rates per 100K: Race/Ethnicity & Disparity Index

Race/Ethnicity	2018 Baseline (A)	Most Recent Rolling 12 Months (B)	Percent Change (B-A/A)	Disparity Index (Race: NH White)
NH White	276.2	589.2	113.3%	1.0
NH Black	359.0	905.1	152.1%	1.5
Hispanic	122.5	380.3	210.5%	0.6
NH Asian*	102.1	257.8	152.4%	0.4
Other	N/A	453.1	N/A	0.8
Race Not Reported	N/A	N/A	N/A	N/A
Statewide Total	269.9	704.9	161.2%	1.2

Cumulative DPRP Enrollment By Quarter By Race/Ethnicity



* Data for NH Asian is cumulative as of January 1st, 2020.

*Effective September 1, 2021, data for "Other" race/ethnicity has been divided into "Other" and "Data Not Reported". As such, a 2018 baseline is not available for these categories.

Opioids Domain

Overdose Fatalities

Introduction:

The official SIHIS measure aims to capture the annual change in overdose mortality as compared to a cohort of states with historically similar overdose mortality rate and demographics.

HSCRC will be conducting the final measure assessment. This report presents a proxy measure from which stakeholders can assess measure performance to date. Therefore, the results presented in this report may differ from the official SIHIS measure performance.

Proxy Measure:

Annual change in overdose mortality in Maryland as compared to the nation overall.
Refer to the User Guide for information about the data sources and parameters for the official and proxy measure.

Key Findings:

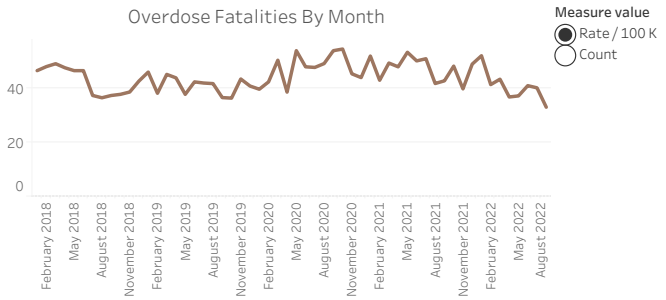
- Maryland has experienced a -3.0% decrease in Overdose Fatality per 100k population since 2018. This rate of change is slower than the nation overall, which has experienced a 49.5% increase over the same time period.
- By Race/Ethnicity, overdose fatality among the Non-Hispanic Black population is 1.4 times higher than the Non-Hispanic White population.

Data available through August 2022

Overdose Fatalities Compared to National Average

	2018 Baseline (A)	Most Recent Rolling 12 Months (B)	Percent Change (B-A/A)	National Comparison Change
Rates per 100K	42.63	41.33	-3.0%	49.5%
Total Count	2,406	2,503	4.0%	51.0%

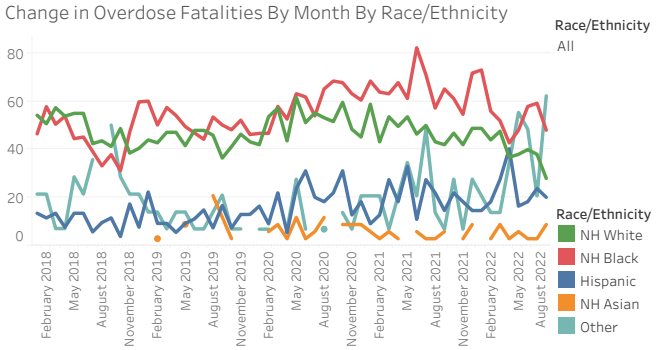
Overdose Fatalities By Month



Overdose Fatality Rates per 100K: Race/Ethnicity & Disparity Index

Race/Ethnicity	2018 Baseline (A)	Most Recent Rolling 12 Months (B)	Percent Change (B-A/A)	Disparity Index(Race: NH White)
NH White	48.47	41.75	-13.9%	1.0
NH Black	45.59	57.50	26.1%	1.4
Hispanic	10.80	20.78	92.5%	0.5
NH Asian	0.00	4.42	NA	0.1
Other	22.10	28.27	27.9%	0.7
Statewide Total	42.63	41.33	-3.0%	1.0

Change in Overdose Fatalities By Month By Race/Ethnicity



Maternal and Child Health Domain

Severe Maternal Morbidity Rate

Introduction:

The official SIHIS measure aims to capture the annual rate of severe maternal morbidity (SMM) per 10,000 delivery hospitalizations. Maryland's success in the measure is defined as having an SMM rate per 10,000 deliveries that is lower than the target.

HSCRC will be conducting the final measure assessment. Therefore, while this report attempts to track the official SIHIS measure, the results presented in this report may differ from the official SIHIS measure performance. Refer to the User Guide for information about the data sources and parameters for both the official measure and any modifications made for this report.

Reported Measure:

Annual severe maternal morbidity rate per 10,000 delivery hospitalizations among women ages 12-55. The official targets have been established to represent an improvement from the 2018 baseline.

Key Findings:

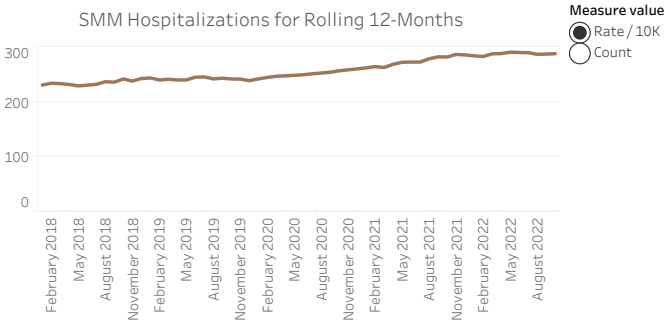
- Maryland had 288.5 SMM-related hospitalizations per 10,000 delivery discharges over the last 12 months. This rate is 69.2 hospitalizations per 10,000 higher than the 2023 target. It is also 45 hospitalizations per 10,000 higher than 2018 baseline.
- By Race/Ethnicity, NH Black population has the SMM hospitalization rate per 10,000 deliveries, which is currently 1.9 times higher than the Non-Hispanic White population.
- NH Black population experienced the largest annual growth in SMM hospitalization rate per 10,000 deliveries, with an increase of 71.6 SMM hospitalizations per 10,000 deliveries since 2018 .

Data available through October 2022

SMM Hospitalizations Compared to 2023 Target

	2018 Baseline	Most Recent 12 Months	2023 Target	Difference - Most Recent 12 months to Target
Rates per 10K	243.1	288.5	219.3	69.19
SMM Events	1,585	1,793		
Eligible Deliveries	65,199	62,152		

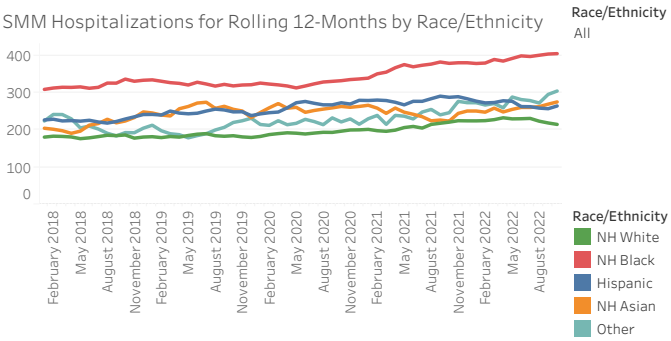
SMM Hospitalizations for Rolling 12-Months



SMM Hospitalization Rates per 10K Compared to 2023 Target: Race/Ethnicity & Disparity Index

Race/Ethnicity	2018 Baseline	Most Recent 12 Months	2023 Target	Difference - Most Recent 12 months to Target	Disparity Index
NH White	181.4	215.4	169.8	45.6	1.0
NH Black	334.2	405.8	295.7	110.1	1.9
Hispanic	242.0	265.1	213.2	51.9	1.2
NH Asian	249.0	275.9	217.7	58.2	1.3
Other	205.2	305.3	204.6	100.7	1.4
Statewide Total	243.1	288.5	219.3	69.2	1.3

SMM Hospitalizations for Rolling 12-Months by Race/Ethnicity



Maternal and Child Health Domain
Childhood Asthma

Introduction:
The official SIHIS measure aims to capture the annual rate of childhood asthma-related emergency department (ED) visits. Maryland's success in the measure is defined as having an ED visit rate per 1,000 children that is lower than the target.

HSCRC will be conducting the final measure assessment. Therefore, while this report attempts to track the official SIHIS measure, the results presented in this report may differ from the official SIHIS measure performance. Refer to the User Guide for information about the data sources and parameters for both the official measure and any modifications made for this report.

Reported Measure:
Annual rate of asthma-related emergency room department visits for children 2-17. The official targets have been established to represent an improvement from the 2018 baseline.

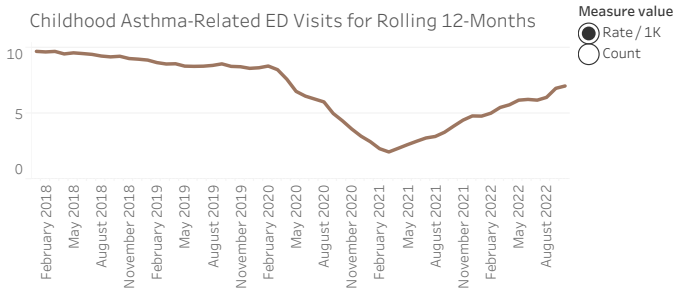
Key Findings:
- Maryland had 7.1 asthma-related emergency department visits per 1,000 children over the last 12 months. This rate is 0.1 visits per 1,000 children lower than the 2023 target
- By Race/Ethnicity, NH Black population has the highest asthma-related emergency department rate per 1,000 children, which is currently 4.4 times higher than the Non-Hispanic White population. However, this rate is still 0.2 visits per 1,000 children lower than the 2023 race/ethnicity target of 14.36.

Data available through October 2022

Childhood Asthma-Related ED Visits Compared to 2023 Target

	2018 Baseline	Most Recent 12 Months	2023 Target	Difference - Most Recent 12 months to Target
Rates per 1K	9.2	7.1	7.2	-0.1
Total Count	10,974	8,495		

Childhood Asthma-Related ED Visits for Rolling 12-Months



Childhood Asthma-Related ED Visit Rates per 1K Compared to 2023 Target: Race/Ethnicity & Disparity Index

Race/Ethnicity	2018 Baseline	Most Recent 12 Months	2023 Target	Difference - Most Recent 12 months to Target	Disparity Index
NH White	4.1	3.2	3.50	-0.3	1.0
NH Black	19.1	14.2	14.36	-0.2	4.4
Hispanic	5.5	5.0	4.70	0.3	1.6
NH Asian	2.6	3.0	2.60	0.4	0.9
Other	10.3	8.1	7.30	0.8	2.5
Statewide Total	9.2	7.1	7.2	-0.1	2.2

Childhood Asthma-Related ED Visits for Rolling 12-Months by Race/Ethnicity