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Statewide Integrated Health Improvement Strategy

Annual Report

CY 2022 Performance and CY 2023 Activities

March 2024

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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, provides updates on 2022 performance, details official performance on the official 2021 SIHIS milestones, and provides information on broad stakeholder engagement activities in 2023 to achieve success under SIHIS. As a note, the State did not have formal targets set for 2022. For some reporting areas, quantitative performance shows 2022 performance or performance compared to 2023 interim targets. Additionally, this report also highlights the State's efforts to achieve health equity and provides data on racial disparities across all domains. Final 2023 data is not yet available, and the State will provide updates as we determine final performance.

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 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.

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

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 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.

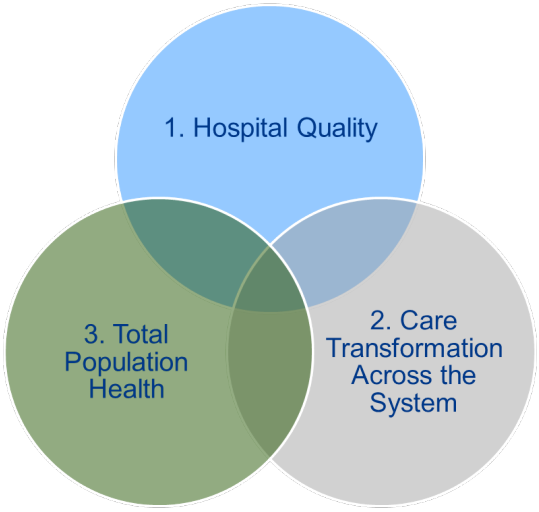
The MOU established the SIHIS proposal requirements and required the State to provide at least one goal for each of the three domains. Within each domain, the SIHIS proposal provided a Model Year 3 milestone that is measured on CY 2021 data, a Model Year 5 interim target that will be measured on CY 2023 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 & Goals



- *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.

Domain Area	Goal(s)
Domain 1 – Hospital Quality	Reduce avoidable admissions and readmissions
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

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

Performance compared to 2023 targets and highlights of ongoing initiatives throughout 2023 to improve population health and health equity are detailed below.

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. The global budget system overall is designed to incentivize hospitals to make investments in population health. 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 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, community health investments, and enhanced primary care resources.

Table 1 shows that on an all-payer basis Maryland had about a 25 percent improvement in avoidable admissions from CY 2018 to CY 2022. This improvement exceeds the CY 2022 Year 4 interim target of an 11 percent improvement. This is an unofficial target set by the State to provide an annual goal to strive towards. 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 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 2022 interim target, there is concern that PQI rates will increase in the near future and the timing of those increases may impact the ability of the State to hit future targets.

Table 1. Hospital Quality - Goal #1

Goal 1: Reduce Avoidable Admissions		
Measure	AHRQ Risk-Adjusted PQIs	
2018 Baseline[4]	1335 admits per 100,000	**Actual Performance**
2021 Year 3 Milestone (Both Met)	8 percent improvement 1228 admits per 100,000	**26.23 percent improvement** **985 admits per 100,000**
2022 Year 4 Interim Target[5]	11 percent improvement 1188 admits per 100,000	**24.65 percent improvement** **1006 admits per 100,000**

[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
[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 v2021; results vary somewhat from the older PQI rate of 1,335 per 100,000 reported in the original SIHIS proposal.
[5] The State has developed unofficial interim targets in the years between official SIHIS milestones and targets to serve as annual improvement goals to strive towards.

2023 Year 5 Target	15 percent improvement 1135 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 A, the CY 2022 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 are 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 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 2 includes a disparity index wherein a value over 1 indicates **negative** performance on the measure when compared to non-Hispanic (NH) White performance. While the disparity index has significantly improved in 2022, areas of opportunity still exist.

Table 2. PQI by Race & Ethnicity, Baseline & 2022 Performance

Race	2018 Baseline	2022 Performance	Disparity Index
NH White	1120	832	1.00
NH Black	2144	1602	1.48
Hispanic	755	644	0.42
NH Asian	306	264	0.25
Other	2277	1961	1.36
Total	1335[6]	1006	1.05

Source: HSCRC Casemix Data

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

Goal 2: Improve Readmission Rates by Reducing Within-Hospital Disparities

Racial and socioeconomic differences in readmission rates are well documented[7,8] and have been a source of significant concern among healthcare providers and regulators for years. In Maryland, the 2018 readmission rate for NH Black beneficiaries was 2.6 percentage points higher than for NH White beneficiaries, and the rate for Medicaid enrollees was 3.4 points higher than for other patients. A 2019 Annals of Internal Medicine paper co-authored by HSCRC staff[9] reported a 1.6 percent higher readmission rate for patients living in neighborhoods with increased deprivation. Maryland hospitals, in line with CMS priorities, identify reduction in disparities as a key priority over the near term. Thus, in March 2020, the Commission approved the nation's first program to provide financial incentives to hospitals that reduce socioeconomic disparities in readmissions. The program assesses patient-level socioeconomic exposure using the Patient Adversity Index (PAI), a continuous measure that reflects exposure to poverty, structural racism, and neighborhood deprivation. As shown in Figure 2, the relationship between PAI and readmissions is then assessed for each hospital for the base and performance period, and improvements in the slope of the line or in the difference in readmission rates at two points on the line (e.g., PAI = 1 vs PAI = 0) are compared for the base and performance period to calculate improvement. In the Readmission Reduction Incentive Program (RRIP) Disparity Gap financial incentive program, hospitals that improve on the within hospital disparity gap and improve on overall readmissions are eligible for a scaled reward up to 0.50 percent of inpatient revenue. Additional information on the development of the within-hospital disparity metric can be found in the RY 2021 RRIP policy.[10]

Figure 2. Hypothetical Example of Relationship between PAI and Readmission Rates

[7] Tsai TC, Orav EJ, Joynt KE. Disparities in surgical 30-day readmission rates for Medicare beneficiaries by race and site of care. *Ann Surg*. 2014;259(6):1086–1090. doi:10.1097/SLA.0000000000000326;
[8] Calvillo–King, Linda, et al. "Impact of social factors on risk of readmission or mortality in pneumonia and heart failure: systematic review." *Journal of general internal medicine* 28.2 (2013): 269-282.
[9] Jencks, Stephen F., et al. "Safety-Net hospitals, neighborhood disadvantage, and readmissions under Maryland's all-payer program: an observational study." Annals of internal medicine 171.2 (2019): 91-98.
[10] https://hscrc.maryland.gov/Documents/2.%20Final%20RY%202021%20RRIP%20Policy.pdf

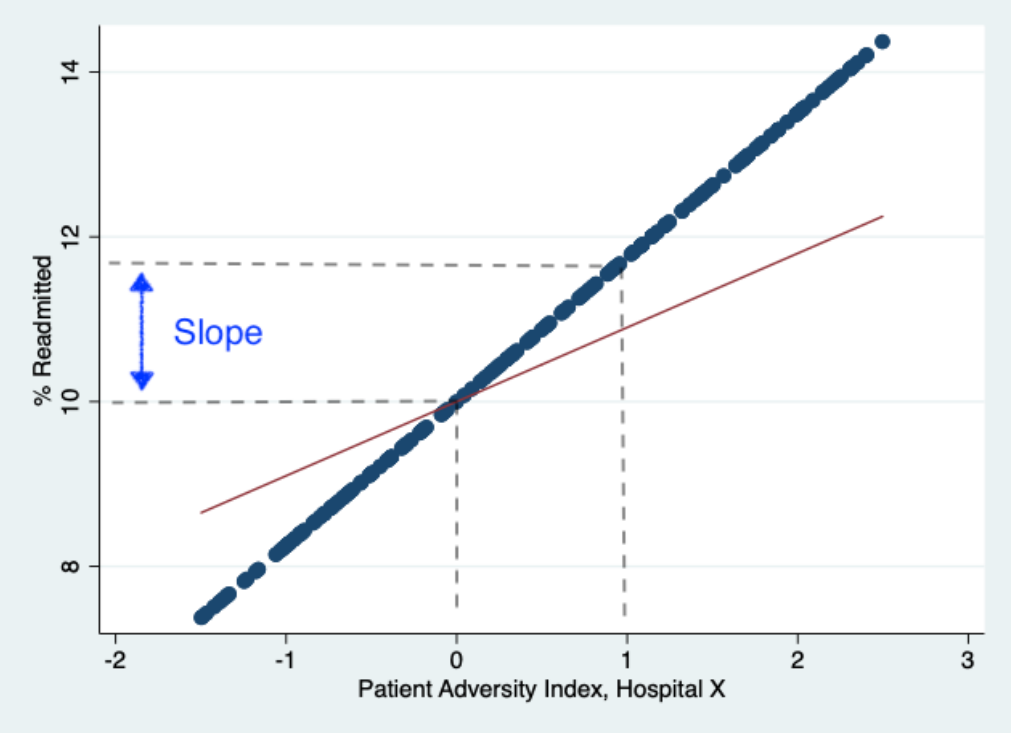


Table 3 provides the targets that were submitted to CMMI indicating that by the end of CY 2026 half of hospitals in Maryland will have a 50 percent improvement in disparity. CY 2022 data shows that 32 hospitals saw a reduction in their within-hospital disparities in readmissions, ranging from a 0.18 percent reduction to a 61.54 percent reduction. To meet the CY 2023 SIHIS Target, the State needs at least 22 hospitals to reduce their within-hospital disparities in readmissions by 25 percent.

Table 3. 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
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

Post-COVID there have been some updates to the disparity gap methodology for readmissions. First, HSCRC staff updated the measure to use post-COVID CY 2021 norms that are applied to both the historical CY 2018 data, as well as to the performance periods. However, in doing this, staff decided that in order to fully measure improvement, all of the regression model coefficients used for risk-adjustment such as diagnosis-severity of illness, age, and sex (not just the PAI coefficient) should be "locked in" or not recalculated for each time period. This technical change ensures any improvement over time is fully captured, rather than only capturing improvement above the state average improvement (which would make the SIHIS goal challenging). Staff are working to lock model coefficients from the CY 2021 base period to be applied to the performance period, but initial analyses show this has only a minor impact on results. These updates to the RRIP-Disparity Gap methodology, however, are important for stakeholder engagement.

The State remains committed to ensuring hospitals are advancing health equity by continuing to financially incentivize reductions in disparities through the RRIP policy and other policies.

Domain 2: Care Transformation Across the System

Goal 1: Total Cost of Care 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 (FFS) payment systems and towards value-based care. The State moved more than 95 percent of all hospital payments to a population-based payment system (i.e. global budgets). 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 4, to address this fragmentation and further grow efforts to move towards a value-based care system that stretches beyond hospital walls. 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, are used to measure performance.

Table 4. 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

As shown in Table 5, Maryland moved 30.79 percent of Medicare TCOC under a care transformation program year in 2022, compared to 25.62 percent in 2021. Year to date, Maryland has enrolled 41.41 percent of its Medicare TCOC under a care transformation program, which exceeds the State's 2023 interim target by 19.41 percent.

Table 5. Medicare Beneficiaries Under Care Transformation Programs, 2022 - September 2023

	2022 Performance	2023 YTD	2023 Target	Difference from Target
Percent	30.79%	41.41%	22%	+19.41%
Beneficiaries Under Care Transformation	252,047	332,827		
Total Medicare Beneficiaries	818,563	803,760		

Source: CCLF Data

Maryland also tracks performance by race and ethnicity. Table 6 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 Black beneficiaries under care transformation programs exceeds all other race/ethnic populations. Also, each group has exceeded the 2023 interim target (22 percent), with the

exception of the Hispanic population. The State will strive for improvement in 2023 and is seeing growth across all populations in early 2023 preliminary data.

Table 6. Medicare Beneficiaries Under Care Transformation Programs by Race/Ethnicity, 2022

Race	Bene Count	Total Medicare Beneficiaries	% of Benes in Care Transformation Programs	Disparity Index
NH White	166,626	537,024	31.03%	1.00
NH Black	63,832	194,270	32.86%	1.06
Hispanic	4,503	23,482	19.18%	0.62
NH Asian	8,190	32,677	25.06%	0.81
Other	8,896	31,110	28.60%	0.92
Total	252,047	818,563	30.79%	0.99

Source: CCLF Data

Total Cost of Care Under Care Transformation Programs

As shown in Table 7, Maryland moved 50.06 percent of Medicare TCOC under a care transformation program in 2022, compared to 33.01 percent in 2021. Year to date, beneficiaries enrolled in a care transformation program account for 44.49 percent of Maryland's Medicare TCOC, which exceeds the State's 2023 interim target (37 percent) by 7.49 percent.

Table 7. Medicare TCOC Under Care Transformation Programs, 2022 – September 2023

	2022 Performance	2023 YTD	2023 Target	Difference from Target
Percent	50.06%	44.49%	37%	7.49%
Dollars Under Care Transformation	$5,197,609,305	$3,364,419,204		
Total Medicare TCOC	$10,383,745,515	$7,562,300,431		

Source: CCLF Data

Care Transformation Programs

As discussed above, 2022 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 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. Performance Year 1 results report a total of 107 CTIs with an average savings of 1.9 percent. All participating PY1 hospitals elected to continue participation for PY2. Forty-three hospitals participated in a cumulative total of 92 CTIs in FY 2022 and 99 CTIs in FY 2023. Assessing CTIs helps to delineate the level of effort each hospital is undertaking to drive system success to inform revenue distribution and policy incentives. Successful CTIs will financially reward hospitals through the Medicare Performance Adjustment (MPA) Framework. Savings of $130M were scored for the first completed year (FY 2022).

Care Redesign Program – Episode Care Improvement Program

The Episode Care Improvement Program (ECIP) is designed to allow a hospital to link payments across providers during an episode of care. Maryland modeled ECIP on CMS's Bundled Payments for Care Improvement Program Advanced Model. Episode payment models bundle payments to health care providers for certain items and services furnished during an episode of care. ECIP's bundled payment approach aligns incentives across hospitals, physicians, and post-acute care facilities to generate savings and improve quality through better care management during episodes, eliminating unnecessary care, and reducing post-discharge emergency department visits and hospital readmissions. ECIP provides hospitals with the opportunity to provide incentive payments to care partners that help achieve these goals. ECIP began on January 1, 2019, with nine hospital participants. ECIP participation grew to 21 hospitals in CY 2021 and 24 hospitals in CY 2022. The HSCRC made policy changes to ECIP for CY 2023, requiring hospitals to share incentives with care partners and/or provide significant resource sharing to care partners. These changes influenced hospital participation decisions. Seventeen hospitals participated in ECIP and 16 hospitals are participating in CY 2024. Care partner engagement, a key element of CRP implementation, has fallen as the number of participating hospitals has declined. For the second half of CY 2023, there were 2,507 unduplicated ECIP care partners and 7 facilities. These declines in participation are not unexpected as many hospitals have opted to direct resources to participating in CTIs and supporting affiliated physicians participating in EQIP as it grows.

Care Redesign Program – Episode Quality Improvement Program

The Episode Quality Improvement Program (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 of EQIP began on January 1, 2022 with 15 episodes focused on the specialty areas of cardiology, gastrointestinal, and orthopedics. Participation in Performance Year (PY) 1 EQIP included 1,981 providers. Year 1 results are favorable as EQIP saved $20 million in total cost of care in 2021, with a savings rate of 5 percent. The program expanded in PY 2 (CY 2023) to include 25 new episodes in the following specialty areas: Allergy, Dermatology, Emergency Department, Ophthalmology and Urology. An additional 5 episodes were added for PY3 (CY 2024) and enrollment stands at 3,203 providers.

Goal 2: Timely Follow-Up after Acute Exacerbations of Chronic Conditions

TFU Medicare

The 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 (TFU) for Medicare beneficiaries who have 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 8 shows the milestones and targets for this SIHIS goal.[11] Table 9 shows annual performance for 2018 through 2022 for Maryland and the nation.[12] As shown in these tables, in CY 2021 Maryland had a TFU rate of 70.07 percent and did not meet the milestone of 72.38 percent in 2021. However, the follow-up rate in Maryland continues to remain higher than the nation in 2022 by 3.33 percent, equating to 975 additional follow-up visits in Maryland than would have occurred if Maryland had the same rate of follow-up as the nation.

Table 8. 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)

[11] 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.
[12] 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).

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 9. Timely Follow-Up, Maryland vs. Nation, CY 2018 - CY 2022

	CY 2018	CY 2019	CY 2020	CY 2021	CY 2022
Maryland	70.85%	71.45%	67.90%	70.07%	70.59%
Nation	66.82%	69.00%	64.75%	67.68%	67.26%
Simple Difference	4.03%	2.45%	3.15%	2.39%	3.33%

Source: CCLF (Maryland) and CCW (National)

Maryland also tracks performance by race and ethnicity. Table 10 includes a disparity index wherein a value over 1 indicates **positive** performance on the measure when compared to non-Hispanic (NH) White performance.

Table 10. Timely Follow-Up Rate by Race/Ethnicity and Disparity Index

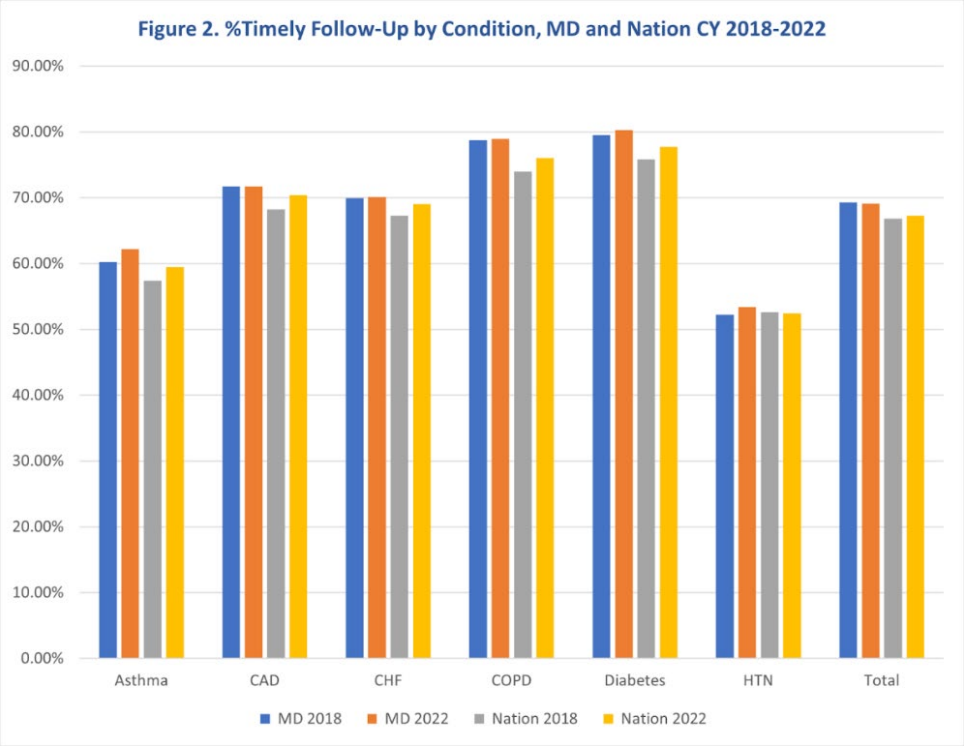
Race	2018 Baseline	2022 Performance	Disparity Index
NH White	75.17%	73.96%	1.00
NH Black	64.44%	64.52%	0.87
Hispanic	67.07%	67.48%	0.91
NH Asian	70.01%	73.74%	1.00
Other	72.73%	69.41%	0.94
Total	70.85%	70.50%	0.95

Source: CCLF Data

Figure 3 provides the change in follow-up by condition from CY 2018 to CY 2022 for Maryland and the nation. This shows that the follow-up rate in Maryland decreased for coronary artery disease (CAD), asthma, and diabetes. However, the follow-up rate in Maryland increased for congestive heart failure (CHF),

chronic obstructive pulmonary disease (COPD) and remained the same for hypertension (HTN). Those increases were offset by larger decreases in timely follow-up for asthma and chronic obstructive pulmonary disease (COPD). Meanwhile, the nation had increases for all conditions except HTN. While Maryland has a higher follow-up rate than the nation, the State did not meet the CY 2021 Year 3 milestone. These rates may have been impacted by the COVID PHE and resulting changes in patient and provider behavior.

Figure 3. Percent Timely Follow-Up by Condition, MD and Nation, CY 2018-2022



Source: CCLF Data (Maryland), CCW Data (Nation)

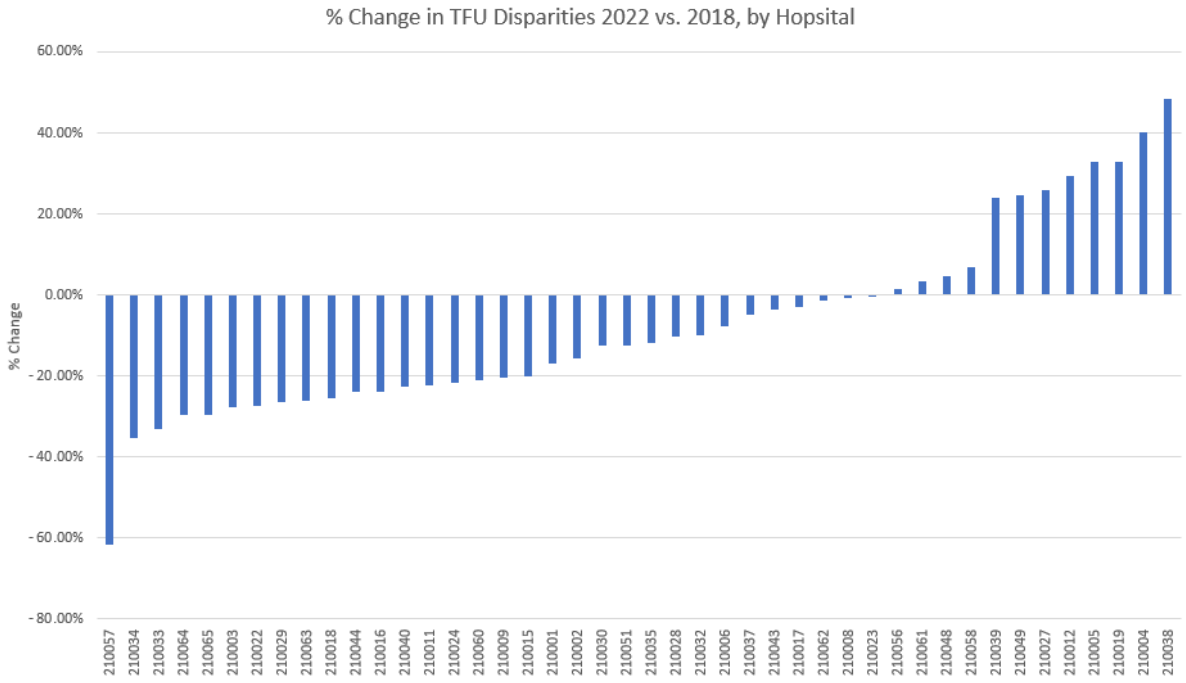
Despite the reduction in timely follow-up during the COVID PHE, Maryland remains committed to achieving the CY 2026 final target of 75 percent or 0.50 percent better than the nation.

Improving TFU Rates by Reduce within-Hospital Disparities

Given that the State did not meet the 2021 Year 3 milestone and the overwhelming evidence of disparities in this measure, HSCRC staff have developed a Timely Follow-Up (TFU) disparity gap metric which is similar to the readmissions disparity gap measure. The TFU disparity gap metric takes the patient-level social exposures of race, dual-eligibility status, and Area Deprivation Index (ADI) and estimates the association between these social exposures and the likelihood of receiving a follow-up in the recommended timeframe; these estimates are calculated for each performance year. The performance metric measures the improvement in within-hospital disparities by comparing the baseline to the performance period. Figure

4 shows hospital improvements in within-hospital disparities in TFU, comparing 2018 to 2022. To incentivize hospitals to improve on the disparities experienced by their patients, HSCRC is proposing to add this measure to the Quality Based Reimbursement (QBR) Program, specifically in the Person and Community Engagement (PCE) domain.

Figure 4. Percent Change in TFU Disparities 2022 vs. 2018, by Hospital



TFU Medicaid

As part of the SIHIS proposal, the State indicated it would explore expanding the TFU rates for chronic conditions to other payers and adding follow-up after a hospitalization for behavioral health. In CY 2022, staff worked with CRISP and Maryland Medicaid to provide hospitals monthly Medicaid TFU reports to measure their performance. In RY 2025, the HSCRC introduced the Medicaid TFU measure into the QBR program within the PCE domain.

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.[13] According to the Centers for Disease Control and Prevention (CDC), 38 percent of

[13] 2021 Behavioral Risk Factor Surveillance System (BRFSS) Data. https://www.cdc.gov/brfss/index.html

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.[14] The goals, milestones, and interim and final targets for the diabetes priority area are shown in Table 11.

Table 11. Total Population Health - Diabetes Goal

Goal: Reduce the mean body mass index (BMI) for adult Maryland residents[15]	
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

[14] 2021 BRFSS Data.
[15] Mean BMI is determined using the results of the BRFSS.

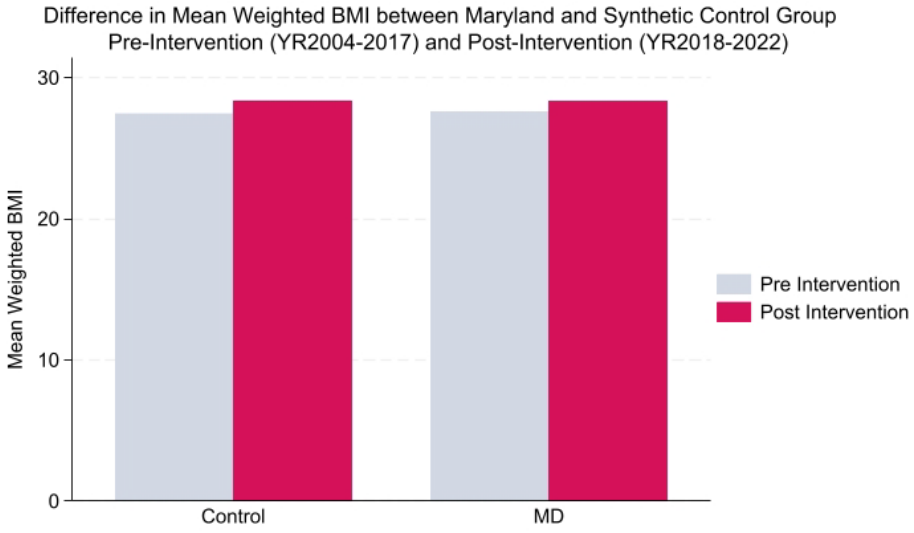
are used to calculate final performance. A description of the process to develop the synthetic control group is detailed in the 2021 SIHIS annual report.

Table 12. Diabetes Synthetic Control Group Weights

State	Weight
Virginia	0.362
Delaware	0.279
Washington, DC	0.25
Mississippi	0.108

Over the course of the TCOC Model, the State of Maryland has achieved a statistically significant reduction in mean BMI as compared to a group of similar states. Since the Model was implemented in 2018, the mean BMI of Marylanders rose to 28.32kg/m^2, while during the same period the mean BMI in control states rose to 28.37 kg/m^2. Thus, Maryland achieved a relative decline of approximately -0.054 kg/m^2 [95% CI: -0.067, -.040] compared to the control group. The comparison group was selected using the synthetic control method, which created a weighted average of BMI data from a selection of other states to closely match Maryland's BMI trend in the years prior to the TCOC Model. Any difference between Maryland and the control during the model period can be attributed to the impact of the TCOC Model.

Figure 5. Difference in Mean Weighted BMI



Performance by Race & Ethnicity

Adult mean BMI by race and ethnicity is shown below in Table 13. The State acknowledges that health disparities in BMI persist in 2022 and is committed to reducing them over the course of SIHIS and beyond.

Table 13. Maryland Adult Mean BMI by Race/Ethnicity, 2018 - 2022

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)	2022 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)	28.1 (27.9 - 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)	29.8 (29.4 - 30.2)
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)	25.5 (24.9 - 26.0)
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)	27.4 (25.8 - 29.0)
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)	28.7 (28.2 - 29.3)
Other	28 (27.2, 28.9)	28.6 (27.8 - 29.4)	28.2 (27.4 - 29.0)	27.9 (27.1 - 28.8)	29.0 (27.7 - 30.4)

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)**	**28.5 (28.3 - 28.7)**

Source: 2018 - 2022 Behavioral Risk Factor Surveillance Survey

Updates on Milestones

As reported in the 2021 annual report on SIHIS activities and shown in Table 11, Maryland met all of the 2021 milestones for the diabetes priority area. Progress on 2022 performance and 2023 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

In November 2020, the Health Service Cost Review Commission (HSCRC) originally approved $165.4 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 goals of the Total Cost of Care (TCOC) Model and support population health goals in the SIHIS. The SIHIS population health domain contains the following focus areas: diabetes, opioid overdose mortality, and maternal and child health. 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 HSCRC focused the Regional Partnership Catalyst Program on the implementation of the National DPP and diabetes self-management education training (DSMES).

The HSCRC funding was intended as seed funding, an initial investment in program development and growth. The HSCRC expected Regional Partnership programs to develop sustainable funding streams to support the programs after the HSCRC funding ended. At the end of CY 2023, the HSCRC made a difficult decision to end funding for diabetes programs early due to concerns over the long-term sustainability of the programs; however, hospitals may continue to support these programs independently using the infrastructure developed since 2021. Funding to Regional Partnerships will end June 30, 2024, but Regional Partnerships will have the full calendar year to transition their programs to a self-sustaining model or wind-down their programs if they determine they will not support them without the dedicated HSCRC funding.

Six Regional Partnerships were initially selected to provide diabetes prevention and management activities across Maryland. 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 final revised funding amounts are listed below in Table 14. The HSCRC and its State partners remain committed to providing technical assistance to Regional Partnerships that will continue operating their programs after funding expires. All Regional Partnerships plan to continue offering programs to address diabetes after funding concludes.

Table 14. Regional Partnerships (Diabetes) Revised Funding Amounts

Regional Partnership	Originally Awarded Total Funding Amount	Revised Total Funding Amount	Program End Date
Baltimore Metropolitan Diabetes Regional Partnership	$43,299,986	$27,968,325	June 30, 2024
Western Regional Partnership	$15,717,413	$10,996,156	June 30, 2024
Nexus Montgomery	$11,876,430	$4,121,123	December 31, 2022
Totally Linking Care - Maryland	$7,379,620	$4,463,519	June 30, 2024
St. Agnes and LifeBridge Health Diabetes Care Collaborative	$5,962,333	$4,081,555	June 30, 2024
Full Circle Wellness for Diabetes in Charles County	$2,124,862	$1,425,078	June 30, 2024
Total	**$86,360,644**	**$53,055,756**	

MDPCP Interaction

In 2023, the Maryland Primary Care Program Management Office (MDPCPMO) conducted virtual meetings with all the Regional Partnerships (RPs) to understand their “current state” of interaction with MDPCP participants. Using a semi-structured interview guide, the MDPCPMO asked each individual RP questions about that particular RP’s relationship with practices, common referral methods and associated workflows, key areas for improvement, patient engagement, and prediabetes strategy. Interviews revealed key successes and challenges for RPs, practice’s utilization of the HEART payment, and RP’s barriers to successes.

To further promote the use of RPs, the MDPCPMO created an internal training to share the purpose of RPs and how to engage with them. Additionally, the MDPCPMO created a guide sharing the five W's (Who, What, When, Where, Why) of Regional Partnerships to disseminate to primary care providers to serve as a resource when talking with patients.

Milestone 3: Expansion of CRISP Referral Tool

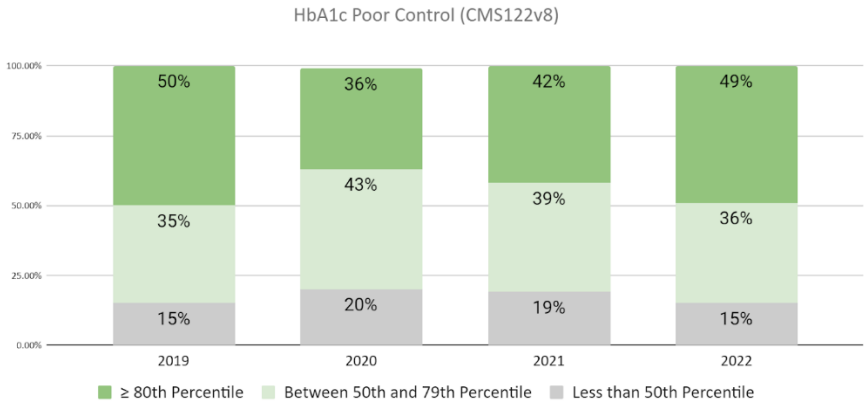
Starting in 2021, the State prioritized expanding the use of a bi-directional DPP e-referral tool for use by providers. The tool was designed to allow for electronic referrals at the point of care and permits the community organization to accept and send back information on the status of the referral. All Regional Partnerships that received funding to implement DPP were onboarded to the tool. The MDPCP Program Management Office continued to promote the use of the CRISP e-referral tool to MDPCP practices and pointed back to previous educational webinars and resources created in earlier years. Medicaid worked closely with the CRISP team in developing the DPP e-referral tool and continued to collaborate on improving technical capabilities to enhance provider experience. Additionally, Medicaid facilitated technical assistance opportunities for providers and the CRISP team. While all Regional Partnerships that received funding were onboarded onto the tool, the CRISP referral tool was one of many that RPs used to drive DPP electronic referrals.

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 2022. Figure 6 shows 2019-2022 diabetes control rates for all patients in MDPCP practices compared to the national median of reporting providers. MDPCP practices performed well, with 85 percent of practices scoring at or above the national median for A1c including 49 percent greater than the 80th percentile. As demonstrated by Figure 6, there is an approximately 5 percent increase in the overall scores from 2021 to 2022.

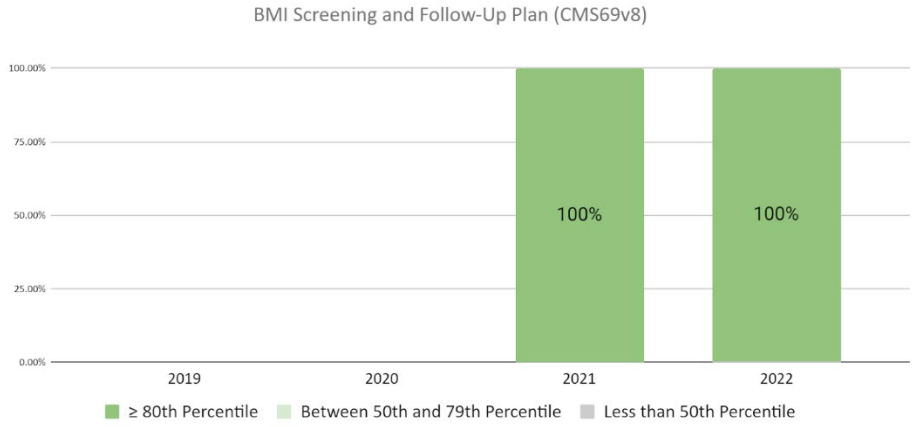
Figure 7 shows performance on the BMI Screening and Follow-up Plan eCQM. Note that the BMI eCQM was again nationally suppressed for 2022, meaning that all MDPCP practices received full credit for this measure.

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



Source: *Annual MDPCP Practice eCQM Reporting to CMS*

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



Source: *Annual MDPCP Practice eCQM Reporting to CMS*

The work with community-based organizations continued to address weight, implement lifestyle change programs, and develop education and best practices, as well as communications for participating practices.

The advent of a renewed focus on diabetes, by way of the MDPCP Comprehensive Diabetes Strategy, began in fall 2022 and continues into fall 2023, and beyond. In fall 2023, the strategy is reevaluated and modified for future years. The MDPCP Comprehensive Diabetes Strategy features new elements, all of which more intentionally provide a path for diabetes work, including: alignment with stakeholders, deliberate collaboration with other State departments, and focused initiatives. In 2023, the MDPCPMO continues to disseminate the MDPCP Diabetes Toolkit, which was originally developed in 2022 and includes resources

on nutrition, exercise, hypoglycemia, support resources, care plan templates, and a one-pager detailing a "who's who?" about the diabetes care team.

Education and technical assistance are a central component of MDPCP efforts to reduce mean BMI and diabetes incidence. In 2023, the MDPCPMO did the following:

- Features in the *MDPCP Today* monthly newsletter - highlights resources for BMI and diabetes prevention and management, as well as spotlight practices that are succeeding in this work;
- Continued dissemination of the MDPCP Diabetes Toolkit - includes resources on nutrition, exercise, hypoglycemia, support resources, care plan templates, and a one-pager detailing a "who's who?" about the diabetes care team;
- Development of a Regional Partnership (RP) Resource Guide - covers the five Ws (Who, Why, What, When, Where) of the RPs, talking points to promote RPs, RP activities, along with contact information, available to share with MDPCP providers and internal team members;
- Inclusion of awards at the "State of the MDPCP" All-Practice Calls - announces awards for practices that are doing outstanding work in the area of diabetes prevention and management.

Additional Programs & Interventions to Address Diabetes

Maryland Department of Health (MDH) Programs & Initiatives

Diabetes Prevention Efforts

MDH creates, oversees, and partners with networks and programs to assist Maryland providers in supporting CDC-approved diabetes prevention efforts with patients.

Diabetes Prevention Program Network

MDH works to support diabetes prevention efforts in the State by connecting people who have prediabetes with the 81 CDC Diabetes Prevention Recognition Program (DPRP) lifestyle change providers. MDH oversees the Diabetes Prevention Program Network, which addresses barriers people at risk may experience in successfully participating in the National Diabetes Prevention Program (National DPP) by directly supporting DPRP providers with an online referral and data tracking system. The network allows DPRP providers to share successes and support others as they problem solve to provide lifestyle programs in their communities. The network holds quarterly meetings for DPRP providers with an average attendance of 65 participants. MDH also provides continuing education events for lifestyle coaches, which include training on topics such as motivational interviewing, how to improve program enrollment, and sustainability.

Referrals through Collaboration with CRISP

MDH collaborated with CRISP to link the referral system (Workshop Wizard) to create "smart alerts," using applied logic to panels to send notifications to providers for patients meeting National DPP eligibility criteria and to ease the referral process for providers. This tool helped support the DPRPs during the post-COVID 19 transition from virtual to hybrid and in-person groups of participants (cohorts).

HALT Diabetes Online Platform

MDH has an agreement with ProVention to provide the Through the Health And Lifestyle Training (HALT) Diabetes online platform to allow Maryland DPRPs the ability to provide the National DPP lifestyle change program virtually and hybrid, in combination with in-person cohorts. Currently, 34 DPRPs use the HALT platform to deliver the National DPP; they have started or completed 84 cohorts, which included 1,027 participants with prediabetes or at risk of diabetes (March 2020 - June 2023).

Diabetes Self-Management Education Services (DSMES)

MDH oversees the 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 who provides ongoing support to DSMES program staff using monthly "drop-in" office hours. The DSMES Network worked with 28 DSMES programs across the state and conducted 8 training sessions with MDPCP to improve referral rates to diabetes providers. The training sessions included over 248 participants and had an additional 178 viewers of the recorded training sessions.

Whole Health Approach

The Cancer and Chronic Disease Bureau (CCDB) programs historically operated with a siloed approach focused specifically on their individual programs. In an effort to change this approach starting in 2021, a new model was developed to embrace intentional and ongoing collaboration between the programs within CCDB to improve public health in local jurisdictions. MDH aligned the common goals of prevention and control between Tobacco and Chronic Disease. To that end, MDH has utilized State tobacco funding to enhance chronic disease evidence-based programming within local communities. As part of this partnership, LHDs were each provided approximately $143,000 to implement community-based strategies focused on public health equity involving tobacco, diabetes, and chronic disease. This new approach involved each LHD implementing at least one of four evidence-based programs: National DPP, Taking Off Pounds Sensibly (TOPS), Healthy Heart Ambassador (HHA), and the Diabetes Self-Management Program.

In this program's first year (Fiscal Year 2023), 20 LHDs received funding (excluding Dorchester, Montgomery, and Prince George's counties, and Baltimore City); in the second year (Fiscal Year 2024), 22 LHDs received funding; only Prince George's County and Baltimore City declined. Diabetes and Chronic Disease efforts focused on implementing lifestyle change programs including implementing 14 new National

DPP cohorts, nine new TOPS chapters, four new Diabetes Self-Management Programs, and two new HHA groups with one LHD hosting one-on-one HHA sessions. LHDs identified populations to tailor outreach and program activities to address health disparities and health equity within the communities. LHDs also established cross-referral mechanisms between tobacco programs and chronic disease programs for the tobacco quit line, tobacco and vape cessation programs, and enrollment into the diabetes and chronic disease lifestyle change programs.

MDH also partnered with Johns Hopkins University to launch a pilot project in Charles County to educate rural corner stores, gas stations and small shop owners on stocking healthy foods and fresh produce for community customers. The project connected eight independently owned small food retail store owners with a designated third-party app designed to encourage group purchasing and delivery to address the infrastructure of supporting healthy foods in small stores and rural Maryland.

Medicaid Initiatives

HealthChoice MCO DPP

Medicaid continues to invest in primary care and funding Evaluation and Management (E&M) increases in order 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 $2.8M to increase E&M rates for FY 2023 and FY 2024.

Population Health Incentive Program

In 2022, Medicaid 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. No other measures were added in 2023.

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 Innovators

Local Health Improvement Coalitions (LHICs)

Following a statewide assessment on the local jurisdictions' LHICs, MDH determined that there were wide inconsistencies between the groups' work. MDH contracted with the Horowitz Center at the University of Maryland to implement LHIC infrastructure development for all jurisdictions based on the statewide assessment, and to provide additional support as needed. Once the LHICs were reestablished, monthly community-of-practice meetings occurred to provide additional training and support to develop diabetes prevention and treatment strategies in the local jurisdictions. The partnership with the Horowitz Center also produced other diabetes-related technical assistance deliverables such as: creation of a Data Guide for the LHICs; data training and health literacy trainings for the LHICs and LHD staff; review of each of the LHDs' Diabetes web pages; and review of MDH's Diabetes web page.

The LHIC partnership has transitioned from the Horowitz Center serving as the lead facilitator to MDH since January 2023. MDH staff continue to provide technical assistance to the LHICs to address diabetes prevention, diabetes treatment, and efforts to reduce diabetes prevalence. As a part of the technical assistance, MDH held monthly virtual group drop-in office hours to encourage open dialogue and problem solving. To further the LHICs' diabetes prevention and control efforts, MDH also facilitated quarterly convenings with the LHICs, which included trainings on pertinent subjects. Each of the year's four quarterly convenings hosted an average of 30 participants, and the training sessions covered topics such as: Overweight and Obesity Initiatives, Sustainability and Community Engagement, Health Equity, and Health Communication and Health Literacy. The LHICs have expressed a desire to continue these community-of-practice sessions as an opportunity to learn from each other regarding strategies that can be helpful for their communities. MDH has also created a web page for the LHICS to continue discussions on pertinent topics, watch recorded meetings and trainings, and obtain information on resources like grant opportunities.

Due to the level of interest expressed by the LHICs, MDH plans to expand the technical assistance in 2024 to include nine LHIC Convenings. LHICs have also expressed interest in expanding their efforts into topics outside of diabetes, including maternal and child health, environmental health, infectious disease prevention and treatment, vaccine equity, and tobacco and cancer prevention and control. MDH is working to

determine the topics with the strongest interest from LHICs, and to determine the best methods for logistics and support for the expansion into the chosen areas.

Local Health Departments (LHDs)

MDH issued funding to eight local health departments to support diabetes prevention strategies with a focus on overweight, obesity, and diabetes prevention. The LHDs focused on three domains: Food Security, Physical Activity, and Community-Wide Health Initiatives. Through these activities, the Charles County Health Department addressed healthy food security and knowledge about healthy food preparation by establishing two community and school gardens, hosting healthy cooking classes for 75 students and their families, hosting four cooking classes for people diagnosed with prediabetes, and developing a modified cooking class curriculum for people living with developmental disabilities. While the cooking class curriculum provided for people living with developmental disabilities was a pilot, the LHD found it to be successful and plans to continue offering it on an ongoing basis. Some of the LHDs also increased physical activity in their communities, with Charles County organizing a Senior Fitness Challenge and four community-wide walking events. Washington County Health Department created an initiative to create a walking group aimed at attracting community members residing in low socioeconomic status zip codes, as those communities have higher rates of obesity, diabetes, and other chronic illnesses. These efforts attracted 69 community members to a new walking group. Washington County also engaged community members and local organizations to participate in community-wide initiatives that included a focus on weight loss to lower community-wide BMI. Through this initiative, Washington County organized a workshop for 25 community-based organizations to develop action plans to meet weight loss goals, and enrolled 964 new users into their weight tracker system. Their efforts resulted in 13,364 community pounds lost.

Additional funding was provided to three local health departments to implement an overweight and obesity screening program centered in adult dental settings in Allegany, Charles, and Dorchester counties. Through this initiative, 8,717 BMI screenings occurred in 2023, resulting in 2,891 patients identified as being overweight or obese. 1,977 patients were referred to medical treatment or counseling; 1,987 patients were referred to virtual cooking classes and physical activity classes; and 12,497 individuals (patients and family members) were educated on healthy behaviors.

Diabetes Quality Task Force

The Diabetes Quality Task Force (DQTF) works to address quality assurance, clinical guidelines, and standard messaging for diabetes prevention and management. The DQTF consists of two committees: 1) the Community Clinical Linkages (CCL) workgroup and 2) the Health Systems Intervention and Data workgroup. The workgroups collaborated to establish clinical and population measures which are tracked on a public facing data dashboard. The CCL workgroup has worked diligently on multiple activities to increase enrollment into the National DPP, and to improve access to diabetes management and diabetes

prevention. They completed a diabetes resource guide for providers, patients, and community-based organizations to be included on MDHs Cancer and Chronic Disease Bureau webpage. The guide provides valuable diabetes management and prevention information, including prescription financial assistance for patients, links to locate provider specialists (e.g., podiatrists, ophthalmologists, endocrinologists) and National DPP providers (sorted by insurance providers and geographic region), and grant opportunities that address diabetes prevention. The CCL group also worked on expanding the community health worker (CHW) network as a cost-effective method to implement diabetes prevention interventions. To that end, the workgroup developed seventeen CHW certification training programs that have been accredited as of November 2023, with additional programs currently in the review process. The workgroup also updated the MDH website to include contact information for each of CHW certification training programs, and provide details on which diabetes-related "Training the Trainer" programs can be used towards professional development hours. The CCL group also identified barriers to participation in the National DPP through a statewide survey of National DPP cohort providers and participants, which identified "other personal life commitments", transportation, location of the National DPP, and the participation length requirement of the National DPP as the primary barriers to participation. Lastly, the CCL group worked with CRISP to improve access for pharmacists to the CRISP portal. The CRISP portal is what provides direct referrals to the National DPP programs for patients with prediabetes, and the CCL workgroup worked to increase awareness of the CRISP portal by developing and distributing to Maryland Pharmacists a one-pager with information on the program and how to gain access.

Diabetes Communication and Outreach Strategies

Communications Strategy – Paid Media Placement

MDH implemented a mass media health education initiative - the Know Your Risk Campaign. This campaign builds Marylanders awareness of diabetes and prediabetes, and promotes taking the risk test and talking to a health care provider about their risk for prediabetes and diabetes. MDH spent $100,000 on transit ads in 3 counties (Frederick, Harford, and Howard counties) and one city (Annapolis). Total impressions for the 8-week run is estimated at 40,912,000. Following the transit ads, MDH spent $45,000 on targeted digital ads statewide. These ads resulted in 5.3 million digital impressions during the 10-week campaign period.

MDH spent $500,000 on a transit ad campaign focusing on diabetes and tobacco use. The message used was "Smoking puts you at higher risk for diabetes. You can quit." This campaign ran in these areas: Harford, Howard, Frederick, and Montgomery counties; the Baltimore Area (Baltimore City/Baltimore County/Anne Arundel County); and Annapolis City. Total impressions for these ads were estimated at 270,739,000 over a 4-month period.

MDH ran the What's Your Why campaign, focusing on women of childbearing age and why they should choose healthy lifestyles. These ads promote maintaining a healthy body weight through healthy eating and physical activity. Transit ads ran over a 4-week period in the same areas as the diabetes and tobacco use campaign, listed above. The total cost for the campaign was approximately $200,000. It received a total estimated 74,342,000 impressions.

Figure 8. Summary of Paid Media Placement Communications Strategy, January–September, 2023

Campaign	Know Your Risk Digital	Know Your Risk Transit	Diabetes and Tobacco Transit	What's Your Why Transit
Total Amount Spent	$45,000	$100,000	$500,000	$200,000
Length of Ad Run	10 weeks	8 weeks	16 weeks	4 weeks
Total Impressions	5,300,000	40,912,000	270,739,000	74,342,000

Source: Maryland Department of Health

Community Outreach

Purple Ticket to Health Campaign (PTTH): The Baltimore Ravens, in partnership with MedStar Health, Novo Nordisk, and GEHA, created the Purple Ticket to Health Campaign (PTTH). PTTH uses the Ravens' national profile to promote people knowing their risk for diabetes and prediabetes by taking the simple Risk Test, which consists of a series of questions. Activations, which include a booth, table, posters, pop-up banners, and info plaques all jointly-branded with the Ravens, and staffed by MedStar, NovoNordisk, and MDH personnel, occur at select Ravens home games and activities throughout the year focusing on one-on-one outreach. MedStar Health facilitates the tests, and people at higher risk are encouraged to talk to their provider about their risk. If the individual does not have a medical provider, Medstar provides them with a link to find a provider in their area. The Ravens also run digital, radio, and TV ads with Mark Andrews (player with type 1 diabetes) as a spokesperson for PTTH, and people who complete the risk test are offered opportunities to win Ravens paraphernalia and prizes. In this initial year of MDH participation, MDH was included on the PTTH landing page and conducted outreach during the home pre-game Ravens Walk as part of the PTTH booth. In future years MDH plans to build on our partnership by being included in all marketing materials and having a larger presence online and during activations.

Autism Walk & 5K Run: As part of MDH's outreach to the disability community, MDH was a sponsoring partner for the Autism Walk and 5K Run in October 2023. MDH had a table at the event staffed with MDH health educators and informational handouts to promote taking the Risk Test, knowing individuals' risk for diabetes, as well as safe and proper management after diabetes diagnosis. MDH's health educators talked with and provided information to over 300 individuals in a single morning. MDH plans to have a larger role in

future years as a way to reach people in the disability community who are at higher risk of diabetes and prediabetes.

American Diabetes Association (ADA): MDH has a longstanding partnership with the American Diabetes Association (ADA). MDH coordinates with the ADA Institute of Learning Program to provide continuing education on improving care for patients with or at risk for diabetes. The continuing education training is offered to MDPCP internal medicine physicians, as well as other types of providers in the DPP and DSMES Networks. MDH staff also participate in the annual ADA State of Diabetes Conference during National Diabetes Awareness Month in November, which offers opportunities for health care professionals and community partners to attend panel discussions, educational presentations, and provides networking opportunities. In 2023, the Director for Center for Chronic Disease Prevention and Control served as a facilitator for a panel focusing on health equity and disparities.

Leveraging CRISP to Drive Progress

Pilot Program – SMART Alert

Prediabetes Smart Alert: In an effort to support diabetes prevention, the MDPCPMO has piloted and promoted the Prediabetes Smart Alert to MDPCP practices. This Smart Alert was developed by CRISP to identify panels of Maryland patients who likely have prediabetes based on Admission, Discharge, and Transfer (ADT) data as well as laboratory data, and align this patient population with Diabetes Prevention Programs (DPP) to focus on diabetes prevention, *before* a Type II diabetes diagnosis. Medicaid collaborated with MDPCPMO and CRISP in developing the Smart Alert and the e-referral tool notification system, and to refine its capabilities based on provider feedback.

There are two (2) prediabetes identification tools available for MDPCP practices:

- Encounter Notification Service (ENS) PROMPT: 'Prediabetes' Smart Alert uses an ENS PROMPT filter to identify patients who are likely prediabetic. Once the filter is applied to a panel, a practice can choose to view the alerts in line with all alerts or limit the list to only those likely prediabetic patients by setting a filter called 'Potential Prediabetes.'
- Full Panel File Comparison: compares a practice's panel(s) with the CRISP Prediabetes Panel and returns a subset panel of likely prediabetic patients.

Four MDPCP practices have fully implemented the prediabetes smart alert. The benefit of implementing and incorporating this into their practice workflow is to make patients aware of their predisposition to be diagnosed with diabetes and help reverse the patient's prognosis with education tools and care plans that include diet and exercise.

eReferral Tool/Enhancements

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 and are continuing into 2023, with a total of four MDPCP practices having fully implemented the tool.

CY 2024 Priorities

MDH plans to continue partnering with local jurisdictions to implement overweight and obesity prevention and treatment activities, including growing the number of National DPPs, DSMES, Taking off Pounds Sensibly (TOPS), Healthy Heart Ambassador programs, and county-wide weight loss initiatives. MDH also plans to expand efforts with the Maryland CornerStore Initiative, with a focus on adding a rural community to increase healthier options in corner stores. Other priorities include restructuring the Diabetes Quality Task Force, and finalizing the launch of the Diabetes Dashboard.

Domain 3b: Total Population Health – Opioids

SIHIS presents a unique opportunity for the State to address the opioid crisis in Maryland. The Opioid pandemic continues to be a priority under the new administration. By executive order, Governor Wes Moore has moved the Opioid Operational Command Center (OOCC) into the Maryland Department of Health and renamed it as Maryland's Office of Overdose Response in order to broaden the State's efforts to combat the opioid and drug overdose crisis. The specific goal, measure, milestones, and targets for the opioids priority area are below.

Table 15. Total Population Health - Opioids Goal

Goal: Improve overdose mortality[16]	
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

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

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.
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 16) 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 16. Opioids Synthetic Control Group Weights

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

In 2022, the State experienced 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 CDC WONDER Provisional Death Data. As shown in Table 17, Maryland experienced a 9.1 percent reduction in the overdose fatality rate per 100K, compared to a national rate increase of 59.5 percent.

Table 17. Overdose Fatalities Compared to National Average, 2018-May 2023

	2018 Baseline	Most Recent Rolling 12 Months	Percent Change	National Comparison Change
Rates per 100K	38.5	42.0	-9.1%	59.5%
Total Count	2,324	2,541	-9.3%	62.4%

Source: WONDER Provisional Death Data

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 18 includes 2018 baseline values, performance through May 2023, 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. The State also tracks a robust number of additional measures on fatal and non-fatal overdoses through a publicly available dashboard operated by Maryland's Office of Overdose Response.[17]

Table 18. Overdose Fatality Rates per 100k: Race/Ethnicity & Disparity Index, 2018-May 2023

	2018 Baseline	Most Recent Rolling 12 Months	Percent Change	Disparity Index
NH White	47.19	40.42	-14.3%	1.0
NH Black	44.21	62.21	40.7%	1.5
Hispanic	8.86	10.24	15.5%	0.3
Other	NA	22.06	NA	0.5
Statewide Total	38.5	42.0	9.1%	1.0

[17] https://stopoverdose.maryland.gov/dashboard/

Source: WONDER Provisional Death Data

Updates on Milestones

As reported in the 2021 annual report on SIHIS activities and shown in Table 15, Maryland met all of the 2021 milestones for the opioids priority area. 2022 performance and progress towards 2023 targets and additional activities underway to address opioid 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 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 19.

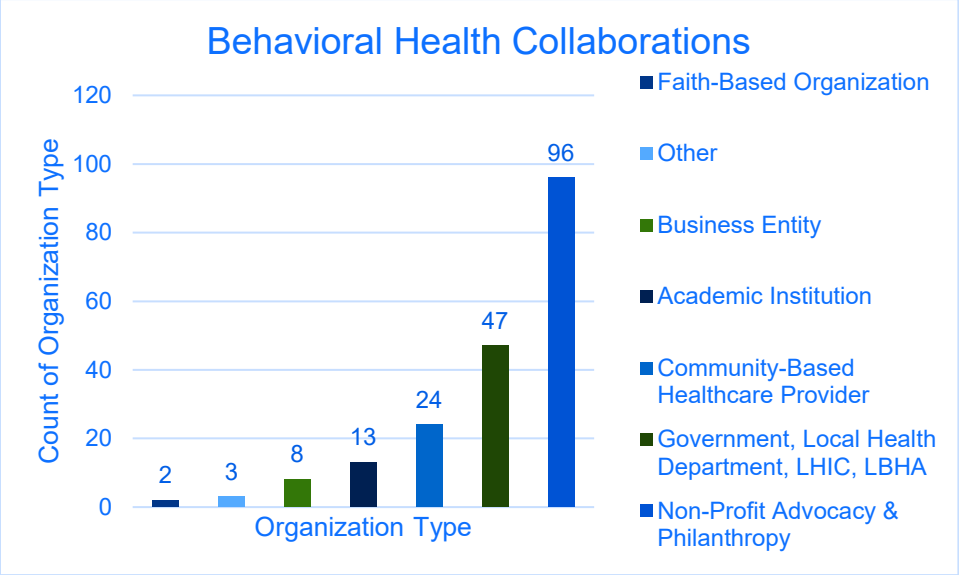
Table 19. Regional Partnership (Behavioral Health) Jurisdictions and Funding Amounts

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 193 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 made significant progress on activities in 2023 surrounding continuation and expansion of care traffic control, mobile crisis teams, and open access and crisis centers. Regional Partnerships also continued to expand formal structures, develop performance metrics and engagement reports, and ensure programs implemented are aligned for long term sustainability.

Care Traffic Control (CTC) Activities

Significant progress was made on care traffic control and open access activities. The 988 Regional Call Center for Central Maryland went live in April 2023, establishing a regional Care Traffic Control system by implementing a single hotline for substance use and mental health crisis calls. An outpatient scheduling module was also completed. Dozens of staff have been trained in using the new system, including on risk assessments, mobile crisis team dispatch, bed registry, and care coordination. Regional Partnerships are also looking into standard operating procedures for referring crisis calls to mobile crisis teams and have begun longitudinally tacking transferred calls to complete a full data analysis. Regional Partnerships continue to campaign and market 988 to increase awareness of the transition and to reduce barriers and stigmas.

Mobile Crisis Teams (MCT)

Two Regional Partnerships are engaged in integrating and expanding mobile crisis teams that have been developed. Mobile crisis team response volume grew dramatically over 2023 to divert patients from the emergency department (ED) who did not require a high-level intervention. Mobile crisis teams work in close collaboration with law enforcement and emergency medical services (EMS), with standard operating procedures around scene sharing and best practice protocols for the emergency crisis continuum. Regional Partnerships have focused on expanding hours and coverage in 2023, as well as evaluation of current processes.

Crisis Centers

Two Regional Partnerships reported on activities to continue crisis center operations and to continue development of new crisis centers in 2023. One Regional Partnership has continued to target marketing and improve operations of 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. Another Regional Partnership continues construction of a new crisis center to be opened in 2024.

One Regional Partnership has focused on expanding same day access to care through an Open Access Pilot. Participating sites have grown throughout 2022 and 2023 and are offering same day appointments to patients. The first cohort of the pilot consisted of five clinics offering same day services and the second cohort consisted of 13 clinics. A third cohort with 17 sites will be announced soon with a 2025 evaluation following. The Regional Partnership is working on sustainability and continuation of services after contract ending. As of November 2023, there have been 1,105 new open access appointments and an improved wait time of 2.83 days for intake/assessment post implementation versus over two weeks prior to Open Access implementation. The Open Access Pilot preliminary data has shown the need for immediate-need behavioral health services.

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. As of May 2023, 354 MDPCP practice sites (including 7 FQHC sites) have implemented SBIRT to identify and appropriately refer patients with substance use disorders to services and treatment. This adoption of SBIRT far exceeds the 2021 SIHIS goal of implementing SBIRT in 200 MDPCP practices.

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.
- **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 May 2023, 100 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 May 2023, 247 practices had uploaded SBIRT data into a CRISP tool built to capture each practice's progress. Table 20 displays the number of SBIRT screenings, positive screens, and brief interventions for the August 2021 to May 2023 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 20. Number of SBIRT Screenings, Positive Screens, and Brief Interventions for MDPCP Practices, August 2021-May 2023

SBIRT Screenings	Positive Screens	Brief Interventions
830,561	58,042	22,097

Source: Monthly MDPCP Practices Reporting to CRISP[18]

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

Additional Programs & Interventions to Address Opioids

Public Health Services (PHS) & Behavioral Health Administration (BHA) – Led Initiatives

Reverse the Cycle

Since 2014, the State of Maryland has contracted with the Mosaic Group to develop and implement SBIRT in hospital EDs & mother-baby units, primary care practices, and several other settings. As this work progressed, two other programs were added to the SBIRT model. This includes both the Opioid Survivors Outreach Program and the Hospital Based Buprenorphine Program. Together, these three programs (SBIRT, OSOP, and HBBI) have been known as the 'Reverse the Cycle Program' and represent a comprehensive approach in Maryland's efforts to address the current opioid crisis.

RTC is a comprehensive hospital substance use response program with three vital components:

1. Universal screening + peer intervention
2. Outreach for patients with high risk of overdose and/or readmission
3. Initiation of medications for opioid use disorder

The Mosaic Group has provided hospital EDs with consultation, training, policy and medical protocol development, workflow, and electronic health record (EHR) modification(s) to implement SBIRT, OSOP, and changes regarding the manner in which medication for opioid use disorder (MOUD) is started with patients who present with an Opioid Use Disorder in their emergency department. This includes development of protocols to support a new medical order set for prescriptions and home induction. The Mosaic Group has implemented this process in 33 Maryland hospitals (two additional in FY 2023).

In FY 2024, there are several SBIRT-related projects planned that are funded by the State Opioid Response III Grant. These projects include Reverse the Cycle at two additional EDs, Reverse the Cycle at two crisis stabilization centers, statewide SBIRT training for nurses/social workers/peer recovery specialists, SBIRT at primary care practices, and Fidelity & Quality Assurance work at approximately 12 EDs that previously implemented the Reverse the Cycle program.

988 Launch in Maryland

Since the National Launch of 988 in July of 2022, the BHA has been very involved in the implementation of 988 across the state. In FY 2024, eight 988 call centers in the state are being funded to answer calls, texts, and chats 24/7/365. Three separate SAMHSA 988 grants have increased capacity to answer the increased number of 988 contacts. In FY 2024, state and federal funding in Maryland of 988 totals $9,817,213. This level of funding is needed to keep pace with the steady increase in call volume. The number of Maryland 988 calls in October of 2023 has grown to 5,273 (up from 3,851 as of July 2022). Current work includes

migrating the former state crisis hotline (211 Press 1) calls, texts, and chats over to 988. This migration will effectively double in-state 988 calls in December of 2023.

The BHA has reached the target of having a 90 percent in-state answer rate and continue to work on 988/911 coordination and integration with local mobile crisis teams. Additionally, through the use of State Opioid Response Grant III dollars, two full time opioid and stimulant use disorder navigators are being funded at each of the 988 call centers. These new positions will work with 988 callers who indicate some concern with opioids/stimulants after the initial crisis call to 988. This follow-up work includes treatment referrals, referrals for medications for opioid use disorder, harm reduction, and other wrap-around services. The team is working to continue the integration of 988 into the rest of the state behavioral health crisis system.

Naloxone Distribution

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 trained staff to provide overdose education and dispense naloxone directly to recipients 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. Presently, all but five jurisdictions in the State have reached naloxone saturation. 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 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.

In FY 2023, 404,172 doses of naloxone were purchased and distributed to ORPs throughout the State. In FY 2023, 324,507 doses of naloxone were distributed by ORPs statewide. 47.26 percent of naloxone doses distributed in FY 2023 were distributed to the priority population groups of those most likely to witness and be present at an overdose (i.e., those with social experience using drugs and family members of people who use drugs).

STOP Act

CHRS and Opioid Operational Command Center (OOCC) collaborated to pass the Statewide Targeted Overdose Prevention (STOP) Act, as an administration bill during the 2022 legislative session. The STOP Act has helped 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. Since the STOP ACT was passed in 2022, CHRS has expanded the total number of authorized and approved ORPs from 173 ORPs at the end of FY 2022 to 230 ORPs at the end of FY 2023.

Maryland's Office of Overdose Response (MOOR) – 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] The OOCC submitted the 2022 DORM report to the Maryland General Assembly in August 2023. Policy implications from the report include continuing to address growing racial disparities in overdose outcomes, exploring and addressing factors driving the increase in overdose deaths among individuals 55 years and older, continuing to promote naloxone training and distribution, increasing access to low barrier buprenorphine and gathering data on xylazine and other emerging drug trends. The final mandated report will be submitted in July 2024.

Local Efforts – Overdose Prevention Teams (OPTS)

Overdose Prevention Teams (*formerly known as Opioid Intervention Teams*) are multi-agency coordinating bodies within each jurisdiction that coordinate the local response to the opioid and overdose crisis. Each OPT develops a local strategic plan that addresses the needs of their jurisdiction with regards to opioid and

[19] Maryland Department of Health. *Data-Informed Overdose Risk Mitigation (DORM) 2022 Annual Report.* August 2023. https://beforeitstoolate.maryland.gov/wp-content/uploads/sites/34/2023/08/8-15-2023-2022-DORM-Annual-Report-Final.pdf

substance use disorder and works to identify and fill programmatic gaps and through collaboration and the use of OOCC block grant funds.[20]

HB116 Grant and Coordinator

The Opioid Use Disorder Examination and Treatment Act of 2019 (House Bill 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. Grantees are in year two of the two-year grant period and the state is working on determining funding sources moving forward.

Opioid Restitution Fund Advisory Council

The Opioid Restitution Fund (ORF) was established through House Bill 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 ORF Advisory Council was established during the 2022 legislative session, with the passage of House Bill 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 from November 2022 through October 2023 and recently submitted their first set of recommendations to the Governor and Secretary of Health. The council will reconvene in early 2024 to continue their work.

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.

MDPCP has promoted behavioral health integration as a required element for all practices. The PMO has coordinated with several contractors to facilitate the implementation of the Collaborative Care Model (CoCM) in over 121 MDPCP practices. It continues to promote this model as an efficient evidence-based

[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

approach to mental health care at the primary care level. These efforts complement a CoCM pilot led by Maryland Medicaid, implemented in 2020. This pilot transitioned into statewide coverage of CoCM for Medicaid participants in October 2023, aligning Medicare and Medicaid implementation of the model.

In 2022, MDPCP began regularly receiving aggregate statewide data from contractors working in Maryland on the impacts of CoCM on objective scores in standardized depression and anxiety scales with remarkable results.

Moving forward, to support practices in their implementation efforts, the MDPCP will include relevant updates in monthly meetings and leverage expertise from its partners. The MDPCP intends to create and provide toolkits to include a self-guided practice assessment and checklist for Integrating Behavioral Health in the Primary Care setting and CMS Behavioral Health Models Billing Codes.

Medication for Opioid Use Disorder Planning

MDPCP recognizes that many patients in practices may not be ready for SUD treatment or counseling and may continue to use drugs and alcohol while in their care. The primary care provider and their practice staff will play a vital role in providing harm-reduction services for these patients. There is an opportunity to expand primary care's role in the future. MDPCP will work across all their practices to provide education and training on effective harm reduction services, including the provision of naloxone, education on overdose risk reduction, outreach to high-risk patients, especially those just surviving an overdose, response to health-related social needs and education on the safe use of drugs and alcohol to minimize health-related issues, such as infectious disease, skin abscess and infections and other health and safety concerns. Targeted technical assistance will be provided to practices seeing high volumes of high-risk patients to help support the full integration of harm reduction services as part of a whole health model of care.

The MDPCP will connect practices to known vendors for technical assistance, leveraging progress made in practices on implementing SBIRT. Since 2020, in partnership with a vendor, the MDPCP has implemented SBIRT in 373 MDPCP practices and continues adding additional practices yearly. In addition, the vendor has assisted the PMO in establishing an SBIRT data reporting system on the CRISP platform and ongoing training and quality assurance for current SBIRT practices.

SBIRT Implementation and Education for Providers

The current strategy 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 focus on health equity, ensuring that SBIRT and MOUD are accessible to diverse practices serving Marylanders, including minority and vulnerable populations. Next steps are as follows:

SBIRT Continuation: MDPCP intends to continue to fund its contractor to support SBIRT reporting, assist practices in developing workflow protocols, and identify those requiring quality improvement. The focus areas are as follows:

1. Practices New to MDPCP - the vendor will proactively engage practices new to MDPCP, focusing on counties of greatest need, as indicated by overdose rates. In partnership with the PMO, the vendor will target practices within these jurisdictions through individual outreach, promotional materials, and education on the benefits of SBIRT integration, emphasizing the need to engage providers in SBIRT work.
2. Quality Improvement of Existing SBIRT Protocols in Practices - the vendor will create a snapshot dashboard for each practice that submits its data in CRISP each quarter. This snapshot will allow the vendor to determine if practices qualify for practice improvement. The vendor will engage qualified practices to conduct workflow analysis and understand the barriers to the practice meeting the program goals, then work to remedy any issues to meet their targets. After problems have been addressed, their data will be reviewed for at least 90 days post-re-launch.
3. Data Reporting Support - Practices will submit their SBIRT data in CRISP monthly. The vendor will work with practices to ensure they can access the Unified Landing Page (ULP) reporting center and the SBIRT tab. The vendor will work with them to modify their EMR, extract the appropriate data points, and begin reporting their SBIRT data in CRISP.

SBIRT Reporting Dashboard Enhancements: MDPCP is working with CRISP to enhance reports that practices may use as tools to assist them with the prevention and management of patients with substance use disorder. MDPCP will continue to build on the existing SBIRT reporting platform by adding additional features that include:

1. Color coding as a performance notification in the dashboard based on target goals.
2. Ability to hover over bar graphs to see patient-level data.
3. Ability to hover over percentages that show the numerator and denominator.
4. Adding a customizable date range feature to select a specific period.
5. Add the total number of eligible patients for screening as a data point - practice provided number.
6. Add MOUD data to the monthly dashboard, including the number of sites delivering MOUD and the number of patients receiving MOUD.

Health IT Tools

The PMO is working on several pilots with CRISP to provide point of care tools for addressing SUD. 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

In addition to providing a comprehensive suite of behavioral health services, including OUD treatment and overdose prevention, Maryland Medicaid has expanded benefits and services to further support improvements in opioid overdose mortality.

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

Effective January 2022, Medicaid offers coverage to adults aged 21 to 64 who have a severe mental illness (SMI) diagnosis and are residing in a private IMD, in addition to covering specialty SUD treatment in institutions of mental diseases (IMDs). SUD treatment in IMDs was introduced for Medicaid participants in 2017 and provided over 82,000 services between 2017 and 2021.

Mobile Crisis and Stabilization

Effective July 1 2023, Maryland Medicaid launched coverage Mobile Crisis teams and Stabilization units. The mobile teams respond to crises on-scene and attempt to stabilize the individual. Crisis stabilization units (CSUs) provide up to 23-hour care for people experiencing behavioral health crises in lieu of an emergency room or hospital.

Collaborative Care Model (CoCM) Statewide Implementation

The Maryland Medicaid CoCM pilot program began in July 2020, and was made statewide effective October 1, 2023. The CoCM is a patient-centered, evidence-based approach for integrating physical and behavioral health services in primary care settings. Eligibility is limited to those with a diagnosis of mild to moderate anxiety, depression, or substance use disorder. Services include care coordination and management; regular, systematic monitoring and treatment using a validated clinical rating scale; and regular, systematic psychiatric caseload reviews and consultation for patients who do not show clinical improvement.

In the first two years of the pilot (FY 2021-FY 2022), for patients that have been enrolled for more than 70 days, more than 65 percent have had clinically significant improvement; meaning baseline scores dropped by more than 50 percent, or their score dropped below the level of eligibility for CoCM.

Reimbursement for Certified Peer Recovery Specialists

Effective June 1, 2023, Maryland Medicaid now reimburses opioid treatment programs (OTPs) and community-based substance use disorder (SUD) programs licensed by the Behavioral Health Administration for peer recovery support services rendered by Certified Peer Recovery Specialists (CPRS). Peer recovery support service is the provision of non-clinical activities by individuals in recovery from behavioral health concerns, including substance use disorders or mental health concerns, who use their personal, lived experiences and training to support other individuals with substance use disorders.

Maternal Opioid Misuse (MOM) Model

The MOM Program 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 effective January 1, 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.

CY 2024 Priorities

In 2024, the State will continue to prioritize implementing and expanding the initiatives described above, focusing on expanding SBIRT and harm reduction in Maryland hospitals and MDPCP practices, expanding access to behavioral health crisis services through grant programs and Medicaid reimbursement, and supporting locally-driven interventions to address opioid use.

Domain 3c: Total Population Health – Maternal Health

Through the Statewide Integrated Health Improvement Strategy (SIHIS), the Maryland Department of Health (MDH) identified decreasing SMM rates in the State as its maternal health[21] priority, with a focus on decreasing racial and ethnic disparities. According to the Centers for Disease Control and Prevention

[21] A note about language: In this report we utilize the terms "birthing person", "maternal", and "women" to refer to individuals who can or do become pregnant. Where possible, we strive to use the more inclusive term "birthing person". However, in instances where we cite external data or refer to historical terms, we may use gendered terms to reflect the data as it was captured.

(CDC), SMM has increased in the past several years.[22] SMM events encompass 21[23] distinct events that occur during labor and delivery (for example, use of ventilation or diagnosis of sepsis). Addressing the incidence of these events requires a population-health approach and investigating drivers at various levels across the life-course and society.[24]MDH focuses on a life-course approach[25] to improve maternal health (e.g. preconception and interconception, pregnancy, birth period, postpartum) with an emphasis on community-based, wrap-around support services such as home visiting and doula expansion, and increased access to evidence-based clinical models such as CenteringPregnancy.

Below are the goals, measures, milestones, and targets for reduction of SMM rates (Table 21 & Table 22) including updated calculations for the 2018 baseline based on the SIHIS Dashboard.

Table 21. 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[26] 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	9.6% decrease in SMM Rate per 10,000 delivery hospitalizations
2026 Year 8 Final Target	18.7% decrease in SMM Rate per 10,000 delivery hospitalizations

Table 22. Race/Ethnicity Disparities in Maryland SMM Rate 2018 Baseline and SIHIS Targets

[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. How Does the CDC Identify Severe Maternal Morbidity. https://www.cdc.gov/reproductivehealth/maternalinfanthealth/smm/severe-morbidity-ICD.htm
[24] Carmichael et al. (2021) "WaysForwardinPreventingSevereMaternalMorbidityand MaternalHealthInequities:ConceptualFrameworks, Definitions,andData, from Population Health Perspective". Source: https://www.whijournal.com/action/showPdf?pii=S1049-3867%2821%2900181-X
[25] Lu and Halfon (2003) "Racial and Ethnic Disparities in Birth Outcomes: A Life-Course Perspective https://link.springer.com/article/10.1023/A:1022537516969
[26] Chesapeake Regional Information System for our Patients Inc. (CRISP) analysis of Health Services Cost Review Commission (HSCRC) data, including blood transfusions. Accessed 3 November 2023.

Race	2018[27, 28]	2023 Year 5 Target	2026 Year 8 Target
Total	181.4	7.5% decrease	15% decrease
NH White	334.2	10% decrease	20% decrease
NH Black	242.0	10% decrease	20% decrease
Hispanic	249.0	10% decrease	20% decrease
NH Asian	205.2	10% decrease	20% decrease
Other	243.1	9.6% decrease	18.7% decrease

Measure Definition and Analysis

To generate Maryland's SMM rates, the State uses administrative hospital discharge data and International Classification of Diseases (ICD) diagnosis codes and procedure codes. Federal partners such as the Health Resources and Services Administration (HRSA), Agency for Healthcare Research and Quality (AHRQ), CDC, and other subject matter experts review and update the SMM indicators annually. The updated SMM indicators are published in the Federally Available Data (FAD) Resource Document[29] and on the Alliance for Innovation on Maternal Health (AIM) Data Resources[30] webpage. In its initial SIHIS proposal, the State indicated its approach to using updated formulas to align with national SMM calculations, which included blood transfusion. However, in 2021, SMM indicators were updated by HRSA to exclude blood transfusions due to its lack of specificity.[31] Consequently, in early 2023, MDH's Prevention and Health Promotion Administration's (PHPA's) Maternal and Child Health Bureau (MCHB) assessed the impact of removing blood transfusions from the SMM indicators to align with the HRSA definition. A preliminary analysis conducted by the MCHB Epidemiology team, in collaboration with CRISP, revealed that blood transfusions contributed to approximately 65 percent of the SMM events in Maryland. While the SIHIS SMM goals still include blood transfusions, MDH has partnered with CRISP to illustrate SMM rates both with and without blood transfusion in the CRISP SIHIS Dashboard. The updated SIHIS Dashboard will be available in early 2024. For the purposes of this report, SMM rates include blood transfusion indicators, except when otherwise noted. MDH will work in collaboration with the HSCRC to address the likely missed 2023 milestone and prepare a mitigation plan for submission to HSCRC in Spring 2024.

[27] There is a slight variation from what was presented in 2021, because the SMM analysis was analyzed by CRISP with an updated CASE mix file and with code/analysis that is updated by AIM/HRSA and the CDC.
[28] Centers for Disease Control and Prevention. How Does the CDC Identify Severe Maternal Morbidity. https://www.cdc.gov/reproductivehealth/maternalinfanthealth/smm/severe-morbidity-ICD.htm

[29] Federally Available Data (FAD) Resource Document https://mchb.tvisdata.hrsa.gov/Admin/FileUpload/DownloadContent?fileName=FadResourceDocument.pdf&isForDownload=False
[30] Alliance for Innovation on Maternal Health (AIM) Data Resources.https://saferbirth.org/aim-resources/
[31] See 16

Quantitative Performance

SMM rates are on the rise across the United States, including in Maryland (see Figure 9),[32] although additional analysis is required to understand the proportionality in changes between the US and Maryland SMM rates. Based on data through August 2023, Maryland had 322.8 SMM-related hospitalizations per 10,000 delivery discharges over the prior 12 months (Table 23). This is 80 hospitalizations per 10,000 higher (32.8 percent higher) than the 2018 baseline (243.1), and 103 hospitalizations per 10,000 higher (46.9 percent higher) than the 2023 target of 219.8.

Figure 9. SMM Hospitalizations for Rolling 12-Months, 2018 – August 2023

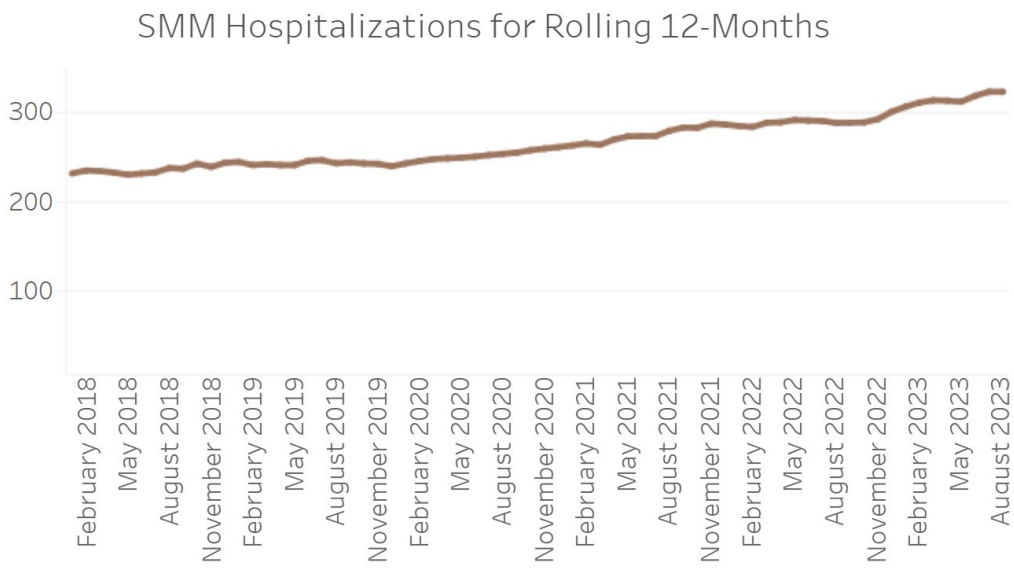


Table 23. SMM Hospitalizations Compared to 2023 Targets, 2018 – August 2023

	2018 Baseline[33]	Most Recenter 12 Months	2023 Target[34]	Difference – Most Recent 12 Months to Target
Rates per 10K	243.1	322.8	219.8	103.0
SMM Events	1,585	1,978		

[32] Fink DA, Kilday D, Cao Z, et al. Trends in Maternal Mortality and Severe Maternal Morbidity During Delivery-Related Hospitalizations in the United States, 2008 to 2021. *JAMA Network Open*. 2023;6(6):e2317641. doi:10.1001/jamanetworkopen.2023.17641
[33] Chesapeake Regional Information System for our Patients Inc. (CRISP) analysis of Health Services Cost Review Commission (HSCRC) data, including blood transfusions. Accessed 3 November 2023.
[34] 2023 Target calculated based on updated 2018 baselines and percentage decreases from original SIHIS application, depicted in Table 2.

Eligible Deliveries	65,199	61,279	

Performance by Race & Ethnicity

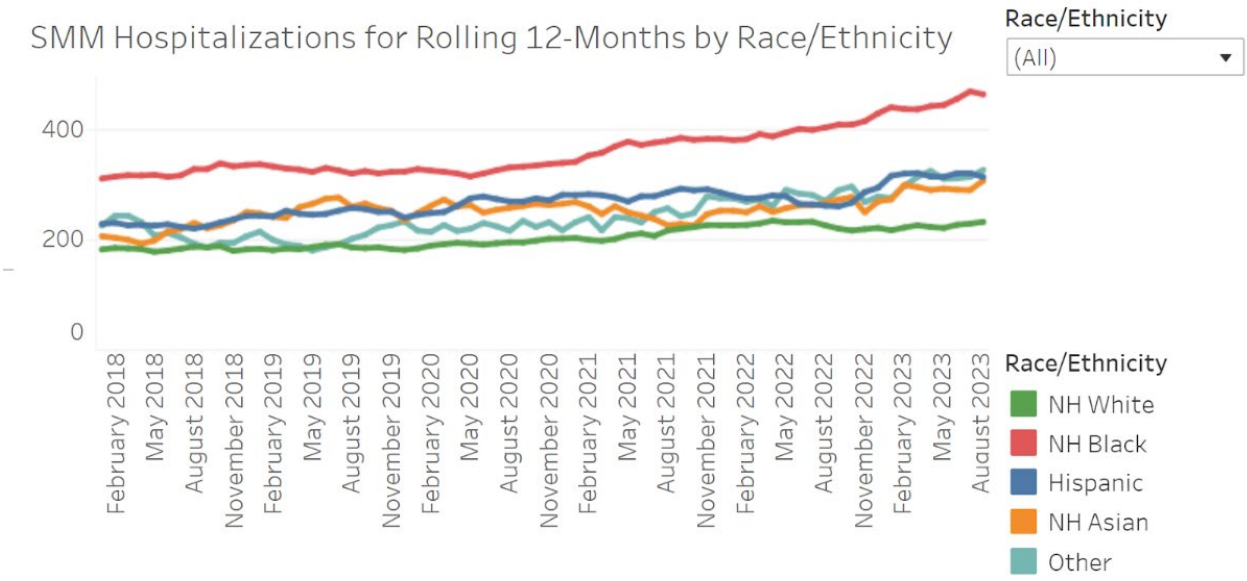
There continue to be health inequities in SMM rates across all Race and Ethnicity groups (Table 24 and Figure 10).[15] Non-Hispanic (NH) Black individuals in Maryland continue to be the most impacted; the rate of SMM for NH Black birthing people is twice the rate for NH White birthing people (Table 24). The rate of SMM for Hispanic birthing people is 1.4 times the rate for NH White birthing people. For NH Asian people, the SMM is 1.3 times the rate for NH White birthing people. Table 24 below includes 2018 baseline values, performance through October 2023, and a Disparity Index, where a value over 1 indicates **inequities** on the measure when compared to NH White SMM rates.

Table 24. SMM Hospitalizations Rates by Race/Ethnicity, 2018 – August 2023

Race/Ethnicity	2018 Baseline[35]	Most Recent 12 Months	2023 Target[36]	Difference – Most Recent 12 Months to Target	Disparity Index
NH White	181.4	231.2	167.8	63.4	1.0 (baseline)
NH Black	334.2	462.2	300.8	161.4	2.0
Hispanic	242.0	312.2	217.8	94.4	1.4
NH Asian	249.0	305.8	224.1	81.7	1.3
Other	205.2	325.3	184.7	140.6	1.4
Statewide Total	243.1	322.8	219.8	103.0	1.4

Figure 10. SMM Hospitalizations for Rolling 12-Months by Race/Ethnicity, 2018 – August 2023

[35] Chesapeake Regional Information System for our Patients Inc. (CRISP) analysis of Health Services Cost Review Commission (HSCRC) data, including blood transfusions. Accessed 3 November 2023.
[36] There is a slight variation from what was presented in 2021, because the SMM analysis was analyzed by CRISP with an updated CASE mix file and with code/analysis that is updated by AIM/HRSA and the CDC.



Potential Drivers of Sustained Increase in Maryland SMM Rates

The persistent increases in Maryland SMM rates echo national trends, although more analysis is needed regarding the proportionality of the two statistics.[37] MDH also conducted a literature review in 2023 to investigate any changes nationally in contributing factors to SMM since development of the initial SIHIS proposal.

Blood Transfusions

As noted above, MDH investigated the impact of blood transfusions on SMM rates following removal of blood transfusions from national SMM definitions. Preliminary analyses suggest that the increases in SMM rates from 2018 to current have persisted with the exclusion of blood transfusion indicators. However, some differences by race and ethnicity are noted, such as fewer disparities between Hispanic and NH Asian groups when compared to NH White and a decrease in SMM rate excluding blood transfusions among NH Asian individuals. While additional analyses are underway to confirm these findings, the preliminary results further emphasize the need to prioritize efforts to reduce SMM among NH Black birthing individuals, where inequities in SMM rates persist both including and excluding blood transfusions.

[37] Fink et al. (2023) "Trends in Maternal Mortality and Severe Maternal Morbidity During Delivery-Related Hospitalizations in the United States, 2008 to 2021" https://jamanetwork.com/journals/jamanetworkopen/article-abstract/2806478

Significant contributors of elevated SMM rates from literature include: COVID-19, comorbidities, hypertension, mental health, racial disparities, and clinical level and patient factors.[38,39,40,41,42,43] Further findings are provided below.

COVID-19

Previous internal analysis from 2021 Maryland data demonstrated that there was an increase in respiratory conditions contributing to SMM, particularly in cases requiring ventilation. An analysis by Matsuo et al. (2023) that studied a population of 2,578,095 hospital deliveries across 2,691 centers between April and December 2020 found that pregnant patients with COVID-19 infection at delivery were more likely to experience a SMM event when compared to those without.[44] The same study indicated that COVID-19 infection was associated with the following specific outcomes: increased risk of tracheostomy, respiratory distress syndrome, ventilation, acute myocardial infarction, sepsis, shock, cardiac arrest, and coagulopathy. Additionally, the COVID-19 pandemic has had a long-lasting negative impact on health care services, increased maternal stress, potential delay in prenatal care, and an impact on social determinants of health.[45,46]

Comorbidities, Hypertension, Mental Health and Racial Disparities

Nationally, reported incidence of SMM is two- to threefold higher among NH Black women compared with NH White women; although the difference is less pronounced, the incidence of SMM is also higher among Hispanic, Asian and Pacific Islander, and Native American women.[47] Having a pre-existing medical condition was strongly associated with the risk for SMM. Maryland experiences similar disparities in SMM rates by race/ethnicity (Table 24). Having a pre-existing medical condition was strongly associated with the risk for SMM. Wolfson et al. (2022) revealed that 75 percent of pregnant women in their study who faced SMM had comorbidities including obesity, asthma, a mental health disorder and hypertension.[48] Additionally, Brown et al. (2020) discussed that NH Black women had a higher prevalence

[38] Matsuo K, Green JM, Herrman SA, Mandelbaum RS, Ouzounian JG. Severe Maternal Morbidity and Mortality of Pregnant Patients With COVID-19 Infection During the Early Pandemic Period in the US. JAMA Network Open. 2023;6(4):e237149. doi:10.1001/jamanetworkopen.2023.7149
[39] Guglielminotti J, Wong CA, Friedman, AM, Li G. Racial Ethnic Disparities in Death Associated with Severe Maternal Morbidity in the United States© 2021 by the American College of Obstetricians and Gynecologists. Published By Wolters Kluwer Health, Inc. All rights reserved. ISSN: 0029-7844/21
[40] Wolfson C, Qian J, Chin P, et al. Findings From Severe Maternal Morbidity Surveillance and Review in Maryland. JAMA Network Open. 2022;5(11):e2244077. doi:10.1001/jamanetworkopen.2022.44077
[41] Brown CC, Adams CE, George KE, Moore JE. Associations Between Comorbidities and Severe Maternal Morbidity. Obstet Gynecol. 2020 Nov;136(5):892-901. doi: 10.1097/AOG.0000000000004057. PMID: 33030867; PMCID: PMC8006182.
[42] Braveman PA, Arkin E, Proctor D, Kauh T, Holm N. Systemic And Structural Racism: Definitions, Examples, Health Damages, And Approaches To Dismantling. Health Affairs 2022;41(2):171-178. doi: 10.1377/hlthaff.2021.01394
[43] Joia Crear-Perry, Rosaly Correa-de-Araujo, Tamara Lewis Johnson, Monica R. McLemore, Elizabeth Neilson, and Maeve Wallace. Social and Structural Determinants of Health Inequities in Maternal Health. Journal of Women's Health.Feb 2021.230-235.http://doi.org/10.1089/jwh.2020.8882
[44] Matsuo K, Green JM, Herrman SA, Mandelbaum RS, Ouzounian JG. Severe Maternal Morbidity and Mortality of Pregnant Patients With COVID-19 Infection During the Early Pandemic Period in the US. JAMA Network Open. 2023;6(4):e237149. doi:10.1001/jamanetworkopen.2023.7149
[45] Kotlar, B., Gerson, E.M., Petrillo, S. *et al.* The impact of the COVID-19 pandemic on maternal and perinatal health: a scoping review. *Reprod Health* **18**, 10 (2021).https://doi.org/10.1186/s12978-021-01070-6
[46] https://aspe.hhs.gov/sites/default/files/documents/9cc72124abd9ea25d58a22c7692dccb6/aspe-covid-workforce-report.pdf
[47] 2023 Target calculated based on updated 2018 baselines and percentage decreases from original SIHIS application, depicted in Table 2.
[48] Fink et al. (2023) "Trends in Maternal Mortality and Severe Maternal Morbidity During Delivery-Related Hospitalizations in the United States, 2008 to 2021" https://jamanetwork.com/journals/jamanetworkopen/article-abstract/2806478

of medical comorbidities than any other racial or ethnic group.[49] The higher prevalence of medical comorbidities may be one reason why Black women experience higher rates of SMM. Systemic biases and structural racism may also contribute to these health inequities that increase a person's risk of an SMM event.[50] Crear-Perry et. al. (2021) described how larger structural policies and determinants stemming from these systemic biases and racism impact factors like housing, education, income, and the built environment–which are commonly known as the "social determinants of health." Collectively, these factors continue to drive disparate health outcomes of Black birthing women.[51]

Clinical Level Factors

Many SMM events are preventable, and recent analysis of Maryland SMM events found that approximately one third could have been averted by "changes to clinician-, system-, and/or patient-level factors".[52, 53] Clinician-level factors include the opportunity to assess patients at the point of entry for future care, diagnose patients or recognize those who are at high-risk of pregnancy complications, refer to treatment specialists in a timely manner, and have policies and procedures in place for certain processes, and particularly for discharge from hospitals.[54] Problems arising post-hospital discharge often originate from medically improper discharge, lack of patient counseling, and lapses in follow-up.[55] The Maryland Perinatal Quality Collaborative is working to address equitable care provision in Maryland's birthing hospitals; those efforts are described later in this report.

Programs and Interventions Supporting Maternal Health

Progress on the 2023 milestones and additional activities to address SMM are detailed below across the primary life stage impacted: 1) preconception and interconception period, 2) pregnancy, 3) birth/delivery period, and 4) postpartum. We also highlight several cross-cutting initiatives and external collaborations in the "Programs Using Data to Drive Action" and "Collaborations" sections. Specific programs funded by the Maternal and Child Health SIHIS funds are described in the below CenteringPregnancy Expansion and Home Visiting Expansion subsections. While Maryland met all 2021 milestones for the maternal health priority area, it is unlikely that the 2023 Year 5 Target will be met. MDH's mitigation strategy is presented in the "CY2024 Priorities" section.

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[49] Matsuo K, Green JM, Herrman SA, Mandelbaum RS, Ouzounian JG. Severe Maternal Morbidity and Mortality of Pregnant Patients With COVID-19 Infection During the Early Pandemic Period in the US. JAMA Network Open. 2023;6(4):e237149. doi:10.1001/jamanetworkopen.2023.7149
[50] Guglielminotti J, Wong CA, Friedman, AM, Li G. Racial Ethnic Disparities in Death Associated with Severe Maternal Morbidity in the United States© 2021 by the American College of Obstetricians and Gynecologists. Published By Wolters Kluwer Health, Inc. All rights reserved. ISSN: 0029-7844/21
[51] Wolfson C, Qian J, Chin P, et al. Findings From Severe Maternal Morbidity Surveillance and Review in Maryland. JAMA Network Open. 2022;5(11):e2244077. doi:10.1001/jamanetworkopen.2022.44077
[52] Fink et al. (2023) "Trends in Maternal Mortality and Severe Maternal Morbidity During Delivery-Related Hospitalizations in the United States, 2008 to 2021" https://jamanetwork.com/journals/jamanetworkopen/article-abstract/2806478
[53] The article and its supporting documents did not define "patient-level factors". However, other mortality prevention frameworks define patient/individual-level factors as those that "affect individuals before, during or after pregnancy and their family, internal or external to the household, with influence on the individual. This includes influences like chronic disease, cultural/religion, knowledge, mental health conditions etc. Source: https://reviewtoaction.org/sites/default/files/2022-12/Committee%20Decisions%20Form-fillable_v22_dec15.pdf
[54] Geller SE, Cox SM, Kilpatrick SJ. A descriptive model of preventability in maternal morbidity and mortality. J Perinatol. 2006 Feb;26(2):79-84. doi: 10.1038/sj.jp.7211432. PMID: 16407964.
[55] See 42.

Maternal and Child Health Improvement Fund

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

Programs for the Preconception and Interception Period

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, with priority provided for those individuals with incomes below 250 percent of the Federal Poverty Level. 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, health education/counseling, and referrals to community resources. The mission of the program is supported through 22 subrecipients who provide service delivery at 63 family planning service sites. In FY 2023, MFPP provided reproductive health care to 46,405 clients by way of 66,131 health care visits within its network.

During FY 2023, MFPP focused on strategies to advance Maryland toward health equity and improve access to high-quality, comprehensive reproductive health care services and related preventive health services for communities most in need. In achieving this goal, MFPP initiated a comprehensive Needs Assessment to evaluate and develop a strategy for program improvement. This project remains ongoing, with plans for completion in FY 2024. MFPP anticipates implementing recommendations from this assessment to promote program improvement to support Marylanders in their reproductive health care needs in FY 2025.

MFPP also implemented a telehealth expansion project in FY 2023. Through federal funding support, the program increased the capacity of nine local health departments (LHDs) and three non-profit clinic systems to provide family planning services utilizing telehealth. 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.

Programs During Pregnancy

CenteringPregnancy

The CenteringPregnancy group prenatal care model follows the traditional recommended schedule of ten prenatal visits, but with the difference that each visit is 90 to 120 minutes long. This model gives pregnant patients ten times the length of interaction with providers when compared with the average amount of interaction time in traditional prenatal visits. Moreover, the model allows for the patient to take their own weight and blood pressure and to record their own health data during the visit. This interactive approach empowers patients and fosters a sense of efficacy in managing their health. After the health assessment is completed, eight to 10 pregnant patients gather with a provider to be part of interactive activities designed to address important and timely health topics.[56] CenteringPregnancy is shown to be effective in reducing birth outcome disparities among NH Black pregnant people, who disproportionately experience adverse maternal health outcomes.[57,58] In response to the disproportionate SMM rates that affect particularly the Black birthing Marylanders, MDH has devoted funds to implement CenteringPregnancy in priority jurisdictions with high SMM rates. MDH is currently supporting the expansion of five sites through public health start-up funds. In F 20Y24, PHPA/MCHB combined additional public health funding from the Babies Born Healthy Program to provide support for three additional sites, for a total of eight new sites supported over the duration of SIHIS.

Effective January 1, 2023, Maryland Medicaid began reimbursing CenteringPregnancy providers at accredited or pending accreditation practices an enhanced payment for perinatal care. The enhanced payment is covered by the MCH Population Health Improvement Fund which supports the overall operations and sustainability of CenteringPregnancy practices. Medicaid created the infrastructure required to support the enhanced payment, including identification of a billing code and updates to the provider enrollment system (ePREP). This code is billed alongside a typical perinatal visit code. As of August 2023, there were 17 Medicaid-enrolled CenteringPregnancy providers.

Perinatal Care Coordination

Care coordination is a vital service to connect birthing people with the care they need. Improving system coordination and ensuring warm handoffs has consistently been cited by the Maternal Mortality Review Program as a necessary action to prevent future maternal deaths. Maryland pursues care coordination within its 24 jurisdictions through a combination of programs detailed below.

[56] Centering Healthcare Institute. https://centeringhealthcare.org/what-we-do/centering-pregnancy. Accessed 19 October, 2022
[57] Crockett, A. H., Chen, L., Heberlein, E. C., Britt, J. L., Covington-Kolb, M. S., Witrick, M. B., Doherty, M. E., Zhang, L., Borders, A., Keenan-Devlin, L., Smart, M. B., & Heo, M. (2022). Group versus traditional prenatal care for improving racial equity in preterm birth and low birthweight: the Cradle randomizedclinical trial study. American Journal of Obstetrics and Gynecology.
[58] CHI. CenteringPregnancy and CenteringParenting Annotated Bibliography. December 2022. https://www.centeringhealthcare.org/uploads/files/Centering-Healthcare-Institute-Annotated-Bibliography.docx-16.pdf

Thrive By Three Prenatal Care Access and Care Coordination

During the 2021 Maryland legislative session, SB 777/HB 1349 passed, increasing 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. Importantly, this access includes pregnant people who cannot otherwise access care due to their citizenship status. In Fall 2021, MDH hosted a town hall with LHDs, FQHCs, birthing hospitals, and other MCHB partners, to learn about challenges and needs of Maryland communities in regard to prenatal care access. Stakeholders shared the unique challenges that various different pregnant populations in their respective communities faced when attempting to access prenatal care, but all stakeholders agreed that both the uninsured and undocumented pregnant populations face the most significant barriers to consistently accessing prenatal care.

As of September 2023, three LHDs (Harford, St. Mary's, and Wicomico counties) and three Federally Qualified Health Centers (CCI, Inc., Greater Baden Medical Services, and Mary's Center) received funding to implement programs that increase access to prenatal care and care coordination, specifically for underserved populations. An additional three yet-undetermined programs will be funded in FY24.

Strengthening Referrals to Perinatal Care Coordination

Improving mechanisms to provide linkages to care for birthing people and their families is key to ensuring that they receive necessary care and services in the prenatal period. The **Maryland Prenatal Risk Assessment and Maternal Referral** (PRA) helps to identify Medicaid 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. Medicaid is leading efforts to better educate the provider community on the PRA through a website and educational materials. Additionally, MDH employs LHD Nurse Consultants to provide technical assistance to Administrative Care Coordination Units (ACCUs) on reaching out to providers.

The **Maryland Postpartum Infant and Maternal Referral (PIMR)** form is intended for use by Maryland birthing hospitals to refer high-risk infants and birthing people at hospital discharge to their LHD to be connected with community-based services and care. To increase the utilization of the PIMR form and linkages to care, MDH 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 FY23, MDH continued to explore the statewide rollout of the electronic PIMR form in partnership with CRISP. In FY24, MDH received federal funding to support expansion of the PIMR form to rural and suburban communities on the Eastern Shore and in Prince George's County, respectively. LHDs will also receive funding to conduct relationship building activities with birthing hospitals to identify opportunities to enhance linkages to care and increase utilization of the PIMR.

Supporting Birthing People with Opioid Use Disorder through the MOM Program

The MOM program 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 program focuses on improving clinical resources and enhancing care coordination to Medicaid beneficiaries with OUD during and after their pregnancies. Under the MOM program, 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. Program 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 program was expanded to be completely statewide, with availability to all eligible HealthChoice members. As of November 2023, the MOM program enrolled a total of 49 participants from across the State, 36 of whom remain active.

Programs during the Birth/Delivery Period

Maryland has a long history of collaboration in prenatal care and has made significant investments to enhance care during and after childbirth. MDH is further strengthening its efforts by taking a health equity approach in quality improvement implementation, and supporting sustainable doula reimbursements via Maryland Medicaid.

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 evidence-based safety or best practices bundles from the Alliance for Innovation in Maternal Health (AIM), which is a national, data-driven, maternal safety and quality improvement initiative. These safety bundles may include developing a standard protocol for recognizing early maternal warning signs, training(s) for providers, and education for patients. Additionally, unit practice drills are conducted to address high blood pressure during the birthing period.

All 32 Maryland birthing hospitals participated in an initiative focused on maternal hypertension from January 2021 through June 2023.The hospitals implemented a bundle of interventions that included best practices for preventing, identifying, and responding to a birthing person experiencing high blood pressure. The combined efforts led to a 59.1 percent improvement across all hospitals in the timely treatment of elevated blood pressures, defined as administration of the appropriate treatment within 60 minutes of identification of the elevated blood pressure. This included a 79.3 percent improvement in the timely treatment of elevated blood pressures for NH Black birthing people.

At this time, the majority of birthing hospitals identified that they were prepared to advance to the next initiative while transitioning their work focused on maternal hypertension to sustaining the improvements in care that were made. The MDPQC Steering Committee, which consists of perinatal care providers and public health professionals, worked with birthing hospitals to select obstetric hemorrhage as the next area of focus beginning July 1, 2023. Obstetric hemorrhage is one of the leading causes of maternal mortality and severe maternal morbidity in Maryland. This initiative capitalizes on another AIM Patient Safety Bundle with a focus on prevention, early identification, and rapid response to obstetric hemorrhage. Bundle components also focus on how hospitals can support a birthing person who has experienced an obstetric hemorrhage and their family after the event.

Doula Reimbursement

Doulas are trained to provide continuous physical, emotional, and informational support to a pregnant person 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, persons pregnant for the first time, giving birth in a hospital without a companion, or experiencing language or cultural barriers.

Effective February 21, 2022, doula coverage became a covered benefit, provided by the MCH Population Health Improvement Fund, and 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; and
5. The State Plan Amendment (SPA) was accepted by CMS with an effective date of January 1, 2022.

As of August 2023, eight individual doulas and four 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 has allowed 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.

Programs in the Postpartum Period

The early postpartum period is sometimes referred to as the "fourth trimester", highlighting the importance this time plays in not only newborn development and parent-child bonding, but also the emotional, physical, and mental recovery and growth that a recently pregnant person experiences. Home visiting, early childhood development, and expanded postpartum coverage are three strategies that MDH utilizes to provide comprehensive support to birthing people in this time period.

Maternal, Infant, and Early Childhood Home Visiting

Evidence-based home visiting programs offer a proven track record in addressing disparities in healthcare quality and health outcomes by coordinating care and providing education programs; continuing findings suggest how home visiting can be a mechanism to improve maternal health and reduce maternal morbidity.[59] The Maternal, Infant, and Early Childhood Home Visiting (MIECHV) Program is funded by HRSA. MIECHV's goals are to:

1. Improve maternal and child health;
2. Prevent child abuse and neglect;
3. Reduce crime and domestic violence;
4. Increase family education level and learning potential; and
5. Promote children's development and readiness to participate in school.

In FY 2023, this funding supported the implementation of three evidence-based home visiting models in ten jurisdictions in Maryland. Among the models included are: Family Connects, Healthy Families America (HFA), and Nurse-Family Partnership. Participation in the program is voluntary and home visitors meet virtually or in person to support families by providing information on various health topics including healthy

[59] 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

pregnancy practices, encouraging early language development and early learning at home, teaching positive parenting skills, working with caregivers to set family goals, and connecting families to other services and resources in their community.

Home Visiting Expansion

Through additional funding from HSCRC (the Maternal and Child Health Population Health Improvement Fund, or the Fund), a competitive procurement was pursued to expand evidence-based and promising practice models of home visiting and/or perinatal care coordination. Promising practice models of home visiting are interventions that show potential to be effective in improving outcomes, but have not yet received sufficient study to be considered evidence-based. Promising practice programs offer innovative solutions and allow for flexibility and adaptation based on data, as they are not bound by the same sort of strict protocols of evidence-based programs. In August 2022, four home visiting or perinatal care coordination programs were selected to provide services. The recipients of this funding opportunity included: Montgomery and Washington Counties' Health Departments, Baltimore Healthy Start, and Baltimore City-based The Family Tree. In the first year of funding (FY 2023), the sites concentrated on implementing the expansion of their programs.

Medicaid Reimbursement Of Home Visits

Effective January 13, 2022, Medicaid home visiting services (HVS) coverage became a statewide benefit. Medicaid met all key milestones and stakeholder engagement to create this coverage pathway including the creation of regulations for HVS coverage and the establishment of a new HVS provider type in ePREP. Additionally, Medicaid provided stakeholder outreach including hosting multiple provider enrollment training webinars and stakeholder meetings and maintaining a regularly updated FAQ document. The State also meets regularly with MCOs at the Monthly MCO MCH Office Hours to discuss the programs and benefits covered by the MCH Population Health Improvement Fund, providing an opportunity for an open dialogue and time for questions.

Utilization of Medicaid HVS increased in CY 2023. As of August 2023, 130 unique participants received a total of 1064 Medicaid HVS. In CY 2023, participants received an average of 8.2 visits each, an increase of 6.4 visits in CY 2022.

HealthySteps

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.

Effective January 1, 2023, MDH began reimbursing 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 is covered by the Fund which supports the overall operations of HealthySteps practices, including the salary of the HealthySteps Specialist. Medicaid created the infrastructure required to support the enhanced payment, including identification of a billing code and updates to the provider Medicaid enrollment system (ePREP).

As of August 2023, there were 66 Medicaid-enrolled HealthySteps providers. Maryland's implementation of the HealthySteps program, including the enhanced Medicaid payment, was recently recognized by the Prenatal-to-3 Policy Impact Center at Vanderbilt University.[60]

Medicaid Coverage Expansions

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 only two months postpartum to pregnant individuals with a family income between 139 to 264-percent of the Federal Poverty Level. The benefit was effective April 1, 2022. MDH estimates that this extended coverage will benefit approximately 4,000 members annually.

In the following 2022 Maryland Legislative Session, HB 1080–Healthy Babies Equity Act (Ch. 28 of the Acts of 2022) 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 one. Prenatal and four months postpartum medical care, behavioral health, and dental care are now available to this population. The effective date for this expansion was July 1, 2023. Since its launch, over 5,500 individuals have enrolled into the new coverage. MDH estimated this will extend coverage for approximately 6,000 people annually.

Programs Using Data to Drive Action

The Maternal Mortality Review Program

Maternal mortality and maternal morbidity are critical indicators of maternal and community health. Recently the Maryland Maternal Mortality Rate (MMR) has improved relative to the national rate. 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

[60] 2023 Maryland Roadmap Summary (2023). Prenatal-to-3 Policy Impact Center at The University of Texas at Austin. https://pn3policy.org/pn-3-state-policy-roadmap-2023/md/.

live births.[61] 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. The Maryland Maternal Mortality Review Program (the Program) was established in 2000 by Health-General Article §§ 13-1201 through 13-1206, Annotated Code of Maryland. The overall mission of the Program is to review the pregnancy-associated deaths that occur in the State, identify interventions that could have prevented these deaths, and promote change among individuals, health care systems, and communities in order to prevent future maternal deaths, reduce maternal morbidities, and improve population health.[62] The Program drives change by presenting its recommendations annually 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 2022, the Program put out a call for member applications for the multidisciplinary Maternal Mortality Review Team (MMRT). New and returning members were oriented to the review process in late 2022, and began their first reviews of the 2021 pregnancy-associated deaths in February 2023. Members include individuals with expertise in perinatal mental health community advocacy, public health practice, individuals with lived experiences, Medicaid, specialists in maternal fetal medicine, obstetrics and gynecology, cardiology, substance use, advanced practice nurses, midwives, and violence prevention. As of October 2023, the MMRT has reviewed the majority of 2021's cases, and successfully led a team retreat on November 17, 2023 to support the program's review processes and operations.

The Program is also committed to supporting community-led approaches to reduce maternal mortality. In March 2023, MDH awarded funding to the Maryland Patient Safety Center (MPSC) to coordinate the inaugural Statewide Maternal Mortality Summit. The aim of the summit is to bring together birth workers and other key stakeholders from across the state to learn, collaborate, and innovate towards eliminating preventable maternal mortality and its associated disparities in care, access, and outcomes for birthing people. The summit is scheduled for May 2024. Additionally, MDH has funded three LHDs to pursue activities designed to address drivers of maternal mortality and prevent maternal deaths, as informed by the needs of each jurisdiction. Each LHD is required to work with and fund at least one community-based organization to design and implement their project over the course of FY24. Finally, in August 2023, MDH provided funding to the University of Maryland School of Nursing to conduct training with perinatal providers and birth workers on trauma-informed care. These trainings will support the provision of supportive, holistic care that is sensitive and responsive to the needs of Maryland's birthing people.

[61] https://health.gov/healthypeople/objectives-and-data/browse-objectives/pregnancy-and-childbirth/reduce-maternal-deaths-mich-04
[62] The Program reviews all deaths that occur during pregnancy or within one year of the end of pregnancy. This includes pregnancy-related deaths, where the cause of death is a pregnancy complication or exacerbated by pregnancy; non-pregnancy related deaths, where the cause of death is not associated with pregnancy, and cases where the Program cannot determine pregnancy-relatedness.

Collaborations

Progress under the Maryland 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 primarily responsible for identifying Maryland-specific gaps in maternal health data, disparities, quality of services, and policies to support pregnant and postpartum individuals, as well as providing guidance on activities and programs to improve the health of Maryland's birthing people.

Over 2023, the Task Force has continued its work to better understand the maternal health landscape of service providers who work with pregnant and postpartum individuals. The Task Force envisions creating an interactive map that will quickly identify key resources, services, and partners to birthing service providers and the wider public. The group developed a survey assessing the types and breadth of services providers may offer, and launched it to members and their networks in the spring of 2023. In addition to the information provided through this survey, the Task Force is also working with its Equity Advisor and the larger MDMOM project team to gather information on complementary resources such as local health departments, federally qualified health centers, nutritional services, food security services, lactation support providers, and more. The map is expected to be live in Spring 2024.

The Task Force also continues to prepare updates on the Maryland Maternal Health Strategic Plan (the Plan). The original plan was released in Fall 2021 and 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 interconnected life stages, and addressing the public health infrastructure that underpins high quality services. In late 2022, the Task Force raised the need to update the strategic plan to better center reproductive justice and incorporate lessons learned from the pandemic. In Spring 2023, the Task Force created five work groups organized around the strategic plan goals to propose changes and recommendations to objectives, strategies, and tactics using a reproductive justice lens. The Task Force will continue to advance this work through 2023, and identify further ways to make the strategic plan more actionable.

Maryland Maternal Health Innovation Program (MDMOM)

The Maryland Maternal Health Innovation Program (MDMOM 1.0) was a four-year program (2019-2023) to improve maternal health across the State 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, and perinatal telehealth. MDMOM is a collaboration between Johns Hopkins University, MDH, and the 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 2023. In March 2023, MDMOM developed and shared with stakeholders a data brief to present data from SMM Surveillance and Review Program implemented in 13 hospitals. At the end of 2023, the SMM Surveillance and Review Program included 20 hospitals representing more than 70 percent of the births in the State.

A series of three trainings were provided to perinatal health providers in birthing hospitals:

1. Breaking Through Implicit Bias in Maternal Healthcare developed by the March of Dimes (~3,000 trainees across all 32 birthing hospitals);
2. Learnings from Adverse Maternal Events in Maryland developed by MDMOM with expert consultants (~700 trainees across 32 hospitals); and
3. Managing Bias in the Care of Patients with Substance Use Disorders developed by MDMOM with expert consultants (~800 trainees across 32 hospitals).

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 33 home visiting programs (~290 staff trained; 1,139 pregnant and 1,888 postpartum clients received warning signs education); and program staff meet monthly to share experiences and learning through a community of practice model.

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 cuffs to patients through 24 of the 32 birthing hospitals. As of November 2023, about six blood pressure cuffs are distributed daily. MDMOM rigorously monitors and evaluates all its activities to inform their potential for use at scale in future years, and published five manuscripts on its findings in peer-reviewed literature. In October 2023, MDMOM was extended through a five-year (2023-2028) HRSA award.

Maryland Hospital Association

In 2023, the Maryland Hospital Association (MHA) continued to advance hospitals' capacity to understand and address the drivers of maternal health within their scope of influence—primarily through the Birth Outcomes Accountability Work Group, BIRTH Equity training co-developed with the MPSC, and as a convener/supporter for MDH outreach activities.

MHA's Board of Trustees prioritizes maternal health improvement and encourages member hospitals to actively participate in collective and individual actions to improve maternal health outcomes and reduce disparities.

MHA's Birth Outcomes Accountability Work Group includes clinical and executive maternal health leaders from all birthing hospitals in the state. The goal of the group is to raise hospitals' ability to evaluate their internal data for drivers of maternal health outcomes and to make the necessary internal connections among clinicians, equity leads, and executive leadership that will facilitate action in the most effective areas. The group met three times in 2023 to review statewide and individual hospital data; share learnings from their data, processes, and internal performance review practices; and to identify gaps. In 2024, the group will focus on strategies to bridge identified gaps in data capabilities and further home in on the drivers of maternal health disparities at each hospital.

Clinicians at 19 additional ambulatory sites and emergency departments completed BIRTH Equity training. BIRTH Equity helps non-obstetric providers and patients recognize and act on early warning signs of maternal harm. Clinicians receive additional training using a team STEPPS model to become aware of and interrupt their biases. The program amplifies implicit bias training and the growing suite of perinatal resources throughout the state.

CY 2024 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. As detailed in this report, it has become more evident that focusing on reducing SMM rates is crucial to improving the health of Marylanders. Additionally, SMM rates are greater among people of underrepresented racial and ethnic groups, including NH Black and Indigenous populations.[63] In CY 2024, the State remains committed to continue to invest in the outlined projects, with a focus on extended services to underserved populations and those at elevated risk of SMM. The State will continue to facilitate seamless coordination and collaboration among various stakeholders. This will involve fostering peer-to-peer learning calls to offer guidance and support to home visiting sites and community-based asthma programs.

In 2024, the State will continue its partnership with CRISP to update the SIHIS Dashboard to show SMM rates both with blood transfusion and without blood transfusions. Moreover, the State will also collaborate with HSCRC in regard to the likely missed 2023 milestones and will develop a mitigation plan to submit to HSCRC in spring 2024.

Domain 3d: Total Population Health – Child Health

Asthma has significant impacts on the health and well-being of all children, and also has one of the largest disparities of any chronic disease in the general population. Overall, rates of emergency department (ED)

[63] Rivara FP, Fihn SD. Severe Maternal Morbidity and Mortality: JAMA Network Open Call for Papers. JAMA Network Open. 2020;3(1):e200045. doi:10.1001/jamanetworkopen.2020.0045Centering Healthcare Institute. https://centeringhealthcare.org/what-we-do/centering-pregnancy. Accessed 19 October, 2022.

utilization are three to five times higher for Black non-Hispanic children than children overall, and almost five times higher than for non-Hispanic White children.

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. Childhood asthma was selected as a domain for SIHIS both because of its public health impact, and because Maryland has developed specific strategies to address asthma that provide an opportunity to reduce those impacts. These strategies are discussed in more detail below.

The specific goal, measure, milestones, and targets for this child health priority area are below, as well as 2018 baselines separated by race and ethnicity.

Table 25. 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
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 26. 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 August 2023, Maryland had 7.8 asthma-related emergency department visits per 1,000 children over the prior 12 months. This rate is 0.6 visits per 1,000 children higher than the CY 2023 target. As shown in Figures 11 and 12, while there was a gradual decline in the rates of emergency department visits prior to 2020 for children of all races, COVID-19 caused a large decrease in ED utilization rates across the board through early 2021.

Figure 11. Childhood Asthma-Related ED Visits for Rolling 12-Months, February 2018-August 2023

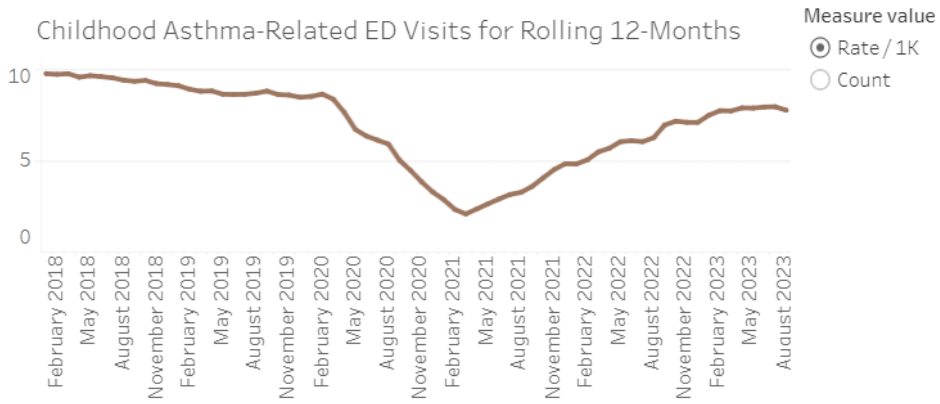


Figure 12. Childhood Asthma-Related ED Visits for Rolling 12-Months by Race/Ethnicity, February 2018-August 2023

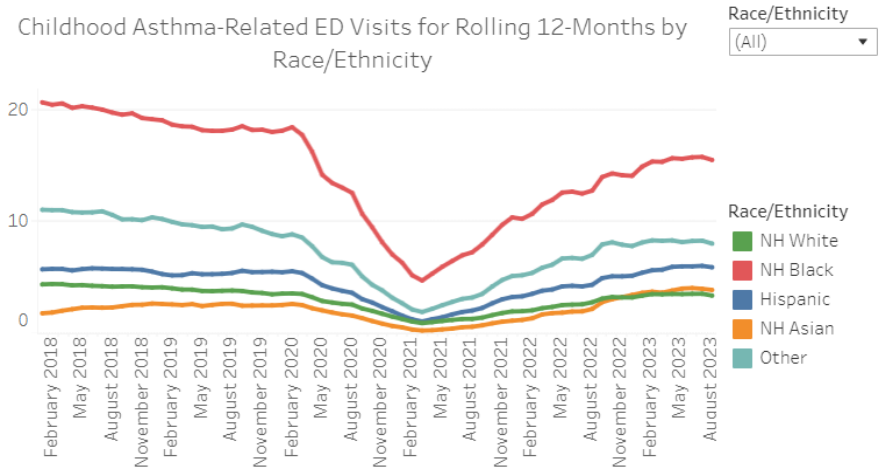


Table 27. Childhood Asthma-Related ED Rates by Race/Ethnicity, February 2018-August 2023

Race/Ethnicity	2018 Baseline	Most Recent 12 Months	2023 Target	Difference	Disparity Index
NH White	4.1	3.3	3.50	-0.2	1.0
NH Black	19.1	15.4	14.36	1.1	4.6
Hispanic	5.5	5.9	4.70	1.2	1.8
NH Asian	2.6	3.8	2.60	1.2	1.2
Other	10.3	8.0	7.30	0.7	2.4
Statewide Total	9.2	7.8	7.20	-0.6	2.3

COVID-19 and Other Influential Factors on Performance

As noted above, Maryland saw sharp declines in ED visits for childhood asthma in 2020 and early 2021 due to COVID-19. While 2022 volumes are trending back to 2018 baselines, MDH believes that the underlying rates of and disparities in asthma, as well as the pre-COVID-19 gradual decline in those rates, are still in place and are likely to resume gradually as COVID-19 becomes part of the background of viral respiratory disease in the population. MDH will continue to monitor asthma ED rates throughout 2023 and 2024 and evaluate the impact of COVID-19 on progress towards the SIHIS goals. In the meantime, MDH continues to expand interventions and identify opportunities under this domain to address and reduce childhood asthma and health disparities, based on the likelihood that these interventions will continue to be important in reducing the severity of childhood asthma and decreasing ED utilization rates due to asthma.

CY 2023 Updates

As reported in last year's annual report on SIHIS activities and shown in Table 25, Maryland met all of its 2021 milestones for the child health priority area. Progress towards the 2023 target and additional activities underway to address childhood asthma are described below.

Priorities Addressed in CY 2023

Development of Asthma Dashboard

Maryland's Environmental Public Health Tracking project run by EHB provides a display of asthma data by relevant geographies across the State. A dashboard for the SIHIS initiative is now included in the Environmental Public Health Tracking public portal, which includes the asthma measures adopted through the SIHIS process and also includes links to LHDs and other partners participating in the asthma interventions. The dashboard was completed in December 2021 and was released publicly in mid-2023. It is available on MDH's website. The dashboard provides an ongoing progress report on the State's efforts to

address the severity and health disparities in asthma, and will also demonstrate the programmatic efforts involved to do so.

Collaboration between Asthma Program, SIHIS, and Title V

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 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 FY 2022 and FY 2023, LHDs were allowed to use their core public health funding to address asthma. Activities include an 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, and partnering with the health exchange to strengthen linkages to care; more information on these efforts is included below. This opportunity allowed two larger jurisdictions (Baltimore City, Prince George's County) to supplement the activities of the lead/asthma home visiting program funded through the Maternal and Child Health insurance Program (MCHP) State Plan Amendment, and to provide services to some children who may not have been eligible for HVS under MCHP alone. For FY 2023, the Baltimore City, Queen Anne, and St. Mary's Health Departments used Title V funds to support asthma programming including home visiting activities.

Programs and Interventions to Address Childhood Asthma

Childhood Lead Poisoning and Asthma Prevention Environmental Case Management Program Expansion

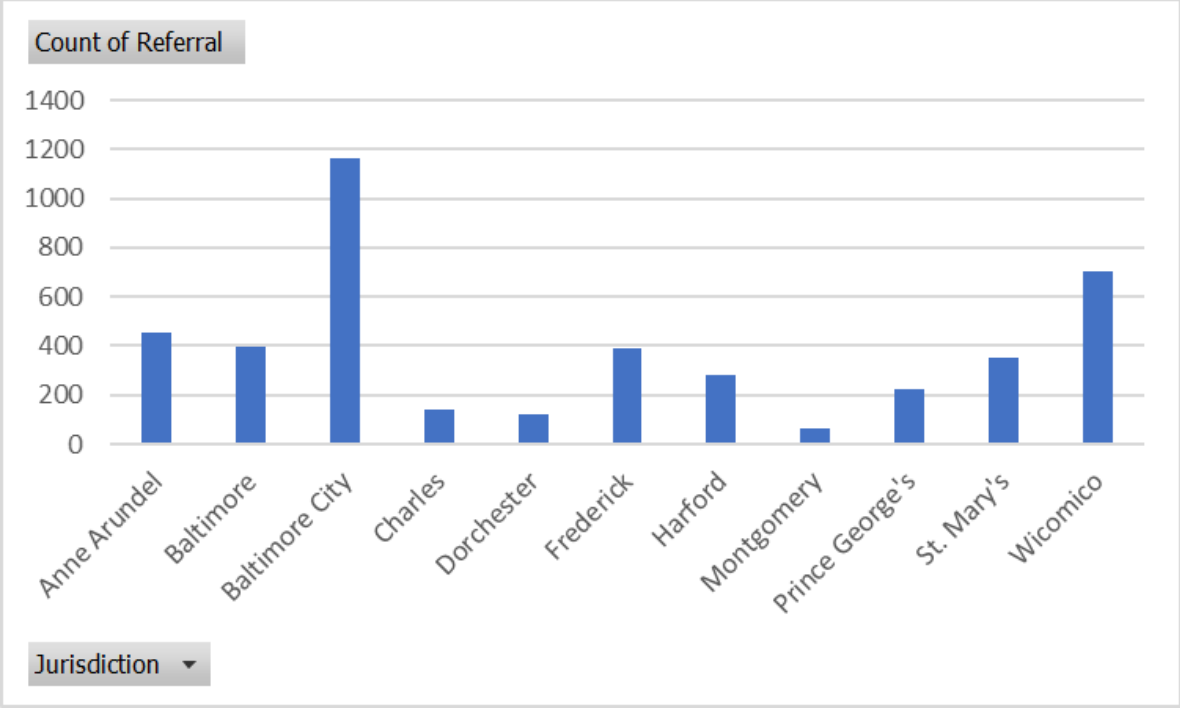
Environmental home visiting programs have been shown to improve asthma outcomes, including adolescent asthma, by addressing asthma triggers in the home and other related environments. Below is a description of the efforts of MDH to improve childhood asthma outcomes.

MDH utilizes funds from Maryland Medicaid's Children's Health Insurance Program Health Services Initiative State Plan Amendment (CHIP HSI SPA) to support the Childhood Lead Poisoning and Asthma

Prevention and Environmental Case Management Program operating in eleven jurisdictions: Anne Arundel, Baltimore, Charles, Dorchester, Frederick, Harford, Montgomery, Prince George's, St. Mary's, and Wicomico Counties, and Baltimore City. The environmental care management program benefits children suffering from moderate to severe asthma with up to six home visits, facilitated by LHD community health workers (CHW) and/or supervising case managers. Generally, families remain in the program up to a year, though in some cases they may take longer.

These visits include an evaluation of environmental triggers, parent education and provision of supplies shown to reduce asthma severity, such as a HEPA vacuum cleaner. The environmental care management program also ensures care coordination amongst providers who interact with the child through the use of asthma action plans. In FY 2023, more than 680 children with asthma received services through this program. In support of the SIHIS and MDH's goal of addressing health disparities, 80.3 percent of the children with asthma served in the program were NH Black or African American.

Figure 13. Referrals For Asthma to Local Health Department Home Visiting Programs (February, 2018 - June, 2023)



Improving Referrals to Local Health Department Asthma Home Visiting Programs

One of the most significant challenges to the environmental care management program has been recruiting families into the program. MDH developed several strategies to improve the referral process, including:

- Care Alerts to health providers through Maryland's health information exchange, Chesapeake Regional Information System for our Patients (CRISP);
- Direct electronic referrals through CRISP to LHDs of children recently discharged from emergency departments or inpatient admissions for asthma exacerbations; and
- Direct referrals from hospitals and managed care organizations to LHD home visiting programs.

Table 28. Referrals to Home Visiting Programs for Asthma by Year

Referral Source	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	Accepted Services[$]
Child Care Provider	0	0	0	3	2	100%
CRISP	0	0	0	4	2,052	27%
Hospital	0	0	0	34	65	55%
Local Health Department	0	2	1	10	47	68%
Managed Care Organization	0	0	0	0	3	67%
MDE	0	0	0	0	7	86%
Medicaid	0	0	0	4	0	25%
Medicaid Finder File	13	12	8	1,034	255	16%
Parent	0	0	0	30	132	81%
Primary Care Provider	0	0	0	3	11	79%
School Based Health Center	0	0	0	2	7	67%
School Nurse	0	0	0	2	24	58%
Other*	0	9	1	54	51	70%
Unknown**	31	155	265	956	8	48%

[$]"Accepted Services" means the family accepted home visiting services or other services for some period of time during the fiscal year.
***Other referral source may include, but is not limited to, asthma call list, outreach event, another LHD, other health care provider, Green & Healthy Homes Initiative (GHHI), family member, other health department employee, or another program participant.**
****The referral source is not recorded**

Taken together, these strategies have significantly increased both the number and diversity of the referrals to the LHD home visiting programs for asthma (Table 28). The first direct electronic referrals of children with recent ED visits or hospitalizations due to asthma were sent from CRISP to LHDs starting September 8, 2022; referrals have continued at the rate of 10 children/LHD/week resulting in most referrals through this mechanism in FY2023.

Difficulties in recruiting families are related in part to the time between the acute health event and the contact by the home visiting program with the family. Since asthma is not a reportable condition, LHDs have had to wait for Medicaid administrative claims data to identify potential recruitment opportunities. Medicaid administrative claims typically have a processing time between six months and a year, leading to

a large gap between health events and the recruitment contact by LHD staff. Additionally, LHD staff have cited difficulties reaching some families, as contact may change in the interim. Finally, many families opt to decline HVS for a variety of reasons, including: (1) the acute event has resolved, and the child is now doing well; (2) the family may not believe the child has asthma, because the diagnosis was made in a hospital but the family has not yet communicated with the primary care provider; or (3) the time between the health event and LHD contact has dampened the urgency of the matter that may subsequently be more controlled.

Community Based and Other Programs Focused on Asthma

In addition to the $1 million from the Fund used to strengthen the LHD home visiting program, MDH 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 and the other in Prince George's County, with high numbers of children with more severe asthma. With these funds, GHHI is addressing asthma through both educational interventions and home-based interventions and will also expand the number of children and families in Maryland who may be eligible for services.

The GHHI program is using a tiered intervention approach to conduct interventions to reduce exposure to home-based environmental asthma triggers such as dust-borne antigens, mold, and other asthma triggers. All of the families approved to participate in the program receive training in asthma triggers, an environmental assessment, and a set of cleaning and housekeeping supplies that assist the family in reducing or eliminating the triggers in the home. They also receive additional supplies including carbon monoxide detectors and smoke detectors. Children with more severe asthma or homes with more severe environmental trigger issues can receive additional services or supplies, including air purifiers, dehumidifiers, air conditioners, mold remediation, or improved insulation.

GHHI has reported to MDH that they are providing the following services in Prince George's County:

GHHI's goal roadmap: 210 children are to be enrolled in the Program over 42 months (3.5 years). In the initial 6 months, GHHI 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, case management, asthma trigger environmental assessment, and 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 is currently scheduling asthma resident educations and environmental assessments with the: Amerigroup client referrals; and referrals from GHHI marketing and outreach, health care providers, and other partners. GHHI conducted

marketing events and Partner Learning Collaborative Trainings with stakeholders in the healthcare, education, and social services area. GHHI also held community-based events with parents and stakeholders to increase asthma awareness, and decrease hospitalizations and ED visit rates for children ages 2 - 17 during the grant period. GHHI fully expects to meet the performance measures for the first 18 months of the Program by completing 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.

In Baltimore City, GHHI had some challenges in receiving referrals from its primary source (a large managed care organization). Progress to date includes:

GHHI goal roadmap: 280 children will be enrolled in the Program over 42 months (3.5 years). In the initial 6 months, GHHI planned to enroll and serve 40 asthma diagnosed children and their households. After the initial 6 months conclude, 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, case management, asthma trigger environmental assessment, and tiered asthma trigger reduction housing interventions, based on the severity of the child's asthma and the condition of the house.

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 is scheduling asthma resident educations and environmental assessments with the: client referrals from their partnering managed care organization, and other referrals from GHHI marketing and outreach; healthcare providers, and other partners. GHHI fully expects to meet the performance measures for the first 18 months of the Program 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

Asthma Community of Practice And Provider Education

The Asthma Community of Practice (CoP) was created by the PHPA's Environmental Health Bureau (EHB) with the vision that all people and families living with asthma in Maryland receive the best possible care so that asthma does not affect their quality of life, and with the mission of improving communication between different fields through information and resource sharing to enhance asthma management. 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.

In FY 2023, EHB successfully held two Asthma CoP meetings. The attendees included LHDs and asthma stakeholders across the state, including the Green & Healthy Homes Initiative, Johns Hopkins School of Medicine Department of Pediatrics, local community organizations, and insurers.

University of Maryland Medical System (UMMS)

As a consequence of SIHIS and MDH outreach, various hospitals and hospital systems have been taking advantage of internal systems to improve linkages to care for their patients with LHD home visiting programs. For example, the University of Maryland Medical System (UMMS) contracted MDH to incorporate patient education materials about the home visiting program into the discharge instruction system of the electronic medical record in the Baltimore UMMS hospitals, consisting of a QR code with a link to the home visiting program website.

CY 2024 Priorities

In 2024, 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. MDH 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 LHDs and the community-based provider are addressing disparities in implementing their programs. Finally, MDH will continue to prioritize provider education through the Asthma 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.

Appendix A: Hospital Quality – MDPCP Potentially Avoidable Admissions Analysis, 2022

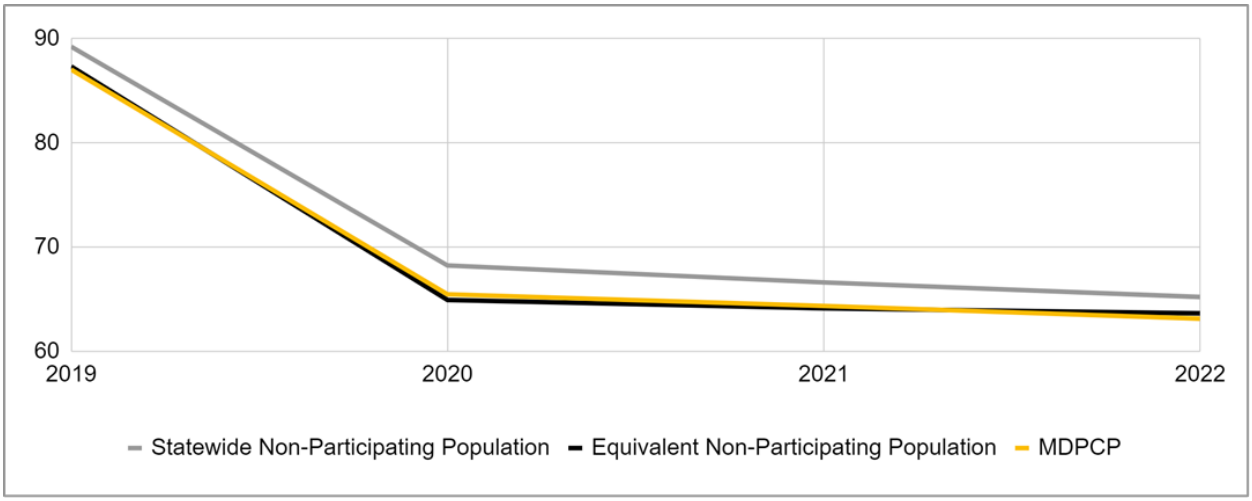
Table 1. Comparison Group Characteristics, 2022.

Population	Beneficiary Count	Description

MDPCP	**369,094**	Represents beneficiaries attributed to MDPCP participating practices.
Statewide FFS (Fee for Service) Population	**736,674**	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	**267,065**	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	**91,687**	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 then 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 2022, there was a decrease in PQI-like events (Figure 1) 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 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 (Table 2).

Figure 1. PQI-like Events Performance



In PY4, there were 63.12 PQI-like events per every 1,000 MDPCP-attributed beneficiaries, a decrease of 1.91% compared to the previous year (Table 2). This trend follows the prior three years in which PQI-like events decreased.

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

Category		Base Year 2019	2020	2021	2022	Cumulative Percent Change
Statewide Non-Participating Population		89.25	68.24	66.61	65.21	-28.03%
	% Change from Prior Year	N/A	-23.54%	-2.39%	-2.10%	
Equivalent Non-Participating Population		87.34	64.92	64.12	63.64	-27.65%
	% Change from Prior Year	N/A	-25.67%	-1.23%	-0.75%	
MDPCP		87.04	65.47	64.35	63.12	-28.40%

	% Change from Prior Year	N/A	-24.78%	-1.71%	-1.91%	