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Statewide Integrated Health Improvement Strategy

Annual Report

January 2022

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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 details efforts to achieve statewide population health improvement, make progress against the official 2021 SIHIS milestones, and provides information on broad stakeholder engagement activities to achieve success under SIHIS. Additionally, this report also highlights the State's efforts to achieve health equity and provides baseline values for racial disparities across all population health priority areas. Finally, the report provides information on the impact of COVID-19 on the State's ongoing performance under SIHIS, as well as the recent Maryland Department of Health (MDH) network security incident which has disrupted MDH operations.

The State is pleased to report that all 2021 programmatic milestones have been achieved. Performance results for the Domain 1 and 2 quantitative milestones are not yet available. For these milestones, the State will share performance results with CMMI as data becomes available in mid-2022 and formally report performance in the December 2022 annual report.

Table 1. SIHIS Goals and 2021 Milestone Progress

Domain Area	Goal(s)	Milestones Met
Domain 1 – Hospital Quality	Reduce avoidable admissions and readmissions	2021 Milestone Met Avoidable Admission Performance Results Available in 2022
Domain 2 – Care Transformation Across the System	Increase the amount of Medicare TCOC or number of Medicare beneficiaries under Care Transformation Initiatives (CTIs), Care Redesign Program, or successor payment model	Performance Results Available in 2022

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

Implications of COVID-19 on SIHIS

Maryland is closely monitoring the effects of COVID-19 on SIHIS performance. Given the evolving nature of the pandemic and emergence of new variants, such as delta and omicron, the impact that COVID-19 may have on SIHIS performance in 2022 and beyond is unclear. In cases where there are directional indicators or official monitoring data is available, COVID-19 has had clear deleterious or artificial effects on progress towards some SIHIS goals. As additional data become available, the State anticipates that COVID-19 will have the greatest impact on SIHIS goals associated with hospital-based settings of care, such as hospital avoidable admissions and readmissions, the severe maternal morbidity rate, and childhood-asthma ED rates.

Furthermore, in some SIHIS areas, Maryland has seen 2021 performance begin to trend back towards 2018 baselines. Given this, the State will continue to monitor these trends and communicate with CMMI if negative trends continue, or performance does not recover to pre-COVID levels. Moving forward, the unpredictable nature of the COVID-19 pandemic could have implications on SIHIS performance and could threaten the Maryland's ability to meet 2023 interim targets. Additional context on COVID-19's impact on specific goals is provided further in this report.

Background

The State of Maryland is leading a transformative effort to improve care and lower healthcare spending growth through the Maryland TCOC Model. The TCOC Model builds on the successes of the All-Payer Model, a five-year demonstration project with the CMMI that established global budgets for hospitals and ended December 31, 2018. In 2019, the State of Maryland launched the TCOC Model with the goal of "testing whether statewide healthcare delivery transformation, in conjunction with population-based hospital payments, improves population health and care outcomes for individuals, while controlling the growth of

Medicare Total Cost of Care."[1] Thus, the TCOC Model continued the hospital global budgets of the All-Payer Model, while also introducing additional responsibility and flexibility for the State to limit growth of Medicare total cost of care. Given the TCOC Model's broader mandate, the State and CMMI recognized that success under the new agreement would require more focus beyond hospital walls.

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

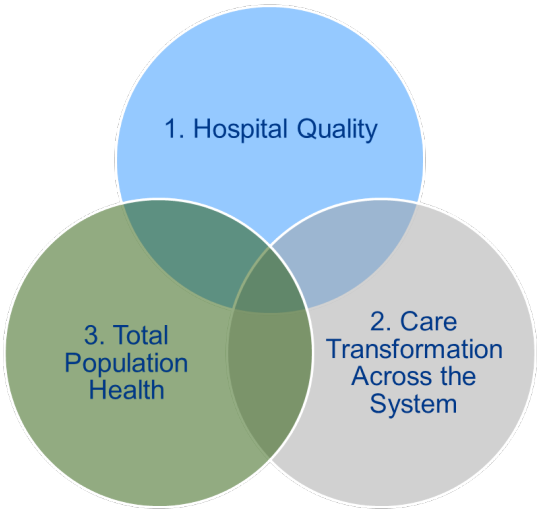
- Maryland's strategy should fully maximize the population health improvement opportunities made possible by the TCOC Model;
- Goals, measures, and targets should be specific to Maryland and established through a collaborative public process;
- Goals, measures, and targets should reflect an all-payer 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

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

- 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 population-based hospital payments 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 will 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.



- *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.

Progress towards 2021 milestones and highlights of ongoing initiatives to improve population health and health equity are detailed below.

State Commitment to Health Equity

The success of SIHIS is integrally linked to achieving health equity and reducing healthcare disparities across all population health priority areas. Addressing health disparities is a core component of SIHIS and Maryland is prioritizing health equity through a variety of pathways. In addition to specific interventions that

target vulnerable individuals, Maryland is focusing on health equity through the establishment of a statewide commission that sets health policy, through funding opportunities designed to address social determinants of health (SDOH), and through provider data collection and reporting strategies.

The Maryland Commission of Health Equity (MCHE) was established under the Shirley Nathan Pulliam Health Equity Act of 2021. The purpose of this multi-agency Commission is to determine ways for state and local governments to work collaboratively to implement policies and laws that reduce health disparities therefore increasing health equity across the state. Using a health equity framework, MCHE will advise on issues of racial, ethnic, cultural, and socioeconomic health disparities; develop a comprehensive health equity plan to address the social determinants of health; and set goals for achieving health equity in alignment with other statewide planning activities. Staff at MDH and MCHE are working collaboratively to ensure alignment between this newly formed health equity commission and SIHIS efforts.

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

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

Additionally, the State tracks racial disparities for as part of its ongoing SIHIS monitoring activities. During 2021, MDH, HSCRC, and CRISP staff collaborated to construct the SIHIS Directional Indicators Dashboard to support oversight of progress against the SIHIS Total Population Health goals. In addition to the aggregated performance, each measure is broken down by race to illustrate disparity gaps in outcomes. MDH leadership reviews this dashboard monthly to consider the State's progress and actions needed to work towards 2023 and 2026 SIHIS targets.

Broad Public-Private Sector Engagement Strategy

Consistent with the guiding principles used by the State when developing its SIHIS proposal, the State is employing a strategy that leverages public and private partnerships with shared resources and infrastructure to achieve its goals. Engaging new and unlikely partners, beyond traditional public health stakeholders, will also be key to realizing success under SIHIS. Throughout 2021, the State has led a broad stakeholder engagement approach to achieve the goals of SIHIS and provide oversight of ongoing work.

Secretary's Vision Group and Population Health Management Group

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

The Population Health Management Group (PHMG) is a sub-group of the SVG. It is a working group composed of a diverse group of stakeholders across State agencies and includes hospital, physician, and payer representatives. The PHMG serves as the official oversight body for the Total Population Health domain under SIHIS. The PHMG meets every other month to review performance on the population health goals, receive reports on State-led initiatives for each priority area, and to discuss broad strategies to impact SIHIS targets. PHMG members are currently developing a framework to address social determinants of health including risk and protective factors that are shared across the health priority areas and can impact Total Population Health domain goals.

Engaging the Business Community

While hospitals, physicians, payers, and public health advocates have long been engaged in addressing population health, the State also knows there are untapped stakeholders who have an interest in creating healthier communities. During 2021, MDH began discussions with the Department of Commerce (DOC) on strategies to engage the business community and communicate the role SIHIS can play in creating a healthier workforce. Payers, such as CareFirst, are already working with employers to improve employee health and are also supporting this SIHIS initiative to engage the business community. Through

Maryland's Healthiest Business Program, part of the Diabetes Action Plan, MDH is already engaging employers on initiatives to address diabetes in the workplace for high-risk employees. In addition to this work, MDH and DOC plan to form focus groups to develop messaging to best communicate the significance of SIHIS to employers and how they can improve the health of their employees around each of the population health priority areas.

Stakeholder Innovation Group – Innovations for Better Health

While the Stakeholder Innovation Group (SIG) is primarily focused on supporting the development of new payment models for Maryland healthcare providers, the SIG has been collecting an inventory of key interventions supporting the TCOC Model and SIHIS. The Innovations for Better Health website was established to help capture and spread innovations that are happening statewide that align with the goals of Maryland's unique hospital model and updated recently to include innovations aligned with Maryland's Statewide Integrated Health Improvement Strategy (SIHIS). The site showcases the innovations that put Maryland on the leading edge of care delivery transformation and population health improvement. This site, a product of the SIG, demonstrates how health care providers—including hospitals, doctors, skilled nursing facilities, and community organizations are working together to make care more preventive, more personalized, and more productive. To date the site has collected 221 innovative case studies and continues to grow. Some highlights of interventions that support SIHIS include:

Garrett Regional Medical Center – Well Patient Program

Under the Well Patient Program, nurse navigators, social workers, community health workers, pharmacists, dieticians work with high-utilizer patients to deliver care in the most appropriate and cost-effective setting. The program addresses medical, social, psychological, and financial limitations that impact the patient's ability to manage their chronic disease. The program works closely with primary care providers and community partners to assist patients and their caregivers.

CAREAPP

CAREAPP is a community-wide project led by Howard County Health Department that aims to improve access to social support services and resources -- such as health, transportation, food, education, employment, housing, and access to care -- through a web-based platform operated by Healthify. This platform features a live, searchable resource database, a needs assessment screening tool, a two-way referral tracking system and data analytics. The tool allows partner organizations and providers to communicate in real-time and link vulnerable clients to critical resources and support.

Leveraging CRISP to Drive Progress

Across each SIHIS domain, the State is leveraging the analytic capabilities and robust clinical tools offered by the statewide health information change, the Chesapeake Regional Information System for our Patients (CRISP), to measure progress and meaningfully enhance patient care to achieve SIHIS goals. To support ongoing SIHIS monitoring efforts, the State has collaborated with CRISP to build a "SIHIS Directional Indicators Dashboard" that includes key indicators to help the State understand its performance. Phase 1 development of the dashboard is focused on the Total Population Health domain and uses either the official SIHIS population health goal measures or proxy measures if the official data source for the measure is heavily lagged. The dashboard also breaks down performance by race and ethnicity to illustrate health disparities present. Phase 2 development of the dashboard will be completed in spring and summer of 2022 and will include progress data for Domains 1 and 2. The dashboard is provided to SVG and PHMG members prior to meetings so that strategies can be discussed to address trends reflected in the data. In addition, the dashboard is accessible to local health departments, hospitals, and practices to promote alignment and accountability across the State and delivery system. The most recent reports from the dashboard and user guide are attached as appendices. Examples of provider tools that directly support the population health goals of SIHIS are referenced later in this report.

Domain 1 – Hospital Quality

Maryland hospitals made significant quality improvements under the All-Payer Model, achieving reductions in hospital-acquired complication and readmissions rates. Under the TCOC Model, Maryland hospitals must maintain these achievements and match any national quality improvement in these areas. While specific quality targets were not included in the contract, Maryland recognizes the need to make further progress in hospital quality, consistent with the broader care coordination and population health aims of the TCOC Model. The Hospital Quality domains 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 and population health aims of the TCOC Model, as it requires Maryland hospitals to work 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. Primary care providers, including MDPCP practices, are key partners with hospitals to meet this goal. Due to data lags, HSCRC intends to provide 2021 performance results in mid-2022. While final data is not yet available, the State believes that performance may be negatively

impacted by COVID-19. HSCRC staff will discuss the potential impact of COVID-19 on avoidable admissions with CMMI when performance results are available.

Table 2. Hospital Quality - Goal #1

Goal: Reduce avoidable admissions	
Measure	AHRQ Risk-Adjusted PQIs
2018 Baseline	1335 admits per 100,000[2]
2021 Year 3 Milestone	8 percent improvement
2023 Year 5 Target	15 percent improvement
2026 Year 8 Final Target	25 percent improvement

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

In March 2020, the Commission approved the nation's first program to provide financial incentives to hospitals that are able to reduce socioeconomic disparities in readmission. The program assesses patient-level socioeconomic exposure using the Patient Adversity Index, a measure that reflects exposure to poverty, structural racism and neighborhood deprivation. Due to the pandemic's impact on hospitals, rewards under the program are currently suspended. The HSCRC suspects the pandemic will impact not only hospital performance under the measure, as resources are diverted from care management and disparity reduction programs to COVID-19 response, but also validity of measurement under the program, as it is challenging to disambiguate the impact of COVID-19 and disparity reduction efforts on readmission disparity over time.

Table 3. Hospital Quality - Goal #2

Goal: Improve Readmission Rates by Reducing Within-Hospital Disparities	
Measure	Readmission disparity gap
2018 Baseline	Hospital-specific risk difference across levels of Patient Adversity Index.
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

[2] This all-payer baseline rate for MD residents was run using HSCRC case-mix data under PQI v2020. The baseline rate will be updated with new PQI versions to ensure that the baseline rate incorporates new codes and changes in clinical logic over time. COVID positive patients (primary or secondary diagnosis) should be removed for comparison to 2018 rates.

2026 Year 8 Final Target	Half of eligible hospitals achieving 50% improvement in disparity

Domain 2 – Care Transformation Across the System

Under the TCOC Model, Maryland has continued to build upon the successes of the All-Payer Model and move away from traditional fee-for-service payment systems and towards value-based care. During the TCOC Model, the State will continue and accelerate the transition towards value-based care and move all payments – regardless of setting of care – to a value-based payment arrangement. While these initiatives have helped the State's to reduce the total cost of care and the unnecessary hospitalization rate, the accountability for managing Medicare beneficiaries remains fragmented across many different providers in different settings of care.

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

The State already has significant delivery system reform efforts beyond the hospitals, including Care Redesign Programs (CRP) and the Maryland Primary Care Program (MDPCP). Throughout 2021, the State worked closely with CMMI to develop the Episode Quality Improvement Program (EQIP) which launched January 1, 2022. The first performance year of EQIP includes a range of initial Clinical Episodes in the specialty areas of cardiology, gastrointestinal, and orthopedics and will engage more than 2400 clinicians in care transformation efforts. The State also launched Care Transformation Initiatives (CTIs) in 2021. CTIs develop 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. Due to data lags, performance results for 2021 will be reported in the December 2022 annual monitoring report.

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 CTI
2018 Baseline	$0	0
2021 Year 3 Milestone	12.5% of Medicare TCOC under a CTI or CRP or successor payment model	7.5% of Medicare Beneficiaries covered under a CTI or CRP or successor payment model
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

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

Maryland healthcare providers are actively working to achieve the 2021 timely follow-up milestone by prioritizing and expanding case management and care transitions for high-risk patients. 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. Due to data lags, 2021 performance results for timely-follow-up will be reported in mid-2022.

Table 5. Care Transformation Across the System - Goal #2

Goal: Improve care coordination for patients with chronic conditions[3]	
Measure	Timely Follow-up After Acute Exacerbations of Chronic Conditions (NQF# 3455)
2018 Baseline	71.36%
2021 Year 3 Milestone	72.26% 1.25 percent improvement
2023 Year 5 Target	73.16% 2.52 percent improvement
2026 Year 8 Final Target	75.00% 5.10 percent improvement or 0.50 percent better than the national rate

Domain 3 – Total Population Health

Domain 3a: Total Population Health – Diabetes

Diabetes was identified in 2019 as a statewide priority by the Maryland State Secretary of Health. Since then, MDH has led statewide efforts to develop and implement Maryland's "Diabetes Action Plan" and galvanize stakeholders to address Maryland's approximately 1.6 million Maryland adults who have pre-diabetes and 500,000 Maryland adults in Maryland who have diabetes.[4] Since elevated BMI is a critical clinical indicator of diabetes risk, improvement in statewide BMI mean could have significant positive implications on the State's diabetes burden. The specific goal, measure, milestones, and targets for the diabetes priority area are below, as well as 2018 baselines broken down by race and ethnicity.

[3] Medicare-only based on Claims and Claims-Line Feed (CCLF) data.
[4] Maryland Department of Health, Diabetes Action Plan. https://phpa.health.maryland.gov/CCDPC/Pages/diabetes-action-plan.aspx

Table 6. Total Population Health - Diabetes Goal

Goal: Reduce the mean BMI for adult Maryland residents[5]	
Measure	Mean BMI in the population of adult Maryland residents
2018 Baseline	28.13 kg/m^2
2021 Year 3 Milestone	Identify the cohort of states that will serve as the control group to measure progress. Enter into Data Use Agreements (DUAs), if necessary. Launch the Diabetes Prevention and Management Program track of the HSCRC Regional Partnership Catalyst Grant Program. Expansion of CRISP Referral Tool to Regional Partnerships to increase patient referrals for Diabetes Prevention Programs. Incorporate 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).
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

Table 7. Race/Ethnicity Disparities in Maryland Adult Mean BMI, 2018

Race	2018 BMI (95% Confidence Interval)
White	27.9 (27.7, 28.1)
Black	29.3 (29, 29.7)
Asian	25 (24.4, 25.5)
American Indian/Alaskan Native	28.6 (27.2, 30)
Hispanic	28.9 (28.1, 29.6)
Other	28 (27.2, 28.9)

Source: 2018 Behavioral Risk Factor Surveillance Survey

Milestone Progress

Maryland is pleased to share that all four 2021 milestones for the diabetes priority area have been met. Descriptions of activities to accomplish this work are below.

[5] Mean BMI will be determined using the results of the Behavioral Risk Factor Surveillance System (BRFSS).

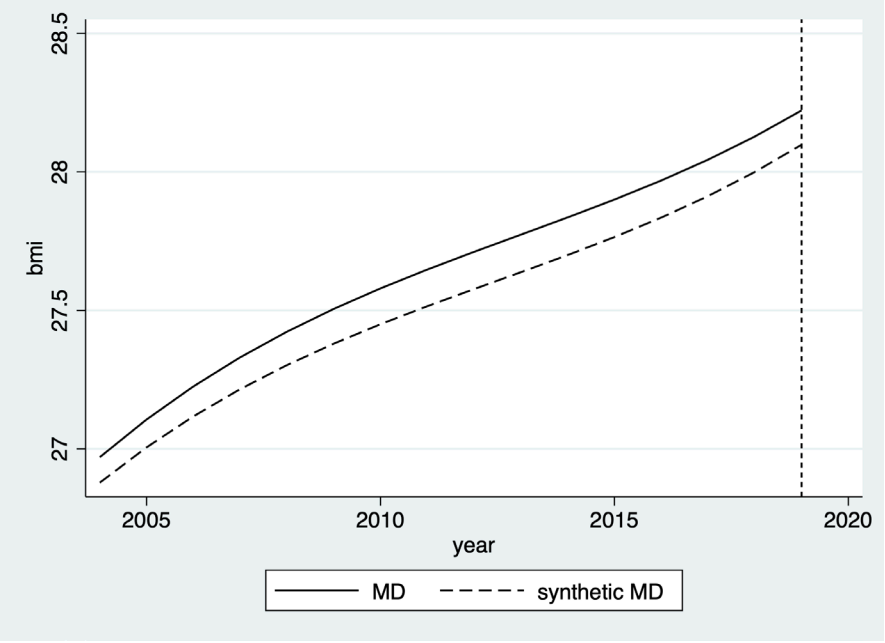
Milestone 1: Identify cohort of states for synthetic control group

HSCRC has selected 3 states and Washington, DC to serve as the synthetic control group: Delaware, Virginia, Mississippi, 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). To address imprecise estimates from survey data, the analytic process included estimation of state by year mean BMI using a random effects model with exponential terms that accounted for non-linear state trends in BMI. This process also employed survey weighting to account for non-random selection of respondents into the survey.

Using these smoothed annual estimates of state mean BMI, the synthetic control process identified a set of weights for each state that, taken together, produce a pre-intervention trend line that closely matches Maryland's, while yielding a control group that resembles Maryland across a selection of demographic variables, including race, education, age, income and gender. The synthetic control weights reflect the proportion of the control group's BMI that is attributable to a particular state. Most states receive a weight of zero, meaning they contribute no data to the synthetic control BMI estimate.

The synthetic control group produced a BMI trend that is acceptably close to Maryland's, as shown by the figure below.

Figure 1. Diabetes Synthetic Control Group - BMI Trend



States included in the control group were assigned weights as follows:

Figure 2. Diabetes Synthetic Control Group Weights

State	Weight

VA	0.362
DE	0.279
DC	0.25
MS	0.108

Milestone 2: Regional Partnership Catalyst Program – Diabetes Track

In November 2020, the Health Service Cost Review Commission (HSCRC) 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 is intended as seed funding, an initial investment in program development and growth. The HSCRC expects Regional Partnership programs will develop sustainable funding streams to support the programs after the HSCRC funding ends on December 31, 2025.

The HSCRC allocated $86.3 million to six Regional Partnerships 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 funding amounts are listed below.

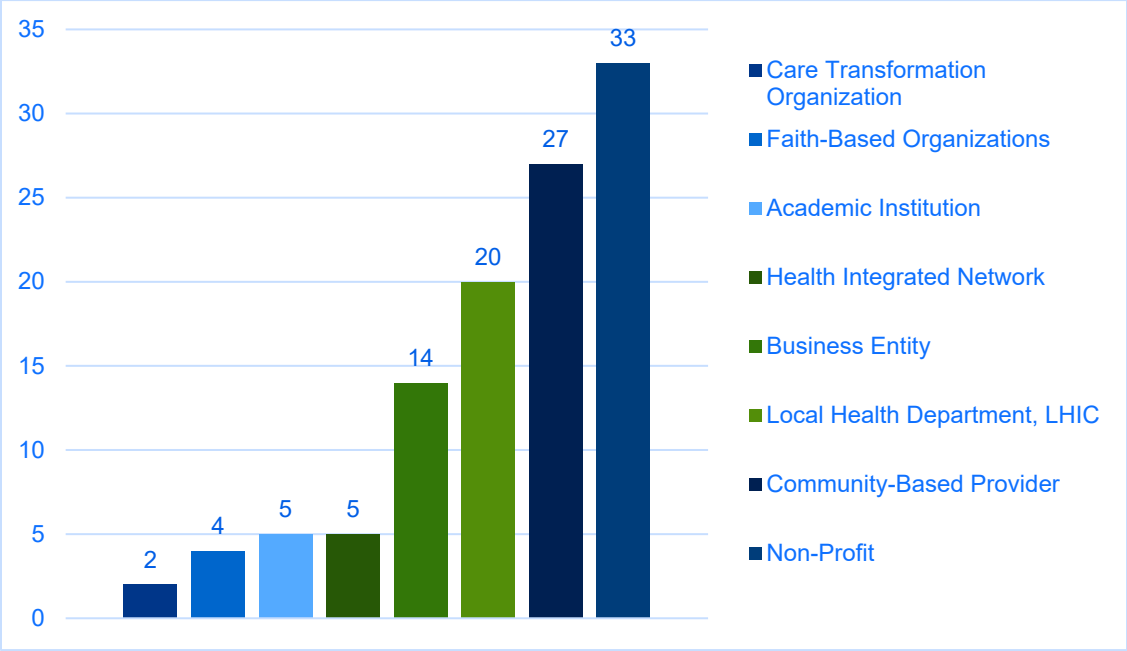
Table 8. Regional Partnership (Diabetes) Jurisdictions and Funding Amounts

Regional Partnership	Jurisdiction	**Total** 5-Year **Funding**
Baltimore Metropolitan Diabetes Regional Partnership	Baltimore City	$43,299,986
Western Regional Partnership	Allegany, Frederick, and Washington Counties	$15,717,413
Nexus Montgomery	Montgomery County	$11,876,430
Totally Linking Care - Maryland	Prince George's, Charles, and St. Mary's Counties	$7,379,620
St. Agnes and LifeBridge Health Diabetes Care Collaborative	Baltimore City/County	$5,962,333

Full Circle Wellness for Diabetes in Charles County	Charles County	$2,124,862

A core goal of the Regional Partnership Catalyst Program is to foster widespread collaboration between hospitals and community partners. Under this program, hospitals are partnering with neighboring hospitals and diverse community organizations including local health departments (LHDs), managed care organizations (MCOs), provider organizations, and non-profits to implement diabetes interventions and expand behavioral health crisis services infrastructure that are intended to aid in improving population health. Regional Partnerships receiving diabetes funding identified a total of 110 community partners to support the implementation of National DPP and DSMES in their communities.

Figure 3. Regional Partnership Diabetes Collaborator Types and Counts



Source: Regional Partnership Proposals

The first year of the program ended December 31, 2021, and Regional Partnerships will submit annual reports to the HSCRC for review in spring 2022. To date, Regional Partnerships have prioritized building relationships with existing DPP and DSMES providers, contracting with existing or establishing new programs, formalizing referral workflows, and developing infrastructure to bill for services to provide a sustainable source of funding for the programs in the future. In CY 2022, Regional Partnerships are expected to begin referring patients to a participating National DPP provider within their service area, as

well as begin initiating DSMES services. Many Regional Partnerships began this work in 2021 and will be scaling their operations in CY 2022 and beyond.

Milestone 3: Expanding Use CRISP DPP Referral Tool to Regional Partnerships

This year, the State prioritized expanding the use of a bi-directional DPP e-referral tool for use by a wide range of providers, including clinicians, HSCRC Regional Partnerships, managed care organizations (MCOs), health plans, and DPP providers. The tool is designed to allow for electronic referrals at the point of care that allows the community organization to accept and send back information on the status of the referral. All six Regional Partnerships that received funding to implement DPP have been onboarded to the tool. While the official 2021 milestone only refers to expanding the tool to Regional Partnerships, CRISP has also onboarded seven of the nine MCOs that offer HealthChoice DPP. The MDPCP Program Management Office PMO has also hosted education webinars for MDPCP practices outlining how to use the tool, encouraging referrals to DPP and promoting use of the referral tool as well.

Milestone 4: Maryland Primary Care Program – BMI Quality Measure

In January 2021, all 525 MDPCP practices began tracking the BMI quality measure and will report data to CMS via CRISP at the end of Q1 in CY 2022. The Program Management Office has prioritized a variety of activities to promote improved performance on the BMI measure and create sustainable practice workflows. In early 2021, the PMO developed resource guides for all four 2021 eCQMs, including CMS69v8, Preventative Care and Screening: Body Mass Index (BMI) Screening and Follow-Up Plan. This resource guide walks MDPCP practices through the specifics of the measure and lists patient support and provider resources. Additionally, the PMO launched a pilot program focused on involving practices in targeted, rapid-cycle Plan-Do-Study-Act (PDSA) cycles that began in October 2021 and will end in January 2022. The PMO has also hosted various educational webinars throughout the fall of 2021 to provide an overview of eCQMs for 2022 and promote use of the CRISP DPP Referral tool.

Additional Efforts to Address Diabetes Burden

The section of the report highlights additional initiatives the State and stakeholders are implementing to address diabetes burden in Maryland. The initiatives described are not an exhaustive list of ongoing and planned activities but are key areas of focus driving progress under SIHIS.

Maryland Department of Health Diabetes Action Plan

In 2020, MDH assembled a team to implement actions from the Diabetes Action Plan. A description of activities completed through 2021 include the following:

- Contract with the University of Maryland School of Public Health, Horowitz Center for Health Literacy to provide technical assistance to the Local Health Improvement Coalitions (LHICs) to prioritize diabetes in their communities. Health literacy training sessions for LHICs were included in

this effort to better serve individual communities with clear and appropriate diabetes prevention and control messaging. Technical assistance was provided to 20 functioning LHICs with each LHIC implementing a diabetes strategy in their jurisdictions.

- A web-based diabetes educational series for providers and community health workers who generally serve vulnerable or hard to reach populations.
- Initiation of a pilot study with multiple medical laboratories to identify hotspots of diabetes and prediabetes in various communities by zip code. These reports will pinpoint underserved communities with high prediabetes and diabetes prevalence or risk and may allow for the stratification of the data by income, race, and other indicators. Data analysis is expected at the end of 2021.
- The Diabetes Quality Task Force (DQTF) launched in the spring 2021 to address quality assurance, clinical guidelines, and standard messaging for diabetes prevention and management. The DQTF consists of four workgroups: Environmental Approaches, Health Systems Intervention, Data, Surveillance, and Epidemiology, and Community Clinical Linkages. These workgroups are prioritizing strategies to improve quality in diabetes care for all populations, including those who are hard-to-reach. Quality and outcome measures are in the process of being developed for this task force. Task force members completed a prioritization survey identifying activities that align with the Diabetes Action Plan.
- Initiation of an Employer Initiative with “The Cost of Diabetes in the Workplace: Actions you can take to reduce diabetes in Maryland” webinar in September 2021. This event aimed to increase commitment from benefits decision makers across the state of Maryland to address prevention of type 2 diabetes through adoption of the evidence-based practices that support lifestyle change in high-risk employees. The webinar provided participants an opportunity to hear directly from MDH, the Centers for Disease Control and Prevention (CDC), and CareFirst who have prioritized diabetes prevention in their worksite. Participants were issued a call to action at the conclusion of the meeting and have been offered an opportunity to receive individual consultation post-event.

Medicaid Initiatives

Medicaid continues to expand and refine implementation of its National Diabetes Prevention coverage under the HealthChoice DPP which is currently being implemented by all nine MCOs. A key initiative is implementing continued funding from the CDC through NACDD to Maryland Medicaid of $250,000 through its Coverage 2.0 - Part 4 grant program. The majority of this funding goes to MCOs and continues to support the incorporation of lessons learned from the Medicaid Demonstration Project in the areas of operational and financial management systems building, quality improvement processes, and the identification, strengthening, and coordination of stakeholders' roles into the development and implementation of sustainable coverage models for the National DPP lifestyle change program. MCO workplans for the coming year focus on issues of expanding DPP provider network capacity, especially for claims and billing, and to include both in person and online delivery modes; refining and using the eligibility algorithm developed by the Department, in coordination with the Hilltop Institute of UMBC, to proactively identify and outreach to potentially eligible members; strategies to help members enroll and stay in the program through use of food and program supports, and other creative marketing campaigns; launching online platforms to serve members “in-house”; and provider outreach and engagement strategies.

SVG Stakeholder Highlights

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

MedChi

MedChi, the statewide professional association for physicians, has been actively supporting efforts to address diabetes in Maryland. MedChi's Care Transformation Organization (CTO), part of the MDPCP, supports 25 practices. In addition to implementing the MDPCP diabetes quality measure, the CTO is piloting technology programs, such as My Sugar, and other diabetes-related remote patient monitoring tools to determine if they can help address diabetes burden. MedChi also worked with the American Medical Association (AMA) on education and outreach to physicians on diabetes burden.

CareFirst

CareFirst has prioritized enhancing diabetes benefits to members with diabetes and pre-diabetes. Members pay $0 for preferred brand insulin and diabetes supplies and may also participate in a virtual diabetes management program. CareFirst also operates Sharecare's DPP Scale Back program, a telehealth-based weight loss program for members at risk for pre-diabetes.

Leveraging CRISP to Drive Progress

In addition to using the CRISP DPP Referral tool mentioned earlier in this section, Medicaid is also working closely with CRISP on other tools to identify and refer patients to DPP. Medicaid is collaborating with CRISP to capitalize on the prediabetes flag technology that provides providers a Care Alert at the point of care that a patient is eligible for DPP. Additionally, CRISP also supports population level SMART alert reports so MCOs can provide proactive outreach and support to members potentially eligible for DPP.

CY 2022 Priorities

In 2022, the State is focused on accomplishing four main priorities to address diabetes and achieve SIHIS goals.

- Infrastructure development of data on selected BMI, Diabetes and Prediabetes measures will be completed to create a Diabetes Dashboard. Data development is important to understand type 2 diabetes and the risk factors for prediabetes and diabetes. An emphasis will be on developing the diabetes measures for a supplemental SIHIS Directional Indicators Dashboard and a Clinical Measure/Provider Dashboard. Baseline measures will be obtained, and the state will develop goals and objectives for improvement on the diabetes measures.
- The DQTF workgroups have been focused on developing work plans with activities that align with the Diabetes Action Plan and SIHIS measures. This will continue to be a focus in 2022.

- MDH will continue to partner with MDPCP and Medicaid to align and operationalize diabetes programming.
- Employer engagement is a priority for the state to continue efforts in addressing prevention of type 2 diabetes. MDH is participating in a state employer learning collaborative made available by the Centers for Disease Control and Prevention and the National Association of Chronic Disease Directors. The goal is to provide strategies to work with employers to increase coverage of the National DPP lifestyle change program.

Domain 3b. Total Population Health – Opioids

SIHIS presents a unique opportunity for the State to address the opioid crisis in Maryland. In 2015, the Lt. Governor convened the Maryland Heroin and Opioid Emergency Taskforce, which highlighted the opioid crisis as a critical health priority for the state. In 2017, Governor Hogan declared a State of Emergency, establishing the Opioid Operational Command Center (OOCC) and the Inter-Agency Heroin and Opioid Coordinating Council (IOCC) which is still in operation today. The specific goal, measure, milestones, and targets for the opioids priority area are below, as well as 2018 baselines broken down by race and ethnicity.

Table 9. Total Population Health - Opioids Goal

Goal: Improve overdose mortality[6]	
Measure	Annual change in overdose mortality as compared to a cohort of states with historically similar overdose mortality rates and demographics.
2018 Baseline	Age-adjusted death rate of 37.2/100,000
2021 Year 3 Milestones ***All Milestones Complete***	Identify the cohort of states who will serve as the synthetic control group to measure progress. Enter into Data Use Agreements as necessary. 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

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 through a proxy measure which uses data from the Office of the Chief Medical Examiner (OCME) and the Maryland

[6] Maryland will utilize CDC data that measure age-adjusted overdose rates based on ICD-10 codes.

Department of Planning. Additional detail on the proxy measure is included in Appendix 1 – SIHIS Directional Indicators Dashboard User Guide.

Table 10. Overdose Fatality Rates per 100K by Race/Ethnicity, 2018

Race	2018
White	48.47
Black	45.59
Hispanic	10.80
Asian	0
Other	22.10

Source: OCME Enhanced Data and Maryland Department of Planning

Milestone Progress

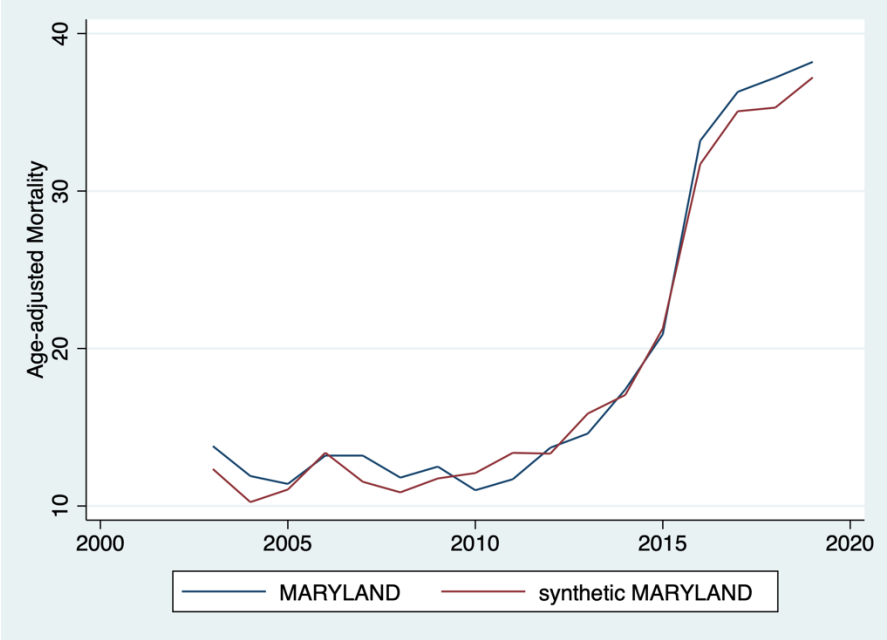
Maryland is pleased to share that all three 2021 milestones for the opioids use priority area have been met.

Milestone 1: Identify cohort of states for synthetic control group

HSCRC has selected three states and Washington, DC to serve as the synthetic control group: Massachusetts, New Jersey, Delaware, Washington, DC. To identify synthetic control states, Maryland relied on multiple years of age-adjusted overdose mortality data from the CDC. The synthetic control process identified a set of weights for each state that, taken together, produce a pre-intervention trend line that closely matches Maryland's, while yielding a control group that resembles Maryland across a selection of demographic variables, including race, education, income and gender. The synthetic control weights reflect the percentage of the control group's overdose mortality rate that is attributable to a particular state. Most states receive a weight of zero, meaning they contribute no data to the synthetic control estimate.

The synthetic control group produced a mortality trend that is acceptably close to Maryland's, as shown by the figure below.

Figure 4. Opioids Synthetic Control Group Mortality Trend



States included in the control group were assigned weights as follows:

Figure 5. Opioids Synthetic Control Group Weights

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

Milestone 2: Regional Partnership Catalyst Program – Behavioral Health Track

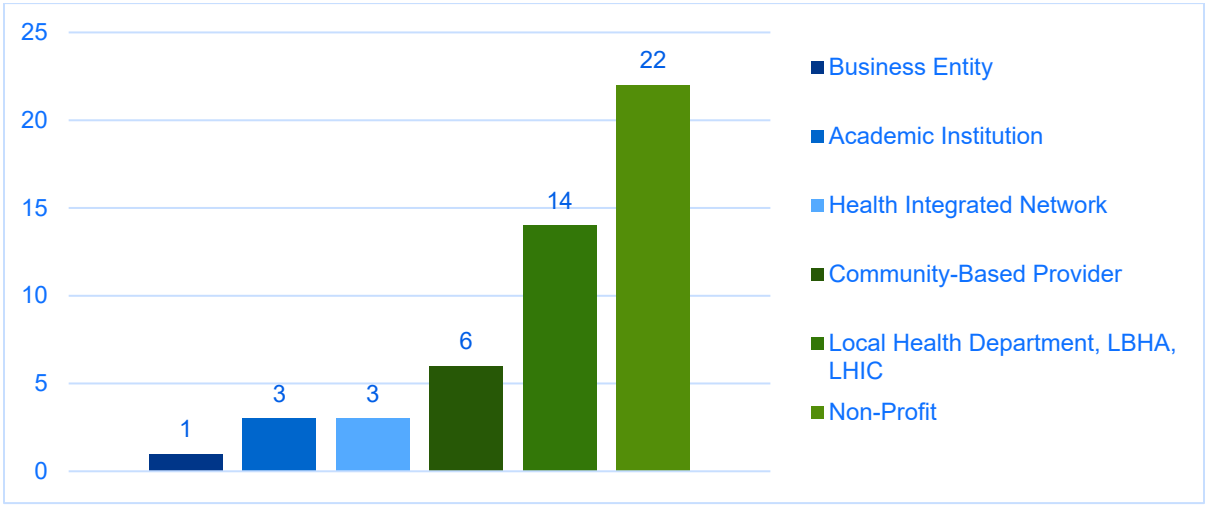
The Regional Partnership Catalyst Grant Program, discussed above in the diabetes section of this report, also supports the implementation and expansion of behavioral health crisis management models as described in the "Crisis Now: Transforming Services is Within Our Reach" action plan developed by the 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 listed below.

Table 11. Table 8. 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 identified a total of 49 community partners to support the expansion of behavioral health crisis services in their communities.

Figure 6. Regional Partnership Behavioral Health Collaborator Types and Counts



Source: Regional Partnership Proposals

As with the diabetes funding stream of the Regional Partnership Catalyst Program, the first year of the program ended December 31, 2021. Regional Partnerships will submit annual reports on activities and spending in spring 2022. To date, CY 2021 has primarily served as a planning year for each Regional Partnership. Regional Partnerships prioritized putting business agreements in place, finalizing memorandums of understanding, and procuring contracts necessary for implementing activities in CY 2022. GBRICS and TLC focused efforts on procuring software to implement "air traffic control" systems and expanding mobile crisis teams in their service area in CY 2022. TRIBE has spent the year preparing to open the doors to their ED-adjacent stabilization center in late January 2022.

Milestone 3: Expand SBIRT to 200 practices participating in MDPCP

As of December 2021, 311 MDPCP practices have implemented Screening, Brief Intervention, and Referral to Treatment (SBIRT). Of these, 115 practices have been assisted in transitioning their SBIRT data reporting into CRISP monthly. Since 2020, 296 providers and staff have been trained on SBIRT. This training includes the specific practice workflow and documentation in the EMR, the steps for a brief intervention utilizing motivational interviewing to assist patients with behavioral change.

The MDPCP provides practices with a menu of evidence-based methods of behavioral health integration. For example, to help practices combat Maryland's statewide opioid epidemic, the State engaged a contractor named Mosaic Group, which is experienced in integrating into primary care the evidence-based protocol for SBIRT. By the end of 2020, 157 MDPCP practices had fully implemented this process, 40 more than in 2019. The contractor has continued to work with these practices to ensure continuous improvement in the process as well as working with more practices to implement SBIRT.

Additional Efforts to Address Opioid Misuse

The section of the report highlights additional initiatives the State and stakeholders are implementing to address opioid use and reduce overdose mortality. The initiatives described are not an exhaustive list of ongoing and planned activities but are key areas of focus driving progress under SIHIS.

Opioid Operational Command Center Initiatives

The Opioid Operational Command Center (OOCC), the state's principal coordinating office for responding to the opioid and overdose crisis, will continue to facilitate inter-agency coordination of state efforts to ensure state and local initiatives are in alignment with the Hogan Rutherford Administration's policy priorities: Prevention & Education, Enforcement & Public Safety and Treatment & Recovery. The OOCC is charged with leading the development of the state's annual coordination plan which identifies the highest priority goals, strategies and tactics for the state's opioid and overdose response.

Additionally, the OOCC serves as a grant-making agency and distributes funding to governmental and non-governmental agencies to implement programs to reduce overdose-related morbidity and mortality. Understanding that individuals who are involved in the criminal justice system are at high-risk of overdose death following release from incarceration, the OOCC will be issuing a notice of funding opportunity (NOFO) to support local detention centers in standing up the provisions of the *Opioid Use Disorder Examinations and Treatment Act* of 2019. This act requires local detention centers to screen inmates for opioid use disorder and connect them to an FDA-approved formulation of medications for opioid use disorder (MOUD), if appropriate. By January 1, 2023, all local detention centers must be compliant with the legislation. The OOCC believes that by connecting individuals with OUD to MOUD within the correctional system, and ensuring continuity of care upon release, the State will address overdose risk for a vulnerable population.

The Outpatient Mental Health Center (OMHC) to Crisis Stabilization Facility (CSF) Transition Program was established by a grant from the OOCC in FY 2021 and received continued funding through FY 2022 this past summer. The goal of the program is to assist with the need for crisis infrastructure in Maryland by assisting established OMHCs with their transition to becoming CSFs. Through the technical assistance provided by the OMHC to CSF Transition Team, each selected site will work on a feasibility study, create operational and transition budgets, and increase their ability to provide buprenorphine products through obtaining DATA 2000 Waivers, as part of the funding received from the OOCC. Selected sites were notified of their selection in mid-December and their on-boarding began January 3rd, 2022. Each site will work with the OMHC to CSF Transition Team on all internal deliverables mentioned until June 30th, 2022.

Medicaid Initiatives

In addition to covering specialty SUD treatment in institutions of mental diseases (IMDs), Medicaid will now offer coverage to adults aged 21 to 64 who have a severe mental illness (SMI) diagnosis and are residing in a private IMD. Medicaid is also focused on expanding the Maternal Opioid Misuse (MOM) Model which is discussed more thoroughly under the maternal health milestones section of this report.

Naloxone Distribution and Saturation Formula

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

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

To better understand how local jurisdictions are reaching people at the highest risk for overdose with naloxone, CHRS developed a naloxone saturation formula based on previous research that demonstrated the effectiveness of naloxone distribution in reducing opioid-related mortality. One study showed that when naloxone was distributed to people at risk for overdose at 9-20 times greater than the number of overdose deaths, there was a 20.0-30.0 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.

Racial Disparities in Overdose Taskforce

In 2017, Maryland began observing racial disparities in overdose mortality trends. Between 2017-2019 overdose mortality declined by 11% for white Marylanders, while increasing by nearly 40% for Black Marylanders.[7] To respond to this growing disparity, the IOCC, chaired by Lt. Governor Boyd Rutherford, formed the Racial Disparities in Overdose Taskforce. The charge of the task force is to identify contributing factors leading to the acceleration in overdose deaths in the Black community and to identify policies and programs that can be implemented immediately to reduce overdose death among Black Marylanders. The workgroup is comprised of a diverse group of stakeholders, including but not limited to state and local government, providers, the advocacy community, and individuals with lived experience. The task force will report its findings to the Lt. Governor's Inter-Agency Opioid Task Force in August 2022.

SVG Stakeholder Activity Highlights

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

CareFirst

CareFirst has a team of care managers specifically dedicated to behavioral health transitions to improve patient outcomes. The team works collaboratively with patients, their providers, and community resources to provide support, care coordination and, when necessary, discharge planning from behavioral health facilities. CareFirst also has a comprehensive opioid management strategy to address inappropriate and high-dose opioid use, as well as a program to address potential overutilization of controlled substances and high-risk behavior. CareFirst is also implementing quality measures specific to behavioral health that incentivize providers to improve quality of care for patients.

MedChi

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

[7] Data from Vital Statistics Administration.

Leveraging CRISP to Drive Progress

In 2021, CRISP implemented a consent registry and management tool that enables provider mediated workflows for the registration of 42 CFR Part 2 compliant consents to share information. This tool will allow SUD providers covered under 42 CFR Part 2 to partner with CRISP to share substance use disorder treatment information with patient care teams through the HIE. CRISP worked in 2021 to increase the number of SUD providers sharing Part 2 information through the HIE. In addition, CRISP developed a workflow that will allow consent signatures to be captured outside the tool and then registered in the tool, enabling consents to be captured and filed as more SUD providers move to telehealth workflows due to the Covid-19 situation. In 2022, CRISP will train more BH and somatic care providers, including PCPs, federally qualified health centers (FQHCs), and hospital discharge planners to use the consent tool to register consent. In addition, CRISP will work with payers to enable them to work with their members to register consent so that the payer team can also view SUD information.

CY 2022 Priorities

In 2022, the State is prioritizing expanding SBIRT in emergency department (ED) and primary care settings to identify individuals with opioid use disorders. In parallel, the State will continue to work to expand access to MOUD in the hospital and primary care setting so that individuals who are identified as having an opioid use disorder can be connected to treatment. Additionally, Maryland will continue to expand its robust community-based naloxone distribution program. The State will increase efforts to ensure that healthcare providers, including opioid treatment programs, hospitals, homeless services providers, and emergency medical systems, are able to distribute naloxone directly to those at greatest risk for overdose.

Domain 3c: Total Population Health – Maternal Health

Severe maternal morbidity (SMM) events are unexpected outcomes of labor and delivery. According to the Centers for Disease Control and Prevention, severe maternal morbidity has increased in the past several years.[8] The increase may be due to overall population health changes in birthing individuals such as increasing maternal age, pre-pregnancy obesity, pre-existing chronic medical conditions, and cesarean deliveries.[9]

To generate the Maryland's SMM rate, the State uses administrative hospital discharge data and International Classification of Diseases (ICD) diagnosis codes and procedure codes. Federal partners such

[8] 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.

[9] 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.

as the Health Resource Service 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 then published in the Federally Available Data (FAD) Resource Document and the Alliance for Innovation on Maternal Health (AIM) Data resource webpage. Under SIHIS, Maryland is using indicators available through the FAD Resource Document and AIM Data resource webpage. The State intends to use the updated formula to align with national SMM calculations. The 2018 baselines have been updated from the SIHIS proposal to reflect the updated SMM indicators and most recent formula. The specific goal, measure, milestones, and targets for the maternal health priority area are below.

Table 12. Total Population Health - Maternal Health Goal

Goal: Reduce severe maternal morbidity rate	
Measure	Severe Maternal Morbidity Rate per 10,000 delivery hospitalizations
2018 Baseline	243.1 SMM Rate per 10,000 delivery hospitalizations
2021 Year 3 Milestone	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	219.3 SMM Rate per 10,000 delivery hospitalizations
2026 Year 8 Final Target	197.1 SMM Rate per 10,000 delivery hospitalizations

Table 13. Race/Ethnicity Disparities in Maryland SMM Rate, 2018 Baseline

Race	2018
NH White	181.4
NH Black	334.2
Hispanic	242.0
NH Asian	249.2
Other	205.2

Source: HSCRC Case-Mix Data

Impact of COVID-19 on Performance

The State is closely monitoring monthly performance on SMM rates which were negatively impacted by COVID-19. As vaccination rates increase in the State, the SMM rates are declining, although the impact of

the COVID-19 omicron variant on performance may impact this improved performance. The State will continue to monitor performance throughout 2022 and communicate with CMMI if negative trends continue and threaten the State's ability to meet its 2023 target. Despite the influence of COVID-19 on SMM outcomes, healthcare providers and stakeholders continue to work diligently to expand and implement interventions to improve maternal health and reduce SMM in Maryland.

Milestone Progress

Maryland is pleased to share that all four 2021 milestones for the maternal health priority area have been met.

Milestone 1: Re-launch the Maryland Perinatal Quality Collaborative

Perinatal Quality Collaboratives are state networks of teams working to improve the quality of care for mothers 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 uses the safety bundles from the AIM, which is a national data-driven maternal safety and quality improvement initiative. The MDPQC relaunched and hosted its initial MDPQC kickoff on January 25, 2021, on the AIM severe hypertension bundle. The kickoff consisted of patient speakers, a hospital's experience, and the AIM Implementation Director with a focus on maternal hypertension.

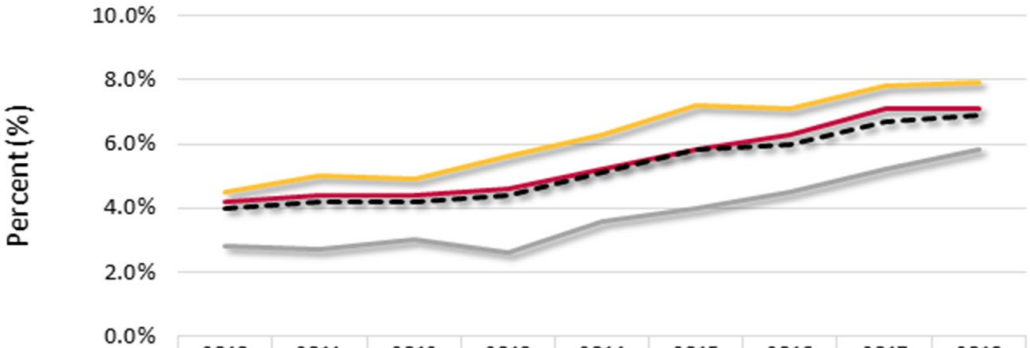
Hypertension was selected by the MDPQC Steering Committee, which consisted of perinatal care providers and public health professionals. Factors leading to this decision included that the rates of chronic and gestational hypertension have been steadily increasing in Maryland with increasing disparities in chronic hypertension seen between Black Non-Hispanic and White Non-Hispanic birthing people (Figure 4 and Figure 5). Steering Committee members recognized that hypertension conditions lead to severe complications. According to literature, birthing individuals with pre-eclampsia and eclampsia may have a 3- to 25-fold increased risk of severe complications, such as placental abruption, bleeding disorders, and respiratory complications.[10] Finally, a significant proportion of SMM events were related to hypertension. In 2018, seventeen percent of the SMM events were pre-eclampsia and eclampsia events.[11] From 2016-2019, 21% of the SMM events were related to hypertension-related severe maternal morbidity events.[12]

[10] Dr. Jun Zhang, Susan Meikle & Ann Trumble (2003) Severe Maternal Morbidity Associated with Hypertensive Disorders in Pregnancy in the United States, Hypertension in Pregnancy, 22:2, 203-212, DOI: 10.1081/PRG-120021066

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

[12] Calculated by the Maternal and Child Health Bureau Epidemiology with HSCRC data. Hypertension-related Severe Maternal Morbidity was defined as having 1 or more of the following conditions: acute renal failure, cardiac arrest/ventricular fibrillation, heart failure during procedure or surgery, conversion of cardiac rhythm, acute myocardial infarction, pulmonary edema, disseminated intravascular coagulation, thrombotic embolism, puerperal cerebrovascular disorders, eclampsia, or aneurysm. This was defined by the Centers for Disease Control and Prevention. https://www.cdc.gov/pcd/issues/2019/19_0045.htm#T1_down

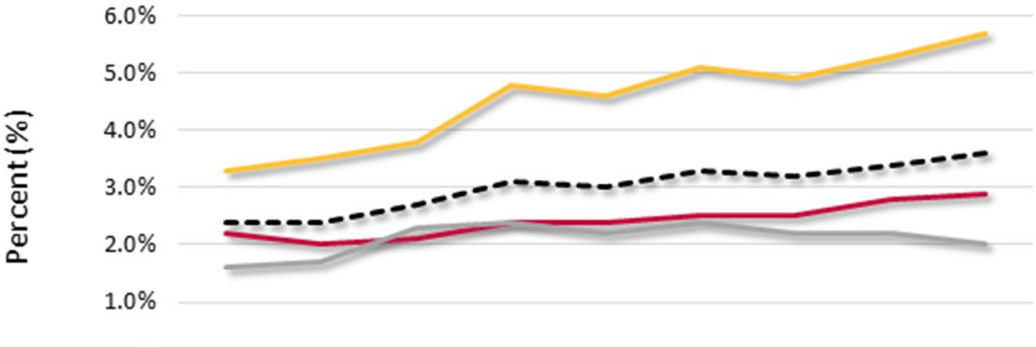
Figure 7. Percent of Births with Pregnancy-Associated Hypertension by Race and Ethnicity, 2010-2018



	2010	2011	2012	2013	2014	2015	2016	2017	2018
NH White	4.2%	4.4%	4.4%	4.6%	5.2%	5.8%	6.3%	7.1%	7.1%
NH Black	4.5%	5.0%	4.9%	5.6%	6.3%	7.2%	7.1%	7.8%	7.9%
Hispanic	2.8%	2.7%	3.0%	2.6%	3.6%	4.0%	4.5%	5.2%	5.8%
Total	4.0%	4.2%	4.2%	4.4%	5.1%	5.8%	6.0%	6.7%	6.9%

Data source: Vital Statistics Administration (VSA), MDH

Figure 8. Percent of Births with Chronic Hypertension by Race and Ethnicity, Maryland, 2010-2018



	2010	2011	2012	2013	2014	2015	2016	2017	2018
NH White	2.2%	2.0%	2.1%	2.4%	2.4%	2.5%	2.5%	2.8%	2.9%
NH Black	3.3%	3.5%	3.8%	4.8%	4.6%	5.1%	4.9%	5.3%	5.7%
Hispanic	1.6%	1.7%	2.3%	2.4%	2.2%	2.4%	2.2%	2.2%	2.0%
Total	2.4%	2.4%	2.7%	3.1%	3.0%	3.3%	3.2%	3.4%	3.6%

Data source: Vital Statistics Administration (VSA), MDH

All thirty-two Maryland birthing hospitals participate in the MDPQC. The MDPQC has been working to provide technical assistance to the birthing hospitals particularly in submitting data for the PQC and AIM (Table 1).

*Table 14. Maryland Birthing Hospitals Data Submission to MDPQC and AIM, Q4 CY 2020 - Q3 CY 2021**

	Hospitals Submitted, n (%)				% Change Q420 -Q321
Structure Measures	**CY20 – Q4**	**CY21 – Q1**	**CY21 – Q2**	**CY21 – Q3**	
S1: Patients, Families, and Support	12 (38%)	14 (44%)	14 (44%)	14 (44%)	17% ↑
S2: Debriefs	20 (63%)	24 (75%)	24 (75%)	26 (81%)	30% ↑
S3: Multidisciplinary Case Reviews	17 (53%)	21 (66%)	22 (69%)	23 (72%)	35% ↑
HTN S4: Unit Policy	22 (69%)	26 (81%)	27 (84%)	28 (88%)	27% ↑
HTN S5: EHR Integration	17 (53%)	21 (66%)	24 (75%)	25 (78%)	47% ↑

Source: MDPQC and AIM Reports

Milestone 2: Pilot a Severe Maternal Morbidity Review Process in Maryland Birthing Hospitals

In September 2019, the HRSA awarded the Johns Hopkins University (JHU) $10.3 million dollars over a five-year period as part of the State Maternal Health Initiative Program to address disparities in maternal health and improving maternal health outcomes, with a particular emphasis on preventing and reducing maternal mortality and severe maternal morbidity. JHU has partnered with MDH, Baltimore Healthy Start, and hospital centers to address SMM.

Six birthing hospitals participated in the SMM review process. The six hospitals were Anne Arundel Medical Center, Howard County General Hospital, Johns Hopkins Hospital, MedStar St. Mary's Hospital, Mercy Medical Center, and Sinai Hospital of Baltimore. The SMM Surveillance Case Definition in Maryland is adapted from the proposed CDC, American College of Obstetrics and Gynecology (ACOG), and Society for Maternal Fetal Medicine (SMFM) definition for facility-based surveillance. It includes all birthing individuals admitted to a critical care unit, birthing individuals with four or more units of red blood cells transfused, and birthing individuals affected by emerging public health threats requiring hospital admission and treatment.

Lead data abstractors at each hospital identify the SMM Cases, abstract, and enter relevant case information into a surveillance database that was developed by Maryland Maternal Health Innovation Program (MDMOM) health informatics specialists and housed on the MDMOM program website. Upon abstraction of data from several cases, multidisciplinary hospital-based review committees meet to review cases and assess their preventability.

Milestone 3: Draft Maryland Maternal Health Strategic Plan

As part of the Maternal Health Improvement Program, the Maternal Health Improvement Task Force developed a Maternal Health Strategic Plan to improve maternal health outcomes in Maryland for the next five years. The plan builds upon HRSA Title V Block Grant needs assessment and State's activities.

There are five goals for the Maternal Health Improvement Program Strategic Plan:

- Goal 1: Promote equity and anti-racism in maternal health policies and practices
- Goal 2: Promote maternal health (preconception, prenatal and birth, postpartum and interconception periods) through the implementation of effective programs and advocacy for necessary policy change.
- Goal 3: Acknowledge the influence of the social determinants of health and historical racism in the development of strategies to improve resiliency and promote an optimal quality of life for birthing people, their families, and their communities.
- Goal 4: Improve access to and utilization of data and improve surveillance of data on structural racism and its impact, to make informed policy decisions.
- Goal 5: Develop a maternal health provider workforce that will be available, accessible, and culturally relevant whose practice is rooted in principles of equity and racial justice.

The strategic plan builds upon the MDMOM initiative and includes 25 objectives and 57 tactics across more than 20 partners.

Milestone 4: Launch MCH Funding Initiative

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. Funding through Medicaid will create the opportunity for the State to receive federal match funding to nearly double the investment.

The following are the priority areas for the funding:

Medicaid-led Initiatives

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

1. Home Visiting Services pilot expansion;
2. Reimbursement for doula services;
3. CenteringPregnancy, a clinic-based group prenatal care model;
4. Healthy Steps, a clinic-based intensive prenatal and postpartum case management framework; and
5. Maternal Opioid Misuse (MOM) model expansion

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Home Visiting Services (HVS) Pilot Expansion

Medicaid has operated a Home Visiting Services (HVS) pilot since 2017 through its §1115 waiver, which has enabled an expansion of evidence-based home visiting services to Medicaid-eligible high-risk pregnant individuals and children up to age two. The HVS pilot program is aligned with two evidence-based models focused on the health of pregnant individuals. The Nurse Family Partnership (NFP) model is designed to reinforce maternal behaviors that encourage positive parent-child relationships and maternal, child and family accomplishments. The Healthy Families America (HFA) model targets parents facing issues such as

single parenthood, low income, childhood history of abuse, substance use disorder, mental health issues or domestic violence. The current financing structure of the HVS pilot, which requires local lead government entities to provide a local match through an intergovernmental transfer, has garnered limited participation from additional lead entities because of the requirement to produce the required match from non-federal funding sources. Expanding existing HFA or NFP programs will allow more high-risk pregnant individuals to get access to both health and social support during the prenatal to three-year period through home visiting services.

HVS coverage is anticipated to be available statewide through all nine MCOs, effective January 13, 2022. As of December 2021, Medicaid has met all key milestones required in the path to coverage: 1) regulations for HVS coverage are drafted and were available for public comment between October 22-November 22nd. These include the requirements for HVS participation with Medicaid, including accreditation standards and the proposed reimbursement model, among other coverage details; 2) a new HVS provider type has been established in the Medicaid Management Information Systems (MMIS); 3) two provider enrollment training webinars are being prepared and scheduled for December (one focused on LHD enrollment, and the other non-LHD enrollment); 4) meetings with MCOs have occurred in July, September and October, a FAQ document with MCO questions has been prepared, and MCOs are preparing their systems for this coverage; 5) MDH has maintained communications with HVS stakeholders and is scheduled to meet weekly with the MCH Bureau (MCHB) staff through the end of the year to discuss implementation progress, communications and collaboration opportunities to help ensure a successful rollout of this benefit, including how programs that currently are funded by maternal, infant, and early childhood home visiting (MIECHV) will respond to the Medicaid coverage.

Reimbursement for Doula Services

Doulas are trained to provide continuous physical, emotional, and informational support to a mother before, during and shortly after childbirth. Key to a doula's function are the provision of emotional support and a constant presence during labor; encouraging laboring individuals and their families; and communicating between mothers 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, primiparous, giving birth in a hospital without a companion or had experienced language or cultural barriers.

Doula coverage is anticipated to be available statewide through all nine MCOs, effective February 7, 2022. As of November 10, 2021, Medicaid has met all key milestones required in the path to coverage: 1) regulations for doula coverage are drafted and are now expected to be available for public comment between November 19-December 20th. These include the requirements for doula participation with

Medicaid, including certification standards and the proposed reimbursement model, among other coverage details; 2) a new doula provider type has been established in the MMIS system; 3) two provider enrollment training webinars are being prepared and scheduled for December (focused on Doula group enrollment) and January (focused on individual doula enrollment; 4) meetings with MCOs have occurred in July, September and October, a FAQ document with MCO questions has been prepared, and MCOs are preparing their systems for this coverage; 5) MDH has maintained communications with doula stakeholders (led by the Doula Technical Assistance Advisory Group-DTAAG) and is scheduled to meet in early December to discuss implementation progress, communications and collaboration opportunities to help ensure a successful rollout of this benefit; 6) MDH is collaborating with the Maryland Hospital Association (MHA) to ensure that hospitals are aware of and prepared to participate in the benefit; 7) the State Plan Amendment (SPA) has been drafted and is expected be submitted to CMS in early 2022.

CenteringPregnancy

CenteringPregnancy is an evidence-based group prenatal care model for low-risk pregnancies. Facilitators support a cohort of eight to ten individuals of similar gestational age through a curriculum of ten 90- to 120-minute interactive group prenatal care visits that largely consist of discussion sessions covering medical and non-medical aspects of pregnancy, including nutrition, common discomforts, stress management, labor, and birth, breastfeeding and infant care. While Centering groups are comprised of participants of different ages, races and socio-economic backgrounds, this program has been shown to improve outcomes and reduce preterm birth, particularly for Black participants. Evidence suggests CenteringPregnancy reduces costs, improves outcomes, and leads to high satisfaction, with one study showing a reduction in risk of premature birth by 36 percent, with an average cost savings of $22,667, in the rate of low birthweight by 44 percent (average savings of $29,627) and NICU stays (average savings of $27,249). There are currently eight CenteringPregnancy sites in Maryland—four in the Baltimore metro area, two in the DC metro area, one on the Eastern Shore and one in Western Maryland. MDH has researched CenteringPregnancy implementation in other states and has been working with MCOs to begin implementation of CenteringPregnancy coverage in CY2022.

HealthySteps

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

Maryland School of Medicine Department of Family & Community Medicine and University of Maryland Pediatrics – Midtown, both located in Baltimore. MDH has researched HealthySteps implementation in other states and has been working with MCOs to begin implementation of HealthySteps coverage in CY2022.

Maternal Opioid Misuse (MOM) Model

The MOM model focuses on improving care for pregnant and postpartum Medicaid participants diagnosed with opioid use disorder (OUD). With over 21,000 individuals of childbearing age diagnosed with an OUD in Maryland, substance use is a leading cause of maternal death and has a significant impact on the approximately 1,500 infants born to Medicaid beneficiaries with OUD in Maryland per year. Utilizing HealthChoice MCOs as care delivery partners, the MOM model focuses on improving clinical resources and enhancing care coordination to Medicaid beneficiaries with OUD during and after their pregnancies. Under the Maryland MOM model, HealthChoice MCOs receive a per member, per month 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. The Maryland MOM model is currently a CMMI-funded demonstration; model services are provided on a pilot basis in one Maryland jurisdiction (St. Mary's County) from July 2021 through June 2022. The model is anticipated to scale to statewide by January 2023, leveraging the MCH Population Health Improvement Fund as the state share when the model transitions to §1115 funding in July 2022.

PHS-led Initiatives

PHS has developed an Eliminating Disparities in Maternal Health initiative which will provide funding to jurisdictions with elevated SMM rates. This initiative will support the expansion of CenteringPregnancy and other evidence-based and promising practice home visiting interventions. The MCHB has released a competitive bid to expand these programs and will issue funding in early 2022.

Additional Efforts to Address SMM

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

State Investments in Post-Partum Coverage

During the 2021 session, the Maryland legislature passed Senate Bill 923, which extends Medicaid coverage for comprehensive medical, dental and other health care services for postpartum individuals. The legislation provided an estimated $17 million in additional funding to improve health for mothers who participate in Maryland's Medicaid program. On April 1, 2022, the Department will extend the postpartum

period from 60 days to 12 months. The Centers for Medicare and Medicaid Services (CMS) released additional guidance on how to implement expanded postpartum in December 2021.

The Governor's Supplemental Budget for FY 2021 allocated $1 million in funds for dental coverage for postpartum women, to align with the member's somatic coverage. The Department is currently in the process of promulgating regulations to include postpartum coverage for eligible members of the Maryland Healthy Smiles Dental Program (MHSDP). Effective November 15, 2021, Maryland Medicaid's Fee-for-Service (FFS) dental coverage provided to pregnant women under the MHSDP will be extended through their postpartum period.

SVG Stakeholder Activity Highlights

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

CareFirst

As part of ongoing efforts to improve maternal and newborn health outcomes, CareFirst is working with large obstetric practices to develop payment models to improve maternity episodes of care. Additionally, through collaboration with L&D providers and hospitals, CareFirst has prioritized evaluating health disparities and offering programs to improve access to care for women and infants to improve health outcomes. Additionally, CareFirst offers care coordination and case management for members identified as high-risk obstetric patients.

University of Maryland Medical System

In addition to participating in various collaboratives and programs to address maternal health, such as the PQC and MDMOM, UMMS is implementing various maternity bundles to increase use of evidence-based practices in obstetric care. The system is currently focused on implementing the severe hypertension in pregnancy bundle, in addition to the AIM bundles for Safe Reduction of Primary Cesarean Births and Obstetric Hemorrhage. UMMS also prioritizes clinician education though the use of an Active OB simulation program to educate and strengthen technical, behavioral, and communication skills.

CY 2022 Priorities

In 2022, the State is focused on scaling existing MCH programs and interventions to maximize impact on SMM rates and reduce maternal health disparities. MDH is prioritizing the expansion of maternal, infant, and early childhood home visiting programs through Medicaid and MCHB. Additionally, the State is expanding the number of CenteringPregnancy sites, as well as the number of SMM review sites.

Domain 3d: Total Population Health – Child Health

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

Table 15. 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	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 16. Race/Ethnicity Disparities in Childhood Asthma-Related ED Visit Rates, 2018

Race	2018
NH White	4.1
NH Black	19.1
Hispanic	5.5
NH Asian	2.6
Other	10.3

Impact of COVID-19 on Performance

As is true for hospitals nationally, Maryland hospitals saw sharp declines in ED volumes in 2020 and early 2021. Understandably, Maryland's asthma-related ED visit rate for ages 2-17 declined during this period. While 2021 volumes are trending back to 2018 baselines, they are still artificially low. Despite these low ED

volumes, the State believes that the underlying dynamics of childhood asthma in Maryland have not changed. In some cases, childhood asthma may be exacerbated as patients avoided seeking healthcare entirely, potentially worsening racial disparities. The State will continue to monitor performance throughout 2022 and evaluate the impact of COVID-19 on progress. In the meantime, the State continues to expand interventions and identify opportunities to address and reduce childhood asthma and health disparities.

Milestone Progress

Maryland achieved all 2021 milestones for the childhood asthma population health priority area.

Milestone 1: Check population projections

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

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

Milestone 2: Development of Asthma Dashboard

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

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

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

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

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

Milestone 4: Launch MCH Funding Initiative

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

One million of annual funding is dedicated to expanding Medicaid's CHIP Health Services Initiative (HSI) State Plan Amendment that authorizes asthma home visiting programs with LHDs. The program currently operates in nine jurisdictions: Baltimore City and Baltimore County, Charles, Dorchester, Frederick, Harford, Prince George's, St. Mary's, and Wicomico Counties. These are sites with some of the highest burden of asthma ED visits. Two new jurisdictions, Anne Arundel County and Montgomery County, will be implementing the asthma home visiting program beginning in 2022. Once they are deemed eligible and enrolled in the program, children's families are eligible for up to six home visits to receive education and training around home environmental factors that trigger asthma, durable goods that can reduce or eliminate home triggers, and improved care coordination with providers through asthma action plans. The program similarly provides home visiting for eligible children who have been lead poisoned and is one of the first such programs in the country. The home visiting program is built on evidence-based models that emphasize remediation of environmental factors, including the provision of education and training for parents, and provision of durable cleaning supplies and other equipment to assist families in reducing environmental factors including dust mites, insect and pet allergens, and other common allergens. Work to engage MCOs on this initiative has also recently begun, aimed at creating new or enhancing existing processes that notify MCOs when a member has been referred to or enrolled in an asthma home visiting

program. MCOs will work to ensure the child/family also receive the clinically appropriate services and/or counseling to achieve effective asthma management.

An additional $250,000 in annual funding will support other community-based interventions, such as mobile asthma treatment, for patients of all payer types. A competitive RFA to establish community-based asthma interventions was released in fall 2021.

Additional Efforts to Address Childhood Asthma

The section of the report highlights additional initiatives the State and stakeholders are implementing to address childhood asthma in Maryland. The initiatives described are not an exhaustive list of ongoing and planned activities but are key drivers of progress under SIHIS.

Rapid Referral Pilots

The MDH EHB and Medicaid program are working with several health care organizations and managed care organizations on a variety of asthma-related pilots, all designed to improve care coordination, referrals, and communications among and between primary and specialty care providers, managed care case management and asthma home visiting programs, and local health department asthma home visiting programs. Among the pilots are several with hospitals and health systems that are interested in expedited referrals to local health department home visiting programs. EHB is also working with CRISP on a pilot to identify and refer Medicaid-enrolled children who are seen in emergency departments or hospitalized for asthma. Many of these pilots are planned for a 2022 implementation, providing the state and health care systems with valuable information about improving care coordination,

SVG Stakeholder Highlights

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

University of Maryland Medical System

UMMS has various initiatives in place to address childhood asthma-related ED visits. UMMS is expanding existing UM School of Medicine asthma treatment program, as well as education programs for clinicians, patients, and families to promote high-quality care. Additionally, UMMS is increasing efforts to identify and address unmet SDOH needs to address childhood asthma burden.

CY 2022 Priorities

In 2022, the State will continue to maintain the implementation of the asthma home visiting program in the nine existing, and expand to two new jurisdictions, in partnership with Medicaid. The State will also

establish one or more community-based asthma projects. Additionally, the State will continue to pilot rapid referrals to the asthma home visiting programs with the University of Maryland Medical System (UMMS) and Greater Baltimore Medical Center (GBMC) through the use of CRISP care alerts, provided to physicians at the point of care.

Conclusion

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

Across the each SIHIS domain, Maryland was careful to consider goals, measures, and targets in its 2020 proposal that are realistic and achievable during the SIHIS performance period. However, COVID-19 continues to stretch healthcare resources and could ultimately affect the State's ability to achieve some or all of the goals under SIHIS. The State will continue to monitor performance across all SIHIS goals and will communicate with CMMI about the impact of COVID-19 on outcomes as additional data becomes available. Despite these challenges, Maryland is proud of the work accomplished in 2021 to support SIHIS and enthusiastic to continue this work in 2022. The State of Maryland looks forward to further discussions with CMMI on 2021 activities and ongoing efforts in 2022 to achieve SIHIS goals.

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Appendix I. SIHIS Population Health Directional Indicators Dashboard User Guide and Reports

STATEWIDE INTEGRATED HEALTH IMPROVEMENT STRATEGY (SIHIS):

POPULATION HEALTH DIRECTIONAL INDICATORS DASHBOARD

User Guide 1.0

October 13, 2021

hMetrix

TABLE OF CONTENTS

1 BACKGROUND & INTRODUCTION

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

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

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

The SIHIS Population Health Directional Indicator reports focus on the Population Health Domain, which has three focus areas:

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

Many of the data sources used for official SIHIS monitoring are calculated annually on delayed data sources. Therefore, CRISP and hMetrix partnered together with HSCRC and MDH to develop a series of reports using proxy measures and available data sources.

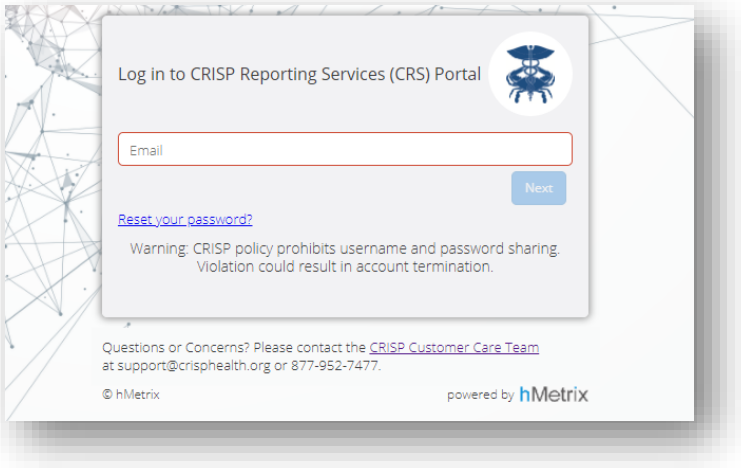
1.1 Software Requirements

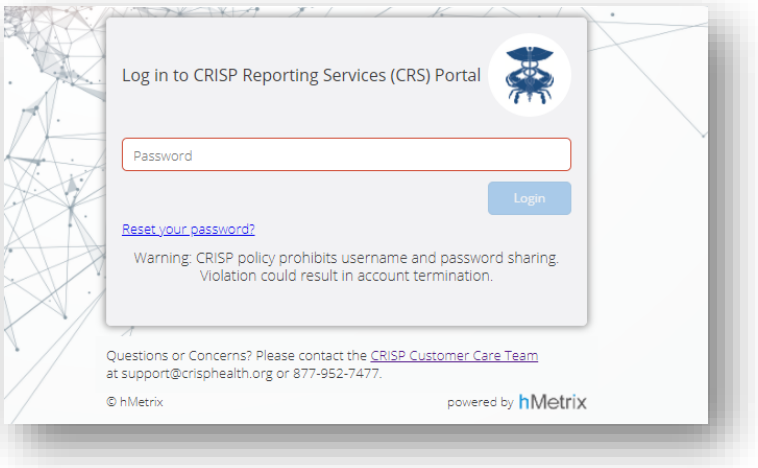
The SIHIS Population Health Directional Indicator reports are available through a web-based application accessible using a modern browser: Google Chrome 57 or higher, Internet Explorer 11 or higher, Firefox 52 or higher, and Safari 9 or higher.

1.2 Launching SIHIS Population Health Directional Indicator Reports

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

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

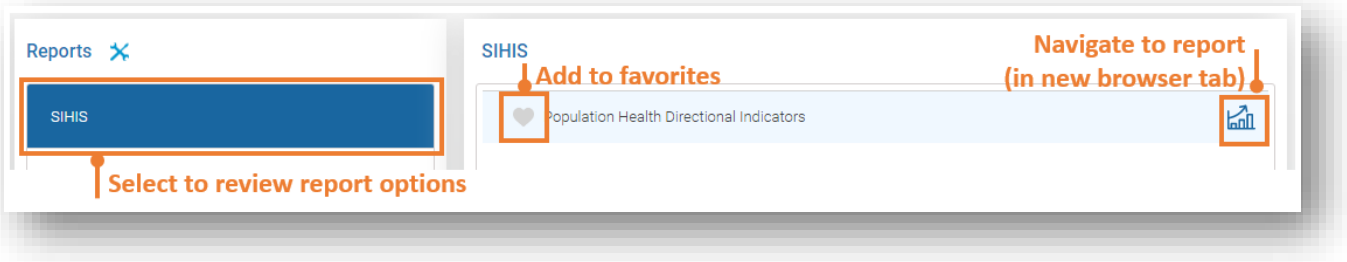




Step 2: Click the Card named “Public Health” within the Portal

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

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



2 COMPARISON OF FORMAL SIHIS AND PROXY MEASURES

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

2.1 Opioid Domain: Overdose Fatalities

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

Element	Formal Measure	Proxy Measure
Measure	• Drug overdose mortality rate per 100,000 Maryland Residents • Age-adjusted • Includes all drugs/substances	• Drug overdose fatality rate per 100,000 Maryland Residents • Not age-adjusted • Includes all drugs/substances
Comparison/Trend	Change in rate from 2018 baseline compared to cohort of states with similar mortality rates and demographics. As of report release, the methodology for identifying and quantifying the overdose fatality rate for the comparison states is not available.	Change in rate from 2018 baseline compared to national change from 2018 baseline
Data Sources Numerator	**Maryland & Cohort**: National Vital Statistics System, available through Center for Disease Control (CDC) Wonder Database[1]	**Maryland**: Office of the Chief Medical Examiner (OCME) Enhanced Data **Nation:** National Vital Statistics Rapid Release Provisional Data[2]
Data Sources Denominator	**Maryland & Cohort**:[3]	**Maryland:** MD Department of Planning Maryland population estimates[4]
Time Period for Baseline	**Maryland & Cohort**: 12-month rolling average as of December 31, 2018	**Maryland & Nation**: 12-month rolling average as of December 31, 2018
Time Period for Measurement Period	**Maryland & Cohort**: Updated annually, approximately a 2-year delay in reporting	**Maryland**: Updated monthly, approximately 2-month delay in reporting **Nation**: Updated monthly, approximately 7-month delay in reporting
Population	Residents of Maryland	Deaths that occurred in Maryland regardless of residency

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

2.2 Diabetes Domain: Diabetes Prevention Recognition Program (DPRP)

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

Element	Formal Measure	Proxy Measure
Measure	Reduction in mean body mass index (BMI) for adult Maryland residents	Cumulative enrollment of adult Maryland residents in diabetes prevention recognition programs
Comparison/Trend	Change in rate from 2018 baseline compared to cohort of states. As of report release, the methodology for identifying and quantifying the overdose fatality rate for the comparison states is not available	Change in cumulative enrollment from 2018 baseline compared to national change from 2018 baseline
Data Sources Numerator	**Maryland & Cohort**: Behavioral Risk Factor Surveillance Survey (BRFSS)[5]	**Maryland & Nation**: Centers for Disease Control (CDC) programmatic data
Data Sources Denominator	**Maryland & Cohort**: Behavioral Risk Factor Surveillance Survey (BRFSS)	**Maryland & Nation:** MD Department of Planning Maryland population estimates for ages 18 and over[6] Estimate of individuals with pre-diabetes based on Maryland Diabetes Action Plan (34% of adult population)[7]
Time Period for Baseline	**Maryland & Cohort**: Statewide average BMI for 12-month rolling average as of December 31, 2018	**Maryland & Nation**: Cumulative enrollment as of December 31, 2018
Time Period for Measurement Period	**Maryland & Cohort**: Updated annually, approximately 18-month delay in reporting	**Maryland & Nation**: Updated quarterly, approximately 1-month delay in reporting
Population	Maryland residents over 18 years old	Maryland residents over 18 years old with pre-diabetes

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

2.3 Maternal and Child Health: Severe Maternal Morbidity Hospitalizations

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

Element	Formal Measure
Measure	Severe maternal morbidity (SMM) rate per 10,000 delivery hospitalizations for women ages 12-55 years old
Comparison/Trend	Rate of SMM delivery hospitalizations compared to measure targets
Data Sources Numerator	HSCRC Case Mix Data; SMM indicators based on guidance from the Alliance for Innovation on Maternal Health[8] and Federal Available Data logic; includes Blood Transfusions[9]
Data Sources Denominator	HSCRC Case Mix Data; Delivery hospitalization indicators based on guidance from Federally Available Data Logic
Time Period for Baseline	Statewide average annual rate of SMM hospitalizations as of December 31, 2018
Time Period for Measurement Period	Statewide average rate of SMM hospitalizations for the most recent rolling 12 months
Population	Maryland residents ages 12-55 with a delivery hospitalization

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

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

Element	Formal Measure
Measure	Childhood asthma-related emergency department visits per 1,000 children ages 2 – 17 years old
Comparison/Trend	Rate of asthma-related emergency department visits compared to measure targets
Data Sources Numerator	HSCRC Case Mix Data; Asthma defined according to AHRQ CCS category
Data Sources Denominator	MD Department of Planning Maryland population estimates for ages 2 - 17[10]
Time Period for Baseline	Statewide average annual rate of childhood asthma-related emergency department visits as of December 31, 2018
Time Period for Measurement Period	Statewide average rate of childhood asthma-related emergency department visits for the most recent rolling 12 months
Population	Maryland residents ages 2-17

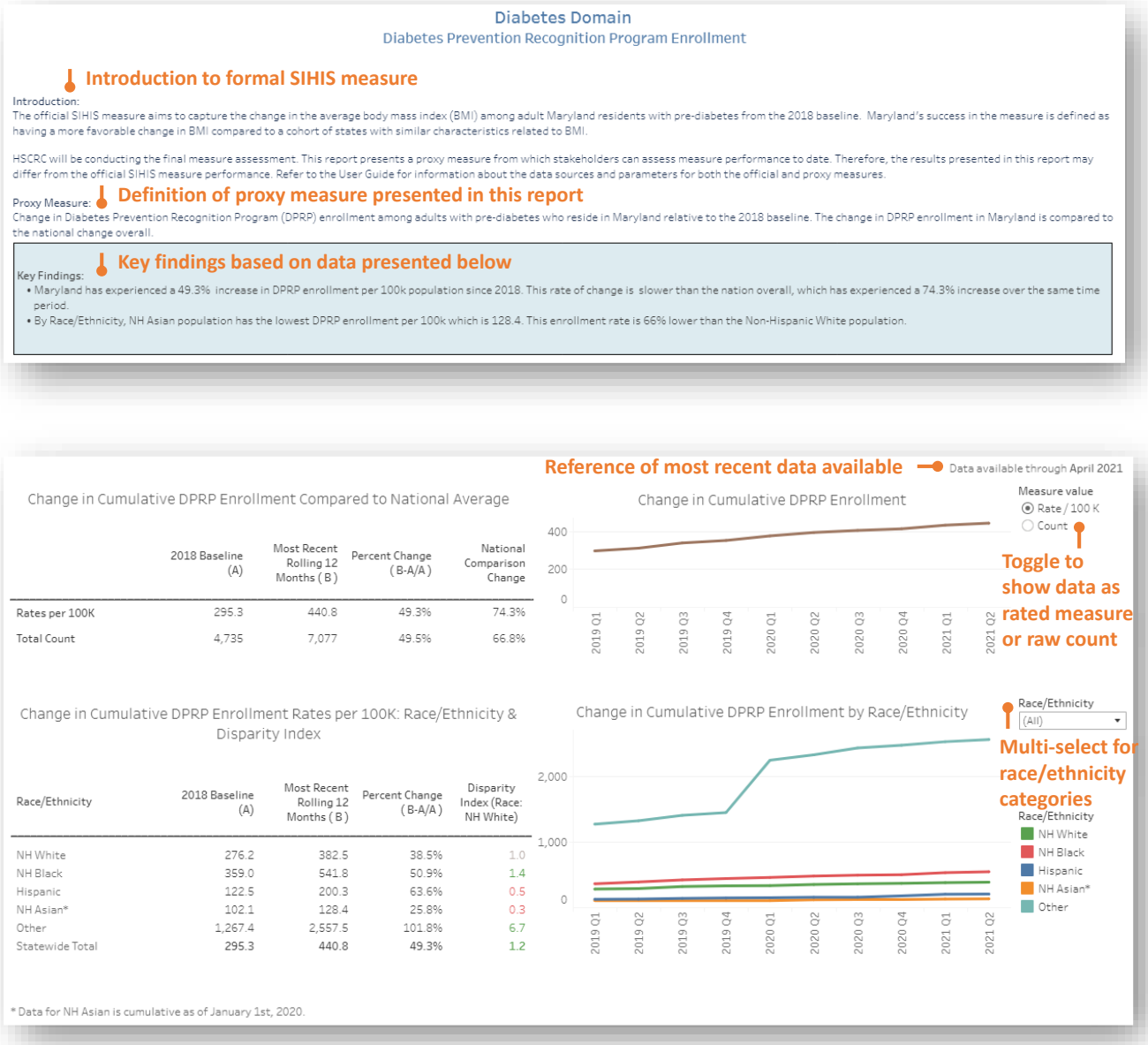
[8] https://safehealthcareforeverywoman.org/aim/resources/aim-data-resources/
[9] https://mchb.tvisdata.hrsa.gov/uploadedfiles/TvisWebReports/Documents/FADResourceDocument.pdf
[10] https://planning.maryland.gov/MSDC/Pages/pop_estimate/CensPopEst.aspx

3 REPORT DESIGN AND FUNCTION

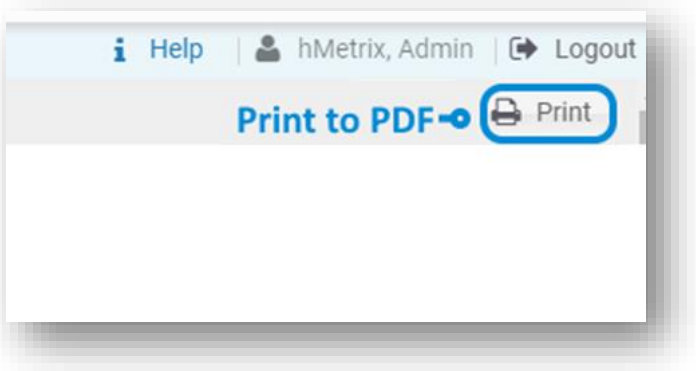
All reports in this reporting suite are designed with a consistent format and design. Each report contains:

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

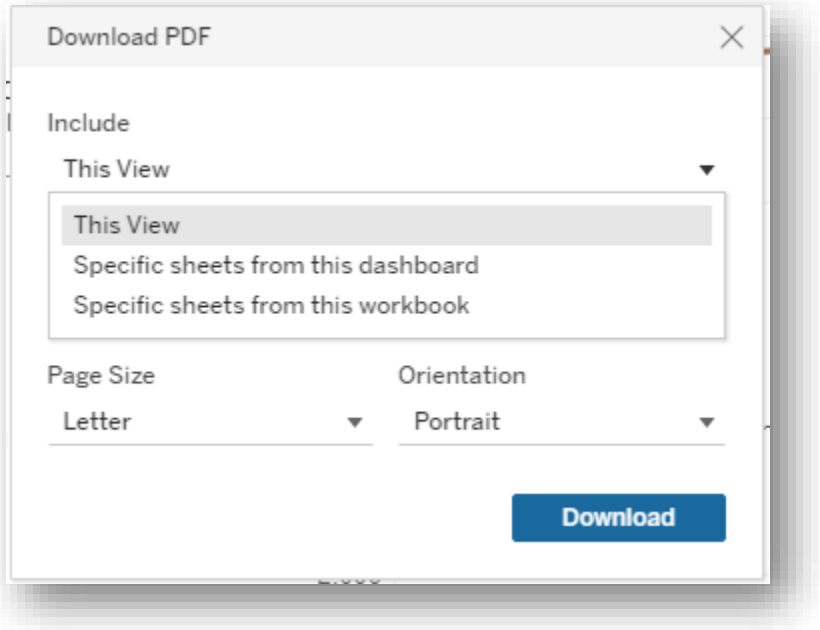
The figure below highlights key aspects of the reports, using the Diabetes Domain as an example.



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



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



Diabetes Domain

Diabetes Prevention Recognition Program Enrollment

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

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

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

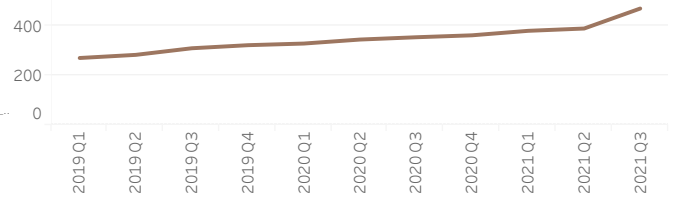
Key Findings:
- Maryland has experienced a 92.9% increase in DPRP enrollment per 100k population since 2018. This rate of change is faster than the nation overall, which has experienced a 80.5% increase over the same time period.
- By Race/Ethnicity, NH Asian population has the lowest DPRP enrollment per 100k which is 163.3. This enrollment rate is 63% lower than the Non-Hispanic White population.

Data available through **September 2021**

Cumulative DPRP Enrollment Compared to National Average

	2018 Baseline (A)	Most Recent Rolling 12 Months (B)	Percent Change (B-A/A)	National Comparison Change
Rates per 100K	269.9	520.6	92.9%	80.5%
Total Count	4,328	8,358	93.1%	81.6%

Cumulative DPRP Enrollment By Quarter

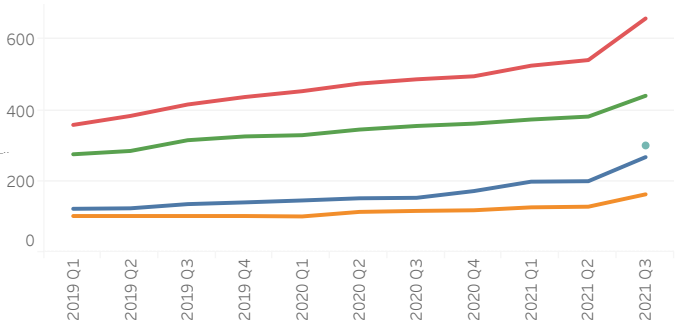


Measure value
Rate / 100 K
Count

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

Race/Ethnicity	2018 Baseline (A)	Most Recent Rolling 12 Months (B)	Percent Change (B-A/A)	Disparity Index (Race: NH White)
NH White	276.2	441.1	59.7%	1.0
NH Black	359.0	659.1	83.6%	1.5
Hispanic	122.5	268.2	119.0%	0.6
NH Asian*	102.1	163.3	59.9%	0.4
Other	N/A	301.1	N/A	0.7
Race Not Reported	N/A	N/A	N/A	N/A
Statewide Total	269.9	520.6	92.9%	1.2

Cumulative DPRP Enrollment By Quarter By Race/Ethnicity



Race/Ethnicity
All

Race/Ethnicity
NH White
NH Black
Hispanic
NH Asian*
Other
Race Not Reported

* Data for NH Asian is cumulative as of January 1st, 2020.
*Effective September 1, 2021, data for "Other" race/ethnicity has been divided into "Other" and "Data Not Reported". As such, a 2018 baseline is not available for these categories.

Opioids Domain
Overdose Fatalities

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

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

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

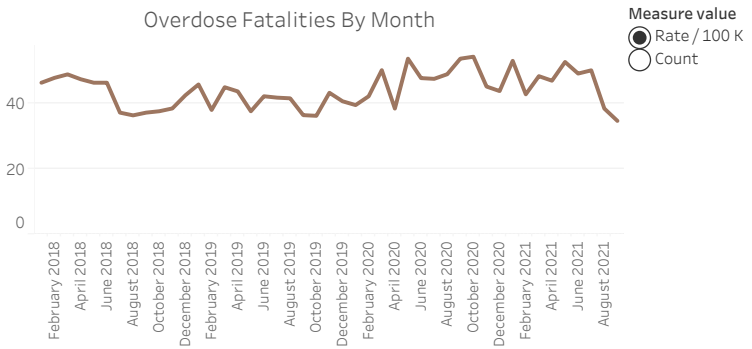
Key Findings:
- Maryland has experienced a 8.4% increase in Overdose Fatality per 100k population since 2018. This rate of change is slower than the nation overall, which has experienced a 42.3% increase over the same time period.
- By Race/Ethnicity, overdose fatality among the Non-Hispanic Black population is 1.3 times higher than the Non-Hispanic White population.

Data available through September 2021

Overdose Fatalities Compared to National Average

	2018 Baseline (A)	Most Recent Rolling 12 Months (B)	Percent Change (B-A/A)	National Comparison Change
Rates per 100K	42.63	46.20	8.4%	42.3%
Total Count	2,406	2,798	16.3%	43.7%

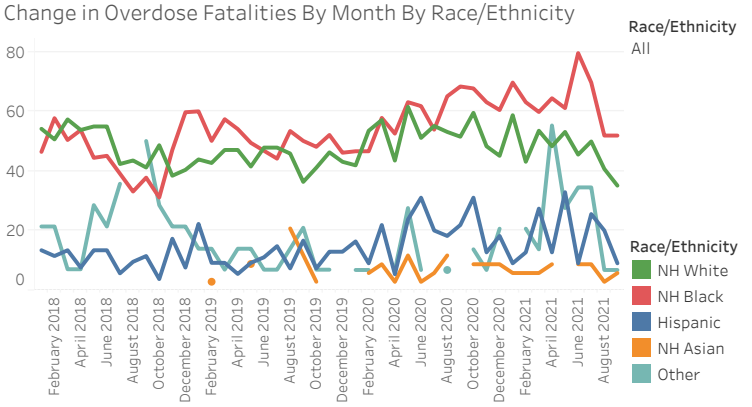
Overdose Fatalities By Month



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

Race/Ethnicity	2018 Baseline (A)	Most Recent Rolling 12 Months (B)	Percent Change (B-A/A)	Disparity Index(Race: NH White)
NH White	48.47	48.52	0.1%	1.0
NH Black	45.59	63.64	39.6%	1.3
Hispanic	10.80	18.49	71.3%	0.4
NH Asian	0.00	6.64	NA	0.1
Other	22.10	20.19	-8.6%	0.4
Statewide Total	42.63	46.20	8.4%	1.0

Change in Overdose Fatalities By Month By Race/Ethnicity



Maternal and Child Health Domain

Severe Maternal Morbidity Rate

Introduction:

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

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

Reported Measure:

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

Key Findings:

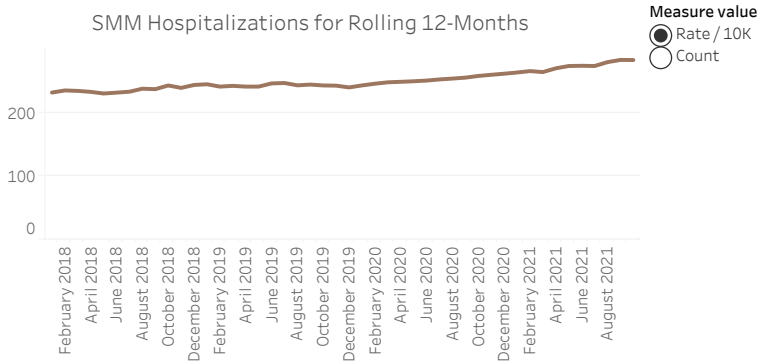
- Maryland had 282.2 SMM-related hospitalizations per 10,000 delivery discharges over the last 12 months. This rate is 62.9 hospitalizations per 10,000 higher than the 2023 target. It is also 39 hospitalizations per 10,000 higher than 2018 baseline.
- By Race/Ethnicity, NH Black population has the SMM hospitalization rate per 10,000 deliveries, which is currently 1.7 times higher than the Non-Hispanic White population.
- NH Black population experienced the largest annual growth in SMM hospitalization rate per 10,000 deliveries, with an increase of 46.3 SMM hospitalizations per 10,000 deliveries since 2018 .

Data available through October 2021

SMM Hospitalizations Compared to 2023 Target

	2018 Baseline	Most Recent 12 Months	2023 Target	Difference - Most Recent 12 months to Target
Rates per 10K	243.1	282.2	219.3	62.9
SMM Events	1,585	1,738		
Eligible Deliveries	63,614	59,850		

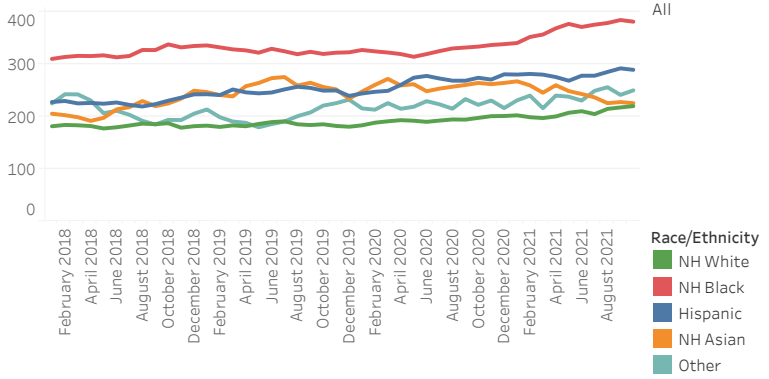
SMM Hospitalizations for Rolling 12-Months



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

Race/Ethnicity	2018 Baseline	Most Recent 12 Months	2023 Target	Difference - Most Recent 12 months to Target	Disparity Index
NH White	181.4	219.7	169.8	49.9	1.0
NH Black	334.2	380.5	295.7	84.8	1.7
Hispanic	242.0	288.8	213.2	75.6	1.3
NH Asian	249.0	225.3	217.7	7.6	1.0
Other	205.2	249.7	204.6	45.1	1.1
Statewide Total	243.1	282.2	219.3	62.9	1.3

SMM Hospitalizations for Rolling 12-Months by Race/Ethnicity



Maternal and Child Health Domain

Childhood Asthma

Introduction:

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

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

Reported Measure:

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

Key Findings:

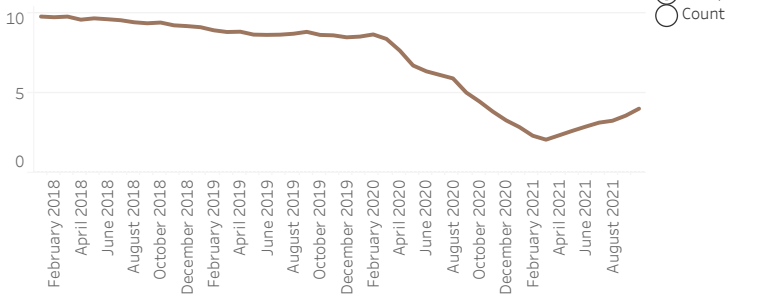
- Maryland had 4.0 asthma-related emergency department visits per 1,000 children over the last 12 months. This rate is 3.2 visits per 1,000 children lower than the 2023 target
- By Race/Ethnicity, NH Black population has the highest asthma-related emergency department rate per 1,000 children, which is currently 5.5 times higher than the Non-Hispanic White population. However, this rate is still 5.7 visits per 1,000 children lower than the 2023 race/ethnicity target of 14.36.

Data available through October 2021

Childhood Asthma-Related ED Visits Compared to 2023 Target

	2018 Baseline	Most Recent 12 Months	2023 Target	Difference - Most Recent 12 months to Target
Rates per 1K	9.2	4.0	7.2	-3.2
Total Count	10,974	4,792		

Childhood Asthma-Related ED Visits for Rolling 12-Months



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

Race/Ethnicity	2018 Baseline	Most Recent 12 Months	2023 Target	Difference - Most Recent 12 months to Target	Disparity Index
NH White	4.1	1.6	3.50	-1.9	1.0
NH Black	19.1	8.7	14.36	-5.7	5.5
Hispanic	5.5	2.6	4.70	-2.1	1.6
NH Asian	2.6	0.9	2.60	-1.7	0.6
Other	10.3	4.2	7.30	-3.1	2.7
Statewide Total	9.2	4.0	7.2	-3.2	2.6

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