The Hilltop Institute

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report

Evaluation of the Maryland Medicaid HealthChoice Program: CY 2018 to CY 2022

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List of Abbreviations

ABD	Aged, Blind, and Disabled
ACA	Affordable Care Act
ACCU	administrative care coordination unit
ACG	Adjusted Clinical Groups
ACIS	Assistance in Community Integration Services
ACS	American Community Survey
AHRQ	U.S. Agency for Healthcare Research and Quality, HHS
AMR	asthma medication ratio
AOD	alcohol and other drug
ART	antiretroviral therapy
ASAM	American Society of Addiction Medicine
ASO	administrative services organization
BHA	Behavioral Health Administration
BMI	body mass index
CD4	A test of the quantity of immune system cells used to diagnose and monitor HIV disease
CDC	Centers for Disease Control and Prevention
CHIP	Children's Health Insurance Program
CI	confidence interval
CLR	Childhood Lead Registry
CMC	Corrective Managed Care
CMMI	Center for Medicare and Medicaid Innovation
CMS	Centers for Medicare & Medicaid Services
CoCM	Collaborative Care Model
COMAR	Code of Maryland Regulations
COPD	chronic obstructive pulmonary disease
CPS	Coverage of the Total Population
CPT	Current Procedural Terminology
CRISP	Chesapeake Regional Information System for Our Patients
CY	calendar year

DPP	Diabetes Prevention Program
ED	emergency department
EID	Employed Individuals with Disabilities
EPSDT	Early and Periodic Screening, Diagnosis, and Treatment
EQRO	external quality review organization
ET3	Emergency Triage, Treat, and Transport
EVS	Maryland's electronic verification system
F&C	Families and Children
FFCRA	Families First Coronavirus Response Act
FFS	fee-for-service
FOBT	fecal occult blood test
FPL	federal poverty level
FQHC	federally qualified health center
FUA	Follow-Up After Emergency Department Visit for Alcohol and Other Drug Abuse or Dependence
FUM	Follow-Up After Emergency Department Visit for Mental Illness
FY	fiscal year
HbA1c	hemoglobin A1c screening
HCBS	home and community-based services
HEDIS®	Healthcare Effectiveness Data and Information Set®
HFA	Healthy Families America
HHS	U.S. Department of Health and Human Services
HPV	human papillomavirus
HR	hazard ratio
HSCRC	Health Services Cost Review Commission
HSI	Health Services Initiatives
HVS	Home Visiting Services
ICD	International Classification of Diseases
ICS	Increased Community Services
IEP	individualized education plan
IFSP	individualized family service plan

IMA	immunizations for adolescents
IMD	institution for mental disease
IOP	intensive outpatient
IUD/IUS	intrauterine device or system
JHU	Johns Hopkins University
LAA	local access area
LE	lead entity
LEPAC	Lead Exposure and Prevention Advisory Committee
LOS	length of stay
LTSS	long-term services and supports
MAGI	modified adjusted gross income
MARR	Maryland Average Reportable Rate
MAT	medication-assisted treatment
MCH	Maternal and Child Health
MCHP	Maryland Children's Health Program
MCO	managed care organization
MDE	Maryland Department of the Environment
MDH	Maryland Department of Health
MFR	Managing for Results
MHBE	Maryland Health Benefit Exchange
MHD	mental health disorder
MMIS2	Maryland Medicaid Management Information System
MOE	Medicaid maintenance of eligibility
MOM	Maternal Opioid Misuse
MPC	Maryland Physicians Care
MRR	medical record review
MY	measurement year
NCI	National Cancer Institute
NCQA	National Committee for Quality Assurance
NPI	National Provider Identifier
NYU	New York University

OOCC	Opioid Operational Command Center
OPA	Office of Population Affairs
OR	odds ratio
OUD	opioid use disorder
Pap	Papanicolaou test for cervical cancer
PCP	primary care provider
PE	participating entity
PH	permanent housing (PH)
PHE	public health emergency
PHIP	Population Health Incentive Program
PHQ-9	Patient Health Questionnaire-9
PMPM	per member per month
PPC	prenatal and postpartum care measure
PQI	Prevention Quality Indicator
PrEP	pre-exposure prophylaxis
REM	Rare and Expensive Case Management
RRH	rapid re-housing (RRH).
SAMHSA	Substance Abuse and Mental Health Services Administration
SBIRT	Screening, Brief Intervention, and Referral to Treatment
SED	serious emotional disturbance
SIHIS	Statewide Integrated Health Improvement Strategy
SMI	serious mental illness
SPA	state plan amendment
SSI	Supplemental Security Income
SUD	substance use disorder
TANF	Temporary Assistance for Needy Families
Tdap	tetanus, diphtheria, and pertussis
VBP	Value-Based Purchasing

Evaluation of the Maryland Medicaid HealthChoice Program: CY 2018 to CY 2022

Executive Summary

In 1997, Maryland implemented HealthChoice—a statewide mandatory Medicaid and Children's Health Insurance Program (CHIP) managed care program—under authority of a waiver through §1115 of the Social Security Act. The provisions of the Affordable Care Act (ACA) that went into effect in 2014 marked another milestone by extending quality coverage to many more Marylanders with low income. Over 25 years after its launch, HealthChoice covers close to 90% of the state's Medicaid and Maryland Children's Health Program (MCHP) populations.[1]

Since the inception of HealthChoice, the Maryland Department of Health (MDH) has requested and received seven §1115 waiver renewals. The Hilltop Institute, on behalf of MDH, evaluates the program annually; this evaluation covers the period of calendar year (CY) 2018 through CY 2022.

The goal of the HealthChoice §1115 demonstration is to improve the health status of Marylanders with low income by:

- Improving access to health care for the Medicaid population, including special populations
- Improving the quality of health services delivered
- Providing patient-focused, comprehensive, and coordinated care through the provision of a single medical home
- Emphasizing health promotion and disease prevention
- Expanding coverage to additional low-income Marylanders with resources generated through managed care efficiencies

HealthChoice is a mature managed care program that covered one in four Marylanders during CY 2022. Participants choose one of the nine participating managed care organizations (MCOs), along with a primary care provider (PCP) from their MCO's network, to oversee their medical care.

HealthChoice and fee-for-service (FFS) enrollees receive the same comprehensive benefits. This evaluation provides evidence that HealthChoice has provided oversight to the standards of achieving its stated goals of improving coverage and access to care, providing a medical home to

[1] Maryland's Children's Health Insurance Program is known as MCHP.

participants, improving the quality of care, and providing comprehensive, prevention-oriented health care.

HealthChoice has demonstrated mixed results in providing targeted preventive screenings and ensuring that participants receive care at the appropriate level during the evaluation period. Recent successes include a decrease in the rate of children aged 0 to 6 years with an elevated blood lead level and a sharp decline in asthma-related ED visits. In CY 2022, 60.6% of children received dental services, which is greater than the national Healthcare Effectiveness Data and Information Set® (HEDIS®)[2] mean. During the evaluation period, colorectal, breast, and cervical cancer screening rates decreased, which corresponds with the national rates (CDC, 2021e; Oakes et al., 2023). Among individuals with HIV/AIDS, ambulatory care rates and emergency department (ED) use decreased during the evaluation period. Viral load testing and cluster of differentiation 4 (CD4) testing rates decreased, while antiretroviral therapy (ART) increased by 0.6 percentage points. The percentage of HealthChoice participants aged 18 to 64 years with at least one inpatient hospital admission declined by 2.4 percentage points during the evaluation period.

The state implemented programs—such as the Residential Treatment for Individuals with Substance Use Disorder program and the Evidence-Based Home Visiting Services (HVS) pilot program—which began in July 2017 and are improving access, reducing costs, and improving quality. In March 2019, MDH received approval to extend coverage for the Residential Treatment for Individuals with a primary substance use disorder (SUD) and a secondary mental health disorder (MHD) to American Society of Addiction Medicine (ASAM) level 4.0. Access to the National Diabetes Prevention Program (National DPP) lifestyle change program was expanded to all eligible HealthChoice participants as of September 1, 2019. A request for an amendment approved in April 2020 established a Collaborative Care Model (CoCM) pilot program to integrate primary care and behavioral health services to further address behavioral health needs. Coverage for CoCM services for HealthChoice participants began in July 2020.

MDH received approval for the §1115 waiver renewal in 2021 to expand critical programs and add additional programs, including expansion of SUD residential and inpatient treatment services to remove caps on lengths of stay for SUD in an institution for mental disease (IMD), expansion of IMD services for beneficiaries with serious mental illness (SMI), and modification of the Assistance in Community Integration Services (ACIS) pilot program. In addition, the Maternal Opioid Misuse (MOM) program became effective July 1, 2021. The Family Planning program, HVS program, and Adult Dental pilot were not renewed because they were added to the State Plan.

Program improvements are necessary to ensure that the growing number of participants have access to quality care. MDH is committed to working with the Centers for Medicare & Medicaid Services (CMS) and other stakeholders to identify and address necessary changes. Some areas targeted for improvements include asthma medication ratio (AMR) and ED utilization, diabetes prevention, and prenatal and postpartum care; reducing racial and ethnic disparities; and increasing rates of follow-up care after ED visits for MHD or SUD. MDH collaborated with the Center for Medicare and Medicaid Innovation (CMMI) to establish domains of health care quality and delivery through Maryland's Statewide Integrated Health Improvement Strategy

[2] HEDIS® is a registered trademark of the National Committee for Quality Assurance (NCQA).

(SIHIS) (Maryland Department of Health, 2020a). The SIHIS framework focuses on stakeholder collaboration and investing in improving health, addressing disparities, and reducing health care costs. SIHIS targets improvements in three domains: 1) hospital quality, 2) care transformation across the health care system, and 3) total population health. Priority areas for the third domain include diabetes, opioid use, and maternal and child health (Maryland Department of Health, 2020a). The SIHIS 2021 goals have been successful in reducing the mean body mass index (BMI) for adults, reducing avoidable admissions and readmissions, reducing the severe maternal morbidity rate, and improving overdose mortality (Maryland Department of Health, 2023b). The state is focused on improving care coordination for participants with chronic conditions, which was the only 2021 milestone that was not met. MDH is developing an annual monitoring plan for the evaluation of the Maternal and Child Health (MCH) Population Health Improvement Fund, which is funded by the Maryland Health Services Cost Review Commission (HSCRC) (Maryland Department of Health, 2023).

In January 2020, the behavioral health administrative services organization (ASO) for Maryland changed from Beacon Health Options to Optum, and technical problems with the transition impacted the submission of behavioral health data during the evaluation period. Additionally, the COVID-19 pandemic, which began in March 2020, had a large impact on the HealthChoice program during CY 2020 to CY 2022. Enrollment in the Medicaid program significantly increased in CY 2020 to CY 2022 as a result of the public health emergency (PHE), which expired May 11, 2023 (CMS, 2023). Rates of service utilization and screenings decreased for many measures in CY 2020, and while many have seen subsequent increases through CY 2022, few rates have returned to pre-pandemic levels. Maryland will continue to monitor the effects of the COVID-19 pandemic on the HealthChoice program.

There was a substantial change to the quality of the race and ethnicity information beginning in 2014, with the implementation of the ACA. Due to a new approach to selecting race and ethnicity on the Medicaid eligibility application, the number of individuals reporting their race or ethnicity decreased, while the proportion represented as "Other" continued to increase. MDH has completed a process of enhancing the Medicaid race and ethnicity data in the Maryland Medicaid Management Information System (MMIS2) using external data sets from the Maryland Health Benefit Exchange (MHBE) and Chesapeake Regional Information System for Our Patients (CRISP), Maryland's health information exchange, with the goal of improving the race and ethnicity data for monitoring health equity and disparities among Medicaid participants. Results show the enhanced data are closer to the benchmark of the Medicaid participants in the American Community Survey (ACS).[3] The analyses in this year's evaluation of the HealthChoice program use the enhanced race and ethnicity data.

Coverage and Access

A major goal of the HealthChoice program is to expand coverage to residents with low income and to improve access to health care services for the Medicaid population. HealthChoice has largely succeeded in this area. Overall, program enrollment increased 28.3% over the evaluation

[3] American Community Survey Data: https://www.census.gov/programs-surveys/acs/data.html.

period: from 1,191,110 participants in CY 2018 to 1,528,736 participants in CY 2022.[4] Continuous enrollment increased by 15.3 percentage points from CY 2019 to CY 2022, in part due to the COVID-19 pandemic policy responses propelling enrollment in health insurance. Under the Families First Coronavirus Response Act (FFCRA), states had to meet certain Medicaid maintenance of eligibility (MOE) requirements, which included continuous coverage for participants enrolled in Medicaid as of March 2020 (Dolan et al., 2020). These MOE requirements contributed to increased Medicaid enrollment in CY 2020 through CY 2022. The continuous eligibility requirement ended on March 31, 2023.[5]

While enrollment increased dramatically from CY 2020 to CY 2022, in part due to the PHE, all MCOs experienced a decrease in overall service utilization and screenings beginning in CY 2020. Nonetheless, trends in service utilization through CY 2019 indicate increased health literacy, in alignment with the overall goals of the HealthChoice demonstration program. HealthChoice facilitates access to care by requiring each MCO to have a provider network capacity of one PCP for every 200 participants. The results of a network adequacy analysis counting the number of PCP offices included in provider networks in each jurisdiction in Maryland showed that all jurisdictions except Prince George's County achieved a 200:1 ratio of participants to PCPs in CY 2022.

Care for Special Populations

HealthChoice continues to seek ways to improve access to health services for vulnerable populations and improve the quality of care they receive. These vulnerable populations include children in foster care, Rare and Expensive Case Management (REM) participants, and racial and ethnic minorities. MDH also monitors demographic characteristics and service utilization among the ACA Medicaid expansion population.

Service utilization for children in foster care[6] decreased slightly over the evaluation period. In CY 2022, they had a 3.6 percentage point lower rate of ambulatory care service utilization and a 1.9 percentage point higher rate of ED visits compared to other children in HealthChoice. The REM program, which serves individuals with multiple and severe health care needs, experienced a decrease of 3.9 percentage points in the proportion of enrollees with dental visits during the evaluation period, with the largest decrease (15.9 percentage points) from CY 2019 to CY 2020. The percentage of REM participants who had an ambulatory care visit remained largely stable, while outpatient ED visits and inpatient admissions declined during the evaluation period.

As for racial and ethnic disparities in access to care, Black children had the lowest rate of ambulatory care visits in CY 2018, while the rate for Native American children was the lowest in CY 2022; Hispanic children had the highest rate for both years. In CY 2018 and CY 2022, Black participants had the highest ED utilization rates, while Asian participants had the lowest.

[4] These totals reflect participants enrolled as of December 31 of each respective year, thus providing a snapshot of typical program enrollment on a given day.
[5] H.R. 2617, 117th Cong. (2022) (enacted).
[6] Data include individuals in subsidized adoption and guardianship populations.

Enrollment continued to grow among the ACA Medicaid expansion population, increasing 18.2% over the evaluation period. As of December 2022, 420,070 HealthChoice participants were enrolled under the ACA expansion coverage group. Expansion participants had a lower rate of ambulatory care visits than any other coverage group in the Medicaid population from CY 2018 to CY 2022. The ED visit rates for ACA participants with 12 months of enrollment decreased from 33.5% in CY 2018 to 24.5% in CY 2022. Additional changes occurred in service utilization patterns during the evaluation period, including a decrease in the overall proportion of ACA expansion participants who received services for a SUD or co-occurring MHD and SUD conditions.

Quality of Care

Improving the quality of services delivered to HealthChoice participants is a core aim of the program. Performance measures in this report are selected because they either measure quality of health care directly or indicate utilization and performance indirectly related to providing quality health services. Additionally, HealthChoice has two evaluations focused on measuring and improving quality of care: the Population Health Incentive Program (PHIP)—formerly Value-Based Purchasing (VBP) program—and the Early and Periodic Screening, Diagnosis, and Treatment (EPSDT) annual review.

PHIP, which began in CY 2022, providers MCOs with incentive payments according to their scores on specific measures of healthcare quality outcomes. MCOs that meet or exceed a performance threshold receive incentive payments. MDH may modify PHIP measures in response to population health needs as the program strives for consistency with CMS's national performance measures for Medicaid. Overall, though, PHIP supports quality improvement across the HealthChoice population by basing the incentive levels on averages of all plan performance. An evaluation of the Comprehensive Diabetes Care - HbA1c Control measure shows that the Maryland Average Reportable Rate (MARR) increased by 3.7 percentage points between CY 2018 and CY 2022.

The EPSDT annual review assesses MCO performance in delivering services to children under the age of 21. EPSDT services are a national requirement for Medicaid, and the EPSDT review measures whether all HealthChoice MCOs achieve minimum levels of performance in delivering EPSDT services. The most recent review shows that the MCOs meet or exceed standards for all five components.

Medical Home

Another goal of the HealthChoice program is to provide patient-focused, comprehensive, and coordinated care for its participants by providing each member with a single "medical home" through a PCP. With a greater understanding of the resources available to them, HealthChoice participants should seek care for non-emergent conditions in an ambulatory care setting rather than using the ED or letting an ailment exacerbate to the extent that it could warrant an inpatient hospital admission. One method to assess this goal is to measure whether participants

can identify with and effectively navigate a medical home. During the evaluation period, the rate of potentially avoidable ED visits—an indicator of performance in this area—decreased from 41.0% in CY 2018 to 38.2% in CY 2022. The percentage of HealthChoice adults with an inpatient admission designated as potentially preventable also decreased slightly, from 0.8% in CY 2018 to 0.6% in CY 2022. The state is working with CMS to monitor several hospital quality measures, including Prevention Quality Indicator (PQI) admissions across Medicaid, Medicare, and commercial payers under Maryland's All-Payer Model Agreement—and subsequent Total Cost of Care Model. The model places global budget limits on hospitals, which reduces hospitals' incentives to increase admissions. MDH will use these tools to continue to monitor the rate of PQI admissions and will research policies to reduce their frequency.

Health Promotion and Disease Prevention

The HealthChoice program prioritizes health promotion and disease prevention by providing access to immunizations and other wellness services, such as regular prenatal care. The HEDIS® compares HealthChoice against nationally recognized performance standards for the use of preventive care and management of chronic disease conditions (MetaStar, Inc., 2023). Since the COVID-19 pandemic affected utilization rates from CY 2020 through CY 2022, HealthChoice HEDIS® scores were similarly affected.

Some indicators showed improvement while others remained fairly stable or declined over the evaluation period. Breast cancer screening rates decreased 6.2 percentage points over the evaluation period, with the largest decrease of 5.4 percentage points between CY 2019 and CY 2020. However, breast cancer screening rates remained above the national Medicaid average for the entire evaluation period, contributing to better preventive care for women. Rates for childhood immunizations decreased over the evaluation period but were higher than national Medicaid averages every year except for CY 2020. The share of children aged 0 to 6 years with an elevated blood lead level decreased from CY 2018 to CY 2022 while blood lead screening rates for children aged 12 to 35 months decreased over the evaluation period.

Although the percentage of women in HealthChoice who received a cervical cancer screening declined from 62.2% in CY 2018 to 57.9% in CY 2020, the rate increased to 59.4% in CY 2022. In addition, the rate was above the national HEDIS® mean for all evaluation years except CY 2020. Declines in cervical precancers are associated with widespread vaccinations for human papillomavirus (HPV) (McClung et al., 2019). The proportion of adolescents who received an immunization combination including the HPV vaccine decreased from 46.2% in 2018 to 41.9% in CY 2022, but Maryland performed above the national HEDIS® mean during the evaluation period. Colorectal screening rates declined slightly during the evaluation period.

The percentage of pregnant women who received prenatal services in a timely manner decreased slightly by 0.3 percentage points from CY 2019 to CY 2022. HealthChoice outperformed the national HEDIS® mean for timely prenatal services in all years except CY 2020.

The HealthChoice program also prioritizes management of chronic conditions such as asthma, diabetes, HIV/AIDS, and behavioral health diagnoses. During the evaluation period, ambulatory

care, ED, and inpatient utilization for participants with asthma decreased by 0.4, 3.4, and 2.3 percentage points, respectively. Asthma-related ED visit rates and inpatient admissions with asthma as the primary diagnosis also decreased during the evaluation period. The percentage of participants with diabetes who received an eye exam decreased slightly by 1.0 percentage points between CY 2018 and CY 2022. HealthChoice was above the HEDIS® average for controlling HbA1c from CY 2019 through CY 2022. During the evaluation period, inpatient and ED utilization decreased by 3.8 and 5.0 percentage points, respectively, among HealthChoice participants with diabetes, while ambulatory care utilization increased slightly. Although receipt of just the HbA1c screening was associated with an increased likelihood of experiencing a diabetes-related ED visit, receipt of either a HbA1c test or eye exam the previous year mitigated the likelihood of having a diabetes-related ED visit the following year.

Participants with HIV/AIDS ambulatory care service utilization decreased slightly by 2.2 percentage points during the evaluation period. The utilization rate for ART increased by 0.6 percentage points, while viral load testing and CD4 cell count testing rates decreased by 5.5 and 6.2 percentage points, respectively. ED utilization by this population decreased by 8.3 percentage points during the evaluation period.

The percentage of participants with a behavioral health diagnosis remained stable from CY 2018 to CY 2022. Utilization of ambulatory care services increased by 0.9 percentage points during the evaluation period among HealthChoice participants with a behavioral health diagnosis, while inpatient and ED utilization decreased by 2.8 and 7.0 percentage points, respectively. The Corrective Managed Care (CMC) program restricts participants to one pharmacy to decrease potential abuse of controlled substances. The percentage of participants in the CMC program who had an overdose decreased by 1.3 percentage points, from CY 2018 to CY 2022.

Demonstration Programs

The HealthChoice program uses the §1115 waiver demonstration authority to test emerging practices through innovation and pilot programs to better serve participants. As part of its waiver renewal in 2016, MDH proposed the following new innovative programs: Residential Treatment for Individuals with SUD; HVS and ACIS community health pilots; and dental services for former foster care individuals.

With CMS approval, Maryland Medicaid participants aged 21 years and older with SUDs can now receive residential treatment services—up to two (2) 30-day stays—in IMDs based on American Society of Addiction Medicine (ASAM) residential levels 3.7-WM, 3.7, 3.5, and 3.3. On January 1, 2019, MDH phased in coverage of ASAM level 3.1. Given the current opioid epidemic, this allows the state to expand access across the care continuum and deliver critical care to individuals with SUD. Hilltop analyzed measures related to IMD cost of care, medication-assisted treatment (MAT) utilization and initiation and engagement in treatment for alcohol and other drug (AOD) dependence. Cost of care per member per month (PMPM) for HealthChoice participants who received IMD treatment for an SUD increased by 12.8% between CY 2018 and CY 2022. Participants aged 65 and older had almost double the cost PMPM compared to other

age groups. The MAT utilization rate among IMD participants increased 4.6 percentage points between CY 2018 and CY 2021 but dropped by 3.1 percentage points in CY 2022. A logistic regression analyzing the impact of IMD care on the probability of initiation and engagement for AOD treatment indicates that IMD treatment is associated with an increased likelihood of participants initiating treatment however, it decreases the likelihood of engaging in ongoing treatment.

The ACIS pilot program provides tenancy-based case management services/tenancy support services and housing case management services to individuals with complex health care needs who are at risk of institutionalization and/or homelessness. Approximately 78% of ACIS participants were homeless at the time of their enrollment in the program during the evaluation period, and approximately 82% of participants obtained stable housing during their ACIS enrollment. Health service utilization was analyzed for participants from CY 2018 to CY 2022. The percentage of participants with at least one ambulatory care visit increased by 4.4 percentage points and the percentage of participants with at least one ED visit increased by 9.4 percentage points.

Beginning in January 2017, Maryland initiated coverage of dental services for former foster care participants through the age of 26. Of former foster youth enrolled for at least 320 days in CY 2018, 22.2% had at least one dental visit; this increased to 25.9% in CY 2019 and then decreased to 13.3% in CY 2022. MDH anticipates that these rates will increase over time. The percentage of former foster care participants who had at least one ED visit with a dental diagnosis increased by .7 percentage points from CY 2018 to CY 2022. In 2019, MDH received approval for a pilot to provide dental services to adults between the ages of 21 and 64 who are eligible for both Medicare and Medicaid. In the first seven months (June 1, 2019, through December 31, 2019) of the adult dental pilot, 4,508 participants (12.2% of total) had at least one dental visit. In CY 2022, that rate of adult dental participants with at least one dental visit decreased to 10.4%. The percentage of users (enrollees who received dental services during the evaluation period) in the adult dental program who were seen in the ED with a dental diagnosis decreased by 1.9 percentage points from CY 2019 to CY 2022. Beginning on January 1, 2023, adults enrolled in HealthChoice receive coverage for comprehensive dental services through the Maryland Healthy Smiles dental program, and the adult dental pilot was sunset.[7]

The National DPP lifestyle change program was authorized for HealthChoice members beginning September 1, 2019. By participating in HealthChoice DPP, HealthChoice participants who are considered at risk for developing type 2 diabetes and meet the eligibility criteria engage with certified DPP providers to learn how to reduce their risk of developing type 2 diabetes through lifestyle changes to improve their overall health. In partnership with MDH and HealthChoice MCOs, Hilltop developed an algorithm that MCOs can use to search their electronic medical records and identify members who meet eligibility criteria for HealthChoice DPP. This algorithm was provided to the MCOs and implemented in the spring of 2021 after extensive testing.

[7] MD. CODE. ANN, Health-Gen § 15-303(a)(2)(xiii)(2).

Hilltop uses Medicaid claims and encounter data to provide MDH with periodic service utilization reports that track current and cumulative DPP enrollment. From its implementation in September 2019 through December 31, 2022, there have been 1,379 DPP encounters. Regression analyses indicate that DPP participants are significantly less likely to develop diabetes with no association found between DPP participation and total number of ED visits or inpatient admissions.

MDH also renewed the Increased Community Services (ICS) program. The ICS program allows certain adults with physical disabilities to remain in the community as an alternative to institutional care. During the evaluation period, 13.6% of ICS-eligible long-stay nursing facility residents transitioned to a community setting under the ICS program.

The HealthChoice waiver allows MDH to provide a limited benefit package of family planning services to eligible women. The program covers medical services related to family planning, including office and clinic visits, physical examinations, certain laboratory services, treatments for sexually transmitted infections, family planning supplies, permanent sterilization and reproductive health counseling, education, and referrals. Effective July 1, 2018, MDH expanded eligibility under its Family Planning program to lift the age limit and open coverage to include men. The number of participants in the Family Planning program for any period of enrollment decreased slightly by 1.4%, and the number of participants continuously enrolled dramatically increased by 38.6%, mostly likely due to continuous Medicaid eligibility required under MOE requirements.

Maryland also received waiver approval to establish and implement the CoCM pilot program. The CoCM program integrates primary care and behavioral health services for HealthChoice participants who have experienced a behavioral health need (either a mental health condition or SUD) but have not received effective treatment. Coverage for CoCM services provided to HealthChoice participants began in July 2020. The number of active participants grew from 65 in September 2020 to 113 in June 2023. The percentage of program participants with a clinical contact who had at least one Patient Health Questionnaire-9 (PHQ-9) screening for depression increased from 92.6% in Q2 of FY 2021 to 97.1% in Q4 of FY 2023. Furthermore, 43.1% of participants enrolled for at least 70 days with at least one PHQ-9 screening experienced a substantial decrease in their screening scores.

In 2021, MDH received approval for the §1115 waiver renewal for the period of January 1, 2022, through December 31, 2026, to focus on maintaining high-quality, cost-effective services and pilot programs initiated in the last waiver renewal period. The Family Planning program was not renewed, as it was incorporated into the State Plan. Key demonstrations components include the following:

- Expansion of IMD services for adults with SMI
- Expansion of SUD Residential and Inpatient Treatment Services
- MOM program

- Modification to ACIS pilot program
- Collaborative Care Model pilot Program
- Diabetes Prevention Program (DPP)
- Dental Services for Former Foster Care Individuals up to 26 years old

Evaluation of the Maryland Medicaid HealthChoice Program: CY 2018 to CY 2022

Section I. Introduction

In 1997, Maryland implemented HealthChoice—a statewide mandatory Medicaid and Children's Health Insurance Program (CHIP) managed care program—as a waiver of standard federal Medicaid rules, under authority of §1115 of the Social Security Act. The Centers for Medicare & Medicaid Services (CMS) approved subsequent waiver renewals in 2002, 2005, 2007, 2010, 2013, 2016, and 2021. The Maryland Department of Health (MDH) provides oversight and continually monitors HealthChoice performance on a variety of measures across the demonstration's goals, culminating in an annual evaluation.

This report—the 2024 summative evaluation—includes data from calendar year (CY) 2018 through CY 2022. The following sections provide a brief overview of the HealthChoice program and recent program updates before addressing these goals:

- Improve access to health care for the Medicaid population, including special populations
- Improve the quality of health services delivered
- Provide patient-focused, comprehensive, and coordinated care through the provision of a single medical home
- Emphasize health promotion and disease prevention
- Expand coverage to additional low-income Marylanders with resources generated through managed care efficiencies

This report is a collaborative effort between MDH and The Hilltop Institute at UMBC.

It is important to note that the COVID-19 pandemic in 2020 had a significant impact on the HealthChoice program, resulting in increased enrollment and decreased utilization of services. Because the Families First Coronavirus Response Act (FFCRA) required continuous Medicaid eligibility during the public health emergency (PHE), starting in March 2020, there was a pause in eligibility reviews that led to a large increase in Medicaid enrollment through 2022. Rates of service utilization and screenings decreased in CY 2020 during the COVID-19 pandemic, and while many have seen subsequent increases in CY 2021 and CY 2022, few rates have returned to pre-pandemic levels. Maryland will continue to monitor the effects of the COVID-19 pandemic on the HealthChoice program.

Furthermore, the quality of the race and ethnicity information available changed dramatically beginning in 2014, with the implementation of the ACA as a new approach to selecting race and ethnicity on the Medicaid eligibility application reduced the number of individuals reporting

their race or ethnicity and increased the proportion represented as "Other." MDH has completed a process of enhancing the Medicaid race and ethnicity data in the MMIS2 using external data sets from the Maryland Health Benefit Exchange (MHBE) and Chesapeake Regional Information System for Our Patients (CRISP), Maryland's health information exchange, with the goal of improving the race and ethnicity data for monitoring health equity and disparities among Medicaid participants. Results show the enhanced data are closer to the benchmark of the Medicaid participants in the American Community Survey (ACS).[8] The analyses in this year's evaluation of the HealthChoice program use the enhanced race and ethnicity data.

Overview of the HealthChoice Program

As of the end of CY 2022, close to 90% of the state's Medicaid and Maryland Children's Health Program (MCHP) populations were enrolled in HealthChoice. HealthChoice participants choose a managed care organization (MCO) and a primary care provider (PCP) from their MCO's network to oversee their medical care. Participants who do not select an MCO or a PCP are assigned to one automatically. The groups of Medicaid-eligible individuals who enroll in HealthChoice MCOs include the following:

- Families with low income that have children
- Families that receive Temporary Assistance for Needy Families (TANF)
- Children younger than 19 years who are eligible for MCHP
- Children in foster care and, starting in CY 2014, individuals up to age 26 who were previously in foster care
- Adults under the age of 65 with income up to 138% of the federal poverty level (FPL)
- Women with income up to 264% of the FPL who are pregnant or less-than-60-days postpartum
- Individuals receiving Supplemental Security Income (SSI) who are under age 65 and ineligible for Medicare

Not all Maryland Medicaid participants are eligible for the HealthChoice managed care program. Groups that are ineligible for enrollment in the managed care program include the following:

- Medicare beneficiaries

[8] American Community Survey Data, available at https://www.census.gov/programs-surveys/acs/data.html.

- Individuals aged 65 years and older[9]
- Individuals in a "spend-down" eligibility group who are only eligible for Medicaid for a limited time
- Individuals who require more than 90 days of long-term care services and are subsequently disenrolled from HealthChoice
- Individuals who are continuously enrolled in an institution for mental disease (IMD) for more than 30 days
- Residents of an intermediate care facility for individuals with intellectual disabilities
- Individuals enrolled in the Model Waiver or the Employed Individuals with Disabilities (EID) program

There are additional populations covered under the HealthChoice waiver who do not enroll in HealthChoice MCOs, including individuals in the Family Planning and the Rare and Expensive Case Management (REM) programs. The Family Planning program is a limited-benefit program under the waiver. The REM program allows HealthChoice-eligible individuals with certain rare and expensive diagnoses to receive care on a fee-for-service (FFS) basis. REM is discussed in more detail in Section III of this report, and Family Planning is discussed in Section VII.

HealthChoice participants receive the same comprehensive benefits as those available to Maryland Medicaid participants through the FFS system. MCOs were responsible for coverage of most medical services during 2022, including the following:

- Inpatient and outpatient hospital care
- Physician care
- Federally qualified health center (FQHC) or other clinic services
- Laboratory and X-ray services
- Early and Periodic Screening, Diagnosis, and Treatment (EPSDT) services for children under 21
- Prescription drugs, except for behavioral health drugs

[9] Individuals aged 65 and older can be enrolled in a HealthChoice MCO if covered as a parent or caretaker.

- Durable medical equipment and disposable medical supplies
- Home health care
- Vision services, including corrective lens and hearing aids for children under 21[10]
- Dialysis
- The first 90 days of long-term care services

The following services are not covered by the MCOs and instead are covered by the Medicaid FFS system:

- Specialty mental health care and substance use disorder (SUD) treatment services[11]
- Dental care for children, pregnant women, and adults in the REM program
- Health-related services and targeted case management services provided to children when the services are specified in the child's individualized education plan (IEP) or individualized family service plan (IFSP)
- Therapy services (occupational, physical, and speech) for children
- Personal assistance services offered under the Community First Choice program
- Viral load testing services, genotypic, phenotypic, or other HIV/AIDS drug resistance testing for the treatment of HIV/AIDS
- Behavioral health drugs
- Services covered under 1915(c) home and community-based services (HCBS) waivers[12]

Program Updates

MDH implemented the following programmatic changes to the HealthChoice program that influenced the evaluation period:

[10] Although not required by regulation, some MCOs provide adults with limited vision, hearing, and dental benefits.
[11] SUD services were carved out of the MCO benefit package on January 1, 2015. Mental health services have never been included in the MCO benefit package.
[12] Services covered under the 1915(c) HCBS waivers include assisted living, medical day care, family training, case management, senior center plus, dietitian and nutritionist services, and behavioral consultation.

- From the inception of the HealthChoice program in 1997, mental health services were carved out of the benefit package, while services for individuals with SUDs were provided by the MCOs. MDH combined mental health and SUD services in an integrated carve-out on January 1, 2015. Under the carve-out, an administrative services organization (ASO) administers and reimburses all specialty mental health and SUD services for Medicaid participants on an FFS basis, under the oversight of the Medicaid program and the Behavioral Health Administration (BHA).
- In 2013, MDH implemented a §2703 Chronic Health Home program, serving adults diagnosed with a serious and persistent mental illness, children diagnosed with a serious emotional disturbance (SED), and individuals diagnosed with an opioid SUD who are at risk for another chronic condition based on tobacco, alcohol, or other non-opioid substance use. As of December 2022, MDH had approved 267 Chronic Health Home site applications. The Health Home sites include 196 psychiatric rehabilitation programs, 24 mobile treatment providers, and 47 opioid treatment programs. In December 2022, there were 10,255 participants in the Chronic Health Home program, including 617 children/youth under age 18; 8,836 participants aged 18 to 64; and 802 participants aged 65 and over.
- Under the ACA, Maryland expanded coverage through the Medicaid program to two new populations:
    - Individuals with income up to 138% of the FPL. Over the course of the expansion's first year (CY 2014), 283,716 adults received Medicaid coverage through this expansion. As of December 2022, there were 420,070 individuals enrolled in the ACA expansion.
    - Former foster care children up to the age of 26 years.

MDH included several initiatives for innovative programs that were approved for the CY 2017 to CY 2021 waiver period. See Section VII for additional information on the following initiatives:

- Residential Treatment for Individuals with SUDs aged 21 through 64 years in IMDs
- Two community health pilot programs
    - Evidence-Based Home Visiting Services (HVS)
    - Assistance in Community Integration Services (ACIS)
- Dental benefits for former foster youth between the ages of 21 and 26 years
- Adult dental pilot program to provide dental services to adults between the ages of 21 and 64 years

- National Diabetes Prevention Program (DPP)
- Increased Community Services (ICS)
- Family Planning program
- Collaborative Care Model (CoCM) pilot

MDH submitted a §1115 waiver renewal application in July 2021 and received approval in December 2021 for the period of January 1, 2022, through December 31, 2026.
The Family Planning program, HVS program, and Adult Dental pilot were not renewed because they were added to the State Plan. However, several initiatives were added, expanded, or modified, including the following:

- Addition of the MOM program
- Expansion of IMD services for adults to include primary diagnoses of serious mental illness (SMI)
- Expansion of SUD Residential and Inpatient Treatment Services to remove caps on lengths of stays for SUD treatment in an IMD and aim for a statewide average length of stay (LOS) of 30 days or less
- Modification to the ACIS pilot program to increase the statewide capacity to 900 spaces

MDH, in collaboration with the Center for Medicare and Medicaid Innovation (CMMI), established Maryland's Statewide Integrated Health Improvement Strategy (SIHIS)[13] (Maryland Department of Health, 2020a). To develop the SIHIS proposal, workgroups led by MDH, the Opioid Operational Command Center (OOCC),[14] and the Health Services Cost Review Commission (HSCRC) collaborated to gather stakeholder input to establish goals, measures, milestones, and targets for SIHIS.

SIHIS is structured to drive improvements in three domains: hospital quality, care transformation across the health care system, and total population health. Reducing avoidable admissions and readmissions is a top priority under hospital quality. Diabetes, opioid use, and maternal and child health were selected as priority areas under the third domain, with the identified goals of improving care coordination for patients with chronic conditions, improving adult body mass index (BMI), improving overdose mortality rates, reducing severe maternal morbidity rates, and decreasing asthma-related ED visits rates for ages 2 to 17. CMMI approved Maryland's proposal in 2021, which includes a detailed plan to achieve "progress milestones and population health outcome targets across all three domains by the end of 2026" (Maryland

[13] https://hscrc.maryland.gov/Pages/Statewide-Integrated-Health-Improvement-Strategy-.aspx
[14] In 2023, known as the Office of Overdose Response.

Department of Health, 2020b, p. 1). The SIHIS 2021 goals and milestones were important building blocks necessary to progress toward the 2023 and 2026 targets. The SIHIS 2021 goals have been successful in reducing the mean BMI for adults, reducing avoidable admissions and readmissions, reducing the severe maternal morbidity rate and improved overdose mortality (Maryland Department of Health, 2023b). The state is focused on improving care coordination for participants with chronic conditions, which was the only 2021 milestone that was not met.

As a result of the collaboration with CMMI, MDH developed an annual monitoring plan for the evaluation of Maryland Health Services Cost Review Commission (HSCRC)-funded Maternal and Child Health (MCH) Population Health Improvement Fund for July 1, 2021, to June 30, 2025. The plan includes impact measures that align with SIHIS and include the following programs:

- HVS pilot expansion for high-risk pregnant individuals and children under the age of three
- Reimbursement for doula services for pregnant individuals and new parents
- MOM program expansion for pregnant individuals with opioid use disorder (OUD)
- CenteringPregnancy, a clinic-based group prenatal care model
- HealthySteps, a clinic-based pediatric primary care model and family case management framework

This will also support expansion of the State's existing community-based asthma programs and Eliminating Disparities in Maternal Health Initiative.

Section II. Methodology

Because of the varying evaluation measures, Hilltop used different methodologies to evaluate the HealthChoice outcomes being measured. For measuring trends in enrollment and service utilization among demographic and clinical subgroups, Hilltop used Medicaid program data for CY 2018 to CY 2022 from the Maryland Medicaid Management Information System (MMIS2) to identify enrollees, their services utilization and treatment. These measures are expressed either as five-year trends or as comparisons between the first and the last year of the evaluation period (i.e., CY 2018 and CY 2022). Additionally, some analyses distinguish between all ACA Medicaid expansion participants and those enrolled for 12 continuous months. ACA Medicaid expansion participants with 12 continuous months of enrollment provide an MCO with more time and opportunities to intervene in their health care than participants with any period of enrollment.

Hilltop also used data from *LTSSMaryland*—the state's integrated long-term services and supports (LTSS) tracking system—to identify enrollees in the REM program for analyses of this subpopulation's demographics and service utilization.

For standardized definitions of particular clinical, pharmaceutical, and health utilization measures, Hilltop used the Healthcare Effectiveness Data and Information Set (HEDIS®)[15] proprietary software from Cognizant, an NCQA-certified software vendor, to define and classify according to standard NCQA measures. Hilltop also uses the MetaStar Executive Summary (2023) to report HEDIS® measures for preventive care and monitoring chronic diseases.

Hilltop developed programming to create person- and visit-level summaries of two HEDIS® measures: Follow-Up After Emergency Department Visit for Alcohol and Other Drug Abuse or Dependence (FUA) and Follow-Up After Emergency Department Visit for Mental Illness (FUM). Hilltop also developed programming to create person-level data sets utilizing diagnoses and service definitions from the HEDIS® Asthma Medication Ratio (AMR) measure and the diabetes retinal and hemoglobin A1c screening from the Comprehensive Diabetes Care (CDC) measure.

Hilltop analyzed trends in health services utilization pre- and post-program-implementation, pre- and post-program-enrollment, and pre- and post-treatment. Hilltop also conducted analyses to compare the differences in trends in health services utilization between program participants and non-participants. Finally, some analyses examined the monthly count of service utilization per participant in a given program.

Regression Analysis

To evaluate the effects of HealthChoice service delivery on outcomes such as hospitalizations or ED visits, a trend analysis would not be sufficient. Numerous factors besides health care treatment—such as age, sex, race, geographic location, and pre-existing health conditions—affect outcomes. To separate these other factors when estimating whether

[15] HEDIS® is a registered trademark of the National Committee for Quality Assurance (NCQA).

adherence to HEDIS® guidelines is associated with improved outcome measures, Hilltop used a set of statistical techniques known as multivariable regression analysis. The multivariable regression techniques used included logistic and linear regression models.

Logistic regressions are used to analyze relationships when the dependent (outcome) variable has only two discrete outcomes. The variables that are being measured for their associations with the outcome variable are called independent variables. Independent variables can themselves be discrete (such as race, sex, or region), ordinal (such as rankings from best to worst), interval (such as amounts of a service), or ratio-level (such as a percentage). The coefficients of independent variables produced by logistic regressions are thereafter translated into odds ratios (ORs), which represent the odds that an outcome will occur (given a particular level of one of these variables changing) compared to the odds of the outcome occurring in the absence of those variables. For example, in a group of people whose outcome variable is an ED visit, if the OR for females is 0.90, then females have 10% lower odds (or are 10% less likely) to incur an ED visit in this sample when compared to males.

While constructing these regression analyses, Hilltop created programming to identify Medicaid participants who met HEDIS® measure population definitions and their relationship with the following outcomes of interest including:

- Relationship between asthma patients with a positive AMR and ED utilization as well as inpatient admissions compared to those without a positive AMR
- Initiation and Engagement of Alcohol and Other Drug Dependence Treatment
- Receipt of diabetes eye screenings and inpatient admission and ED visit for diabetes
- Among prediabetic adults, relationships between participation in the DPP and diabetes incidence, inpatient admissions, and ED utilization

Methodological Limitations

Regression analyses and other measures used in this evaluation do not establish whether the independent variables measured cause the outcome variable. Multivariable regressions measure the associations between the independent variables and the outcome variables, assuming that other conditions are met, such as avoiding selection bias[16] or inappropriate comparison groups. Causality between the treatment condition (i.e., the main independent variable of interest) and outcome variables cannot be inferred without random assignment of the main treatment condition. Nonetheless, the strength of the association between independent and outcome variables can be measured by the estimated confidence intervals

[16] Selection bias occurs when the study sample does not reflect the population of interest. Therefore, any risks/benefits/outcome observed in the analysis does not accurately represent how that risks/benefits/outcome would occur in the target population, affecting the generalizability of the study's results.

around the parameter or estimates. A narrower confidence interval indicates that the estimated parameter is more likely to be close to the center of that confidence interval than in the case of a broader confidence interval. In January 2020, the behavioral health ASO for Maryland Medicaid changed from Beacon Health Options to Optum, and technical problems with the transition impacted the submission of behavioral health data for analysis during the evaluation period. Additionally, the effects of the COVID-19 pandemic, which began in March 2020, had a large impact on the HealthChoice program from CY 2020 to CY 2022 and posed methodological challenges for the evaluation.

Section III. Improve Access to Care for the Medicaid Population

The HealthChoice demonstration depends on managed care programs improving access to care for participants. This section measures Maryland's progress toward improving access to care by examining enrollment, network adequacy, and utilization. This section also measures the HealthChoice programs that improve access to care for special populations—including children in foster care and individuals in the REM population—and addresses racial and ethnic disparities in health care and service utilization.

Enrollment

HealthChoice Enrollment

One way to measure the population served by HealthChoice is to count the number of individuals with any period of enrollment during a given calendar year, including individuals who may not have been enrolled for the entire year. Another method is to count individuals enrolled at a particular point in time (e.g., enrollment as of December 31). Program enrollment on a given day is smaller than the number of enrollees served over the course of a year as individuals move in and out of Medicaid eligibility. Unless otherwise stated, the enrollment data in this section of the report use the point-in-time methodology to reflect enrollment as of December 31 of the measurement year.[17] Occasionally, measures will specify that they include persons enrolled at any time during the year.

Table 1 displays demographic characteristics of the HealthChoice population for those with any period of enrollment during the evaluation period (CY 2018 through CY 2022).[18] Table 1 utilized the improved race and ethnicity data. The total number of participants increased by 13.3% during this time. The distribution of all demographic characteristics except for race/ethnicity remained relatively consistent throughout the evaluation period. The percentage of participants who reported their race as "Hispanic" increased by 2.2 percentage points from CY 2018 to CY 2022. The only other racial groups that grew from CY 2018 to CY 2022 were Asian and "Other" with increases of 0.7 and 0.4 percentage points, respectively.

[17] Enrollment data are presented for individuals aged 0 through 64 years. Age is calculated as of December 31 of the measurement year.

[18] Data was rerun using the enhanced race data variable. Therefore, CY 2018 enrollment and race and ethnicity breakdowns will not reflect values found in previous HealthChoice Evaluations.

Table 1. HealthChoice Population (Any Period of Enrollment) by Demographics, CY 2018 and CY 2022

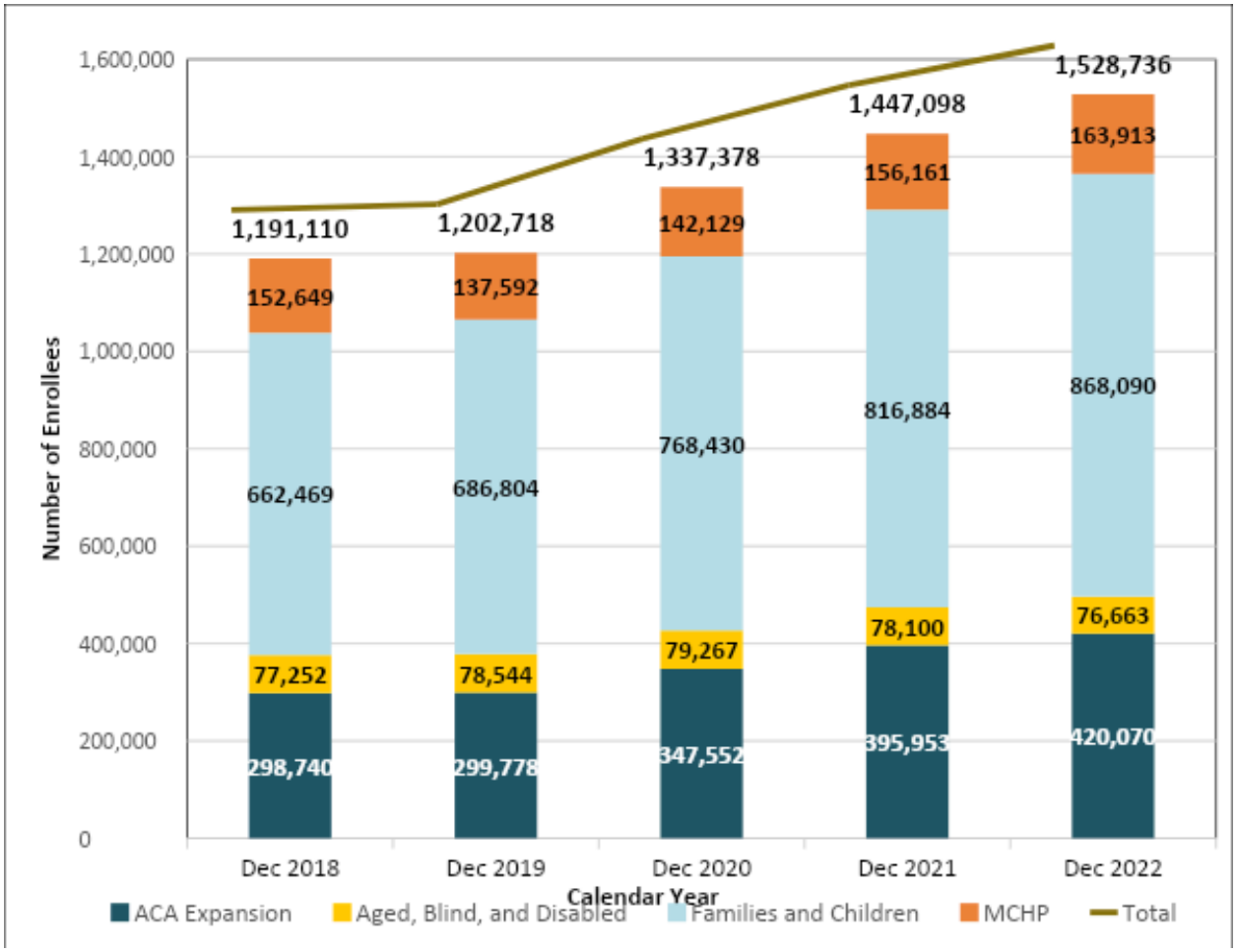
Demographic Characteristic	CY 2018		CY 2022	
	# of Participants	% of Total	# of Participants	% of Total
Sex				
Female	747,901	53.8%	842,823	53.5%
Male	641,469	46.2%	731,358	46.5%
Total	**1,389,370**	**100%**	**1,574,181**	**100%**
Age Group (Years)				
0–<1	35,838	2.6%	34,610	2.2%
1–2	78,870	5.7%	76,257	4.8%
3–5	113,831	8.2%	116,735	7.4%
6–9	148,267	10.7%	155,147	9.9%
10–14	176,029	12.7%	192,176	12.2%
15–18	117,134	8.4%	142,344	9.0%
19–20	51,201	3.7%	62,257	4.0%
21–39	385,379	27.7%	460,261	29.2%
40–64	282,821	20.4%	334,394	21.2%
Total	**1,389,370**	**100%**	**1,574,181**	**100%**
Race/Ethnicity				
Asian	69,185	5.0%	90,029	5.7%
Black	616,122	44.4%	682,899	43.4%
White	391,090	28.2%	404,313	25.7%
Hispanic	214,960	15.5%	279,057	17.7%
Native American	13,359	1.0%	15,365	1.0%
Other*	84,654	6.1%	102,518	6.5%
Total	**1,389,370**	**100%**	**1,574,181**	**100%**
Region**				
Baltimore City	240,094	17.3%	255,940	16.3%
Baltimore Suburban	417,081	30.0%	475,118	30.2%
Eastern Shore	129,392	9.3%	140,727	8.9%
Southern Maryland	71,207	5.1%	80,462	5.1%
Washington Suburban	413,431	29.8%	491,026	31.2%
Western Maryland	116,656	8.4%	129,918	8.3%
Out of State	1,509	0.1%	990	0.1%
Total	**1,389,370**	**100%**	**1,574,181**	**100%**

*"Other" race/ethnicity category includes Pacific Islander, Alaskan Native, Two or More Races, Prefer Not to Say, and Unknown.

**Regions are defined as the following: Baltimore City (only), Baltimore Metro (Anne Arundel, Baltimore, Carroll, Harford, and Howard Counties), Eastern Shore (Caroline, Cecil, Dorchester, Kent, Queen Anne's, Somerset, Talbot, Wicomico, and Worcester Counties), Southern Maryland (Calvert, Charles, and St. Mary's Counties), Washington Metro (Montgomery and Prince George's Counties), and Western Maryland (Allegany, Frederick, Garrett, and Washington Counties).

Figure 1 displays HealthChoice enrollment by coverage category[19, 20, 21] from CY 2018 through CY 2022. Please note that, for this year's evaluation, Hilltop shifted from using the Disabled coverage category to using the Aged, Blind, and Disabled (ABD) coverage category, which is identified using a different set of codes. There were code changes for the Families and Children coverage category as well. For a detailed list of the inclusion criteria for each coverage category, see Appendix. Since CY 2018, the overall HealthChoice population has grown by 28.3%. Enrollment grew each year, with the largest increase noted between CY 2019 and 2020 (11.2%), followed by CY 2020 to CY 2021 (8.2%).[22]

Figure 1. HealthChoice Enrollment by Coverage Category as of December 31, CY 2018–CY 2022*



*Enrollment counts in Figure 1 include participants aged 0-64 years who are enrolled in a HealthChoice MCO.

[19] The Disabled category is now Aged, Blind, and Disabled (ABD).
[20] The codes for ABD and F&C were updated in CY 2022.
[21] The F&C category is families, children, and pregnant women.
[22] Data for each year were updated to reflect a change in how coverage groups were categorized and to add a category for participants enrolled in ACA expansion coverage groups. See Appendix for an explanation of which Medicaid coverage groups are included in each category.

Enrollment Growth

As of December 2022, national enrollment in Medicaid and CHIP was 92.6 million (Kaiser Family Foundation, n.d.a). In fiscal year (FY) 2023, overall enrollment growth slowed to 6.5%, which is down from the growth rate of 8.4% in FY 2022, with the trend due in part to the unwinding of the PHE and the end of the continuous enrollment requirement of FFCRA. Enrollment is projected to decline by 8.6% in FY 2024 (Williams et al., 2023). The national enrollment rate peaked in FY 2015, partly because of the tapering of the ACA enrollment. Between pre-ACA enrollment and the end of 2022,[23] Maryland experienced the eighth highest growth rate in Medicaid and CHIP enrollment out of the 48 states and the District of Columbia that reported data (Kaiser Family Foundation, n.d.c). In 2013, before the ACA expansion, more than 10% of Maryland residents were uninsured. The growth in Medicaid enrollment contributed to a decline in Maryland's uninsured rate, which overall remained constant throughout the evaluation period, at around 6.0% (Kaiser Family Foundation, n.d.b, Kaiser Family Foundation, n.d.a).[24]

Table 2 shows the percentage of Maryland's population enrolled in HealthChoice between CY 2018 and CY 2022. The number of HealthChoice participants with any period of enrollment fluctuated throughout the evaluation period but increased overall. The percentage of Maryland's population who were HealthChoice participants also increased by 2.5 percentage points. The number of HealthChoice enrollees and the percentage of Maryland's population who were enrolled as of December 31 increased each year from CY 2018 to CY 2022.

Table 2. HealthChoice Enrollment as a Percentage of the Maryland Population, CY 2018–CY 2022

	CY 2018	CY 2019	CY 2020	CY 2021	CY 2022
Maryland Population*	6,042,718	6,045,680	6,165,129	6,174,610	6,163,981
Individuals Enrolled in HealthChoice for Any Period of Time During the Year					
HealthChoice Population	1,389,716	1,377,493	1,392,876	1,487,449	1,574,181
% of Population in HealthChoice	23.0%	22.8%	22.6%	24.1%	25.5%
Individuals Enrolled in HealthChoice as of December 31					
HealthChoice Population	1,191,110	1,202,718	1,337,378	1,447,098	1,528,736
% of Population in HealthChoice	19.7%	19.9%	21.7%	23.4%	24.8%

*Data source: U.S. Census Bureau, Population Division. *Annual estimates of the resident population: April 1, 2010, to July 1, 2022*. https://www.census.gov/quickfacts/fact/table/MD,US/PST045218

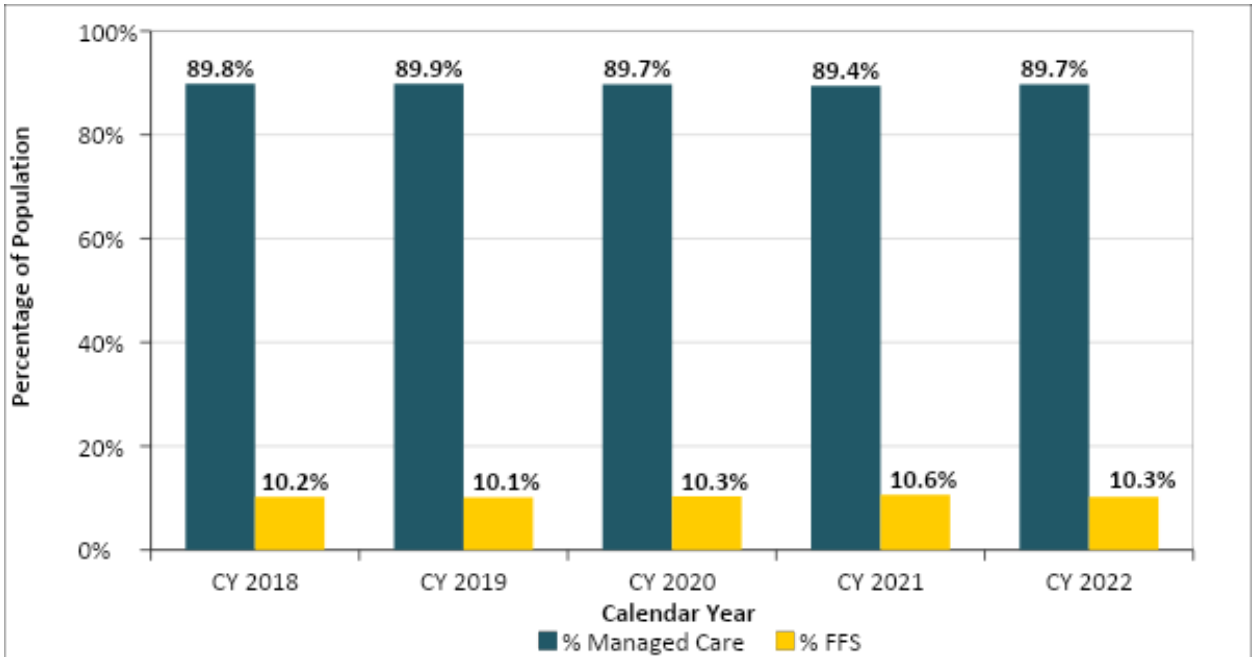
[23] The Pre-ACA enrollment figure used for this comparison is the average enrollment between July and September 2013.

[24] The limited data available for CY 2020 suggest that there was a decline in the uninsured rate to 4.3%. The 2020 data are based on the Coverage of the Total Population (CPS) instead of the American Community Survey (ACS) and cannot be compared to CY 2018, CY 2019, and CY 2021 data.

Managed Care Enrollment

Since its inception, HealthChoice has been expected to enroll a high percentage of Medicaid participants into managed care. Figure 2 compares Medicaid managed care and FFS enrollment. Between CY 2018 and CY 2022, managed care enrollment remained consistently above 89.0%, with the highest rate of 89.9% in CY 2019, followed by 89.8% in CY 2018.

Figure 2. Percentage of Medicaid[25] Participants in Managed Care Compared to FFS, CY 2018–CY 2022



Continuous Enrollment

MDH began monitoring HealthChoice participants to ensure that they did not have a gap or interruption in Medicaid coverage as a result of a change in the system for eligibility redetermination in CY 2015. MDH initiated automated renewals of coverage based on data indicating no substantial changes in participants' financial position to reduce the amount of time Medicaid-eligible individuals were without Medicaid coverage and improve the health and financial status of beneficiaries. Since FFCRA's continuous enrollment requirement affected enrollment from CY 2020 through CY 2022, it is difficult to evaluate the extent to which the auto-enrollment policy affected continuous enrollment or reduced gaps in coverage over the evaluation period.

Table 3 shows the proportion of HealthChoice participants with twelve months of continuous Medicaid enrollment by age group. The percentage of participants with continuous enrollment increased steadily for all age groups over the evaluation period, with overall continuous enrollment among participants of any age rising from 75.1% in CY 2018 to 92.7% in CY 2022.

[25] "Medicaid" is representative of both Medicaid and MCHP.

Adults aged 19 to 39 years continued to have lower rates of continuous enrollment than other age groups throughout the evaluation period.

Table 3. Percentage of HealthChoice Participants with Continuous Medicaid Enrollment, by Age Group, CY 2018–CY 2022

Age Group (Years)	Calendar Year				
	2018	2019	2020	2021	2022
1–2	74.5%	75.0%	85.8%	92.8%	93.7%
3–9	80.4%	81.9%	91.0%	93.8%	94.2%
10–18	80.9%	82.3%	91.1%	94.5%	94.9%
19–39	68.9%	71.9%	82.2%	89.0%	90.9%
40–64	74.1%	77.3%	83.3%	89.5%	91.6%
Total	**75.1%**	**77.4%**	**86.3%**	**91.4%**	**92.7%**

Table 4 shows the odds ratios of demographic characteristics on having fewer than 12 months of enrollment. A logistic regression was used to calculate the odds ratios for MCO participants aged 1 to 64 years each calendar year. Demographic groups that had higher odds of experiencing non-continuous enrollment than the reference groups throughout the evaluation period include adults aged 19 to 39 years, ACA expansion participants, and participants who live in Western Maryland or out of state. For example, in CY 2022, the odds that participants in the ACA expansion coverage groups had less than 12 months of continuous enrollment were 1.567 times higher than for non-ACA expansion participants.

Table 4. Associations between Demographic Characteristics and Continuous Enrollment, Odds Ratios of Fewer than 12 Months Enrollment, CY 2018–CY2022

Effect	2018	2019	2020	2021	2022
Age Group					
03-09	0.828***	0.746***	0.649***	0.889***	0.925***
10-18	0.848***	0.787***	0.704***	0.904***	0.813***
19-39	1.393***	1.083***	1.150***	1.352***	1.194***
40-64	1.014**	0.755***	0.973***	1.163***	1.055***
Race†					
Black	0.799***	0.835***	0.674***	0.649***	0.677***
White	0.872***	0.873***	0.793	0.826***	1.004***
Hispanic	0.704***	0.716***	0.556***	0.429***	0.783***
Native American	1.09***	1.044**	0.915**	1.045***	0.933
Other	1.265***	1.242***	0.982***	1.018***	1.344***
ACA Expansion Coverage	1.366***	1.692***	1.767***	1.825***	1.567***
Region					
Eastern Shore	1.018***	1.008***	0.922***	1.034***	1.050***
Montgomery and Prince George's County	1.280***	1.247***	1.363***	1.305*	1.274
Out of State	1.492***	1.703***	1.793***	2.16***	2.349***
Southern Maryland	1.145	1.105***	1.100***	1.132***	1.114***

Effect	2018	2019	2020	2021	2022
Western Maryland	1.088***	1.104***	1.053***	1.165***	1.171***

***<0.001, **<0.01, *<0.05
†, Reference Groups: Age 01-02, Asian, Not ACA, Baltimore Metro
For CY 2022, enhanced race and ethnicity data were used.

Table 5 displays the number and percentage of HealthChoice participants with a gap in Medicaid enrollment of one or more days from CY 2018 through CY 2022, as well as whether the gap lasted longer than 180 days (i.e., over 6 months). Participants who reapply within 120 days are enrolled into their previous MCO. Participants who reapply after 121 days or more are auto-assigned to an MCO. The percentage of HealthChoice participants with at least one gap in coverage decreased from 8.2% in CY 2018, to 1.2% in CY 2020, and 0.4% in CY 2022. Among participants with a gap in coverage in CY 2022, 79.4% had a gap of 180 days or less, and 20.6% had a gap of 181 days or more.

Compared to CY 2018, CY 2019 and CY 2020 had fewer gaps overall, but a greater share of those gaps extended beyond 180 days. CY 2022 had fewer gaps than in all previous years, except CY 2021, and the percentage of those gaps that extended beyond 180 days were lower than CY 2018 levels.

Table 5. Number of HealthChoice Participants with a Gap in Medicaid Coverage, by Length of Gap, CY 2018–CY 2022

Calendar Year	Total	At Least One Gap in Medicaid Coverage		Length of Coverage Gap			
				180 Days or Less		181 Days or More	
		#	%	#	%	#	%
2018	1,389,716	113,801	8.2%	87,976	77.3%	25,825	22.7%
2019	1,377,493	79,624	5.8%	57,746	72.5%	21,878	27.5%
2020	1,392,876	16,241	1.2%	11,391	70.1%	4,850	29.9%
2021	1,487,449	4,212	0.3%	3,253	77.2%	959	22.8%
2022	1,574,181	6,115	0.4%	4,854	79.4%	1,261	20.6%

Table 6 shows the number of participants in the ACA expansion coverage groups who had a coverage gap during the evaluation period and the lengths of participants' respective coverage gaps. Participants in the ACA expansion coverage groups followed a similar trend to the overall population. Over the evaluation period, participants with at least one gap in Medicaid coverage declined from 6.8% in CY 2018 to 0.4% in CY 2022. Excluding CY 2020 to CY 2022, which were affected by the COVID-19 PHE, the percentage of participants in the ACA expansion coverage groups with at least one gap in Medicaid coverage decreased from CY 2018 to CY 2019, and there were 4,856 fewer re-enrollments. From CY 2021 to CY 2022, there was a slight increase in the number of participants in the ACA expansion coverage groups with at least one gap. The respective proportions of gaps that lasted 180 days or less and 181 days or more fluctuated throughout the evaluation period.

Table 6. Number of ACA Expansion HealthChoice Participants with a Gap in Medicaid Coverage, by Length of Gap, CY 2018–CY 2022

Calendar Year	Total	At Least One Gap in Medicaid Coverage		Length of Coverage Gap			
				180 Days or Less		181 Days or More	
		#	%	#	%	#	%
2018	365,733	24,808	6.8%	16,844	67.9%	7,964	32.1%
2019	360,983	19,745	5.5%	11,988	60.7%	7,757	39.3%
2020	368,065	4,755	1.3%	3,108	65.4%	1,647	34.6%
2021	412,143	1,415	0.3%	1,133	80.1%	282	19.9%
2022	438,447	1,683	0.4%	1,300	77.2%	383	22.8%

Table 7 shows the odds ratios of demographic characteristics on having reenrollment within six months (180 days or less) of disenrollment. A logistic regression was used to calculate the odds ratios for MCO participants aged 0 to 64 years during the evaluation period. Prior to the COVID-19 PHE in CY 2020, the odds of being disenrolled and reenrolled within six months declined relative to the start of the evaluation period in CY 2018 ($p<0.001$). Given the impact of the COVID-19 PHE on disenrollment trends, it is difficult to determine the extent to which auto-renewal policies that began in CY 2016 continued to have an effect in CYs 2020 through 2022. Throughout the evaluation period, children of all other age groups were more likely than children aged 0 to 1 years to experience reenrollment within six months; children aged 1 to 2 years were 1.833 times more likely than children aged 0 to 1 to do so, the highest odds ratio for any age group ($p<0.001$). Both adult age groups were less likely than children aged 0 to 1 to experience reenrollment within six months ($p<0.001$). Black and Hispanic participants were more likely than Asian participants to be reenrolled within six months, while White participants were less likely than Asian participants to do so ($p<0.001$). The odds that ACA expansion participants would experience reenrollment within six months were 1.131 times higher than for non-ACA expansion participants ($p<0.001$). Participants in the Eastern Shore region were less likely than Baltimore Metro region residents to be reenrolled within six months, and participants living out of state were 1.156 times more likely than participants in the Baltimore Metro region to do so ($p<0.05$).

Table 7. Associations between Demographic Characteristics and Continuous Enrollment, Odds Ratios of Reenrollment within Six Months of Disenrollment, CY 2018–CY 2022

Effect	Reenrollment (180 Days or Less)		
	Odds Ratio	95% CI	
Year			
2019	0.644 ***	0.64	0.65
2020	0.131 ***	0.13	0.13
2021	0.046 ***	0.05	0.05
2022	0.044 ***	0.04	0.05
Age Group			
01-02	1.833 ***	1.77	1.90
03-09	1.205 ***	1.17	1.24
10-18	1.195 ***	1.16	1.23

Effect	Reenrollment (180 Days or Less)		
	Odds Ratio	95% CI	
19-39	0.885 ***	0.86	0.91
40-64	0.621 ***	0.60	0.64
Race†			
Black	1.046 ***	1.02	1.07
White	0.793 ***	0.77	0.81
Hispanic	1.184 ***	1.16	1.21
Native American	0.971	0.92	1.03
Other	0.986	0.96	1.02
ACA Expansion Coverage	1.131 ***	1.11	1.15
Region			
Eastern Shore	0.881 ***	0.86	0.90
Montgomery and Prince George's County	0.965	0.95	0.98
Out of State	1.156 *	1.00	1.34
Southern Maryland	0.958	0.94	0.98
Western Maryland	0.967	0.95	0.99

***<0.001, **<0.01, *<0.05

†, Reference Groups: 2018, Age 0-01, Asian, Not ACA, Baltimore Metro

In addition to encouraging continuity of coverage, MDH sought to improve connection to services for new HealthChoice participants. Table 8 shows the mean number of days until first service for new HealthChoice participants. Between CY 2018 and CY 2022, the mean duration decreased for medical services, pharmacy services, and overall, for any service. There was an increase in the mean duration for all service categories in CY 2020, likely due to the impact of the COVID-19 pandemic on the availability of medical services.

Table 8. Mean Duration in Days until First Service for New HealthChoice Participants, CY 2018–CY 2022

Service	CY 2018	CY 2019	CY 2020	CY 2021	CY 2022
Any	61.3	57.5	72.7	48.5	47.9
Medical	65.1	60.8	77.5	53.9	52.6
Pharmacy	107.8	101.3	113.7	98.3	97.9

Network Adequacy

Another method of measuring enrollee access to care is to examine provider network adequacy. This section of the report examines PCP and specialty provider networks.

PCP Network Adequacy

HealthChoice requires every participant to have a PCP, and each MCO must have an adequate network of PCPs to serve its enrolled population. Under HealthChoice regulations, MCOs must have a ratio of 1 PCP to every 200 participants within each of the up to 40 local access areas (LAAs) in the state for their network to be considered adequate.[26] MDH assesses network adequacy periodically throughout the year and works with the MCOs to resolve capacity issues. In the case of any issues, MDH discontinues new enrollment for that MCO in the affected region until it increases provider contracts to an adequate level.

Table 9 shows PCP network adequacy as of December 2022. The network adequacy analysis counted the number of PCP offices included in provider networks in each county in Maryland. In CY 2022, Prince George's County was the only jurisdiction that was unable to achieve a 200:1 ratio of participants to PCPs.

Table 9. PCP Capacity, by County, December 2022[27]

County	Number of PCP Offices	Capacity at 200:1	Total Dec 2022 Enrollment	Excess Capacity
				Difference 200:1 Ratio
Allegany	157	31,400	21,338	10,062
Anne Arundel	965	193,000	108,738	84,262
Baltimore City	2,150	430,000	249,510	180,490
Baltimore County	1,785	357,000	224,529	132,471
Calvert	151	30,200	15,881	14,319
Caroline	113	22,600	12,488	10,112
Carroll	273	54,600	25,118	29,482
Cecil	162	32,400	28,319	4,081
Charles	239	47,800	38,022	9,778
Dorchester	89	17,800	12,896	4,904
Frederick	354	70,800	48,137	22,663
Garrett	88	17,600	8,403	9,197
Harford	398	79,600	50,557	29,043
Howard	513	102,600	51,768	50,832
Kent	36	7,200	4,736	2,464
Montgomery	1,553	310,600	206,953	103,647
Prince George's	1,253	250,600	271,211	-20,611

[26] COMAR 10.67.05.05(B).

[27] Providers were identified by their license numbers. If a license number was unavailable, then the provider's national provider identifier (NPI) was used. If a provider had more than one office location in a county, only one office was counted. If a provider had multiple office locations among different counties, one office was counted in each county. PCPs in Washington, DC were not included in the analysis. Although the regulations apply to each MCO individually, this analysis aggregated data from all nine MCOs.

County	Number of PCP Offices	Capacity at 200:1	Total Dec 2022 Enrollment	Excess Capacity Difference 200:1 Ratio
Queen Anne's	117	23,400	8,837	14,563
Somerset	60	12,000	8,760	3,240
St. Mary's	201	40,200	24,063	16,137
Talbot	199	39,800	8,613	31,187
Washington	270	54,000	47,347	6,653
Wicomico	233	46,600	37,806	8,794
Worcester	136	27,200	13,846	13,354
Total (in MD)	**11,495**	**2,299,000**	**1,527,876**	**771,124**
Other	532			
Washington, D.C.	1,207			

Specialty Care Provider Network Adequacy

In addition to ensuring PCP network adequacy, MDH requires MCOs to provide all medically necessary specialty care. If an MCO does not have the appropriate in-network specialist needed to meet an enrollee's medical needs, then it must arrange for care with an out-of-network specialist and compensate the provider. Regulations for specialty care access require each MCO to have an in-network contract with at least one provider statewide in 14 major medical specialties.[28] These medical specialties include eight core specialties—cardiology, otolaryngology, gastroenterology, neurology, ophthalmology, orthopedics, surgery, and urology—and six major specialties—allergy and immunology, dermatology, endocrinology, infectious disease, nephrology, and pulmonology. Additionally, for each of the ten specialty care regions throughout the state that an MCO serves, an MCO must include at least one in-network specialist in each of the eight core specialties.

Utilization

With the continued increase in HealthChoice enrollment, it is important to maintain access to care. This section of the report examines service utilization related to ambulatory care, ED visits, and inpatient admissions. Unless otherwise stated, all measures in this section are calculated for HealthChoice participants with any period of enrollment in the program during the calendar year.

Ambulatory Care Visits

MDH monitors ambulatory care utilization as a measure of access to care. When properly accessing care, HealthChoice participants should receive care in an ambulatory care setting

[28] COMAR 10.67.05.05-1.

rather than use the ED for a non-emergent condition or allow a condition to exacerbate to the extent that it requires an inpatient admission. For this analysis, an ambulatory care visit is defined as contact with a doctor, nurse practitioner, or physician assistant in a clinic, physician's office, or hospital outpatient department by an individual enrolled in HealthChoice at any time during the measurement year. The definition excludes outpatient ED visits, hospital inpatient services, home health services, X-rays, and laboratory services.

Figure 3 shows the percentage of HealthChoice participants with an ambulatory care visit during the calendar year by age group. Between CY 2018 and CY 2022, children under the age of 3 had the highest ambulatory care visit rates, while participants aged 19 to 39 years had the lowest rate. While rates decreased for all age groups in CY 2020, they increased in CY 2021 for every age group above age 1, with gains ranging from 1.2 percentage points for children aged 1 to 2 years to 5.8 percentage points for children aged 10 to 18 years. Between CY 2021 and CY 2022, rates for all age groups decreased except for participants under the age of 1. All age groups above age 1 saw increases in their ambulatory care rate in CY 2022; all age groups experienced rate decreases overall between CY 2018 and CY 2022.

Figure 3. Percentage of the HealthChoice Population Who Had an Ambulatory Care Visit, by Age Group, CY 2018–CY 2022

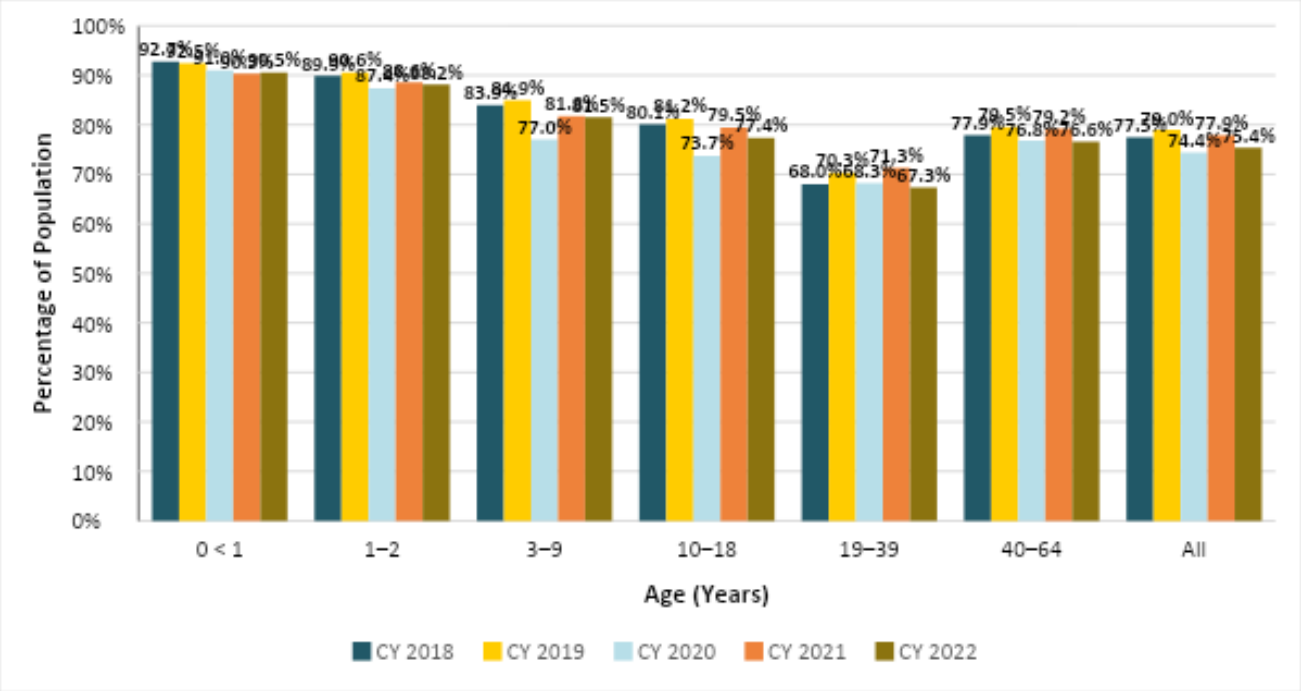


Figure 4 presents ambulatory care use by coverage category. ACA expansion participants accessed ambulatory care services at lower rates than participants in other coverage categories, with their rate decreasing by 1.6 percentage points during the evaluation period. ACA expansion participants constitute more than 25% of the HealthChoice population (Figure 1), so their low utilization of ambulatory care affects the trend for the entire population. All coverage groups experienced declines in ambulatory care visit rates between CY 2019 and CY 2020 but saw increases ranging from 2.3 to 4.1 percentage points between CY 2020 and CY 2021, followed by decreases from CY 2021 to CY 2022. All coverage categories experienced overall decreases ranging from 1.4 to 3.7 percentage points over the evaluation period.

Figure 4. Percentage of the HealthChoice Population Who Had an Ambulatory Care Visit, by Coverage Category, CY 2018–CY 2022

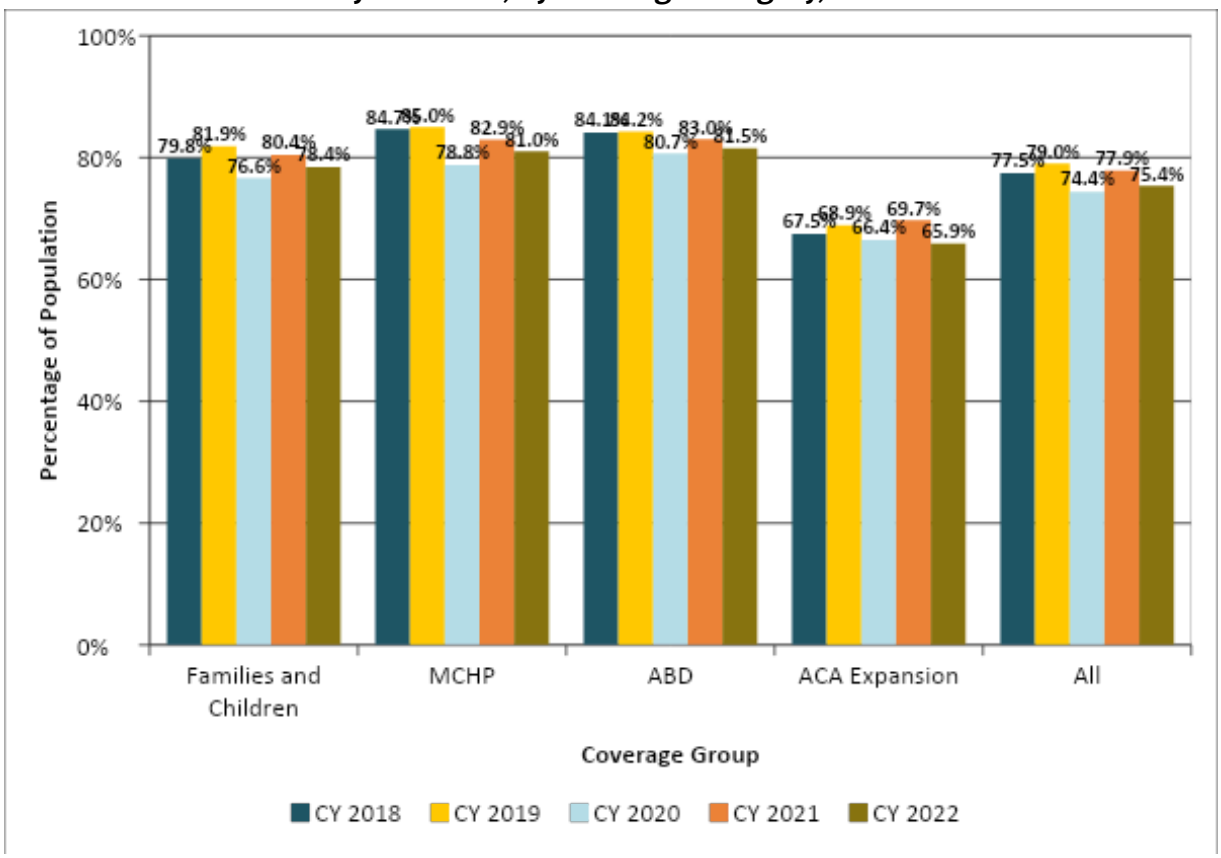
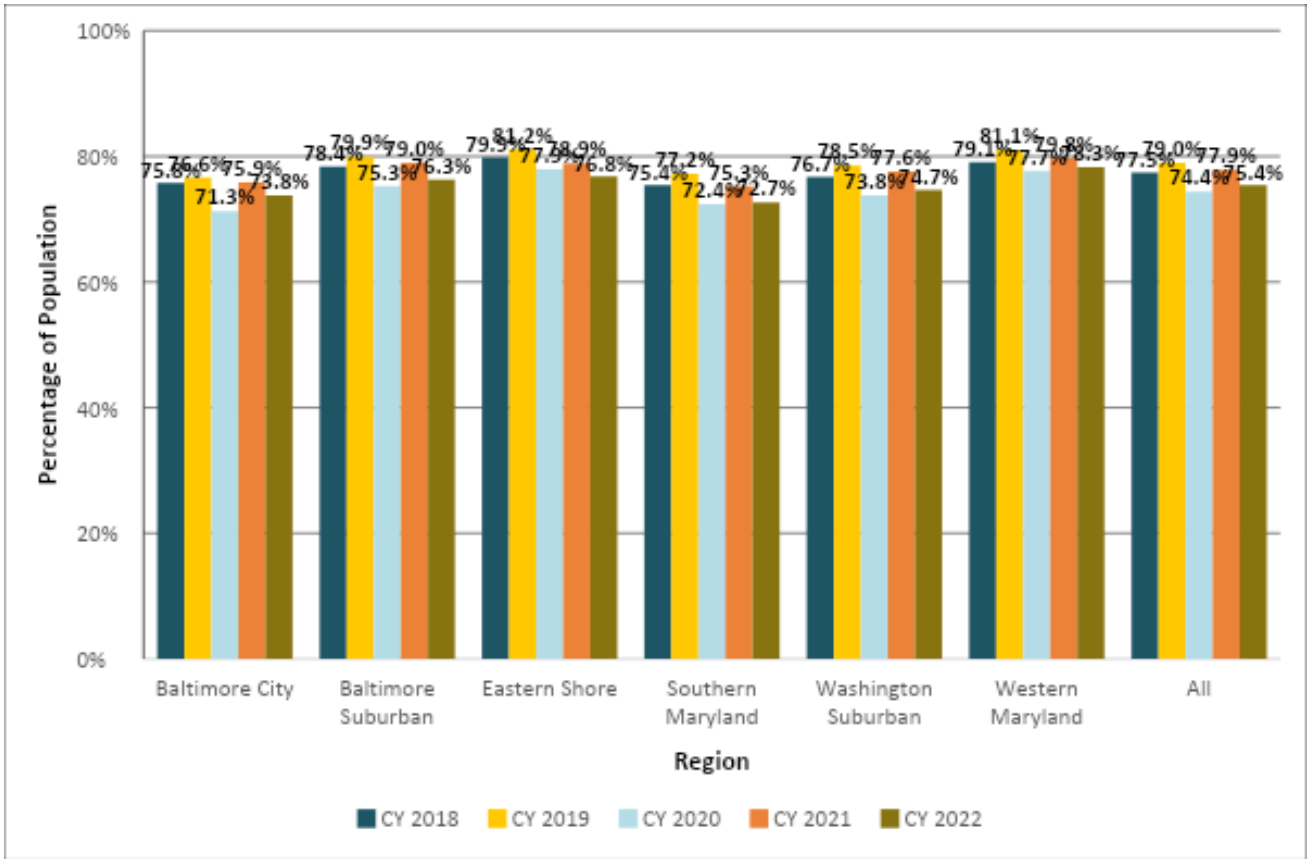


Figure 5 presents the percentage of the HealthChoice population with an ambulatory care visit by region between CY 2018 and CY 2022. Ambulatory care utilization fluctuated across all regions from CY 2018 to CY 2022: rates dropped between 3.3 and 5.3 percentage points between CY 2019 and CY 2020 before increasing in CY 2021 and then decreasing in CY 2022. In CY 2022, residents of Western Maryland had the highest rate of ambulatory care use, followed by the Eastern Shore region.

Figure 5. Percentage of the HealthChoice Population Who Had an Ambulatory Care Visit, by Region, CY 2018–CY 2022



ED Utilization

As noted earlier, one of the goals of the HealthChoice program is to treat more conditions in an ambulatory care setting rather than in the ED. Based on the premise that a managed care system promotes ambulatory and preventive care, the need for emergency services should decline. To assess overall ED utilization, MDH measures the percentage of individuals with any period of enrollment who visited an ED at least once during the calendar year. Unless otherwise noted, ED utilization measures in this report exclude ED visits that resulted in an inpatient hospital admission.

Figure 6 presents the percentage of HealthChoice participants with an ED visit by age group. The percentage with an outpatient ED visit decreased between CY 2018 and CY 2020, then increased again in CY 2021. Between CY 2021 and CY 2022, the percentage with an outpatient ED visit increased in all age groups except for participants aged 19 to 39 and 40 to 64 years. Each age group saw an overall decline in ED visits between 2018 and 2022; the largest declines were observed in the age groups of 19 to 39 years and 40 to 64 years, which experienced decreases of 6.6 and 4.7 percentage points, respectively, over the evaluation period.

Figure 6. Percentage of the HealthChoice Population Who Had an Outpatient ED Visit, by Age Group, CY 2018–CY 2022

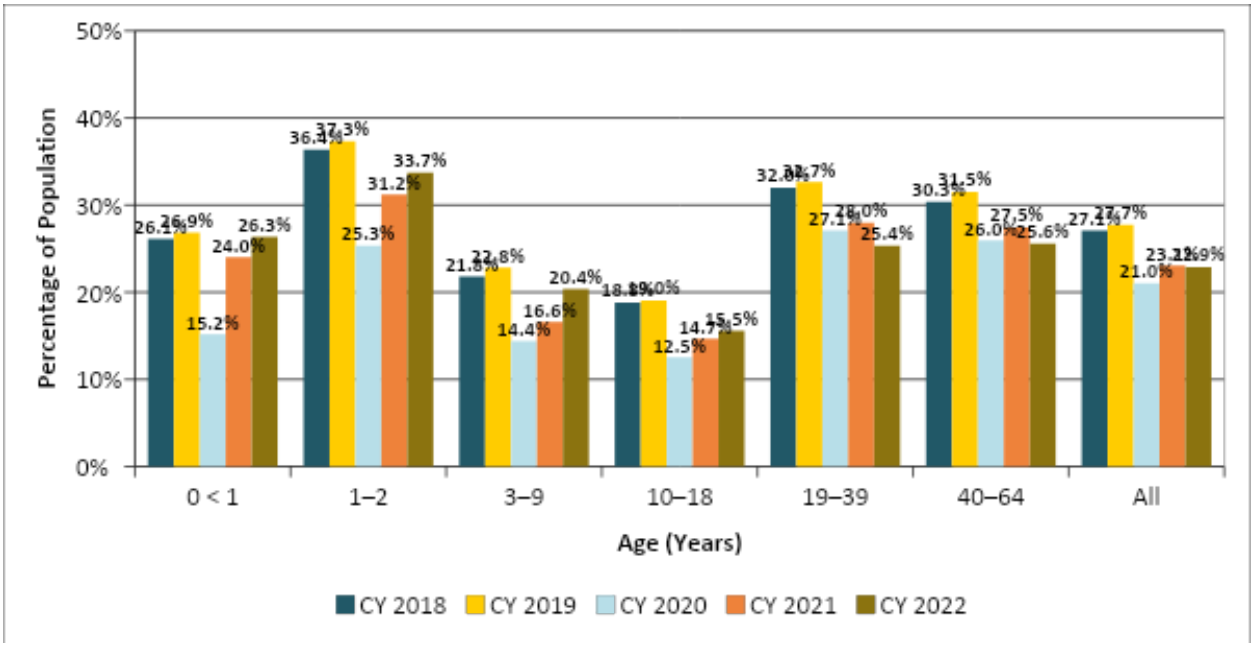


Figure 7 shows ED use by coverage category. Overall, the outpatient ED visit rate among all HealthChoice participants declined from CY 2018 to CY 2022. Among the coverage categories, (ABD) enrollees were the most likely to utilize ED services, although they still experienced a decrease: from 39.6% in CY 2018 to 33.1% in CY 2022.

Figure 7. Percentage of the HealthChoice Population Who Had an Outpatient ED Visit, by Coverage Category, CY 2018–CY 2022

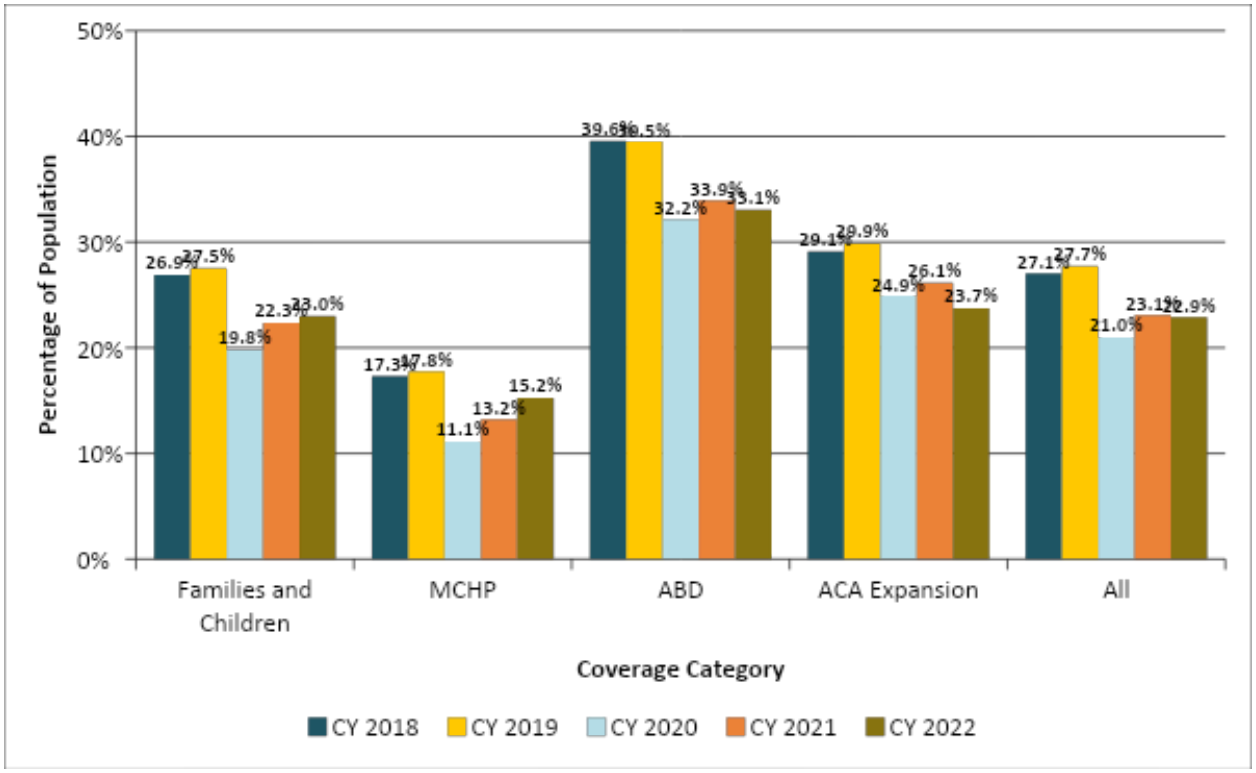


Figure 8 shows the percentage of HealthChoice participants with an ED visit by region between CY 2018 and CY 2022. Participants living in Baltimore City used ED services at the highest rates throughout the evaluation period; however, their rates fell by 6.1 percentage points from CY 2018 to CY 2022. In other regions, rates also declined, ranging from a reduction of 2.4 percentage points in the Washington Suburban area to 6.0 percentage points in Southern Maryland.

Figure 8. Percentage of the HealthChoice Population Who Had an Outpatient ED Visit, by Region, CY 2018–CY 2022

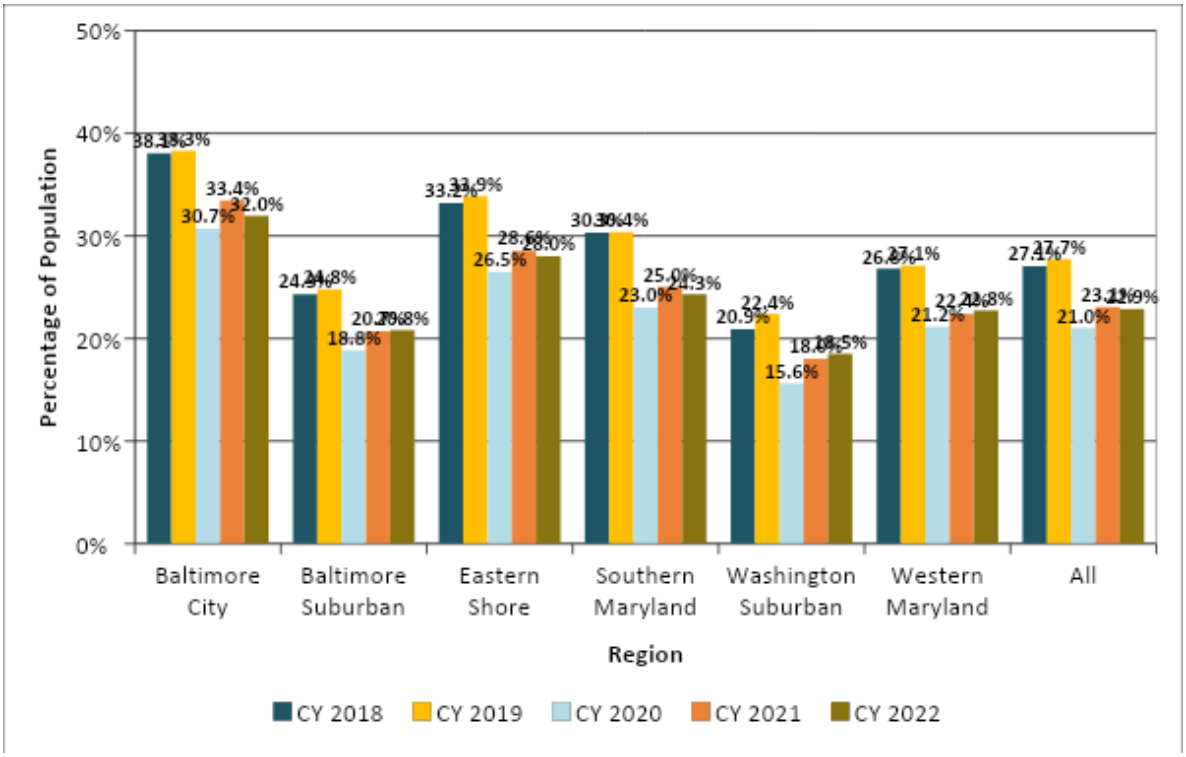


Table 10 presents the number and percentage of HealthChoice participants aged 0 to 64 years with an outpatient ED visit, by age group, during CY 2018 and CY 2022. The percentage of participants with an ED visit decreased in most of the age groups from CY 2018 to CY 2022, with the largest decline of 6.6 percentage points in the 19-39 years age group. The overall average number of ED visits per user (meaning the average number of ED visits among participants that had at least one ED visit) among all age groups declined by 0.2 during the evaluation period.

Table 10. Percentage of HealthChoice Participants Who Had an Outpatient ED Visit and Average Number of Visits per User, by Age Group, CY 2018 and CY 2022

Age (Years)	Outpatient ED Visits							
	CY 2018				CY 2022			
	# of Participants	# with Visit	% with Visit	Average # Visits by User	# of Participants	# with Visit	% with Visit	Average # Visits by User
0 < 1	35,957	9,389	26.1%	1.6	34,610	9,115	26.3%	1.6
1–2	78,942	28,722	36.4%	1.8	76,257	25,701	33.7%	1.7
3–9	262,115	57,121	21.8%	1.5	271,882	55,412	20.4%	1.5
10–18	293,216	55,144	18.8%	1.6	334,520	52,005	15.5%	1.5
19–39	436,633	139,751	32.0%	2.2	522,518	132,557	25.4%	2.0
40–64	282,853	85,844	30.3%	2.3	334,394	85,456	25.6%	2.1
All	**1,389,716**	**375,971**	**27.1%**	**2.0**	**1,574,181**	**360,246**	**22.9%**	**1.8**

Note: The average number of visits by user reported in CY 2018 was revised to correct a calculation error the 2020 HealthChoice Evaluation; the data changed slightly.

ED Visits with Inpatient Admission

Table 11 shows the number and percentage of HealthChoice participants who had an ED visit that resulted in an inpatient admission by demographic characteristics in CY 2018 and CY 2022. The overall percentage of participants with an ED visit that resulted in an inpatient admission decreased from CY 2018 to CY 2022. That decrease is reflected in the rate for each age group, region, and coverage category, as well as for all MCOs except Kaiser Permanente, which experienced an increase of 0.1 percentage points during the evaluation period.

In CY 2022, Baltimore City had the highest percentage (4.4%) of participants with an ED visit that resulted in an inpatient hospitalization. Among coverage groups, those in the ABD coverage group had the highest percentage (9.8%) of ED visits that resulted in an inpatient admission.

Table 11. Percentage of the HealthChoice Population Who Had an ED Visit that Resulted in an Inpatient Admission, by Demographic and Coverage Category, CY 2018 and CY 2022

Demographic and Coverage Characteristics	CY 2018			CY 2022		
	Total Participants	# ED Visit with Inpatient Admission	% ED Visit with Inpatient Admission	Total Participants	# ED Visit with Inpatient Admission	% ED Visit with Inpatient Admission
Age Group (Years)						
0 < 1	35,957	1,222	3.4%	34,610	1,079	3.1%
1–2	78,942	1,635	2.1%	76,257	1,416	1.9%
3–9	262,115	1,949	0.7%	271,882	1,796	0.7%
10–18	293,216	2,741	0.9%	334,520	2,474	0.7%
19–39	436,633	20,453	4.7%	522,518	18,577	3.6%
40–64	282,853	22,814	8.1%	334,394	20,061	6.0%
Total	**1,389,716**	**50,814**	**3.7%**	**1,574,181**	**45,403**	**2.9%**
Region*						
Baltimore City	246,054	14,138	5.7%	255,940	11,149	4.4%
Baltimore Suburban	407,793	14,695	3.6%	475,118	13,834	2.9%
Eastern Shore	128,946	4,167	3.2%	140,727	3,758	2.7%
Southern Maryland	69,999	2,751	3.9%	80,462	2,550	3.2%
Washington Suburban	421,929	10,922	2.6%	491,026	10,377	2.1%
Western Maryland	113,796	4,059	3.6%	129,918	3,704	2.9%
Out of State	1,199	82	6.8%	990	31	3.1%
Total	**1,389,716**	**50,814**	**3.7%**	**1,574,181**	**45,403**	**2.9%**
Managed Care Organization**						
Aetna	19,167	839	4.4%	61,482	1,843	3.0%

Demographic and Coverage Characteristics	CY 2018			CY 2022		
	Total Participants	# ED Visit with Inpatient Admission	% ED Visit with Inpatient Admission	Total Participants	# ED Visit with Inpatient Admission	% ED Visit with Inpatient Admission
CareFirst Community Health Plan	60,229	2,779	4.6%	89,156	2,970	3.3%
Jai Medical Systems	30,716	1,961	6.4%	31,309	1,484	4.7%
Kaiser	79,291	1,597	2.0%	124,996	2,645	2.1%
Maryland Physicians Care	251,515	10,453	4.2%	261,367	8,431	3.2%
MedStar	109,641	4,959	4.5%	114,247	4,075	3.6%
Priority Partners	345,883	12,503	3.6%	369,226	10,545	2.9%
UnitedHealthcare	175,139	6,113	3.5%	180,407	5,178	2.9%
Wellpoint* **	318,135	9,610	3.0%	341,991	8,232	2.4%
Total	**1,389,716**	**50,814**	**3.7%**	**1,574,181**	**45,403**	**2.9%**
Medicaid Coverage Category**						
Families and Children	761,333	17,224	2.3%	887,426	17,315	2.0%
MCHP	175,781	1,270	0.7%	167,346	1,079	0.6%
ABD	86,151	10,753	12.5%	80,962	7,902	9.8%
ACA Expansion	366,451	21,567	5.9%	438,447	19,107	4.4%
Total	**1,389,716**	**50,814**	**3.7%**	**1,574,181**	**45,403**	**2.9%**

*Regions are defined as the following: Baltimore City (only), Baltimore Metro (Anne Arundel, Baltimore, Carroll, Harford, and Howard Counties), Eastern Shore (Caroline, Cecil, Dorchester, Kent, Queen Anne's, Somerset, Talbot, Wicomico, and Worcester Counties), Southern Maryland (Calvert, Charles, and St. Mary's Counties), Washington Metro (Montgomery and Prince George's Counties), and Western Maryland (Allegany, Frederick, Garrett, and Washington Counties).
**Participants were assigned to their last recorded MCO and Medicaid coverage category of the calendar year.
†MCO data are shown for total enrollment and not adjusted for enrollees' risk distribution.
***On January 1, 2023, Amerigroup Community Care in Maryland became Wellpoint Maryland.

Inpatient Admissions

One measure for assessing inpatient utilization is to calculate the percentage of participants aged 18 to 64 years with any period of HealthChoice enrollment who had an inpatient admission during the calendar year. Another measure for assessing inpatient utilization is to calculate the average number of inpatient hospital days. Table 12 presents HealthChoice participants with at least one inpatient hospital admission, by age group, and the average number of days per participant. Participants aged 18 to 40 years had both a lower rate of inpatient admissions and fewer average days compared to participants aged 41 to 64 years. Both age groups decreased in inpatient admissions and average days during the evaluation period.

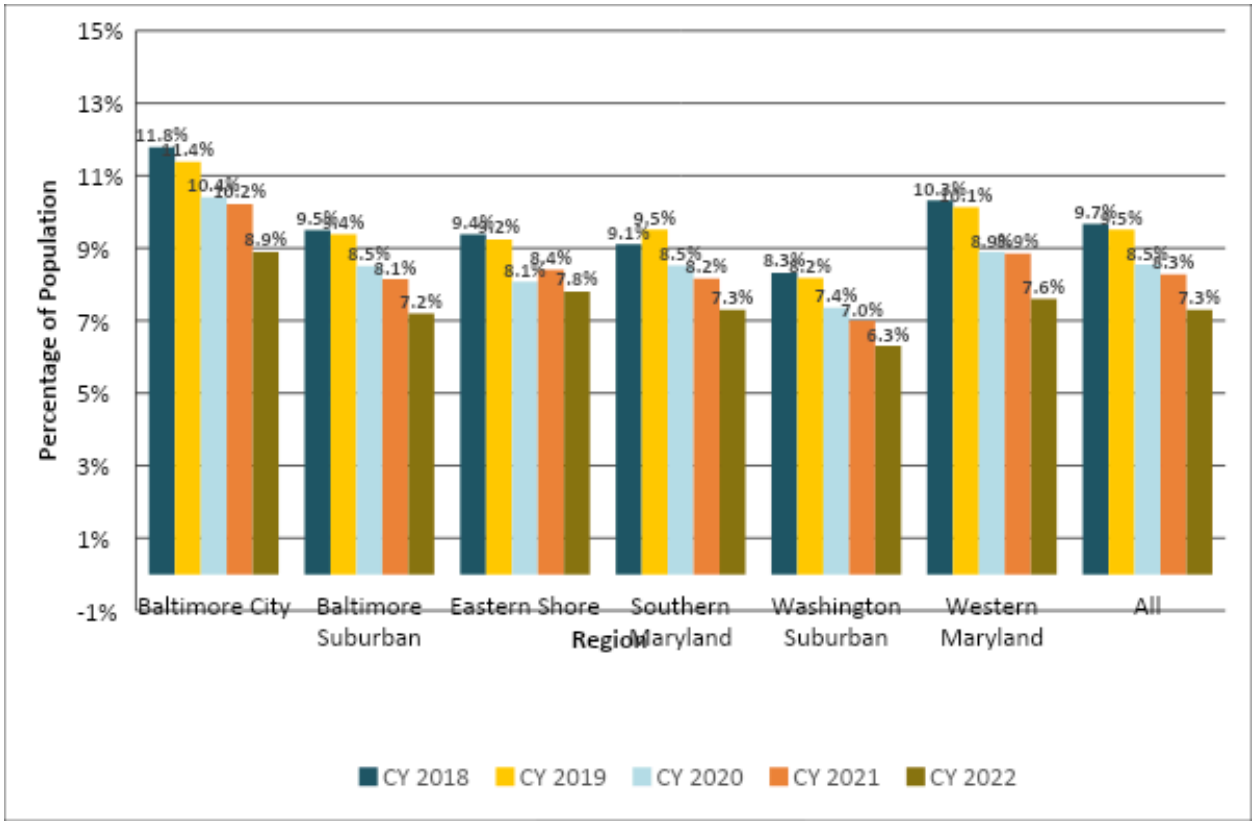
Table 12. Percentage of HealthChoice Participants Aged 18–64 Years Who Had an Inpatient Admission and Average Inpatient Days, by Age Group, CY 2018 and CY 2022

Age Group	All Inpatient Admissions							
	CY 2018				CY 2022			
	Total Participants	# with Inpatient Admission	% with Inpatient Admission	Average Inpatient Days per Participant	Total Participants	# with Inpatient Admission	% with Inpatient Admission	Average Inpatient Days per Participant
18–40	479,181	44,964	9.4%	0.6	573,369	41,102	7.2%	0.5
41–64	269,031	27,372	10.2%	1.1	315,953	24,123	7.6%	1.0
Total	**748,212**	**72,336**	**9.7%**	**0.9**	**889,322**	**65,225**	**7.3%**	**0.8**

Note: The average inpatient days per participant reported in CY 2018 was revised to correct a calculation error in the 2020 HealthChoice Evaluation; the data changed slightly.

Figure 9 displays the percentages of HealthChoice participants aged 18 to 64 years with an inpatient admission by region. Between CY 2018 and CY 2022, inpatient admission rates decreased across all regions. The greatest decline (2.9 percentage points) was observed in Baltimore City. The Washington Suburban region had the lowest admission rate during the evaluation period, with 6.3% in CY 2022, falling from 8.3% in CY 2018. Baltimore City is the only region where admission rates remained above 10.0% throughout the evaluation period until CY 2022, when admission rates dropped to 8.9%.

Figure 9. Percentage of HealthChoice Participants Aged 18–64 Years Who Had an Inpatient Admission, by Region, CY 2018–CY 2022



Care for Special Populations

Another goal of the HealthChoice program is to improve the quality of health services and access to care for special populations. This section of the report assesses services provided to children in foster care, the REM program, access to care stratified by race and ethnicity, and the demographics and health care utilization of the ACA expansion population. Unless otherwise stated, all measures in this section are calculated for HealthChoice participants with any period of enrollment during the calendar year.

Children in Foster Care

This section of the report examines service utilization for children in foster care with any period of enrollment in HealthChoice during the calendar year.[29] It also compares service utilization for children in foster care with other HealthChoice children. Unless otherwise specified, the measures presented here are for foster care children from birth through 21 years.

Table 13 displays HealthChoice children in foster care by age group for CY 2018 and CY 2022. Across the evaluation period, children aged 10 to 21 years made up the largest proportion of HealthChoice children in foster care (66.1% in CY 2018 and 66.8% in CY 2022).

[29] Data includes individuals in subsidized adoption and guardianship populations.

Table 13. Percentage of HealthChoice Children in Foster Care, by Age Group, CY 2018 and CY 2022

Age Group (Years)	CY 2018		CY 2022	
	Number of Participants in Foster Care	Percentage of Total	Number of Participants in Foster Care	Percentage of Total
0 to <1	234	1.5%	175	1.3%
1–2	883	5.8%	663	4.8%
3–5	1,626	10.7%	1,412	10.3%
6–9	2,411	15.8%	2,302	16.8%
10–14	3,762	24.7%	3,318	24.2%
15–18	3,797	24.9%	3,483	25.4%
19–21	2,511	16.5%	2,365	17.2%
Total	**15,224**	**100%**	**13,718**	**100%**

Table 14 shows the percentage of HealthChoice children in foster care by service received and age group. Between CY 2018 and 2022, the percentage of children in foster care who did not receive any services increased by 1.6 percentage points. The rates of outpatient ED visits were highest among the age groups of 1 to 2 years and 19 to 21 years in CY 2018. In CY 2022, the rates of outpatient ED visits were highest among children under age 1 and children aged 1 to 2 years. Inpatient admission rates declined for all age groups, except for children aged 3 to 5 years, across the measurement period.

Table 14. Percentage of HealthChoice Children in Foster Care, by Service and Age Group, CY 2018 and CY 2022

Age Group (Years)	CY 2018			CY 2022		
	Total Participants	Number with Service	Percentage with Service	Total Participants	Number with Service	Percentage with Service
Ambulatory Care Visit						
0 to <1	234	222	94.9%	175	163	93.1%
1–2	883	823	93.2%	663	579	87.3%
3–5	1,626	1,413	86.9%	1,412	1,139	80.7%
6–9	2,411	1,963	81.4%	2,302	1,777	77.2%
10–14	3,762	3,003	79.8%	3,318	2,598	78.3%
15–18	3,797	2,982	78.5%	3,483	2,606	74.8%
19–21	2,511	1,630	64.9%	2,365	1,527	64.6%
Total	**15,224**	**12,036**	**79.1%**	**13,718**	**10,389**	**75.7%**
Outpatient ED Visit						
0 to <1	234	80	34.2%	175	58	33.1%
1–2	883	314	35.6%	663	223	33.6%
3–5	1,626	377	23.2%	1,412	274	19.4%
6–9	2,411	469	19.5%	2,302	376	16.3%
10–14	3,762	809	21.5%	3,318	582	17.5%

Age Group (Years)	CY 2018			CY 2022		
	Total Participants	Number with Service	Percentage with Service	Total Participants	Number with Service	Percentage with Service
15–18	3,797	1,162	30.6%	3,483	884	25.4%
19–21	2,511	869	34.6%	2,365	717	30.3%
Total	**15,224**	**4,080**	**26.8%**	**13,718**	**3,114**	**22.7%**
Inpatient Admission						
0 to <1†	234	190	81.2%	175	133	76.0%
1–2	883	57	6.5%	663	42	6.3%
3–5	1,626	23	1.4%	1,412	31	2.2%
6–9	2,411	89	3.7%	2,302	46	2.0%
10–14	3,762	271	7.2%	3,318	163	4.9%
15–18	3,797	417	11.0%	3,483	282	8.1%
19–21	2,511	224	8.9%	2,365	148	6.3%
Total	**15,224**	**1,271**	**8.3%**	**13,718**	**845**	**6.2%**
No Medicaid Service						
0 to <1	234	*	*	175	*	*
1–2	883	*	*	663	*	*
3–5	1,626	116	7.1%	1,412	159	11.3%
6–9	2,411	234	9.7%	2,302	287	12.5%
10–14	3,762	425	11.3%	3,318	393	11.8%
15–18	3,797	446	11.7%	3,483	462	13.3%
19–21	2,511	558	22.2%	2,365	489	20.7%
Total	**15,224**	**1,818**	**11.9%**	**13,718**	**1,850**	**13.5%**

*Cell values of 10 or less have been suppressed.
†Includes admissions tied to infant's (0 to <1) birth.

Table 15 compares the service utilization of HealthChoice children in foster care to those not in foster care. Overall, the percentage of foster children who did not receive a service was higher than non-foster care children in CY 2018 and CY 2022. A higher percentage of children in foster care had an outpatient ED visit compared to non-foster care children, and a higher percentage had an inpatient admission.

Table 15. Percentage of HealthChoice Foster Care Children vs. Non-Foster Care Children, by Service, CY 2018 and CY 2022

Age Group (Years)	CY 2018			CY 2022		
	Total Participants	Number with Service	Percentage with Service	Total Participants	Number with Service	Percentage with Service
Ambulatory Care Visit						
Foster	15,224	12,036	79.1%	13,718	10,389	75.7%
Non-Foster	728,374	596,776	81.9%	794,585	630,131	79.3%

Age Group (Years)	CY 2018			CY 2022		
	Total Participants	Number with Service	Percentage with Service	Total Participants	Number with Service	Percentage with Service
Outpatient ED Visit						
Foster	15,224	4,080	26.8%	13,718	3,114	22.7%
Non-Foster	728,374	167,125	22.9%	794,585	159,355	20.1%
Inpatient Admission†						
Foster	15,224	1,271	8.3%	13,718	845	6.2%
Non-Foster	728,374	45,574	6.3%	794,585	41,871	5.3%
No Medicaid Service						
Foster	15,224	1,818	11.9%	13,718	1,850	13.5%
Non-Foster	728,374	70,719	9.7%	794,585	86,242	10.9%

†Includes admissions tied to infant's (0 to <1) birth.

Table 16 compares the dental utilization rate in CY 2022 for foster care children aged 4 to 20 years to the rate for non-foster care children enrolled in HealthChoice. Overall, children in foster care had a slightly higher dental visit rate (60.1%) than other HealthChoice children (59.0%). The largest differences between the two populations were observed in both the youngest (4 to 5 years) and oldest (19 to 20 years) age groups. The dental visit rate was 67.0% for children in foster care aged 4 to 5 years, 5.1 percentage points higher than for other HealthChoice children in the same age group. The rate for those aged 19 to 20 years was 5.6 percentage points higher for children in foster care than for non-foster children.

Table 16. Percentage of HealthChoice Foster Care Children Aged 4–20 Years vs. Non-Foster Care Children with a Dental Visit, by Age Group, CY 2022

Age Group (Years)	CY 2022 HealthChoice Foster Care Status					
	Foster Care			Non-Foster Care		
	Total Participants	Number with Dental Visit	Percentage with Dental Visit	Total Participants	Number with Dental Visit	Percentage with Dental Visit
4–5	967	648	67.0%	76,610	47,402	61.9%
6–9	2,302	1,575	68.4%	152,845	101,715	66.5%
10–14	3,318	2,150	64.8%	188,858	117,451	62.2%
15–18	3,483	1,962	56.3%	138,861	75,182	54.1%
19–20	1,654	708	42.8%	60,603	22,524	37.2%
Total	**11,724**	**7,043**	**60.1%**	**617,777**	**364,274**	**59.0%**

Table 17 shows the rates of MHDs, SUDs, and co-occurring MHD and SUD conditions among foster care and non-foster care HealthChoice participants in CY 2018 and CY 2022. The percentages of participants with an MHD-only, SUD-only, or co-occurring MHD and SUD diagnosis were higher among foster care participants than non-foster care HealthChoice participants and were considerably higher among foster care children for MHD-only. The percentage of participants with all types of behavioral health diagnoses decreased across the evaluation period for both foster care statuses: SUD-only diagnoses declined slightly for both foster and non-foster care participants, while MHD-only and dual diagnoses dropped more markedly for foster care participants than for other HealthChoice children.

Table 17. Behavioral Health Diagnosis of HealthChoice Foster Care Children vs. Non-Foster Care Children Aged 0–21 Years, CY 2018 and CY 2022

Foster Care Status	CY 2018			CY 2022		
	Total Participants	Number with Diagnosis	Percentage of Total	Total Participants	Number with Diagnosis	Percentage of Total
MHD-Only						
Foster	15,224	5,987	39.3%	13,718	5,112	37.3%
Non-Foster	728,374	79,056	10.9%	794,585	84,002	10.6%
SUD-Only						
Foster	15,224	83	0.5%	13,718	49	0.4%
Non-Foster	728,374	2,982	0.4%	794,585	1,613	0.2%
Dual Diagnosis (MHD + SUD)						
Foster	15,224	271	1.8%	13,718	200	1.5%
Non-Foster	728,374	1,858	0.3%	794,585	1,431	0.2%

No Behavioral Health Diagnosis						
Foster	15,224	8,883	58.3%	13,718	8,357	60.9%
Non-Foster	728,374	644,478	88.5%	794,585	707,539	89.0%

Rare and Expensive Case Management (REM) Program

The REM program provides case management services to Medicaid participants who have a rare and expensive medical condition from a specified list and require sub-specialty care. The program serves people with specialized medical needs. An individual must be eligible for HealthChoice, have a qualifying diagnosis, and be within the age limit for that diagnosis. Examples of qualifying diagnoses include cystic fibrosis, quadriplegia, muscular dystrophy, chronic renal failure, and spina bifida. REM participants do not receive services through an MCO. The REM program provides the standard FFS Medicaid benefit package and some expanded benefits, such as medically necessary private duty nursing, shift home health aides, and adult dental services. This section of the report presents data on REM enrollment and service utilization.[30] Hilltop used data from *LTSSMaryland*—the state's integrated LTSS tracking system—to identify REM enrollees for these analyses.

REM Enrollment

Table 18 presents REM enrollment by age group, sex, and status for children in foster care for CY 2018 and CY 2022. In both years, most REM participants were males and aged 18 years or younger. Within the REM population, there was a lower percentage of female participants than in the general HealthChoice population. The majority of REM participants were not in foster care.

Table 18. REM Enrollment by Age Group, Sex, and Foster Care Status, CY 2018 and CY 2022

	CY 2018		CY 2022	
Demographic Characteristic	**Number of Enrollees**	**Percentage of Total**	**Number of Enrollees**	**Percentage of Total**
Age Group (Years)				
0–18	2,835	65.3%	2,961	62.8%
19 and over	1,505	34.7%	1,755	37.2%
Total	**4,340**	**100%**	**4,716**	**100%**
Sex				
Female	1,849	42.6%	2,006	42.5%
Male	2,491	57.4%	2,710	57.5%
Total	**4,340**	**100%**	**4,716**	**100%**
Foster Care				
Foster Care	316	7.3%	311	6.6%
Non-Foster Care	4,024	92.7%	4,405	93.4%

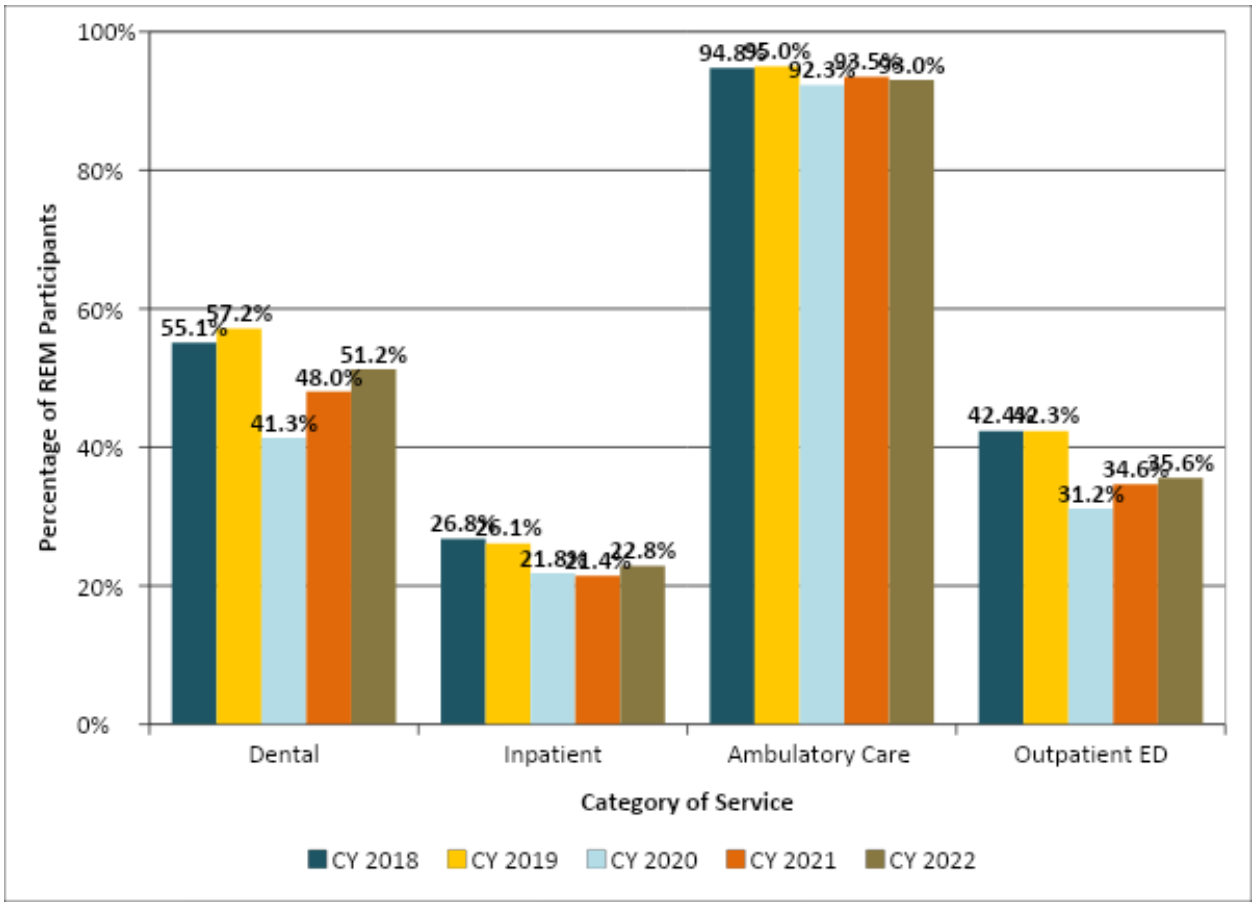
[30] There was a change to the methodology, therefore the data presented are new for CY 2018 to CY 2020.

Total	**4,340**	**100%**	**4,716**	**100%**

REM Service Utilization

Figure 10 shows the percentage of REM participants who received at least one dental, inpatient, ambulatory care, or outpatient ED visit between CY 2018 and CY 2022. The dental, inpatient, and ambulatory care visit measures serve as indicators of access to care. The percentage of participants with a dental visit decreased during the evaluation period, from 55.1% in CY 2018 to 51.2% in CY 2022, although it increased from CY 2020 to CY 2022 after a major drop to 41.3% in CY 2020. The percentage of REM participants who had an inpatient visit declined by 4 percentage points between CY 2018 and CY 2022, while ambulatory care utilization remained stable. Outpatient ED visits decreased by 6.8 percentage points over the entire evaluation period. Due to the nature of qualifying conditions for the REM program, nearly 100% of REM participants received at least one service a year during the evaluation period.[31]

Figure 10. Percentage of REM Participants with a Dental, Inpatient, Ambulatory Care, or Outpatient ED Visit, CY 2018–CY 2022



[31] Data not shown.

Table 19 shows the behavioral health diagnosis rates among REM participants at the beginning and end of the evaluation period. The rates for MHD-only diagnoses increased slightly by 0.1 percentage points, while the rate of SUD-only diagnoses decreased by 2.6 percentage points. The percentage of REM participants with no behavioral health diagnosis increased by 2.8 percentage points.

Table 19. Number and Percentage of REM Participants by Behavioral Health Diagnoses, CY 2018 and CY 2022

CY 2018			CY 2022		
Number of Participants	Total Participants	Percentage of Total	Number of Participants	Total Participants	Percentage of Total
MHD-Only					
845	4,340	19.5%	924	4,716	19.6%
SUD-Only					
143	4,340	3.3%	34	4,716	0.7%
Dual Diagnosis (MHD + SUD)					
34	4,340	0.8%	19	4,716	0.4%
No Behavioral Health Diagnosis					
3,318	4,340	76.5%	3,739	4,716	79.3%

Racial and Ethnic Disparities

Racial and ethnic disparities in health care are nationally recognized challenges. MDH is committed to reducing disparities among racial and ethnic groups through its Managing for Results (MFR) program. MFR is a strategic planning and performance measurement process used to improve government programs. MDH's Office of Minority Health and Health Disparities uses MFR to target goals in reducing racial and ethnic disparities. This section of the report presents enrollment trends among racial and ethnic groups and assesses disparities within measures of service utilization.

The data presented in this section were especially impacted by the decline in the quality of race and ethnicity information available due to changes to the approach for selecting race and ethnicity on the Medicaid eligibility application in 2014. Beginning in 2023, the Hilltop Institute was able to combine several data sources to enhance the quality of race and ethnicity information available for analysis. The following tables use the enhanced race and ethnicity information to present a more precise assessment of enrollment trends and service utilization disparities for CY 2018 through CY 2022.

Enrollment

Table 20 displays HealthChoice enrollment by race and ethnicity. The percentages of enrolled participants identifying as White and Black decreased between CY 2018 and CY 2022. The

percentages of participants who were Hispanic, Asian, and "Other" increased by 2.2, 0.7, and 0.4 percentage points, respectively.

Table 20. HealthChoice Enrollment by Race/Ethnicity, CY 2018 and CY 2022

Race/Ethnicity	CY 2018		CY 2022	
	# of Participants	% of Total	# of Participants	% of Total
Asian	69,185	5.0%	90,029	5.7%
Black	616,122	44.4%	682,899	43.4%
White	391,090	28.2%	404,313	25.7%
Hispanic	214,960	15.5%	279,057	17.7%
Native American	13,359	1.0%	15,365	1.0%
Other	84,654	6.1%	102,518	6.5%
Total	**1,389,370**	**100.0%**	**1,574,181**	**100.0%**

Note: "Other" race/ethnicity category includes Pacific Islander, Alaskan Native, Two or More Races, Prefer Not to Say, and Unknown.

Ambulatory Care Visits

Figure 11 shows the percentage of children aged 0 through 18 years with at least one ambulatory visit in CY 2018 and CY 2022, by race and ethnicity. The overall rate of ambulatory care visits fell from 83.5% in CY 2018 to 80.7% in CY 2022. All racial and ethnic groups experienced a decrease throughout the evaluation period. In CY 2018, the disparity between the racial/ethnic group with the highest rate of ambulatory care visits (Hispanic) and the lowest rate ("Other") was 11.4 percentage points. In CY 2022, "Other" participants were also the racial/ethnic group with the lowest percentage of ambulatory care visits, at 10.2 percentage points lower than the racial/ethnic group with the highest percentage (Hispanic).

Figure 11. Percentage of HealthChoice Participants Aged 0–18 Years with an Ambulatory Care Visit, by Race/Ethnicity, CY 2018 and CY 2022

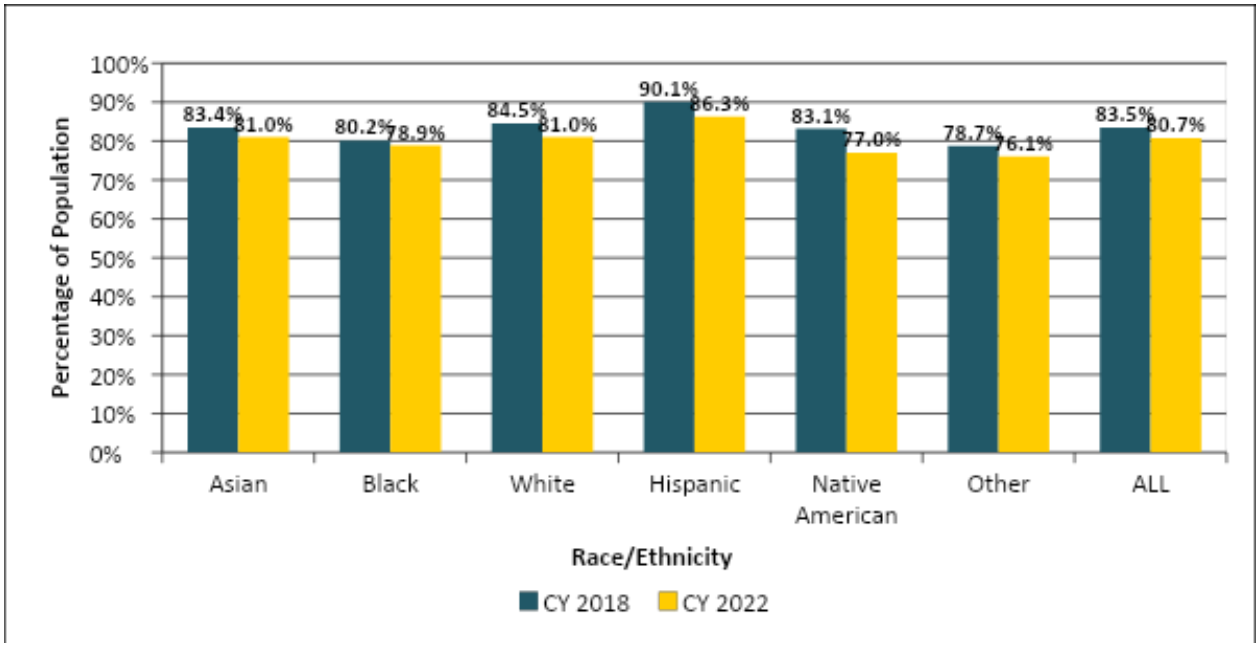
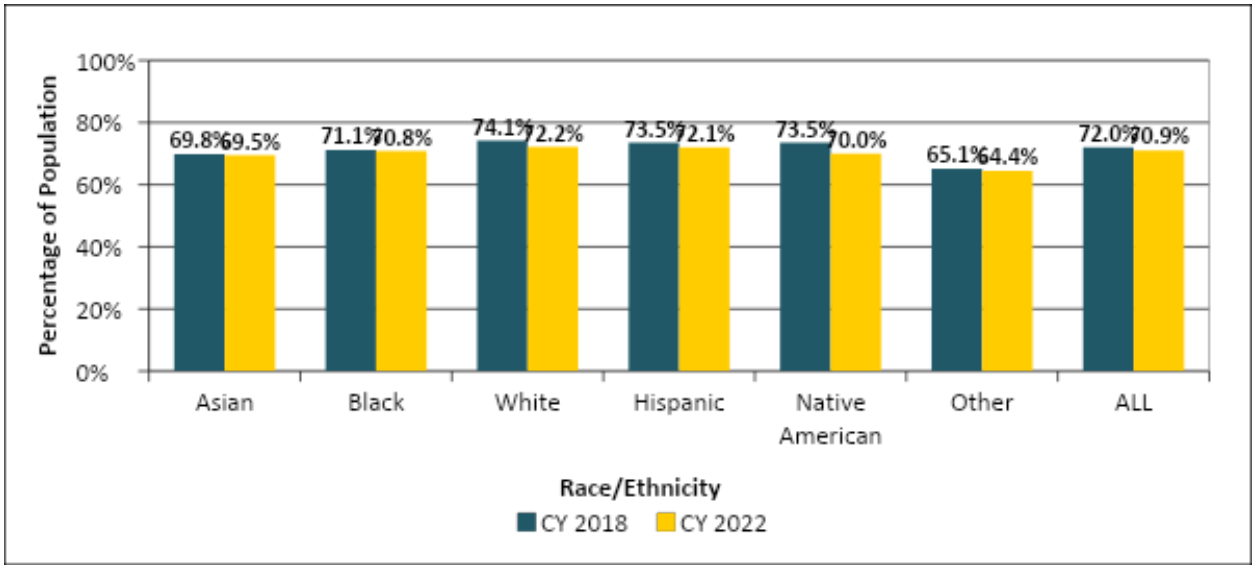


Figure 12 shows the percentage of adults aged 19 to 64 years with at least one ambulatory care visit in CY 2018 and CY 2022, by race and ethnicity. In CY 2018, 72.0% of all adult HealthChoice participants received an ambulatory care visit. This rate decreased to 70.9% in CY 2022. All racial/ethnic groups' rates decreased over the evaluation period.

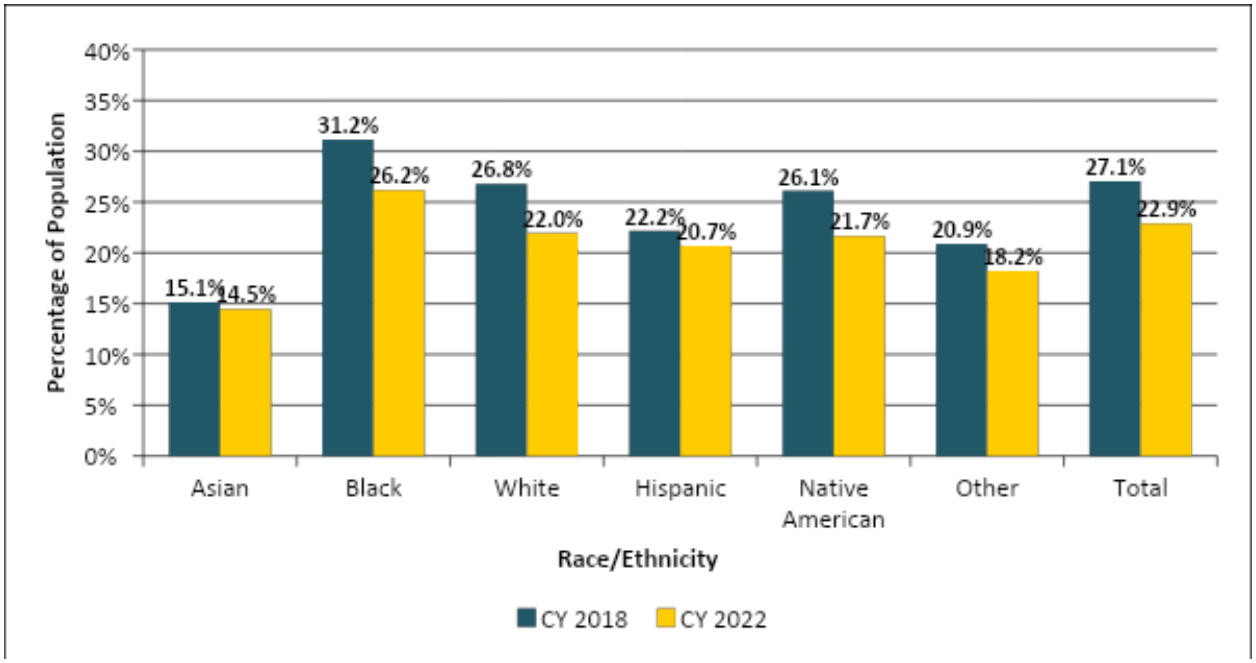
Figure 12. Percentage of HealthChoice Participants Aged 19–64 Years with an Ambulatory Care Visit, by Race/Ethnicity, CY 2018 and CY 2022



Outpatient ED Visits

Figure 13 displays the percentage of HealthChoice participants aged 0 to 64 years with at least one outpatient ED visit by race and ethnicity in CY 2018 and CY 2022. During the evaluation period, each racial and ethnic group experienced a drop in their rate of accessing ED services. Black participants had the highest ED visit rate in both years, while Asian participants had the lowest rate.

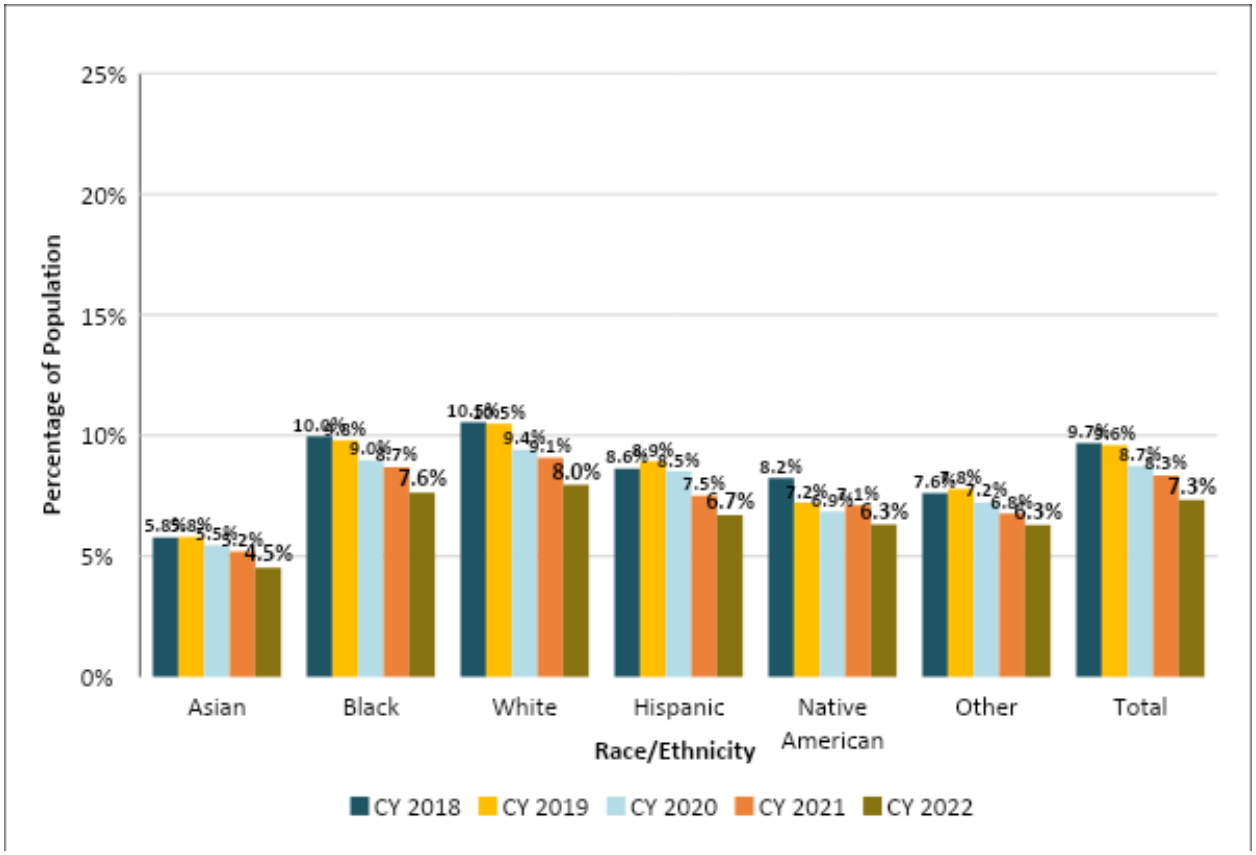
Figure 13. Percentage of HealthChoice Participants Aged 0–64 Years with an Outpatient ED Visit, by Race/Ethnicity, CY 2018 and CY 2022



Inpatient Admissions

Figure 14 presents the percentage of HealthChoice participants aged 18 to 64 years with an inpatient admission between CY 2018 and CY 2022, by race and ethnicity. Each group's rate declined overall between CY 2018 and CY 2022. Asian participants had the lowest rate of inpatient admissions throughout the evaluation period, while White participants had the highest rate throughout.

Figure 14. Percentage of HealthChoice Participants Aged 18–64 Years Who Had an Inpatient Admission, by Race/Ethnicity, CY 2018–CY 2022



ACA Medicaid Expansion Population

This section of the report examines the demographic characteristics and health care utilization of the ACA Medicaid expansion population between CY 2018 and CY 2022. These demographic and service utilization measures are for participants with any period of enrollment in one of the ACA Medicaid expansion coverage groups. Many of these participants were gaining Medicaid coverage for the first time and had limited health care utilization literacy or struggled with homelessness, resulting in reduced access to care until they became more familiar with accessing care through Medicaid.

ACA Medicaid Expansion Population Demographics

In CY 2018, the Maryland Medicaid program enrolled 397,403 adults (with any period of enrollment) through the ACA Medicaid expansion.[32] By CY 2022, the number of participants (members) who received coverage for at least one month in an ACA expansion coverage group increased to 469,556.

[32] Race and ethnicity values were calculated using the new enhanced race/ethnicity variable and updated for the entire measurement period. Thus, race and ethnicity totals will not match the other demographic results for CY 2018 through CY 2021 nor previous HealthChoice Evaluation results.

Table 21 displays demographic characteristics of the expansion population (with any period of enrollment) during the evaluation period. Participants aged 19 to 34 years composed the largest portion of the ACA expansion population. Black participants were the largest racial/ethnic group, and the Baltimore Suburban region had the largest percentage of participants. The proportion of expansion participants with 12 member months rose by 22.1 percentage points between CY 2018 and CY 2022.

Table 21. ACA Medicaid Expansion Population Aged 19–64 Years, by Demographics and Any Enrollment Period, CY 2018–CY 2022

Demographic Characteristic	CY 2018		CY 2019		CY 2020		CY 2021		CY 2022	
	# of Participants	% of Total	# of Participants	% of Total	# of Participants	% of Total	# of Participants	% of Total	# of Participants	% of Total
Race/Ethnicity*										
Asian	21,957	5.5%	22,011	5.6%	24,213	6.1%	27,964	6.4%	30,403	6.5%
Black	177,478	44.7%	176,815	45.1%	178,886	45.0%	198,710	45.3%	212,873	45.3%
White	144,543	36.4%	139,629	35.6%	137,192	34.5%	146,742	33.4%	153,818	32.8%
Hispanic	29,412	7.4%	29,380	7.5%	31,503	7.9%	36,489	8.3%	40,808	8.7%
Native American	3,751	0.9%	3,841	1.0%	4,082	1.0%	4,689	1.1%	5,204	1.1%
Other	20,104	5.1%	20,148	5.1%	21,302	5.4%	24,316	5.5%	26,450	5.6%
Total	**397,245**	**100%**	**391,824**	**100%**	**397,178**	**100%**	**438,910**	**100%**	**469,556**	**100%**
Sex										
Female	185,902	46.8%	182,264	46.5%	182,675	46.0%	200,433	45.7%	213,291	45.4%
Male	211,501	53.2%	209,520	53.5%	214,201	54.0%	237,860	54.3%	256,265	54.6%
Total	**397,403**	**100%**	**391,784**	**100%**	**396,876**	**100%**	**438,293**	**100%**	**469,556**	**100%**
Region										
Baltimore City	79,582	20.0%	78,669	20.1%	78,145	19.7%	83,920	19.1%	88,233	18.8%
Baltimore Suburban	116,984	29.4%	116,089	29.6%	118,006	29.7%	130,900	29.9%	140,923	30.0%
Eastern Shore	37,799	9.5%	36,896	9.4%	35,956	9.1%	38,971	8.9%	41,564	8.9%
Southern Maryland	21,173	5.3%	20,860	5.3%	21,042	5.3%	23,074	5.3%	24,668	5.3%
Washington Suburban	108,865	27.4%	106,443	27.2%	111,364	28.1%	125,724	28.7%	135,664	28.9%
Western Maryland	32,179	8.1%	32,144	8.2%	31,753	8.0%	35,050	8.0%	37,687	8.0%
Out of State	821	0.2%	683	0.2%	610	0.2%	654	0.1%	817	0.2%
Total	**397,403**	**100%**	**391,784**	**100%**	**396,876**	**100%**	**438,293**	**100%**	**469,556**	**100%**
***Age Group* (Years)**										
19–34	184,973	46.6%	184,408	47.1%	183,703	46.3%	203,313	46.4%	215,289	45.8%
35–49	96,276	24.2%	93,936	24.0%	96,852	24.4%	107,921	24.6%	118,895	25.3%
50–64	116,154	29.2%	113,440	29.0%	116,321	29.3%	127,059	29.0%	135,372	28.8%
Total	**397,403**	**100%**	**391,784**	**100%**	**396,876**	**100%**	**438,293**	**100%**	**469,556**	**100%**
Member Months										
1	12,270	3.1%	11,433	2.9%	14,907	3.8%	6,433	1.5%	6,178	1.3%
2	10,760	2.7%	11,095	2.8%	11,788	3.0%	5,685	1.3%	5,301	1.1%
3	10,761	2.7%	10,219	2.6%	7,001	1.8%	5,184	1.2%	4,476	1.0%
4	11,035	2.8%	9,689	2.5%	6,498	1.6%	5,032	1.1%	4,748	1.0%
5	13,062	3.3%	10,272	2.6%	6,734	1.7%	6,061	1.4%	4,749	1.0%
6	12,181	3.1%	9,696	2.5%	6,832	1.7%	5,268	1.2%	4,107	0.9%
7	10,645	2.7%	10,490	2.7%	6,794	1.7%	5,476	1.2%	4,382	0.9%
8	11,849	3.0%	11,631	3.0%	6,437	1.6%	5,620	1.3%	4,439	0.9%
9	11,632	2.9%	11,684	3.0%	8,531	2.1%	6,009	1.4%	4,386	0.9%
10	12,464	3.1%	12,966	3.3%	8,374	2.1%	6,781	1.5%	4,865	1.0%
11	16,228	4.1%	15,022	3.8%	6,773	1.7%	5,876	1.3%	5,503	1.2%
12	264,516	66.6%	267,587	68.3%	306,207	77.2%	374,868	85.5%	416,422	88.7%
Total	**397,403**	**100%**	**391,784**	**100%**	**396,876**	**100%**	**438,293**	**100%**	**469,556**	**100%**

Note: "Other" race/ethnicity category includes Pacific Islander, Alaskan Native, Two or More Races, Prefer Not to Say, and Unknown.

*Race and ethnicity values were calculated using the new enhanced race/ethnicity variable and updated for the entire measurement period. Thus, race and ethnicity totals will not match previous HealthChoice Evaluation results.

Table 22 displays demographic characteristics of the expansion population with a full 12 months of enrollment during the evaluation period. The racial and regional distribution of this population is similar to the distribution of the expansion population with any period of enrollment. Participants aged 19 to 34 years composed the largest portion of the ACA expansion population with 12 months of enrollment. Black participants were the largest racial/ethnic group, and the Baltimore Suburban region had the largest portion of participants.

Table 22. ACA Medicaid Expansion Population Demographics for Participants Aged 19–64 Years, 12 Months of Enrollment, CY 2018–CY 2022

Demographic Characteristic	CY 2018		CY 2019		CY 2020		CY 2021		CY 2022	
	# of Participants	% of Total	# of Participants	% of Total	# of Participants	% of Total	# of Participants	% of Total	# of Participants	% of Total
Race/Ethnicity*										
Asian	14,428	5.5%	15,005	5.6%	17,455	5.7%	23,255	6.2%	26,647	6.4%
Black	120,397	45.6%	122,441	45.8%	140,925	46.0%	172,373	46.0%	192,197	46.2%
White	96,338	36.4%	95,876	35.8%	106,439	34.8%	124,352	33.2%	133,797	32.1%
Hispanic	18,603	7.0%	19,109	7.1%	23,086	7.5%	30,875	8.2%	36,001	8.6%
Native American	2,655	1.0%	2,762	1.0%	3,201	1.0%	4,053	1.1%	4,614	1.1%
Other	11,882	4.5%	12,346	4.6%	15,180	5.0%	20,139	5.4%	23,166	5.6%
Total	**264,303**	**100%**	**267,539**	**100%**	**306,286**	**100%**	**375,047**	**100%**	**416,422**	**100%**
Sex										
Female	124,280	47.0%	124,508	46.5%	140,411	45.9%	171,627	45.8%	188,325	45.2%
Male	140,236	53.0%	143,079	53.5%	165,796	54.1%	203,241	54.2%	228,097	54.8%
Total	**264,516**	**100%**	**267,587**	**100%**	**306,207**	**100%**	**374,868**	**100%**	**416,422**	**100%**
Region										
Baltimore City	56,391	21.3%	56,616	21.2%	63,465	20.7%	74,023	19.7%	80,455	19.3%
Baltimore Suburban	77,767	29.4%	79,363	29.7%	91,025	29.7%	111,655	29.8%	124,455	29.9%
Eastern Shore	25,735	9.7%	25,501	9.5%	28,830	9.4%	33,818	9.0%	37,079	8.9%
Southern Maryland	14,117	5.3%	14,565	5.4%	16,515	5.4%	19,921	5.3%	21,895	5.3%
Washington Suburban	68,947	26.1%	69,766	26.1%	81,197	26.5%	105,156	28.1%	119,018	28.6%
Western Maryland	21,105	8.0%	21,357	8.0%	24,712	8.1%	29,758	7.9%	32,872	7.9%
Out of State	454	0.2%	419	0.2%	463	0.2%	537	0.1%	648	0.2%
Total	**264,516**	**100%**	**267,587**	**100%**	**306,207**	**100%**	**374,868**	**100%**	**416,422**	**100%**
***Age Group* (Years)**										
19–34	118,398	44.8%	120,885	45.2%	139,786	45.7%	172,995	46.1%	189,748	45.6%
35–49	65,144	24.6%	65,438	24.5%	75,773	24.7%	92,892	24.8%	106,426	25.6%
50–64	80,974	30.6%	81,264	30.4%	90,648	29.6%	108,981	29.1%	120,248	28.9%
Total	**264,516**	**100%**	**267,587**	**100%**	**306,207**	**100%**	**374,868**	**100%**	**416,422**	**100%**

*Race and ethnicity values were calculated using the new enhanced race/ethnicity variable and updated for the entire measurement period. Thus, race and ethnicity totals will not match previous HealthChoice Evaluation results.

ACA Medicaid Expansion Population Service Utilization

This section discusses the health care utilization of participants who received coverage through the ACA Medicaid expansion. Table 23 displays the number and percentage of participants with an ambulatory visit, outpatient ED visit, or inpatient admission in CY 2018 through CY 2022 with any period of enrollment as well as 12 months of enrollment. ACA Medicaid expansion participants with 12 continuous months of enrollment provide an MCO with more time and opportunities to intervene in their health care than participants with any period of enrollment. Key findings from Table 23 include the following:

- In CY 2018, 66.6% of ACA Medicaid expansion participants with any period of enrollment had an ambulatory care visit; this rate increased to 68.6% in CY 2021 and then decreased to 65.0% in CY 2022. Visit rates also decreased from 75.8% to 67.2% over the evaluation period for expansion participants enrolled for the entire year.

- In CY 2018, 29.3% of ACA Medicaid expansion participants with any period of enrollment had an outpatient ED visit. This rate experienced sharp declines in CY 2020 and CY 2022, with an overall decline of 5.5 percentage points during the evaluation period. The rates for participants with 12 months of enrollment decreased from 33.5% in CY 2018 to 24.5% in CY 2022.

- Overall, 8.4% of ACA Medicaid expansion participants with any period of enrollment had an inpatient admission in CY 2018, decreasing to 6.4% in CY 2022. Participants who were enrolled for the entire year experienced a higher rate of inpatient admissions from CY 2018 and CY 2019, and the rates were equal in CY 2020. The inpatient admission rate for those with 12 months of enrollment was lower in both CY 2021 and CY 2022. In CY 2022, 6.1% of participants enrolled for 12 months had an inpatient admission compared to 6.4% of participants with any enrollment.

- While enrollment increased for ACA Medicaid expansion participants from CY 2021 to CY 2022, utilization decreased for ambulatory visits, outpatient ED visits, and inpatient admissions for both participants enrolled for 12 months and those with any enrollment. A large percentage of newly enrolled Medicaid expansion participants in CY 2022 did not use any services which may have contributed to the overall decrease in utilization.

Table 23. Service Utilization of ACA Medicaid Expansion Population Aged 19–64 Years, by Enrollment Period, CY 2018–CY 2022

Enrollment Period	CY 2018			CY 2019			CY 2020			CY 2021			CY 2022		
	# of Users	# of Participants	% of Total	# of Users	# of Participants	% of Total	# of Users	# of Participants	% of Total	# of Users	# of Participants	% of Total	# of Users	# of Participants	% of Total
Ambulatory Care Visits															
Any	264,710	397,403	66.6%	267,294	391,784	68.2%	258,789	396,876	65.2%	300,615	438,293	68.6%	305,241	469,556	65.0%
12 Months	200,499	264,516	75.8%	202,589	267,587	75.7%	215,701	306,207	70.4%	268,048	374,868	71.5%	279,778	416,422	67.2%
Outpatient ED Visits															
Any	116,393	397,403	29.3%	117,383	391,784	30.0%	98,697	396,876	24.9%	114,587	438,293	26.1%	111,625	469,556	23.8%
12 Months	88,507	264,516	33.5%	89,555	267,587	33.5%	82,473	306,207	26.9%	101,526	374,868	27.1%	102,154	416,422	24.5%
Inpatient Admissions															
Any	33,421	397,403	8.4%	31,941	391,784	8.2%	28,419	396,876	7.2%	32,050	438,293	7.3%	30,021	469,556	6.4%
12 Months	24,248	264,516	9.2%	22,876	267,587	8.5%	21,931	306,207	7.2%	26,144	374,868	7.0%	25,573	416,422	6.1%

Notes: The number of users is the number of participants that had at least one visit. The number of users reported for any enrollment period for ambulatory care and outpatient ED visits in CY 2018 was revised to correct a transcription error reported in the 2020 HealthChoice Evaluation; the percentage of participants who had these services did not change.

ACA Medicaid Expansion Population with Mental Health and Substance Use Disorders

This section of the evaluation presents the rates of behavioral health diagnoses among ACA expansion participants. Table 24 shows the rates of MHDs, SUDs, and co-occurring MHD and SUD conditions among ACA Medicaid expansion participants aged 19 to 64 years. Rates are shown for those with any period of enrollment and 12 months of enrollment in CY 2018 through CY 2022.

The percentages of participants diagnosed with an MHD, SUD, or co-occurring MHD and SUD were higher among participants who were enrolled for a 12-month period compared to participants with any period of enrollment. However, the difference narrowed across the evaluation period for all participant groups. The percentage of participants with any period of enrollment and an MHD increased by 1.1 percentage points overall. The percentage of participants with any period of enrollment and an SUD decreased from 6.9% in CY 2018 to 5.2% in CY 2022. The percentage of participants with any period of enrollment and a dual diagnosis of MHD and SUD remained stable at roughly 5.0%.

Table 24. Behavioral Health Diagnosis of ACA Medicaid Expansion Population Aged 19–64 Years, by Enrollment Period, CY 2018–CY 2022

Enrollment Period	CY 2018			CY 2019			CY 2020			CY 2021			CY 2022		
	# of Participants	Total Participants	% of Total	# of Participants	Total Participants	% of Total	# of Participants	Total Participants	% of Total	# of Participants	Total Participants	% of Total	# of Participants	Total Participants	% of Total
MHD-Only															
Any Period	42,558	397,403	10.7%	44,184	391,784	11.3%	43,128	396,876	10.9%	50,114	438,293	11.4%	55,183	469,556	11.8%
12 Months	32,129	264,516	12.2%	33,509	267,587	12.5%	36,246	306,207	11.8%	44,478	374,868	11.9%	50,156	416,422	12.0%
SUD-Only															
Any Period	27,258	397,403	6.9%	26,745	391,784	6.8%	25,024	396,876	6.3%	25,445	438,293	5.8%	24,521	469,556	5.2%
12 Months	20,818	264,516	7.9%	20,496	267,587	7.7%	21,367	306,207	7.0%	22,735	374,868	6.1%	22,577	416,422	5.4%
Dual Diagnosis (MHD + SUD)															
Any Period	20,719	397,403	5.2%	22,213	391,784	5.7%	20,408	396,876	5.1%	21,380	438,293	4.9%	22,562	469,556	4.8%
12 Months	17,159	264,516	6.5%	18,185	267,587	6.8%	18,112	306,207	5.9%	19,495	374,868	5.2%	20,955	416,422	5.0%
No Behavioral Health Diagnosis															
Any Period	306,868	397,403	77.2%	298,642	391,784	76.2%	308,316	396,876	77.7%	341,354	438,293	77.9%	367,290	469,556	78.2%
12 Months	194,410	264,516	73.5%	195,397	267,587	73.0%	230,482	306,207	75.3%	288,160	374,868	76.9%	322,734	416,422	77.5%

Section III Conclusion

During CY 2022, HealthChoice maintained access to primary care for its members, with all but one Maryland county having sufficient PCPs to outperform the benchmark ratio of 200 patients per provider practice. The percentage of Medicaid participants enrolled in managed care remained consistently above 89.0% from CY 2018 to CY 2022, increasing significantly (along with continuous enrollment) in CY 2020 and CY 2021, and then slightly in CY 2022. This increase is a result of the PHE and the continuous enrollment provision of FFCRA. Regression analyses found several associations between participants' demographic characteristics and their likelihoods of being enrolled for less than a year and of timely reenrollment. Across a wide variety of measures, HealthChoice utilization trends were largely consistent with program goals in CY 2018 and CY 2019. However, the COVID-19 pandemic in CY 2020 negatively impacted utilization trends. The percentage of HealthChoice participants who received ambulatory care decreased over the evaluation period, with the largest decrease of 4.6 percentage points between CY 2019 and CY 2020 followed by an increase of 3.5 percentage points in CY 2021 and then a subsequent decrease of 2.5 percentage points in CY 2022. Outpatient ED visits and inpatient admissions generally declined over the evaluation period.

HealthChoice prioritizes the delivery of and access to quality health services to special populations—such as children in foster care and REM program participants—as well as reducing racial and ethnic disparities. Utilization of services among these special populations were largely consistent with utilization trends of the overall HealthChoice population. Over the evaluation period, the percentage of children in foster care who received an ambulatory service decreased, and utilization of the ED and inpatient admissions for this population also decreased. However, outpatient ED visits and inpatient admissions were higher for children in foster care than for children not in foster care in CY 2022. The percentage of REM participants with a dental visit, ED visit, or inpatient admission decreased during the evaluation period; however, ED and dental visits increased from CY 2020 to CY 2022.

Section IV. Quality of Care

Population Health Incentive Program

The Center for Health Care Strategies helped MDH develop a Value-Based Purchasing (VBP) initiative for HealthChoice beginning in 1999. The VBP initiative has since been renamed the Population Health Incentive Program (PHIP). PHIP pays incentives to MCOs that demonstrate high-quality care, increased access, and administrative efficiency by using standardized measures of performance on population health goals.

PHIP measures may change according to MDH's priorities and analysis of changing population health needs. The measures selected are intended to improve outcomes for HealthChoice participants—including children, children with special needs, pregnant women, adults with disabilities, and adults with chronic conditions—while being measurable with available data and comparable to national performance measures for benchmarking. PHIP strives for consistency with CMS's national performance measures for Medicaid and should reflect areas in which it is possible for MCOs to effect change. Measures included in the CY 2022 PHIP (see Table 25) were adapted from NCQA's HEDIS®.[33] These measures were chosen using encounter data and data supplied by the HealthChoice MCOs and subsequently validated by MDH's external quality review organization (EQRO) and HEDIS® auditor. Changes in the components of PHIP may result in changes in plan performance with respect to that measure. Therefore, decisions to make changes to the list of PHIP measures are taken with due consideration by MDH. Moreover, the measures are applied to MCOs without adjustments for differing risks in the population each serves. This has the effect of assuming that each MCO's PHIP performance is not affected by differences among an MCO's enrollees.

Table 25. Population Health Incentive Program Measures and Statewide Percentages, CY 2022

Population Health Incentive Program Measure	Statewide Percentage
Ambulatory Care Visits for SSI Adults	79.7%
Ambulatory Care Visits for SSI Children	79.0%
Asthma Medication Ratio	69.6%
Breast Cancer Screening	63.1%
Comprehensive Diabetes Care - HbA1c Control (<8.0%)	57.3%
Lead Screenings for Children - Ages 12-23 Months	60.5%
Prenatal and Postpartum Care - Postpartum Care	82.6%

In early 2021, PHIP moved to an incentive-only model for CY 2022. The overall goal remained the same: allocate financial incentives annually to HealthChoice MCOs that demonstrate high-quality care based on standardized measures of performance.

[33] Some of the HEDIS® measures have changed and are different than what was reported in the 2022 HealthChoice Evaluation.

Hilltop developed and proposed an incentive payment structure based on current performance and historical improvement on both standardized performance measures (i.e., HEDIS®) and locally developed (i.e., homegrown) quality measures. Measure selection was informed to align with Maryland's new SIHIS. Hilltop then proposed to allocate available funds through two rounds of incentive payments:

- In Round 1, payments to plans are made from the allocated incentive funding based on performance during the measurement year and improvement from the previous year.
- In Round 2, unallocated funds from Round 1 are redistributed among high-performing MCOs as additional incentives, up to a limit of 1% of the MCO's measurement year capitation as total payment from Round 1 and Round 2.

This methodology was refined in conjunction with MDH and MCOs, and the new payment structure went into effect during the CY 2022 performance year.

Three performance measures were selected to further evaluate PHIP during the evaluation period: 1) Comprehensive Diabetes Care - HbA1c Control (<8.0%), 2) Ambulatory Care Visits for SSI Adults, and 3) Ambulatory Care Visits for SSI Children.

Due to the COVID-19 pandemic, there are challenges in evaluating the effects of PHIP on the chosen measures. The Comprehensive Diabetes Care - HbA1c Control measure was added to PHIP in CY 2019. The percentage of participants with Comprehensive Diabetes Care HbA1c Control (<8.0%) increased from CY 2018 to CY 2019 in the pre-pandemic period (see Table 26). Overall performance declined in CY 2020 but increased in CY 2021 and CY 2022, marking a 3.7 percentage point increase from CY 2018 to CY 2022 for the Maryland Average Reportable Rate (MARR). MCOs varied in their performance, ranging from a decrease of 5.4 percentage points (CareFirst) to an increase of 13.4 percentage points (Maryland Physicians Care) over the evaluation period.

Table 26. Percentage of HealthChoice Participants with Comprehensive Diabetes Care (CDC) HbA1c Control (<8.0%), by MCO, CY 2018–CY 2022

MCO	2018	2019	2020	2021	2022
Aetna	52.6%	49.6%	47.0%	52.8%	55.7%
CareFirst Community Health Plan	59.4%	57.9%	51.8%	54.0%	54.0%
Jai Medical Systems	63.8%	65.0%	56.6%	59.5%	62.3%
Kaiser	61.1%	63.8%	56.8%	62.0%	59.0%
Maryland Physicians Care	42.6%	54.3%	48.2%	57.4%	56.0%
MedStar	54.3%	57.5%	53.9%	56.6%	61.6%
Priority Partners	47.7%	47.7%	41.9%	55.2%	56.7%
UnitedHealthcare	49.1%	52.8%	47.9%	53.0%	55.2%
Wellpoint*	51.8%	51.8%	55.0%	55.7%	55.2%
MARR	**53.6%**	**55.6%**	**51.0%**	**56.3%**	**57.3%**

*formerly Amerigroup Community Care

MCOs differed in their performance on the measures of ambulatory care for SSI adults and children. Over the evaluation period, MCOs ranged from a decrease of 15.0 percentage points (CareFirst) to an increase of 1.7 percentage points (Kaiser) in the percentage of SSI adults with an ambulatory visit. The percentage of SSI children with an ambulatory visit ranged from a decrease of 15.8 percentage points (CareFirst) to an increase of 8.3 percentage points (Aetna) over the evaluation period. Jai was the highest performing MCO on the adult measure and remained consistent over the evaluation period. For the child measure, Jai was the highest performing MCO from CY 2018 to CY 2021, and Priority Partners was the highest performing MCO for CY 2022. Prior to the COVID-19 PHE, most MCOs remained consistent or improved on the measures. Overall performance decreased on both measures from CY 2018 to CY 2022.

Table 27. Percentage of Ambulatory Care Visits for SSI Adults, by MCO, CY 2018–CY 2022

MCO	2018	2019	2020	2021	2022
Aetna	57.1%	58.2%	57.0%	59.8%	58.6%
CareFirst Community Health Plan	87.6%	87.7%	76.4%	76.1%	72.6%
Jai Medical Systems	90.7%	90.6%	89.7%	90.1%	87.1%
Kaiser	69.2%	75.5%	69.0%	71.9%	70.9%
Maryland Physicians Care	83.6%	84.7%	83.1%	83.6%	82.6%
MedStar	82.2%	83.5%	80.0%	80.2%	79.6%
Priority Partners	86.4%	86.1%	82.3%	83.6%	82.0%
UnitedHealthcare	80.4%	79.4%	76.8%	78.6%	76.2%
Wellpoint*	81.7%	82.2%	77.2%	80.1%	77.9%
All	**83.7%**	**83.9%**	**80.3%**	**81.5%**	**79.7%**

*formerly Amerigroup Community Care

Table 28. Percentage of Ambulatory Care Visits for SSI Children, by MCO, CY 2018–CY 2022

MCO	2018	2019	2020	2021	2022
Aetna	38.7%	40.7%	37.8%	45.8%	47.0%
CareFirst Community Health Plan	86.3%	88.5%	66.3%	64.3%	70.5%
Jai Medical Systems	89.8%	90.9%	89.8%	89.1%	81.3%
Kaiser	76.3%	79.5%	66.4%	76.0%	71.0%
Maryland Physicians Care	81.8%	84.4%	78.6%	82.7%	81.9%
MedStar	79.1%	78.9%	74.0%	76.4%	75.3%
Priority Partners	85.3%	85.5%	77.1%	84.7%	82.6%
UnitedHealthcare	79.5%	80.2%	70.0%	78.5%	75.2%
Wellpoint*	84.8%	84.2%	74.8%	82.3%	78.8%
All	**83.2%**	**83.7%**	**75.0%**	**81.2%**	**79.0%**

*formerly Amerigroup Community Care

EPSDT (Healthy Kids) Review

Federal regulations[34] require EPSDT services for all Medicaid participants under the age of 21 years. The purpose of EPSDT is to ensure that children receive age-appropriate physical examinations, developmental assessments, and mental health screenings periodically to identify any deviations from expected growth and development.

Maryland's EPSDT program aims to support access to and increase the availability of quality health care. MDH has the Healthy Kids Program, with nurse consultants who certify HealthChoice providers in receiving EPSDT training, support the MCOs, and educate them on new EPSDT requirements. The Healthy Kids Program also collaborates with MCOs to share age-appropriate encounter forms, risk assessment forms, and questionnaires with their provider networks to assist with documenting preventive services according to the Maryland Schedule of Preventive Health Care.

The annual EPSDT Healthy Kids medical record review (MRR) assesses whether EPSDT services are provided to HealthChoice participants in a timely manner. The review is conducted on HealthChoice provider compliance with five EPSDT components: 1) health and developmental history, 2) comprehensive physical exam, 3) laboratory tests/at-risk screenings, 4) immunizations, and 5) health education/anticipatory guidance.

Between CY 2018 and CY 2022, provider compliance increased for four components and decreased for only one of the EPSDT components (Table 29). The HealthChoice aggregate total score increased overall from CY 2018 to CY 2022 with a small decrease occurring in CY 2019 (Qlarant, 2024). MDH achieved the minimum compliance score of 80% for all components for CY 2018 and maintained it through CY 2019, except for two components that were baseline results because of the change in the MRR process stemming from the COVID-19 PHE. Only one component in CY 2020—Laboratory Tests/At-Risk Screenings—remained below the minimum compliance score. In CY 2021 and 2022, all components achieved the minimum compliance score. MCOs use the Healthy Kids review results to develop education efforts to inform participants and providers about EPSDT services.

Table 29. HealthChoice MCO Aggregate Composite Scores for Components of the EPSDT/Healthy Kids Review, CY 2018–CY 2022

EPSDT Component	CY 2018	CY 2019	CY 2020	CY 2021	CY 2022
Health and Developmental History	94%	88%	94%	94%	96%
Comprehensive Physical Exam	97%	93%	96%	96%	98%
Laboratory Tests/At-Risk Screenings	87%	66%*	77%	81%	85%
Immunizations	93%	71%*	86%	88%	95%
Health Education/Anticipatory Guidance	94%	92%	94%	94%	97%
HealthChoice Aggregate Total	**94%**	**83%**	**91%**	**92%**	**95%**

*CY 2019 results for these components are baseline because of the change in the MRR process due to the COVID-19 PHE. Underlined scores are below the 80% minimum compliance requirement.

[34] 42 CFR § 440.345.

Section IV Conclusion

Although many of the HealthChoice performance measures in this report demonstrate quality of health care already delivered, two HealthChoice programs focus more directly on improving specific quality of care measures.

First, PHIP incentivizes MCOs to maintain and improve performance by awarding additional payments according to their scores on measures of clinical outcomes and care delivery defined in advance. The overall performance of the nine MCOs sets the standards by which each MCO is evaluated. Those MCOs that exceed a performance threshold receive incentive payments, while MCOs with less-than-standard performance receive no additional payments. An evaluation of the Comprehensive Diabetes Care - HbA1c Control measure shows that the MARR increased by 3.7 percentage points between CY 2018 and CY 2022. Although MCOs may vary with respect to which measures earn incentive payments, PHIP supports overall quality improvement across HealthChoice.

Second, the EPSDT annual review assesses plan performance on services to children under the age of 21. Because EPSDT services are a national requirement for Medicaid, the EPSDT review measures whether all HealthChoice plans achieve minimum levels of performance in delivering these services to eligible children. Results from the most recent review show that the MCOs have met or exceeded standards across the board in CY 2018, CY 2021, and CY 2022 and have recovered from CY 2019 and CY 2020, wherein the MCOs failed to attain the minimum compliance requirement for at least one measure each year. In CY 2019, compliance requirements were not met for two measures: Laboratory Tests/At-Risk Screenings and Immunizations. In CY 2020, one measure—Laboratory Tests/At-Risk Screenings—remained below the minimum compliance requirement. However, these results should be interpreted with caution as changes to measures were implemented due to the COVID-19 PHE. In CY 2022, the MCOs met or exceeded the minimum compliance score for all components

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Section V. Provide Patient-Focused Comprehensive and Coordinated Care through Provision of a Medical Home

The HealthChoice demonstration's medical home provision offers patient-focused, comprehensive, coordinated care for its participants by matching each member to a single "medical home" through a PCP. A medical home encourages HealthChoice participants to use care settings appropriate to their needs and decrease potentially inappropriate or avoidable utilization of health services. To this end, HealthChoice participants are asked to select an MCO and PCP to oversee their medical care, and those who do not select an MCO or PCP are assigned to one.

This section of the report assesses how adequately HealthChoice provides participants with a medical home and educates them as to their use. The measures analyze appropriate service utilization and participants' ability to connect with their medical homes. Participants should be able to understand the resources available to them and seek care in an ambulatory care setting before resorting to seeking care in the ED or allowing a condition to progress to the extent that it warrants an inpatient admission.

Medical Home Utilization

In December 2015, MDH began collecting information from MCOs on HealthChoice participants' PCP assignments, as well as information on the PCPs within a group practice. This information helps MDH track whether participants visited their assigned PCPs or whether they used other providers to oversee their medical care and provide a medical home.

Table 30 presents the number of participants who had at least one visit with their assigned PCP, their assigned PCP's group practice or partner PCP, or any PCP in the MCO's network from CY 2018 to CY 2022. This section presents these measures by MCO for HealthChoice participants with 12 months of enrollment in an MCO. Participants enrolled for 12 continuous months provide an MCO with enough time to intervene in their health care.

During the evaluation period, all MCOs experienced declines in a) the proportion of their HealthChoice participants with at least one visit to their assigned PCP and b) the proportion with at least one visit to any PCP within the MCO network.[35] All MCOs except for Kaiser experienced a decline in the proportion of their HealthChoice participants with at least one visit to their assigned PCP, group practice, or partner PCP during the evaluation period.

[35] Excluding Aetna—which only began providing acceptable files in 2021—and Jai—because the percentage of participants with a visit to their assigned PCP could not be reported in CY 2018 and CY 2019 due to the use of the billing NPI, which limits ability to capture a participant's assigned PCP.

Table 30. Percentage of HealthChoice Participants (12 Months of Enrollment) with a PCP Visit, by MCO,* CY 2018–CY 2022

MCO	# of Participants* (12 Months of Enrollment)	% of Participants with a Visit with their Assigned PCP	% of Participants with a Visit with Assigned PCP, Group Practice, or Partner PCPs	% of Participants with a Visit with any PCP in MCO's Network
CY 2018**				
Aetna***	1,504	0.7%	1.5%	5.6%
CareFirst Community Health Plan	30,252	31.2%	47.3%	80.4%
Jai Medical Systems******	20,146	1.3%	64.3%	85.2%
Kaiser	44,638	62.3%	67.5%	83.2%
Maryland Physicians Care	164,736	36.3%	57.4%	86.4%
MedStar	65,476	35.5%	54.7%	84.8%
Priority Partners	227,383	52.8%	55.6%	89.6%
UnitedHealthcare	114,003	41.8%	55.4%	85.3%
Wellpoint	214,342	46.7%	70.4%	89.5%
Total***	**882,480**	**44.0%**	**59.9%**	**87.2%**
CY 2019**				
Aetna***	10,390	0.8%	1.3%	3.7%
CareFirst Community Health Plan	32,525	28.8%	48.3%	80.0%
Jai Medical Systems******	21,526	4.2%	67.0%	83.5%
Kaiser	46,398	66.4%	73.1%	83.9%
Maryland Physicians Care	167,215	38.5%	60.6%	86.1%
MedStar	68,438	33.3%	62.3%	84.4%
Priority Partners	234,752	57.9%	60.8%	89.3%
UnitedHealthcare	112,874	43.2%	57.4%	86.2%
Wellpoint	217,490	48.7%	73.4%	89.1%
Total	**911,608**	**45.9%**	**63.1%**	**86.2%**
CY 2020**				
Aetna***	24,965	0.4%	0.6%	1.8%
CareFirst Community Health Plan	40,015	29.2%	43.7%	69.0%
Jai Medical Systems	23,967	29.5%	59.6%	77.0%
Kaiser	63,507	56.1%	76.2%	78.3%
Maryland Physicians Care	194,487	35.0%	53.8%	75.2%
MedStar	81,112	29.9%	49.2%	75.5%
Priority Partners	276,317	35.2%	38.1%	74.8%
UnitedHealthcare	130,721	33.1%	47.7%	68.7%
Wellpoint	255,847	46.2%	65.2%	78.1%
Total	**1,090,938**	**37.2%**	**51.3%**	**73.3%**
CY 2021******				

MCO	# of Participants* (12 Months of Enrollment)	% of Participants with a Visit with their Assigned PCP	% of Participants with a Visit with Assigned PCP, Group Practice, or Partner PCPs	% of Participants with a Visit with any PCP in MCO's Network
Aetna	40,702	24.5%	35.4%	65.4%
CareFirst Community Health Plan	50,357	28.4%	42.6%	71.7%
Jai Medical Systems	27,073	29.7%	59.1%	78.7%
Kaiser	90,820	59.1%	79.1%	82.6%
Maryland Physicians Care	220,022	33.8%	53.6%	79.5%
MedStar	95,106	28.9%	48.7%	79.3%
Priority Partners	314,309	40.4%	43.2%	81.5%
UnitedHealthcare	151,311	27.6%	41.9%	77.5%
Wellpoint	293,591	46.0%	65.5%	82.3%
Total	**1,283,291**	**38.3%**	**52.9%**	**78.7%**
CY 2022				
Aetna	48,052	26.0%	38.4%	64.5%
CareFirst Community Health Plan	65,871	26.7%	39.7%	69.7%
Jai Medical Systems	27,713	31.7%	59.3%	75.8%
Kaiser	105,096	53.8%	74.6%	78.5%
Maryland Physicians Care	232,962	33.6%	52.3%	76.7%
MedStar	101,147	27.7%	46.2%	75.9%
Priority Partners	331,354	39.9%	42.0%	79.4%
UnitedHealthcare	159,553	34.0%	48.3%	75.3%
Wellpoint	309,780	43.6%	61.9%	79.8%
Total	**1,381,528**	**37.9%**	**51.8%**	**77.2%**

*The number of participants in a HealthChoice MCO only includes participants who were listed in the data files provided by the MCO and in the MCO enrollment files according to MMIS2 data.
**The methodology was updated in 2021 to account for changes in the rendering vs. billing provider fields in MMIS2, so the CY 2018 to CY 2020 numbers have changed significantly in some cases.
***Please read Aetna's results with caution: this MCO only began providing acceptable files in 2021.
****The percentage of participants with a visit to their assigned PCP is not reported for Jai because the use of the billing NPI limits ability to capture a participant's assigned PCP.
*****CY 2021, % of Participants with a Visit with any PCP in MCO's Network data has been revised to correct an error in reporting.

Table 31 shows the proportion of participants who received at least one ambulatory care visit by MCO in CY 2018 and CY 2022. The total number of participants enrolled in HealthChoice grew by 13.3% between CY 2018 and CY 2022, while the proportion receiving an ambulatory care visit decreased by 2.1 percentage points. There was variation in this measure among MCOs. In CY 2018, 75% of participants in four out of nine MCOs had an ambulatory care visit; in CY 2022, this remained as four out of nine MCOs.

Table 31. Number and Percentage of HealthChoice Participants Aged 0–64 Years Who Had an Ambulatory Care Visit, by MCO, CY 2018 and CY 2022

MCO*	CY 2018			CY 2022		
	Total Participants	# with Ambulatory Care Visit	% with Ambulatory Care Visit	Total Participants	# with Ambulatory Care Visit	% with Ambulatory Care Visit
Aetna	19,167	9,753	50.9%	61,482	37,067	60.3%
CareFirst	60,229	40,315	66.9%	89,156	58,933	66.1%
JAI	30,716	22,353	72.8%	31,309	22,422	71.6%
Kaiser	79,291	56,974	71.9%	124,996	89,436	71.6%
MPC	251,515	194,308	77.3%	261,367	199,642	76.4%
MedStar	109,641	80,141	73.1%	114,247	82,951	72.6%
Priority Partners	345,883	280,222	81.0%	369,226	290,139	78.6%
United	175,139	134,974	77.1%	180,407	135,846	75.3%
Wellpoint	318,135	257,404	80.9%	341,991	270,350	79.1%
ALL MCOs	**1,389,716**	**1,076,444**	**77.5%**	**1,574,181**	**1,186,786**	**75.4%**

*It is important to note that the data contained here have not been risk-adjusted, so they do not account for variances in risk profiles across MCOs.

Table 32 displays the outpatient ED utilization of HealthChoice participants aged 0 to 64 years by MCO during CY 2018 and CY 2022. Between CY 2018 and CY 2022, all MCOs except Wellpoint experienced a decrease in the percentage of their participants with an ED visit; CareFirst and Jai experienced the largest decreases in ED use: by 7.6 and 6.4 percentage points, respectively. Wellpoint experienced an increase of 0.7 percentage points during the evaluation period. In CY 2018, at least 30% of participants in three of the nine MCOs used ED services. By CY 2022, no MCOs had an ED utilization rate above 30%.

Table 32. Percentage of HealthChoice Participants Aged 0–64 Years Who Had an Outpatient ED Visit, by MCO, CY 2018 and CY 2022

MCO*	CY 2018			CY 2022		
	Total Participants	# with ED Visit	% with ED Visit	Total Participants	# with ED Visit	% with ED Visit
Aetna	19,167	4,171	21.8%	61,482	13,074	21.3%
CareFirst	60,229	17,332	28.8%	89,156	18,921	21.2%
JAI	30,716	10,534	34.3%	31,309	8,733	27.9%
Kaiser	79,291	11,281	14.2%	124,996	15,792	12.6%
MPC	251,515	78,801	31.3%	261,367	67,198	25.7%
MedStar	109,641	31,988	29.2%	114,247	26,411	23.1%
Priority Partners	345,883	104,330	30.2%	369,226	92,792	25.1%
United	175,139	48,541	27.7%	180,407	40,637	22.5%
Wellpoint	318,135	68,993	21.7%	341,991	76,688	22.4%
Total	**1,389,716**	**375,971**	**27.1%**	**1,574,181**	**360,246**	**22.9%**

*It is important to note that the data contained here have not been risk-adjusted, so they do not account for variances in risk profiles across MCOs.

Appropriateness of ED Care

A fundamental goal of managed care programs like HealthChoice is the delivery of the appropriate care at the appropriate time in the appropriate setting. One widely used methodology to evaluate progress toward appropriate ED utilization is based on classifications developed by researchers at the New York University (NYU) Center for Health and Public Service Research (Billings et al., 2000). The original algorithm was created with ICD-9 codes as of 2001 and was not revised to incorporate new ICD-9 and ICD-10 codes that were added each year. Because this resulted in an increase in the percentage of unclassified ED visits over time, researchers revised the algorithm to account for updated ICD-9 and ICD-10 codes released in 2001 through 2014 (Johnston et al., 2017). Hilltop has not yet applied this update for classifying ED visits because the update for ICD-10 was still in the beta version and not classified by NYU. According to Billings et al. (2000), the ED profiling algorithm categorizes emergency visits as follows:

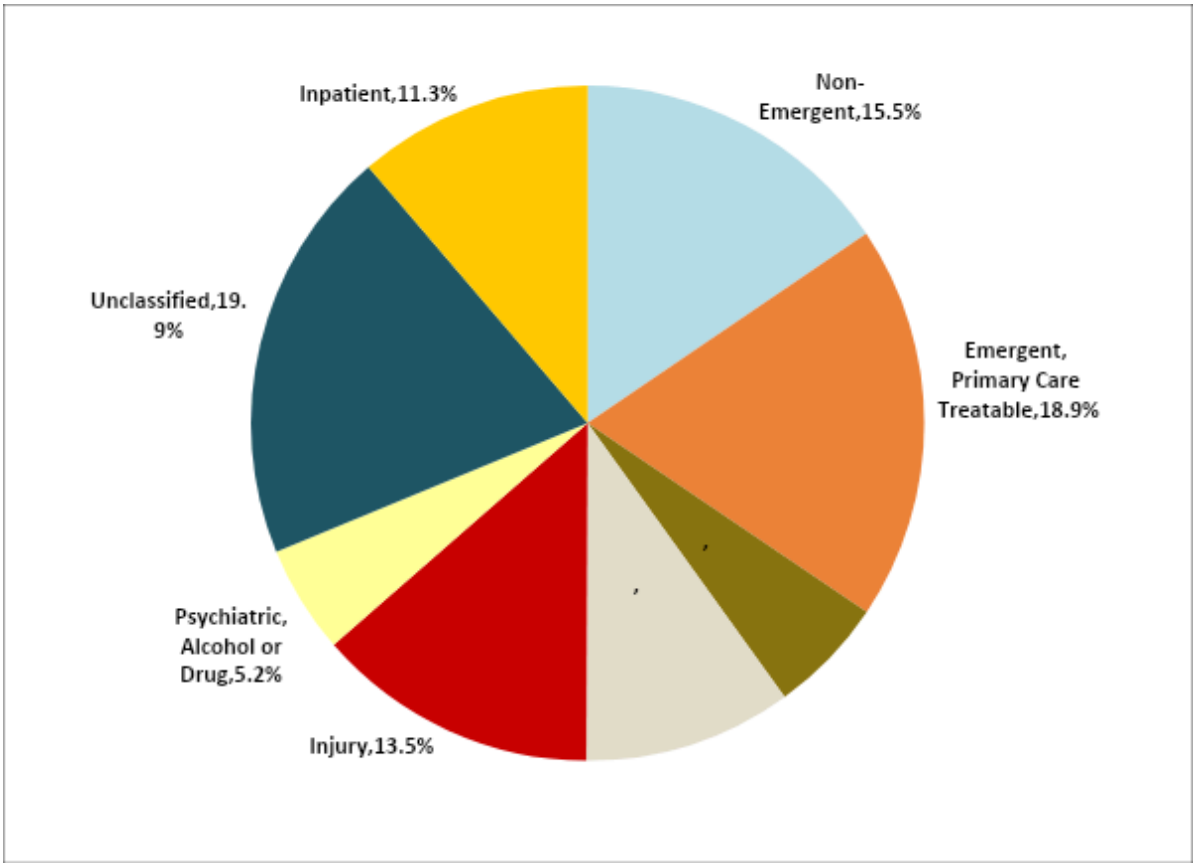
1. *Non-emergent*: Immediate care was not required within 12 hours based on the patient's presenting symptoms, medical history, and vital signs.
2. *Emergent but primary care treatable*: Treatment was required within 12 hours but it could have been provided effectively in a primary care setting (e.g., CAT scan or certain lab tests).
3. *Emergent but preventable/avoidable*: Emergency care was required, but the condition was potentially preventable/avoidable if timely and effective ambulatory care had been accessible and received during the episode of illness (e.g., asthma flare-up).
4. *Emergent, ED care needed, not preventable/avoidable*: Ambulatory care could not have prevented the condition (e.g., trauma or appendicitis).
5. *Injury*: Injury was the principal diagnosis.
6. *Alcohol-related*: The principal diagnosis was related to alcohol.
7. *Drug-related*: The principal diagnosis was related to drugs.
8. *Mental health-related*: The principal diagnosis was related to mental health.
9. *Unclassified*: The condition was not classified in one of the above categories by the expert panel.

ED visits that fall into the first three categories above may indicate problems with access to primary care, including access during non-traditional work hours. Figure 15 presents the distribution of all CY 2022 ED visits by NYU classification for individuals with any period of HealthChoice enrollment. In CY 2022, 40.0% of all ED visits were for potentially avoidable (preventable) conditions, meaning that the ED visit may have been avoided if the condition had been addressed with high-quality and timely primary care. ED visits in categories 4 (emergent, ED care needed, not preventable/avoidable) and 5 (injury) are the least likely to be prevented

with access to primary care. These two categories combined accounted for 23.5% of all ED visits in CY 2022.

Adults aged 40 through 64 years had more ED visits related to category 4 (emergent, ED care needed, not preventable/avoidable) than any other age group; children aged 3 through 18 years had more category 5 (injury) ED visits than other age groups.[36] The inpatient category in Figure 15, which is not a part of the NYU classification, represents ED visits that resulted in a hospital admission. Participants with disabilities had a much higher rate of ED visits that led to an inpatient admission than participants in the families, children, and pregnant women (F&C) and MCHP coverage groups.[37]

Figure 15. ED Visits by HealthChoice Participants Classified According to NYU Avoidable ED Algorithm, CY 2022



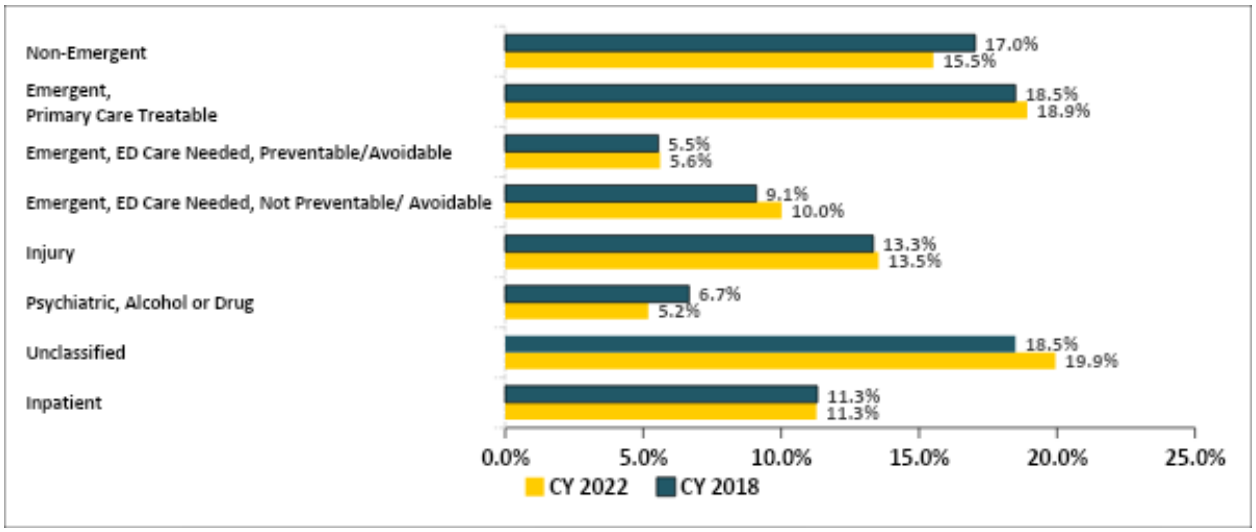
Note: ED visits that result in inpatient stays are not a part of the NYU algorithm and have been added here in their own category. The three categories with ED visits for potentially avoidable/preventable conditions are pulled out in the figure.

Figure 16 compares the ED visit classifications for CY 2018 with the classifications for CY 2022. Potentially avoidable ED visits decreased during the evaluation period: from 41.0% of all ED visits in CY 2018 to 40.0% in CY 2022. However, to some degree, this decline is balanced by an

[36] Data not shown.
[37] Data not shown.

increase in the unclassified category. MDH continues to monitor ED use with the goal of reducing potentially avoidable ED visits. ED visits for psychiatric-, alcohol-, or drug-related reasons decreased from 6.7% in CY 2018 to 5.2% in CY 2022.

Figure 16. Classification of ED Visits, by HealthChoice Participants, CY 2018 and CY 2022



Preventable or Avoidable Admissions

Ambulatory care sensitive hospitalizations—also referred to as preventable or avoidable hospitalizations—are inpatient admissions that may have been prevented if proper ambulatory care had been provided in a timely and effective manner. According to an Agency for Healthcare Research and Quality (AHRQ) report, one in ten hospital admissions nationwide were avoidable (McDermott & Jiang, 2020). High numbers of avoidable admissions may indicate problems with access to primary and urgent care services or deficiencies in outpatient management, follow-up, and readmission status. MDH monitors potentially avoidable admissions using AHRQ's Prevention Quality Indicators (PQIs) methodology, which aligns with the health quality goals under Maryland's SIHIS. PQIs are a set of measures obtained from hospital discharge records for specific primary diagnoses to identify quality of care for ambulatory conditions based on the conditions listed in each measure. PQIs are for conditions for which ambulatory care can potentially prevent the need for hospitalization. The measures presented are as follows:[38]

PQI #1: Diabetes Short-Term Complications

PQI #3: Diabetes Long-Term Complications

PQI #5: Chronic Obstructive Pulmonary Disease (COPD) or Asthma in Older Adults

PQI #7: Hypertension

[38] The measure estimation logic has been updated using AHRQ PQI Version 2021. A full description of the methodological revisions is available here: https://qualityindicators.ahrq.gov/Modules/Log_Coding_Updates_PQI_v2021.aspx.

PQI #8: Congestive Heart Failure

PQI #11: Bacterial Pneumonia

PQI #12: Urinary Tract Infection

PQI #14: Uncontrolled Diabetes

PQI #15: Asthma in Younger Adults

PQI #16: Lower-Extremity Amputation in Patients with Diabetes

PQI #90:[39] Prevention Quality Overall Composite

PQI #91:[40] Prevention Quality Acute Composite

PQI #92:[41] Prevention Quality Chronic Composite

PQI #93:[42] Prevention Quality Diabetes Composite

The measure denominators include the number of HealthChoice participants who meet the following enrollment criteria:

- Aged 18 to 64 years as of December 31 of the calendar year
    - For PQI #5: Aged 40 to 64 years as of December 31 of the calendar year
    - For PQI #15: Aged 18 to 39 years as of December 31 of the calendar year
- Enrolled in the same HealthChoice MCO as of December 31 of the calendar year as the MCO that paid for the inpatient admission qualifying the participant for a PQI designation

Table 33 presents the number of potentially avoidable inpatient admissions per 100,000 HealthChoice participants aged 18 to 64 years during the evaluation period. COPD or asthma in older adults (PQI #5) was responsible for the highest number of potentially avoidable admissions for CY 2018 through CY 2022. The number of potentially avoidable admissions for lower-extremity amputation in patients with diabetes (PQI #16) was the smallest for CY 2018 through CY 2020. In CY 2021 and CY 2022, uncontrolled diabetes admissions (PQI #14) was the smallest.

[39] PQI #90 includes PQI #s 1, 3, 5, 7, 8, 10, 11, 12, 14, 15, and 16.
[40] PQI #91 includes PQI #s 11 and 12.
[41] PQI #92 includes PQI #s 1, 3, 5, 7, 8, 14, 15, and 16.
[42] PQI #93 includes PQI #s 1, 3, 14, and 16.

Table 33. Number of Potentially Avoidable Admissions per 100,000 HealthChoice Participants Aged 18–64 Years (Any Period of Enrollment), CY 2018–CY 2022[43]

Any PQI #	CY 2018	CY 2019	CY 2020	CY 2021	CY 2022
1: Diabetes Short-Term Complications Admissions	202	208	198	175	161
3: Diabetes Long-Term Complications Admissions	135	150	123	120	113
5: COPD or Asthma in Older Adults Admissions (Ages 40-64)	732	646	395	346	343
7: Hypertension Admissions	83	76	62	57	67
8: Congestive Heart Failure Admissions	239	243	196	183	190
11: Bacterial Pneumonia Admissions	129	122	92	61	57
12: Urinary Tract Infection Admissions	70	73	45	43	31
14: Uncontrolled Diabetes Admissions	37	41	36	31	24
15: Asthma in Younger Adults Admissions (Ages 18-39)	74	82	50	42	34
16: Lower-Extremity Amputation in Patients with Diabetes	30	34	34	33	33
90: Prevention Quality Overall Composite*	**1,233**	**1,224**	**949**	**843**	**812**
91: Prevention Quality Acute Composite*	**199**	**195**	**137**	**104**	**89**
92: Prevention Quality Chronic Composite	**1034**	**1,028**	**812**	**739**	**723**
93: Prevention Quality Diabetes Composite	**390**	**414**	**372**	**342**	**315**

Note: The rates for PQI #5: Chronic Obstructive Pulmonary Disease (COPD) and Asthma in Older Adults and PQI #15: Asthma in Younger Adults have been corrected for CY 2018 to CY 2021.

Table 34 presents the number and percentage of adults who had at least one inpatient admission and the proportion of PQI admissions during the evaluation period. Overall, the percentage of adults enrolled in HealthChoice with at least one inpatient admission with a PQI designation decreased slightly from 0.8% in CY 2018 to 0.6% in CY 2022.

During the same period, the percentage of participants with at least one inpatient admission decreased from 7.8% in CY 2018 to 6.2% in CY 2022. Among HealthChoice adults with an inpatient admission, the percentage of participants with a PQI-designated admission decreased from 10.4% in CY 2018 to 8.9% in CY 2022.

[43] This measure presents the number of potentially avoidable admissions per 100,000 participants. The methodology for calculating inpatient admission rates only counts inpatient stays paid for by an MCO.

Table 34. Potentially Avoidable Admission Rates, Participants Aged 18–64 Years (Any Period of Enrollment), with ≥1 Inpatient Admission, CY 2018–CY 2022*

Calendar Year	# of Participants in HealthChoice	# of Participants with ≥1 MCO Admissions	% of Participants with ≥1 MCO Admission	# of Participants with Any PQI	% of Participants with Any PQI	% of Participants With ≥1 MCO Admission that had a PQI
2018	748,112	58,417	7.8%	6,091	0.8%	10.4%
2019	734,903	57,725	7.9%	5,858	0.8%	10.1%
2020	755,803	55,175	7.3%	4,868	0.6%	8.8%
2021	826,931	58,844	7.1%	4,866	0.6%	8.3%
2022	889,322	54,974	6.2%	4,916	0.6%	8.9%

*This measure includes only MCO inpatient admissions.

Section V Conclusion

Over the course of the evaluation period, the percentage of HealthChoice participants who saw their assigned PCPs[44] or their assigned PCP's group practice or partner PCP decreased for all MCOs. When the medical home was defined to include any PCPs within their MCO network, all the MCOs except for Aetna saw that over 70% of their participants had a visit every year from CY 2018 to CY 2021 except for CY 2020 and CY 2022.

Avoidable ED use declined between CY 2018 and CY 2022, and the proportion of inpatient admissions with any PQI also decreased slightly over the evaluation period. MDH will continue to provide oversight and monitor this trend to ensure that PQI results are consistent with the continuing use of medical homes to provide preventive care.

Section VI. Emphasize Health Promotion and Disease Prevention

Another goal of the HealthChoice program is to improve the quality of health services delivered through the provision of preventive services and chronic care management. This section assesses the demonstration's performance across quality measures—many nationally recognized, such as HEDIS®—in the areas of preventive health and the management of chronic disease, including behavioral health (MHD and SUD). Preventative care and chronic care management services are also assessed based on their relationship with adverse outcomes. For example, preventive and chronic disease care measures—prenatal and postpartum care, asthma-related and depression-related ED visits, use of Screening, Brief Intervention, and Referral to Treatment (SBIRT) services, diabetes screenings and care—align with Maryland's SIHIS.

[44] Excluding Aetna—which only began providing acceptable files in 2021—and Jai—because the percentage of participants with a visit to their assigned PCP could not be reported in CY 2018 and CY 2019 due to the use of the billing NPI, which limits ability to capture a participant's assigned PCP.

Because of the NCQA restrictions, national HEDIS® means cannot be published. Therefore, in the tables below, a "+" sign indicates that Maryland's rate is above the national HEDIS® mean, while a "-" sign indicates that Maryland's rate is below the national mean.

Preventive Care

HEDIS® Childhood Measures

MDH uses HEDIS® measures to report childhood immunization status and well-child visit rates. Table 35 presents the immunization and well-child measures for the HealthChoice population (MetaStar, Inc., 2023). HealthChoice performed above the national HEDIS® mean for childhood immunizations, well-child visits (first 15 months of life), and well-care visits for children and adolescents (aged 3 to 21 years) in CY 2021 and CY 2022. Childhood Immunization Combination 3 and well-care visits for adolescents are part of PHIP.

Table 35. HEDIS® Immunizations and Well-Child Visits: Percentage of HealthChoice Children Compared with the National HEDIS® Mean, CY 2018–CY 2022

HEDIS® Measure	CY 2018	CY 2019	CY 2020	CY 2021	CY 2022
Childhood Immunization Status: Combination 3					
HealthChoice	77.4%	75.4%	70.2%	68.4%	68.9%
National HEDIS® Mean*	+	+	-	+	+
Well-Child Visits: 15 Months of Life* **					
HealthChoice			61.1%	54.8%	57.5%
National HEDIS® Mean*				+	+
Child and Adolescent Well-Care Visits (WCV), 3-11 years**					
HealthChoice			57.4%	64.3%	61.5%
National HEDIS® Mean*				+	+
Child and Adolescent Well-Care Visits (WCV), 12-17 years**					
HealthChoice			53.7%	57.4%	54.1%
National HEDIS® Mean*				+	+
Child and Adolescent Well-Care Visits (WCV), 18-21 years**					
HealthChoice			38.0%	38.5%	35.4%
National HEDIS® Mean*				+	+
Child and Adolescent Well-Care Visits (WCV), Total 3-21 years**					
HealthChoice			53.1%	57.7%	54.6%
National HEDIS® Mean*				+	+

*Because of the NCQA restrictions, national HEDIS® means cannot be published. Therefore, a "+" sign indicates that Maryland's rate is above the national HEDIS® mean and a "-" sign indicates that Maryland's rate is below the national mean.
** National HEDIS® means were unavailable in measurement year (MY) 2020. Due to significant changes made to the well-child visits measure in MY 2020, NCQA determined a trending break, so the data for CY 2018 and CY 2019 are not available.

Immunizations for Adolescents (IMA)

MDH uses the HEDIS® measure to report the immunizations for adolescents (IMA). The IMA is for adolescents 13 years of age who had one dose of meningococcal vaccine; one tetanus,

diphtheria toxoids and acellular pertussis (Tdap) vaccine; and have completed the human papillomavirus (HPV) vaccine series by their 13th birthday. (MetaStar Inc., 2023). CDC recommends all adolescents aged 11 to 12 receive at least one does of the meningococcal vaccine (CDC, n.d.a) and one dose of the Tdap vaccine (CDC, n.d.b). In addition, the CDC (2021c) now recommends that 11- to 12-year-olds receive two doses of the HPV vaccine—rather than the previously recommended three doses—to protect against cancers caused by HPV. HPV is a common virus that spreads by sexual contact and can cause cervical cancer in women and penile cancer in men. HPV can also cause anal cancer, throat cancer, and genital warts in both men and women (CDC, 2022a).

Table 36 presents the percentage of HealthChoice adolescents who received the IMA compared to the national HEDIS® mean for CY 2018 through CY 2022. The measure calculates rates for two combinations: Combination 1 (both meningococcal and Tdap vaccines) and Combination 2 (meningococcal, Tdap, and HPV vaccines). There was a decrease of 4.6 percentage points from CY 2018 to CY 2021 and then a slight increase in CY 2022 for Combination 2. Maryland performed above the national HEDIS® mean for Combination 1 and Combination 2 in CY 2021 and CY 2022.

Table 36. Percentage of Adolescents HealthChoice Aged 13 Years Who Had Immunizations for Adolescents, Compared with the National HEDIS® Mean, CY 2018–CY 2022

IMA	CY 2018	CY 2019	CY 2020	CY 2021	CY 2022
Immunizations for Adolescents (IMA), Combo 1					
HealthChoice	89.3%	87.7%	82.9%	81.2%	84.6%
National HEDIS® Mean*	+	+	+	+	+
Immunizations for Adolescents (IMA), Combo 2					
HealthChoice	46.2%	45.5%	42.7%	41.6%	41.9%
National HEDIS® Mean*	+	+	+	+	+

Childhood Lead Testing

MDH is a member of Maryland's Lead Poisoning Prevention Commission, which advises Maryland executive agencies, the General Assembly, and the Governor on lead poisoning prevention in the state. Maryland's plan to reduce childhood lead poisoning includes ensuring that young children receive appropriate lead risk screening and blood lead testing. MDH's 2017 Joint Chairmen's Report describes its efforts through several initiatives (Maryland Department of Health, 2017).

As part of the EPSDT benefit, Medicaid requires that all children receive a blood lead test at 12 and 24 months of age. MDH measures the blood lead testing rates for children aged 12 to 23 months and 24 to 35 months who are enrolled continuously in the same MCO for at least 90 days. A child's lead test must have occurred during the calendar year or the year prior.

To ensure that the children with elevated blood lead levels receive appropriate follow-up, including case management services and home environmental lead testing, MDH provides each MCO with monthly reports on children who received blood lead tests and those found to have elevated blood lead levels. In 2012, the Centers for Disease Control and Prevention (CDC) issued the recommendation to 1) remove the "level of concern" language from 10 micrograms per deciliter and replace it with the "reference level" of five micrograms per deciliter, and 2) require statewide testing of all children. Maryland adopted these recommendations for all children born on or after January 1, 2015, and the reference level of five micrograms per deciliter is currently used. However, the CDC updated the reference level to 3.5 micrograms per deciliter following a unanimous vote in May 2021 by the Lead Exposure and Prevention Advisory Committee (LEPAC) in favor of recommending the new threshold. In addition to complying with the EPSDT mandate for blood lead testing, MDH also includes blood lead testing measures in several of its quality assurance activities, including the MFR and PHIP programs (Maryland Department of Health, n.d.a; Maryland Department of Health, 2023).[45]

In CY 2018 and CY 2019, over 50,000 children in HealthChoice aged 0 to 6 years received a lead test as reported to the Maryland Department of the Environment (MDE) Childhood Lead Registry (CLR), with a lot fewer receiving tests in the following years. Over 36,000 children received lead tests in CY 2022, still below pre-2020 levels, possibly due in part to continued pandemic-related delays in processing of paper test results. Table 37 presents the number of children with lead tests in CY 2018 and CY 2022, as well as the number and percentage of those children who had an elevated blood lead level, defined as greater than or equal to five micrograms per deciliter. The percentage of children aged 0 to 6 years with an elevated blood lead level decreased from 2.4% in CY 2018 to 1.9% in CY 2022.

Table 37. HealthChoice Children Aged 0–6 Years with an Elevated Blood Lead Level, CY 2018 and CY 2022

Calendar Year	Number of Children with a Lead Test	Children with an Elevated Blood Lead Level (≥5µg/dL)	
		#	%
2018	54,073	1,293	2.4%
2022	36,442	676	1.9%

Table 38 presents the percentage of children aged 12 to 23 months and 24 to 35 months who received at least one lead test during the calendar year or the prior year. The rate of lead testing for the 12 to 23 months age group fluctuated throughout the evaluation period but decreased by 1.8 percentage points overall, while the rate for children aged 24 to 35 months increased from CY 2018 through CY 2019 and decreased from CY 2020 through CY 2022 for an overall decrease of 4.8 percentage points.

[45] The lead testing measures count lead tests reported through Medicaid administrative data and the Childhood Lead Registry, which is maintained by the Maryland Department of the Environment.

Table 38. Percentage of HealthChoice Children Aged 12–23 and 24–35 Months Who Received a Lead Test During the Calendar Year or the Prior Year, CY 2018–CY 2022

Age Group (Months)	CY 2018	CY 2019	CY 2020	CY 2021	CY 2022
12–23	62.2%	62.4%	58.6%	59.1%	60.4%
24–35	80.8%	81.5%	80.3%	76.4%	76.0%

There are currently two CHIP Health Service Initiative (HSI) State plan amendments (SPAs) implemented in Maryland to complement lead testing efforts (MACPAC, 2019). Maryland uses HSI funding to 1) support the state's poison control centers, and 2) operate programs that identify and remove lead hazards in the homes of low-income children and that provide HVS for children with moderate to severe asthma or elevated blood lead levels.

Breast Cancer Screening

Breast cancer is the most prevalent type of cancer among women by rates of new cancer cases (U.S. Cancer Statistics Working Group, 2023). In 2020, Maryland's breast cancer incidence rate was 128.6 cases per 100,000 women, compared to the 119.2 cases per 100,000 women nationally (U.S. Cancer Statistics Working Group, 2021). When detected early, breast cancer is easier to treat, and women have a greater chance of survival (CDC, 2022d). Mammograms are the most effective technique for early detection of breast cancer.

Table 39 demonstrates a 6.2 percentage point decrease in the percentage of female HealthChoice participants who received a mammogram for breast cancer screening from CY 2018 to CY 2022 (MetaStar, Inc., 2023). Maryland performed above the national HEDIS® mean throughout the evaluation period.

Table 39. Percentage of Women in HealthChoice Aged 50–64 Years Who Had a Mammogram for Breast Cancer Screening, Compared with the National HEDIS® Mean, CY 2018–CY 2022

	CY 2018	CY 2019	CY 2020	CY 2021	CY 2022
Maryland Percentage	69.3%	70.6%	65.2%	63.8%	63.1%
National HEDIS® Mean*	+	+	+	+	+

Note: Because of the NCQA restrictions, national HEDIS® means cannot be published. Therefore, a "+" sign indicates that Maryland's rate is above the national HEDIS® mean, while a "-" sign indicates that Maryland's rate is below the national mean.
*The national HEDIS® mean is based on an assessment of women aged 50 to 74 years.

Cervical Cancer Screening

Cervical cancer is preventable and treatable. The CDC (n.d.b) recommends cervical cancer screenings for women starting at age 21. According to the National Cancer Institute (NCI) (2023), women aged 21 to 29 years should be screened with a Papanicolaou (Pap) test every three years. Women aged 30 to 65 years can then be screened every five years with Pap and HPV co-testing, or every three years with a Pap test alone. Women with certain risk factors may need to have more frequent screening or continue screening beyond age 65 years.

Table 40 presents the percentage of women aged 21 to 64 years in HealthChoice who received a cervical cancer screening in CY 2018 through CY 2022. There was a decrease of 4.3 percentage points from CY 2018to CY 2020 and then a slight increase in CY 2021 that continued in 2022 (MetaStar, Inc., 2023). HealthChoice performed above the national HEDIS® mean in all evaluation years except CY 2020.

Table 40. Percentage of Women in HealthChoice Aged 21–64 Years Who Had a Cervical Cancer Screening, Compared with the National HEDIS® Mean, CY 2018–CY 2022

	CY 2018	CY 2019	CY 2020	CY 2021	2022
Maryland Percentage	62.2%	63.8%	57.9%	58.1%	59.4%
National HEDIS® Mean*	+	+	-	+	+

*Because of the NCQA restrictions, national HEDIS® means cannot be published. Therefore, a "+" sign indicates that Maryland's rate is above the national HEDIS® mean, while a "-" sign indicates that Maryland's rate is below the national mean.

Colorectal Cancer Screening

According to the U.S. Cancer Statistics Working Group (2023), colorectal cancer is one of the most common cancers in both men and women. In the U.S. and in Maryland, colorectal cancer is the fourth most diagnosed cancer, as well as the fourth-leading cause of cancer mortality as of 2020. Maryland's rank in overall cancer mortality has been steadily improving compared to other states and the District of Columbia (Maryland Department of Health, n.d.b; CDC, n.d.). In 2020, colorectal cancer was the fourth leading cause of cancer mortality in Maryland (U.S. Cancer Statistics Working Group, 2023). However, screening tests find precancerous polyps that can be removed before they become cancerous (CDC, 2018a). The expansion of Medicaid coverage to childless adults and additional parents and caretakers under the ACA removed a major access barrier for age-eligible adults with low income to be screened for colorectal cancer.

Table 41 shows the percentage of HealthChoice participants who received at least one of three appropriate colorectal cancer screenings—fecal occult blood test (FOBT), flexible sigmoidoscopy, or colonoscopy—during the study period.[46] The colorectal cancer screening rate decreased by 1.3 percentage points between CY 2018 and CY 2022.

[46] HEDIS® defines an appropriate screening as follows: an FOBT during the measurement year, a flexible sigmoidoscopy during the measurement year or the prior four years, a colonoscopy during the measurement year or the prior nine years, a CT colonography during the measurement year or the prior four years, and a FIT-DNA test during the measurement year or the prior two years. Only participants who met the HEDIS® eligibility requirements were included in the population for this measure. These participants were enrolled continuously in Medicaid during the calendar year and the preceding calendar year. Participants must have been enrolled as of the last day of the measurement year and could not have more than one gap of enrollment exceeding 45 days during each year of continuous enrollment. The group of newly enrolled ACA participants did not have the full length of time to complete screenings compared to participants who had been eligible for HealthChoice for a longer period.

Table 41. Percentage of HealthChoice Participants Aged 50–64 Years Who Had a Colorectal Cancer Screening, CY 2018–CY 2022

	CY 2018	CY 2019	CY 2020	CY 2021	CY 2022
Percentage of HealthChoice Participants	40.7%	41.4%	39.3%	39.1%	39.4%

Dental Services

The Maryland Medicaid program covers dental benefits through the Maryland Healthy Smiles dental program. Dental services are covered under EPSDT for children aged 20 and younger, pregnant women, adults in the REM program, and former foster care youth (see Section VII) until they turn 26. Non-pregnant adults may receive dental benefits provided as an additional benefit of their MCO. As of August 2020, all MCOs voluntarily covered limited adult dental services for their members as a part of their benefit package using their own revenues. In addition, on June 1, 2019, MDH implemented an adult dental pilot for adults aged 21 through 64 years who are enrolled in both Medicare and Medicaid (see Section VII). This is a limited benefit when compared to the full benefits of the Healthy Smiles program. As of January 1, 2023, Healthy Smiles was available to adults who receive full Medicaid benefits, including members of the adult dental pilot.[47]

Maryland continues to improve its dental program by confronting barriers to providing comprehensive oral health services to Medicaid participants. MDH prepared data for its 2023 Annual Oral Health Legislative Report, which includes Medicaid dental care and access measures from CY 2018 through CY 2022 (Maryland Department of Health, 2022b). The Medicaid program delivered oral health services to 506,830 children and adults (aged 0 to 64) during CY 2022—up from 485,806 in CY 2021. In CY 2022, 60.6% of children enrolled in Medicaid for at least 320 days received dental services, which is greater than the national HEDIS® mean. In CY 2022, 20.2% of pregnant women aged 14 years and older with any period of enrollment had at least one dental service; this is a slight decrease from CY 2021, when 20.8% of pregnant women received dental services.

Maternal Health and Reproductive Health

MDH and the HealthChoice MCOs engage pregnant women in care through individualized outreach, community events, and prenatal case management, which aligns with the population health goals under Maryland's SIHIS. Pregnant HealthChoice participants are qualified as a Special Needs Population under Code of Maryland Regulations (COMAR) 10.67.04.08. This requires that they receive timely access to care as well as informational materials, dental benefits, and other resources. MDH also operates a dedicated help line for pregnant women. Women who contact the help line are referred to Medicaid-funded administrative care coordination units (ACCUs) at local health departments. The ACCUs connect HealthChoice

[47] 2022 MD Laws Ch. 303.

participants to both their MCOs and other services, such as dental services and local home-visiting programs.

Timeliness of Prenatal Care

Early prenatal care is linked to better overall health outcomes for both the mother and child. Table 42 shows the percentage of deliveries for which the mother received a prenatal care visit in the first trimester or within 42 days of HealthChoice enrollment for CY 2019 through CY 2022 (MetaStar, Inc., 2023). In 2019, HEDIS® made significant changes to the timeliness of prenatal care measure and NCQA determined a trending break; therefore, results cannot be compared to the 2018 benchmark. HealthChoice outperformed the national HEDIS® mean in every year except for CY 2020.

Table 42. HEDIS® Timeliness of Prenatal Care, HealthChoice Compared with the National HEDIS® Mean, CY 2019–CY 2022*

	CY 2019	CY 2020	CY 2021	CY 2022
Percentage of deliveries in which the mother received a prenatal care visit in the 1st trimester or within 42 days of HealthChoice enrollment	88.2%	87.0%	88.9%	87.9%
National HEDIS® Mean**	+	-	+	+

*HEDIS® made significant changes to the timeliness of prenatal care measure in MY 2019. NCQA determined a trending break for HEDIS® MY 2019, therefore results cannot be compared to the prior year benchmarks.
**Because of the NCQA restrictions, national HEDIS® means cannot be published. Therefore, a "+" sign indicates that Maryland's rate is above the national HEDIS® mean, while a "-" sign indicates that Maryland's rate is below the national mean.

Contraceptive Care

Contraception is a highly effective clinical preventive service that can help women fulfill their personal health goals, including preventing teen and unintended pregnancies, as well as achieving healthy spacing of births. The U.S. Department of Health and Human Services Office of Population Affairs (OPA) has developed contraceptive care measures that assess the provision of contraception to women aged 15 to 44 years (OPA, n.d.a).

Table 43 presents the percentage of women at risk of unintended pregnancy that are provided the following methods of contraception (OPA, n.d.b):

1. Most effective contraception: female sterilization, hormonal implants, or intrauterine devices or systems (IUD/IUS)
2. Moderately effective contraception: oral pills, injectables, patch, or ring

The table includes women enrolled in HealthChoice aged 15 to 44 as of the end of the calendar year who had no more than one gap in Medicaid enrollment of up to 45 days during the year. The percentage of women enrolled in HealthChoice with at least one type of contraception classified as most effective decreased from 4.5% in CY 2018 to 3.1% in CY 2022. The percentage of women enrolled in HealthChoice with at least one moderately effective type of contraception decreased from 22.5% in CY 2018 to 17.5% in CY 2022.

Table 43. Contraceptive Care Rates, Women Enrolled in HealthChoice Aged 15–44 Years, CY 2018–CY 2022*

	CY 2018	CY 2019	CY 2020	CY 2021	CY 2022
Percentage receiving most effective contraception	4.5%	4.7%	3.8%	3.5%	3.1%
Percentage receiving moderately effective contraception	22.5%	22.2%	20.7%	19.0%	17.5%
Number of HealthChoice women at risk of unintended pregnancy	264,804	271,329	309,786	359,165	392,699

*The codes defining the most or moderately effective contraceptive care were updated by the HHS Office of Population Affairs, changing the data for CY 2018 to CY 2021 from the 2023 HealthChoice Evaluation. Please note that as of FY 2022 the diaphragm is no longer considered a moderately effective contraception.

Care for Chronic Diseases

The HealthChoice program focuses on improving the quality of health services delivered through chronic care management. This section of the evaluation assesses the demonstration's performance across quality measures—many nationally recognized, such as HEDIS®—in the areas of medication management for people with asthma, diabetes screenings, HIV/AIDS, and behavioral health (MHD and SUD).

Service Utilization and Medication Management for People with Asthma

Asthma is a common chronic disease that affected close to 25 million Americans in 2021, including 4.7 million children under the age of 18 and over 10.1 million aged 35 to 64 years (CDC, 2022d).[48] In 2021, 451,158 adults aged 18 years and older (9.4%) in Maryland had asthma (CDC, 2022d).

MDH monitors service utilization for HealthChoice participants with asthma and uses HEDIS® to report their medication management. The diagnosis of asthma was defined based on MY 2022 HEDIS® clinical criteria for AMR. If asthma medications are used correctly, asthma-related hospitalizations, ED visits, and missed school and workdays decrease (CDC, n.d.a).

Asthma has one of the largest racial and ethnic health disparities in terms of ED visit rates and is responsible for more ED visits than other major chronic diseases, such as hypertension and diabetes (Maryland Department of Health, 2023). As part of Maryland's initiatives, including SIHIS and the CHIP HSI SPA, MDH has made reducing the number of childhood asthma-related ED visits a priority. Through these initiatives, MDH provides asthma prevention and environmental home visiting program for HealthChoice participants to identify environmental triggers and provide interventions to reduce asthma severity (Maryland Department of Health, 2023a).

[48] The asthma prevalence data comes from the national and state surveillance systems administered by the Centers for Disease Control and Prevention (CDC).

Although asthma is often thought of as predominantly a condition that affects children, the proportion of individuals with asthma who are older increased as a result of the ACA expansion; specifically, persons aged 40 to 64 years now represent the largest share of HealthChoice participants with asthma. See Table 44 for the percentage of HealthChoice participants with an asthma diagnosis[49] and their distribution by race/ethnicity, sex, region, and age group.

Table 44. Demographic Characteristics of HealthChoice Participants with an Asthma Diagnosis, CY 2018–CY 2022

Demographic Characteristic	Calendar Year				
	CY 2018	CY 2019	CY 2020	CY 2021	CY 2022
Race/Ethnicity*					
Asian	2.6%	2.8%	2.9%	2.9%	3.2%
Black	50.0%	49.6%	49.7%	50.9%	50.4%
White	32.1%	31.5%	31.0%	30.9%	30.2%
Hispanic	9.9%	10.5%	10.9%	9.8%	10.5%
Native American	1.0%	1.1%	1.1%	1.1%	1.1%
Other	4.3%	4.4%	4.4%	4.5%	4.7%
Sex					
Female	58.2%	58.1%	60.4%	60.5%	60.5%
Male	41.8%	41.9%	39.6%	39.5%	39.5%
Region					
Baltimore City	25.9%	25.3%	25.2%	26.1%	25.8%
Baltimore Suburban	28.9%	28.8%	28.9%	29.3%	30.0%
Eastern Shore	10.4%	10.3%	9.8%	10.1%	9.9%
Southern Maryland	4.6%	4.7%	4.6%	4.6%	4.5%
Washington Suburban	21.6%	22.1%	22.6%	20.9%	20.4%
Western Maryland	8.5%	8.6%	8.8%	9.0%	9.3%
Out of State	0.1%	0.1%	0.1%	0.1%	0.1%
Age Group (Years)					
5–9	16.6%	16.1%	12.4%	10.9%	12.7%
10–14	15.8%	15.8%	13.7%	12.6%	12.0%
15–18	6.9%	7.1%	7.2%	7.4%	7.4%
19–20	2.2%	2.2%	2.4%	2.3%	2.3%
21–39	18.9%	18.9%	21.3%	22.4%	21.8%
40–64	39.7%	39.9%	43.1%	44.5%	43.8%
Total Number of Participants	**54,344**	**55,106**	**51,902**	**47,755**	**42,429**

*Race and ethnicity values were calculated using the new enhanced race/ethnicity variable and updated for the entire measurement period. Thus, race and ethnicity totals will not match previous HealthChoice Evaluation results.

[49] The methodology for identifying participants with asthma was revised due to the HEDIS® measure Medication Management for People with Asthma (MMA) being retired and instead using AMR. Diagnosis codes and medication lists were revised.

Table 45 presents the number and percentage of HealthChoice participants with an asthma diagnosis who had an ambulatory care visit. The percentage decreased by 0.4 percentage points between CY 2018 and CY 2022.

Table 45. Number and Percentage of HealthChoice Participants with an Asthma Diagnosis Who Had an Ambulatory Care Visit, CY 2018–CY 2022

Calendar Year	Total Number of Participants	At Least One Ambulatory Care Visit	
		Number	Percentage of Total
2018	54,344	53,082	97.7%
2019	55,106	53,892	97.8%
2020	51,902	50,027	96.4%
2021	47,755	46,416	97.2%
2022	42,429	41,269	97.3%

Table 46 presents the percentage of HealthChoice participants with asthma who had at least one outpatient ED visit for any diagnosis and at least one ED visit with asthma as the primary diagnosis. Overall, the ED visit rate for participants with asthma decreased from 46.1% to 42.7% during the evaluation period. Asthma-related ED visit rates also declined for this population: from 10.2% in CY 2018 to 9.3% in CY 2022.

Table 46. HealthChoice Participants Who Had an Outpatient ED Visit, by Asthma-Related Diagnosis, CY 2018–CY 2022

Calendar Year	Total Number of Participants	At Least One ED Visit		At Least One ED Visit with Asthma Primary Diagnosis	
		Number of Participants	Percentage of Total Participants	Number of Participants	Percentage of Total
2018	54,344	25,042	46.1%	5,526	10.2%
2019	55,106	25,726	46.7%	5,736	10.4%
2020	51,902	19,633	37.8%	3,627	7.0%
2021	47,755	19,627	41.1%	3,682	7.7%
2022	42,429	18,133	42.7%	3,942	9.3%

Table 47 shows the number and percentage of HealthChoice participants with asthma who had at least one inpatient admission, as well as participants with asthma who had at least one inpatient admission with asthma as the primary diagnosis. The percentage of participants with asthma who had an inpatient admission decreased from 13.6% to 11.3% during the evaluation period. The percentage of participants with asthma who had an inpatient admission with asthma as the primary diagnosis decreased from 1.8% to 1.2%.

Table 47. HealthChoice Participants Who Had an Inpatient Admission, by Asthma-Related Diagnosis, CY 2018–CY 2022

Calendar Year	Total Number of Participants	At Least One Inpatient Admission		At Least One Inpatient Admission with Asthma Primary Diagnosis	
		Number	Percentage of Total	Number of Participants	Percentage of Total
2018	54,344	7,410	13.6%	964	1.8%
2019	55,106	7,167	13.0%	876	1.6%
2020	51,902	5,704	11.0%	469	0.9%
2021	47,755	5,742	12.0%	546	1.1%
2022	42,429	4,800	11.3%	522	1.2%

Asthma Medication Ratio (AMR) for People with Asthma

Table 48 presents the results for AMR: specifically, a logistic regression using HEDIS® standard measures[50] that examines ED utilization among HealthChoice asthma patients between the ages of 5 and 64 years with versus without a positive AMR from CY 2018 to CY 2022.[51] A positive AMR is defined as a ratio of controller medications to total asthma medications of 0.50 or greater during the measurement year.

Overall, HealthChoice participants aged 5 to 64 years who had an AMR of at least 0.50 during the calendar year were less likely to experience an ED visit with a primary diagnosis of asthma that same calendar year compared to participants who had an AMR below 0.50. Similarly, participants who had an AMR of at least 0.50 the prior year (i.e., AMR lagged) were less likely to experience an ED visit with a primary diagnosis of asthma the following calendar year compared to participants who had an AMR below 0.50 the prior year. The regression controlled for demographic characteristics (race/ethnicity, age, and gender), comorbidity levels, participant region, and the number of inpatient admissions the previous year. The population only includes participants with persistent asthma, defined as those who had asthma encounters in the measurement year or the year prior. It is important to note that AMR is a measure of medication load of the entire year, while an asthma-related ED visit can occur at any point during the measurement year.

Participants who had a positive AMR had 19.1% lower odds of having an ED visit with a primary diagnosis of asthma than those who did not (OR 0.809, $p<0.001$). Similarly, participants who had a positive AMR the previous year had 39.3% lower odds of experiencing an ED visit with a primary diagnosis of asthma during the current measurement year (OR 0.607, $p<0.001$). Increased inpatient admissions the previous year, regardless of associated diagnosis, increased the odds of having an asthma-related ED visit. Each additional inpatient stay increased a participant's odds of an asthma-related ED visit by 19.7% (OR 1.197, $p<0.001$). Young

[50] This measure was calculated using the HEDIS® proprietary software from Cognizant.
[51] CY 2017 data is included as a look back period.

participants had higher odds of ED use; with each additional year of age, participants were 3.2% less likely to have an ED visit (OR 0.968 p<0.001). Only the Families & Children coverage category had increased odds of an asthma-related ED visit compared to the ABD coverage category (OR 1.435, p<0.001).

Residents in all regions, except for out of state, were less likely to have an ED visit than Baltimore City residents, with the Washington Suburban area having the lowest odds (OR 0.520 p<0.001). Hispanic, Black, and Other participants were more likely to have an ED visit compared to White participants; further, Black participants were more than two times as likely (OR 2.705, p<0.001). All comorbidity groups[52] were between two and three times more likely to have an ED visit with a primary diagnosis of asthma than participants with low comorbidity (p<0.001).

Model 2 includes an interaction term that estimates the impact of having a current AMR greater than 0.50 and an AMR greater than 0.50 in the previous calendar year (i.e., AMR X AMR lagged) on the probability of experiencing an ED visit in the current measurement year. According to the logistic regression, having a positive AMR in both the current and previous calendar year reduced the probability of experiencing an ED visit by an additional 36.5% (0R 0.635, p< 0.001).

To establish direction of the relationship and that the main independent variable is effectuating the dependent variable, the independent variable must occur prior to the dependent variable (i.e., have temporal precedence). Without temporal precedence, there is a risk that the relationship is reversed in that the dependent variable is driving or causing the relationship. Therefore, it is arguable there are ambiguous temporal precedence issues surrounding an enrollee's current AMR status and their ED utilization because AMR is assessed over the entire year whereas an asthma-related ED visit is a point-in-time measurement. However, the direction and strength of the odds ratio of the AMR and lagged AMR variables supports a conclusion that, for most participants, achieving a positive AMR is not caused by experiencing an asthma-related ED visit.

Table 48. Associations between Asthma Medication Ratio and ED Visits with a Primary Asthma Diagnosis, HealthChoice Participants Aged 5–64 Years, CY 2018–CY 2022

Variables	ED Visit with Asthma as a Primary Diagnosis					
	Model 1:			Model 2		
	OR	95 % CI		OR	95 % CI	
Asthma Med Ratio (AMR)	0.809 ***	0.76	0.87	0.777 ***	0.71	0.84
AMR Lagged	0.607 ***	0.57	0.65			
AMR X AMR_lag				0.635 ***	0.58	0.69
Age	0.968 ***	0.97	0.97	0.968 ***	0.97	0.97
Female	1.068	0.99	1.15	1.068	0.99	1.15
Coverage Category						
Families & Children	1.435 ***	1.28	1.60	1.430 ***	1.28	1.60

[52] A person's comorbidity level is estimated based on the Johns Hopkins Adjusted Clinical Groups (ACG) methodology. For this analysis, Hilltop assigned individuals to one of four comorbidity categories (Low, Moderate, High, Very High) based on their claims records in the measurement years (2018 to 2022).

Variables	ED Visit with Asthma as a Primary Diagnosis					
	Model 1:			Model 2		
	OR	95 % CI		OR	95 % CI	
MCHP	0.953	0.82	1.11	0.954	0.82	1.11
Other	1.202	0.90	1.61	1.202	0.90	1.60
Region†						
Baltimore Suburban	0.629 ***	0.58	0.69	0.632 ***	0.58	0.69
Eastern Shore	0.632 ***	0.55	0.72	0.638 ***	0.56	0.73
Southern Maryland	0.663 ***	0.56	0.79	0.669 ***	0.56	0.80
Washington Suburban	0.520 ***	0.47	0.57	0.522 ***	0.47	0.58
Western Maryland	0.598 ***	0.51	0.70	0.603 ***	0.51	0.71
Out of State	2.145	0.78	5.89	2.165	0.79	5.91
Race†						
Asian	1.454 **	1.12	1.89	1.450 **	1.12	1.88
Black	2.705 ***	2.43	3.01	2.678 ***	2.41	2.98
Hispanic	1.688 ***	1.45	1.96	1.667 ***	1.43	1.94
Other	1.647 ***	1.42	1.92	1.637 ***	1.41	1.90
Comorbidity Score†						
Moderate Comorbidity	2.759 ***	2.47	3.08	2.757 ***	2.47	3.08
High Comorbidity	3.689 ***	3.27	4.16	3.684 ***	3.26	4.16
Very-High Comorbidity	3.257 ***	2.79	3.81	3.263 ***	2.79	3.81
Inpatient Stays Count _lag	1.197 ***	1.13	1.27	1.196 ***	1.13	1.26
Year†						
2020	0.698 ***	0.65	0.75	0.686 ***	0.64	0.74
2021	0.788 ***	0.73	0.85	0.786 ***	0.73	0.84
2022	0.944 ***	0.88	1.01	0.940	0.87	1.01
Constant	0.078	0.06	0.10	0.074	0.06	0.09

*** p<.001, **p<.01, *01, *p<.05

†, Reference Groups: Aged, Blind, and Disabled (ABD), Baltimore City, White, Low, 2019

Table 49 examines the relationship between HealthChoice participants, aged between 5 and 64 years, with a positive medication ratio and asthma-related inpatient stays compared to those without a positive AMR.

There was no association between a positive AMR and the odds of experiencing an asthma-related inpatient admission. Participants with a positive AMR the previous year were 39% less likely to have an asthma-related inpatient stay in the current measurement year (OR 0.610 p<0.001). Each additional ED visit the prior year was associated with a 5.0% increase in the likelihood of incurring an asthma-related inpatient stay (p<0.01). Participants in all regions were less likely to have an inpatient admission compared to participants in Baltimore City, with participants in Western Maryland having the lowest odds (OR 0.320, p<0.001). Black and Hispanic participants were more likely to incur an inpatient admission compared to White participants (OR 2.276, p<0.001; OR 1.910, p<0.01). Higher comorbidities were associated with

higher odds of inpatient admission; participants with a very high comorbidity score had almost 15 times higher odds of incurring an inpatient admission (OR 14.844, p<0.001).

Model 2 added an interaction term that estimates the impact of having an AMR greater than 0.50 in the previous and current calendar year on the probability of incurring an inpatient stay in the present. Unlike in the first regression without the interaction term, a positive AMR was associated with a 57.4% increase in the probability of having an inpatient stay the same year (OR 1.574, p<0.001). However, having a positive AMR the previous year and in the current year reduced the probability of having an inpatient stay by an additional 57.5% (OR 0.425, p< 0.001). Taken together, holding other factors constant, the probability decrease would only be 0.1% if an individual had a positive AMR the previous year and in the current year.

Similar to the ED visit logistic regression, there are ambiguous temporal precedence issues. However, the diverging odds ratios of the positive AMR versus the lagged AMR supports a conclusion that an inpatient stay could initiate the need to increase the amount of asthma controller medications prescribed. However, having a positive AMR the previous year lowers the odds of an inpatient stay the following year, indicating that high asthma controller medication load has lasting positive effects.

Table 49. Associations between Asthma Medication Ratio and Inpatient Admissions with a Primary Asthma Diagnosis, HealthChoice Participants Aged 5–64 Years, CY 2018–CY 2022

Variables	Inpatient Stay with Asthma as a Primary Diagnosis					
	Model 1			Model 2		
	OR	95 % CI		OR	95 % CI	
Asthma Med Ratio (AMR)	1.081	0.85	1.38	1.574 ***	1.23	2.01
AMR Lagged	0.610 ***	0.48	0.78			
AMR X AMR_lag				0.425 ***	0.33	0.55
Age	0.950 ***	0.94	0.96	0.950 ***	0.94	0.96
Female	1.148	0.94	1.41	1.148	0.94	1.41
Coverage Category						
Families & Children	1.221	0.92	1.63	1.206	0.91	1.61
MCHP	0.634 ***	0.41	0.98	0.636 *	0.41	0.98
Other	0.641	0.22	1.88	0.645	0.22	1.89
Region†						
Baltimore Suburban	0.693 **	0.54	0.89	0.701 **	0.54	0.90
Eastern Shore	0.430 ***	0.29	0.65	0.438 ***	0.29	0.66
Southern Maryland	0.496 **	0.27	0.90	0.506 *	0.28	0.92
Washington Suburban	0.554 ***	0.41	0.75	0.559 ***	0.41	0.76
Western Maryland	0.320 ***	0.17	0.59	0.324 ***	0.18	0.60
Out of State						
Race†						
Asian	1.449	0.68	3.07	1.452	0.69	3.08

Variables	Inpatient Stay with Asthma as a Primary Diagnosis					
	Model 1			Model 2		
	OR	95 % CI		OR	95 % CI	
Black	2.276 ***	1.64	3.15	2.230 ***	1.61	3.09
Hispanic	1.910**	1.22	2.99	1.871 **	1.19	2.94
Other	1.663 *	1.04	2.66	1.641 *	1.03	2.62
Comorbidity Score†						
Moderate Comorbidity	3.866 ***	2.35	6.36	3.858 ***	2.34	6.36
High Comorbidity	9.076 ***	5.47	15.05	9.037 ***	5.45	14.99
Very-High Comorbidity	14.844 ***	8.48	25.98	14.889 ***	8.50	26.07
ED Visits _lagged	1.050 **	1.02	1.09	1.051 **	1.02	1.08
Year†						
2020	0.553 ***	0.43	0.71	0.536 ***	0.42	0.69
2021	0.753 *	0.59	0.96	0.752 *	0.59	0.95
2022	0.617 ***	0.48	0.80	0.611 ***	0.47	0.79
Constant	0.005	0.00	0.01	0.004	0.00	0.01

*** p<.001, **p<.01, *p<.05

Reference Groups: Aged, Blind, and Disabled (ABD), Baltimore City, White, Low, 2019

Comprehensive Diabetes Care

MDH combines health care utilization and quality measures to evaluate HealthChoice's performance in diabetes management. This section of the report analyzes demographic characteristics of HealthChoice participants with diabetes, as well as measures of their outpatient ED visits, inpatient admissions, and ambulatory care service utilization. HEDIS® clinical criteria for the Comprehensive Diabetes Care measure identified participants with diabetes. In addition, this section investigates whether the completion of recommended diabetes screenings affects ED service use.

Table 50 shows HealthChoice participants with a diabetes diagnosis according to the numbers and percentages within categories of race/ethnicity, sex, region, and age group. Black participants with diabetes exceeded the proportion of White participants with diabetes by more than20 percentage points throughout the evaluation period. White participants experienced a decrease of 2.3 percentage points in their share of the HealthChoice population with diabetes during the five-year evaluation period while Black participants decreased by .7 percentage points. The proportion among the "Other" race category increased from 3.7% in CY 2018 to 3.9% in CY 2022. The proportion of male HealthChoice participants with diabetes increased from 43.3% in CY 2018 to 43.6% in CY 2022. The proportion of participants with diabetes between age groups stayed relatively consistent throughout the evaluation period.

Table 50. Demographic Characteristics of HealthChoice Participants with Diabetes, CY 2018–CY 2022

Demographic Characteristic	Calendar Year				
	CY 2018	CY 2019	CY 2020	CY 2021	CY 2022
Race/Ethnicity*					
Asian	5.9%	6.2%	6.5%	6.7%	7.0%
Black	51.9%	51.8%	51.6%	51.5%	51.2%
White	29.7%	29.5%	28.8%	27.9%	27.4%
Hispanic	7.9%	8.1%	8.7%	9.2%	9.7%
Native American	0.8%	0.8%	0.8%	0.9%	0.9%
Other**	3.7%	3.6%	3.7%	3.8%	3.9%
Sex					
Female	56.7%	56.2%	55.8%	56.0%	56.4%
Male	43.3%	43.8%	44.2%	44.0%	43.6%
Region					
Baltimore City	23.2%	22.6%	22.0%	21.4%	20.6%
Baltimore Suburban	26.9%	28.0%	28.1%	28.1%	28.3%
Eastern Shore	9.8%	9.8%	9.6%	9.3%	9.2%
Southern Maryland	5.3%	5.3%	5.3%	5.4%	5.5%
Washington Suburban	27.0%	26.2%	26.9%	27.8%	28.2%
Western Maryland	7.8%	8.0%	7.9%	8.0%	8.2%
Out of State	0.2%	0.2%	0.1%	0.1%	0.1%
Age Group (Years)					
18-40	22.2%	22.3%	22.3%	22.9%	23.4%
41-64	77.9%	77.7%	77.7%	77.1%	76.6%
Total Number of Participants	**59,566**	**58,810**	**59,456**	**64,920**	**70,131**

*Race and ethnicity values were calculated using the new enhanced race/ethnicity variable and updated for the entire measurement period. Thus, race and ethnicity totals will not match previous HealthChoice Evaluation results.

**"Other" race/ethnicity category includes Pacific Islander, Alaskan Native, Two or More Races, Prefer Not to Say, and Unknown.

Table 51 presents the number and percentage of HealthChoice participants with diabetes who had an ambulatory care visit. The rate increased from 94.3% in CY 2018 to 94.6% in CY 2022.

Table 51. Number and Percentage of HealthChoice Participants with Diabetes Who Had an Ambulatory Care Visit, CY 2018–CY 2022

Calendar Year	Total Number of Participants	At Least One Ambulatory Care Visit	
		Number	Percentage of Total
2018	59,566	56,177	94.3%
2019	58,767	55,787	94.9%
2020	59,423	55,891	94.1%
2021	64,857	61,915	95.5%
2022	70,131	66,376	94.6%

Table 52 presents the number and percentage of HealthChoice participants with diabetes who had an outpatient ED visit. The percentage of participants with diabetes who had an ED visit decreased from 42.7% in CY 2018 to 37.7% in CY 2022.

Table 52. Number and Percentage of HealthChoice Participants with Diabetes Who Had an Outpatient ED Visit, CY 2018–CY 2022

Calendar Year	Total Number of Participants	At Least One ED Visit	
		Number	Percentage of Total
2018	59,566	25,422	42.7%
2019	58,767	25,846	44.0%
2020	59,423	22,370	37.6%
2021	64,857	25,602	39.5%
2022	70,131	26,435	37.7%

Table 53 presents the number and percentage of HealthChoice participants with diabetes who had at least one inpatient admission. This measure decreased during the evaluation period—from 20.8% in CY 2018 to 17.0% in CY 2022—indicating the potential success of the HealthChoice program in proactively targeting diabetes management.

Table 53. Number and Percentage of HealthChoice Participants with Diabetes Who Had an Inpatient Admission, CY 2018–CY 2022

Calendar Year	Total Number of Participants	At Least One Inpatient Admission	
		Number	Percentage of Total
2018	59,566	12,405	20.8%
2019	58,767	11,956	20.3%
2020	59,423	11,519	19.4%
2021	64,857	12,772	19.7%
2022	70,131	11,957	17.0%

Controlling diabetes requires monitoring blood glucose levels and looking for damaged nerve tissue in the eye that may threaten sight. The CDC recommends that people with diabetes have their blood pressure checked (CDC, n.d.a). Table 54 presents the annual HealthChoice performance on these measures for CY 2018 through CY 2022 (MetaStar, 2023). HEDIS® analyses use medical chart reviews, whereas the diabetes analyses presented in the rest of this section rely on administrative data (MCO encounter and FFS claims). HealthChoice performed above the national HEDIS® average on HbA1c testing from CY 2018 through CY 2019 but fell below the average in CY 2020 before rising above it again in CY 2021. This measure was retired in CY 2022. HealthChoice also fell below the HEDIS® average on eye (retinal) exams from CY 2018 through CY 2022. For controlling HbA1c and blood pressure, HealthChoice was above the HEDIS® average for CY 2022.

Table 54. Percentage of HealthChoice Members Aged 18–64 Years with Diabetes Who Received Comprehensive Diabetes Care, Compared with the National HEDIS® Average, CY 2018–CY 2022

HEDIS® Measure	CY 2018	CY 2019	CY 2020	CY 2021	CY 2022
Eye (Retinal) Exam					
HealthChoice	54.1%	54.7%	51.7%	50.3%	53.1%
National HEDIS® Average	-	-	-	-	-
HbA1c Test*					
HealthChoice	88.8%	88.3%	82.9%	87.1%	
National HEDIS® Average	+	+	-	+	
HbA1c Control**					
HealthChoice	53.6%	55.6%	51.0%	56.3%	57.3%
National HEDIS® Average	**	+	+	+	+
Blood Pressure Control***					
HealthChoice			55.9%	57.5%	63.6%
National HEDIS® Average			-	-	+

Note: Because of the NCQA restrictions, national HEDIS® means cannot be published. Therefore, a "+" sign indicates that Maryland's rate is above the national HEDIS® mean, while a "-" sign indicates that Maryland's rate is below the national mean.
*This measure was retired in CY 2022.
** NHM not available.
***National HEDIS® means were unavailable in measurement year (MYs) 2018 and 2019. Due to significant changes made to measure in MY 2020, NCQA determined a trending break, so the data for CY 2018 to CY 2019 are not available.

Under the HealthChoice demonstration waiver, MDH received approval to expand coverage of the National DPP lifestyle change program to all eligible HealthChoice participants as of September 1, 2019. See Section VII for more information on the DPP and an analysis of its impact.

Diabetes Screenings and Utilization

Table 55 presents the logistic regression results for estimating the odds of a HealthChoice participant with diabetes who received an eye (retinal) exam or a hemoglobin A1c (HbA1c) test —using HEDIS® standard screening measures—of having a diabetes-related ED visit that year or the following year, as compared with the odds of a participant who did not have a screening having a diabetes-related ED visit. In addition to the screening conditions, the regression controlled for demographic characteristics (race/ethnicity and sex), comorbidity levels,[53] and region of residence (Model 1). Model 2 also controlled for whether the enrollee had an ED visit with a primary diagnosis of diabetes the previous year.

[53] A person's comorbidity level is estimated based on the Johns Hopkins ACG methodology. For this analysis, Hilltop assigned individuals to one of five comorbidity categories (Low, Moderate, High, Very High, Other) based on their claim records in the measurement years (2018 to 2022).

In Model 1, participants who received an HbA1c test had 28.6% increased odds of experiencing a diabetes-related ED visit compared to those who did not receive a test ($p<0.001$). However, receiving either an HbA1c test or an eye exam the previous year reduced the likelihood of having a diabetes-related ED visit the next year by 23.0% and 9.4%, respectively ($p<0.001$). Older participants had lower odds of having an ED visit compared to younger participants ($p<0.001$), and female participants were 25.8% less likely to experience a diabetes-related ED visit compared to males ($p<0.001$). The likelihood that those in the Families & Children and MCHP coverage categories would have a diabetes-related ED visit did not differ in a statistically significant way from participants in the ABD coverage category. Enrollees in the Other coverage groups were 30.9% less likely than those in the ABD group to experience an ED visit with a primary diagnosis of diabetes ($p<0.001$).

Residents of the Baltimore Suburban ($p<0.001$), Washington Suburban ($p<0.001$), and Western Maryland ($p<0.01$) regions all had between 15.5% and 28.5% lower odds of experiencing a diabetes-related ED visit compared to Baltimore City residents. Asian participants were 38.6% less likely to incur a diabetes-related ED visit compared to White participants ($p<0.001$). However, Black participants were 40.2% more likely to experience a diabetes-related ED visit ($p<0.001$). All participants with moderate to very high comorbidity scores were more likely to incur a diabetes-related ED visit compared to those with a low comorbidity score ($p<0.001$); in particular, participants scoring very high were over 14 times more likely to have an ED visit compared to participants scoring low (OR= 14.668, $p<0.001$).

Model 2 added a lagged dependent variable that captured whether the participant had a diabetes-related ED visit the previous year. It also added an interaction term that reflects whether the participant had an eye exam and an HbA1c test in the same year. With the addition of these variables to the analysis, receiving an eye test had no statistically significant impact on the odds of experiencing a diabetes-related ED visit. Enrollees who incurred a diabetes-related ED visit the previous year were over 5 times more likely to experience one the following year (OR=5.796, $p<0.001$). Receiving both an eye exam and an HbA1c test in the same year was associated with a 17.2% increase in the odds of having a diabetes-related ED visit (OR= 1.172, $p<0.05$). Taken together, an enrollee who had both screenings the same year would have roughly 31.8% increased odds of having a diabetes-related ED visit.[54]

These results suggest that receiving a HbA1c test does not prevent ED visits for those with existing diabetes health issues. However, the direction and strength of the odds ratio on the lagged HbA1c test and eye exam variables suggest that previous screenings may protect participants from future diabetes-related ED visits.

[54] Sum of the respective increases or decreases in the odds of having a diabetes-related ED visit that were observed in association with an HbA1c Test, an Eye exam, and an HbA1c Test and Eye exam together using Model 2.

Table 55. Associations between Diabetes Screenings and ED Visits with a Primary Diagnosis of Diabetes, HealthChoice Participants Aged 5–64 Years, CY 2018–CY 2022

Effect	ED Visit with Diabetes as a Primary Diagnosis					
	Model 1:			Model 2:		
	OR	95% CI		OR	95% CI	
Screenings						
HbA1c Test	1.286 ***	1.21	1.36	1.266 ***	1.18	1.35
Eye exam	1.008	0.97	1.05	0.880	0.77	1.00
HbA1c Test and Eye exam				1.172 *	1.02	1.34
HbA1c Test (1 year Lag)	0.770 ***	0.73	0.81	0.714 ***	0.68	0.75
Eye exam (1 year Lag)	0.906 ***	0.87	0.95	0.902 ***	0.86	0.94
Diabetes PDX ED Visit (1 year Lag)				5.796 ***	5.47	6.14
Age	0.951	0.95	0.95	0.960 ***	0.96	0.96
Female†	0.742	0.71	0.78	0.788 ***	0.75	0.82
Last Coverage Category†						
Families & Children	0.975	0.92	1.03	0.977	0.93	1.03
MCHP	0.874	0.72	1.06	0.875	0.73	1.05
Other	0.691 ***	0.56	0.85	0.736 **	0.61	0.89
Region†						
Baltimore Suburban	0.816 ***	0.76	0.88	0.854 ***	0.80	0.91
Eastern Shore	1.030	0.94	1.13	1.017	0.94	1.10
Out of State	0.991	0.56	1.75	1.008	0.61	1.66
Southern Maryland	1.050	0.94	1.17	1.059	0.96	1.17
Washington Suburban	0.715 ***	0.66	0.77	0.760 ***	0.71	0.81
Western Maryland	0.845 **	0.76	0.94	0.874 **	0.79	0.96
Race†						
Asian	0.614 ***	0.52	0.73	0.648 ***	0.55	0.76
Black	1.402 ***	1.32	1.49	1.352 ***	1.28	1.43
Hispanic	1.020	0.92	1.14	1.043	0.94	1.15
Other	0.972	0.87	1.09	0.978	0.88	1.08
Comorbidity Score†						
Moderate	2.371 ***	1.92	2.93	2.442 ***	1.96	3.04
High	6.022 ***	4.88	7.43	5.781 ***	4.66	7.17
Very High	14.668 ***	11.88	18.11	12.346 ***	9.96	15.31
Year†						
2020	0.857 ***	0.81	0.90	0.852 ***	0.80	0.91
2021	0.804 ***	0.76	0.85	0.829 ***	0.78	0.88
2022	0.744 ***	0.71	0.78	0.766 ***	0.72	0.81
Constant	0.118	0.09	0.15	0.066	0.05	0.08

*** p<.001, **p<.01, *p<.05

†, Reference Groups: Aged, Blind, and Disabled Baltimore City, White, Low, 2019

Table 56 presents the results of a logistic regression that examined the odds of a HealthChoice participant with diabetes who received an eye exam or HbA1c test having a diabetes-related inpatient admission the current year and the following year, as compared with a participant who did not receive a screening. Similar to the diabetes ED visit analysis, the regression controlled for demographic characteristics (race/ethnicity and sex), comorbidity levels,[55] and region of residence (Model 1). Model 2 also controlled for whether the enrollee had an inpatient stay with a primary diagnosis of diabetes the previous year.

In Model 1, participants who received an HbA1c test were 17.2% less likely to have a diabetes-related inpatient stay that year compared to those who did not receive an HbA1c test ($p<0.001$). Having an eye exam also reduced the odds of an inpatient admission for diabetes by 9.3% ($p<0.01$). Receiving an HbA1c test the previous year reduced the likelihood of experiencing a diabetes-related inpatient stay the following year by 18.7% ($p<0.001$). Furthermore, receiving an eye exam the previous year also reduced the likelihood of experiencing a diabetes-related inpatient stay the following year (OR= 0.931, $p<0.05$). Older participants were less likely to experience a diabetes inpatient stay, as were female participants ($p<0.001$). Coverage category status had no statistically significant impact on the likelihood of incurring an inpatient stay with a diabetes primary diagnosis.

Residents in all regions, except for out-of-state and Southern Maryland, had lower odds of experiencing a diabetes-related inpatient stay compared to the reference group of Baltimore City residents. Eastern Shore residents were 39.1% ($p<0.001$) less likely to have one than Baltimore City residents, the most significant odds reduction for any region. Asian and Hispanic participants were less likely to incur a diabetes-related inpatient stay, with Asian participants having 48.2% lower odds compared to White participants ($p<0.001$). Compared to participants with a low comorbidity score, participants with a high to very high comorbidity score were roughly between 8 and 45 times more likely to experience a diabetes-related inpatient stay ($p<0.001$). However, participants with a moderate comorbidity score were only 47.3% more likely to experience a diabetes-related inpatient stay compared to participants with a low comorbidity score ($p<0.05$).

As in the ED visit analysis, Model 2 added a lagged dependent variable that captured whether the enrollee had a diabetes-related inpatient stay the previous year and an interaction variable that shows whether they had an HbA1c test and an eye exam in the same year. In Model 2, receiving both an eye exam and an HbA1c test increased the odds of having an inpatient stay slightly, but the result was not statistically significant. Enrollees who incurred a diabetes-related inpatient stay the previous year were over 8 times more likely to experience one the following year (OR=8.295, $p<0.001$). In Model 2, there was no statistically significant association between the receipt of an eye examination the previous year and the likelihood of having a diabetes-related inpatient admission in the current year.

[55] A person's comorbidity level is estimated based on the Johns Hopkins ACG methodology. For this analysis, Hilltop assigned individuals to one of five comorbidity categories (Low, Moderate, High, Very High, Other) based on their claims records in the measurement years (2018 to 2022).

Unlike the diabetes ED visit analysis, receiving an HbA1c test is associated with reduced odds of existing diabetes health issues leading to an inpatient hospital admission. Furthermore, the direction and strength of the odds ratio on the lagged HbA1c test and eye exam variables indicate that this protection may carry over to the following year.

Table 56. Associations between Diabetes Screenings and Inpatient Admissions with a Primary Diagnosis of Diabetes, HealthChoice Participants Aged 5–64 Years, CY 2018–CY 2022

Effect	Inpatient Admission with Diabetes as a Primary Diagnosis					
	Model 1:			Model 2:		
	OR	95% CI		OR	95% CI	
Screenings						
HbA1c Test	0.828 ***	0.78	0.88	0.817 ***	0.76	0.88
Eye exam	0.907 **	0.86	0.96	0.832 *	0.72	0.97
HbA1c Test and Eye exam				1.078	0.92	1.27
HbA1c Test (1 year Lag)	0.813 ***	0.76	0.87	0.838 ***	0.78	0.90
Eye exam (1 year Lag)	0.931 *	0.88	0.99	0.943	0.89	1.00
Diabetes PDX Inpt Admit (1 year Lag)				8.295 ***	7.70	8.94
Age	0.940 ***	0.94	0.94	0.952 ***	0.95	0.95
Female†	0.692 ***	0.65	0.74	0.754 ***	0.71	0.80
Last Coverage Category†						
Families & Children	0.935	0.87	1.00	0.961	0.90	1.02
MCHP	0.829	0.63	1.10	0.767	0.58	1.02
Other	0.766	0.59	1.00	0.848	0.66	1.09
Region†						
Baltimore Suburban	0.850 ***	0.78	0.93	0.881 **	0.81	0.95
Eastern Shore	0.609 ***	0.54	0.69	0.647 ***	0.58	0.73
Out of State	0.944	0.50	1.79	0.944	0.56	1.60
Southern Maryland	0.891	0.76	1.04	0.908	0.79	1.04
Washington Suburban	0.872 **	0.79	0.96	0.890 **	0.82	0.97
Western Maryland	0.731 ***	0.64	0.84	0.773 ***	0.68	0.87
Race†						
Asian	0.518 ***	0.41	0.66	0.584 ***	0.47	0.73
Black	1.010	0.93	1.09	1.001	0.93	1.07
Hispanic	0.628 ***	0.54	0.73	0.676 ***	0.59	0.78
Other	0.919	0.79	1.07	0.964	0.84	1.10
Comorbidity Score†						
Moderate	1.473 *	1.03	2.11	1.611 *	1.11	2.33
High	8.199 ***	5.80	11.60	8.255 ***	5.78	11.79
Very High	45.615 ***	32.25	64.52	38.105 ***	26.70	54.38
Year†						
2020	0.894 **	0.84	0.96	0.948	0.87	1.03
2021	0.842 ***	0.79	0.90	0.940	0.87	1.01
2022	0.801 ***	0.75	0.86	0.899 **	0.83	0.97
Constant	0.097	0.07	0.14	0.037	0.02	0.05

*** p<.001, **p<.01, *p<.05

†, Reference Groups: Aged, Blind, and Disabled Baltimore City, White, Low, 2019

HIV/AIDS

MDH continuously monitors service utilization for HealthChoice participants with HIV/AIDS. This section of the report presents the enrollment distribution of HealthChoice participants with HIV/AIDS by age group and race/ethnicity, as well as measures of ambulatory care service utilization, outpatient ED visits, CD4 testing, and viral load testing. CD4 testing is used to determine how well the immune system is functioning in individuals diagnosed with HIV. The viral load test monitors the progression of the HIV infection by measuring the level of immunodeficiency virus in the blood. ART is a combination of HIV medications used to slow the progression of HIV. ART is recommended for everyone with HIV and should begin as soon as possible after diagnosis (CDC, 2022c). Early initiation of ART lowers the risk of an individual with HIV of developing AIDS and other complications (Lundgren et al., 2015).

Table 57 presents the percentage of participants with HIV/AIDS by age group and race/ethnicity for CY 2018 and CY 2022. In both years, the majority of participants with HIV/AIDS were aged 40-64 years, and the majority were Black (making up 80.1% of participants with HIV/AIDS in CY 2022), followed by White participants. The total number of participants with HIV/AIDS increased by 760 over the evaluation period.

Table 57. Distribution of HealthChoice Participants with HIV/AIDS, by Age Group and Race/Ethnicity, CY 2018 and CY 2022

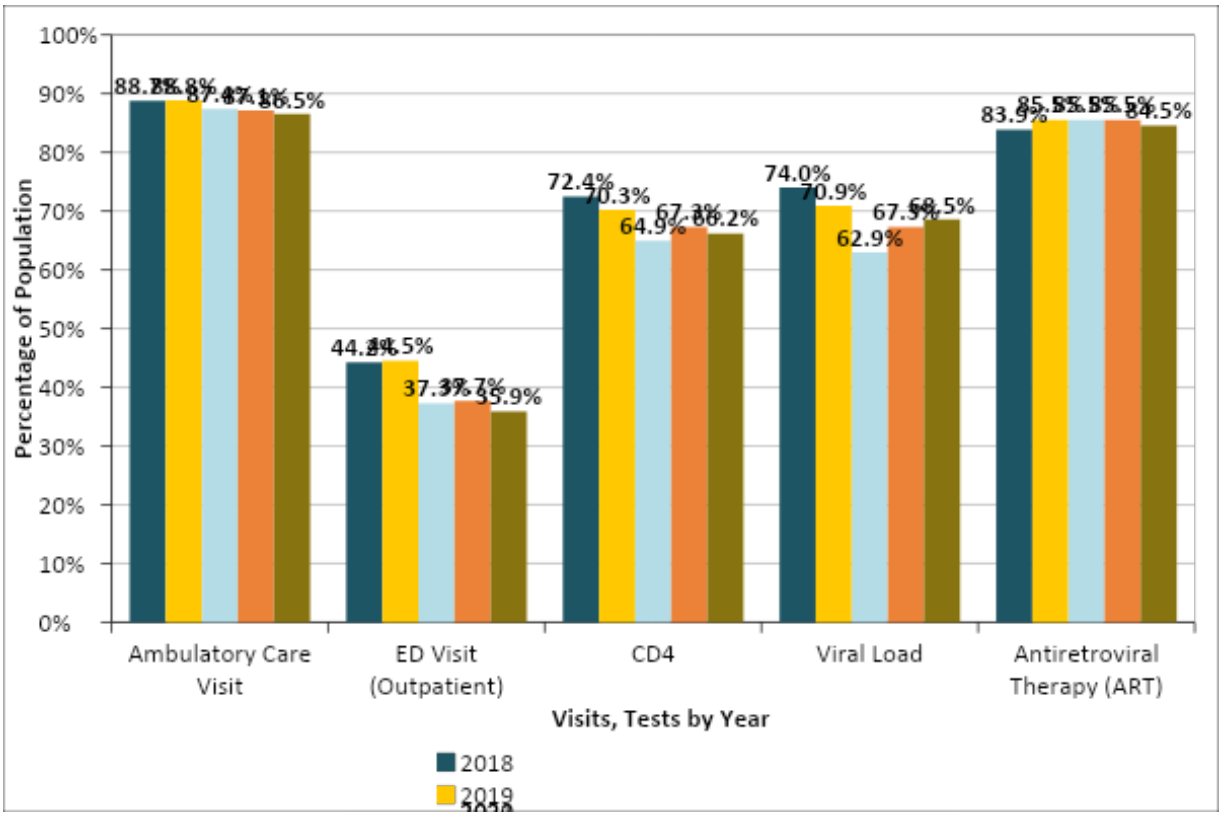
Demographic Characteristic	CY 2018		CY 2022	
	Number of Participants	Percentage of Total	Number of Participants	Percentage of Total
Age Group (Years)				
0–18	163	1.8%	112	1.2%
19–39	3,354	38.0%	3,762	39.2%
40–64	5,315	60.2%	5,718	59.6%
Total	**8,832**	**100%**	**9,592**	**100%**
Race/Ethnicity*				
Asian	104	1.2%	214	2.2%
Black	7,288	82.5%	7,687	80.1%
White	937	10.6%	982	10.2%
Hispanic	223	2.5%	328	3.4%
Native American	52	0.6%	76	0.8%
Other**	228	2.6%	305	3.2%
Total	**8,832**	**100%**	**9,592**	**100%**

Note: The counts of HealthChoice enrollees with HIV/AIDS for CY 2018 to CY 2022 were updated to include all enrollees receiving capitation payments for HIV/AIDS. Previously, childless adults with HIV/AIDS were erroneously excluded from the analysis.

*Race and ethnicity values were calculated using the new enhanced race/ethnicity variable and updated for the entire measurement period. Thus, race and ethnicity totals will not match previous HealthChoice Evaluation results.
**"Other" race/ethnicity category includes Pacific Islander, Alaskan Native, Two or More Races, Prefer Not to Say, and Unknown.

Figure 17 shows service utilization by HealthChoice participants with HIV/AIDS during the study period. The percentage of participants with an outpatient ED visit fell by 8.3 percentage points between CY 2018 and CY 2022. The HealthChoice program also experienced decreases in ambulatory care visits, CD4 testing, and viral load testing (2.2, 6.2, and 5.5 percentage points, respectively). ART increased by 0.6 percentage points over the evaluation period.

Figure 17. Percentage of HealthChoice Participants with HIV/AIDS Who Had an Ambulatory Care Visit, Outpatient ED Visit, CD4 Testing, Viral Load Testing, or Antiretroviral Therapy, CY 2018–CY 2022



Note: The counts of HealthChoice enrollees with HIV/AIDS for CY 2018 to CY 2022 were updated to include all enrollees receiving capitation payments for HIV/AIDS. Previously, childless adults with HIV/AIDS were erroneously excluded from the analysis.

According to the CDC's annual HIV Surveillance Report (2021b), for people aged 13 and older, there was a national HIV incidence rate of 13.2 per 100,000 people in 2019. In Maryland, the incidence rate of HIV diagnoses for 2019 was 18.0 per 100,000 people, a decrease from the previous year's rate of 19.6 (CDC, 2021b). The CDC (2022b) estimates that nearly 40% of new HIV infections are transmitted by people who have undiagnosed HIV. Thus, HIV screening is an important step in determining HIV status and starting appropriate treatment. The CDC currently

recommends that everyone between 13 and 64 years of age be tested for HIV at least once—or more frequently if they are at high risk.

Table 58 shows HIV screenings for HealthChoice participants aged 15[56] to 64 years from CY 2018 through CY 2022. The number and percentage of participants who received a screening fluctuated throughout the evaluation period. While the number of participants with a screening increased by 8,507 between CY 2018 and CY 2022, the percentage with a screening decreased by 2.0 percentage points overall.

Table 58. HIV Screening in the HealthChoice Population for Participants Aged 15–64 Years, CY 2018–CY 2022

HealthChoice Participants	CY 2018	CY 2019	CY 2020	CY 2021	CY 2022
Total Number	836,653	824,976	847,412	927,415	999,256
Number Received HIV Screening	142,678	148,213	127,875	148,052	151,185
Percentage Received HIV Screening	17.1%	18.0%	15.1%	16.0%	15.1%

* The definition of HIV screening was modified in 2022 to include additional procedure codes.

For people who are not HIV positive but are at risk of contracting the infection, pre-exposure prophylaxis (PrEP) can help prevent HIV (CDC, 2019). PrEP is a daily medication that reduces the risk of HIV infection (CDC, 2019). Table 59 presents the number and percentage of HealthChoice participants who received PrEP from CY 2018 to CY 2022. The number of participants who received PrEP dropped significantly between CY 2019 and CY 2021, with 0% of participants receiving PrEP in CY 2021. However, the number of participants who received PrEP increased in CY 2022, for an overall decrease of 375 participants over the evaluation period.

Table 59. HealthChoice Participants, Aged 0 to 64, Who Received HIV PrEP, CY 2018–CY 2022

HealthChoice Participants	CY 2018	CY 2019	CY 2020	CY 2021	CY 2022
Total Number	1,389,716	1,377,493	1,392,876	1,487,449	1,574,181
Number Received PrEP	1,949	1,958	990	478	1,574
Percentage Received PrEP	0.1%	0.1%	0.1%	0.0%	0.1%

* The definition of PrEP was modified in 2022 to include additional National Drug Codes.

Behavioral Health

MDH contracts with an ASO to administer specialty MHD and SUD services, collectively called behavioral health services. Although the managed care benefit package excludes these services, MCOs are mandated to ensure that their enrollees receive all needed health services, including those that are carved out. In taking a whole-person view, this section includes behavioral health

[56] HIV tests are recommended starting at age 15 for Maryland Medicaid recipients: https://health.maryland.gov/mmcp/epsdt/Documents/Maryland%20EPSDT%20Schedule-01-01-22%20HealthRiskAssessment.pdf

services paid on an FFS basis by the ASO but provided to individuals enrolled in the HealthChoice program.

Behavioral Health Demographics and Service Utilization

Table 60 presents the number and percentage of HealthChoice participants by behavioral health diagnosis group. These groups include MHD-only, SUD-only, dual diagnosis of MHD and SUD, and none of these diagnoses. The percentage of HealthChoice participants without a behavioral health diagnosis increased from 82.5% in CY 2018 to 83.1% in CY 2022, accompanied by a slight increase in the percentage of participants with an MHD-only diagnosis. After those with no behavioral health diagnosis, MHD-only diagnoses were the most common throughout the evaluation period.

Table 60. Number and Percentage of HealthChoice Participants with a Behavioral Health Diagnosis, by Diagnosis, CY 2018–CY 2022

Diagnosis	CY 2018	CY 2019	CY 2020	CY 2021	CY 2022
MHD-Only	165,198 (11.9%)	171,971 (12.5%)	167,183 (12.0%)	177,284 (11.9%)	191,690 (12.2%)
SUD-Only	43,274 (3.1%)	42,062 (3.1%)	39,298 (2.8%)	38,838 (2.6%)	37,456 (2.4%)
Dual Diagnosis (MHD + SUD)	34,615 (2.5%)	36,812 (2.7%)	34,070 (2.5%)	34,815 (2.3%)	36,560 (2.3%)
No Behavioral Health Diagnosis	1,146,629 (82.5%)	1,126,648 (81.8%)	1,152,325 (82.7%)	1,236,512 (83.1%)	1,308,475 (83.1%)
Total	**1,389,716**	**1,377,493**	**1,392,876**	**1,487,449**	**1,574,181**

MDH monitors the extent to which participants with a behavioral health diagnosis access ambulatory care services. In CY 2022, 91.7% of participants with a behavioral health condition visited a health care provider for an ambulatory care visit (Table 61).

From CY 2018 through CY 2022, the ambulatory care visit rate among participants with an MHD-only diagnosis remained stable overall at roughly 92.7% despite dropping to 90.2% in CY 2020, while the rate increased by 2.2 percentage points for participants with an SUD-only diagnosis. Participants with a dual diagnosis of MHD and SUD were consistently more likely to receive an ambulatory care visit than participants with an SUD-only diagnosis but had similar utilization to those with an MHD-only diagnosis across the evaluation period.

Table 61. HealthChoice Participants with a Behavioral Health Condition Who Had an Ambulatory Care Visit, by Behavioral Health Diagnosis, CY 2018–CY 2022

Calendar Year	Total Number of Participants	At Least One Ambulatory Care Visit	
		Number of Participants	Percentage of Total Participants
MHD-Only			
2018	165,198	153,182	92.7%
2019	171,971	159,515	92.8%
2020	167,183	150,833	90.2%
2021	177,284	164,585	92.8%
2022	191,690	177,220	92.5%
SUD-Only			
2018	43,274	35,152	81.2%
2019	42,062	34,839	82.8%
2020	39,298	31,800	80.9%
2021	38,838	32,359	83.3%
2022	37,456	31,220	83.4%
Dual Diagnosis (MHD + SUD)			
2018	34,615	32,499	93.9%
2019	36,812	34,876	94.7%
2020	34,070	32,110	94.2%
2021	34,815	33,248	95.5%
2022	36,560	35,139	96.1%
Total			
2018	243,087	220,833	90.8%
2019	250,845	229,230	91.4%
2020	240,551	214,743	89.3%
2021	250,937	230,192	91.7%
2022	265,706	243,579	91.7%

Table 62 displays the number and percentage of HealthChoice participants with a behavioral health diagnosis who had at least one outpatient ED visit.[57] ED utilization rates fell for all diagnosis groups between CY 2018 and CY 2022. In each year of the evaluation period, participants with co-occurring diagnoses had a higher rate of ED utilization compared to participants with an MHD-only or SUD-only diagnosis.

[57] This measure excludes ED visits that resulted in an inpatient hospital admission.

Table 62. HealthChoice Participants with a Behavioral Health Condition Who Had at Least One Outpatient ED Visit, by Behavioral Health Diagnosis, CY 2018–CY 2022

Calendar Year	Total Number of Participants	At Least One ED Visit	
		Number of Participants	Percentage of Total Participants
MHD-Only			
2018	165,198	65,561	39.7%
2019	171,971	67,352	39.2%
2020	167,183	52,060	31.1%
2021	177,284	60,235	34.0%
2022	191,690	64,674	33.7%
SUD-Only			
2018	43,274	20,430	47.2%
2019	42,062	19,965	47.5%
2020	39,298	16,593	42.2%
2021	38,838	16,779	43.2%
2022	37,456	15,003	40.1%
Dual Diagnosis (MHD + SUD)			
2018	34,615	22,663	65.5%
2019	36,812	23,419	63.6%
2020	34,070	19,860	58.3%
2021	34,815	20,639	59.3%
2022	36,560	20,398	55.8%
Total			
2018	243,087	108,654	44.7%
2019	250,845	110,736	44.1%
2020	240,551	88,513	36.8%
2021	250,937	97,653	38.9%
2022	265,706	100,075	37.7%

Table 63 displays the number and percentage of HealthChoice participants with a behavioral health diagnosis who had at least one inpatient admission. Overall, the percentage of participants with a behavioral health diagnosis who had an inpatient admission declined from 14.6% in CY 2018 to 11.8% in CY 2022. Each of the behavioral health diagnosis groups experienced the same downward trend during this time. In each year of the evaluation period, participants with co-occurring diagnoses had a higher rate of inpatient admissions than participants with an MHD-only or SUD-only diagnosis.

Table 63. HealthChoice Participants with a Behavioral Health Condition Who Had an Inpatient Admission, by Behavioral Health Diagnosis, CY 2018–CY 2022

Calendar Year	Total Number of Participants	At Least One Inpatient Visit	
		Number of Participants	Percentage of Total Participants
MHD-Only			
2018	165,198	19,172	11.6%
2019	171,971	18,363	10.7%
2020	167,183	15,055	9.0%
2021	177,284	17,564	9.9%
2022	191,690	18,527	9.7%
SUD-Only			
2018	43,274	6,126	14.2%
2019	42,062	5,772	13.7%
2020	39,298	5,286	13.5%
2021	38,838	5,356	13.8%
2022	37,456	4,453	11.9%
Dual Diagnosis (MHD + SUD)			
2018	34,615	10,166	29.4%
2019	36,812	9,850	26.8%
2020	34,070	8,566	25.1%
2021	34,815	8,558	24.6%
2022	36,560	8,301	22.7%
Total			
2018	243,087	35,464	14.6%
2019	250,845	33,985	13.5%
2020	240,551	28,907	12.0%
2021	250,937	31,478	12.5%
2022	265,706	31,281	11.8%

Table 64 shows the rates of MHD-only, SUD-only, and co-occurring MHD and SUD diagnoses among HealthChoice participants by race and ethnicity during CY 2018 and CY 2022.[58] Throughout the evaluation period, White participants had the highest rates of MDH-only, SUD-only and co-occurring diagnoses. Black and Native American participants experienced each type of diagnosis at the second or third highest rate, respectively, depending on the diagnosis. The largest increase in MHD-only diagnoses from CY 2018 to CY 2022 was noted for Native American participants, among whom this measure increased by 2.6 percentage points. Asian participants were the most likely to have no behavioral health diagnosis throughout, while the

[58] Race and ethnicity values were calculated using the new enhanced race/ethnicity variable and updated for the entire measurement period. Thus, race and ethnicity totals will not match previous HealthChoice Evaluation results.

percentage of Hispanic participants with no behavioral health diagnosis increased between CY 2018 and CY 2022, making them the second most likely group to have no behavioral health diagnosis in CY 2022.

Table 64. Distribution of HealthChoice Participants Aged 0-64 Years, by Race/Ethnicity and Behavioral Health Conditions, CY 2018 and CY 2022

Race/Ethnicity	CY 2018		CY 2022	
	Number of Participants	Percentage of Total Race/Ethnicity	Number of Participants	Percentage of Total Race/Ethnicity
MHD-Only				
Black	75,789	12.3%	90,543	13.3%
White	60,585	15.5%	62,587	15.5%
Hispanic	15,542	7.2%	19,580	7.0%
Asian	2,951	4.3%	5,094	5.7%
Native American	1,660	12.4%	2,304	15.0%
Other	8,748	10.3%	11,582	11.3%
Total	**165,275**	**11.9%**	**191,690**	**12.2%**
SUD-Only				
Black	15,943	2.6%	12,661	1.9%
White	23,549	6.0%	20,809	5.1%
Hispanic	1,621	0.8%	1,530	0.5%
Asian	463	0.7%	536	0.6%
Native American	357	2.7%	378	2.5%
Other	1,338	1.6%	1,542	1.5%
Total	**43,271**	**3.1%**	**37,456**	**2.4%**
Dual Diagnosis (MHD + SUD)				
Black	13,402	2.2%	14,299	2.1%
White	18,801	4.8%	19,042	4.7%
Hispanic	891	0.4%	1,144	0.4%
Asian	244	0.4%	369	0.4%
Native American	332	2.5%	363	2.4%
Other	973	1.1%	1,343	1.3%
Total	**34,643**	**2.5%**	**36,560**	**2.3%**
No Behavioral Health Diagnosis				
Black	510,988	82.9%	565,396	82.8%
White	288,155	73.7%	301,875	74.7%
Hispanic	196,906	91.6%	256,803	92.0%
Asian	65,527	94.7%	84,030	93.3%
Native American	11,010	82.4%	12,320	80.2%
Other	73,595	86.9%	88,051	85.9%
Total	**1,146,181**	**82.5%**	**1,308,475**	**83.1%**

Note: "Other" race/ethnicity category includes Pacific Islanders, Alaskan Natives, Two or More Races, Prefer Not to Say, and unknown.

Mental Health Services

Table 65 displays the key demographic characteristics of HealthChoice participants with a diagnosis of an MHD.[59] The proportion of White participants with an MHD decreased across the evaluation period—from 39.7% in CY 2018 to 35.8% in CY 2022—and the proportion of Hispanic participants increased by 0.9 percentage points. In CY 2018, children and adults made up 38.7% and 61.3%, respectively, of participants with an MHD; the proportion of adults rose to 66.1% in CY 2022.

Table 65. Demographic Characteristics of HealthChoice Participants with an MHD, CY 2018–CY 2022

Demographic Characteristic	CY 2018	CY 2019	CY 2020	CY 2021	CY 2022
	% of Total	% of Total	% of Total	% of Total	% of Total
Race/Ethnicity*					
Asian	1.6%	1.8%	2.0%	2.2%	2.4%
Black	44.6%	45.4%	45.2%	45.1%	45.9%
White	39.7%	38.4%	37.8%	37.1%	35.8%
Hispanic	8.2%	8.4%	8.7%	8.9%	9.1%
Native American	1.0%	1.0%	1.1%	1.1%	1.2%
Other**	4.9%	5.1%	5.3%	5.6%	5.7%
Total	**100%**	**100%**	**100%**	**100%**	**100%**
Sex					
Female	54.6%	54.9%	56.0%	57.9%	58.3%
Male	45.5%	45.1%	44.0%	42.2%	41.7%
Total	**100%**	**100%**	**100%**	**100%**	**100%**
Region					
Baltimore City	25.3%	25.4%	25.1%	24.4%	24.3%
Baltimore Suburban	30.7%	31.2%	31.5%	32.1%	32.7%
Eastern Shore	10.9%	10.9%	10.8%	10.3%	10.4%
Southern Maryland	4.7%	4.6%	4.6%	4.7%	4.5%
Washington Suburban	18.0%	17.9%	17.9%	18.3%	18.1%
Western Maryland	10.2%	9.9%	10.1%	10.1%	9.9%
Out of State	0.1%	0.1%	0.1%	0.1%	0.1%
Total	**100%**	**100%**	**100%**	**100%**	**100%**
Age Group (Years)					
0–18	38.7%	38.6%	37.3%	34.5%	33.9%
19–64	61.3%	61.4%	62.7%	65.5%	66.1%
Total	**100%**	**100%**	**100%**	**100%**	**100%**
Total Participants	**199,813**	**208,783**	**201,253**	**212,099**	**228,250**

*Race and ethnicity values were calculated using the new enhanced race/ethnicity variable and updated for the entire measurement period. Thus, race and ethnicity totals will not match previous HealthChoice Evaluation results.

[59] Individuals are identified as having an MHD if they meet the COMAR definition of MHD.

**"Other" race/ethnicity category includes Pacific Islanders, Alaskan Natives, Two or More Races, Prefer Not to Say, and Unknown.

Table 66 displays the number and percentage of HealthChoice participants with an MHD diagnosis who had at least one ambulatory care visit, as well as participants with at least one ambulatory care visit with an MHD as a primary diagnosis. The percentage of HealthChoice participants with an MHD-only diagnosis who had an ambulatory care visit with an MHD as a primary diagnosis decreased by 5.2 percentage points over the evaluation period, while the rate of overall ambulatory care visits among this population remained steady. Among those with a dual diagnosis of MHD and SUD, the rate of overall ambulatory care visits increased by 2.2 percentage points between CY 2018 and CY 2022, while the rate of ambulatory care visits with an MHD as a primary diagnosis decreased by 4.5 percentage points. Between CY 2018 and CY 2022, the overall percentage of participants with an MHD or a dual diagnosis who had at least one ambulatory care visit remained steady, while the percentage with at least one ambulatory care visit where MHD was the primary diagnosis decreased between 18.1% in CY 2018 to 13.1% in CY 2022.

Table 66. HealthChoice Participants with an MHD Who Had an Ambulatory Care Visit, by MHD Diagnosis, CY 2018–CY 2022

Calendar Year	Total Number of Participants	At Least One Ambulatory Care Visit (Any Diagnosis)		At Least One Ambulatory Care Visit with MHD as Primary Diagnosis	
		Number of Participants	Percentage of Total Participants	Number of Participants	Percentage of Total Participants
MHD-Only					
2018	165,198	153,182	92.7%	30,601	18.5%
2019	171,971	159,515	92.8%	29,391	17.1%
2020	167,183	150,833	90.2%	25,481	15.2%
2021	177,284	164,585	92.8%	27,100	15.3%
2022	191,690	177,220	92.5%	25,517	13.3%
Dual Diagnosis (MHD + SUD)					
2018	34,615	32,499	93.9%	5,594	16.2%
2019	36,812	34,876	94.7%	5,477	14.9%
2020	34,070	32,110	94.2%	4,792	14.1%
2021	34,815	33,248	95.5%	4,568	13.1%
2022	36,560	35,139	96.1%	4,277	11.7%
Total					
2018	199,813	185,681	92.9%	36,195	18.1%
2019	208,783	194,391	93.1%	34,868	16.7%
2020	201,253	182,943	90.9%	30,273	15.0%
2021	212,099	197,833	93.3%	31,668	14.9%
2022	228,250	212,359	93.0%	29,794	13.1%

Table 67 displays the number and percentage of HealthChoice participants who had at least one outpatient ED visit with either any diagnosis or a primary diagnosis of an MHD. Between CY

2018 and CY 2022, the overall percentage of participants with an MHD or a dual diagnosis who had at least one outpatient ED visited decreased by 6.4 percentage points. The percentage that had an ED visit with a primary diagnosis of an MHD decreased by 4.2 percentage points.

The percentages of HealthChoice participants with a dual diagnosis (MHD and SUD) and an MHD-only diagnosis who had at least one outpatient ED visit decreased by 9.7 and 6.0 percentage points, respectively, over the evaluation period. The percentage of HealthChoice participants with a dual diagnosis and at least one outpatient ED visit with a primary diagnosis of an MHD decreased by 6.7 percentage points, whereas the corresponding rate among participants with an MHD-only diagnosis decreased by 3.7 percentage points.

Table 67. HealthChoice Participants with an MHD Who Had an Outpatient ED Visit, by MHD Diagnosis, CY 2018–CY 2022

Calendar Year	Total Number of Participants	At Least One Outpatient ED Visit (Any Diagnosis)		At Least One Outpatient ED Visit with MHD as Primary Diagnosis	
		Number of Participants	Percentage of Total Participants	Number of Participants	Percentage of Total Participants
MHD-Only					
2018	165,198	65,561	39.7%	13,915	8.4%
2019	171,971	67,352	39.2%	12,504	7.3%
2020	167,183	52,060	31.1%	8,851	5.3%
2021	177,284	60,235	34.0%	10,144	5.7%
2022	191,690	64,674	33.7%	8,930	4.7%
Dual Diagnosis (MHD + SUD)					
2018	34,615	22,663	65.5%	4,846	14.0%
2019	36,812	23,419	63.6%	4,273	11.6%
2020	34,070	19,860	58.3%	3,102	9.1%
2021	34,815	20,639	59.3%	3,262	9.4%
2022	36,560	20,398	55.8%	2,684	7.3%
Total					
2018	202,010	88,224	43.7%	18,761	9.3%
2019	206,041	90,771	44.1%	16,777	8.1%
2020	201,998	71,920	35.6%	11,953	5.9%
2021	212,099	80,874	38.1%	13,406	6.3%
2022	228,250	85,072	37.3%	11,614	5.1%

MDH monitors the extent to which HealthChoice participants who had an ED visit with a primary diagnosis of an MHD receive a follow-up outpatient visit with any practitioner within 7 or 30 days.

Table 68 displays the number of ED visits with a primary diagnosis of an MHD among participants aged 6 to 64 years and the percentage of visits where appropriate follow-up care

was provided: i.e., an outpatient visit within 7 or 30 days (FUM)[60] during CY 2018 to CY 2022. A higher percentage of participants with only an MHD completed follow-up visits than participants with a dual diagnosis of MHD and SUD (within both 7 and 30 days) throughout the evaluation period. Among all participants with an MHD or dual diagnosis, the percentage of ED visits with a primary MHD diagnosis and a follow-up appointment within 7 days increased from 37.0% in CY 2018 to 40.6% in CY 2022. The overall percentage of follow-up visits within 30 days increased from 57.8% in CY 2018 to 61.7% in CY 2022.

Table 68. Number and Percentage of ED Visits for MHD and a Follow-Up Visit within 7 or 30 Days, CY 2018–CY 2022

Calendar Year	Total Number of Visits	At Least One Follow-Up within 7 Days		At Least One Follow-Up within 30 Days	
		Number of Visits	Percentage of Visits	Number of Visits	Percentage of Visits
MHD-Only					
2018	9,702	4,011	41.3%	5,992	61.8%
2019	8,947	3,682	41.2%	5,525	61.8%
2020	7,191	2,399	33.4%	4,012	55.8%
2021	7,423	2,991	40.3%	4,512	60.8%
2022	7,209	3,125	43.3%	4,602	63.8%
Dual Diagnosis (MHD + SUD)					
2018	4,195	1,124	26.8%	2,037	48.6%
2019	3,916	1,113	28.4%	1,953	49.9%
2020	3,497	954	27.3%	1,744	49.9%
2021	3,156	928	29.4%	1,561	49.5%
2022	2,808	938	33.4%	1,574	56.1%
Total					
2018	13,897	5,135	37.0%	8,029	57.8%
2019	12,863	4,795	37.3%	7,478	58.1%
2020	10,688	3,353	31.4%	5,756	53.9%
2021	10,579	3,919	37.0%	6,073	57.4%
2022	10,017	4,063	40.6%	6,176	61.7%

Substance Use Disorder Services

This section evaluates the quality and comprehensiveness of SUD-related care provided to HealthChoice participants. SUD services are carved out and administered by the ASO in alignment with specialty mental health services.[61]

Table 69 presents the demographic characteristics of HealthChoice participants with a diagnosis of SUD. Among racial and ethnic groups, White participants made up the highest proportion of persons with an SUD, followed by Black participants. The share of Black participants with an

[60] This measure—Follow-Up After Emergency Department Visit for Mental Illness, or FUM—was calculated using the HEDIS® proprietary software from Cognizant.

[61] Individuals were identified as having an SUD if they had a claim that met the COMAR 10.67.08.02 definition of SUD.

SUD decreased by 1.3 percentage points between CY 2018 and CY 2022, while the share of White participants decreased by 0.6 percentage points. Between CY 2018 and CY 2022, males remained the majority of participants with an SUD, making up 57.0% of participants with an SUD in CY 2022. The Baltimore Suburban region had the highest share of persons with an SUD during the evaluation period, with the distribution among regions remaining steady.

Table 69. Demographic Characteristics of HealthChoice Participants with an SUD, CY 2018–CY 2022

Demographic Characteristics	CY 2018	CY 2019	CY 2020	CY 2021	CY 2022
	% of Total	% of Total	% of Total	% of Total	% of Total
Race/Ethnicity*					
Asian	0.9%	1.0%	1.1%	1.2%	1.2%
Black	37.7%	37.4%	36.2%	35.9%	36.4%
White	54.4%	54.2%	55.1%	55.2%	53.8%
Hispanic	3.2%	3.4%	3.2%	3.1%	3.6%
Native American	0.9%	0.9%	0.9%	0.9%	1.0%
Other**	3.0%	3.2%	3.5%	3.8%	3.9%
Total	**100%**	**100%**	**100%**	**100%**	**100%**
Sex					
Female	43.6%	43.2%	43.7%	43.1%	43.0%
Male	56.4%	56.8%	56.3%	56.9%	57.0%
Total	**100%**	**100%**	**100%**	**100%**	**100%**
Region					
Baltimore City	29.3%	28.9%	28.6%	27.9%	27.6%
Baltimore Suburban	32.0%	32.1%	32.2%	32.8%	32.7%
Eastern Shore	12.6%	12.9%	12.6%	12.6%	12.6%
Southern Maryland	5.7%	5.7%	5.6%	5.7%	5.6%
Washington Suburban	8.9%	8.8%	8.7%	8.2%	8.6%
Western Maryland	11.3%	11.6%	12.3%	12.8%	12.8%
Out of State	0.1%	0.1%	0.1%	0.1%	0.1%
Total	**100%**	**100%**	**100%**	**100%**	**100%**
Age Group (Years)					
0-18	4.2%	4.0%	3.3%	1.9%	2.5%
19-64	95.8%	96.0%	96.7%	98.1%	97.5%
Total	**100%**	**100%**	**100%**	**100%**	**100%**
Total Participants	**77,889**	**78,874**	**73,368**	**73,653**	**74,016**

*Race and ethnicity values were calculated using the new enhanced race/ethnicity variable and updated for the entire measurement period. Thus, race and ethnicity totals will not match previous HealthChoice Evaluation results.

**"Other" race/ethnicity category includes Pacific Islanders, Alaskan Natives, Two or More Races, Prefer Not to Say, and Unknown.

Screening, Brief Intervention, and Referral to Treatment

Screening, Brief Intervention, and Referral to Treatment (SBIRT) is a public health approach for delivering population screening, early intervention, and treatment services[62] targeting SUDs. Health care providers using SBIRT ask participants about substance use during routine medical and dental visits, provide brief advice, and then, if appropriate, refer participants who are at risk of SUDs to more intensive treatment (SAMHSA, 2022). In July 2016, new SBIRT codes were introduced to give providers greater flexibility when billing for SBIRT services (Maryland Department of Health, 2016).

Table 70 presents the number of HealthChoice participants who received an SBIRT service during the evaluation period. The number of participants who received services per 1,000 HealthChoice participants increased by 3.1 between CY 2018 and CY 2022. The total number of participants receiving services increased by 46.3% over the evaluation period.

Adolescents aged 15 to 18 years had the highest number of participants receiving services per 1,000 HealthChoice participants in CY 2018, and adolescents aged 12 to 14 had the highest rate per 1,000 in CY 2019 through CY 2022. Among the group aged 15 to 18 years, the number of participants receiving services per 1,000 HealthChoice participants increased by 14 between CY 2018 and CY 2022.

Table 70. Number of HealthChoice Participants Who Received an SBIRT Service, by Age Group, CY 2018–CY 2022

	Age Group (Years)						Total
	11 and under	12–14	15–18	19–20	21–39	40–64	
CY 2018							
# of Participants	452,536	100,306	117,167	51,214	385,419	282,853	**1,389,495**
# with Service	557	2,764	3,485	704	3,577	3,870	**14,957**
Per 1000	1.2	27.6	29.7	13.7	9.3	13.7	**10.8**
CY 2019							
# of Participants	447,017	105,427	118,243	51,600	377,114	278,019	**1,377,420**
# with Service	1,063	5,532	6,076	1278	4,164	4,537	**22,650**
Per 1000	2.4	52.5	51.4	24.8	11.0	16.3	**16.4**
CY 2020							
# of Participants	436,643	108,778	120,077	52,009	385,628	289,698	**1,392,833**
# with Service	941	4,946	5,017	1,026	2,648	2,891	**17,469**
Per 1000	2.2	45.5	41.8	19.7	6.9	10.0	**12.5**
CY 2021							

[62] An SBIRT service is identified by the following procedure codes: 99408, 99409, W7000, W7010, W7020, W7021, and W7022 during the calendar year.

# of Participants	446,258	113,776	130,854	57,684	424,554	314,323	**1,487,449**
# with Service	1,035	6,471	6,842	1,514	3,941	4,376	**24,179**
Per 1000	2.3	56.9	52.3	26.2	9.3	13.9	**16.3**
CY 2022							
# of Participants	458,634	116,291	142,344	62,257	460,261	334,394	**1,574,181**
# with Service	990	5,463	6,219	1,293	3,593	4,322	**21,880**
Per 1000	2.2	47.0	43.7	20.8	7.8	12.9	**13.9**

MDH also monitors the extent to which HealthChoice participants with an SUD access ambulatory care services. Table 71 displays the percentage of HealthChoice participants with an SUD who had an ambulatory care visit, as well as those having at least one ambulatory care visit with a primary diagnosis of SUD. Participants with a co-occurring MHD and SUD were consistently more likely to receive an ambulatory care visit. The rate of ambulatory care utilization among participants with a co-occurring MHD and SUD increased from 93.9% in CY 2018 to 96.1% in CY 2022. Ambulatory care utilization by participants with an SUD-only diagnosis rose as well. The overall percentage of participants with an SUD or a dual diagnosis who had at least one ambulatory care visit increased from 86.9% in 2018 to 89.7% in CY 2022, and the overall percentage with at least one ambulatory care visit with a primary diagnosis of an SUD rose 23.7 percentage points during the measurement period.

Table 71. HealthChoice Participants with an SUD Who Had an Ambulatory Care Visit, by SUD Status, CY 2018–CY 2022

Calendar Year	Total Number of Participants	At Least One Ambulatory Care Visit		At Least One Ambulatory Care Visit with Primary Diagnosis of SUD	
		Number of Participants	Percentage of Total Participants	Number of Participants	Percentage of Total Participants
SUD-Only					
2018	43,274	35,152	81.2%	19,060	44.0%
2019	42,062	34,839	82.8%	19,859	47.2%
2020	39,298	31,800	80.9%	18,542	47.2%
2021	38,838	32,359	83.3%	18,984	48.9%
2022	37,456	31,220	83.4%	24,656	65.8%
Dual Diagnosis (MHD + SUD)					
2018	34,615	32,499	93.9%	16,146	46.6%
2019	36,812	34,876	94.7%	19,059	51.8%
2020	34,070	32,110	94.2%	17,142	50.3%
2021	34,815	33,248	95.5%	18,491	53.1%
2022	36,560	35,139	96.1%	26,357	72.1%
Total					
2018	77,889	67,651	86.9%	35,206	45.2%

Calendar Year	Total Number of Participants	At Least One Ambulatory Care Visit		At Least One Ambulatory Care Visit with Primary Diagnosis of SUD	
		Number of Participants	Percentage of Total Participants	Number of Participants	Percentage of Total Participants
2019	78,874	69,715	88.4%	38,918	49.3%
2020	73,368	63,910	87.1%	35,684	48.6%
2021	73,653	65,607	89.1%	37,475	50.9%
2022	74,016	66,359	89.7%	51,013	68.9%

Table 72 displays the percentage of HealthChoice participants with an SUD who had at least one outpatient ED visit, as well as the percentage with at least one ED visit with SUD as a primary diagnosis.[63] Throughout the evaluation period, those with dual diagnoses were more likely to have an ED visit and to have an SUD-related ED visit. From CY 2018 to CY 2022, the percentages of participants with an SUD-only and dual diagnosis (MHD and SUD) who had at least one ED visit decreased by 7.1 and 9.7 percentage points, respectively. The overall percentage of participants who had at least one ED visit with a primary diagnosis of SUD decreased from 12.1% in CY 2018 to 11.3% in CY 2022.

Table 72. HealthChoice Participants with an SUD Who Had an Outpatient ED Visit, by SUD Status, CY 2018–CY 2022

Calendar Year	Total Number of Participants	At Least One ED Visit		At Least One ED Visit with Primary Diagnosis of SUD	
		Number of Participants	Percentage of Total Participants	Number of Participants	Percentage of Total Participants
SUD-Only					
2018	43,274	20,430	47.2%	3,969	9.2%
2019	42,062	19,965	47.5%	3,929	9.3%
2020	39,298	16,593	42.2%	3,475	8.8%
2021	38,838	16,779	43.2%	3,855	9.9%
2022	37,456	15,003	40.1%	3,464	9.2%
Dual Diagnosis (MHD + SUD)					
2018	34,615	22,663	65.5%	5,437	15.7%
2019	36,812	23,419	63.6%	5,564	15.1%
2020	34,070	19,860	58.3%	4,760	14.0%
2021	34,815	20,639	59.3%	5,433	15.6%
2022	36,560	20,398	55.8%	4,869	13.3%
Total					
2018	77,889	43,093	55.3%	9,406	12.1%
2019	78,874	43,384	55.0%	9,493	12.0%
2020	73,368	36,453	49.7%	8,235	11.2%

[63] This measure excludes ED visits that resulted in an inpatient hospital admission.

Calendar Year	Total Number of Participants	At Least One ED Visit		At Least One ED Visit with Primary Diagnosis of SUD	
		Number of Participants	Percentage of Total Participants	Number of Participants	Percentage of Total Participants
2021	73,653	37,418	50.8%	9,288	12.6%
2022	74,016	35,401	47.8%	8,333	11.3%

Table 73 displays the percentage of HealthChoice participants with an SUD who had at least one inpatient visit, as well as the percentage with at least one inpatient visit with an SUD as a primary diagnosis. Those with a dual diagnosis were more likely to have an inpatient visit, and more likely to have an SUD-related inpatient visit, each year during the evaluation period. From CY 2018 to CY 2022, the percentages of participants with an SUD-only and a dual diagnosis (MHD and SUD) who had at least one inpatient visit decreased by 2.3 and 6.7 percentage points, respectively. The overall percentage of participants who had at least one inpatient visit with a primary diagnosis of an SUD decreased slightly, from 4.6% in CY 2018 to 3.8% in CY 2022.

Table 73. HealthChoice Participants with an SUD Who Had an Inpatient Admission, by SUD Status, CY 2018–CY 2022

Calendar Year	Total Number of Participants	At Least One Inpatient Visit		At Least One Inpatient Visit with Primary Diagnosis of SUD	
		Number of Participants	Percentage of Total Participants	Number of Participants	Percentage of Total Participants
SUD-Only					
2018	43,274	6,126	14.2%	1,098	2.5%
2019	42,062	5,772	13.7%	1,131	2.7%
2020	39,298	5,286	13.5%	1,114	2.8%
2021	38,838	5,356	13.8%	1,131	2.9%
2022	37,456	4,453	11.9%	898	2.4%
Dual Diagnosis (MHD + SUD)					
2018	34,615	10,166	29.4%	2,506	7.2%
2019	36,812	9,850	26.8%	2,371	6.4%
2020	34,070	8,566	25.1%	2,142	6.2%
2021	34,815	8,558	24.6%	2,030	5.8%
2022	36,560	8,301	22.7%	1,888	5.2%
Total					
2018	77,889	16,292	20.9%	3,604	4.6%
2019	78,874	15,622	19.8%	3,502	4.4%
2020	73,368	13,852	18.9%	3,256	4.4%
2021	73,653	13,914	18.9%	3,161	4.3%
2022	74,016	12,754	17.2%	2,786	3.8%

Table 74 presents the number and percentage of HealthChoice participants with an SUD who received at least one methadone replacement therapy or at least one medication-assisted

treatment (MAT).[64] The percentage of participants with an SUD-only diagnosis who received at least one methadone replacement therapy decreased across the evaluation period—from 37.2% in CY 2018 to 33.5% in CY 2022—alongside smaller decreases in the use of methadone replacement therapy among those with a dual diagnosis. The percentage of participants with an SUD-only diagnosis who received at least one MAT increased during the evaluation period—from 60.8% in CY 2018 to 65.3% in CY 2022.

Table 74. Number and Percentage of HealthChoice Participants with an SUD Who Received Methadone Replacement Therapy or MAT, by SUD Status, CY 2018–CY 2022

Calendar Year	Total Number of Participants	At Least One Methadone Replacement Therapy		At Least One MAT	
		Number of Participants	Percentage of Total Participants	Number of Participants	Percentage of Total Participants
SUD-Only					
2018	43,274	16,109	37.2%	26,323	60.8%
2019	42,062	14,799	35.2%	25,884	61.5%
2020	39,298	14,810	37.7%	26,337	67.0%
2021	38,838	14,105	36.3%	25,942	66.8%
2022	37,456	12,555	33.5%	24,463	65.3%
Dual Diagnosis (MHD + SUD)					
2018	34,615	10,141	29.3%	21,440	61.9%
2019	36,812	10,870	29.5%	23,894	64.9%
2020	34,070	10,334	30.3%	22,781	66.9%
2021	34,815	10,409	29.9%	23,630	67.9%
2022	36,560	10,351	28.3%	24,287	66.4%
Total					
2018	77,889	26,250	33.7%	47,763	61.3%
2019	78,874	25,669	32.5%	49,778	63.1%
2020	73,368	25,144	34.3%	49,118	66.9%
2021	73,653	24,514	33.3%	49,572	67.3%
2022	74,016	22,906	30.9%	48,750	65.9%

MDH also monitors the extent to which HealthChoice participants with an ED visit and a primary diagnosis of SUD receive a follow-up outpatient visit with any practitioner within 7 or 30 days. Table 75 shows the number and percentage of ED visits with a primary diagnosis of SUD that had an outpatient follow-up visit from CY 2018 to CY 2022.[65] The results are displayed by the participant's status as having an SUD-only or co-occurring MHD and SUD. In CY 2018, 20.1% of all ED visits with a primary diagnosis of SUD had a follow-up visit within 7 days, and 32.3% had an appointment within 30 days; by CY 2022, these values had increased overall to 46.9% and 65.5%, respectively, despite decreases in both in CY 2020. The overall percentage of ED visits

[64] MAT was defined as any treatment with buprenorphine, naloxone, methadone, or naltrexone.
[65] This measure was calculated using the HEDIS® proprietary software from Cognizant.

with a primary diagnosis of SUD with a follow-up appointment within 7 and 30 days increased for both participants with an SUD-only and those with a co-occurring diagnosis during the evaluation period. Between CY 2021 and CY 2022, the recorded numbers of follow-up visits increased significantly for both timelines and both diagnosis types, in part due to changes in how the HEDIS® measure used to count the visits is calculated.

Table 75. Number and Percentage of ED Visits by HealthChoice Participants with an SUD That Had a Follow-Up Visit within 7 or 30 days, CY 2018–CY 2022

Calendar Year	Total Number of Visits	At Least One Follow-Up within 7 Days		At Least One Follow-Up within 30 Days	
		Number of Visits	Percentage of Visits	Number of Visits	Percentage of Visits
SUD-Only					
2018	4,562	649	14.2%	1,045	22.9%
2019	4,644	673	14.5%	1,034	22.3%
2020	3,887	507	13.0%	798	20.5%
2021	4,277	623	14.6%	967	22.6%
2022	4,224	1,270	30.1%	1,916	45.4%
Dual Diagnosis (MHD + SUD)					
2018	7,327	1,743	23.8%	2,801	38.2%
2019	7,567	2,004	26.5%	3,066	40.5%
2020	6,488	1,557	24.0%	2,454	37.8%
2021	7,224	1,946	26.9%	3,026	41.9%
2022	7,399	4,185	56.6%	5,701	77.1%
Total					
2018	11,889	2,392	20.1%	3,846	32.3%
2019	12,211	2,677	21.9%	4,100	33.6%
2020	10,375	2,064	19.9%	3,252	31.3%
2021	11,501	2,569	22.3%	3,993	34.7%
2022	11,623	5,455	46.9%	7,617	65.5%

Corrective Managed Care (CMC)

The Corrective Managed Care (CMC) Program was developed to identify participants who are likely to be engaging in a large number of controlled substances across multiple pharmacies (Maryland Department of Health Office of Pharmacy Services et al., n.d). The CMC program serves as an intervention for decreasing potential abuse of these controlled substances. On March 1, 2016, MDH mandated MCOs with HealthChoice members to implement the CMC program. MDH, with the assistance of The Hilltop Institute, places specific participants in the program, using the Conduent system, to be restricted to one pharmacy for a two-year period. This limits the participant's access to other pharmacies and controlled substances.

Table 76 presents the number, percentage, and average of HealthChoice participants in the CMC Program with an overdose. The percentage of participants with an overdose decreased slightly from 23.6% in CY 2018 to 22.3% in CY 2022.

Table 76. Corrective Managed Care Pharmacy Lock-in Participants with an Overdose, CY 2018–CY 2022

Calendar Year	Total Number of Participants	Total Number of Participants with an Overdose	Percentage of Participants with an Overdose	Total Number of Overdoses	Average Number of Overdose per Survivor	Average Number of Overdose per Participant
2018	369	87	23.6%	274	3.1	0.7
2019	209	37	17.7%	166	4.5	0.8
2020	173	46	26.6%	168	3.7	1.0
2021	72	23	31.9%	69	3.0	1.0
2022	121	27	22.3%	81	3.0	0.7

Note: Utilized updated Corrective Managed Care Pharmacy lock-in data.

Table 77 presents the demographic characteristics of HealthChoice participants in the Corrective Managed Care Program with an overdose. The data presented are five-year totals representing individuals who participated in the program at any point during the evaluation period.[66] Of male CMC participants, 26.5% experienced an overdose, with only 20.9% of female participants experiencing an overdose. 23.9% of White participants experienced an overdose, while 23.6% of Black participants experienced an overdose between CY 2018 and CY 2022. Based on regional data over the evaluation period, Baltimore City and Washington Suburban areas had the higher percentage of CMC participants with an overdose at 28.3% and 25.0%, respectively. The number of deaths reported during and after the two-year CMC lock-in period totaled 23 and 17 CMC participants, respectively.

Table 77. Demographic Characteristics of Corrective Managed Care Pharmacy Lock-in Participants with an Overdose, CY 2018–CY 2022

Demographic Characteristic	Total Number of Participants	Total Number of Participants with an Overdose	Percentage of Participants with an Overdose	Total Number of Overdoses	Average Number of Overdoses per Survivor	Average Number of Overdoses per Participant
Race/Ethnicity						
Asian	*	*	*	*	*	*
Black	271	64	23.6%	244	3.8	0.9
White	611	146	23.9%	495	3.4	0.8
Hispanic	16	*	*	*	*	*

[66] Data are presented this way to account for the fact that many participants had multiple two-year lock-in periods over the evaluation period as well as to avoid additional small cells.

Demographic Characteristic	Total Number of Participants	Total Number of Participants with an Overdose	Percentage of Participants with an Overdose	Total Number of Overdoses	Average Number of Overdoses per Survivor	Average Number of Overdoses per Participant
Other	27	*	*	*	*	*
Native American	*	*	*	*	*	*
Total	**944**	**220**	**23.3%**	**758**	**3.4**	**0.8**
Sex						
Female	532	111	20.9%	359	3.2	0.7
Male	412	109	26.5%	399	3.7	1.0
Total	**944**	**220**	**23.3%**	**758**	**3.4**	**0.8**
Region						
Baltimore City	233	66	28.3%	234	3.5	1.0
Baltimore Suburban	373	85	22.8%	272	3.2	0.7
Eastern Shore	81	19	23.5%	68	3.6	0.8
Out of State	*	*	*	*	*	*
Southern Maryland	*	*	*	*	*	*
Washington Suburban	100	25	25.0%	105	4.2	1.1
Western Maryland	79	17	21.5%	63	3.7	0.8
Total	**944**	**220**	**23.3%**	**758**	**3.4**	**0.8**
Total Deaths During Lock-in	**23**					
Total Deaths After Lock-in	**17**					

Notes: "Other" race/ethnicity category includes Pacific Islanders, Alaskan Natives, Two or More Races, Prefer Not to Say, and Unknown. Utilized updated Corrective Managed Care Pharmacy lock-in data.
*Cell values of 10 or less have been suppressed.

Section VI Conclusion

The HealthChoice program focuses on providing a variety of preventive services to participants. Over the evaluation period, with some exceptions, performance measures declined. HealthChoice remained above the national HEDIS® mean on all measures of child and adolescent immunizations and well-care visits despite ending the evaluation period with decreased performance on 5 out of 8 sub-measures. While the percentage of children tested who had an elevated blood lead level decreased between CY 2018 and CY 2022, the percentage of children receiving blood lead tests also decreased. Rates of screening for breast cancer, cervical cancer, and colorectal cancer all declined during the evaluation period. These trends correspond with the sharp decline in the number of breast, cervical, and colon cancer screenings received nationally during CY 2020 and the failure to return to pre-pandemic levels in CY 2021 (Oakes et al., 2023; Star et al., 2023). Greater adherence to asthma medication was associated with reductions in asthma-related ED use in the current year and the following year.

However, the effects of AMR on asthma inpatient admissions only had associations with admissions in the following year. Measures of maternal and reproductive health similarly showed decreased performance from CY 2018 to CY 2022.

HealthChoice covers a broad range of populations with low income and various service needs. Therefore, health promotion activities under HealthChoice have an extensive scope. From care for persons with chronic diseases like asthma, diabetes, and HIV infection to those with behavioral health conditions, most measures of performance were improving until the COVID-19 pandemic in CY 2020 negatively impacted service utilization, after which few measures have returned to pre-pandemic levels. While the percentage of HealthChoice participants with a behavioral health diagnosis decreased slightly during the evaluation period, these participants continue to have ED visits and inpatient admissions at a higher rate compared to the general HealthChoice population, particularly for participants with a dual diagnosis of MHD and SUD. This may represent the need for better access to care for persons with MHD and SUD. MDH will monitor the use of services to assure that necessary care is being delivered and that, where possible, prevention and early intervention minimizes the severity and duration of such conditions. The CMC program restricts participants to one pharmacy to decrease potential abuse of controlled substances and during the evaluation period the percentage of participants in the CMC program who had an overdose decreased from 23.6% in CY 2018 to 22.3% in CY 2022. MDH considers constant monitoring of performance measures for each aspect of health promotion and disease prevention to be a necessary part of demonstrating the HealthChoice program's effectiveness.

Section VII. Expanding Coverage to Additional Low-Income Marylanders with Resources Generated through Managed Care Efficiencies

Section §1115 demonstrations, like HealthChoice, can use calculated cost savings under budget neutrality provisions to fund a federal match for services otherwise not covered by Medicaid. In addition to testing the effectiveness of a managed care program to improve health outcomes and generate expenditure savings, the HealthChoice demonstration can test new services anticipated to benefit the enrolled population. This section of the report analyzes the innovative programs designed to address the social determinants of health and improve the health and wellbeing of the Maryland population using savings from the HealthChoice managed care program. These programs include Residential Treatment for Individuals with SUD, ACIS, dental services for former foster care individuals, Adult Dental pilot, ICS, and the Family Planning program.

In mid-2018, MDH submitted an amendment to the approved waiver containing requests to expand the Residential Treatment for Individuals with SUD and ACIS programs, provide dental services to dually eligible adults, implement the DPP, and adjust the criteria for the Family Planning program. The waiver amendment application was approved in March 2019.

In mid-2019, MDH submitted an amendment request to implement a CoCM pilot. This request was approved in April 2020, and coverage for collaborative care services began in July 2020. The CoCM pilot integrates primary care and behavioral health services for HealthChoice participants who have experienced a behavioral health need (either an MHD or SUD) but have not received effective treatment.

MDH submitted its application for §1115 waiver renewal in July 2021 for the five-year period of January 1, 2022, through December 31, 2026—which was approved by CMS in December 2021. This approval allows Maryland to modify existing programs as well as add new programs.

Under the 2022 to 2026 waiver period, Residential Treatment was expanded to include individuals with SMI and SED who are primarily receiving treatment for an SMI/SED and residing in short-term facilities that meet the definition of an IMD. The ACIS pilot program increased the statewide capacity to 900 spaces. Residential and inpatient treatment services for SUD were expanded to remove caps on lengths of stays for SUD treatment in an IMD and aim for a statewide average LOS of 30 days or less. The MOM program, approved July 1, 2021, was established to address the fragmentation in the care of pregnant and postpartum Medicaid beneficiaries with OUD. The Family Planning program, HVS program, and Adult Dental pilot were not renewed because they were added to the State Plan.

Residential Treatment for Individuals with Substance Use Disorders (SUD)

In 2016, CMS approved Maryland Medicaid to expand coverage to include SUD treatment in IMDs. Effective July 1, 2017, the approval permitted otherwise-covered services to be provided to Medicaid-eligible individuals aged 21 to 64 who are enrolled in an MCO and reside in a non-public IMD based on American Society of Addiction Medicine (ASAM) residential levels

3.7-WM, 3.7, 3.5, and 3.3 for up to two non-consecutive 30-day stays annually. On January 1, 2019, MDH phased in coverage of ASAM level 3.1. In March 2019, MDH received approval for a waiver amendment to allow coverage for ASAM level 4.0 for beneficiaries with a primary SUD and a secondary MHD in inpatient hospital settings only for up to 15 days per month. MDH extended coverage to individuals dually eligible for Medicare and Medicaid as of January 1, 2020. Residential Treatment was expanded in the 2022 to 2026 waiver renewal to include individuals with SMI and SED, and the waiver renewal removed caps on LOS, with the aim of a statewide average LOS of 30 days or less.

Table 78 presents the total cost of care by member month for HealthChoice participants who received SUD-related IMD treatment in CY 2018 and CY 2022.[67] The total number of member months for participants increased by 38.6% between CY 2018 and CY 2022, whereas total cost of care increased by 72.3%. The cost per member per month (PMPM) increased by $645, or 24.4%, between CY 2018 and CY 2022. In CY 2018 and CY 2022, participants aged 65 and over had the highest PMPM cost and female enrollees had slightly higher PMPM costs.[68] Black participants had the highest PMPM cost in CY 2018 and CY 2022, followed by Native American participants in CY 2018 and White participants in CY 2022. Out of state participants had the highest PMPM cost in CY 2018, however, Baltimore City participants had the highest cost PMPM in CY 2022.

Table 78. Cost of Care of HealthChoice Participants Who Received SUD-Related IMD Treatment, CY 2018 and CY 2022

Demographics	Total Member Months	Total Medicaid Cost	Cost Per Member Month	Total Member Months	Total Medicaid Cost	Cost Per Member Month
	CY 2018			CY 2022		
Age Group (Years)						
0–18	55	$75,314	$1,369	340	$757,664	$2,228
19–39	56,391	$131,146,518	$2,326	69,940	$203,491,966	$2,910
40–64	42,437	$130,194,865	$3,068	66,405	$244,041,319	$3,675
65+	102	$394,720	$3,870	475	$2,902,217	$6,110
Total	**98,985**	**$261,811,416**	**$2,645**	**137,160**	**$451,193,167**	**$3,290**
Sex						
Female	35,642	$96,431,602	$2,706	43,070	$144,222,076	$3,349
Male	63,343	$165,379,813	$2,611	94,090	$306,971,091	$3,263
Total	**98,985**	**$261,811,416**	**$2,645**	**137,160**	**$451,193,167**	**$3,290**
Race/Ethnicity*						
Asian	665	$1,652,554	$2,485	1,462	$4,407,973	$3,015
Black	39,747	$112,343,392	$2,826	57,604	$198,677,646	$3,449
White	53,181	$135,045,537	$2,539	67,425	$217,260,231	$3,222
Hispanic	2,138	$4,933,350	$2,307	4,057	$12,107,163	$2,984

[67] Costs are rounded to the nearest whole dollar.
[68] For data available.

Demographics	Total Member Months	Total Medicaid Cost	Cost Per Member Month	Total Member Months	Total Medicaid Cost	Cost Per Member Month
	CY 2018			CY 2022		
Native American	710	$1,869,182	$2,633	1,187	$3,696,553	$3,114
Other	2,544	$5,967,400	$2,346	5,425	$15,043,600	$2,773
Total	**98,985**	**261,811,416**	**$2,645**	**137,160**	**$451,193,167**	**$3,290**
Region**						
Baltimore City	31,697	$102,373,851	$3,230	40,333	$161,242,678	$3,998
Baltimore Suburban	28,398	$69,464,962	$2,446	38,895	$125,245,254	$3,220
Eastern Shore	11,871	$26,210,693	$2,208	16,936	$47,088,412	$2,780
Southern Maryland	6,685	$13,909,892	$2,081	8,613	$22,893,015	$2,658
Washington Suburban	9,278	$21,321,977	$2,298	15,209	$42,256,240	$2,778
Western Maryland	10,844	$27,786,025	$2,562	16,984	$51,889,935	$3,055
Out of State	212	$744,016	$3,510	190	$577,633	$3,040
Total	**98,985**	**$261,811,416**	**$2,645**	**137,160**	**$451,193,167**	**$3,290**

*"Other" race/ethnicity category includes Pacific Islander, Alaskan Native, Two or More Races, Prefer Not to Say, and Unknown.
**Regions are defined as the following: Baltimore City (only), Baltimore Metro (Anne Arundel, Baltimore, Carroll, Harford, and Howard Counties), Eastern Shore (Caroline, Cecil, Dorchester, Kent, Queen Anne's, Somerset, Talbot, Wicomico, and Worcester Counties), Southern Maryland (Calvert, Charles, and St. Mary's Counties), Washington Metro (Montgomery and Prince George's Counties), and Western Maryland (Allegany, Frederick, Garrett, and Washington Counties).

Table 79 displays the rate of medication-assisted treatment (MAT) among HealthChoice participants who received IMD care, by race and ethnicity. Overall, the rate of MAT increased 2.2 percentage points between CY 2018 and CY 2021 before dropping by 4.1 percentage points in CY 2022. White participants in an IMD consistently had MAT rates greater than 70% over the measurement period. Only Native American participants had higher rates in CY 2019, 2020, and 2021. Hispanic participants in an IMD consistently had the lowest MAT rates over the measurement period, except for CY 2019, when Asian participants had the lowest rate. The percentage of Hispanic participants in an IMD with MAT fell from 62.9% in CY 2018 to 59.1% in CY 2022, with a high of 71.3% in CY 2019.

Table 79. Use of Medication Assisted Treatment among HealthChoice Enrollees with an IMD Placement, by Race and Ethnicity, CY 2018–CY 2022

Race	Total IMD Participants	Number of Participants with MAT	Percent of Participants with MAT
CY 2018			
Asian	56	36	64.3%
Black	3,099	2,029	65.5%
White	4,534	3,488	76.9%
Hispanic	175	110	62.9%
Native American	58	43	74.1%
Other*	218	162	74.3%

Race	Total IMD Participants	Number of Participants with MAT	Percent of Participants with MAT
Total	**8,140**	**5,868**	**72.1%**
CY 2019			
Asian	75	51	68.0%
Black	3,596	2,512	69.9%
White	4,956	3,924	79.2%
Hispanic	174	124	71.3%
Native American	72	58	80.6%
Other	252	203	80.6%
Total	**9,125**	**6,872**	**75.3%**
CY 2020			
Asian	72	51	70.8%
Black	3,520	2,430	69.0%
White	4,570	3,600	78.8%
Hispanic	198	131	66.2%
Native American	67	57	85.1%
Other	270	199	73.7%
Total	**8,697**	**6,468**	**74.4%**
CY 2021			
Asian	91	68	74.7%
Black	3,847	2,662	69.2%
White	4,927	3,882	78.8%
Hispanic	243	163	67.1%
Native American	81	64	79.0%
Other	313	218	69.6%
Total	**9,502**	**7,057**	**74.3%**
CY 2022			
Asian	105	65	61.9%
Black	4,301	2,717	63.2%
White	5,437	4,167	76.6%
Hispanic	308	182	59.1%
Native American	94	69	73.4%
Other	410	284	69.3%
Total	**10,655**	**7,484**	**70.2%**

*"Other" race/ethnicity category includes Pacific Islander, Alaskan Native, Two or More Races, Prefer Not to Say, and Unknown.

As part of the waiver, Hilltop performed an analysis to determine the impact of IMD treatment on the health and wellbeing of the Maryland population: namely, if receiving IMD services impacted the likelihood of a participant initiating or engaging in alcohol and other drug (AOD)

dependence treatment post-diagnosis.[69] Table 80 is a logistic regression that presents the results of said analysis. Of the HealthChoice enrollees with an AOD dependence diagnosis, those who received IMD treatment were 15.9% more likely than participants who did not receive IMD treatment to initiate treatment post diagnosis (p<0.001). However, IMD treatment had no statistically significant impact on the likelihood of enrollees engaging in ongoing treatment after their initiation visit. Other associations found by the regression analysis included that participants in the Families and Children coverage category were more likely than those in the ABD coverage category to initiate and to stay engaged in drug dependence treatment (p<0.001), while those in the MCHP coverage category were less likely to take each of those steps (p<0.01). Residents of every other Maryland region were less likely to take either step than Baltimore City residents (p<0.001), and participants in every other racial group were less likely to take either step than White participants (p<0.001).

Table 80. Impact of IMD Care on Probability of Initiation and Engagement of Alcohol and Other Drug Dependence Treatment

Effect	Initiation and Engagement of Alcohol and Other Drug Dependence Treatment					
	Initiation			Engagement		
	OR	95% CI		OR	95% CI	
IMD	1.159 ***	1.12	1.20	0.976	0.93	1.02
Age	1.004 ***	1.00	1.01	1.004 ***	1.00	1.00
Female†	0.956 **	0.93	0.98	0.968 *	0.94	1.00
Last Coverage Category†						
Families & Children	1.269 ***	1.22	1.32	1.284 ***	1.23	1.34
MCHP	0.795**	0.69	0.91	0.771 **	0.65	0.92
Other	0.965	0.85	1.09	1.066	0.92	1.23
Region†						
Baltimore Suburban	0.859 ***	0.83	0.89	0.829 ***	0.80	0.86
Eastern Shore	0.687 ***	0.66	0.72	0.701 ***	0.67	0.74
Out of State	0.948	0.66	1.35	0.924	0.63	1.35
Southern Maryland	0.581 ***	0.55	0.61	0.593 ***	0.56	0.63
Washington Suburban	0.572 ***	0.55	0.60	0.494 ***	0.47	0.52
Western Maryland	0.786 ***	0.75	0.82	0.832 ***	0.79	0.88
Race†						
Asian	0.619 ***	0.56	0.69	0.623 ***	0.55	0.71
Black	0.711 ***	0.69	0.73	0.721 ***	0.70	0.75
Hispanic	0.772 ***	0.72	0.82	0.781 ***	0.72	0.84
Other	0.828 ***	0.78	0.88	0.797 ***	0.74	0.85
Comorbidity Score†						
Moderate	1.080 **	1.02	1.14	1.058 *	1.00	1.12
High	0.879 ***	0.83	0.93	0.798 ***	0.75	0.85

[69] Initiation of AOD Treatment: Members who initiate treatment through an inpatient AOD admission, outpatient visit, intensive outpatient encounter or partial hospitalization, telehealth, or medication treatment within 14 days of the diagnosis. Engagement of AOD Treatment: members who initiated treatment and who were engaged in ongoing AOD treatment within 34 days of the initiation visit.

Effect	Initiation and Engagement of Alcohol and Other Drug Dependence Treatment					
	Initiation			Engagement		
	OR	95% CI		OR	95% CI	
Very High	0.954	0.90	1.01	0.585 ***	0.55	0.62
Other	1.147	0.88	1.49	0.964	0.74	1.25
Year†						
2019	0.956 *	0.92	0.99	0.946 **	0.91	0.98
2020	1.060 **	1.02	1.10	0.943 **	0.91	0.98
2021	1.074 ***	1.03	1.12	1.005	0.97	1.04
2022	1.283 ***	1.23	1.34	omitted		
Constant	1.277	1.17	1.39	0.828	0.75	0.91

*** p<.001, **p<.01, *p<.05

†, Reference Groups: Male, Aged, Blind, or Disabled (ABD), Baltimore City, White, Low, 2018

Table 81 presents the results of a logistic regression analyzing the impact of IMD care on the probability of initiation and engagement of AOD treatment for enrollees with a mental health diagnosis. These results mirror those found for enrollees with an SUD diagnosis. HealthChoice enrollees with a mental health condition and an AOD dependence diagnosis who received IMD care were 15.6% more likely to initiate treatment post-diagnosis compared to those who did not receive IMD care ($p<0.001$). However, IMD treatment had no statistically significant impact on the likelihood of enrollees engaging in ongoing treatment. Other findings include that participants in the Families and Children coverage category were more likely than participants in the ABD coverage category to initiate and to engage in AOD dependence treatment ($p<0.001$), that residents of every other Maryland region were less likely than Baltimore City residents to take each step ($p<0.001$), and that participants of all other races and ethnicities were less likely than White participants to initiate treatment ($p<0.05$). Black and Asian participants, along with those with a race/ethnicity characterized as "Other," were all less likely than White participants to engage in ongoing treatment ($p<0.05$), while there was no statistically significant impact on Hispanic participants' likelihood in continued engagement with treatment. The results from these regressions analyses indicate that, while usage of IMD care is associated with an increased likelihood of participants initiating AOD dependence treatment, it has no statistically significant impact on the likelihood of engaging in ongoing treatment. The cause of this association requires additional investigation.

Table 81. Impact of IMD Care on Probability of Initiation and Engagement of Alcohol and Other Drug Dependence Treatment for Enrollees with a Mental Health Diagnosis

Effect	Initiation and Engagement of Alcohol and Other Drug Dependence Treatment					
	Initiation			Engagement		
	OR	95% CI		OR	95% CI	
IMD	1.156 ***	1.10	1.21	0.977	0.93	1.03
Age	1.007 ***	1.01	1.01	1.007 ***	1.01	1.01
Female†	0.930 ***	0.90	0.96	0.968	0.93	1.01

Effect	Initiation and Engagement of Alcohol and Other Drug Dependence Treatment					
	Initiation			Engagement		
	OR	95% CI		OR	95% CI	
Last Coverage Category†						
Families & Children	1.354 ***	1.29	1.42	1.397 ***	1.32	1.48
MCHP	0.925	0.77	1.11	0.802	0.64	1.01
Other	1.081	0.91	1.29	1.170	0.96	1.43
Region†						
Baltimore Suburban	0.808 ***	0.77	0.85	0.760 ***	0.72	0.80
Eastern Shore	0.658 ***	0.62	0.70	0.656 ***	0.61	0.70
Out of State	0.849	0.51	1.41	0.723	0.41	1.26
Southern Maryland	0.568 ***	0.52	0.62	0.587 ***	0.54	0.64
Washington Suburban	0.571 ***	0.54	0.61	0.444 ***	0.41	0.48
Western Maryland	0.775 ***	0.72	0.83	0.778 ***	0.72	0.84
Race†						
Asian	0.783 **	0.67	0.92	0.799 *	0.66	0.97
Black	0.812 ***	0.78	0.85	0.823 ***	0.78	0.86
Hispanic	0.905 *	0.82	1.00	0.900	0.80	1.01
Other	0.866 **	0.80	0.94	0.832 ***	0.75	0.92
Comorbidity Score†						
Moderate	1.033	0.94	1.13	1.040	0.95	1.14
High	0.822 ***	0.75	0.90	0.750 ***	0.68	0.82
Very High	0.846 **	0.77	0.93	0.561 ***	0.51	0.62
Other	1.311	0.87	1.98	0.997	0.67	1.48
Year†						
2019	0.962	0.91	1.02	0.974	0.92	1.03
2020	1.101 **	1.04	1.16	0.971	0.92	1.03
2021	1.166 ***	1.10	1.23	1.091 **	1.03	1.15
2022	1.411 ***	1.33	1.49			
Constant	1.182	1.04	1.35	0.746	0.65	0.86

*** p<.001, **p<.01, *p<.05

†, Reference Groups: Male, Aged, Blind, or Disabled (ABD), Baltimore City, White, Low, 2018

Assistance in Community Integration Services (ACIS) Community Health Pilot Program

The goals of the Assistance in Community Integration Services (ACIS) pilot program, which began in late 2017, are to reduce unnecessary health services use, increase housing stability, and improve health outcomes for individuals at risk of institutional placement or

homelessness.[70] Four jurisdictions, referred to as lead entities (LEs), currently participate in the pilot program: the Baltimore City Mayor's Office of Homeless Services (Baltimore City), the Cecil County Health Department (Cecil County), the Montgomery County Department of Health and Human Services (Montgomery County), and the Prince George's County Health Department (Prince George's County).

Hilltop recently completed the fifth annual review of the ACIS pilot program, with a focus on the living situations of ACIS participants at enrollment, obtainment of stable housing, ACIS billing and ACIS service utilization, and health service utilization. Since ACIS service delivery began in CY 2018, this evaluation focuses on CY 2018 through CY 2022.

Hilltop analyzed ACIS service utilization and MMIS2 health service utilization for the 728 program participants enrolled during CY 2018 to CY 2022. Table 82 shows the number of ACIS enrollments by sex, race, and age group during each calendar year. During the study period, more males (59.8%) were enrolled than females (40.2%). Similarly, more Black participants (64.3%) were enrolled than any other racial category. Finally, more 51- to 60-year-olds (34.1%) were enrolled compared to any other age group.

Table 82. Demographics of Newly Enrolled ACIS Participants, CY 2018–CY 2022

Demographic Characteristic	CY 2018 N=108		CY 2019 N=164		CY 2020 N=160		CY 2021 N=176		CY 2022 N=120		Total N=728	
	#	%	#	%	#	%	#	%	#	%	#	%
Sex												
Female	44	40.7%	85	51.8%	44	27.5 %	67	38.1%	53	44.2 %	293	40.2 %
Male	64	59.3%	79	48.2%	116	72.5 %	109	61.9%	67	55.8 %	435	59.8 %
Race												
Black	70	64.8%	108	65.9%	98	61.3 %	128	72.7%	64	53.3 %	468	64.3 %
Other*	**	**	**	**	23	14.4 %	18	10.2%	26	21.7 %	92	12.6 %
White	**	**	**	**	39	24.4 %	30	17.0%	30	25.0 %	168	23.1 %
Age Category at Enrollment												
> 30	19	17.6%	24	14.6%	19	11.9 %	22	12.5%	16	13.3 %	100	13.7 %
31–40	**	**	**	**	35	21.9 %	37	21.0%	24	20.0 %	143	19.6 %
41 –50	26	24.1%	41	25.0%	30	18.8 %	36	20.5%	19	15.8 %	152	20.9 %

[70] See ACIS press release at https://health.maryland.gov/newsroom/Pages/Maryland-Medicaid-Announces-Community-Health-Pilot-Selections.aspx

Demographic Characteristic	CY 2018 N=108		CY 2019 N=164		CY 2020 N=160		CY 2021 N=176		CY 2022 N=120		Total N=728	
	#	%	#	%	#	%	#	%	#	%	#	%
51–60	40	37.0%	49	29.9%	56	35.0 %	63	35.8%	40	33.3 %	248	34.1 %
61+	**	**	**	**	20	12.5 %	18	10.2%	21	17.5 %	85	11.7 %

**"Other" race/ethnicity category includes Asian, Hispanic, Pacific Islander, Alaskan Native, Two or More Races, Prefer Not to Say, and Unknown..
**Cell values of 10 or less have been suppressed.

The ACIS data analyzed included:

- General living situation at time of enrollment
- Specific living situation at time of enrollment
- ACIS participants stably housed
    - Number of days to stable housing from ACIS enrollment date
    - First stable housing obtained
- ACIS billing review
- ACIS service delivery
- ACIS participant discharges

The MMIS2 services analyzed included:

- ED visits
- Avoidable ED visits
- Inpatient admissions
- MHD inpatient admissions
- SUD inpatient admissions
- Nursing facility admissions
- Ambulatory care visits

- Participants with a diagnosis of an MHD
- Participants with a diagnosis of an SUD
- MHD outpatient community visits
- SUD outpatient community visits

ACIS Data Measures

Figure 18 illustrates that, on average across all study years, approximately 78% of ACIS participants were homeless at the time of their enrollment in the program.

Figure 18. ACIS Participants General Living Situation at Time of Enrollment, CY 2018–CY 2022

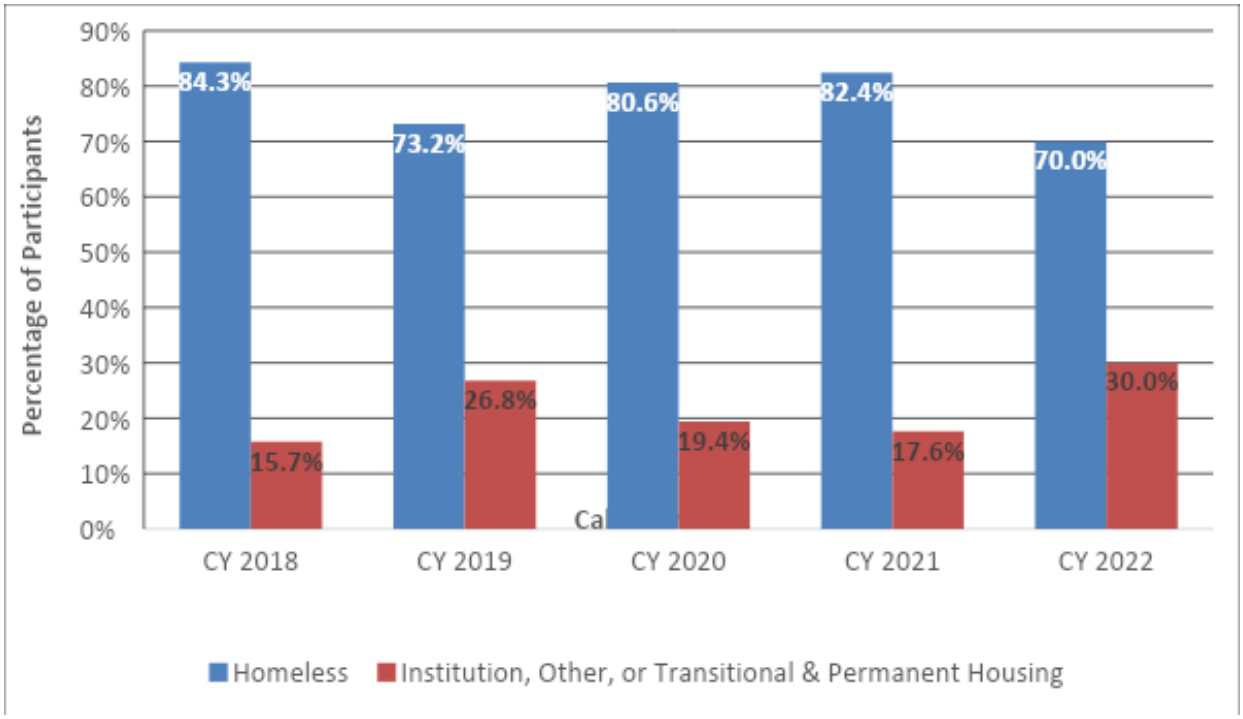
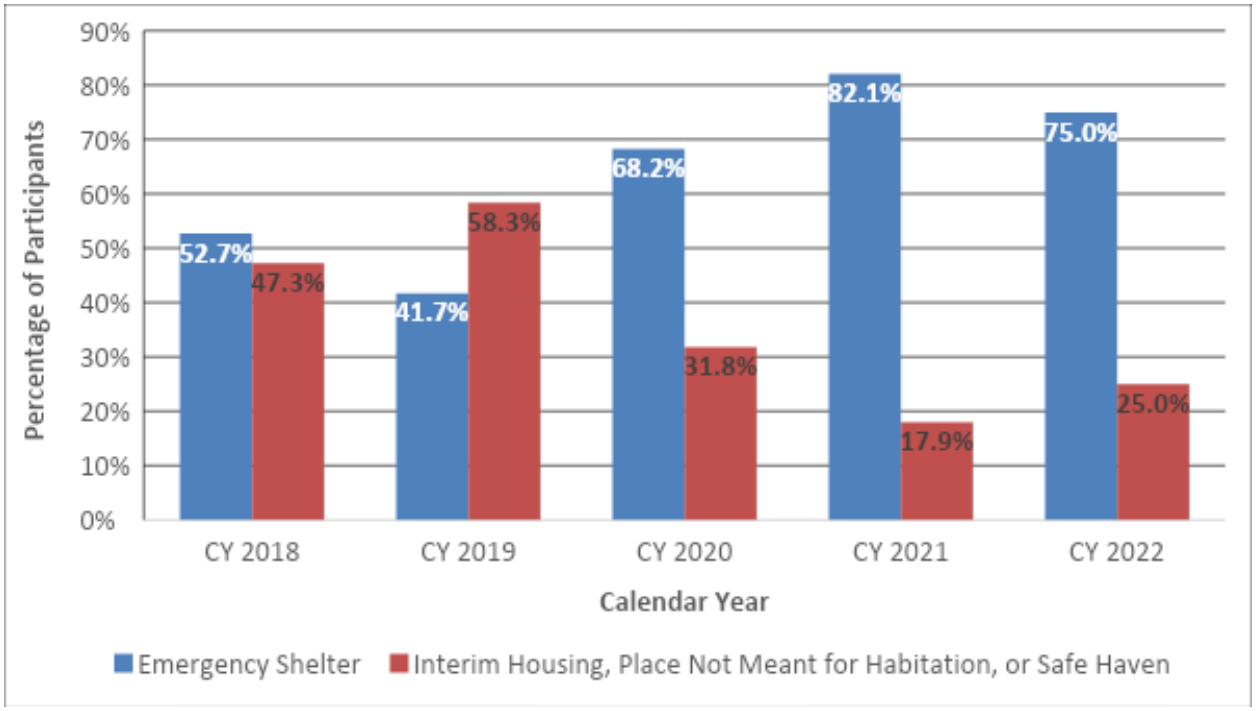


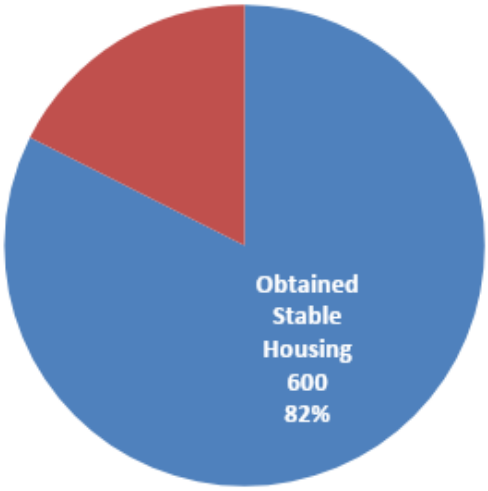
Figure 19 shows that, of the ACIS participants who were homeless, the proportion utilizing emergency shelter vouchers was 52.7% in CY 2018 but increased to 75.0% in CY 2022, potentially due to service providers expanding hotel or motel placements in response to the COVID-19 pandemic.

Figure 19. ACIS Participants Specific Living Situation at Time of Enrollments, CY 2018–CY 2022



Of those enrolled between CY 2018 and CY 2022, approximately 82% of ACIS participants obtained stable housing (Figure 20).[71]

Figure 20. ACIS Participants Obtaining Stable Housing, CY 2018–CY2022



[71] Based on ACIS service data through CY 2023 for ACIS participants enrolled during CY 2018 to CY 2022.

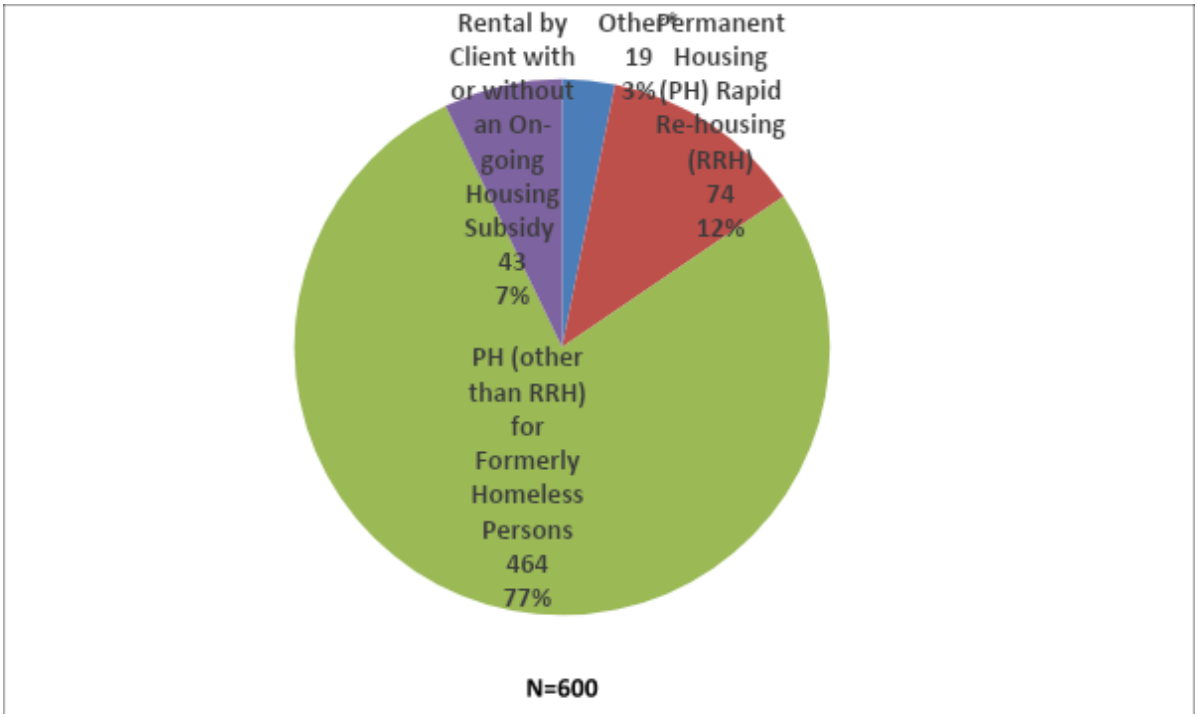
Table 83 shows the average, minimum, and maximum number of days that it took participants to obtain stable housing, by LE. There was considerable variation between different LEs in the average and maximum lengths of time before clients were stably housed, but the minimum number of days before a client was housed with each LE was zero. The LEs have varied approaches to helping participants obtain housing: Baltimore City and Montgomery County typically will not enroll a participant in the pilot program if they do not have a housing voucher available, and even with a housing voucher, it may still take some time getting a participant physically housed due to wait lists, housing stock issues, etc.

Table 83. Average, Minimum, and Maximum Number of Days to Obtain Stable Housing for ACIS Participants, by Lead Entity

Lead Entity	Number of Days		
	Average	Maximum	Minimum
Baltimore City	78	846	0
Cecil County	142	637	0
Montgomery County	61	483	0
Prince George's County	180	616	0

Figure 21 shows the type of living situation of the ACIS participants when they first obtained stable housing. The majority (77%) began living in permanent housing (PH) other than rapid re-housing (RRH).

Figure 21. ACIS Participants Living Situation upon Obtaining Stable Housing, CY 2018–CY 2022



*Other includes host home (non-crisis), owned by client, no ongoing housing subsidy, rental by client in a public housing unit, or rental by client with housing choice voucher.

LEs are only reimbursed for ACIS services delivered when a participant is Medicaid-eligible, and the LE provided three or more ACIS services to that participant in a given month. This is a PMPM reimbursement model. Figure 22 shows the percentage of participants served by PMPM eligibility status for each CY 2022 quarter, by LE. Over the four quarters, Prince George's County had the highest average of participants served that were PMPM-eligible (90%), followed by Cecil County (85%), Baltimore City (84%), and Montgomery County (80%).

Figure 22. Percentage of Participants Served by PMPM Eligibility Status, by Lead Entity and CY 2022 Quarter

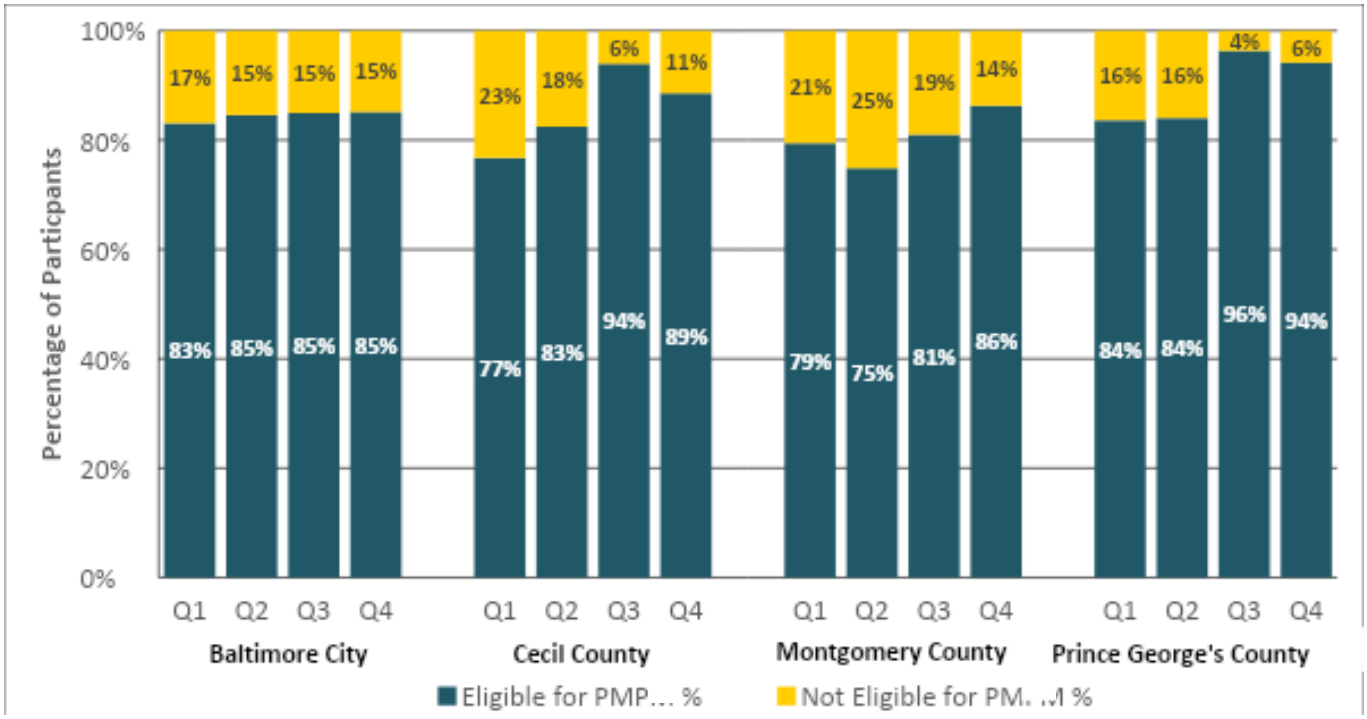


Figure 23 shows the percentage of services delivered by PMPM eligibility status for each CY 2022 quarter, by LE. Over the four quarters, Baltimore City and Prince George's County both had the highest average percentage of services delivered that were PMPM-eligible (roughly equal at 96%), followed by Cecil County and Montgomery County, which both had an average of roughly 93%.

Figure 23. Percentage of Services Delivered by PMPM Eligibility Status, by Lead Entity and CY 2022 Quarter

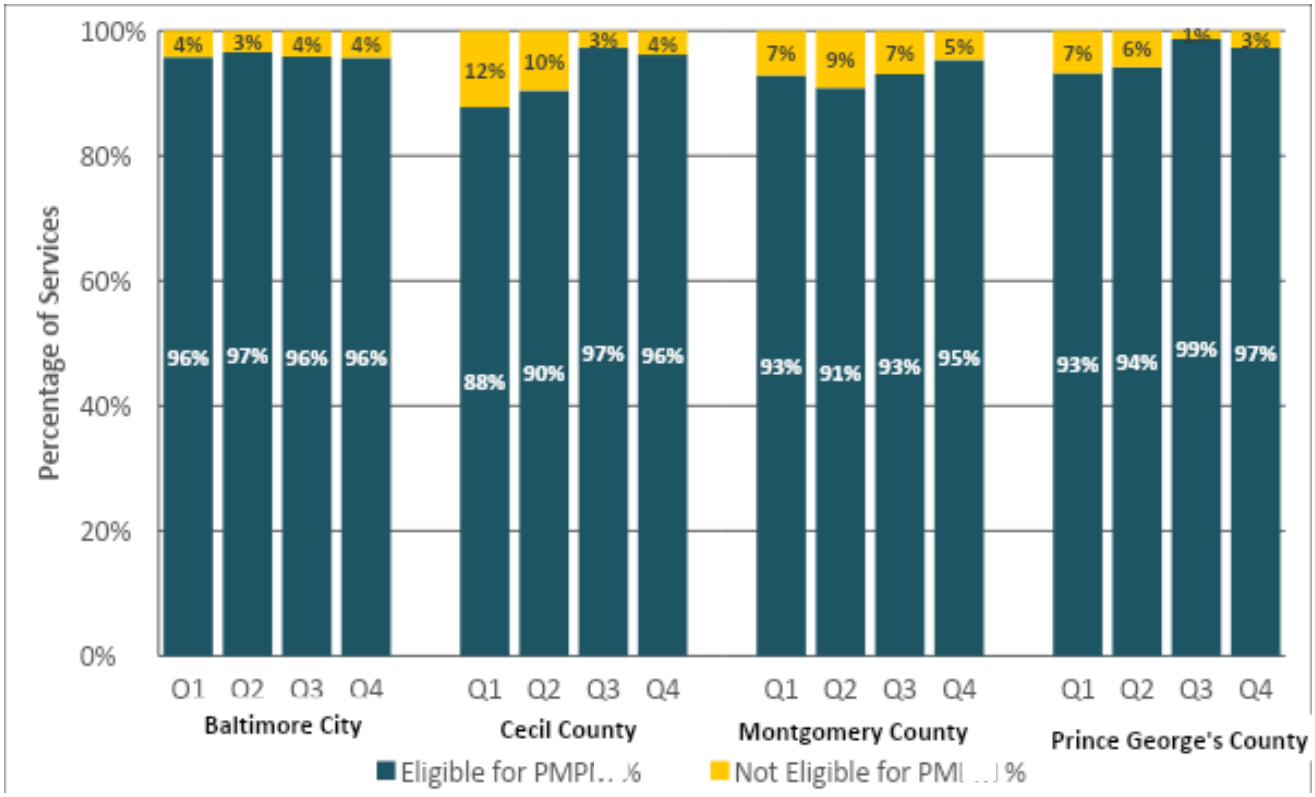


Table 84 shows the average eligible and non-eligible services per person by PMPM eligibility status for CY 2022. Baltimore City had the highest average eligible services per person (7.6), followed by Montgomery County (5.0).

Table 84. Average Eligible Services Per Person by PMPM Eligibility Status, CY 2022

Lead Entity	Average Eligible Services per Person	Average Non-Eligible Services per Person
Baltimore City	7.6	1.7
Cecil County	3.6	1.5
Montgomery County	5.0	1.5
Prince George's County	4.0	1.5

Housing case management was the most frequently delivered ACIS service during CY 2022, accounting for 65.3% of ACIS services (Table 85).

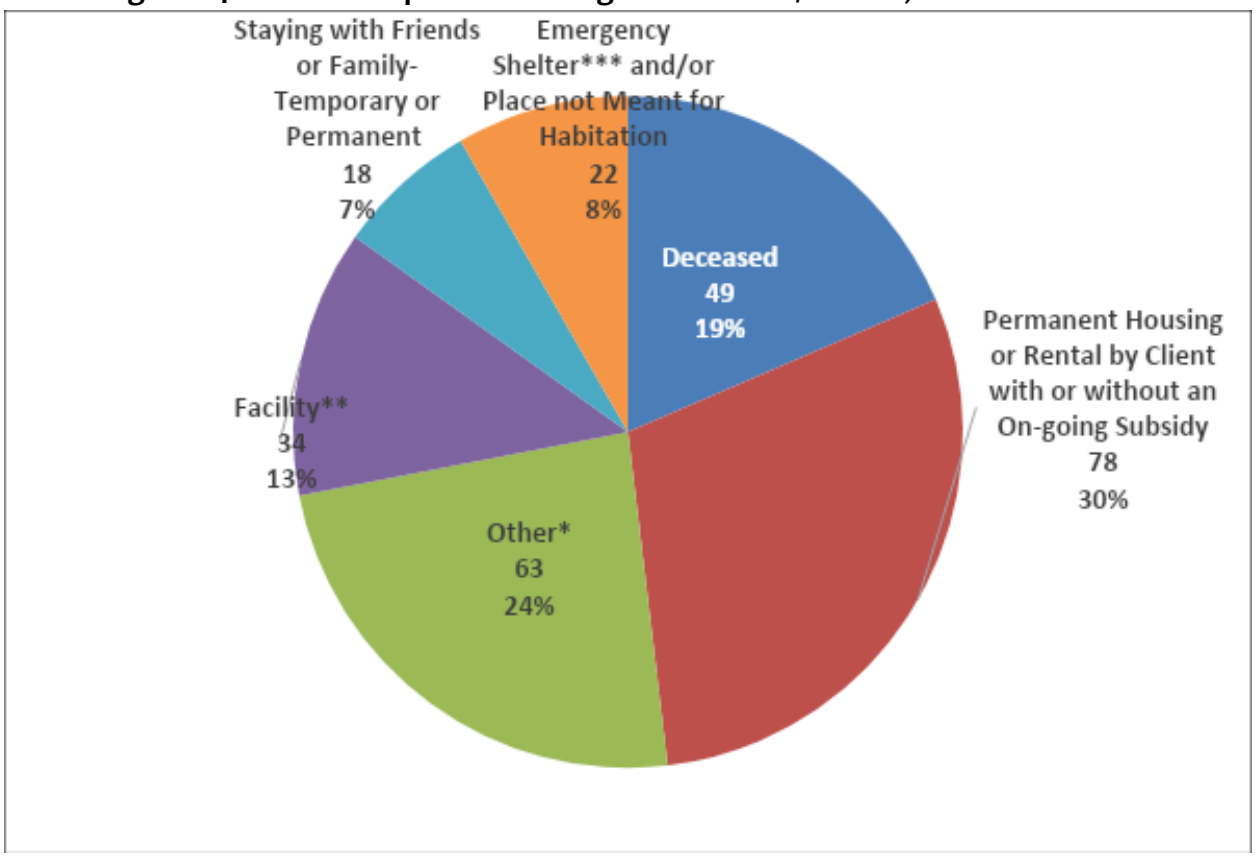
Table 85. ACIS Services Delivered, CY 2022

Type of ACIS Service	Frequency	Percentage
Housing Case Management	13,349	65.3%
Intake/Assessment	120	0.6%
Separation from Program- with and without Service	64	0.3%
Tenancy-Based Case Management	6,894	33.7%

Type of ACIS Service	Frequency	Percentage
Total	**20,427**	**100%**

Of ACIS participants enrolled between CY 2018 and CY 2022, 264 left the program by the end of CY 2022. Participants obtaining PH or renting with or without a housing subsidy accounted for the highest percentage (29%) of discharge destinations (Figure 24).

Figure 24. ACIS Participants' Discharge Destination/Reason, CY 2018–CY 2022



*Other includes no exit interview completed, other, client refused and client does not know.
**Emergency shelter includes hotels/motels paid for with or without an emergency voucher.
***Facility includes jail or prison, nursing home, substance abuse treatment center, hospital or other non-psychiatric facility, psychiatric facility, halfway house, or safe haven.

Health Service Utilization Measures

Table 86 shows that the ambulatory care visit rate for ACIS participants increased from 76.0% in CY 2018 to 80.4% in CY 2022. The ED visits rate for ACIS participants increased from 42.3% in CY 2018 to 51.7% in CY 2022, while the percentage of participants with at least one avoidable ED visit also increased from 26.0% in CY 2018 to 30.4% in CY 2022. The rate of inpatient admissions increased across the study years, while the rate of admissions for mental health conditions decreased.

Table 86. Health Service Utilization of ACIS Participants, CY 2018–CY 2022

Health Service Utilization	CY 2018 N = 104		CY 2019 N = 250		CY 2020 N = 406		CY 2021 N = 483		CY 2022 N = 520	
	#	%	#	%	#	%	#	%	#	%
Ambulatory Care Visits										
At Least One Visit	79	76.0 %	203	81.2%	336	82.8 %	387	80.1 %	418	80.4%
No Visits	25	24.0 %	47	18.8%	70	17.2 %	96	19.9 %	102	19.6%
Inpatient Admissions										
At Least One Visit	14	13.5 %	56	22.4%	109	26.9 %	91	18.8 %	85	16.4%
No Visits	90	86.5 %	194	77.6%	297	73.2 %	392	81.2 %	435	83.7%
MHD Inpatient Admissions										
At Least One Visit	*	*	18	7.2%	33	8.1%	22	4.6%	17	3.3%
No Visits	*	*	232	92.8%	373	91.9 %	461	95.5 %	503	96.7%
ED Visits										
At Least One Visit	44	42.3 %	129	51.6%	223	54.9 %	261	54.0 %	269	51.7%
No Visits	60	57.7 %	121	48.4%	183	45.1 %	222	46.0 %	251	48.3%
Avoidable ED Visits										
At Least One Visit	27	26.0 %	89	35.6%	129	31.8 %	141	29.2 %	158	30.4%
No Visits	77	74.0 %	161	64.4%	277	68.2 %	342	70.8 %	362	69.6%
Nursing Facility Admissions										
At Least One Visit	*	*	*	*	19	4.7%	19	3.9%	15	2.9%
No Visits	*	*	*	*	387	95.3 %	464	96.1 %	505	97.1%

*Cell values of 10 or less have been suppressed.

Table 87 shows the number of ACIS participants with any SUD diagnosis. The percentage of ACIS participants with an SUD diagnosis decreased from 48.1% in 2018 to 46.4% in CY 2022. Of those with an SUD diagnosis during the study period, those with at least one outpatient SUD visit also decreased, from 38.0% in CY 2018 to 33.6% in CY 2022.

Table 87. ACIS Participants with Any SUD Diagnosis and SUD Outpatient Visit, CY 2018–CY2022

Any Substance Use Disorder Diagnosis and Outpatient Visits	CY 2018		CY 2019		CY 2020		CY 2021		CY 2022	
	#	%	#	%	#	%	#	%	#	%

Any SUD Diagnosis										
Yes	50	48.1%	124	49.6%	208	51.2%	248	51.4%	241	46.4%
No	54	51.9%	126	50.4%	198	48.8%	235	48.7%	279	53.7%
Total	**104**	**100%**	**250**	**100%**	**406**	**100%**	**483**	**100%**	**520**	**100%**
SUD Outpatient Visits										
At Least One Visit	19	38.0%	43	34.7%	62	29.8%	82	33.1%	81	33.6%
No Visits	31	62.0%	81	65.3%	146	70.2%	166	66.9%	160	66.4%
Total	**50**	**100%**	**124**	**100%**	**208**	**100%**	**248**	**100%**	**241**	**100%**

Table 88 shows the number of ACIS participants with any MHD diagnosis. The percentage of ACIS participants with an MHD diagnosis decreased from 72.1% in 2018 to 57.7% in CY 2022. Of those with an MHD diagnosis during the study years, those with at least one outpatient MHD visit increased, from 34.7% in CY 2018 to 54.7% in CY 2022.

Table 88. ACIS Participants with Any MHD Diagnosis and MHD Outpatient Visits, CY 2018–CY2022

Any Mental Health Disorder Diagnosis and Outpatient Visits	CY 2018		CY 2019		CY 2020		CY 2021		CY 2022	
	#	%	#	%	#	%	#	%	#	%
Any MHD Diagnosis										
Yes	75	72.1%	180	72.0%	292	71.9%	294	60.9%	300	57.7%
No	29	27.9%	70	28.0%	114	28.1%	189	39.1%	220	42.3%
Total	**104**	**100%**	**250**	**100%**	**406**	**100%**	**483**	**100%**	**520**	**100%**
MHD Outpatient Visits										
At Least One Visit	26	34.7%	89	49.4%	153	52.4%	159	54.1%	164	54.7%
No Visits	49	65.3%	91	50.6%	139	47.6%	135	45.9%	136	45.3%
Total	**75**	**100%**	**180**	**100%**	**292**	**100%**	**294**	**100%**	**300**	**100%**

Dental Services for Former Foster Care Individuals

Chapters 57 and 58 of the Maryland Acts of 2016 (SB 252/HB 511) authorized Medicaid to cover dental services for former foster care participants until they reach age 26.[72] They also required Medicaid to apply to CMS for the necessary waiver to receive a federal match for these services. CMS authorized this benefit as part of the 2016 waiver renewal and was renewed for the 2021 waiver, and Maryland has provided dental services as a benefit to former foster care individuals since January 1, 2017.

Table 89 shows the number and percentage of former foster care participants who were enrolled in Medicaid for at least 320 days and who received dental services by region in CY 2018 through CY 2022. The percentage of former foster care participants who had at least one dental visit increased by 3.7 percentage points from CY 2018 to CY 2019 before decreasing by 10.7 percentage points from CY 2019 to CY 2021, most likely as a result of the COVID-19 pandemic.

[72] COMAR 10.09.05.04.

From CY 2021 to CY 2022, the percentage decreased by 1.9 percentage points. In CY 2022, the percentage of former foster care participants with at least one visit varied widely between regions, ranging from 8.1% to 18.7%. MDH anticipates that, over time, the number and percentage of former foster care participants receiving services will increase.

Table 89. Number and Percentage of Former Foster Care Participants (E05) Enrolled in Medicaid for 320 Days who had Dental Services, by Region, CY 2018–CY 2022

Region**	CY 2018			CY 2019			CY 2020			CY 2021			CY 2022		
	Total Number of Enrollees	Number with at Least One Visit	Percentage with Dental Visits	Total Number of Enrollees	Number with at Least One Visit	Percentage with Dental Visits	Total Number of Enrollees	Number with at Least One Visit	Percentage with Dental Visits	Total Number of Enrollees	Number with at Least One Visit	Percentage with Dental Visits	Total Number of Enrollees	Number with at Least One Visit	Percentage with Dental Visits
Baltimore City	540	104	19.3%	415	98	23.6%	392	66	16.8%	421	61	14.5%	397	52	13.1%
Baltimore Suburban	339	86	25.4%	306	84	27.5%	302	44	14.6%	343	51	14.9%	312	36	11.5%
Eastern Shore	*	*	24.3%	*	*	26.3%	*	*	17.4%	*	*	7.2%	*	*	9.0%
Out of State	*	*	0.0%	*	*	0.0%	*	*	0.0%	*	*	0.0%	*	*	0.0%
Southern Maryland	*	*	25.0%	*	*	21.2%	*	*	18.4%	*	*	5.3%	*	*	8.1%
Washington Suburban	161	37	23.0%	154	49	31.8%	166	34	20.5%	188	39	20.7%	182	34	18.7%
Western Maryland	91	22	24.2%	92	21	22.8%	86	13	15.1%	88	16	18.2%	93	14	15.1%
Total	**1,238**	**275**	**22.2%**	**1,077**	**279**	**25.9%**	**1,054**	**176**	**16.7%**	**1,148**	**174**	**15.2%**	**1,089**	**145**	**13.3%**

*Cell values of less than 11 have been suppressed.

**Baltimore Suburban: Anne Arundel, Baltimore, Carroll, Harford, and Howard Counties. Southern Maryland: Calvert, Charles, and St. Mary's Counties. Western Maryland: Allegany, Frederick, Garrett, and Washington Counties. Eastern Shore: Caroline, Cecil, Dorchester, Kent, Queen Anne's, Somerset, Talbot, Wicomico, and Worcester Counties. Washington Suburban: Prince's George and Montgomery Counties.

Table 90 shows the number and percentage of former foster care participants who had an outpatient ED visit with any dental diagnosis by region from CY 2018 to CY 2022. Overall, the percentage with an ED visit with any dental diagnosis increased from 3.5% in CY 2018 to 4.2% in CY 2022. Participants living in Baltimore City had the highest rate of ED visits related to dental diagnoses among Maryland regions in CY 2022—6.8%, a 2.6 percentage point increase from CY 2021. Participants living on the Eastern Shore had the highest rate of dental-related ED visits in CY 2021—9.5%—but the rate for the region decreased to 6.7% in CY 2022.

Table 90. Number and Percentage of Former Foster Care Participants Enrolled in Medicaid for Any Period Who Had an Outpatient ED Visit with Any Dental Diagnosis, by Region, CY 2018–CY 2022**

Region***	CY 2018			CY 2019			CY 2020			CY 2021			CY 2022		
	Total Number of Enrollees	Total with at Least One ED Visit	Percentage with One ED Visit	Total Number of Enrollees	Total with at Least One ED Visit	Percentage with One ED Visit	Total Number of Enrollees	Total with at Least One ED Visit	Percentage with One ED Visit	Total Number of Enrollees	Total with at Least One ED Visit	Percentage with One ED Visit	Total Number of Enrollees	Total with at Least One ED Visit	Percentage with One ED Visit
Baltimore City	692	34	4.9%	561	25	4.5%	*	*	1.6%	449	19	4.2%	412	28	6.8%
Baltimore Suburban	452	13	2.9%	427	11	2.6%	356	12	3.4%	368	16	4.3%	*	*	3.0%
Eastern Shore	*	*	6.9%	*	*	4.3%	*	*	3.8%	*	*	9.5%	*	*	6.7%
Out of State	*	*	0.0%	*	*	0.0%	*	*	0.0%	*	*	0.0%	*	*	0.0%
Southern Maryland	*	*	4.5%	*	*	4.2%	*	*	7.3%	*	*	2.3%	*	*	0.0%
Washington Suburban	*	*	0.0%	*	*	1.4%	*	*	1.0%	*	*	3.9%	*	*	2.0%
Western Maryland	*	*	0.8%	*	*	4.9%	*	*	4.0%	*	*	5.1%	*	*	1.9%
Total	**1,629**	**57**	**3.5%**	**1,469**	**51**	**3.5%**	**1,222**	**31**	**2.5%**	**1,242**	**56**	**4.5%**	**1,167**	**49**	**4.2%**

*Cell values of 10 or less have been suppressed.

** The data in last year's report were incorrect and has been corrected for this report.

***Baltimore Suburban: Anne Arundel, Baltimore, Carroll, Harford, and Howard Counties. Southern Maryland: Calvert, Charles, and St. Mary's Counties. Western Maryland: Allegany, Frederick, Garrett, and Washington Counties. Eastern Shore: Caroline, Cecil, Dorchester, Kent, Queen Anne's, Somerset, Talbot, Wicomico, and Worcester Counties. Washington Suburban: Prince's George and Montgomery Counties.

Figure 25 shows the percentage of former foster care participants by region and type of service for CY 2022 enrolled in Medicaid for any period. The Washington Suburban region had the highest rates of service utilization for each type of service. Overall, 12.3% of former foster care participants received diagnostic services, 8.4% received preventive services, and 3.5% received restorative services.

Figure 25. Number and Percentage of Former Foster Care Participants (E05) Enrolled for Any Period in Medicaid Receiving Dental Services, by Type of Service and Region, CY 2022

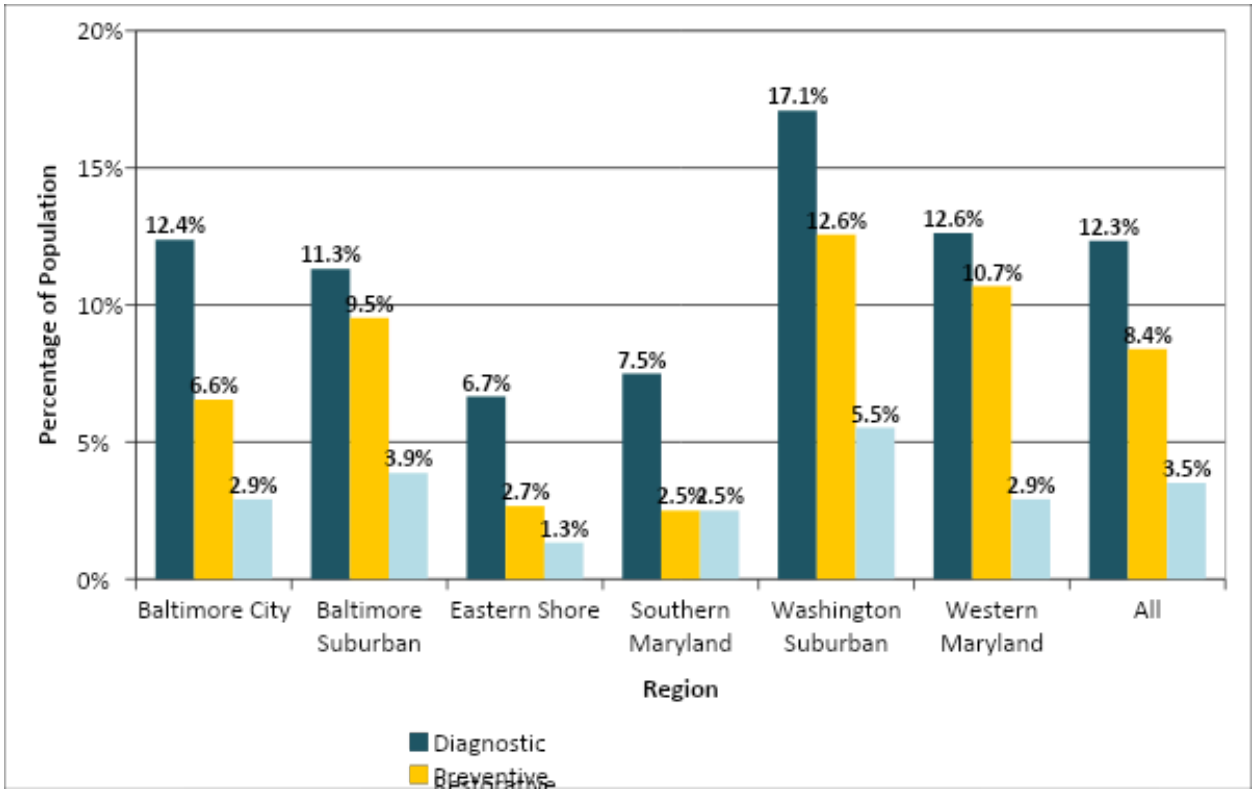


Table 91 presents the number and percentage of former foster care participants in Medicaid who had at least one ED visit with a dental diagnosis (any diagnosis), along with those who had an ED visit with a dental primary diagnosis. The program began in CY 2017, so CY 2016 shows participants' ED utilization prior to program implementation, and CY 2017 to CY 2022 show participants' utilization post-implementation. The percentages of total former foster care participants who had at least one ED visit with a dental diagnosis, and who had a dental primary diagnosis, declined from 3.5% and 2.7% in CY 2016 to 1.0% and 0.9% in CY 2022, respectively. Users are enrollees who received dental services during the measurement period. The percentages of users with at least one ED visit with a dental diagnosis and with a primary dental diagnosis declined from CY 2016 to CY 2022 by 9.7 and 5.9 percentage points, respectively.

Table 91. Number and Percentage of Former Foster Care Participants in Medicaid with at Least One ED Visit and a Dental Diagnosis, CY 2016–CY 2022

Calendar Year	Total Number of Participants	Total Unique Users	At Least One ED Visit with Dental Diagnosis			At Least One ED Visit with Dental Primary Diagnosis		
			Number of Participants	Percentage of Total Participants	Percentage of Users	Number of Participants	Percentage of Total Participants	Percentage of Users
2016	1,580	315	56	3.5%	17.8%	42	2.7%	13.3%
2017	1,689	323	45	2.7%	13.9%	31	1.8%	9.6%
2018	1,631	320	30	1.8%	9.4%	24	1.5%	7.5%
2019	1,468	322	33	2.2%	10.2%	26	1.8%	8.1%
2020	1,223	193	13	1.1%	6.7%	*	0.6%	3.6%
2021	1,242	182	14	1.1%	7.7%	11	0.9%	6.0%
2022	1,167	149	12	1.0%	8.1%	11	0.9%	7.4%

*Cell values of 10 or less have been suppressed.

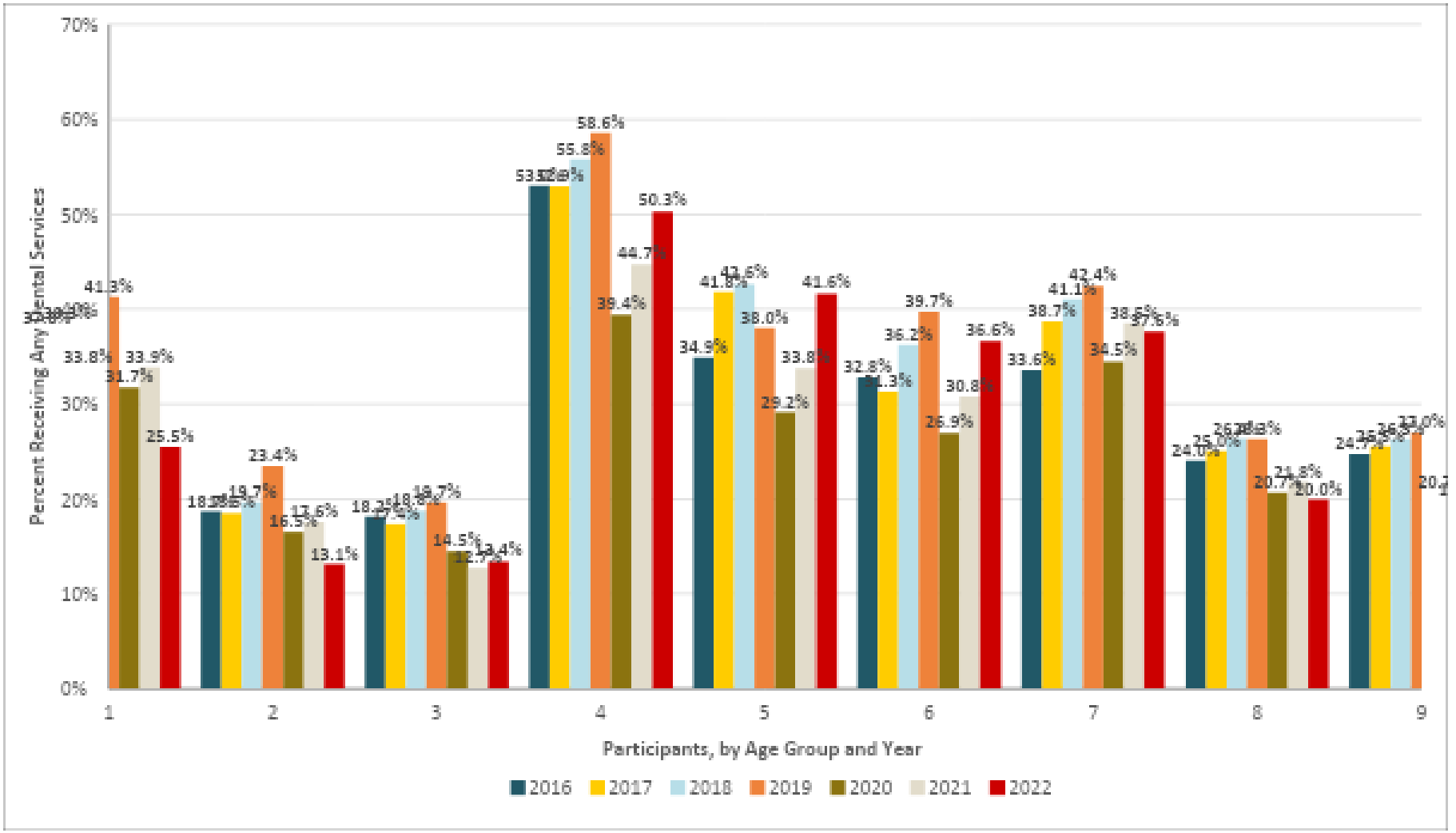
Dental Service Utilization among Special Populations

Figures 26 to 28 show the percentages of former foster care, REM, and pregnant participants in Medicaid receiving any dental, restorative, or preventative-diagnostic services, by age group, from CY 2016 to CY 2022. Former foster care participants are eligible for the dental program between the ages of 18 and 26,[73] and this analysis compares the dental service utilization of former foster care participants to REM and pregnant participants of similar age groups.

Figure 26 shows the rate at which former foster care, REM, and pregnant participants received any dental services from CY 2016 to CY 2022. REM participants had the highest overall dental service utilization rates for all age groups for every year in the evaluation period; this population's utilization rates for the age groups of 18-20 years, 21-23 years, and 24-26 years were 50.3%, 41.6%, and 36.6%, respectively, in CY 2022. Rates among all age groups in the former foster care population declined over the evaluation period, while the REM and pregnant populations each saw overall increases or decreases during the evaluation period depending on the age group. For all three populations, participants aged 18-20 years had the highest overall dental service utilization rates for every year in the evaluation period. Dental service utilization rates for participants aged 18-20 years among former foster care and REM participants decreased 12.3 and 2.7 percentage points, respectively, from CY 2016 to CY 2022, while the rate of pregnant participants aged 18-20 years with any dental service increased 4.0 percentage points. The 24-26-year-olds had the lowest overall dental service utilization among former foster care participants through CY 2021 and among REM participants for every year in the evaluation period.

[73] COMAR 10.09.05.04.

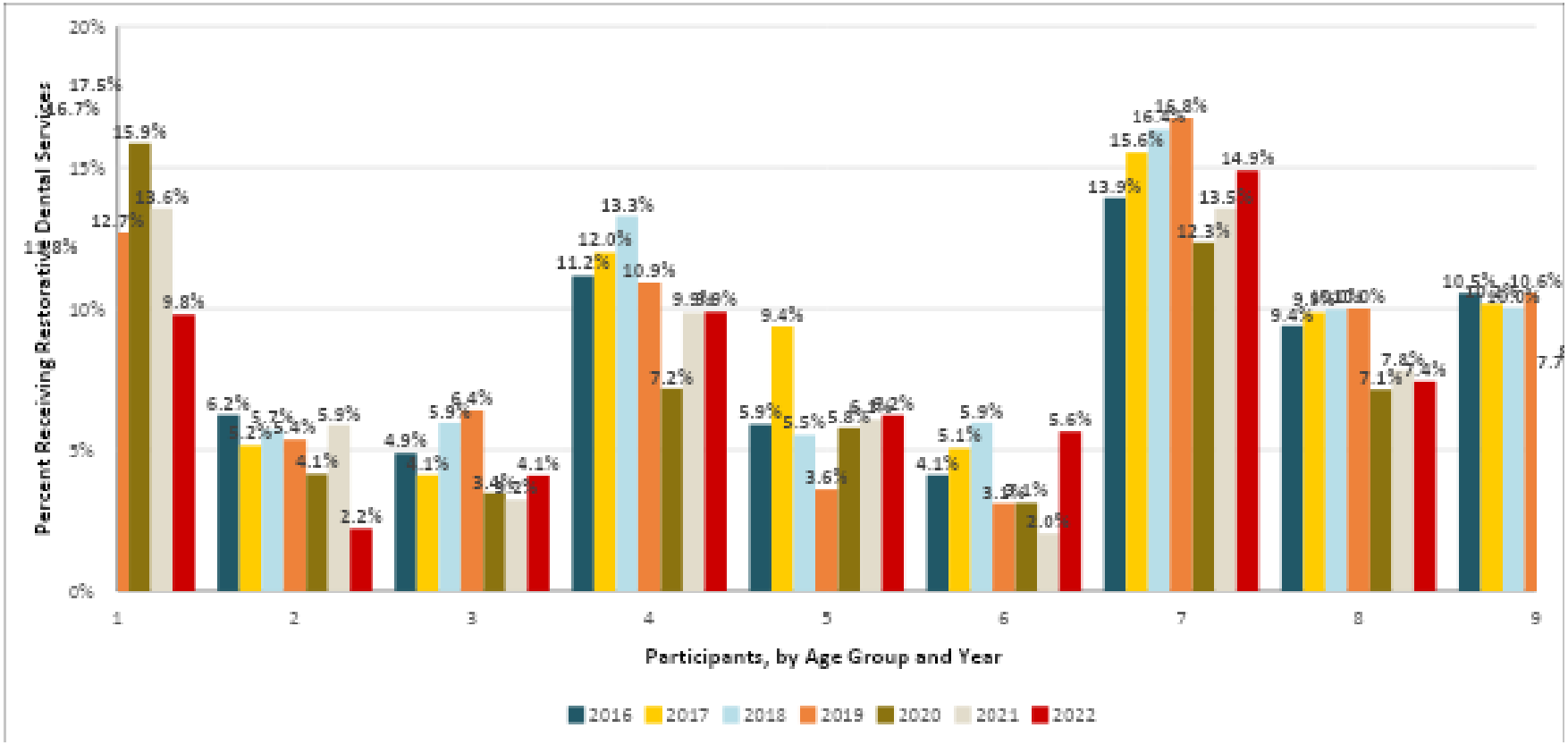
Figure 26. Percentage of Former Foster Care, REM, and Pregnant Participants in Medicaid Receiving Any Dental Services by Age Group, CY 2016–CY 2022*



*The data presented here have been updated and should not be compared to the previous year's report.

Figure 27 shows the rates of restorative dental service utilization among former foster care, REM, and pregnant participants from CY 2016 to CY 2022. Pregnant participants had the highest restorative dental service utilization rates for the age groups of 21-23 years and 24-26 years for every year in the evaluation period. Utilization rates fell over the evaluation period for all age groups among former foster care participants, while rates for REM and pregnant participants increased or decreased depending on the age group. As with any dental services, utilization rates for restorative dental services were also highest in participants aged 18-20 years among all three populations for every year in the evaluation period, with rates at 9.8% among former foster care participants, 9.9% among REM participants, and 14.9% among pregnant participants for this age group in CY 2022. Among participants aged 18-20 years, the utilization rates for restorative dental services in former foster care participants and in REM participants decreased by 2.0 and 1.3 percentage points, respectively, between CY 2016 and CY 2022, while the rate among pregnant participants aged 18-20 years increased by 1.0 percentage points. In CY 2022, restorative service utilization rates were lowest among 21-23-year-old former foster care and pregnant participants, while participants aged 24-26 years had the lowest restorative service utilization rate among REM participants.

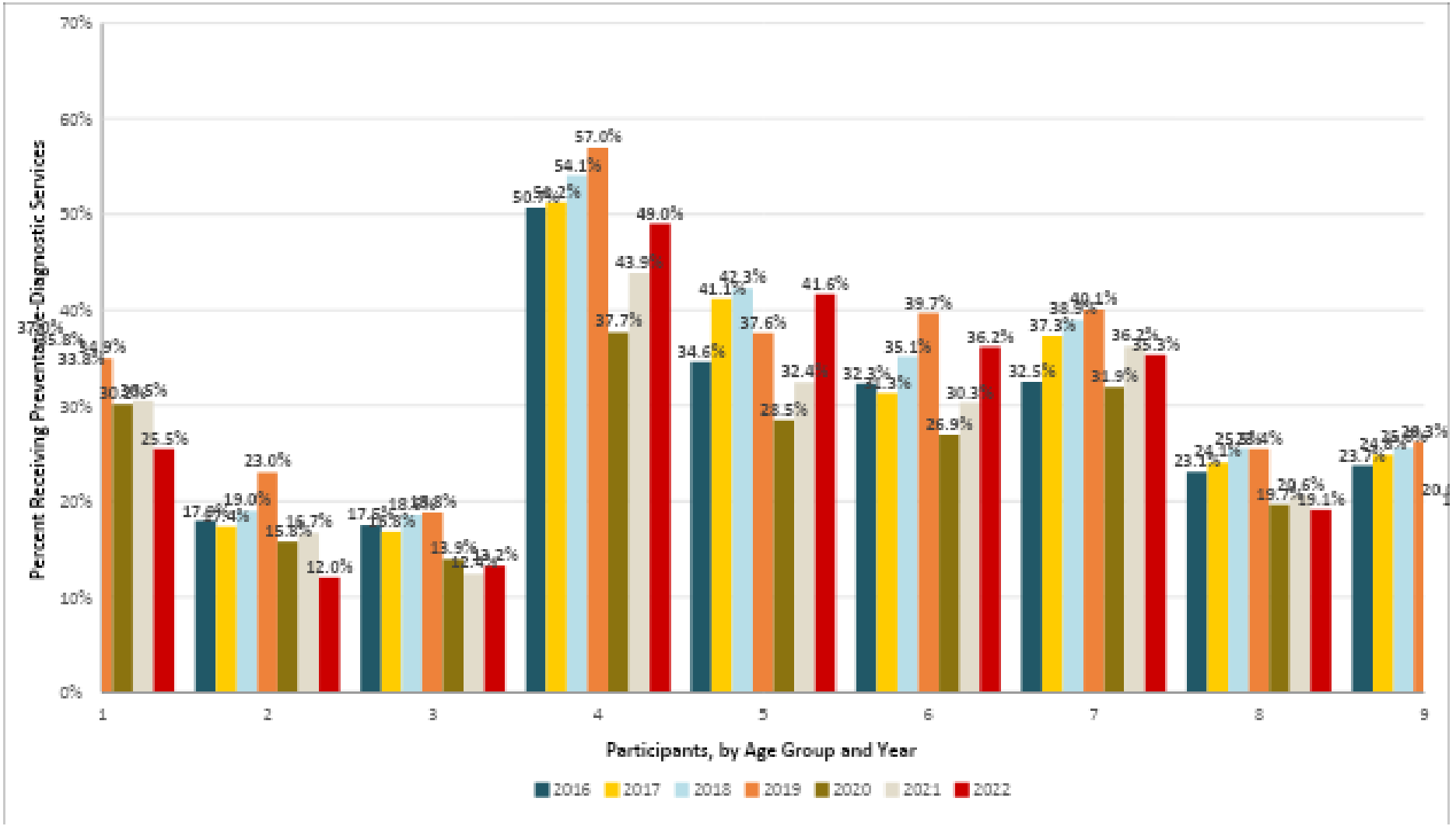
Figure 27. Percentage of Former Foster Care, REM, and Pregnant Participants in Medicaid Receiving Restorative Dental Services by Age Group, CY 2016–CY 2022*



*The data presented here have been updated and should not be compared to the previous year's report.

Figure 28 shows the percentages of former foster care, REM, and pregnant participants who received preventative-diagnostic dental services from CY 2016 to CY 2022. REM participants had the highest preventative-diagnostic dental service utilization rates for all age groups for every year in the evaluation period. Among former foster care participants, all age groups saw a decline in preventative-diagnostic dental service utilization between CY 2016 and CY 2022, with each age group dropping between 4.3 and 11.5 percentage points; the rates for the REM and pregnant coverage categories each saw overall increases or decreases over the evaluation period depending on the age group. For all three populations, utilization rates were highest in participants aged 18-20 years for every year in the evaluation period, with utilization rates for this age group at 25.5% among former foster care participants, 49.0% among REM participants, and 35.3% among pregnant participants in CY 2022. In CY 2022, the lowest preventative-diagnostic utilization rates were in the 21-23-year-old former foster care participants, in the 24-26-year-old REM participants, and in both of these age groups among pregnant participants.

Figure 28. Percentage of Former Foster Care, REM, and Pregnant Participants in Medicaid Receiving Preventative-Diagnostic Dental Services by Age Group, CY 2016–CY 2022*



*The data presented here have been updated and should not be compared to the previous year's report.

Adult Dental Pilot Program

On July 2, 2018, MDH submitted an amendment to its §1115 waiver for the adult dental pilot to provide dental services to adults between the ages of 21 and 64 who are eligible for both Medicare and Medicaid. Dually eligible individuals do not receive dental care through Medicaid; they receive limited coverage through Medicare. MDH received approval April 1, 2019, and implemented the program effective June 1, 2019. The adult dental pilot program was approved to continue in the next waiver renewal period through December 31, 2026. MDH's aim is to determine whether adult dental benefits will improve health outcomes for vulnerable adults.

The pilot includes coverage for diagnostic, preventive, and restorative services, as well as extractions. In CY 2022, 5,138 (10.4%) participants in the pilot had at least one dental visit of any type, 4,882 (9.9%) had a diagnostic visit, 2,908 (5.9%) had a preventive care visit, and 1,272 (2.6%) had a restorative visit (Table 92).

Table 92. Number and Percentage of Adult Pilot Program Participants Enrolled for Any Period in Medicaid Receiving Dental Services, by Type of Service, CY 2022

Dental Service	Any Dental Visit		Diagnostic		Preventive		Restorative	
	Number of Enrollees with Visit	Percentage with Visit	Number of Enrollees with Visit	Percentage with Visit	Number of Enrollees with Visit	Percentage with Visit	Number of Enrollees with Visit	Percentage with Visit
At least One Visit	5,138	10.4%	4,882	9.9%	2,908	5.9%	1,272	2.6%
No Services	44,373	89.6%	44,629	90.1%	46,603	94.1%	48,239	97.4%
Total	**49,511**	**100%**	**49,511**	**100%**	**49,511**	**100%**	**49,511**	**100%**

Table 93 presents the number and percentage of adult dental participants in Medicaid with at least one ED visit with a dental diagnosis or with a dental primary diagnosis. The adult dental pilot program began in 2019, so CY 2018 shows participants' ED utilization prior to implementation of the program, and the period from CY 2019 to CY 2022 shows participants' utilization after program implementation. Participants were eligible for the program if they were between the ages of 21 and 64 and were dually eligible for Medicare and Medicaid.[74] These same requirements were used to identify participants for inclusion in this analysis prior to implementation of the program. The percentages of total adult dental participants who had at least one ED visit with a dental diagnosis or a primary dental diagnosis were 0.2% and 0.1%, respectively, prior to implementation of the adult dental pilot program. After implementation of the pilot program in CY 2019, these rates increased to 0.8% and 0.5%, respectively, then decreased until CY 2022. In addition, the percentage of users (enrollees who received dental services during the evaluation period) with at least one ED visit with a dental diagnosis decreased by 2.3 percentage points during the evaluation period, and the percentage of users with at least one ED visit with a primary dental diagnosis declined by 1.4 percentage points.

[74] 2022 MD Laws Ch. 303.

Table 93. Number and Percentage of Adult Dental Participants in Medicaid with at Least One ED Visit and a Dental Diagnosis, CY 2018–CY 2022

Calendar Year	Total Number of Participants	Total Unique Users	At Least One ED Visit with Dental Diagnosis			At Least One ED Visit with Dental Primary Diagnosis		
			Number of Participants	Percentage of Total Participants	Percentage of Users	Number of Participants	Percentage of Total Participants	Percentage of Users
2018	51,757	1,164	96	0.2%	8.2%	53	0.1%	4.6%
2019	50,237	5,308	414	0.8%	7.8%	247	0.5%	4.7%
2020	45,181	4,760	334	0.7%	7.0%	168	0.4%	3.5%
2021	46,073	5,040	302	0.7%	6.0%	149	0.3%	3.0%
2022	49,511	5,138	304	0.6%	5.9%	166	0.3%	3.2%

Table 94 presents the total Medicaid costs of adult dental participants. While the number of enrollees decreased from 51,757 in CY 2018 to 49,511 in CY 2022, the total FFS Medicaid costs increased by $336,642,942 throughout the measurement period, and the PMPM cost increased by $512.

Table 94. Total Medicaid Costs of Adult Dental Participants, CY 2018–CY 2022

Calendar Year	Total FFS Costs	Total Enrollees	Average Cost per Enrollee	Total Member Months	PMPM Cost
2018	$991,398,079	51,757	$19,155	544,317	$1,821
2019	$1,022,855,873	50,237	$20,361	530,557	$1,928
2020	$1,053,825,881	45,181	$23,325	498,418	$2,114
2021	$1,160,815,047	46,073	$25,195	524,235	$2,214
2022	$1,328,041,021	49,511	$26,823	569,200	$2,333

National Diabetes Prevention Program (DPP)

MDH expanded coverage of the National DPP lifestyle change program to all eligible HealthChoice participants as of September 1, 2019. The National DPP is an evidence-based program established by the CDC to prevent or delay the onset of type 2 diabetes through healthy eating and physical activity. Hilltop partnered with MDH and MCOs to develop an algorithm that MCOs can use to search their members' electronic medical records to identify individuals who may be at risk of developing type 2 diabetes and therefore potentially be eligible for enrollment in the DPP. MDH is also focusing on establishing needed infrastructure such as provider enrollment and MCO contracting. By identifying participants early through screening and testing for prediabetes, MDH hopes to reduce the incidence of diabetes and increase the quality of life for participants in the Maryland Medicaid program. This program also

aligns with the population health goals under Maryland's Total Cost of Care Model and the SIHIS initiative.

Since its implementation in September 2019 through December 31, 2022, there have been 1,379 DPP encounters. The earliest date of service was June 3, 2020. Of the 1,379 DPP encounters, 641 (46.5%) were in-person, 555 (40.2%) were in-person makeup sessions, and 176 (12.8%) were conducted virtually. The average age of DPP participants was 47 years old (standard deviation: 12 years). The majority were women (84.1%), self-identified as Black/African American (70.5%), resided in Prince George's County (37.3%) and were in the Families and Children Medicaid coverage group (92.7%).

Association between DPP Participation and Diabetes Incidence and Utilization

Multivariate logistic models and multivariate linear models were used to analyze the impact of DPP participation on diabetes incidence, number of ED visits, and number of inpatient admissions. Table 95 presents the impact of DPP participation on diabetes incidence when controlling for demographic characteristics (race/ethnicity, age, gender, and county of residence), comorbidity levels, coverage group, MCO, and year fixed effects.[75] Participation in the DPP program was associated with significantly lower odds of developing diabetes (OR = 0.511, p<0.01). A marginal increase in age was associated with an increase in the odds of developing diabetes (OR = 1.017, p<0.001). Participants whose race/ethnicity was classified as Hispanic or "Other" had reduced odds of developing diabetes compared to Asian enrollees. Compared to those in the ABD coverage category, the Family and Children, MCHP, and "Other" coverage categories (including ACA) were associated with lower diabetes incidence (p<0.001). Increasing levels of comorbidity were associated with increasing odds of developing diabetes (p<0.001).

Table 95. Associations between DPP Participation and Diabetes Incidence among HealthChoice Participants Aged 18-64 Years with Prediabetes, CY 2020–CY 2022

Effect	Diabetes Incidence		
	Odds Ratio	95% CI	
In DPP	0.511**	0.279	0.936
Age	1.017***	1.015	1.019
Male†	1.018	0.978	1.060
Race†			
Black	0.965	0.887	1.050
White	0.936	0.849	1.033
Hispanic	0.878**	0.790	0.977
Other	0.730***	0.667	0.799
County†			

[75] A person's comorbidity level is estimated based on the Johns Hopkins ACG methodology. For this analysis, Hilltop assigned individuals to one of five comorbidity categories (Low, Moderate, High, Very High) based on their claims records in the measurement years (2018 to 2022).

Effect	Diabetes Incidence		
	Odds Ratio	95% CI	
Anne Arundel	0.703***	0.588	0.840
Baltimore City	0.739***	0.625	0.874
Baltimore County	0.705***	0.596	0.834
Calvert	0.909	0.713	1.158
Caroline	0.995	0.759	1.304
Carroll	0.571***	0.453	0.719
Cecil	0.723***	0.574	0.911
Charles	0.653***	0.532	0.802
Dorchester	0.891	0.689	1.153
Frederick	0.639***	0.529	0.773
Garrett	1.506**	1.103	2.058
Harford	0.735***	0.608	0.888
Howard	0.561***	0.461	0.682
Kent	0.659**	0.469	0.925
Montgomery	0.637***	0.537	0.756
Out of State	0.907	0.497	1.656
Prince George's	0.667***	0.563	0.791
Queen Anne's	0.667**	0.489	0.910
Somerset	0.606***	0.467	0.785
St. Mary's	0.674***	0.545	0.835
Talbot	0.721**	0.528	0.986
Washington	0.710***	0.583	0.865
Wicomico	0.468***	0.383	0.573
Worcester	0.589***	0.466	0.744
Last Coverage Cat.†			
Families & Children	0.719***	0.680	0.759
MCHP	0.510***	0.375	0.692
Other	0.712***	0.637	0.796

Effect	Diabetes Incidence		
	Odds Ratio	95% CI	
Last MCO†			
Amerigroup	1.112	0.965	1.281
JAI	1.211*	1.023	1.434
Kaiser	0.748***	0.643	0.870
MPC	1.127	0.998	1.274
MedStar	0.947	0.833	1.078
Priority Partners	1.069	0.947	1.206
United	0.967	0.854	1.095
Univ of MD Health Partners	1.048	0.929	1.183
Comorbidity Score†			
Low	0.208***	0.189	0.230
Moderate	0.564***	0.537	0.593
Other	0.371***	0.310	0.445
Very High	1.98***	1.881	2.084
Year†			
2021	0.629***	0.607	0.651
2022	1.035*	1.002	1.070
Constant	0.231***	0.182	0.294

***p<0.001, **p<0.01, *p<0.05

†, Reference Groups: Female, Asian, Allegany, Aged, Blind, or Disabled, Aetna, High, 2020

Table 96 presents the linear regression analysis of the impact of DPP participation on the number of ED visits, controlling for demographic characteristics (race/ethnicity, age, gender, and county of residence), comorbidity levels, coverage group, MCO, and year fixed effects.[76] Coefficient values in a linear regression analysis represent the predicted change in the dependent variable value associated with either (1) a one unit increase in the independent (or predictor) variable, if the predictor variable is a continuous variable or (2) as compared to the reference group, if the predictor variable is a categorical or dichotomous variable. No statistically significant association was found between DPP participation and the number of ED visits. A one-year increase in patient age was associated with a decrease of 0.024 ED visits

[76] A person's comorbidity level is estimated based on the Johns Hopkins ACG methodology. For this analysis, Hilltop assigned individuals to one of five comorbidity categories (Low, Moderate, High, Very High) based on their claims records in the measurement years (2018 to 2022).

(p<0.001). Compared to those in the ABD coverage category, the Family and Children, MCHP, and "Other" coverage categories (including ACA) were associated with lower ED utilization (p<0.001). Increasing levels of comorbidity were associated with an increased number of ED visits.

Table 96. Associations between DPP Participation and Number of ED Visits among HealthChoice Participants Aged 18-64 Years with Prediabetes, CY 2020–CY 2022

Effect	Number of ED Visits		
	Coefficient	95% CI	
In DPP	-0.203	-0.416	0.011
Age	-0.024***	-0.026	-0.022
Male†	0.135***	0.086	0.184
Race†			
Black	0.327***	0.283	0.371
White	0.159***	0.105	0.213
Hispanic	0.080***	0.031	0.129
Other	0.154***	0.099	0.208
County†			
Anne Arundel	-0.027	-0.200	0.147
Baltimore City	0.504***	0.324	0.685
Baltimore County	0.028	-0.156	0.212
Calvert	0.136	-0.079	0.351
Caroline	-0.014	-0.224	0.197
Carroll	-0.109	-0.300	0.081
Cecil	0.298***	0.092	0.503
Charles	0.104	-0.089	0.296
Dorchester	0.670***	0.344	0.996
Frederick	0.015	-0.190	0.219
Garrett	-0.044	-0.276	0.187
Harford	-0.053	-0.230	0.124
Howard	-0.163	-0.334	0.007
Kent	0.312	0.050	0.574
Montgomery	-0.043	-0.211	0.125
Out of State	0.542	-0.465	1.550
Prince George's	-0.103	-0.270	0.065
Queen Anne's	0.432***	0.167	0.696
Somerset	0.285*	0.014	0.556

Effect	Number of ED Visits		
	Coefficient	95% CI	
St. Mary's	0.173	-0.026	0.372
Talbot	0.033	-0.194	0.260
Washington	0.026	-0.165	0.216
Wicomico	0.132	-0.051	0.316
Worcester	0.138	-0.061	0.337
Last Coverage Cat.†			
Families & Children	-0.505***	-0.622	-0.388
MCHP	-1.071***	-1.218	-0.924
Other	-0.583***	-0.707	-0.459
Last MCO†			
Amerigroup	0.013	-0.082	0.107
JAI	0.342***	0.106	0.577
Kaiser	-0.159***	-0.227	-0.091
MPC	0.063	-0.021	0.148
MedStar	-0.009	-0.095	0.078
Priority Partners	-0.006	-0.073	0.061
United	0.054	-0.033	0.140
Univ of MD Health Partners	0.013	-0.054	0.081
Comorbidity Score†			
Low	-0.827***	-0.864	-0.789
Moderate	-0.500***	-0.532	-0.468
Other	-0.518***	-0.599	-0.436
Very High	2.025***	1.927	2.123
Year†			
2021	-0.371***	-0.407	-0.335
2022	-0.107***	-0.149	-0.065
Constant	2.499***	2.277	2.721

***p<0.001, **p<0.01, *p<0.05

†, Reference Groups: Female, Asian, Allegany, Aged, Blind, or Disabled, Aetna, High, 2020

Table 97 presents the impact of DPP participation on the number of inpatient admissions, demographic characteristics (race/ethnicity, age, gender, and county of residence), comorbidity levels, coverage group, MCO, and year fixed effects.[77] No statistically significant association was found between DPP participation and number of inpatient admissions. Increasing age of participants was associated with a decrease in the number of inpatient admissions ($p<0.001$). Compared to those in the ABD coverage category, the Families and Children, MCHP, and "Other" coverage categories (including ACA) were associated with lower inpatient utilization ($p<0.001$).

Table 97. Associations Between DPP Participation and Number of Inpatient Admissions among HealthChoice Participants Aged 18-64 Years with Prediabetes, CY 2020–CY 2022

Effect	Number of Inpatient Admissions		
	Coefficient	95% CI	
In DPP Program	-0.036	-0.105	0.034
Age	-0.003***	-0.003	-0.002
Male†	0.069***	0.058	0.079
Race†			
Black	0.020***	0.008	0.032
White	0.006	-0.008	0.021
Hispanic	-0.002	-0.018	0.013
Other	0.052***	0.036	0.067
County†			
Anne Arundel	-0.026	-0.086	0.033
Baltimore City	0.047	-0.012	0.105
Baltimore County	-0.012	-0.069	0.046
Calvert	-0.033	-0.104	0.038
Caroline	-0.050	-0.122	0.022
Carroll	-0.046	-0.111	0.019
Cecil	-0.013	-0.086	0.060
Charles	-0.047	-0.109	0.014
Dorchester	-0.026	-0.103	0.052
Frederick	-0.051	-0.111	0.008
Garrett	-0.078	-0.164	0.007
Harford	-0.008	-0.069	0.052
Howard	-0.021	-0.080	0.038
Kent	-0.031	-0.129	0.066

[77] A person's comorbidity level is estimated based on the Johns Hopkins ACG methodology. For this analysis, Hilltop assigned individuals to one of five comorbidity categories (Low, Moderate, High, Very High) based on their claims records in the measurement years (2018 to 2022).

Effect	Number of Inpatient Admissions		
	Coefficient	95% CI	
Montgomery	-0.036	-0.093	0.021
Out of State	0.094	-0.129	0.318
Prince George's	-0.021	-0.078	0.037
Queen Anne's	-0.041	-0.133	0.052
Somerset	-0.101**	-0.174	-0.029
St. Mary's	-0.043	-0.106	0.019
Talbot	-0.076	-0.156	0.003
Washington	-0.033	-0.097	0.032
Wicomico	-0.093**	-0.153	-0.033
Worcester	-0.100**	-0.172	-0.028
Last Coverage Cat.†			
Families & Children	-0.148***	-0.172	-0.123
MCHP	-0.206***	-0.241	-0.171
Other	-0.177***	-0.204	-0.150
Last MCO†			
Amerigroup	0.001	-0.031	0.033
JAI	0.043	-0.009	0.095
Kaiser	0.015	-0.010	0.040
MPC	-0.037**	-0.060	-0.015
MedStar	-0.046***	-0.068	-0.024
Priority Partners	-0.024*	-0.046	-0.001
United	-0.029**	-0.050	-0.007
Univ of MD Health Partners	-0.017	-0.038	0.005
Comorbidity Score†			
Low	-0.070***	-0.079	-0.062
Moderate	-0.065***	-0.072	-0.058
Other	-0.024*	-0.042	-0.005

Effect	Number of Inpatient Admissions		
	Coefficient	95% CI	
Very High	0.739***	0.717	0.761
Year†			
2021	-0.083***	-0.092	-0.074
2022	-0.039***	-0.049	-0.028
Constant	0.415***	0.346	0.484

***p<0.001, **p<0.01, *p<0.05

†, Reference Groups: Female, Asian, Allegany, Aged, Blind, or Disabled, Aetna, High, 2020

Total Cost of Care

Table 98 compares the PMPM cost for HealthChoice enrollees with a prediabetes diagnosis in DPP to enrollees with a prediabetes diagnosis not in DPP. Analysis was restricted to enrollees aged 18 to 65 who are not currently pregnant.

PMPM costs for DPP participants were consistently lower than the corresponding costs for non-DPP participants. However, PMPM costs for DPP participants increased by 30.4% between CY 2020 and CY 2022 as the program enrolled more members, shrinking the cost differences between DPP and non-DPP participants to just over $20 in 2022. PMPM costs for non-DPP participants increased slightly between CY 2020 and CY 2022.

Table 98. Total Cost of Care for HealthChoice DPP Participants vs Non DPP Participants with a Prediabetes Diagnosis, CY 2020–CY 2022

Calendar Year	Total FFS Cost	Total Capitation	Total Medicaid Cost	PMPM Cost
DPP Participants				
2020	$68,550.65	$329,858.69	$398,409.34	$889.31
2021	$9,3043.47	$429,351.52	$522,394.99	$818.80
2022	$461,774.56	$880,287.82	$1,342,062.38	$1,159.59
Non-DPP Participants				
2020	$303,110,741.40	$691,808,214.80	$994,918,956.20	$1,146.57
2021	$187,174,555.60	$427,933,793.30	$615,108,348.80	$1,121.17
2022	$317,861,382.80	$ 723,132,656.30	$1,040,994,039.00	$1,180.35

Increased Community Services (ICS)

The ICS program provides cost-effective HCBS to certain adults with physical disabilities as an alternative to institutional care in a nursing facility. The goal of the program is to provide quality services for individuals aged 18 and over in the community, ensure the safety and wellbeing of its participants, and increase opportunities for self-advocacy and self-reliance. Identical to MDH's Community Options §1915(c) waiver in all aspects except financial eligibility, the ICS program was initially approved as part of the HealthChoice demonstration in 2009. To

participate in the program, individuals must have a nursing facility stay of 90 days or more and be Medicaid-eligible in the last 30 days before transition. Once transitioned, participants contribute any income they have above 300% of their Supplemental Security Income to the cost of their care in the community. The 2016 waiver renewal expanded the program from 30 to 100 potential participants, and the ICS program is included in the 2021 waiver renewal. Hilltop analyzed the transitions of former long-stay nursing facility residents to community settings after they applied to the ICS program.

Methodology

The ICS measure utilized two data sources: MMIS2 and *LTSSMaryland*. *LTSSMaryland* was used to define those who meet the technical eligibility requirements to apply for the ICS program. This includes Older Adult Waiver applicants who were denied due to overscale income who also applied for the ICS program from a nursing facility during the evaluation period: CY 2018 through CY 2022. To identify which of these people went on to transition from a nursing facility to the community under the ICS program, MMIS2 data on special program enrollment were examined.

Results

Between CY 2018 and CY 2022, 103 long-stay nursing facility residents were eligible to transition from a nursing facility to a community setting under the ICS program. During this time, 14 people (13.6% of those eligible) successfully transitioned under the ICS program—although there were no new participants in CY 2022. While this program is small, it is contributing to the rebalancing effort from nursing facility living to the use of HCBS.

Family Planning Program

The 2016 HealthChoice waiver allowed MDH to provide a limited benefit package of family planning services to eligible participants through the end of 2021. As of January 2022, family planning services were no longer covered through the §1115 waiver as it was incorporated into the State Plan. The program covers medical services related to family planning, including office and clinic visits, physical examinations, certain laboratory services, treatments for sexually transmitted infections, family planning supplies, permanent sterilization and reproductive health counseling, education, and referrals.

In CY 2017, women younger than 51 years—regardless of postpartum status—who were not otherwise eligible for Medicaid, CHIP, or Medicare and who had a family income at or below 200% of the FPL were eligible for the Family Planning program. MDH expanded eligibility under its Family Planning program to lift the age limit, open coverage to include men, and cover services for postpartum individuals effective July 1, 2018. Specifically, the §1115 waiver allowed women to receive full Medicaid benefits for two months postpartum. As of April 2022, MDH has expanded postpartum care services to 12 months regardless of any changes in income or

household size through a state plan amendment.[78] This aligns with Maryland's SIHIS priority to improve maternal and child health. Those who no longer qualify for Medicaid pregnancy benefits after the end of the postpartum period because they exceed income limits will be automatically enrolled in the Family Planning program for 12 months. After 12 months, these women can re-apply to continue their enrollment.

Table 99 shows that Family Planning program enrollment increased by 19.7% from CY 2018 to CY 2019, followed by an 8.6% decrease from CY 2020 to CY 2022. The initial increase in enrollment from CY 2018 to CY 2019 may be attributed to expanded eligibility in July 2018. The percentage of participants with at least one service decreased by 7.1 percentage points during the evaluation period.

Table 99. Number and Percentage of Family Planning Participants (Any Period of Enrollment) Who Received a Corresponding Service, CY 2018–CY 2022

	CY 2018	CY 2019	CY 2020	CY 2021	CY 2022
Number of Participants	13,680	16,375	14,748	13,838	13,486
Number with at Least 1 Service	1,901	2,034	1,634	1,156	914
Percentage with at Least 1 Service	13.9%	12.4%	11.1%	8.4%	6.8%

The percentage of participants enrolled in the Family Planning program for 12 months with at least one service decreased from 11.0% in CY 2018 to 5.5% in CY 2022, despite a slight increase to 10.5% in CY 2020 (Table 100). The number of participants with 12 months of enrollment in the program also remained stable in CY 2018 and CY 2019, but increased substantially in CY 2020 and CY 2021, for an overall increase of 38.6% over the evaluation period.

Table 100. Number and Percentage of Family Planning Participants (12-Month Enrollment) Who Received a Corresponding Service, CY 2018–CY 2022

	CY 2018	CY 2019	CY 2020	CY 2021	CY 2022
Number of Participants	5,965	5,962	10,331	11,171	8,268
Number with at Least 1 Service	654	507	1,083	897	455
Percentage with at Least 1 Service	11.0%	8.5%	10.5%	8.0%	5.5%

While the number of women enrolled in the Family Planning program for any period of enrollment remained stable from CY 2018 to CY 2022, the number of women enrolled continuously increased, most likely due to continuous Medicaid eligibility required under MOE. Women who lose Medicaid coverage after their postpartum period are automatically enrolled in the Family Planning program, and their coverage auto-renews annually (previously coverage was limited up to five years). However, some women may be unaware that they are enrolled in

78 https://health.maryland.gov/newsroom/Pages/Maryland-Department-of-Health-announces-expanded-Medicaid-coverage-for-new-mothers.aspx.

the program because no action is required on their part. Consequently, they may not seek services or know they are eligible to receive them.

Collaborative Care

MDH received approval to implement a CoCM pilot program in April 2020, and coverage for collaborative care services began in July 2020. The CoCM pilot program integrates physical and behavioral health services in primary care settings to address the mental health and/or SUD needs of Maryland HealthChoice participants who have not previously received effective treatment. Participants receive services from an enhanced care team consisting of a treating practitioner, a behavioral health case manager, and a psychiatric consultant at one of three pilot sites operated by the Privia Medical Group—one of which is located in a rural area, a location selected specifically because the behavioral health needs of rural populations have traditionally been underserved (Maryland Department of Health, 2022a). This care team can provide a variety of services. However, the treating practitioner only bills using select Current Procedural Terminology (CPT) codes and is reimbursed through an FFS payment arrangement.

Hilltop's analysis includes Medicaid participants enrolled in FFS who were non-dually eligible for Medicare with a behavioral health diagnosis and did not receive services through the ASO. Enrollees were identified if they had a claim for behavioral health services but did not receive services through the ASO for the same conditions (i.e., depression, SUD, mental health, co-occurring, or any other behavioral health condition). Hilltop receives files containing information on billing and the services provided to participants. However, these services are recorded as categorical interventions such as "Chart Review," "Psychiatric Consultation Review," and "Brief Check In," so it is not always clear whether treatment or other clinical services were provided during any given intervention. Therefore, for the purposes of this evaluation, participants are considered to have had at least one clinical contact in a month if there is a record of their provider billing for services in that month because providers are only expected to bill if treatment is provided.

Table 101 shows the number of CoCM participants who received at least one clinical contact each month from April 2020 to June 2023 and the number of active participants who received a clinical contact at the end of the last month of fiscal year quarter.[79] Overall, the number of participants who received a clinical contact increased over the evaluation period: from 14 in April 2020 to 108 in June 2023, with the highest number of participants with a clinical contact occurring in July 2022. Additionally, about as many participants received a clinical contact as there were active participants in almost all months for which active participant data were available, with some variation as to which measure was higher for any given month. The largest gap seen was in December 2022, when there were 16 fewer participants receiving a clinical contact than active participants.

[79] Because of the structure of the files, participant status in the CoCM pilot program ("Active," "Completed," "Pending," or "Not Enrolled") is only available as of the end of the last month of each fiscal year quarter.

Table 101. Number of CoCM Pilot Program Participants Who Received at Least One Clinical Contact by Month, April 2020–June 2023

Month & Year	Participants Who Received a Clinical Contact	Active Participants as of the End of the Month*
April 2020	14	
May 2020	33	
June 2020	50	47
July 2020	50	
August 2020	62	
September 2020	68	65
October 2020	58	
November 2020	57	
December 2020	70	67
January 2021	77	
February 2021	73	
March 2021	84	78
April 2021	75	
May 2021	75	
June 2021	78	79
July 2021	80	
August 2021	86	
September 2021	84	89
October 2021	80	
November 2021	94	
December 2021	83	89
January 2022	81	
February 2022	86	
March 2022	94	92
April 2022	104	
May 2022	113	
June 2022	114	118
July 2022	133	
August 2022	130	
September 2022	111	112
October 2022	99	
November 2022	98	
December 2022	92	108
January 2023	97	
February 2023	94	
March 2023	102	112
April 2023	101	
May 2023	102	
June 2023	108	113

*Participant status only available as of the end of each fiscal year quarter.

One method of tracking the treatment progress of participants in the CoCM pilot program is by tracking changes in their scores over time on the Patient Health Questionnaire-9 (PHQ-9) screening for depression (Kroenke, et al., 2001). Scores on the PHQ-9 can range from 0 to 27, with scores of 10 and above indicating moderate to severe depression and scores below 10 indicating mild to minimal depression. Table 102 shows the number and percentage of unique (i.e., unduplicated) participants with at least one clinical contact who received at least one PHQ-9 screening for depression by fiscal year quarter. With the exception of the first two quarters, more than 90% of unique participants with clinical contact had a PHQ-9 screening in each quarter.

Table 102. Unique and Total CoCM Participants Who Received at Least One PHQ-9 Screening and at Least One Clinical Contact by Quarter, Q4 FY 2020–Q4 FY 2023

Quarter and FY	Unique Participants Who Received at Least One PHQ-9 Screening	Unique Participants Who Received at Least One Clinical Contact	Percent Unique*
Q4 FY 2020	36	59	61.0%
Q1 FY 2021	53	92	57.6%
Q2 FY 2021	88	95	92.6%
Q3 FY 2021	100	104	96.2%
Q4 FY 2021	94	101	93.1%
Q1 FY 2022	107	112	95.5%
Q2 FY 2022	113	115	98.3%
Q3 FY 2022	119	126	94.4%
Q4 FY 2022	141	145	97.2%
Q1 FY 2023	166	167	99.4%
Q2 FY 2023	132	136	97.1%
Q3 FY 2023	134	136	98.5%
Q4 FY 2023	135	139	97.1%

*Denominator is the unique participants who received at least one clinical contact.

Table 103 presents the number of CoCM participants who received at least one PHQ-9 screening, were enrolled for at least 70 days in the pilot program and had either 1) a 50% reduction from their first recorded screening score to their last recorded score or 2) a drop from their first recorded screening greater than or equal to 10 to less than 10 on their last recorded screening. Of the 425 participants with a recorded screening who were enrolled for 70 days or more, 43.1% (n = 183) were reported to have a substantial decrease in their screening scores.

Table 103. Number and Percentage of CoCM Participants Enrolled for at Least 70 Days Who Had Large Recorded Decreases in PHQ-9 Screening Scores, Q4 FY 2020–Q4 FY 2023

Measure	Number	Percentage*

Participants Who Received At Least One PHQ-9 Screening, ***Were Enrolled for At Least 70 Days, and Had Either a 50% Reduction from First Recorded to Last Recorded Screening, or a Drop from First Recorded Screening to a Score of Less Than 10***	183	43.1%
Participants Who Received At Least One PHQ-9 Screening ***and Were Enrolled for At Least 70 Days***	425	100%

*Denominator is the number of participants who received at least one screening and were enrolled for at least 70 days.

Table 104 shows the number of participants who received at least one PHQ-9 screening, as well as the number and percentage of these participants whose last recorded screening score was less than 5, suggesting minimal depression. Just over 25% (n = 170) of the 617 CoCM participants who received at least one screening had a score below 5 for their last recorded PHQ-9 score.

Table 104. Number and Percentage of CoCM Participants Who Received at Least One PHQ-9 Screening and Whose Last Recorded PHQ-9 Score Was Below 5, Q4 FY 2020–Q4 FY 2023

Measure	Number	Percentage*
Total Number of Participants Who Received at Least One PHQ-9 Screening and Whose Last Recorded PHQ-9 Score was Below 5	170	27.6%
Total Number of Participants Who Received at Least One PHQ-9 Screening	617	100%

*Denominator is the number of participants who received at least one screening.

Data on participants with a claim for specialty behavioral health services paid by the ASO within 30 days of discharge from the CoCM pilot program between April 2020 and June 2023 are presented in Tables 105 and 106. A participant was considered discharged based on the discharge date provided in the CoCM files, though these files do not describe the reason for discharge. Of the 441 participants who were discharged from the CoCM pilot program, 90 (20.4%) had at least one subsequent claim for specialty behavioral health services (Table 105). The majority (66.7%) of these 90 had five or fewer claims.

Table 105. Number of Participants with at Least One Claim for Specialty Behavioral Health Services within 30 Days of Discharge from the CoCM Pilot Program, April 2020–June 2023

Number of Claims for Specialty Services	Number of Participants	Percentage of Discharged Participants with a Claim	Percentage of All Discharged Participants
1	22	24.4%	4.9%
2	12	13.3%	2.7%
3	*	*	*
4	*	*	*
5	*	*	*
6 to 10	19	21.1%	4.3%

More than 10	11	12.2%	2.5%
Total	**90**	**100%**	**20.4%**
Total Discharged Participants	**441**		

*Cell values of 10 or less have been suppressed.

Table 106 shows the provider specialty type that was recorded on each of the 565 total identified claims. The provider type with the highest number of submitted claims was "Outpatient Mental Health Clinic" (n = 141, 25.0%), followed by "Substance Use Disorder Program" (n = 104, 18.4%), and "Clinic, Drug" (n = 101, 17.9%). There were fewer claims with provider types associated with more intensive forms of treatment, such as "Acute Hospitals" and "IMD Residential SUD Adult" (n = 72, 12.7%). While it is not possible to know what services were provided and the reason, the fact that the most common three provider types combined represented 61.3% of all claims suggests most treatment received soon after discharge from the CoCM was in an outpatient, non-emergent setting.

Table 106. Provider Type Listed on Each Claim by CoCM Participants within 30 Days of Discharge from the CoCM Pilot Program, April 2020–June 2023

Provider Type	Claim Count	Percentage of Total
Acute Hospitals	12	2.1%
Certified Professional Counselor LPCP, LCMFT, LCADC, or LCPAT	*	*
Clinic, Drug	101	17.9%
IMD Residential SUD Adult	60	10.6%
Laboratories	48	8.5%
Mental Health Case Management Provider	*	*
Nurse Practitioners (CRNP)	52	9.2%
Outpatient Mental Health Clinic	141	25.0%
Physician	11	1.9%
Physician Assistant	*	*
Psychiatric Rehab Services Facility	*	*
Psychologist	*	*
Social Worker (LCSW-C)	13	2.3%
Special Other Chronic Hospital	*	*
Substance Use Disorder Program	104	18.4%
Total	**565**	**100%**

*Cell values of 10 or less have been suppressed

Section VII Conclusion

Throughout the demonstration period, resources generated through managed care efficiencies allowed MDH to establish innovative programs to improve the health status of the HealthChoice population. Residential Treatment for Individuals with SUD was made possible through a §1115 waiver of Medicaid's limitations for coverage of care in IMDs and is intended to improve outcomes for those with SUD. The PMPM cost of care for HealthChoice participants who received IMD treatment for an SUD increased by 24.4% between CY 2018 and CY 2022. Participants aged 65 and older had almost double the cost PMPM compared to other age

groups. The MAT utilization rate among IMD participants increased 2.2 percentage points between CY 2018 and CY 2021 but dropped by 4.1 percentage points in CY 2022. Logistic regressions analyzing the impact of IMD care on the probability of initiation and engagement for AOD treatment indicate that IMD treatment is associated with an increased likelihood of participants initiating treatment but with no impact on the likelihood of engaging in ongoing treatment.

Hilltop recently completed the fifth annual review of the ACIS pilot program, whose goals are to help optimize housing stability, health services use, and health outcomes for individuals at risk of institutional placement or homelessness. Around 78% of ACIS participants were homeless when they enrolled in the program, but around 82% of participants enrolled between CY 2018 and CY 2022 obtained stable housing, with the majority moved to permanent housing. The rates of inpatient admissions, ED visits, and avoidable ED visits among the ACIS population increased over the evaluation period, while the percentages of ACIS participants with an SUD or an MHD diagnosis decreased. Another notable change for the HealthChoice population is that dental services were expanded for two groups: former foster care participants receiving dental coverage up to age 26 (beginning in 2017), and adults who are dually eligible for both Medicare and Medicaid (beginning in 2019). The percentage of former foster care participants who had at least one ED visit with a dental diagnosis increased from 3.5% in CY 2018 to 4.2% in CY 2022. During the third full year of the adult dental program in CY 2022, 10.4% of the participants had at least one dental visit, a 0.5 percentage point decrease from CY 2021. Access to the National DPP lifestyle change program was expanded to all eligible HealthChoice participants as of September 1, 2019, to reduce the risk of type 2 diabetes and improve their health. Regression analyses indicate that participants in the DPP are significantly less likely to develop diabetes but found no association between DPP participation and ED visits inpatient admissions. PMPM costs were lower for DPP participants than for non-DPP participants each year between CY 2020 and CY 2022.

MDH monitors several ongoing programs, including the ICS program for ABD adults, where nearly 14% of participants transitioned to a community setting during the evaluation period. In the long-running Family Planning program, eligibility was expanded by removing the age limit and opening coverage to men as well. As of 2022, more than 13,400 participants (with any period of enrollment) were enrolled in the program, and 6.8% received a family planning service. Overall, the number of CoCM participants who received at least one clinical contact each month increased from 14 in April 2020 to 108 in June 2023.

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Appendix. Definitions and Specifications

Table A1. Coverage Category Inclusion Criteria

Coverage Category	Inclusion Criteria		
Aged, Blind, and Disabled (ABD)	Coverage Group = A04, H01, H98, H99, L01, L98, L99, S01, S02, S03, S04, S05, S06, S07, S08, S10, S14, S15, S16, S17, S18, S19, S20, S21, S98, S99		
MCHP	Coverage Group = D02, D04, P13, P14		
	OR		
	Coverage Group = F05, P06, P07	AND	Coverage Type = "S"
ACA Expansion	Coverage Group = A01, A02, A03		
Families & Children	All other Coverage Groups/Coverage Types		

Table A2. Medicaid Coverage Group Descriptions

Coverage Group	Description
A02	Childless Adults < 65, 138% FPL, inc disabled
A03	Parents and Caretaker Relative 124%-138% FPL
A04	Disabled Adults, no Medicare 77% FPL
C10	Family Planning Presumptive Eligibility (FPPE)
C13	Presumptive Eligibility
D02	MCHP Premium, 212%-264% FPL
D04	MCHP Premium, 265%-322% FPL
E01	IV-E Adoption & Foster Care
E02	FAC Foster Care
E03	State-Funded Foster Care
E04	State-Funded Subsidized Adoption
E05	Former Foster Care up to 26 years old
F02	Post-TCA: Earnings Extension
F05	Parents/Primary Caretakers and Children <123% FPL
F98	Children 19 and 20 123% FPL
F99	FAC - Med Needy Spenddown
G01	Refugee Cash Assistance
G02	Post RCA: Earnings Extension
G98	Refugee Med Needy Non-Spenddown
G99	Refugee Med Needy Spenddown
H01	HCB Waiver
H02	HCBS Waiver Participants Processed on E&E
H13	Walter Lomax- Healthcare to Individual Erroneously Convicted
H98	HCB Waiver Med Needy

Coverage Group	Description
L01	SSI Recipient in LTC
L98	ABD Long Term Care
L99	ABD Long Term Care Spenddown
P02	Pregnant Women up to 189% FPL
P06	Newborns of Elig Mothers and their < 1
P07	Children 1-19, 1-6 143% FPL, 6-19 138% FPL
P10	Family Planning Program
P11	Pregnant Women 190% - 264% of FPL
P13	Child Under 19, up to 189% FPL
P14	Title XXI MCHP. under 19, 190-211% FPL
S01	Public Assistance to Adults (PAA)
S02	SSI Recipients
S03	Qualified Medicare Beneficiary (QMB)
S04	Pickle Amendment
S05	Disabled Widowed Beneficiaries (DWB)
S06	Qualified Disabled Working Individuals
S07	Specified Low Income Medicare Beneficiaries (SLMB)
S13-D	Employed Individuals with Disabilities Program (EID)
S14	Qualifying Individuals (Qualifying Individual 1—QI-1)
S16	Increased Community Services Program (ICS) formerly MPDP
S19	Disabled Adult Children (DAC)
S20	Disabled Widowed Beneficiaries (DWB)
S21	Temporary Category for Children Losing SSI Transitioning to Other Children's Medicaid Coverage Groups
S98	ABD - Med Needy
S99	ABD – Spenddown
T02	Family LTC Med Needy
T03	Medicaid Child Under 1 in LTC
T04	Medicaid Child Under 6 in LTC
T05	Medicaid Child Under 19 in LTC
T99	Family LTC Med Needy Spenddown
W01	Women's Breast & CC
X01	State-Funded Aliens
X02	Non-MAGI Undocumented or Ineligible Aliens, Emergency Medical Services
X03	MAGI Undocumented or Ineligible Aliens, Emergency Medical Services

Table A3. Medicaid Coverage Type Descriptions

Coverage Type	Description
A	Aged
B	Blind
C	Complimentary Coverage
D	Disabled
E	FC and SA
F	Family
G	Refugee
H	HCB Waiver
M	Medicaid Only
N	Not in CARES
P	Pregnant
R	Regular
T	Family LTC
U	Unemployed
X	Miscellaneous

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