DRAFT
Maryland HealthChoice Program
Section 1115 Waiver Renewal Application

May 4, 2021

HealthChoice Section 1115 Waiver Renewal Application

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Introduction

The Maryland Department of Health (the Department) is pleased to submit this section 1115 waiver renewal application for the HealthChoice program. HealthChoice, Maryland's statewide mandatory Medicaid managed care program, was implemented in July 1997 under authority of a waiver through Section 1115 of the Social Security Act. The initial waiver was approved for five years. The Centers for Medicare and Medicaid Services (CMS) approved subsequent waiver renewals of three years each in 2002, 2005, 2008, 2011, and 2013. CMS approved a five-year renewal in 2016. The 2016 renewal focused not only on the HealthChoice goal of improving the health status of Marylanders with low income through improving coverage and access to care, providing a medical home to participants, and improving the quality of care, but also on expanding coverage through several pilot programs designed to address complex health needs and unmet social determinants of health needs. Between waiver renewals, the Department continually monitors HealthChoice performance on a variety of measures and completes an annual evaluation for HealthChoice stakeholders.

This renewal period will focus on maintaining high quality, cost-effective services and pilot programs initiated in the last waiver renewal period. In addition, the Department will focus on alignment with statewide efforts and population health measures designed to achieve success on the Statewide Integrated Health Improvement Strategy (SIHIS) as required by the Center for Medicare and Medicaid Innovation (CMMI) under Maryland's Total Cost of Care (TCOC) model.
This renewal application includes the following sections:

- A look back at the current waiver period, including:
    - Contextual factors affecting the Medicaid program, and
    - Existing waiver programs proposed for continuation and/or modification;
- A look ahead at the next waiver period, including proposed new demonstration programs:
    - Residential treatment for individuals with psychiatric disorders,
    - The Maternal Opioid Misuse (MOM) model, and
    - Emergency triage, treat, and transport (ET3) model;
- Requested changes and description of the requested waiver and expenditure authorities;
- A budget neutrality request and description of financial data demonstrating historical and projected expenditures;
- A description of the Department's public input process; and
- An evaluation report of the demonstration.

Waiver Application Summary

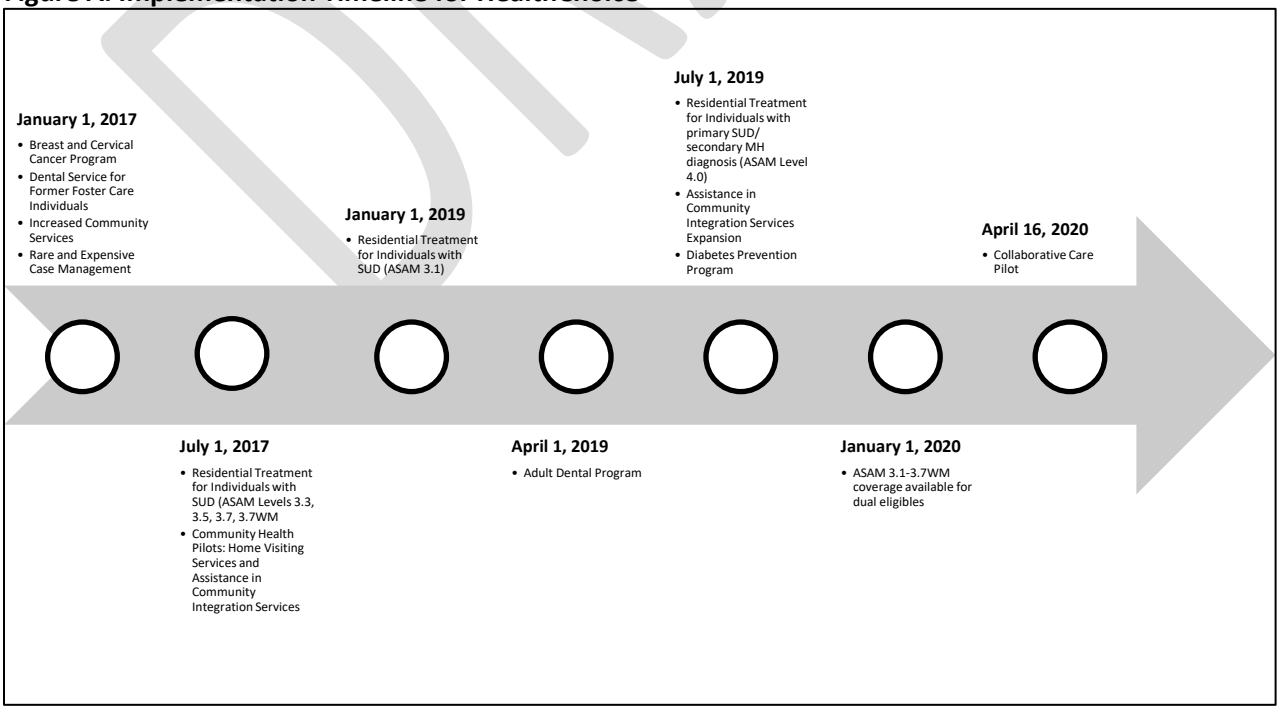
The table below summarizes programs for which the Department is requesting approval in this renewal application broken out into categories of Continuation As Is, Continue with Modification, or New Program/Service.

Table 1. Maryland Medicaid §1115 HealthChoice Waiver Summary of Programs

Existing Program/Service: Continue As Is	Existing Program/Service Continue with Modification	New Program/Service
• Adult Dental pilot program • Breast and Cervical Cancer Program • Collaborative Care Model pilot program • HealthChoice Diabetes Prevention Program • Hospital Presumptive Eligibility Process • Increased Community Services • Rare and Expensive Case Management	• Assistance in Community Integration Services pilot • Home Visiting Services pilot • Residential Treatment for Substance Use Disorder (SUD)	• Emergency Triage, Treat, and Transport model • Expansion of Institutions of Mental Disease (IMD) for Severe Mental Illness • MOM model

As the timeline in Figure A below shows, several of these programs/services were implemented at different times throughout the last waiver period.

Figure A. Implementation Timeline for HealthChoice



A Look Back at the Waiver: 2017-2021

Throughout the 2017-2021 waiver period, the Department made significant progress in meeting or exceeding the quality and access goals of the HealthChoice program, implementing payment and delivery system reform initiatives, and designating new population health priorities along with related measures and performance targets. Four years into this waiver period, however, the U.S. Department of Health and Human Services (HHS) declared a public health emergency (PHE) and Maryland declared a state of emergency in response to the global pandemic due to COVID-19. The Department took immediate steps, in partnership with CMS, to gain the authorities needed to continue operating the HealthChoice program and its demonstration programs. This section provides context around the Department's response to the COVID-19 PHE, activities undertaken to monitor quality and access, payment and delivery reform initiatives, and the Department's work on behavioral health care during the waiver period.

COVID-19 Global Pandemic

On January 31, 2020, HHS Secretary Alex M. Azar II declared a PHE to aid the nation's health care community in responding to COVID-19. On March 5, 2020, Maryland Governor Lawrence J. Hogan, Jr., declared a state of emergency due to the disease. As part of Maryland's response to this national emergency, the Department applied for and obtained numerous emergency waivers from CMS to enable continued operations during the PHE.

To prevent transmission and spread of COVID-19 disease and ensure the safety of participants and providers, the Department implemented certain flexibilities with respect to delivery of services via telehealth, these include permitting a participant's home or any other secure location to serve as a telehealth originating site; permitting reimbursement for audio-only health care services delivered by phone; and permitting use of telehealth technology not compliant with HIPAA. In April 2021, the Maryland General Assembly passed a law making many of these flexibilities permanent and permitting coverage of audio-only services until June 30, 2023.[1] The bill further requires the Maryland Health Care Commission, the Maryland Insurance Administration, and the Department to submit a report to the General Assembly on or before December 1, 2022. The report must assess telehealth utilization during the PHE and the appropriateness of telehealth across the continuum of care; the report will also include recommendations on telehealth coverage and payment levels.

The Department also waived monthly premium payments for the Maryland Children's Health Program Premium (MCHP) and Employed Individuals with Disabilities (EID), and introduced other flexibilities surrounding the delivery of long-term services and supports (LTSS). The Department also relaxed provider enrollment and registration requirements and collaborated with its nine Managed Care Organizations (MCOs) to establish a global risk corridor as a fiscal safeguard.

In addition, the Department followed CMS maintenance of effort (MOE) requirements in order to obtain an enhanced federal match granted during the PHE and to allow continued coverage regardless of redetermination status. Since the end of February 2020, enrollment in Maryland Medicaid has grown by over 160,000 participants. The short-term impacts of the COVID-19 pandemic on access to care and existing programs covered and proposed under the section 1115 waiver will be referenced as applicable below; the

[1] HB 123/SB 3—Preserve Telehealth Access Act of 2021 (Chapters 70 and 71 of the Acts of 2021).

longer-term effects of the pandemic on the HealthChoice program and its participants are as yet unknown. The Department will continue to monitor the impact of the pandemic through the next waiver period.

Evaluation and Quality Assurance Activities

The Department will study Maryland-specific results as part of the summative evaluation of the 2017-2021 HealthChoice demonstration waiver period, due to CMS in June 2023. The Department intends to continue to follow its existing approved evaluation design for programs it requests authority to continue in the new demonstration period, see Appendix D: Approved Evaluation Design Demonstration Hypotheses and Evaluation measures. Evaluation measures for new programs are noted in the New Programs section.

The Department also engages in a variety of activities to monitor progress towards demonstration goals and to monitor quality assurance each year. To ensure continual improvement, the Department has an extensive system for quality measurement that uses nationally recognized performance standards. The objective is to identify areas for improvement by developing processes and systems capable of profiling and tracking information regarding the care received by HealthChoice participants.

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 designed to meet health care needs by providing each member a single "medical home" through a primary care provider (PCP);
- Emphasizing health promotion and disease prevention by providing access to immunizations and other wellness services, such as regular prenatal care; and
- Expanding coverage to additional Marylanders with low income through resources generated by managed care efficiencies through 1115 waiver programs and pilots as described in this application.

A key component of the Department's ongoing monitoring efforts is the annual HealthChoice evaluation, which assesses the quality of care delivered to Maryland Medicaid participants in the HealthChoice Program. The evaluation includes Healthcare Effectiveness Data and Information Set® (HEDIS®) quality and performance measures selected because they either measure quality of health care directly or indicate utilization and performance indirectly related to providing quality health services. A copy of the most recent evaluation covering 2015-2019 is included in this document as Appendix D. Key highlights of the evaluation are noted below:

- **Improving access to care:** HealthChoice has largely succeeded in this area. Overall, program enrollment increased 20.4%, from 999,252 participants in CY 2015 to 1,202,718 participants in CY 2019, due in part to the ACA expansion. The most recent evaluation provides evidence that HealthChoice has successfully achieved its stated goals of improving coverage and access to care, providing a medical home to participants, and improving the quality of care. Some of these recent successes include increasing the rates of women receiving breast cancer screenings, colorectal cancer screenings, and ambulatory care visits among children in foster care. Among individuals with HIV/AIDS, a test for the quantity of immune system cells used to diagnose and monitor HIV/AIDS—referred to as viral load testing—as well as cluster of differentiation 4 (CD4) testing rates increased, while emergency department (ED) utilization dropped. The percentage of HealthChoice participants aged 18 to 64 years with at least one

inpatient hospital admission declined by .7 percentage points.

- **Provision of a Medical Home:** Participants choose one of the nine participating managed care organizations (MCOs), along with a PCP from their MCO's network, to oversee their medical care. 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 45.7% in CY 2015 to 41.4% in CY 2019. The percentage of HealthChoice adults with an inpatient admission designated as potentially preventable also decreased slightly, from .9% in CY 2015 to .8% in CY 2019.

- **Health Promotion and Disease Prevention:** Many indicators showed improvement over the evaluation period. Breast cancer screening rates improved during the evaluation period by .6%, contributing to better preventive care for women and remained above the national Medicaid average since CY 2015. Rates for well-child visits, well-care visits, and immunizations were consistently higher than national Medicaid averages. Blood lead screening rates for children aged 12 to 23 months and 24 to 35 months also improved. The percentage of pregnant women who received prenatal services in a timely manner increased by 3.8 percentage points from CY 2015 to CY 2019, and HealthChoice outperformed the national HEDIS® mean throughout the evaluation period. Additional indicators in the report indicate progress is being made with respect to management of chronic conditions prioritized by the Department such as asthma, diabetes, HIV/AIDS, and behavioral health diagnoses.

HealthChoice also has two additional initiatives focused on measuring and improving quality of care: the Value-Based Purchasing (VBP) program and the Early and Periodic Screening, Diagnosis, and Treatment (EPSDT) annual review, which assesses MCO performance on services to children under the age of 21.[2] As required by Federal regulations, the Department also contracts with an External Quality Review Organization to perform an independent annual review of services provided under each MCO contract to ensure that the services provided to the participants meet the standards set forth in the regulations governing the HealthChoice Program.

Additional quality of care activities include: the Consumer Assessment of Healthcare Providers and Systems (CAHPS) surveys, a provider satisfaction survey, a HealthChoice consumer report card, annual Performance Improvement Projects, the state Managing for Results (MFR) program and the EPSDT provider compliance review. The Department also initiated plans to evaluate the use of the PCP medical home assignments to better understand their effectiveness and PCP utilization patterns by participants. The Department continues to monitor implementation of the 2016 Medicaid and CHIP Managed Care Final Rule, which includes a number of provisions aimed at improving the quality of care to Medicaid participants. Finally, the Department will continue to monitor and address the short- and long-term impact of the COVID-19 pandemic on Medicaid participants, including the care for special populations and those adversely impacted by the virus.

Copies of reports associated with many of the Department's quality assurance activities can be found on

[2] The Department plans to sunset the Value-Based Purchasing program at the end of 2021. A new incentive-only based program, the Public Health Incentive Program (PHIP), will begin in 2022. Unlike the Value-Based Purchasing Program, which assessed incentives and penalties, PHIP is an incentive-only program funded independently of MCO capitation, which allocates payments based on stellar MCO performance and improvement compared to national and local benchmarks on population health measures including chronic disease, opioid use, preventive care, and maternal/child health.

online.[3] Key findings of select recent activities are noted below:

- **HEDIS® 2020 Results:** Maryland MCOs are high performing across the majority of measures and within each measure domain. There were 27 measures/measure indicators where at least eight out of the nine MCOs performed above the National HEDIS Mean. This level of performance demonstrates that superior care is delivered to HealthChoice participants.
- **VBP Program:** Table 2 indicates how many measures met the incentives and disincentives for each MCO, and those with neutral performances on the VBP measures from CY 2015 to CY 2019. Between CY 2015 and CY 2018, MCOs were scored on 13 measures. Beginning in CY 2019, the measures were consolidated to 9. The individual MCOs' measures show mixed results; some MCOs tend to have consistently high or low performance, while some experienced increases in the number of their disincentive penalties, indicated in orange on the chart. Because the incentive and disincentive levels are based on the average of all plans' performance, when plans improve their measures across the board, they increase the standard for earning incentive payments and losing disincentives. Therefore, a decrease in the number of plans earning incentives may reflect the rising standards for care in HealthChoice as a whole. Since HealthChoice typically exceeds the National HEDIS® mean on most measures, VBP targets are usually higher than the national means.

Table 2: Count of VBP Incentives and Disincentives by MCO,* CY 2015–CY 2019

*ABH: Aetna Better Health; ACC: AMERIGROUP Community Care; JMS: Jai Medical Systems; KPMAS: Kaiser Permanente of the Mid-Atlantic States; MPC: Maryland Physicians Care; MSFC: MedStar Family Choice; PP: Priority Partners; UHC: UnitedHealthcare; UMHP: University of Maryland Health Partners. Complete data were not available for KP in 2015, UMHP in 2016, and ABH in 2019.

[3] https://mmcp.health.maryland.gov/healthchoice/pages/HealthChoice-Quality-Assurance-Activities.aspx

- **2020 CAHPS Surveys:**
    - *Adult Medicaid Survey Results:* Overall, the HealthChoice Aggregate performed on par with the 2019 levels across the measure spectrum, with no statistically significant improvements or declines in scores. Performance gains largely outnumbered losses across the entire array of plans and measures. None of the plans experienced statistically significant declines in performance compared to 2019. A few of the gains reached statistical significance, and a larger number of them have held steady over the past two years. On most measures, HealthChoice scored in the middle third of the 2019 NCQA Quality Compass Adult Medicaid percentile distribution. HealthChoice scored in the top third on How Well Doctors Communicate but in the bottom third on Rating of Doctor and Rating of Health Plan.
    - *Child Medicaid Survey Results:* Overall, the HealthChoice Aggregate performed in the middle-to-top third of the 2019 NCQA Quality Compass Child Medicaid National distribution on most survey measures. A notable exception was Rating of Health Plan, which has declined slightly over the past two years, placing the HealthChoice Aggregate in the bottom third of the distribution. Among the surveyed plans, none placed in the top third of the Quality Compass distribution on Rating of Health Plan, and none improved significantly compared the prior years.

Payment and Delivery System Reform Initiatives

In the last waiver period, Maryland transitioned from its initial All-Payer Model Agreement with CMS, started in January 2014, to the newer TCOC model, approved in 2018, for the period of 2019-2028. The All-Payer Model initially placed all 47 acute care hospitals in Maryland under a global budget arrangement and limited growth of all-payer hospital expenditures to no more than 3.58 percent per capita per year, among other measures. This unique model allowed Maryland's Health Services Cost Review Commission (HSCRC) to calculate an annual budget for each hospital. To meet their fixed global budgets each year, hospitals had the flexibility to adjust their rates within a specified charge corridor. The Maryland all-payer hospital rate regulation system is tied to the HealthChoice trends pursuant to the Code of Maryland Regulations. Hospital unit cost trends for each year are consistent with HSCRC Medicaid MCO cost per case and cost per visit trends, which are revised where necessary through the mid-year process each year. Maryland's actuaries project the hospital utilization and case mix components, which are combined with the HSCRC unit cost trends, to build to the overall per member per month (PMPM) trends. Maryland's TCOC model builds on the All-Payer Model by expanding outside hospital walls and creating greater incentives for health care providers to coordinate with each other and provide patient-centered care, and by committing the State to a sustainable growth rate in per capita total cost of care spending for Medicare beneficiaries. The TCOC model continues an all-payer approach to quality programs—for hospital readmissions, potentially avoidable utilization, hospital-acquired conditional and quality-based reimbursement—and hospital growth (3.58 percent). During the waiver period, the HSCRC approved a change to the public payer differential, from 94 percent to 92.3 percent, to adjust for high levels of uncompensated care among non-public payers.

In addition, in 2019, the State of Maryland collaborated with CMMI to establish the domains of health care quality and delivery that the State could impact under the TCOC model. The collaboration also included an agreed-upon process and timeline by which the State would submit proposed goals, measures, milestones, and targets to CMMI. As a result of the collaboration with CMMI, the State entered into a Memorandum of Understanding that required Maryland to provide a proposal for the SIHIS to CMMI by December 31, 2020. The SIHIS aligns statewide efforts across three interrelated domains—hospital quality, care transformation across the system, and total population health

—that have the potential to make significant improvement in not just Maryland's health care system, but in the health outcomes of Marylanders.

Maryland designated three priority areas under the SIHIS total population health domain and identified measures and targets under each: diabetes, opioid use, and maternal and child health (i.e., severe maternal morbidity and pediatric asthma). This section 1115 waiver renewal, therefore, includes both continuation of current initiatives as well as new programs designed to support achieving the CMMI-approved population health measure milestones and targets.

Achieving the desired population health outcomes will require enhanced support of Medicaid's vulnerable populations to also address unmet social determinants of health needs. These programs/initiatives are outlined in the "A Look at the Next Waiver Period" section.

Behavioral Health Integration and Addressing the Opioid Epidemic

In the last waiver period, the Department's goals included Behavioral Health Integration (BHI), transitioning to a new Administrative Services Organization (ASO) and collaborating with MCOs to design a MOM model pilot through funds awarded by CMMI. The Department has also engaged in initiatives designed to integrate behavioral health care in the primary care setting, including supporting the use of Screening, Brief Intervention, and Referral to Treatment (SBIRT) in provider practices and launching the Collaborative Care Model (CoCM) pilot program.

The Department delivers behavioral health services through an ASO model. Specialty substance use disorder (SUD) and mental health (MH) services are carved out of the HealthChoice MCO benefits package and administered by an ASO. MCOs in HealthChoice are responsible for delivering primary behavioral health services and referring participants to the ASO for specialty services. Beacon Health Options served as the ASO through 2019. In 2019, the Department selected Optum as the new ASO, as part of a competitive re-procurement, and transition efforts began in mid-2019.

The ASO serves as the hub for the provision of both Medicaid and state-funded behavioral health services in Maryland. Since many individuals with behavioral health conditions access both MH and SUD services, this change set the stage for service integration, closer coordination of care, and a single entity for provider billing and credentialing. BHI efforts continue to focus on refining the process to integrate SUD treatment and specialty MH services into one comprehensive system that includes claims, billing, authorization, and referral services for individuals seeking behavioral health care.

The Department has also promoted the use of SBIRT in provider practices.[4] SBIRT is a comprehensive, universal public health approach that integrates behavioral health into the primary care setting. The SBIRT model provides universal screening, prevention and early intervention for substance use across a full continuum. Certified health care professionals use screening tools to briefly engage patients on substance use. Based on the screening assessment, the provider administers a brief intervention and, when indicated, makes a referral for treatment. The Department issued new guidance in July 2016 that included clarifications on the provider types eligible to bill for services, billable services, and new coding and

[4] Executive Director Susan J. Tucker to Federally Qualified Health Centers (FQHCs), June 8, 2016, Maryland Department of Health and Mental Hygiene, Office of Health Services Medical Care Programs, PT 45-16. https://mmcp.health.maryland.gov/MCOupdates/Documents/pt_45-16_SBIRT.pdf

reimbursement guidelines.[5] Funding available outside Medicaid during this same time period through the Substance Abuse Mental Health Services Administration (SAMHSA), state-based State Opioid Response grants, and the Conrad N. Hilton Foundation was leveraged to train providers across the state on the use of SBIRT.

To further BHI, the Department also implemented a CoCM pilot program under section 1115 waiver authority in 2020. Collaborative Care is a patient-centered, evidence-based approach for integrating physical and behavioral health services in primary care settings that includes: (1) care coordination and management; (2) regular, systematic monitoring and treatment using a validated clinical rating scale; and (3) regular, systematic psychiatric caseload reviews and consultation for patients who do not show clinical improvement. A collaborative team (i.e. a Primary Care Provider; a behavioral health care manager; and, a psychiatric consultant) is responsible for delivery and management of patient-centered care. Proponents of the model suggest that merging behavioral health with primary care normalizes and de-stigmatizes treatment for behavioral health disorders for the patient. This in turn encourages patients to seek access to the evidence-based behavioral health services available in their regular primary care clinics resulting in improved patient outcomes.

The Department has also participated in statewide efforts to improve behavioral health data sharing through the State Health Information Exchange, Chesapeake Regional Information System for our Patients (CRISP). Development is now underway of the CRISP open source software application called 'Consent2Share,' which will allow providers to access behavioral health data through CRISP if they are named in stored patient release of information consents that comply with 42 C.F.R. Part 2.[6]

Finally, in the last waiver period, the Department directly addressed the opioid epidemic's impact on pregnant women and infants through the MOM model. During the waiver period, the Department received federal funding and initiated a collaborative design process with MCOs as care delivery partners, which culminated in the inclusion of the MOM model in this waiver renewal application. Further details of this MOM model pilot are described in the "A Look at the Next Waiver Period" section.

Existing Programs

This section highlights existing programs and services that were either approved as part of the last waiver renewal or during subsequent amendments.

Dental Services and Access

Maryland Medicaid's dental benefits, collectively called the Maryland Healthy Smiles Dental Program, are administered by a single statewide dental benefits administrator (DBA). The DBA is responsible for coordinating all dental services for children, pregnant women, adults in the Rare and Expensive Case

[5] Executive Director Susan J. Tucker to Dental Providers, Federally Qualified Health Centers, General Clinics, Hospitals, Local Health Departments, Managed Care Organizations, Nurse Midwives, Nurse Practitioners, Physicians, June 8, 2016, Maryland Department of Health and Mental Hygiene, Office of Health Services Medical Care Programs, PT 43-16. https://mmcp.health.maryland.gov/MCOupdates/Documents/pt_43_16_edicaid_program_updates_for_spring_2016.pdf

[6] "Behavioral Health Integration Update, Collaborative Care Revisited, 2017 Joint Chairmen's Report, Page 87 and Page 89," February 26, 2018, Maryland Department of Health, https://mmcp.health.maryland.gov/Documents/JCRs/2017/BHIJCRfinal1-18.pdf.

Management (REM) Program, and former foster care youth up to age 26. Coverage through an Adult Dental Pilot Program is also currently available to adults 21 through 64 years of age enrolled in both Medicaid and Medicare and administered by the DBA.

Dental service reimbursement is authorized under the section 1115 waiver for former foster care youth up to age 26 as an EPSDT benefit, as well as adults 21 through 64 years of age enrolled in both Medicare and Medicaid in the State's Adult Dental Pilot Program. The Adult Dental Pilot Program has a maximum benefit allowance of $800 per calendar year.

Additionally, the DBA is responsible for all functions related to the delivery of dental services for these populations, including provider network development and maintenance, claims processing, utilization review, authorization of services, outreach and education, and complaint resolution. SKYGEN USA (formerly known as Scion) has been serving as the DBA since calendar year (CY) 2016. Utilization rates have increased, and provider networks have expanded since the Department improved and rebranded its dental benefit as the Maryland Healthy Smiles Dental Program. Maryland dental utilization continues to outpace national averages.

Since providers have 12 months to submit claims for dental services, the Department does not yet have a clear understanding of the impact of COVID-19 on dental utilization but will be evaluating this after receipt of the CY 2020 claims data. The Department expects the program to continue under its current approved structure.

Inpatient Benefit for Pregnant Women Eligible through Hospital Presumptive Eligibility

Under the Affordable Care Act (ACA), qualified hospitals were given the option to determine eligibility for Medicaid for Modified Adjusted Gross Income (MAGI) populations, including pregnant women through 264 percent of the Federal Poverty Level (FPL). The Hospital Presumptive Eligibility (HPE) process enables timely access to necessary health care services, immediate temporary medical coverage while full eligibility is being determined, a pathway to longer-term Medicaid coverage, and a coverage determination based on minimal eligibility information. The Department permits individuals to quality for one HPE period every 12 months, and pregnant women are allowed one period of coverage per pregnancy. Regardless of the ultimate Medicaid eligibility determination, federal rules require that state Medicaid programs reimburse hospitals and other providers for services provided during the temporary HPE period, except for inpatient services provided to pregnant women. The Department received authority to waive 42 CFR 435.1103(a), instead paying for inpatient services for pregnant women found eligible through HPE.

As of December 2020, 36 of 47 hospitals are enrolled and participate in HPE. To date, 30 of the 36 enrolled hospitals have completed the HPE training and may submit HPE applications. Of the 30 hospitals able to submit applications, five actively and continuously submit HPE applications. The Department has initiated additional outreach and training for the state's hospitals in an effort to increase participation and encourage the use of this critical eligibility and uncompensated care mitigation tool. The Department expects the program to continue under its current approved structure.

Health Choice Diabetes Prevention Program

Since September 2019, the HealthChoice Diabetes Prevention Program (HealthChoice DPP) enabled MCOs to provide the National Diabetes Prevention Program (National DPP) to eligible participants

statewide. The National DPP is a structured year-long program intended for adults 18 years of age and older who have prediabetes or are at high risk for developing type 2 diabetes. It includes lifestyle health coaching through weekly and monthly classes that teach skills needed to lose weight, become more physically active, and manage stress. People with prediabetes who take part in this evidence-based, Centers for Disease Control and Prevention (CDC)-established structured lifestyle change program can cut their risk of developing type 2 diabetes by 58 percent over three years (71 percent for people over 60 years old). The program can help people lose five to seven percent of their body weight through healthier eating and 150 minutes of physical activity per week.

The National DPP includes an initial six-month phase where at least 16 weekly sessions, including make-up sessions, are offered over a period lasting at least 16 weeks and no more than 26 weeks. The second six-month phase must consist of at least one session each month and six sessions total. Each session must be at least one hour long. HealthChoice DPP aligns with all aspects of CDC's Diabetes Prevention Recognition Standards, including eligibility, provider recognition, and program delivery modes, among other criteria. Individuals who are pregnant or who have been diagnosed with diabetes are not eligible to participate.

As of April 27, 2021, twenty DPP providers are enrolled with Medicaid, and twelve are contracted with at least one MCO to provide services to eligible HealthChoice participants. Two MCOs are in process of or have become CDC-recognized programs and are offering the program to their own members rather than contracting with an outside DPP provider. Efforts to enroll DPP providers and provide services during the COVID-19 PHE continued and leveraged flexibilities obtained by the Department under emergency waivers, which allowed expedited enrollment of out-of-state online providers. Similarly, the CDC allowed flexibility to in-person CDC-recognized organizations to begin delivering the program via distance learning or online delivery modes, since in-person cohorts were not feasible during the PHE.

Enrollment in HealthChoice DPP continues to increase now that all MCOs have contracts in place with one or more DPP providers and are implementing member and provider outreach campaigns to engage new participants and encourage providers to recommend eligible patients to the program. The Department, with the assistance of its independent contractor, the Hilltop Institute at the University of Maryland, Baltimore County (Hilltop), developed and distributed technical guidance to MCOs on how to use an eligibility determination algorithm to identify potentially eligible members. In addition, the Department collaborated with CRISP, the statewide Health Information Exchange, to develop a prediabetes flag to allow providers using the CRISP patient portal to see which members of their panel are eligible for HealthChoice DPP, and also provide reports of members to each MCO. HealthChoice DPP implementation efforts are coordinated with the SIHIS diabetes population health priority area, as well as with broader state strategy and work to implement the Diabetes Action Plan. The Department expects the program to continue under its current approved structure.

Community Health Pilots

Following a request by stakeholders in 2016, the Department applied for and was approved to implement two Community Health Pilots intended to support high-risk Medicaid participants with complex health and social needs. These programs offer local governments the opportunity to request matching federal funds for: (1) the Assistance in Community Integration Services (ACIS) pilot for high-risk, high-utilizing Medicaid participants who are either transitioning to the community from an institution or at high risk of institutional placement; and (2) the Home Visiting Services (HVS) pilot for high-risk pregnant women and children up to age two.

Assistance in Community Integration Services Pilot

Under this program, the Department works with four local government agencies, known as Lead Entities (LE), to provide a set of home and community-based services (HBCS) to eligible participants. The state's needs-based criteria are specified below:

1. Health criteria (at least one)
    a. Repeated incidents of ED use (defined as more than four visits per year) or hospital admissions; or
    b. Two or more chronic conditions as defined in section 1945(h)(2) of the Social Security Act
2. Housing Criteria (at least one)
    a. Individuals who will experience homelessness upon release from the settings defined in 24 CFR 578.3; or
    b. Those at imminent risk of institutional placement.

For example, those at imminent risk of institutionalization include individuals with a disabling condition who meet an institutional level of care. Services provided to eligible individuals include Tenancy-Based Case Management Services and Tenancy Support Services, to assist the target population in obtaining the services of state and local housing programs to locate and support the individual's medical needs in the home, and/or housing case management services.

As of State Fiscal Year (SFY) 2021 Q1, 420 of the 600 ACIS participant spaces have been allocated across LEs. The Department anticipates filling the remaining 180 spaces through a rolling application process. The Department has outlined a modification request for this program in the, "A Look at the Next Waiver Renewal Period" section.

Home Visiting Services Pilot

Under this program, the Department currently works with two LEs to expand evidence-based HVS to Medicaid eligible high-risk pregnant women and children up to age 2. Currently the HVS Pilot program aligns with two evidence-based models focused on the health of pregnant women: Healthy Families America (HFA) and Nurse Family Partnership (NFP). Both participating LEs use the HFA model.

The HFA model targets parents facing issues such as single parenthood, low income, childhood history of abuse, SUD, MH issues, or domestic violence. The NFP model is designed to reinforce maternal behaviors that encourage positive parent child relationships and maternal, child, and family accomplishments. The Department has outlined a modification request for this program in the, "A Look at the Next Waiver Renewal Period" section.

Increased Community Services

The Department has been operating the Increased Community Services (ICS) Program since 2009. The ICS Program allows individuals residing in institutions with incomes above 300 percent of Supplemental Security Income (SSI) to move into the community, while also permitting them to keep an income level up to 300 percent of SSI. Individuals in the ICS Program are an expansion population under the HealthChoice waiver. The ICS Program plays an integral role in removing a barrier preventing these individuals from living in the community. During the previous waiver renewal, the Department expanded this program from 30 to 100 slots. As of December 2020, there are 26 participants in the ICS Program. Enrollment activities have most likely been affected by barriers to access presented by COVID-19. The Department expects the program to continue under its current approved structure.

Rare and Expensive Case Management Program

The Rare and Expensive Case Management (REM) program provides case management services to Medicaid participants who have a rare and expensive medical condition and require sub-specialty care. REM participants must be HealthChoice eligible, have a qualifying diagnosis, and be within the age limit for that diagnosis. REM allows participants to opt out of managed care and receive services on a fee-for-service (FFS) basis, including the standard Medicaid FFS benefit package and some additional benefits, such as medically necessary private-duty nursing, shift home health aides, and adult dental services.

Certain REM participants may remain in the program after becoming eligible for Medicare; to qualify, individuals must continue to meet the eligibility diagnosis for REM. All REM participants, irrespective of Medicare enrollment, are disenrolled on the age out date of their specific REM diagnosis or when they turn 65. As of December 2020, 4,359 Medicaid participants were enrolled in the REM Program. The Department plans to continue offering this expanded benefit package to REM participants during the next waiver period.

Family Planning Program

The Family Planning Program provides family planning benefits to eligible low-income women and men. These benefits include advice about birth control methods; physical exams, including pelvic and breast exams; screenings, such as pap smears and tests for sexually-transmitted infections when performed as part of a family planning visit; birth control pills and devices, such as intrauterine devices, emergency contraception, and permanent sterilization (must be aged 21 or over).

The Family Planning Program covers both men and women of any age who have a family income at or below 250 percent of the FPL. Twelve months of family planning coverage is also extended to women who qualified for Medicaid coverage during their pregnancy but subsequently lost coverage due to no longer meeting income requirements following the two-month postpartum period. On February 1, 2020, Maryland transitioned the application process for Family Planning eligibility to the state health benefits exchange, MHC. This system change allowed for people enrolled in Family Planning after their two-month postpartum period to transition automatically. As of February 2020, authority to operate the Family Planning program was transitioned from the section 1115 waiver to the Maryland State Plan (MD SPA 18-0005).

Breast and Cervical Cancer Program

The Breast and Cervical Cancer Program serves women with incomes up to 250 percent of the FPL. As part of the 2013 waiver renewal period, the Department received a waiver to stop accepting any new Breast and Cervical Cancer Program applicants who were not enrolled in the program as of January 1, 2014. Through provisions in the ACA, individuals who would have previously been eligible under the Breast and Cervical Cancer Program now have new alternatives for accessing care. Maryland expanded its Medicaid program to cover childless adults up to 138 percent of the FPL, and individuals between 138 percent and 400 percent of the FPL are eligible for advanced premium tax credits and cost-sharing subsidies through MHC. Additionally, insurers in the individual and group markets are prohibited from imposing pre-existing condition exclusions. Because Maryland does not want to discontinue Medicaid coverage for individuals still in need of treatment who were enrolled in the program as of December 31, 2013, the Department will continue to renew women currently enrolled in the program receiving active breast and cervical cancer treatment. As of March 2021, 65 women were enrolled in the program. The Department expects the program to continue under its current approved structure.

Collaborative Care Model Pilot Program

CMS approved Maryland's section 1115 amendment authorizing a CoCM pilot program in April 2020 for services starting July 1, 2020. Collaborative Care is an evidence-based approach for integrating physical and behavioral health services in primary care settings that includes: (1) care coordination and management; (2) regular, systematic monitoring and treatment using a validated clinical rating scale; and (3) regular, systematic psychiatric caseload reviews and consultation for patients who do not show clinical improvement.

The goal of the CoCM pilot is to improve health outcomes for Maryland Medicaid participants who have experienced mental illness or have a SUD, but have not received effective treatment, and to further the integration of primary and behavioral health care. The Department approved three sites to participate in the CoCM Pilot via a competitive application process with a collective budget of up to $550,000 annually for services rendered for SFY 2021, SFY 2022, and SFY 2023 (July 1, 2020 through June 30, 2023). Following completion of the CoCM Pilot, the Department will evaluate its outcomes to assess whether it controlled costs and improved access to care and clinical outcomes.

Due to COVID-19, the pilot sites have seen fewer participants come in to receive services, which has led to a lower than expected enrollment. With an expected capacity of 255 participants annually, the CoCM pilot sites screened 297 individuals and enrolled 160 participants as of the third quarter of SFY 2021. Both the Department and the pilot sites anticipate enrollment will increase in the coming months as more Medicaid participants return to primary care sites for preventive care. The Department plans to continue offering the CoCM pilot during the next waiver period.

Residential Treatment for Individuals with Substance Use Disorders

With the rise of the opioid crisis across the country and a national rise in opioid-related deaths over the last several years, the need to improve outcomes and access to SUD treatment is of paramount importance. On January 7, 2021, the Secretary of HHS renewed the National Public Health Emergency Order related to the opioid crisis.[7] Maryland has been significantly impacted by this crisis. In the first six months of 2020 there were a total of 1,326 reported unintentional intoxication deaths of which 1,187 involved opioids (89.5 percent). Opioid fatalities have increased by 9.4 percent from this same timeframe of 2019.[8]

Maryland has long been committed to addressing the growing substance use crisis, beginning with Governor Hogan declaring Maryland's heroin problem a public health epidemic. On February 24, 2015, Governor Hogan issued Executive Order 01.01.2015.12,[9] which created the Heroin and Opioid Emergency

[7] "Renewal of Determination That A Public Health Emergency Exists." *Public Health Emergency, (2021).* https://www.phe.gov/emergency/news/healthactions/phe/Pages/opioids-7Jan2021.aspx

[8] "2020 Second Quarter Report: April 1, 2020 - June 30, 2020," September 22, 2020, Maryland Opioid Operational Command Center, Office of the Governor. https://bha.health.maryland.gov/OVERDOSE_PREVENTION/Documents/Second-Quarter-OOCC-Report-2020-Master-Copy-9-21-20-Update.pdf

[9] "Executive Order 01.01.2017.02, Executive Order Regarding the Heroin, Opioid, and Fentanyl Overdose Crisis Declaration of Emergency," *The State of Maryland Executive Department*, (2017): 1-3. https://governor.maryland.gov/wp-content/uploads/2017/03/0391_001.pdf

Task Force. The Task Force is composed of 11 members with expertise in addiction treatment, law enforcement, education, and prevention. Lieutenant Governor Boyd K. Rutherford serves as Chair. The Task Force is charged with advising and assisting Governor Hogan in establishing a coordinated statewide and multi-jurisdictional effort to prevent, treat, and significantly reduce heroin and opioid use disorders.

Maryland is currently pursuing a wide array of strategies to address the epidemic. Maryland has authorized pharmacists to dispense an overdose-reversal drug through the State's Overdose Response Program, aligning with the U.S. government's recent efforts to address the opioid epidemic. On June 1, 2019, Dr. Jinlene Chan, then the Department Assistant Secretary for Public Health Services, issued an updated statewide standing order allowing Maryland-licensed pharmacists to dispense naloxone to anyone who may be at risk for opioid overdose or in a position to assist someone believed to be experiencing opioid overdose.[10]

Maryland previously sought expenditure authority under Section 1115(a)(2) of the Social Security Act to claim expenditures by the State for SUD treatment in non-public IMDs—which are not otherwise included as expenditures under section 1903—and to have those expenditures regarded as such under the State's Title XIX plan. Maryland is seeking to retain expenditure authority for otherwise-covered services provided in non-public IMDs to Medicaid-eligible individuals aged 21 through 64 who are enrolled in a Medicaid MCO or are dually-eligible for Medicare and Medicaid, as authorized under the previous waiver and its amendments including coverage for:

- American Society of Addiction Medicine (ASAM) residential levels 3.1, 3.3, 3.5, 3.7 and 3.7WM (withdrawal management) for up to two non-consecutive 30-day stays every 12 months; and
- ASAM residential level 4.0 for individuals with a primary SUD diagnosis and secondary MH diagnosis IMD for up to two non-consecutive 30-day stays every 12 months (now addressed below in A Look at the Next Waiver Period section (Table 6).

Per CMS guidance, Maryland required and ensured that all SUD residential providers continue to meet the program standards set forth by ASAM. The Department has outlined a modification request for this program in the, "A Look At the Next Waiver Renewal Period" section.

Maryland's Comprehensive SUD Coverage

Maryland offers a comprehensive set of Medicaid-covered SUD benefits (See Table 3 below) based on the ASAM guidelines. Since the last waiver renewal period, coverage has been extended to include SUD residential treatment, filling a much-needed gap in the continuum of care.

Medicaid-funded residential treatment complements significant efforts by Maryland to improve SUD coverage and delivery. Most notably, the State has promoted the SBIRT model to integrate behavioral health in primary care settings by allowing reimbursement to physicians, nurses, FQHCs, and physician assistants. Furthermore, physicians and nurses are able to delegate the provision of SBIRT services to any other provider if those services are within the provider's scope of practice. Maryland continues to ensure compliance with ASAM standards in its delivery system, particularly around provider licensure requirements and adherence to medical necessity criteria and standards of care, and will continue to conduct monitoring and oversight to ensure that providers in its delivery system are using ASAM standards effectively.

Medicaid-funded residential treatment coverage has expanded access and fostered sustainability.

[10] Behavioral Health Administration, Maryland Department of Health, "Statewide Standing Order for Pharmacy Naloxone Dispensing," retrieved on April 28, 2021, https://bha.health.maryland.gov/NALOXONE/Pages/Statewide-Standing-Order.aspx.

Continuing access to individuals with SUD needs resulted in greater and more appropriate clinical treatment options for Medicaid participants and national data have demonstrated reductions in hospital and ED admissions.[11] The Department will study Maryland-specific results as part of the summative evaluation of the 2017-2021 HealthChoice demonstration waiver period, due to CMS in June 2023. Providers in Maryland have overwhelmingly expressed that Medicaid reimbursing IMDs ultimately enabled them to reach and treat more people. Expanding residential treatment options had a beneficial impact on the entire SUD treatment system in Maryland.

Table 3. Current Continuum of Care in Maryland

CURRENT CONTINUUM OF CARE IN MARYLAND	
SUD Services	**ASAM Criteria**
SBIRT	N/A
Substance Use Disorder Assessment (CSAA)	N/A
Group Outpatient Therapy	Level 1-Outpatient Service
Individual Outpatient Therapy	Level 1-Outpatient Service
Ambulatory Detoxification	Level 1-Outpatient Service
Intensive outpatient (IOP)	Level 2.1- Intensive Outpatient Service
Partial Hospitalization	Level 2.5- Partial Hospitalization
Clinically Managed Low-Intensity Residential Services	Level 3.1 - Residential/Inpatient Services
Clinically Managed Population-Specific High-Intensity Residential Services	Level 3.3 - Residential/Inpatient Services
Clinically Managed High-Intensity Residential Services	Level 3.5 - Residential/Inpatient Services
Medically Monitored Intensive Inpatient Services	Level 3.7 - Residential/Inpatient Services
Medically Monitored Intensive Inpatient Services	Level 3.7WM (Withdrawal Management) - Residential/Inpatient Services
Medically Managed Intensive Inpatient Services	Level 4.0 - Inpatient Services
Methadone/Buprenorphine: Induction and Maintenance	Level OMT- Opioid Maintenance Therapy
Medicaid covers all FDA-covered pharmaceuticals. Additional medication-assisted treatment covered with clinical criteria: ● Buprenorphine/Naloxone combination therapies: Bunavail, Suboxone, Suboxone Film, and Zubsolv ● Campral ● Naltrexone ● Subutex – Buprenorphine ● Vivitrol	N/A
ICF-A: Under 21	Medically monitored intensive inpatient treatment Level 3.7WM Level 3.7 Level 3.5
Intensive Inpatient Services	Level 4 – Inpatient Services and Level 4.0 WM

[11] "State Options for Medicaid Coverage of Inpatient Behavioral Health Services," November 2019, MaryBeth Musumeci, Priya Chidambaram, and Kendal Orgera, Kaiser Family Foundation, https://www.milbank.org/wp-content/uploads/2019/11/9368-State-Options-for-Medicaid-Coverage-of-Inpatient-Behavioral-Health-Services-1.pdf.

Those who are Medicaid enrolled and diagnosed with SUD are the target of this demonstration program. Demonstration expenditures are estimated through 2027 in the Table 4 below. Consistent with CMS guidance, coverage in the future waiver period will be available for up to two non-consecutive 30-day stays every 12 months.

For purposes of estimating fiscal impact in the upcoming waiver period, the Department included individuals with a dual SUD/MH diagnosis receiving ASAM 4.0 level IMD services in the "A Look at the Next Waiver Period" section (Table 6).

Table 4. Number of Medicaid Participants Served and Projected Cost, SFY 2022-2027

State Fiscal Year (SFY)	Estimated Medicaid Participants (19-64) with SUD Utilizing ASAM 3.1-3.7WM IMD Services*		ALOS in Days	Per Member Cost Per Day*	Member Months	Projected Cost (Total Funds)	Average PMPM
SFY 2022 (Q3, Q4)	Level 3.1	649	26	$94.70	1.00	$1,597,968	$2,462
	Level 3.3	658	21	$211.05	1.00	$2,916,289	$4,432
	Level 3.5	1,821	19	$211.05	1.00	$7,302,119	$4,010
	Level 3.7	2,822	16	$324.92	1.00	$14,670,788	$5,199
	Level 3.7WM	2,557	6	$395.12	1.00	$6,061,931	$2,371
	Overall	**5,939**	**21**			**$32,549,095**	**$5,481**
SFY 2023	Level 3.1	1,324	26	$98.49	1.00	$3,387,790	$2,561
	Level 3.3	1,342	21	$219.49	1.00	$6,185,724	$4,609
	Level 3.5	3,715	19	$219.49	1.00	$15,492,843	$4,170
	Level 3.7	5,757	16	$337.92	1.00	$33,732,207	$5,407
	Level 3.7WM	5,216	6	$410.92	1.00	$12,860,303	$2,466
	Overall	**12,116**	**21**			$71,658,866	**$5,914**
SFY 2024	Level 3.1	1,350	26	$102.43	1.00	$3,595,206	$2,663
	Level 3.3	1,369	21	$228.27	1.00	$6,562,583	$4,794
	Level 3.5	3,789	19	$228.27	1.00	$16,433,507	$4,337
	Level 3.7	5,872	16	$351.43	1.00	$35,784,362	$5,623
	Level 3.7WM	5,320	6	$427.36	1.00	$13,641,388	$2,564
	Overall	**12,358**	**21**			**$76,017,045**	**$6,151**
SFY 2025	Level 3.1	1,377	26	$106.52	1.00	$3,813,794	$2,770
	Level 3.3	1,396	21	$237.40	1.00	$6,959,693	$4,985
	Level 3.5	3,865	19	$237.40	1.00	$17,433,656	$4,511
	Level 3.7	5,989	16	$365.49	1.00	$37,958,414	$5,848
	Level 3.7WM	5,426	6	$444.46	1.00	$14,469,718	$2,667
	Overall	**12,605**	**21**			**$80,635,275**	**$6,397**
SFY 2026	Level 3.1	1,406	26	$106.52	1.00	$3,894,114	$2,770
	Level 3.3	1,424	21	$237.40	1.00	$7,099,286	$4,985
	Level 3.5	3,942	19	$237.40	1.00	$17,780,976	$4,511
	Level 3.7	6,109	16	$365.49	1.00	$38,724,482	$5,848
	Level 3.7WM	5,536	6	$444.46	1.00	$14,763,059	$2,667

State Fiscal Year (SFY)	Estimated Medicaid Participants (19-64) with SUD Utilizing ASAM 3.1-3.7WM IMD Services*		ALOS in Days	Per Member Cost Per Day*	Member Months	Projected Cost (Total Funds)	Average PMPM
	Overall	***12,857***	***21***			**$82,261,917**	**$6,398**
SFY 2027 (Q1, Q2)	Level 3.1	717	26	$106.52	1.00	$1,985,831.98	$2,769.64
	Level 3.3	726	21	$237.40	1.00	$3,619,439.23	$4,985.45
	Level 3.5	2,011	19	$237.40	1.00	$9,070,913.93	$4,510.65
	Level 3.7	3,116	16	$365.49	1.00	$19,748,199	$5,847.85
	Level 3.7WM	2,824	6	$444.46	1.00	$7,530,866.93	$2,666.74
	Overall	***6,557***	***21***			**$41,955,252**	**$6,399**

**Estimates based on historical data from 2018 and 2019, and assume 2 percent utilization growth with a 4 percent rate increase for community service providers annually from SFY 2022-2025.*

A Look at the Next Waiver Period

Introduction

The Department remains dedicated to the HealthChoice participants who receive services through section 1115 waiver authorized programs and their participating providers. The Department's renewal application for the next waiver period is focused on maintaining quality and access for existing programs. The Department is requesting approval to modify certain programs authorized in the previous renewal period as well as authority to operate certain new programs to address the current needs of our Medicaid population.

Modifications to Existing Programs

Community Health Pilots

Over the course of the previous section 1115 HealthChoice waiver period, the Community Health Pilot programs have had considerable uptake in the community. As a result of the COVID-19, the Department anticipates more interest in both the ACIS and the HVS pilot will grow as both focus heavily on key social determinants of health. In addition, both pilots' interventions may also help the State meet TCOC population health goals. Requests for pilot modifications are specified below.

Assistance in Community Integration Services Pilot-Expansion of Cap

ACIS pilot implementation has been in effect from July 1, 2017 through present. Following three rounds of competitive funding opportunities and the current rolling application process, award notifications were offered to four LEs that are currently participating in the ACIS pilot program: Baltimore City-Mayor's Office of Homeless Services (Baltimore City MOHS) provides services for up to 200 individuals; Montgomery County Department of Health and Human Services provides services for up to 130 individuals; Cecil County Health Department provides services to up to 15 individuals, and the Prince George's County Health Department provides services for up to 75 individuals.

Requested Expansion

During SFY 2020, the Department received inquiries regarding ACIS pilot program space availability from multiple jurisdictions, both currently participating and new. Based on these inquiries, an increased focus on population health through statewide efforts around the TCOC model, and recognizing housing as a key social determinant of health need, the Department is requesting an additional 300 participant spaces for the ACIS Pilot, bringing the total cap to 900 participants annually. The Department seeks section 1115 authority through the HealthChoice demonstration waiver to waive Section 1902(a)(10)(B) and Section 1902(a)(23)(A) of the Social Security Act to enable the State to provide benefits specified in the special terms and conditions to Demonstration participants enrolled in the ACIS pilot program which are not available under the Medicaid State Plan.

Budget Neutrality

Based on utilization to date, if the ACIS pilot program spaces were expanded to 900, the Department estimates that it would service an additional 50 ACIS participants each subsequent year of the waiver period. Projected expenditures for all participants are detailed in Appendix A attached to this application.

Home Visiting Services-Expansion of Age Limit

The HVS pilot program aligns with two evidence-based models focused on the health of pregnant women, NFP and HFA. Garrett and Harford County Health Departments currently serve as HVS LEs. Both LEs use the HFA model to carry out the HVS Pilot. The HFA model allows families to stay enrolled in the program until age three. Under the current section 1115 waiver authority, HVS pilot families stay enrolled until the child reaches two years of age. Thus far, thirteen families have been disenrolled from the HVS pilot due to this deviation from the HFA model.

During CY 2020, the Maternal Child Health Bureau of the Department submitted a Maternal Infant and Early Childhood Home Visiting (MIECHV) Program Statewide Needs Assessment Update to the Health and Resources Service Administration (HRSA). This assessment provided multiple recommendations for current Maryland Home Visiting Programs, including: improving awareness regarding home visiting; overall data and measure standardization; increased substance use supports; and better statewide coordination. Most pertinent in the MIECHV Needs Assessment is their finding that in multiple jurisdictions, demand for home visiting services remains greater than the current capacity of programs.[12]

Requested Expansion

Based on the MIECHV Assessment and family disenrollment data from current HVS pilot LEs, the Department proposes to expand the age limit for LEs participating in the HFA model. The Department requests to allow enrollment up to age three to align with the national model. The Department seeks section 1115 authority through the HealthChoice demonstration waiver to waive Section 1902(a)(10)(B) and Section 1902(a)(23)(A) of the Social Security Act to enable the State to provide benefits specified in the special terms and conditions to Demonstration participants enrolled in the HVS pilot program which are not available under the Medicaid State Plan.

Budget Neutrality

Projected expenditures for all participants are detailed in Appendix A attached to this application.

[12] "2020 Maryland MIECHV Home Visiting Needs Assessment," 2020, Maternal and Child Health Bureau, Maryland Department of Health,https://phpa.health.maryland.gov/mch/Documents/HV/2020%20MD_%20MIECHV%20Home%20Visiting%20Needs%20Assessment_EXEC%20SUM_v2.pdf.

Residential Treatment for Adults with Substance Use Disorder

The Department remains dedicated to ensuring access to residential treatment for SUD for HealthChoice participants. In addition to the efforts the Department has already undertaken, the Department would like to make the modification specified below.

Requested Modification

The Department is requesting to modify its coverage of ASAM Level 4.0 to include not only providers located in Maryland, but also those based in contiguous states.

Budget Neutrality

For purposes of estimating fiscal impact in the upcoming waiver period, the Department included individuals with a dual SUD/MH diagnosis receiving ASAM 4.0 level IMD services in the Table 6.

New Programs

Expansion of IMD Services for Adults with Serious Mental Illness

Introduction

Maryland has made great strides in expanding coverage to residential treatment for individuals with SUD and now requests approval to extend this coverage to adults with a Serious Mental Illness (SMI). Maryland previously had a psychiatric IMD exclusion beginning in 1997 that was phased out by 2008 under the direction of CMS. Again, in 2012 through 2015, under the ACA, Maryland had a Medicaid Emergency Psychiatric Demonstration. Following the end of that demonstration period, on July 27, 2015, Maryland submitted an amendment to the existing Section 1115 waiver to allow for coverage of residential treatment for both SUD and MH diagnoses, however, the application was not approved. The State was encouraged by CMS to apply solely for SUD residential treatment coverage thereafter. As part of the 2016 HealthChoice section 1115 renewal application, CMS authorized Maryland Medicaid to cover SUD services delivered in IMD for adults aged 21 to 64. The Department began reimbursing for up to two non-consecutive 30-day stays for ASAM levels 3.7WM (withdrawal management), 3.7, 3.5, and 3.3 effective July 1, 2017. The Department staggered the roll-out for ASAM 3.1 (effective January 1, 2019) and coverage for dual eligibles for all levels (effective January 1, 2020). The Department also successfully submitted a section 1115 waiver amendment in June 2018 to extend coverage for individuals with a primary SUD diagnosis and secondary MH condition for up to 15 days per month in ASAM 4.0 (effective July 1, 2019). More recently, in November 2018, CMS announced opportunities for states to apply for demonstrations to cover residential mental health services in IMD settings.

In January 2019, the Governor's Commission to Study Mental and Behavioral Health (MBH Commission) in Maryland was created by Executive Order 01.01.2019.02.[13] The MBH Commission, chaired by Lt. Governor Boyd Rutherford, has been tasked with studying MH in Maryland, including access to mental health services and the overlap between MH conditions and SUD. Robust stakeholder involvement from across the state has highlighted that lack of capacity and coverage of residential treatment negatively affects the quality of life for individuals experiencing exacerbated symptoms of mental health conditions. The compounding isolation of the COVID-19 pandemic continues to have detrimental and lasting impacts on mental health—

[13] "Executive Order 01.01.2019.02, Commission to Study Mental and Behavioral Health in Maryland," *The State of Maryland Executive Department*, (2019): 1-5. https://governor.maryland.gov/wp-content/uploads/2019/05/0441_001.pdf

including increases in anxiety, depression, and suicide—and disproportionately affecting communities of color.[14] In April 2020, 13.4 percent of adults reported experiencing psychological distress as compared with 3.9 percent in 2018, marking an increase of 9.5 percent.[15]

Although individuals with a primary SUD diagnosis and secondary MH conditions may receive treatment in IMDs under the existing waiver, individuals solely in need of a higher level of care for a MH condition are excluded. The Department is seeking expenditure authority under section 1115(a) of the Social Security Act to claim expenditures by the State for MH treatment in non-public IMDs—which are not otherwise included as expenditures under section 1903—and to have those expenditures regarded as payments under the State's Title XIX plan. Specifically, the Department is requesting expenditure authority to cover Medicaid adults aged 21-64 that have an SMI diagnosis who are residing in a private IMD for up to two non-consecutive 30-day stays annually beginning on January 1, 2022. The days authorized would be based on medical necessity and would be covered when delivered by facilities located within Maryland or a contiguous state.

The Department covers a comprehensive array of services for MH and intends to maintain this level of coverage while expanding to reimburse for services in private IMDs for adults with SMI. The table below illuminates the full set of MH services currently covered in Maryland through MCOs, the ASO, and on an FFS basis. The SMI IMD demonstration will complement the current services covered in the state.

Table 5. The Current Continuum of Coverage for Mental Health Services in Maryland

Emergency	Inpatient	Outpatient
Fee-for-Service	***Administrative Service Organization***	***Managed Care Organization***
Emergency Transportation (Ambulance)	Acute Care Services	Primary Mental Health Services (assessment, clinical evaluation, referral to ASO)
Administrative Service Organization	Ancillary Services—MH	***Administrative Service Organization***
Emergency Room—All-inclusive ancillary services	Anesthesia—Inpatient	Biofeedback
Emergency Room—Medications	Electroconvulsive therapy (ECT)--Inpatient	Educational Therapy
Emergency Room—Beyond EMTALA Screening	Patient Consultation	Electroconvulsive Therapy (ECT)—Outpatient
Emergency Room—EMTALA Screening	Psychological or neuropsychological testing and evaluation—Inpatient	Family Psycho-Educational Therapy
Emergency Room—Post	Individual Therapy—MH Inpatient	Family Therapy—Outpatient

[14] Nirmita Panchal, Rabah Kamal, Cynthia Cox, and Rachel Garfield, "The Implications of COVID-19 for Mental Health and Substance Use," last modified February 10, 2021 https://www.kff.org/coronavirus-covid-19/issue-brief/the-implications-of-covid-19-for-mental-health-and-substance-use/.

[15] Emma E. McGinty, Rachel Presskreischer, Hahrie Han, and Colleen L. Barry, "Psychological Distress and Loneliness Reported by Adults in 2018 and April 2020," *JAMA 324*, no. 1 (June 2020): 93-94, doi:10.1001/jama.2020.9740.

Emergency	Inpatient	Outpatient
stabilization services		
Emergency Room—Stabilization services	Group Therapy—MH Inpatient	Group Therapy—Outpatient
Emergency Room—Clinical Laboratory	Family Therapy—MH Inpatient	Health Behavior Assessment
Emergency Room—General Services	Special Psychiatric Hospital	Health Behavioral Reassessment
Observation Stay—24 hour	Residential Treatment Centers	Individual Psycho-Educational Therapy
	Nursing Facility: MH Services	Individual Therapy—Outpatient
		Intensive Outpatient (IOP)
		Mental Health Assessment
		Mental Health Reassessment
		Multiple Family Group Therapy
		Partial Hospitalization (PHP)
		Psychiatric Rehabilitation Services
		Psychological or Neuropsychological Testing and Evaluation
		Therapeutic Behavioral Services
		Transcranial Magnetic Stimulation (TMS)
		Traumatic Brain Injury (TBI) Day Habilitation
		Evaluation and Management—Outpatient
		Laboratory Services
		Mobile Treatment—Assertive Community Treatment (ACT)
		Mobile Treatment—non-ACT
		Targeted Case Management
		Health Home Services for MH Reasons [serious and persistent mental illness (SPMI) – services by mobile treatment services (MTS) or psychological rehabilitation programs (PRP)]

Expected Outcomes

The demonstration will test whether the availability of specialty MH services in a dedicated psychiatric hospital, in addition to other community-based MH care, results in increased access to health care across the continuum of care and improved health outcomes for individuals with SMI. Additionally, an IMD exclusion waiver for psychiatric services supports the aims of Maryland's TCOC model, by potentially decreasing ED utilization in acute care hospitals (thereby decreasing wait times) as well as avoidable readmissions. Thus, approval of coverage of short stays in psychiatric IMDs for individuals with SMI would aid the Department in meeting among other goals as outlined by CMS the following:

- Improving access to a continuum of clinically-appropriate care to Medicaid participants needing treatment for SMI
- Reducing utilization and lengths of stay in EDs among Medicaid participants with SMI
- Reducing preventable readmissions to acute care hospitals and residential settings
- Improving care coordination, especially continuity of care in the community following episodes of acute care in hospitals and residential treatment facilities

The Department will continue to follow existing state processes to ensure participating hospitals and residential settings are licensed or otherwise authorized to primarily provide treatment for mental illnesses and are appropriately accredited. Additionally, processes through the ASO ensure beneficiaries access the appropriate level of care based on their presenting diagnoses and medical necessity criteria review. The ASO monitors length of stay based on periodic medical necessity criteria reviews based on Department established authorization periods. The Department has also increased care coordination resources available through the ASO contract. The Department continues to work with the aforementioned MBH Commission of which one of the subcommittees is devoted to enhancing crisis services throughout the State. Subsequently, the Department was awarded a grant from the Opioid Operational Command Center (OOCC) to increase the availability of comprehensive crisis stabilization services for both MH and SUD by leveraging the OMHC provider network. The Department formed a stakeholder workgroup to inform the process and partnered with Hilltop to produce data analysis and an environmental scan. The HSCRC has also awarded three Regional Partnership Catalyst Grants totaling approximately 79 million dollars for the expansion of BH crisis services rooted in the Crisis Now model over a period of five years.

The Greater Baltimore Region Integrated Crisis System (GBRICS) received nearly 45 million dollars to implement a care traffic control system, increase same day access to services, and expand mobile crisis teams in Baltimore City and Baltimore, Carroll, and Howard counties. Totally Linking Care in Prince George's County and Southern Maryland received over 22 million dollars to implement care traffic control, crisis bed expansion, mobile crisis team expansion, and crisis receiving and stabilization services. Tri-County Behavioral Health Engagement (TRIBE) received over 11 million dollars to build a hub and spoke like model for crisis stabilization in Somerset, Wicomico, and Worcester counties. The Department has engaged all of the HSCRC awardees in order to align efforts of enhancing the crisis response system. The CoCM pilot program will be leveraged to increase integration of behavioral health services in non-specialty care settings, along with continued promotion of SBIRT. Combined, all of these efforts work towards achieving the following SMI demonstration milestones:

- Ensuring Quality of Care in Psychiatric Hospitals and Residential Settings
- Improving Care Coordination and Transitions to Community-Based Care
- Increasing Access to Continuum of Care Including Crisis Stabilization Services
- Earlier Identification and Engagement in Treatment Including Through Increased Integration

Evaluation Design/Quality Measures

The Department will conduct a thorough evaluation of the demonstration in alignment with CMS's November 13, 2018 released Opportunities to Design Innovative Service Delivery System for Adults with Serious Mental Illness (SMI) and Children with Serious Emotional Disturbance. The design and methods of

the evaluation will be developed with CMS and the evaluator. The evaluation design and evaluation reports will follow CMS guidelines.

Budget Neutrality

Based on utilization to date, the Department estimates private standing psychiatric hospitals located in and contiguous to the State will treat approximately 3,960 Medicaid participants, 21 to 64 years of age, in SFY 2022 beginning January 1, 2022. Of these individuals, approximately one-third, or 1,320 are being treated for co-occurring substance use and psychiatric disorders and are already covered by Medicaid under its existing waiver authority. The remaining 2,640 will be treated for psychiatric disorders only and would be newly eligible for Medicaid coverage of services under this expansion. Projected expenditures for all 3,960 participants are detailed below in Table 6.

Table 6. Number of Medicaid Participants Served and Projected Cost, SFY 2022-2027

State Fiscal Year (SFY)	Estimated Medicaid Participants (19-64) with SMI Utilizing IMD IP Services*	Average Length of Stay (ALOS) in Days	Member Months	Per Member Cost Per Day*	Projected Cost (Total Funds)	Total Member Months	PMPM
SFY 2022 (Q3, Q4)	1,980	10.00	1.00	$1,500	$29,700,000	1,980	$15,000
SFY 2023	3,960	10.00	1.00	$1,537	$60,865,200	3,960	$15,370
SFY 2024	3,960	10.00	1.00	$1,598	$63,280,800	3,960	$15,980
SFY 2025	3,960	10.00	1.00	$1,662	$65,815,200	3,960	$16,620
SFY 2026	3,960	10.00	1.00	$1,662	$65,815,200	3,960	$16,620
SFY 2027 (Q1, Q2)	1,980	10.00	1.00	$1,662	$32,907,600	1,980	$16,620

**Estimates assume a 4 percent rate increase for providers annually from SFY 2022-2025.*

Maintenance of Effort Commitment

The Department acknowledges that in the event it is granted authority by CMS to expand IMD services to individuals with an SMI diagnosis, that will comply with the maintenance of effort requirements as specified in State Medicaid Director Letter 18-011.[16] Under these requirements, CMS will consider a state's commitment to on-going maintenance of effort on funding outpatient community-based mental health services when determining whether to approve a state's proposed demonstration project in order to ensure that resources are not disproportionately drawn into increasing access to treatment in inpatient and residential settings at the expense of community-based services.

As noted above, the Department is currently engaged in a variety of activities designed to expand access to outpatient community-based mental health services as described above. At this time the Department pays for the IMD services that are the subject of this waiver request with state-only funds under the Public

[16] Deputy Administrator and Director Mary C. Mayhew to State Medicaid Director, November 13, 2018, Department of Health and Human Services, Centers for Medicare & Medicaid Services, SMD # 18-011. https://www.medicaid.gov/sites/default/files/federal-policy-guidance/downloads/smd18011.pdf

Behavioral Health System (PBHS). Funding for the PBHS is not guaranteed and subject to budget cuts given the COVID-19 pandemic and financial recession. Based on discussions with CMS to date, the Department notes that certain quality improvement activities may result in savings to the Department driving a decline in community-based outpatient expenditures, which should not be assessed for purposes of calculating expenditures under the maintenance of effort requirements. As an example, the Department has seen disproportionate growth in expenditures attributable to psychiatric rehabilitation programs (PRP). The Department (Medicaid and BHA) are currently evaluating possible drivers for these costs and may implement additional oversight measures as a result.

Maternal Opioid Misuse Model

Introduction, Background, and Evidence

The MOM model, a CMMI initiative, focuses on improving care for pregnant and postpartum Medicaid participants diagnosed with OUD. In Maryland, with over 21,000 individuals of childbearing age diagnosed with an OUD, substance use is a leading cause of maternal death and has a significant impact on the approximately 1,500 infants born to Medicaid participants with OUD in the state per year. To meet CMMI evaluation requirements, the Department will initially pilot the MOM model in one jurisdiction, St. Mary's County.

Objective and Policy Rationale

Utilizing HealthChoice MCOs as care delivery partners, the MOM model focuses on improving clinical resources and enhancing care coordination to Medicaid participants with OUD during and after their pregnancies. HealthChoice MCOs will receive a PMPM payment to provide a set of enhanced case management services, standardized social determinants of health screenings and care coordination. In addition to the care planning and social determinants of health screening activities conducted at intake, MCO case managers will also be responsible for a minimum of at least one monthly connection with MOM participants and for ensuring each participant receives at least one somatic or behavioral health service per month.

Cooperative agreement funding from CMMI will support MOM model PMPMs during the period of July 2021 through June 2022. The Department seeks section 1115 authority through the HealthChoice demonstration waiver to fund a federal match for the MOM PMPM payments to the MCOs, effective July 2022. Given that Maryland has designed an MCO-centric case management model, the Department seeks section 1115 authority to waive the comparability requirements described in section 1902(a) (10) (B) of the Social Security Act in order to limit the MOM model to the MCO-enrolled population. Additionally, because the MOM model will be implemented on a site-specific pilot basis in St. Mary's County, the Department also seeks a waiver of the state wideness requirements described in section 1902(a)(1) of the Social Security Act. Depending on initial pilot outcomes and funding availability, the Department requests CMS's consideration of a streamlined process for expanding to additional jurisdictions under the HealthChoice demonstration.

The MOM model intervention provides services distinct from case management and care coordination services already available to Maryland Medicaid participants. Following is a description of the MOM model intervention to be funded via section 1115 authority.

Intake

Prior to MOM model intake, Maryland Medicaid MCOs will engage in a continuous 'no wrong door' approach to identifying potential MOM model participants. During an initial contact, the MCO case manager and potential participant will agree upon a time and place to hold an intake meeting. During the

intake visit, each potential MOM model participant will receive an overview of the MOM model, discuss their right to voluntarily participate and be granted the opportunity to raise any questions, as part of the informed consent process. With a signed informed consent, the individual will be considered enrolled in the MOM model.

Assessment

Once an individual consents to participate in MOM, they will respond to a health-related social needs screening. The Maryland MOM model social determinants of health (SDOH) screening tool covers the domains of living situation, food, transportation, utilities, safety, financial strain, employment, education, substance use (including tobacco), mental health (including depression), family and community support and maternal-child health. Additionally, the participant will work with the MOM case manager to respond to the Patient Activation Measure (PAM) questionnaire and additional screenings for anxiety, depression and alcohol and tobacco use.

Assessments will inform the collaborative development of a care plan and will be revisited at various intervals during MOM model participation. After delivery and during the postpartum period, reassessments will center on the infant-mother dyad, with a focus on parenting, managing stress and other activities that will contribute to a stable and healthy family environment for the infant and reduce the risk of recurrence of use or overdose.

Creation of a Treatment Plan

Each participant will work jointly with their MOM case manager during the intake session to develop an initial care plan, which will collect information on all providers who the participant sees for health care. It will also track somatic and behavioral health appointments scheduled and kept, and link to the health information exchange for additional information on medications and clinical conditions.

Using participant engagement best practices such as motivational interviewing and shared decision-making, the MOM participant will work with their MOM case manager to identify two to three goals based on their identified needs, with time-based and achievable objectives for each goal. The care plan will be reviewed during every monthly meeting and updated as needed. During the care plan review, the MOM case manager will also check in with the participant on their progress towards achieving each goal, addressing needs identified through the assessment and identifying any barriers to completing the goals.

Coordination

Each participant will be engaged in MOM model services from the time of intake up until 12 months postpartum or until they lose Medicaid eligibility, unless they opt out or become lost to follow-up (after substantial outreach, below) before that time. On a monthly basis, each participant will receive a minimum of one of the following five core components of care coordination: 1) comprehensive case management; 2) care coordination; 3) health promotion; 4) individual and family supports; and 5) linkages to community and support services.

1. Comprehensive Case Management
    a. Initial needs assessment and SDOH screening
    b. Development and periodic reassessment of MOM care plan
    c. Supportive shared decision-making process to understand and select from the landscape of health-related social needs resources
2. Care Coordination
    a. Appropriate linkages to somatic and behavioral health providers as identified within care plan for infant and mother
    b. Following up on needed services and supports
    c. Benefitting from one central case manager for different providers and CSOs
3. Health Promotion

a. Discussing recurrence of symptoms and creating a safety plan
b. Providing naloxone to the participant and educating friends/family on use of naloxone
c. Providing literature on Maryland Crisis Connect
d. Discussing options for family planning
e. Nutritional counseling
f. Wellness programs
g. Education about sexually-transmitted infections and other infectious diseases; e.g., viral hepatitis and HIV/AIDS Preventive health care education
h. Assisting with medication adherence
i. Educating family regarding appropriate infant developmental milestones and healthy attachment behaviors

4. Individual and Family Supports
    a. With participant permission, involving partner and/or family in care activities
    b. Training family about the recurrence of use and use of naloxone
    c. Connecting families and children with needed supports such as parenting classes or family counseling
5. Linkages to Community and Support Services
    a. Connecting participants to resources related to the SDOH screening by completing warm handoffs with programs embedded in Local Health Departments (LHDs), Local Behavioral Health Authorities (LBHAs) and CSOs, such as disability benefits, social services, SUD treatment, housing, legal services, life skills training and educational/vocational training

Engagement

In addition to case management and care coordination services, MOM model engagement requires attending at least one behavioral or somatic health visit each month. Each participant will receive support from their case managers to ensure they are able to attend their appointments; this may include arranging for transportation, peer support or other supports that facilitate the keeping of scheduled medical appointments and thus remain engaged in the MOM model.

Referral

In addition to the referral activities identified under Coordination ('Linkages to Community and Support Services'), each participant will work jointly with their case managers to develop an individualized plan when transitioning off of MOM model services. Participants will review the goals developed for their care plan, determine areas that may need continued support and work with their MCO case managers to perform warm handoffs to other programs if warranted, such as MIECHV or Medicaid HVS pilot funded home-visiting services. This process will be informed by a final SDOH screening.

Outreach to Disengaged Beneficiaries

Substantial outreach is a specific protocol for re-engaging participants should they become disengaged from care (e.g., miss a doctor's appointment or miss a monthly case manager contact). Each participant may receive substantial follow-up for multiple consecutive two-month periods, in which case managers utilize varied and innovative approaches to locating the participant.

Per month of substantial outreach, case managers will need to make and document at least three outreach attempts, two of which must be different types of follow-up (e.g., two phone calls and one letter in the mail). The first attempt should utilize the participant's preferred contact method. Should the participant be located and re-engaged, the case manager and participant will discuss what barriers prevented their engagement during the month(s) of substantial outreach and avenues for addressing them going forward.

Expected Outcomes

Maryland's MOM model is expected to improve quality of care for pregnant and postpartum individuals with OUD by furthering the integration of service delivery to the target population. In addition, the MOM model is also expected to improve health outcomes for babies born to model participants by decreasing the incidence of infants born with neonatal abstinence syndrome (NAS) or lessening NAS severity upon birth, subsequently reducing the length of stays in the neonatal intensive care unit (NICU), and improving their health outcomes and life chances.

The Maryland MOM model will deploy a three-pronged strategy to generate improvements in quality of care: 1) PMPM payments to MCOs to support enhanced case management and care coordination; 2) targeted technical assistance to providers to increase the integration of obstetric and medication for OUD services; and 3) enhanced health IT functionalities, such as a Care Coordination Module that will interface with a planned SDOH screening, referral and feedback loop platform.

Stemming from the direct model interventions, Maryland's MOM model anticipates the following output-level improvements to the quality of care:

1) Increased utilization of behavioral health treatment, such as medication for OUD, by model participants;
2) Increased utilization of somatic health services, such as prenatal and postpartum visits, by model participants; and
3) Increased coordination between behavioral and somatic health care providers as well as community-based organizations who provide services to the model participants.

Evaluation Design/Quality Measures

CMMI's federal statute requires robust evaluation of CMMI-funded demonstrations. As such, CMMI has procured third-party contractors to conduct extensive monitoring and evaluation activities for the MOM model and has stated that the Department should not pursue a separate, state-led evaluation. The demonstration evaluation will measure these model outputs through the five MOM Performance Milestones, as defined by CMMI:

1. Gains in patient activation scores;
2. Health-related social needs screenings;
3. Postpartum follow-up;
4. Maternal OUD treatment; and
5. Pharmacotherapy at delivery.

Additional information on federal evaluation efforts can be found on the CMMI MOM model website.[17]

Budget Neutrality

MOM model outcomes link the interventions and shorter-term outcomes with the model's overall goal to reduce Medicaid and CHIP expenditures and improve the quality of care for pregnant and postpartum individuals with OUD and their infants. Maryland anticipates its MOM model design will support cost savings related to decrease potentially avoidable ED and inpatient utilization by model participants and their infants, including neonatal intensive care unit (NICU) stays.

The Department expects to reduce the cost of care by 50 percent for half of the infants born to beneficiaries with OUD who are enrolled. When these savings are distributed across the total eligible population of infants, they are reduced to a total overall savings of 25 percent for all infants born to

[17] Centers for Medicare & Medicaid Services, "Maternal Opioid Misuse (MOM) Model," last modified February 12, 2021, https://innovation.cms.gov/innovation-models/maternal-opioid-misuse-model.

beneficiaries with OUD. Additional calculations for estimated uptake in St. Mary's:[18]

- Estimated MOM participants: 30
- Total cost of two months postpartum for infants with OUD in the absence of the MOM intervention: $781,380
- Total cost of two months postpartum for infants with OUD with the MOM intervention (assuming overall savings of 25 percent): $586,035
- Gross annual savings: $195,345
- Total annual cost of MOM intervention: $74,768
- Annual savings projection, net of intervention: $120,577

The resulting decreases in potentially avoidable ED and inpatient utilization also align with the broader goals of Maryland's TCOC model. Key to the success of the model is educating both providers and consumers to seek appropriate care in the appropriate setting at the appropriate time. Finally, the MOM model incorporates elements of two of the three population health domains - opioid use and maternal-child health - in Maryland's SIHIS, as proposed. The MOM model will serve as an important effort to support Maryland's goals and targets under the TCOC model.

Emergency Triage, Treat and Transport Model

Introduction

In CY 2018, Emergency Medical Services in Maryland provided 564,760 transports to the ED. Sixty-one percent (348,101) of these transports were categorized as Priority 3, meaning they were for "non-emergent conditions, requiring medical attention, but not on an emergency basis."[19] These kinds of conditions could be treated at a more appropriate and cost-effective primary or urgent health care setting. Similarly, the CY 2018 evaluation of the HealthChoice program found that 41 percent of all ED visits by Medicaid MCO participants were for potentially avoidable conditions, and could have been prevented by more appropriate primary or urgent care.[20]

At the same time, Maryland's ED wait times have been above the national average for the past decade.[21] Increased wait times affect both patient care and EMS ED-EMS Transfer Time (transfer time), i.e. the time between the arrival of an ambulance-transported patient and the time that the patient is moved off of the EMS stretcher with transfer of care to ED staff. As a result, Maryland's valuable emergency medical time and resources are consumed by low acuity conditions, impacting patient care, costs and outcomes.

[18] CY 2017 figures.

[19] Maryland Institute for Emergency Medical Services Systems and Health Services Cost Review Commission, "Joint Chairman's Report on Emergency Department Overcrowding," December 2017, https://www.mhaonline.org/docs/default-source/Resources/ED-Diversions/miemss-hospital-ed-overcrowding-report-12-2017-final.pdf?sfvrsn=2

[20] Hilltop Institute, "2020 HealthChoice Evaluation (Cy14-CY18)," .July 2020, https://mmcp.health.maryland.gov/healthchoice/Documents/HealthChoice%20Evaluations/2020%20HealthChoice%20Evaluation%20(CY%202014-CY%202018).pdf

[21] Maryland Institute for Emergency Medical Services Systems and Health Services Cost Review Commission, "Emergency Department Overcrowding Update," November 2019, https://www.miemss.org/home/Portals/0/Docs/LegislativeReports/miemss-ed-overcrowding-update-10-31-19.pdf?ver=2019-11-19-174743-763

Current Status of Similar Work in Maryland

Transportation to Alternative Destination for Medicaid Participants with Low-acuity Somatic Conditions

Use of EDs for non-emergent health care services is not a Maryland-specific problem. In order to test models that could improve outcomes for patients and improve the efficiency of EMS service delivery, CMMI developed the Emergency Triage, Treat, and Transport (ET3) model. ET3 is a voluntary, five-year payment model that provides greater flexibility to ambulance care teams to address emergency health care needs following a 911 call by allowing for payment for ground transports to alternative destinations such as urgent care providers in addition to the ED. The model targets Medicare beneficiaries. In 2020, four public ground EMS transportation providers in Maryland – Annapolis Fire Department, Baltimore City Fire Department, Charles County Fire and Rescue, and Montgomery County Fire and Rescue Service–were approved by CMMI to participate in ET3 starting January, 2021. Under the model, ambulance providers will be paid the current Medicare FFS ground transportation rate to an alternative destination (AD) in lieu of the ED. In order to be transported to an AD the patient must consent and meet certain criteria using an algorithm developed by the Maryland Institute for Emergency Medical Services Systems (MIEMSS), which is provided in *Appendix C: ET3 Alternative Destination Protocol and Chief Complaints.*

The Department requests CMS's consideration to allow Medicaid to pay for alternative destinations in the ET3 selected counties.

Transportation to Crisis Stabilization Services for Behavioral Health Care

While the ET3 model seeks to provide care outside the ED for 911 calls with low-acuity somatic complaints, there is also substantial work underway in Maryland to expand treatment options in lieu of the ED for those with behavioral health needs. In 2018, MIEMSS approved a protocol to allow EMS providers to transport persons in behavioral health crises to be transported to alternative destinations outside of the ED for treatment. To date only one behavioral health provider, the Tuerk House in Baltimore City, is receiving drop-offs from EMS providers using this approved protocol. Medicaid does not reimburse for transportation to crisis stabilization centers at this time, instead EMS providers are paid for the transportation claim through a grant. However, during the 2020 legislative session, a number of alternative destinations were approved to receive transports for emergency mental health evaluations.[22] Outpatient Mental Health Clinics (OMHCs) were included as one of the new providers under this designation indicating increased interest in the state for expanding the use of community-based providers for care that has traditionally been provided in E.Ds. Finally, Medicaid was awarded a grant in 2020 from the OOCC. As part of this work Medicaid aims to increase the number of community providers who could accept persons in crisis via EMS transport in lieu of them receiving care in the ED.

Requested Policy Changes, Objectives, and Rationale

ET3 specifically targets Medicare participants; however, the model aims to provide services to all payers. Therefore, Maryland is requesting a waiver of the state wideness requirements described in section 1902(a)(1) of the Social Security Act to allow for the reimbursement of EMS FFS ground transportation of Medicaid participants to ADs in these four jurisdictions, consistent with the current ET3 MIEMSS-approved AD protocols for Medicare participants.

In Maryland, EMS ground transportation to an ED is an FFS benefit for the HealthChoice population. Providers are paid $100 per transport (reimbursement code A0427).[23] Maryland will allow the four jurisdictions participating in the ET3 model to use the established MIEMSS-approved AD protocol for

[22] Maryland General Assembly, 2020, SB441, http://mgaleg.maryland.gov/2020RS/chapters_noln/Ch_173_sb0441E.pdf.

[23] MCOs are responsible for paying for hospital to hospital ambulance transfers.

determining if a Medicaid participant is eligible for transport to an AD in lieu of the ED. This protocol is continually subject to quality assurance and improvement processes to guarantee patient safety. Under this section 1115 demonstration, Maryland would reimburse ground FFS transports to ADs at the same FFS rate. Urgent care is already a covered service for HealthChoice participants, as are primary care and behavioral health care. As a part of their ET3 work, all participating jurisdictions have contracted with urgent care providers and other community providers in order to assure care upon arrival, and the state will assure that all MCOs accept claims from ET3 participating providers.

Conditions for which a consenting Medicaid participant could be transported to an AD under ET3

Conditions that would be deemed eligible for transportation to an AD under this demonstration include: mild cough; non-traumatic dental problems; diarrhea; chronic dizziness; mild dysuria; ear pain; itching without systemic rash; minor eye irritation without active infection; distal extremity fractures with no open wounds or vascular impairment; minor headache without neurological impairment; injury follow-up; as well as a host of other conditions (see *Appendix C* for the complete list). Although the vast majority of Priority 3 transports will qualify for transportation to an AD, not all of them will. Only those patients that meet the specific screening criteria in the MIEMSS-approved protocol will be eligible for transportation to an AD.

Estimated Number of Transports under Model

In 2018, a total of 192,022 FFS EMS ground transports occurred in the four participating ET3 jurisdictions, of these approximately 25 percent (54,312) were provided to Medicaid participants (excluding dually-eligible individuals).[24] Of note, these approximately 54,000 transports in ET3 jurisdictions represent approximately 48 percent of all FFS EMS ground transports for Medicaid participants statewide that year (112,458). Maryland estimates that approximately 30 percent of all FFS transports for Medicaid participants in ET3 jurisdictions will be eligible to be transported to an AD under the model for a total estimated annual number of transports of 17,000 and $1,700,000 in reimbursement. The table below provides additional detail regarding these estimates that would be eligible for alternative destinations.

Table 7. Proportion of EMS Ground Transportation FFS claims for Medicaid Participants* (CY 2018)

Participating Jurisdiction	Total number of FFS runs for Medicaid Participants*	Number of Medicaid EMS FFS transports in Jurisdiction	Expected proportion eligible for transportation under ET3	Estimated number of runs eligible for AD transport	Total Reimbursement for Transport Services
Baltimore City	100,000	43,465	30%	14,000	$1,400,000
Annapolis	5,826	1,098	30%	350	$35,000
Charles County	13,696	148	30%	50	$5,000
Montgomery County	72,500	8,623	30%	2,500	$250,000
Total	**192,022**	**53,334**	**30%**	**17,000**	**$1,700,000**

**Excludes dually eligible individuals*

[24] For the purpose of the 1115 demonstration of ET3, claims for dually eligible will not be included.

Anticipated Outcomes

The primary outcome for the ET3 program under this section 1115 demonstration will be that consenting Medicaid participants with low acuity 911 calls in the participating jurisdictions will receive appropriate care at ADs without experiencing adverse events. Specifically, the outcome of interest will be the occurrence of a Related Subsequent Visit (RSV), defined as a visit to an AD or ED for the same complaint within seven days of the initial encounter.[25] This outcome is intended to indicate deficient care, under the reasoning that appropriate care for a given low-acuity medical issue should result in the resolution of that complaint; insufficient care, however, would lead to additional visits for the same complaint. Secondarily, the Department expects to see reductions in transfer interval times, as well as patients awaiting intake. Quicker turn-around times for transports should result in increased cost-effectiveness of the provision of EMS services.

Evaluation Design

The ET3 pilot will test whether reimbursement for EMS transport of Priority 3 calls to ADs will assure timely access to medical care to address Medicaid participants' emergent needs while improving the efficiency by which EMS services are provided.

Sources of Data for Demonstration Evaluation

The Department and MIEMSS have signed a Data Use Agreement whereby MIEMSS will share eMEDS® Electronic Patient Care Reporting System data with Medicaid and Hilltop. This data, combined with MMIS claims and encounter data, will allow the Department to evaluate the effectiveness of this demonstration using the following design and metrics. Data from Maryland's HSCRC Quality Program data, using CMS' Clinical Quality Measures will also be used to gauge the impact of the program on an all-payer level.

Design and Evaluation Measures

Utilization of the ET3 model will be monitored based on a number of relevant metrics. The following process measures will be used to determine uptake of the model in the participating jurisdictions:

- Number of AD transports for Medicaid Priority 3 calls
- Number of ED transports for Medicaid Priority 3 calls
- Proportion of all potentially eligible participants who chose to be transported to an AD in lieu of the ED

Evaluation of the intervention itself - transportation of consenting Medicaid participants to an AD in lieu of the ED for low-acuity emergent health care needs following a 911 call - will be completed using a logistic regression model. The treatment group will consist of 911 callers within the ET3 jurisdictions who chose to be transported to an AD. The Department will compare the incidence of an RSV between that treatment group and 911 callers outside of the ET3 jurisdictions who were transported to an ED for similar complaints, thus limiting the effect of selection bias on our estimates. The analysis will also control for relevant participant characteristics that may affect the likelihood of an RSV, including demographic, geographic, chronic disease burden, and historical health care utilization patterns. Sensitivity analysis will be completed using two ancillary models:

- One comparing outcomes for the treatment group to individuals outside of the ET3 jurisdictions who self-transported to an AD, and
- Another comparing outcomes for the treatment group to individuals inside of the ET3 jurisdictions who chose to be treated at an ED.

[25] For example, suppose an individual within a participating ET3 jurisdiction receives an EMS transport due to headache (ICD-10: R51), and chooses to be treated at an AD. If they were treated for headache again in either an AD or ED—regardless of transportation mode—in the following seven days, then they will be flagged as having a related subsequent visit.

These will provide an understanding of both the selection- and provider-level effects on the likelihood of an RSV for low-acuity populations and will be used to inform our primary model. In concert, the three analyses will provide a comprehensive understanding of the ET3 program on patient outcomes.

Additional measures to be included in the evaluation include the measures that MIEMSS will report to the Department:

- *Adverse Event Reporting.* For their ET3 models for Medicare patients, each participating jurisdiction, as well as MIEMSS, is conducting a thorough quality assurance and quality improvement review for the AD protocol. As a part of this, participating jurisdictions will regularly meet with their ADs to review any unanticipated patient outcomes, and refine the AD protocol, as needed. MIEMSS will report on the quality assurance reviews and share any adverse events with the state for the Medicaid population.
- *ED-EMS Transfer Time Interval.* A transfer time interval is defined as the time between the arrival of an ambulance-transported patient at the ED and the time that the patient is moved off the EMS stretcher with transfer of care to ED staff. Delays in transfer time intervals effectively keep the ambulance out of service, which can delay EMS responses to other emergency calls in their jurisdictions, decreasing advanced life support coverage that responds to cardiac arrests, trauma, and other critical cases. MIEMSS data shows that Priority 2 and 3 calls have, on average, higher transfer time intervals than Priority 1 calls.[26] In a recent six month period, over 6,000 Priority 3 calls had a transfer time interval of over an hour.[27] MIEMSS will report on the transfer interval times on an all-payer basis, as MIEMSS cannot differentiate at the payer level. There is no reason to expect that Medicaid Priority 3 transfer interval times will differ on a systematic basis, therefore the overall change in transfer interval time will be used as part of this evaluation.

Budget Neutrality

This demonstration would remain budget neutral, as Maryland would reimburse EMS at the same FFS rate of $100 for each ground transport to an AD. In addition, ET3 may reduce health care costs after patients are transported. Urgent care costs generally range between $150-$200 for Maryland Medicaid visit.[28] In comparison, the average cost of an ED visit for low-acuity complaints is $560 in the Northeast.[29] As seen in the table below, Maryland estimates that approximately 17,000 Priority 3 calls will be eligible for AD transport at the same flat transportation rate of $100, resulting in an approximately $6.1 million reduction in costs of services provided by destination.

[26] Maryland Institute for Emergency Medical Services Systems and Health Services Cost Review Commission, "Emergency Department Overcrowding Update," November 2019, https://www.miemss.org/home/Portals/0/Docs/LegislativeReports/miemss-ed-overcrowding-update-10-31-19.pdf?ver=2019-11-19-174743-763

[27] Maryland Institute for Emergency Medical Services Systems and Health Services Cost Review Commission, "Emergency Department Overcrowding Update," November 2019, https://www.miemss.org/home/Portals/0/Docs/LegislativeReports/miemss-ed-overcrowding-update-10-31-19.pdf?ver=2019-11-19-174743-763

[28] Maryland Department of Health, "Maryland Medical Assistance Program Urgent Care Facilities Guidelines," January 2020, https://mmcp.health.maryland.gov/Documents/Urgent%20Care%20Facility%20Guidelines%20FINAL%201-17-20%20%281%29.pdf

[29] Agency for Healthcare Research and Quality, "Statistical Brief #268: Costs of Emergency Department Visits in the United States, 2017," December 2020, https://www.hcup-us.ahrq.gov/reports/statbriefs/sb268-ED-Costs-2017.jsp

Table 8. ET3 Cost Savings

Participating Jurisdiction	Estimated number of runs eligible for AD transport	Total FFS Claims Reimbursement for Transport Services	Total Cost of ED Visit ($560 average per visit)	Total Cost of AD visits ($200 average per visit)	Total costs saved (ED costs minus AD costs)
Baltimore City	14,000	$1,400,000	$7,840,000	$2,800,000	$5,040,000
City of Annapolis	350	$35,000	$196,000	$70,000	$126,000
Charles County	50	$5,000	$28,000	$10,000	$18,000
Montgomery County	2,500	$250,000	$1,400,000	$500,000	$900,000
Total	**17,000**	**$1,700,000**	**$9,464,000**	**$3,380,000**	**$6,084,000**

Request to Waive Title XIX Requirements

The following table summarizes the current waiver provisions and expenditure authorities and whether the Department is requesting to continue these provisions and authorities in the next renewal period.

Table 9. Waiver and Expenditure Authorities Table

Program/ Policy Name	Current Terms and Conditions	Proposed Changes
ACIS Pilot	Waiver to Section 1902(a)(10)(B)—to enable the State to provide benefits specified in the special terms and conditions to Demonstration participants enrolled in the ACIS Pilot program which are not available to other individuals under the Medicaid State Plan. Waiver to Section 1902(a)(23)(A)	Modification to request additional slots
Adult Dental Pilot Program	Provide coverage of dental benefits for fully dually eligible individuals ages 21 through 64.	Continue with no changes
Breast and Cervical Cancer Program	For continuity of care purposes those individuals who were enrolled and in an active treatment program prior to January 1, 2014, were grandfathered into the program and receive coverage under this demonstration effective January 1, 2014.	Continue with no changes
Collaborative Care Pilot Model (CoCM) Pilot Program	Implement a CoCM pilot program for a limited number of HealthChoice beneficiaries.	Continue with no changes
Dental Expansion	Waiver to Section 1902(a) (10) (B)— to enable the State to	Continue with no

Program/ Policy Name	Current Terms and Conditions	Proposed Changes
for Former Foster Youth	provide benefits specified in the special terms and conditions to Demonstration participants enrolled as former foster care youth which are not available to other individuals under the Medicaid State Plan.	changes
Disenrollment Operations for Automatic Re-enrollment into the MCO	Provide an enrollee with the disenrollment rights required by sections 1903 (m)(2)(A)(vi) and 1932(a)(4) of the Act, when the enrollee is automatically re-enrolled into the enrollee's prior MCO after an eligibility lapse of no more than 120 days. Send a written notice of action for a denial of payment [as specified in 42 CFR 438.400(b)(3)] when the beneficiary has no liability, as required by sections 1903(m)(2)(A)(xi) and 1932(b)(4) of the Act and in regulations at 438.404(c)(2)	Continue with no changes
Emergency Triage, Treat, and Transport Model (ET3)	N/A	New Program
Expansion of IMD for SMI	Currently limited to individuals with a dual diagnosis of SUD and MH condition. Maryland seeks to maintain and expand expenditure authority under Section 1115(a)(2) of the Social Security Act to claim expenditures by the State for mental health in non-public IMDs— which are not otherwise included as expenditures under Section 1903—and to have those expenditures regarded as expenditures under the State's Title XIX plan.	Expansion would cover all individuals with an SMI diagnosis, not just those with dual SUD/MH diagnosis.
Family Planning Program	Women of childbearing age who have a family income at or below 250 percent of the FPL and who are not otherwise eligible for Medicaid, CHIP, or Medicare, but had Medicaid pregnancy coverage, will be eligible for the HealthChoice family planning program for 12 months immediately following the 2-month postpartum period.	Transitioned to a State Plan Amendment, no longer needed in section 1115 demonstration
Freedom of Choice Selection 1902(a)23(A)	To enable the State to restrict freedom of choice of provider, other than for family planning services, for children with special needs, as identified in section 1932(a)(2)(A)(i-v) of the Act, who are participants in the Demonstration To enable the State to require that all populations participating in the Demonstration receive outpatient specialty mental health and substance use services from providers with the public behavioral health	Continue with no changes

Program/ Policy Name	Current Terms and Conditions	Proposed Changes
	system.	
HealthChoice DPP	Provide National Diabetes Prevention Program (National DPP) services.	Continue with no changes
HVS Pilot	Provide evidence-based home visiting services by licensed practitioners to promote enhanced health outcomes, whole person care, and community-integration for high-risk pregnant women and children up to two (2) years old.	Modification to serve children up to three (3) years old.
ICS	Allow the program, previously approved for 100, to continue to be capped at 100 individuals. Waiver to Section 1902(a)(10)	Continue with no changes
Inpatient Benefit for Pregnant Women Eligible through Hospital Presumptive Eligibility	Waiver of 42 CFR 435.1103(a)—to permit the State to provide the entire State Plan benefit package to pregnant women found presumptively eligible.	Continue with no changes
MOM model	N/A	Waiver to Section 1902(a)(10)(B)—to enable the State to provide benefits specified in the special terms and conditions to Demonstration participants enrolled in the Maternal Opioid Misuse model which are not available to other individuals under the Medicaid State Plan. Waiver to Section 1902(a)(1)--to enable the State to limit the provision of benefits specified in the special

Program/ Policy Name	Current Terms and Conditions	Proposed Changes
		terms and conditions for the Maternal Opioid Misuse model to a sub-state area Expenditure authority under Section 1115(a)(2) of the Social Security Act to claim expenditures by the State for Maternal Opioid Misuse model services— which are not otherwise included as expenditures under Section 1903—and to have those expenditures regarded as expenditures under the State's Title XIX plan.
Presumptive Eligibility Option Section 1902(a)(47) insofar as it incorporates sections 1920 and 1920A	To permit the State to provide presumptive eligibility for pregnant women and children using a method for determining presumptive eligibility that is not in accordance with sections 1920 and 1920A.	Continue with no changes
REM Demonstration Benefits	Waiver to Section 1902(a)(10)(B)—to enable the State to provide benefits specified in the special terms and conditions to Demonstration participants in the Rare and Expensive Case Management program which are not available to other individuals under the Medicaid State Plan. Waiver to Section 1902(a)(23)(A)—to permit the State to selectively contract with a single entity for the provision of the Rare and Expensive Case Management (REM) benefit as authorized under this demonstration through Expenditure Authority 6. The operation of this selective contracting	Continue with no changes

Program/ Policy Name	Current Terms and Conditions	Proposed Changes
	authority does not affect a beneficiary's ability to select between two or more qualified case managers	
Residential Treatment for SUD	Maryland seeks to maintain expenditure authority under Section 1115(a)(2) of the Social Security Act to claim expenditures by the State for substance use disorders in non-public IMDs— which are not otherwise included as expenditures under Section 1903—and to have those expenditures regarded as expenditures under the State's Title XIX plan.	Continue with no changes
Retroactive Eligibility Section 1902(a)(34)	To exempt the State from extending eligibility prior to the date of application to optional targeted low-income children, except for infants under age one described in subsection 1902(a)(10)(A)(i)(IV), or children described in subsections 1902(a)(10)(A)(i)(VI) or 1902(a)(10)(A)(i)(VII)	Continue with no changes

Impact on Enrollment and Expenditures

Demonstration projects under section 1115(a) waivers are expected to be budget neutral to the federal government. A budget neutral demonstration project does not result in Medicaid costs to the federal government that are greater than what the federal government's Medicaid costs would likely have been absent the demonstration. CMS requires states to demonstrate that actual expenditures do not exceed certain cost thresholds. i.e., they may not exceed what the costs of providing those services would have been under a traditional Medicaid FFS program. The budget neutrality expenditure limits are based on projections of the amount of FFP that the state would likely have received in the absence of the demonstration.

With this application, for the next waiver renewal period, the demonstration is not anticipated to have a negative impact on Medicaid enrollment. Enrollment and expenditures for the current waiver period and projections for the renewal period are outlined in the Appendix A.

Budget Neutrality Savings Accrual and Rebasing

Since the last waiver renewal, CMS updated its budget neutrality methodology. Previously, CMS considered the budget neutrality savings from the prior approval period(s) to "roll over" into the next demonstration approval period. Over time, CMS noted that states like Maryland, with long-running demonstrations, accumulated substantial amounts of "unspent" budget neutrality savings due to this "roll over" policy. In 2016, CMS updated its approach to create a budget neutrality test based on recent state spending trends. CMS began a transitional phase-in of methodology adjustments to their budget neutrality approach for demonstration extension approvals. Beginning January 1, 2021, these methodologic approaches will be applied to all waiver demonstration extensions, including Maryland's. In this waiver renewal period, only savings from the most recent five years can "roll over" into an extension from prior approval periods. Going forward, demonstrations without waiver baselines will be rebased to more accurately reflect recent state spending trends. There will be a transitional phase-down

of newly accrued savings for the demonstration going forward, and there will be limits on approved upper payment limit (UPL) diversionary spending.

Appendix A: Impact on Expenditures and Enrollment demonstrates that HealthChoice has met this condition and generated savings for both the state and federal governments. The Department requests to maintain the existing monthly capitation and trend rates for the current population eligible today. The Department continues to use the same Medicaid eligibility groups (MEGs), which were used during the previous renewal period, and has added new MEGs as appropriate for new programs. Appendix A highlights capitation and trend rates.

Public Process and Indian Consultation Requirements

[To be amended at the close of public comment period]

As of May 4, 2021, the State's 30-day public comment period is open. The Department will accept comments through June 4, 2021. The Department provided public notice and solicited stakeholder participation for this renewal application pursuant to 42 C.F.R. §431.408. Notice was published in the *Maryland Register,* on April 9, 2021, and May 7 2021. The full draft narrative of the waiver application was published on the Department website on May 4, 2021.

The Department presented highlights of the waiver renewal to the Maryland Medicaid Advisory Committee (MMAC) at its April 22, 2021 meeting, informing those in attendance of the public notice content. The Department will present again at the May 27, 2021 meeting. The Department provided a 31-day public comment period, from May 4, 2021 through June 4, 2021. Comments received after this date will also be accepted, to receive the broadest input from stakeholders possible.

In addition to publishing these notices, the Department will conduct two public hearings on the renewal application. Due to the COVID-19 PHE both hearings will be held virtually via the GoToWebinar Platform. This hearing is accessible by audio conference and will be presented as a webinar so that slides are visible to participants. , The first hearing will be held on May 11, 2021. The second hearing will be held on May 27, 2021, following the MMAC meeting. During these hearings, the Department will present a summary of the renewal application and accept verbal and written comments from stakeholders (See *Appendix B: Summary of Public Comments* for additional information on comments received). The public is able to access information about the waiver renewal and submission of comments on the Department website via the link: https://mmcp.the Department.maryland.gov/sim/Pages/1115-HealthChoice-Waiver-Renewal.aspx

Though the State has no federally recognized tribes, Jessica Dickerson, of the Office of Urban Indian Health Programs in Maryland, has been contacted for review of the current Maryland HealthChoice Program section 1115 Waiver Renewal Application. On May 4, 2021, the Department sent overview of the draft section 1115 renewal application and summary document to Jessica Dickerson, of the Office of Urban Indian Health Programs in Maryland, for input and comments.

Beyond these requirements, the Department continually consults with stakeholders on the HealthChoice program through the MMAC. The MMAC meets monthly and receives reports on regulatory and waiver changes, including amendments to the section 1115 waiver. Annually, the MMAC provides feedback on the HealthChoice evaluation report. Notice of the waiver renewal was distributed to the MMAC stakeholder

email list, with instruction to submit written comments to the Department stakeholder email address, healthchoicerenewal@maryland.gov.

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Appendix A: Impact on Expenditures and Enrollment

The Department understands that when submitting a Section 1115 demonstration waiver, states are required to include an initial view illustrating that they expect the demonstration to be budget neutral. The test for budget neutrality will be applied according to the terms and conditions for the demonstration that are agreed to by the State and CMS, will be measured periodically throughout the approval period, and evaluated at the conclusion of the demonstration based on per member per month (PMPM) costs.

Based on CMS guidance, a budget neutrality workbook will be provided to include historical enrollment, trends, and expenditures.

To ensure budget neutrality, the Department will achieve cost savings from a range of sources including:

- Comprehensive management of members;
- Deflecting members with behavioral health conditions away from high-cost;
- Institutional services when unnecessary, ensuring proper management under community-based services; and
- Stabilizing behavioral health conditions and co-morbid medical conditions to avoid long-term Medicaid eligibility for some individuals. For others, the outcome of the early intervention will result in conditions that are easier to manage and less costly than disability-related Medicaid.

In FY 2020, there were 1,620,533 individuals enrolled in the Medicaid program, including 1,370,465 individuals in HealthChoice. This demonstration is not expected to increase or decrease annual enrollment. Table 10 below reflects current enrollment data and expenditure projections expected over the term of the demonstration for individuals enrolled in HealthChoice whose health care coverage is impacted by the demonstration. The enrollment and expenditures estimated through 2026 noted here reflect the program as currently approved because the demonstration is not expected to have a material impact on Medicaid enrollment. The Department does anticipate enrollment may decrease when COVID-19 related MOE requirements sunset following the end of the PHE.

Estimated costs for HealthChoice enrollment based on projected capitation payments are also provided. The impact of individual program interventions are also estimated.

Table 10. Projected Member Months by Calendar Year*

	Prior Waiver Period					Current Waiver Period				
	2017	**2018**	**2019**	**2020**	**2021 (projected)**	**2022 (projected)**	**2023 (projected)**	**2024 (projected)**	**2025 (projected)**	**2026 (projected)**
HealthChoice**	13,103,311	13,437,823	14,438,136	15,394,492	16,470,142	16,526,109	16,182,874	16,344,703	16,508,150	16,673,232
Home Visiting Services (HVS) Pilot	270	270	270	564	564	7,800	7,800	7,800	7,800	7,800
Assistance in Community Integration Services (ACIS) Pilot	-	1,284	2,340	3,666	7,200	7,800	8,400	9,000	9,600	10,800
HealthChoice Diabetes Prevention Program (DPP)	-	-	960	960	109,152	109,152	109,152	109,152	109,152	109,152
Adult Dental Pilot Program	-	-	54,096	414,348	418,524	431,076	444,000	457,320	471,036	485,160
Collaborative Care Model (CoCM) Pilot Program	-	-	-	960	1,530	1,530	1,530	1,530	1,530	1,530
Increased Community Services (ICS)	336	396	360	348	324	1,200	1,200	1,200	1,200	1,200
Breast and Cervical Cancer Program	1,648	1,430	1098	806	775	775	775	775	775	775
Presumptive Eligibility for Pregnant Women (PEPW)	20	12	0	0	0	0	0	0	0	0
Former Foster Care Dental	15,723	15,345	13,746	11,393	12,720	13,092	13,476	13,872	14,280	14,700

***** Inclusive of: TANF Adults 0-123; Medicaid Children; Medically Needy Adult; Medically Needy Children; SOBRA Adults; SSI/BD Adults; SSI/BD Children; New Adults.

**Please see Tables 4 and 7 for more information on SUD and SMI demonstration enrollment. Please note that coverage for SMI IMD was only available for individuals with a dual MH/SUD diagnosis during the previous demonstration period. See MOM model and ET3 sections for additional details.

Table 11. Projected Demonstration Expenditures by Calendar Year*

	Prior Waiver Period					Current Waiver Period				
	2017	**2018**	**2019**	**2020**	**2021 (projected)**	**2022 (projected)**	**2023 (projected)**	**2024 (projected)**	**2025 (projected)**	**2026 (projected)**
HealthChoice**	$7,730,969,828	$7,836,523,747	$7,444,837,437	$7,385,370,611	$8,372,298,762	$8,988,005,009	$9,026,954,699	$9,344,656,659	$9,673,543,935	$10,014,010,402
Home Visiting Services (HVS) Pilot	$375,000	$375,000	$375,000	$375,000	$375,000	$5,400,000	$5,400,000	$5,400,000	$5,400,000	$5,400,000
Assistance in Community Integration Services (ACIS) Pilot	-	$1,746,020	$3,120,000	$4,888,000	$9,600,000	$9,600,000	$9,600,000	$9,600,000	$9,600,000	$9,600,000
HealthChoice Diabetes Prevention Program (DPP)	-	-	$53,600	$53,600	$6,094,320.00	$6,094,320.00	$6,094,320.00	$6,094,320.00	$6,094,320.00	$6,094,320.00
Adult Dental Pilot Program	-	-	$585,318.72	$4,483,245	$4,528,429.68	$4,664,242.32	$4,804,080.00	$4,948,202.40	$5,096,609.52	$5,249,431.20
Collaborative Care Model (CoCM) Pilot Program	-	-	-	$182,400	$290,700	$550,000	$550,000	$550,000	$550,000	$550,000
Increased Community Services (ICS)	-	-	-	-	-	-	-	-	-	-
Breast and Cervical Cancer Program	$1,167,839	$168,961	$1,197,097	$1,084,719	$821,010	$411,532	$1,200,000	$1,200,000	$1,200,000	$1,200,000
Presumptive Eligibility for Pregnant Women (PEPW)	$4,675	$2,805	-	-	-	-	-	-	-	-
Former Foster Care Dental	$360,739.2	$382,427.79	$405,454.08	$429,889.64	$455,809.45	$483,292.08	$360,739.2	$382,427.79	$405,454.08	$429,889.64

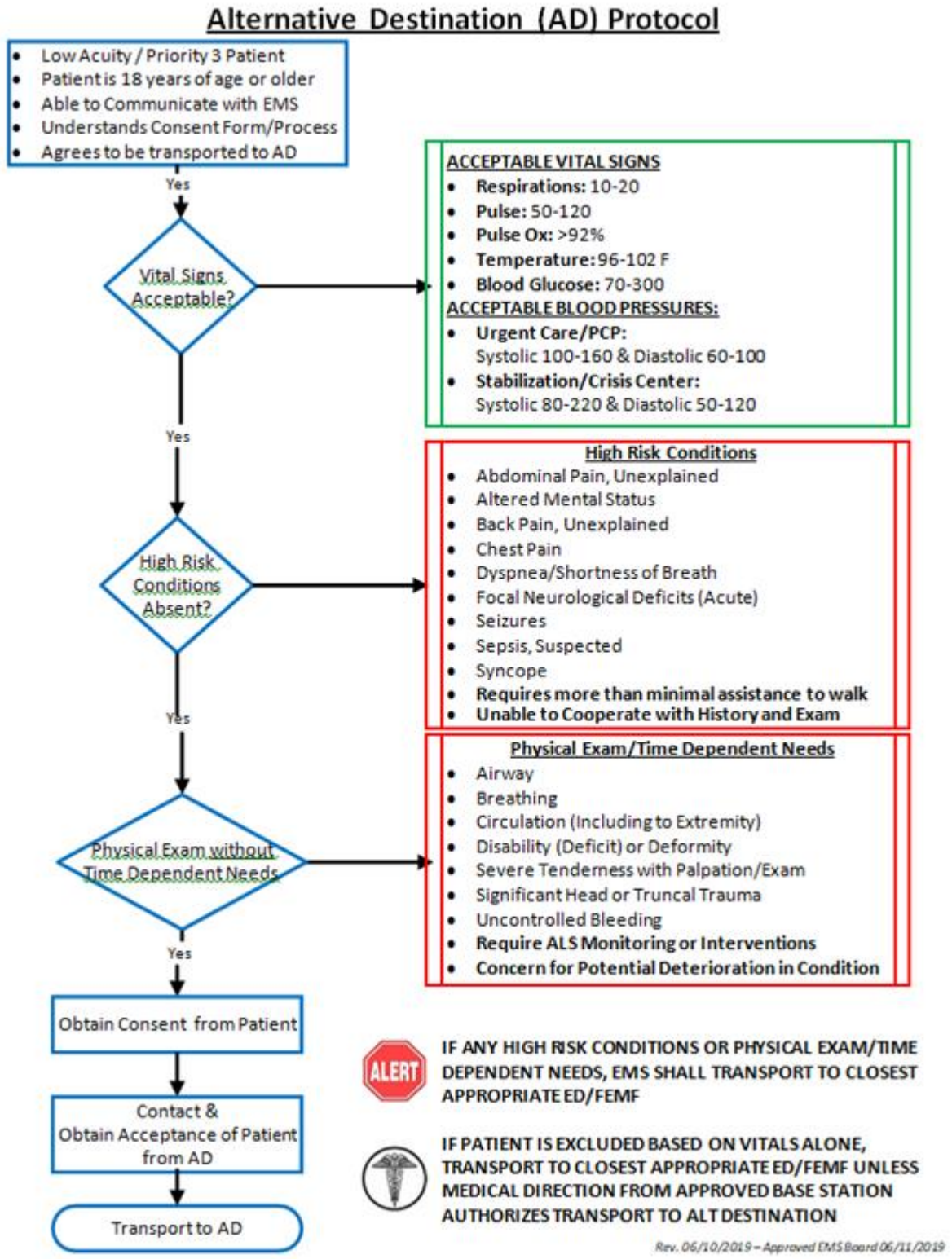
***** Inclusive of: TANF Adults 0-123; Medicaid Children; Medically Needy Adult; Medically Needy Children; SOBRA Adults; SSI/BD Adults; SSI/BD Children; New Adults.

**Please see Tables 4 and 7 for more information on SUD and SMI expenditures. Please note that coverage for SMI IMD was only available for individuals with a dual MH/SUD diagnosis during the previous demonstration period. See MOM model and ET3 sections for additional details.

Appendix B: Summary of Public Comments

[To be amended at the close of public comment period]

Appendix C: ET3 Alternative Destination Protocol and Chief Complaints



Examples of Low Acuity Chief Complaints

- Allergy or hay fever
- Back pain, mild; able to walk without assistance
- Contusions or abrasions, minor
- Cough, mild; without hemoptysis or respiratory impairment
- Non-traumatic dental problems
- Diarrhea, without dizziness or other signs of dehydration
- Dizziness, chronic (recurrent or known history)
- Dysuria, mild; female
- Ear pain
- Ingrown toenails
- Itching without systemic rash
- Eye irritation without signs of active infection, minor
- Fracture, distal extremity (forearm, lower leg), isolated injury, not open, With neurovascular intact
- Headache, minor without neurological impairment
- Injury follow-up (minor injury, treated previously)
- Joint pain
- Mouth blisters
- Muscle aches
- Nausea, vomiting
- Neck pain (no history of acute trauma)
- Nosebleed (resolved)
- Painless urethral discharge
- Physical exam requests (except patients with diabetes, CHF, kidney failure, cancer)
- Plantar warts
- Rectal pain/itching, minor
- Sexual disease exposure
- Simple localized rash
- Sinusitis, chronic
- Skin infection or sores, minor
- Sore throat without stridor
- Sunburn (localized without blisters)
- Vaginal discharge
- Vaginal bleeding (Hx non-pregnant, not postpartum, and requires less than one pad in five hours)
- Upper respiratory infection
- Work release or disability
- Wound checks

Appendix D: Approved Evaluation Design Demonstration Hypotheses and Evaluation measures

Research Question	Outcomes used to address the research question	Sample or subgroups to be compared	Numerator	Denominator	Measure Steward	Data sources	Analytic methods
Hypothesis 1: Eligibility and enrollment changes implemented during the current HealthChoice waiver period increase coverage and access to care for HealthChoice participants.							
Implementation of auto-renewal improved continuity of enrollment and reduced enrollment churn.	Spans of coverage without interruptions	All HealthChoice participants are subject to autorenewal. Separate analysis will be performed for the ACA expansion coverage groups	Uninterrupted Coverage Spans	All coverage spans coming due during a specific measurement year	N/A	MMIS	Interrupted time-series analysis of trends pre-and post- policy implementation. Collection of qualitative data from enrollees on auto-renewal process.
	Persons disenrolling and reenrolling within six months		Persons disenrolling and reenrolling within six months	All Persons disenrolling within a specific measurement year			Interrupted time-series analysis of trends pre-and post- policy implementation. Collection of qualitative data from enrollees on auto-renewal

							process.
The auto-assignment to MCOs after one-day policy improved service utilization among new participants.	Mean duration until services first used by new participants	New participants (>120 day six-month enrollment gap)	Duration Data	N/A	N/A	MMIS	Interrupted time-series analysis of trends pre-and post- policy implementation. These analyses rely on administrative data to measure timeliness and are not suited for qualitative analysis.
Hypothesis 2: Payment approaches implemented during the current HealthChoice waiver period improve quality of care for HealthChoice participants.							
Additions to Value Based Purchasing incentive payment program led to increases in utilization	HbA1c control (added in CY 2019)	Population diagnosed with diabetes, subanalysis by MCO	Persons in Denominator with HbA1c <=8.0	Persons identified with Diabetes (Patients ages 18 to 64 with diabetes who have at least two visits for this diagnosis in the last two years (established patient) with at least one visit in the last 12	MN Community Measurement NQF ID: 0729	MMIS, HEDIS	Interrupted time-series analysis of trends pre-and post- policy implementation. These analyses rely on administrative data defined by HEDIS and are not suited for qualitative analysis.

				months.			
	Well-child visits for children under 15 months in age	Children < 15 months of age, subanalysis by MCO	The number of children who received 6 or more well-child visits (Well-Care Value Set), on different dates of service, with a PCP during their first 15 months of life. The well-child visit must occur with a PCP, but the PCP does not have to be the practitioner assigned to the child.	15 months old during the measurement year.	NCQA NQF ID: 1392	MMIS, HEDIS	Interrupted time-series analysis of trends pre-and post- policy implementation. These analyses rely on administrative data defined by HEDIS and are not suited for qualitative analysis.
CHIP Health Services Initiative improved outcomes related to lead and asthma	Percentage of children with elevated blood lead levels (BLL) who have received services	Participants in Healthy Homes for Healthy Kids versus non-participants (Program 1)	Children receiving lead remediation	Children with elevated blood lead >=5µg/dL	N/A	MMIS using ICD-10 coding of BLL, Blood Lead matching, Local Health Departments, Childhood Lead Registry	Difference-in-differences analysis of trends between participants and non-participants. These analyses
	Among those	Expansion of the	N/A	Children with	N/A		

	will elevated BLL, the proportion whose follow up blood lead test was below 5µg/dL	Childhood Lead Poisoning Prevention and Environmental Case Management Program versus non-participants (Program 2). Non-participant comparison group will be selected from counties not participating in the program. Subgroup analysis can be performed by gender, age and geographic location.		elevated blood lead >=5µg/dL			rely on quantitative data and are not suited for qualitative analysis.
	Asthma: Fewer nights awakened; fewer days with shortness of breath; fewer days of rescue inhaler use; reduced asthma-related ED and inpatient use		N/A	N/A	N/A	Local Health Departments HEDIS MMIS	
	Process Measures ***Program 1 (Lead Remediation)*** • IA and DUA signed between DHCD and MDH • DHCD procurement of abatement companies to work on program • DHCD procurement of lead inspector company to perform work for Program 1 • Successful completion of invoicing and billing payment • No. of lead remediation contractors procured for task order according to National HUD and local MDE guidelines • New provider type established in Maryland Medicaid's provider enrollment system: Lead Risk Assessor						

	Program 2 (Environmental Case Management) • IA and DUA IRD to EHB • No. of IAs and DUAs established between IRD, EHB and LHDs • Successful completion of billing and payment mechanism, i.e. through IGT • No. of LHDs with MMIS and EVS access to screen for current Medicaid enrollment • No. of LHDs with staff onboarded based on quotas established by the Department • No. staff on-boarded at EHB for P1/P2 administration • No. of LHDs with staff that have been trained • No. Health Departments actively referring to P1 (DHCD) • No. LHDs conducting home visits						
Streamlined Corrective Managed Care decreases prescription drug abuse	No. of persons on CMC	Persons using Rx identified for CMC, enrolled on CMC and not enrolled	N/A	N/A	N/A	Point of Sale Pharmacy System	Difference-in-differences analysis of trends between participants and non-participants. This analysis relies on quantitative data of persons on CMC and is not suited for qualitative analysis.
	No. of overdoses		N/A	N/A	N/A		
Hypothesis 3: Innovative programs address the social determinants of health and improve the health and wellbeing of the Maryland population.							
IMD exclusion waiver results in improved outcomes for	Probability of initiation and engagement of alcohol and	Persons with SUD, users of IMD compared	Persons in denominator with claims for	All persons diagnosed with SUD	N/A	MMIS, HEDIS	Estimated odds ratio of IMD to Non-IMD users, controlling for

SUD	other drug dependence treatment	with non-users	SUD treatment				level of care in IMD, using binary outcome regression. This analysis relies on administrative claims and is not suited for qualitative analysis.
	Follow-up after discharge from the ED for mental health or alcohol or other drug dependence		Persons in denominator with claims for SUD treatment after discharge	All persons diagnosed with SUD using ED services	N/A	MMIS	Odds ratio of follow up within seven and 30 days after discharge using binary outcome regression. This analysis relies on administrative claims and is not suited for qualitative analysis.
	ED utilization for consequences of SUD, including opioid		Frequency of SUD diagnoses in ED	N/A	N/A		Frequency of ED use with primary DX of SUD, controlling for IMD participation and level of care,

	overdoses						using event-count regression models. This analysis relies on administrative claims and is not suited for qualitative analysis.
	Use of MAT services among persons with OUD and IMD placement		Persons in denominator receiving MAT	Persons with opioid SUD diagnoses	N/A		Frequency of ED use with primary DX of SUD, controlling for IMD participation and level of care, using event-count regression models. This measure relies on administrative claims. Key informants and other qualitative data may be queried to assess demand for MAT

	Presence of discharge planning in making effective linkages to community-based care[30]	IMD users		IMD users	N/A		Summary statistics of completed discharge planning, use of services post discharge, using Chi-square or t-tests. Qualitative data such as sampling of discharge notes may be used.
	Readmission frequency to the same level of care or higher		IMD users having readmissions		N/A		Pooled cross-sectional time-series counts of readmissions. This analysis relies on administrative claims and is not suited for qualitative analysis.
	Overall cost of care for individuals with SUD	Persons with SUD, users of IMD compared	N/A	N/A	N/A		Pooled cross-sectional time-series spending inclusive of IMD and outpatient treatment,

[30] The Department has limited resources to conduct record reviews, which may challenge the completion of this measure.

	including co-morbid physical and mental health conditions Tabulations of spending inclusive of IMD and outpatient treatment	with non-users					controlling for persons with and without IMD use
	Death by OUD	Deaths by OUD among Medicaid participants	Deaths of individuals in the denominator	All persons with SUD diagnoses		Vital Statistics	Incidence of OUD in binary regression model comparing IMD and non-IMD. Vital Statistics data are not amenable to qualitative analysis

	Process Measures
	• Fee schedule created of Medicaid reimbursement rates
	• No. of IMDs billing Medicaid under the demonstration
	  ○ By region
	  ○ By ASAM level
	  ○ Compared with before demonstration implementation
	• No. of IMDs having participated in a Medicaid onboarding training (*e.g.*, how to bill):
	  ○ 3.3 - 3.7D
	  ○ 3.1
	  ○ 4.0						

	○ Duals expansion • No. of grievances, appeals and critical incidents related to SUD treatment services						
The HVS Pilot improves health outcomes for participating families and children	Length of time between initiation of well child visits	Comparing participants in HVS to non-participants, *i.e.,* in counties where HVS is not active, matching control cases to intervention group with propensity scoring for HVS enrollment.	N/A	N/A	N/A	MMIS	Hazard rate or time to event models are not amenable to qualitative analysis. Interviews with key informants (*e.g.*, HVS visiting nurses) will add to analysis.
	Frequency of well-child visits around appropriate ages in months						Event count models (Poisson regression) for counts of visits.
	Length of time to mother's first post-partum visit						Hazard rate models
	Mother's screening for depression						Hazard rate models
	Mother and newborn use of ED for all						Binary outcome regression controlling for

	causes					MMIS	participation in HVS, with All Cause ED use or ED use with injury, poisoning, trauma
	Mother's use of dental services						Binary outcome regression, controlling for participation in HVS
	Post-partum contraceptive uptake						Binary outcome regression, controlling for participation in HVS
	Mothers and infants admission rates, within one year of birth						Event count models, controlling for participation in HVS

	Process Measures
	• No. of Lead Entities participating
	  ○ Signed IA/DUA
	  ○ Successful completion of inter-governmental transfer (IGT) of funds for local match
	  ○ Completion rate of monthly implementation report
	• No. of Lead Entities with NFP or HFA accreditation						

ACIS pilot improves health outcomes for participants	Pre- and post-living situation	ACIS participants vs Non-participants	N/A	N/A	N/A	Enrollment data on living arrangement	Interrupted time-series analysis. Qualitative interviews or focus groups
	ED visits (incl. potentially-avoidable utilization)					MMIS, HEDIS	Event count models, controlling for participation. Administrative data are needed and measure is not amenable to qualitative analysis.
	Inpatient admissions						Event count models, controlling for participation. Administrative data are needed and measure is not amenable to qualitative analysis
	HEDIS Follow Up after Hospitalization (FUH)		Submission Criteria 1: Patient Received Follow-Up	Submission Criteria 1: Patients 6 years of age and older who	National Committee for Quality Assurance (HEDIS)		Administrative data are needed and measure is not amenable to qualitative

			within 30 Days after Discharge. A follow-up visit with a mental health practitioner within 30 days after acute inpatient discharge. Submission Criteria 2: Patient Received Follow-Up within 7 Days after Discharge: A follow-up visit with a mental health practitioner within 7 days after acute inpatient discharge.	were discharged from an acute inpatient setting (including acute care psychiatric facilities) with a principal diagnosis of mental illness or intentional self-harm on or between January 1 and December 1 of the measurement period Submission Criteria 2: Patients 6 years of age and older who were discharged from an acute inpatient setting (including acute care psychiatric facilities) with			analysis

				a principal diagnosis of mental illness or intentional self-harm on or between January 1 and December 1 of the measurement period			
	Frequency of admissions to NH, Behavioral Health, inpatient acute care from users of CFR 578.3 facilities	Users of CFR 578.3 facilities compared to non-users	N/A	N/A	N/A		Event count models, controlling for participation

	Process Measures
	• No. of Lead Entities participating
	  ○ Signed IA/DUA
	  ○ Successful completion of inter-governmental transfer (IGT) of funds for local match
	  ○ Completion rate of monthly implementation report
	• No. of Learning Collaboratives held and Lead Entity participation rate in each
	• No. of Lead Entities and Participating Entities with signed DUAs/contracts
	• No. of Lead Entities trained, licensed and using Homeless Management Information System						

Dental benefits for former foster	Frequency of ED visits with	Former foster	N/A	N/A	N/A	MMIS	Compare ED use for dental

care children reduced potentially-avoidable utilization	dental diagnoses	care children					services, pre and post implementation.
	Frequency of dental services, including preventive/diagnostic and restorative visits						Compare to similar age groups (REM and pregnant women), pre and post implementation in event count outcome regression
Pilot for Adult Dental Benefits improves outcomes related to dental care	Reduction in ED use for dental related conditions	Dual eligible pilot participant and non-participants	N/A	N/A	N/A	MMIS	Difference-in-differences for matched control group compared to pilot participants. Qualitative interviews and focus groups.
	Diagnoses of diabetes, MCH, inflammatory disease compared to similar age groups in multivariate						Participants compared to similar age groups in multivariate binary outcome regression

	regression						
	Total Medicaid costs for dental benefit pilot participants vs non-participants						Pooled cross-section time series data of participants compared to matched control non-participants.
Increased Community Services increases transitions to the community	Transitions of long stay nursing facility residents to community settings	Nursing facility residents participating and not participating in the pilot	ICS participants	All nursing facility residents in pilot area	N/A	MMIS	Compare length of stay of ICS participants with similar nursing facility residents in a multivariate regression.
Family Planning increases utilization of family planning services	Effect of inclusion in Maryland Health Connection on enrollment and uptake of prescription contraceptives (daily and/or LARC)	Uptake of prescription contraceptives (daily and/or LARC)	Use of contraceptives by women of child-bearing age	All women of child-bearing age	N/A	MMIS	Multivariate difference in difference pre and post implementation, for binary outcome of daily prescription, LARC, and of any contraceptive

HealthChoice Diabetes Prevention Program improves health outcomes for participants	All-cause hospital admissions	Compare DPP participants to non-participants	All-cause hospital admissions for participants vs. eligible enrollees who did not participate in DPP	All eligible participants (comparing those that enrolled vs. those that did not enroll in DPP)	N/A	MMIS	Event count models
	Prescription adherence for participants who have progressed to type 2 diabetes		No. of participants who progressed to a type 2 diabetes diagnosis in adherence with medication regimen	All participants who progressed to a type 2 diabetes diagnosis	N/A		Frequency (count) of prescriptions
	Total cost of care		Total cost of care for participants vs. eligible enrollees who did not participate in DPP	All eligible participants (comparing those that enrolled vs. those that did not enroll in DPP)	N/A		Pooled cross-section time series analysis of costs
	Diabetes incidence		Diabetes incidence for participants vs. eligible enrollees who	All eligible participants (comparing those that enrolled vs.	N/A		Binary outcome regression

			did not participate in DPP	those that did not enroll in DPP)			
	ED visit rate		ED visits for participants vs. eligible enrollees who did not participate in DPP	All eligible participants (comparing those that enrolled vs. those that did not enroll in DPP)	N/A		Event count models
	Process Measures • New provider type established in Maryland Medicaid's provider enrollment system: DPP provider • No. of DPP providers enrolled in Maryland Medicaid, by delivery mode (in-person or virtual) • No. of MCOs with at least one DPP provider contracted in their network • No. of DPPs contracted with each MCO, disaggregated by in-person and virtual, and in each: o No. of individuals enrolled o No. of individuals retained at six months o No. of individuals achieving five-percent weight loss o No. of individuals achieving nine-percent weight loss						
Integrated delivery of primary and behavioral health care through the Collaborative	Monthly contact: Proportion of participants receiving active treatment in	CoCM Pilot Program participants	No. of participants with at least one clinical contact per month[31]	Total no. of CoCM Pilot Program-enrolled participants in that month	N/A	CoCM provider	Event counts

[31] A "clinical contact" is defined as a contact in which monitoring may occur and treatment is delivered with corroborating documentation in the patient chart. This includes individual or group psychotherapy visits and telephonic engagement as long as treatment is delivered.

Care Model Pilot Program improves health outcomes for participants	CoCM						
	Depression screening rate: Proportion of participants receiving a depression screening		No. of participants who received a PHQ-2 or PHQ-9 screening in the past 12 months	No. of participants enrolled in CoCM Pilot Program	N/A		Event count models
	Depression diagnosis: Proportion of participants demonstrating clinically-significant improvement		No. of participants enrolled in CoCM Pilot Program for 70 days or greater with either: 1) a 50% reduction from baseline PHQ-9; or 2) a drop from baseline PHQ-9 to less than 10	No. of participants enrolled in CoCM Pilot Program for 70 days or more	N/A		Interrupted time-series analysis
	Case review: Proportion of participants without improvement whose case and/or treatment plan were reviewed		No. of participants enrolled in CoCM Pilot Program for 70 days or greater, who did not show improvement,	No. of participants enrolled for 70 days or greater who did not meet clinical improvement criteria that month	N/A		Interrupted time-series analysis

			whose case was reviewed by the Consulting Psychiatrist with treatment recommendations provided to the primary care provider or BH care manager OR had a documented change made to their treatment plan in the month of non-improved screening				
	Remission rate: Proportion of participants who achieved remission criteria		No. of participants whose last-recorded PHQ-9 score was below 5	No. of participants	N/A		Event count models
	Specialty behavioral health utilization rate		No. of participants 1) referred to the ASO for specialty behavioral	No. of participants	N/A	MMIS	Event count models

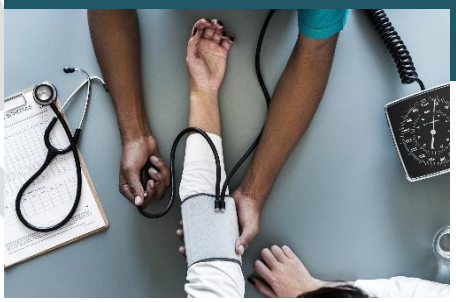
			health services and 2) of those referred, the number with a with a behavioral health claim paid by the ASO within 30 days				

	Process Measures
	
	• Signed contract with at least one entity to implement CoCM Pilot Program
	• No. of pilot sites established
	  ○ No. of rural sites
	  ○ No. of urban sites
	  ○ No. of Ob/Gyn provider sites
	• No. of participants enrolled per site						

Appendix E: Draft Evaluation of the Maryland Medicaid HealthChoice Program: CY 2015 to CY 2019

The Hilltop Institute
UMBC

Draft Evaluation of the Maryland Medicaid HealthChoice Program: CY 2015 to CY 2019



report

April 30, 2021

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The Hilltop Institute

Evaluation of the Maryland Medicaid HealthChoice Program: CY 2015 to CY 2019

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List of Abbreviations

ACA	Affordable Care Act
ACCU	administrative care coordination unit
ACG	Adjusted Clinical Groups
ACIP	Advisory Committee on Immunization Practices
ACIS	Assistance in Community Integration Services
AHRQ	U.S. Agency for Healthcare Research and Quality, HHS
ART	antiretroviral therapy
ASAM	American Society of Addiction Medicine
ASO	administrative services organization
BHA	Behavioral Health Administration
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
CLR	Childhood Lead Registry
CMS	Centers for Medicare & Medicaid Services
CoCM	Collaborative Care Model
COMAR	Code of Maryland Regulations
COPD	chronic obstructive pulmonary disease
CY	calendar year
Department	Maryland Department of Health
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
F&C	Families and Children
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®
HHS	U.S. Department of Health and Human Services
HPV	human papillomavirus
SIHIS	Statewide Integrated Health Improvement Strategy
HVS	Home Visiting Services
ICS	Increased Community Services
IMD	Institution for Mental Disease
IUD/IUS	intrauterine device or system
LAA	local access area
LBW	low birth weight
LOS	Length of stay
MAGI	modified adjusted gross income
MAT	medication-assisted treatment
MCO	managed care organization
MCHP	Maryland Children's Health Program
MFR	Managing for Results
MHBE	Maryland Health Benefit Exchange
MHC	Maryland Health Connection
MHD	mental health disorder
MMA	Medication Management for People with Asthma
NCI	National Cancer Institute
NCQA	National Committee for Quality Assurance
NQF	National Quality Forum

MPC	Maryland Physicians Care
NPI	National Provider Identifier
NYU	New York University
OPA	Office of Population Affairs
OR	odds ratio
Pap	papanicolaou test for cervical cancer
PAC	Primary Adult Care program
PCP	primary care provider
PrEP	pre-exposure prophylaxis
POS	plan of service
PQI	Prevention Quality Indicator
QHP	qualified health plan
REM	Rare and Expensive Case Management
SAMHSA	Substance Abuse and Mental Health Services Administration
SBIRT	Screening, Brief Intervention, and Referral to Treatment
SPA	state plan amendment
SSI	Supplemental Security Income
SUD	substance use disorder
TANF	Temporary Assistance for Needy Families
VBP	value-based purchasing
VLBW	very low birth weight

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 by calendar year (CY) 2019. Over 20 years after its launch, HealthChoice covered close to 90% of the state's Medicaid and Maryland Children's Health Program (MCHP) populations.[32]

The Hilltop Institute, on behalf of the Maryland Department of Health (the Department), evaluates the program annually; this evaluation covers the period from CY 2015 through CY 2019.

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 designed to meet health care needs by providing each member a single "medical home" through a primary care provider (PCP)
- Emphasizing health promotion and disease prevention by providing access to immunizations and other wellness services, such as regular prenatal care
- Expanding coverage to additional Marylanders with low income through resources generated by managed care efficiencies

HealthChoice is a mature managed care program that covered nearly one in four Marylanders during CY 2019. Participants choose one of the nine participating managed care organizations (MCOs), along with a 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 successfully achieved its stated goals of improving coverage and access to care, providing a medical home to participants, and improving the quality of care.

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

HealthChoice has demonstrated improvement in providing targeted preventive screenings and ensuring that participants receive care at the appropriate level. Some of these recent successes include increasing the rates of women receiving breast cancer screenings, colorectal cancer screenings, and ambulatory care visits among children in foster care. Among individuals with HIV/AIDS, a test for the quantity of immune system cells used to diagnose and monitor HIV/AIDS—referred to as viral load testing—as well as cluster of differentiation 4 (CD4) testing rates increased, while emergency department (ED) utilization dropped. The percentage of HealthChoice participants aged 18 to 64 years with at least one inpatient hospital admission declined by .7 percentage points.

Recent developments both within Maryland and nationally will continue to affect HealthChoice. Primarily, increased enrollment starting in CY 2014 stemming from the ACA's expansion of Medicaid eligibility increased service utilization across the spectrum of somatic and behavioral health services. In addition, the state's chronic health home demonstration is improving health outcomes for individuals with chronic conditions, with a focus on behavioral health needs such as serious persistent mental illness and opioid substance use disorders (The Hilltop Institute, 2021).Other programs—such as the Residential Treatment for Individuals with Substance Use Disorder (SUD) program and the Evidence-Based Home Visiting Services Pilot program—began in July 2017 and are expected to improve access, reduce costs, and improve quality. In March 2019, the Department received approval to extend coverage for the Residential Treatment for Individuals with a primary SUD and a secondary mental health disorder (MHD) to ASAM level 4.0. A request for amendment approved in April 2020 established a Collaborative Care Model (CoCM) pilot program to further address behavioral health needs, and participants from HealthChoice began in July 2020. Access to the National Diabetes Prevention Program (DPP) lifestyle change program was expanded to all eligible HealthChoice participants as of September 1, 2019.

Program improvements are a necessary component to ensure that the growing number of participants have access to quality care. The Department is committed to working with the Centers for Medicare & Medicaid Services (CMS) and other stakeholders to identify and address necessary changes. Some of the areas targeted for improvements include improving adherence to asthma medication, diabetes care, and prenatal and birth outcomes; reducing racial and ethnic disparities; and increasing rates of follow-up care after ED visits for MHD or SUD.

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 20.4%, from 999,252 participants in CY 2015 to 1,202,718 participants in CY 2019.[33]

[33] 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. Alternatively, the total number of participants with any period of HealthChoice enrollment during the year increased by 11.1% between CY 2014 and CY 2018.

Enrollment continued to grow during the study period as the expansion of Medicaid eligibility had ramped up over the course of 2014 and more residents realized they were eligible for Medicaid during the evaluation period. In 2014, the Department expanded Medicaid eligibility to adults under the age of 65 years with incomes up to 138% of the federal poverty level (FPL) per the ACA, which resulted in a large increase in Medicaid enrollment. In January 2014, 139,427 participants gained coverage through this expansion (The Hilltop Institute, 2017). This included more than 90,000 participants switching to full-benefit Medicaid from the former Primary Adult Care (PAC) program. Individuals covered under the ACA expansion included some participants who may have had low health literacy and were previously unaccustomed to accessing care through Medicaid, had limited experience in navigating a managed care health system, and were unfamiliar with the Medicaid benefit package. In addition, many ACA expansion participants may not have received services in the past. By December 2019, 299,778 HealthChoice participants were enrolled under the ACA expansion.

The large influx of ACA expansion participants led to changes in overall program access and utilization measures. ACA enrollment increased by 4.1 percentage points over the evaluation period. Expansion participants had a lower rate of ambulatory care visits than the rest of the Medicaid population from CY 2015 through CY 2019, however they experienced an increase by 3.1 percentage points. The ED visit rates for ACA participants with 12 months of enrollment decreased from 38.9 in CY 2015 to 33.5 in CY 2019. Additional changes occurred in service utilization patterns during the evaluation period, including a slight increase in the number of participants who received services for a behavioral health condition.

The addition of a new MCO in CY 2017 also influenced overall program performance due to initial lower service volumes. Nonetheless, trends in service utilization 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. This network adequacy analysis counts the number of PCP offices included in provider networks in each county in Maryland. All jurisdictions achieved a 200:1 ratio of participants to PCPs in CY 2019.

Care for Special Populations

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

Children in foster care showed positive trends in service utilization; however, in CY 2019, they had a 3.8 percentage point lower rate of ambulatory care service utilization and a 1.4 percentage point higher rate of ED visits compared to other children in HealthChoice.[34] The REM program experienced increases in dental care during the evaluation period, while ambulatory care

[34] Children in the subsidized adoption and guardianship programs are included in the foster children counts.

remained stable. The percentage of REM participants who had outpatient ED visits and inpatient admissions declined.

As for racial and ethnic disparities in access to care, Black and Native American children had lower rates—and Hispanic children had higher rates—of ambulatory care visits than other children did in both CY 2015 and CY 2019. Among the entire HealthChoice population, Black participants also had the highest ED utilization rates, while Asian participants had the lowest.

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 programs focusing on measuring and improving quality of care: the Value-Based Purchasing (VBP) program and the Early and Periodic Screening, Diagnosis, and Treatment (EPSDT) annual review.

The Department's priorities and analysis of population health needs may change the VBP measures as the program strives for consistency with CMS's national performance measures for Medicaid. The VBP program adjusts a portion of MCO payments according to their scores on specific measures of clinical quality outcomes. Those MCOs that exceed a performance threshold receive enhanced incentive payments. MCOs whose performance is less than the standard pay penalties. Although the MCOs demonstrated varied results across the assessed measures, the VBP program overall supports quality improvement across the HealthChoice population by basing the incentive levels on averages of all plan performance.

The EPSDT annual review assesses MCO performance on 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. The most recent review shows that the MCOs meet or exceed standards across the board.

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 achieve 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 45.7% in CY 2015 to 41.4% in CY 2019. The percentage of HealthChoice adults with an inpatient admission designated as potentially preventable also decreased slightly, from

.9% in CY 2015 to .8% in CY 2019. 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. The Department 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

Another goal of the HealthChoice program is to prioritize health promotion and disease prevention by providing access to immunizations and other wellness services, such as regular prenatal care. The Healthcare Effectiveness Data and Information Set (HEDIS®)[35] compares HealthChoice against nationally recognized performance standards for the use of preventive care and management of chronic disease conditions (MetaStar, Inc., 2020). Over the evaluation period, measures based on service utilization varied, in part because of the influx of adults into the HealthChoice population resulting from the ACA expansion. These new participants took longer to engage in appropriate primary care treatment. The addition of a new MCO in CY 2017 also affected HealthChoice HEDIS® scores because the methodology for determining these scores calculates a simple average across the plans instead of a weighted average.

Nevertheless, many indicators showed improvement over the evaluation period. Breast cancer screening rates improved during the evaluation period by .6%, contributing to better preventive care for women and remained above the national Medicaid average since CY 2015. Rates for well-child visits, well-care visits, and immunizations were consistently higher than national Medicaid averages. Blood lead screening rates for children aged 12 to 23 months and 24 to 35 months also improved.

Although the percentage of women in HealthChoice who received a cervical cancer screening declined from 65.1% in CY 2015 to 63.8% in CY 2019, the rate continues to be above the national HEDIS® mean. Declines in the outcome of cervical pre-cancer are observed with widespread vaccinations for human papillomavirus (HPV) (McClung et al., 2019). Adolescents who received two HPV vaccine doses between their 9th and 13th birthdays increased from 22.7% in CY 2015 to 34.8% in CY 2019. Colorectal screening rates increased from 35.0% in CY 2015 to 41.5% in CY 2019 and is expected to continue to increase as ACA expansion participants have longer enrollment periods.

The percentage of pregnant women who received prenatal services in a timely manner increased by 3.8 percentage points from CY 2015 to CY 2019, and HealthChoice outperformed the national HEDIS® mean throughout the evaluation period.

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

The HealthChoice program also prioritizes management of chronic conditions such as asthma, diabetes, HIV/AIDS, and behavioral health diagnoses. Among measures of the quality of care for chronic conditions, the percentage of participants with asthma who remained on asthma controller medication for at least half of their treatment period rose from 56.9% in CY 2015 to 61.6% in CY 2019. When compared to participants who remained on their asthma medication for less than half of their treatment period, those who remained on their medication for at least half of their treatment period were 14.1% less likely to have an asthma related ED visit that year and 13.6% less likely to have an asthma related ED visit the following year.

The rate of hemoglobin A1c (HbA1c) screenings among participants with diabetes decreased slightly by 0.5 percentage points but remained close to the national HEDIS® mean. The percentage of participants with diabetes who received an eye exam decreased by 5.5 percentage points between CY 2015 and CY 2019. The decrease may be a result of the removal of this measure from the VBP incentive program in CY 2015. During the evaluation period, inpatient and ED utilization decreased by 3.2 and 6.0 percentage points, respectively, among HealthChoice participants with diabetes, while ambulatory care utilization remained stable. Although receipt of just the HbA1c screening or the eye exam was associated with an increased likelihood of experiencing a diabetes related ED visit., receipt of both screening mitigated the overall likelihood of having a diabetes related ED visit.

Participants with HIV/AIDS maintained stable ambulatory care service utilization and CD4 cell count testing rates during the evaluation period. Viral load testing and antiretroviral therapy (ART) increased by 3.6 and 3.9 percentage points, respectively. ED utilization by this population decreased by 5.2 percentage points during the evaluation period.

The percentage of participants with a behavioral health diagnosis increased from 15.8% in CY 2015 to 18.2% in CY 2019. Utilization of ambulatory care services increased by 2.6% during the evaluation period among HealthChoice participants with a behavioral health diagnosis, while inpatient and ED utilization decreased by 2.4 and 4.6 percentage points, respectively.

Demonstration Programs

Another goal of the HealthChoice program is to use §1115 demonstration authority to test emerging practices through innovation and pilot programs to better serve participants. As part of its waiver renewal in 2016, the Department proposed the following innovative programs: Residential Treatment for Individuals with SUD; the Evidence-Based Home Visiting Services (HVS) and Assistance in Community Integration Services (ACIS) community health pilots; and dental services for former foster care individuals.

With CMS approval, Maryland Medicaid participants aged 21 years and over with SUDs can now receive residential treatment services—up to two (2) 30-day stays—in institutions for mental disease (IMDs). Given the current opioid epidemic, this is particularly important as it allows the state to expand access across the care continuum. From July 1, 2017, to June 30, 2018 (fiscal year [FY] 2018), 8,747 participants received these services under the waiver. This increased to

10,792 participants in FY 2019 followed by a decrease to 9,819 participants in FY 2020.[36] Amendments to the 1115 waiver beginning in January 2019 included coverage of more intensive IMD services at ASAM Level 4.0 for Medicaid adults who have a primary SUD and a secondary MHD, for up to 15 days per month.

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 2017, over 21% had at least one dental visit; this increased to close to 26% in CY 2019. The Department anticipates that these rates will continue to increase over time. In 2019, the Department received approval for an adult dental pilot to provide dental services to adults between the ages of 21 and 64 who are eligible for both Medicaid and Medicare.

National Diabetes Prevention Program (DPP) Lifestyle Change Program was authorized for HealthChoice members beginning September 1, 2019. By participating in the DPP, HealthChoice members who are considered at risk for developing type 2 diabetes engage with certified DPP providers to learn skills and set goals to reduce risk of type 2 diabetes and to improve their overall health. Hilltop uses Medicaid claims and encounters data to provide the Department with periodic service utilization reports that track, among other things, current and cumulative DPP enrollment, though more data is needed to conduct a formal evaluation of the program.

Additionally, in partnership with the Department and HealthChoice MCOs, The Hilltop Institute has developed an algorithm that MCOs can use to search their electronic medical records and identify members who meet eligibility criteria for the DPP. This algorithm has been provided to the MCOs, however it is still being tested and refined, and has not yet been finalized.

The Department also renewed the Increased Community Services (ICS), and the Family Planning programs from previous waiver periods. The ICS program allows certain adults with physical disabilities to remain in the community as an alternative to institutional care. The majority of the ICS measures had 100 percent compliance from implementation through CY 2019.

The HealthChoice waiver allows the Department 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. The Department has expanded eligibility under its Family Planning Program to lift the age limit, and open coverage to include men, effective July 1, 2018.

Lastly, Maryland received approval for an amendment to the State's §1115 HealthChoice Demonstration Waiver on April 16, 2020, 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

[36] FY 2019 was updated to include level 3.1. FY 2020 data may have been influenced by the COVID-19 pandemic.

SUD) but have not received effective treatment. Coverage for CoCM services provided to HealthChoice participants began in July 2020.

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 2005, 2007, 2010, 2013, and 2016. The Maryland Department of Health (the Department) continually monitors HealthChoice performance on a variety of measures across the demonstration's goals, culminating in an annual evaluation.

This report—the 2021 annual evaluation—includes data from calendar year (CY) 2015 through CY 2019. The following sections provide a brief overview of the HealthChoice program and recent program updates before addressing these goals:

- Coverage and access to care
- Quality of care
- Medical home utilization and appropriateness of care
- Health promotion and disease prevention
- Innovative programs approved under the demonstration

This report is a collaborative effort between the Department and The Hilltop Institute at the University of Maryland, Baltimore County (UMBC).

Overview of the HealthChoice Program

As of the end of CY 2019, 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

- Starting in CY 2014, 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 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
- Individuals aged 65 years and older[37]
- 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 2019, 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 and HIV/AIDS drugs

[37] 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 (although not required by regulation, some MCOs cover adults for limited vision, hearing, and dental benefits)
- 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[38]
- 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 or Individualized Family Service Plan
- 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
- HIV/AIDS and behavioral health drugs
- Services covered under 1915(c) home and community-based services (HCBS) waivers[39]

Program Updates

The Department implemented the following changes to the HealthChoice program during the evaluation period:

- 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. The Department 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).

[38] 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.

[39] 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.

- In 2013, the Department implemented a §2703 Chronic Health Home program, serving adults diagnosed with a serious and persistent mental illness, children diagnosed with a serious emotional disturbance, 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 May 1, 2020, the Department had approved 104 Chronic Health Home site applications, with 10,473 (9,446 adults, 1,027 children/youth) enrolled participants. The Health Home sites include 70 psychiatric rehabilitation programs, 12 mobile treatment providers, and 22 opioid treatment programs.
- 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. This included more than 90,000 former Primary Adult Care (PAC) program participants who automatically transferred into expansion coverage.[40] As of December 2019, there were 299,778individuals enrolled in the ACA expansion.
    - Former foster care children up to the age of 26 years.

The Department is now including several initiatives for innovative programs that were recently 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
- Increased Community Services (ICS)
- Family Planning program

The Department, in collaboration with the Centers for Medicare and Medicaid Services Center for Innovation (CMII) established Maryland's Statewide Integrated Health Improvement Strategy (SIHIS) workgroup report[41]. The workgroups led by the Department, Opioid Operational Command Center (OOCC), and the Health Services Cost Review Commission (HSCRC)

[40] The PAC program offered a limited benefit package to adults with low income, covering primary care visits, certain outpatient mental health and substance use disorder services, ED services, and prescription drugs.
[41] Maryland Department of Health. (2020, November). *Statewide Integrated Health Improvement Strategy (SIHIS): Update on Workgroup Progress*. https://www.mhaonline.org/docs/default-source/advocacy/hscrc/newsbreak-links/sihis-update-on-wg-progress.pdf?sfvrsn=8fc2d00d_2

collaborated to gather stakeholder input to establish the goals, measures, milestones, and targets for the SIHIS proposal.[42] Maryland's proposal has been approved and includes a detailed plan to achieve "progress milestones and population heath outcome targets across all three domains by the end of 2026" (page 1).

The goals were established to improve in the three domains of Maryland's health care system: hospital quality, care transformation across the system, and total population of health. Reducing avoidable admissions and readmissions is a top priority under hospital quality. Under the third domain, diabetes, Opioid Use Disorder (OUD), and maternal and child health are among the top priority areas. Improving overdose mortality rates, reducing severe maternal morbidity rates, and decreasing asthma related emergency department visits rates for ages 2 to 17 are significant goals under the Total Population Health domain of health care quality and delivery for SIHIS.

Proposed CY 2021 milestones are important building blocks necessary to progress toward the 2023 and 2026 targets. If delays because of COVID hinder progress toward 2023 and 2026 goals, the State would revisit its SIHIS goals, measures, and targets with CMMI in the first quarter of 2022.

[42] Maryland Department of Health. (2020, December). *Statewide Integrated Health Improvement Strategy (SIHIS) Proposal*. https://hscrc.maryland.gov/Documents/Modernization/SIHIS%20Proposal%20-%20CMMI%20Submission%2012142020.pdf

Section II. Methodology

Because of the varying evaluation measures, Hilltop used different methodologies deemed appropriate to evaluate the HealthChoice outcomes being measured. For measuring trends in counts or percentages of enrollment and service utilization among demographic and clinical subgroups, Hilltop used the data contained in its warehouse for CY 2015-2019 from the Maryland Medicaid Management Information System (MMIS) to identify enrollees, their FFS claims and MCO encounters, the types of services used, and the diagnoses treated. These measures are expressed as five-year trends in the frequency of persons enrolled or treated, within each of various groups of detailed interest.

For standardized definitions of particular clinical, pharmaceutical, and health utilization measures, Hilltop used HEDIS® proprietary software from Cognizant, an NCQA certified software vendor to define and classify according to standard NCQA measures, beginning with data from CY 2017.

Hilltop developed programming to create person and visit level summaries of the 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 datasets for HEDIS® medication adherence measures (i.e., asthma, diabetes, schizophrenia, and depression) and for prenatal care.

Regression Analysis

To evaluate the effects of HealthChoice service delivery on outcomes such as a hospitalization or ED visit, a trend analysis would not be sufficient. There are numerous factors besides health care treatment affecting outcomes, such as age, sex, racial characteristics, geographic location factors, and pre-existing health conditions. To separate these other effects when estimating whether adherence to HEDIS® guidelines is associated with improved outcome measures, Hilltop used a set of statistical techniques known as multivariable regression analysis. Because most of the outcomes of interest in this evaluation are discrete choices—e.g., whether a person has an ED visit—Hilltop used multivariate regression techniques known as logistic regressions and multinomial regressions.

Logistic regressions are used to analyze relationships when the dependent (outcome) variable has only two discrete outcomes. Multinomial logistic regressions are used when the dependent variable has more than two discrete outcomes (e.g., low, normal, and high). 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 on independent variables produced by logistic regressions are thereafter translated into odd ratios (OR),

which represents 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 female is 0.90, females have 10% lower odds (or are 10% less likely) to incur an ED visit in this sample when compared to males (i.e., Female= 0).

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

- Receipt of prenatal care in the 1st trimester and infant birthweight
- Adherence to anti-psychotic medication management for individuals with schizophrenia and schizophrenia-related ED visits or inpatient admissions
- Adherence level of asthma-controller medication and Inpatient admissions and ED visits for asthma
- Receipt of diabetes HbA1c blood or eye screenings and inpatient admission and ED visit for diabetes

Methodological Limitations

Regression analyses and other measures used in this evaluation do not establish whether the independent variables measured cause the outcome variable. Multiple regressions measure the associations between the independent variables and the outcome variables, assuming that other conditions are met, such as avoiding selection of the more likely outcomes through non-random selection or inappropriate comparison groups. Nonetheless, the strength of the association between independent and outcome variables can be measured by the estimated confidence intervals 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.

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

The population served by HealthChoice can be measured in terms of 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.[43] 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 in CY 2015 through CY 2019. The total number of participants increased by 5.6% during the evaluation period. The distribution of all demographic characteristics except for race/ethnicity remained relatively consistent throughout the evaluation period. The number of participants who reported their race as "Other" increased by 83.1% from CY 2015 to CY 2019, most likely due to changes in race reporting requirements in CY 2014.

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

Table 1. HealthChoice Population (Any Period of Enrollment) by Demographics, CY 2015 and CY 2019

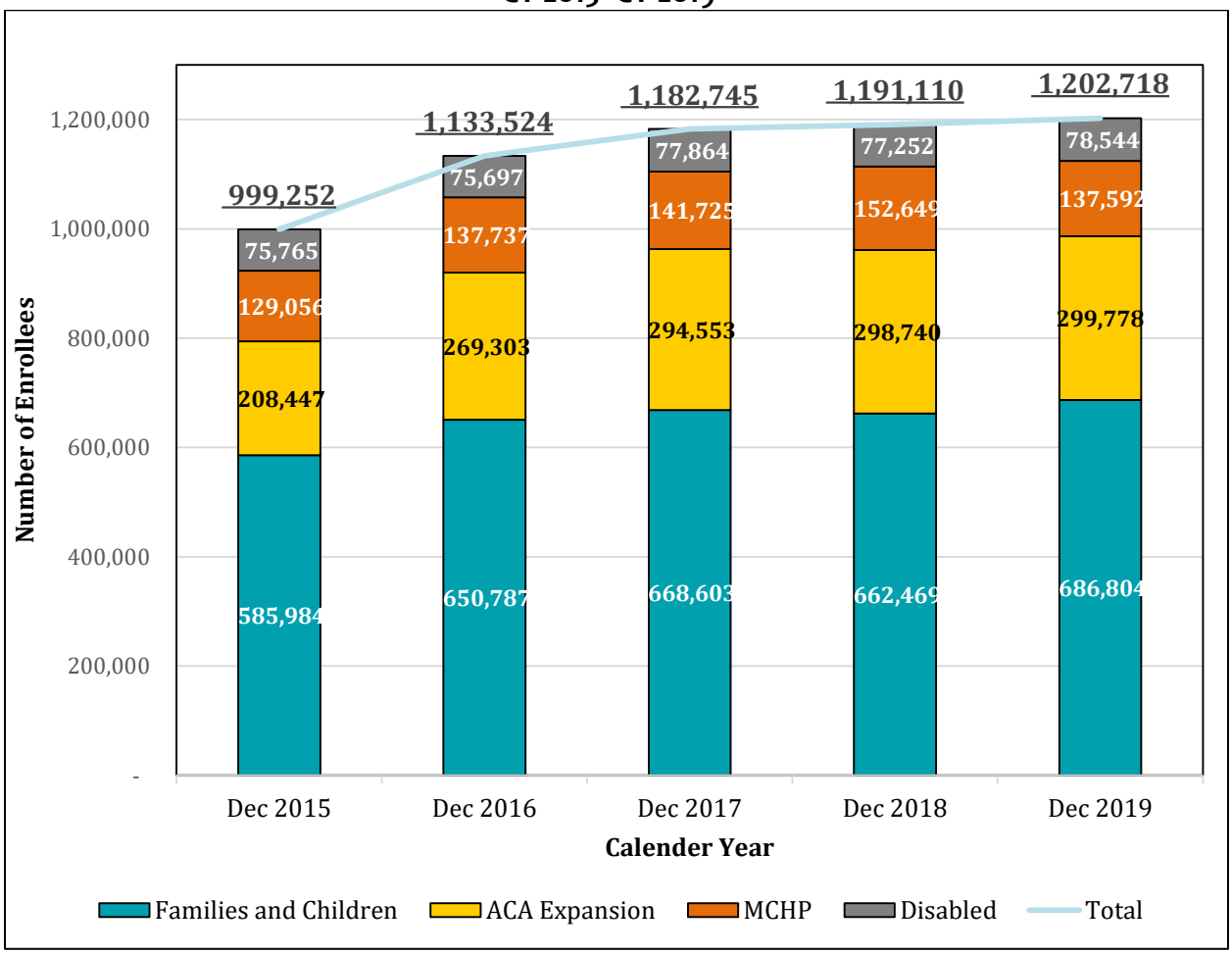
Demographic Characteristic	CY 2015		CY 2019	
	# of Participants	% of Total	# of Participants	% of Total
Sex				
Female	709,860	54.4%	738,586	53.6%
Male	594,037	45.6%	638,907	46.4%
Total	**1,303,897**	**100%**	**1,377,493**	**100%**
Age Group (Years)				
0–<1	36,034	2.8%	35,920	2.6%
1–2	78,655	6.0%	77,233	5.6%
3–5	111,491	8.6%	113,363	8.2%
6–9	151,028	11.6%	145,489	10.6%
10–14	154,884	11.9%	180,512	13.1%
15–18	110,113	8.4%	118,243	8.6%
19–20	46,174	3.5%	51,600	3.7%
21–39	345,760	26.5%	377,114	27.4%
40–64	269,758	20.7%	278,019	20.2%
Total	**1,303,897**	**100%**	**1,377,493**	**100%**
Race/Ethnicity				
Asian	58,077	4.5%	62,445	4.5%
Black	584,775	44.8%	566,300	41.1%
White	381,336	29.2%	360,123	26.1%
Hispanic	123,785	9.5%	105,872	7.7%
Native American	3,708	0.3%	4,032	0.3%
Other*	152,216	11.7%	278,721	20.2%
Total	**1,303,897**	**100%**	**1,377,493**	**100%**
Region**				
Baltimore City	241,091	18.5%	241,141	17.5%
Baltimore Metro	377,518	29.0%	407,957	29.6%
Eastern Shore	120,548	9.2%	126,577	9.2%
Southern Maryland	66,561	5.1%	69,660	5.1%
Washington Metro	390,911	30.0%	418,203	30.4%
Western Maryland	105,300	8.1%	112,932	8.2%
Out of State	1,968	0.2%	1,023	0.1%
Total	**1,303,897**	**100%**	**1,377,493**	**100%**

*"Other" race/ethnicity category includes Pacific Islanders, Alaskan Natives, 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 from CY 2015 through CY 2019.[44] Since CY 2015, the overall HealthChoice population has grown by 20.4%. Enrollment grew each year, with the largest increase seen between CY 2015 and 2016.[45]

Figure 1. HealthChoice Enrollment by Coverage Category as of December 31, CY 2015–CY 2019*



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

[44] The F&C category is families, children, and pregnant women.

[45] 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 2019, national enrollment in Medicaid and CHIP was 71.1 million (The Kaiser Family Foundation, n.d.a). In fiscal year (FY) 2020, overall enrollment increased slightly by 0.8% (Rudowitz et al., 2019). The national enrollment growth has continued to slow partly because of the tapering of the ACA enrollment. Between the summer of 2013 and the end of 2019, 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 (The Kaiser Family Foundation, n.d.a). In 2013, before the ACA expansion, 10% of Maryland residents were uninsured. The growth in Medicaid enrollment contributed to a decline in Maryland's uninsured rate from 6.7% in CY 2015 to 5.9% in CY 2019 (The Kaiser Family Foundation, n.d.b). Table 2 shows the percentage of Maryland's population enrolled in HealthChoice between CY 2015 and CY 2019. Almost all new Maryland Medicaid participants are enrolled in managed care.

Table 2. HealthChoice Enrollment as a Percentage of the Maryland Population, CY 2015–CY 2019

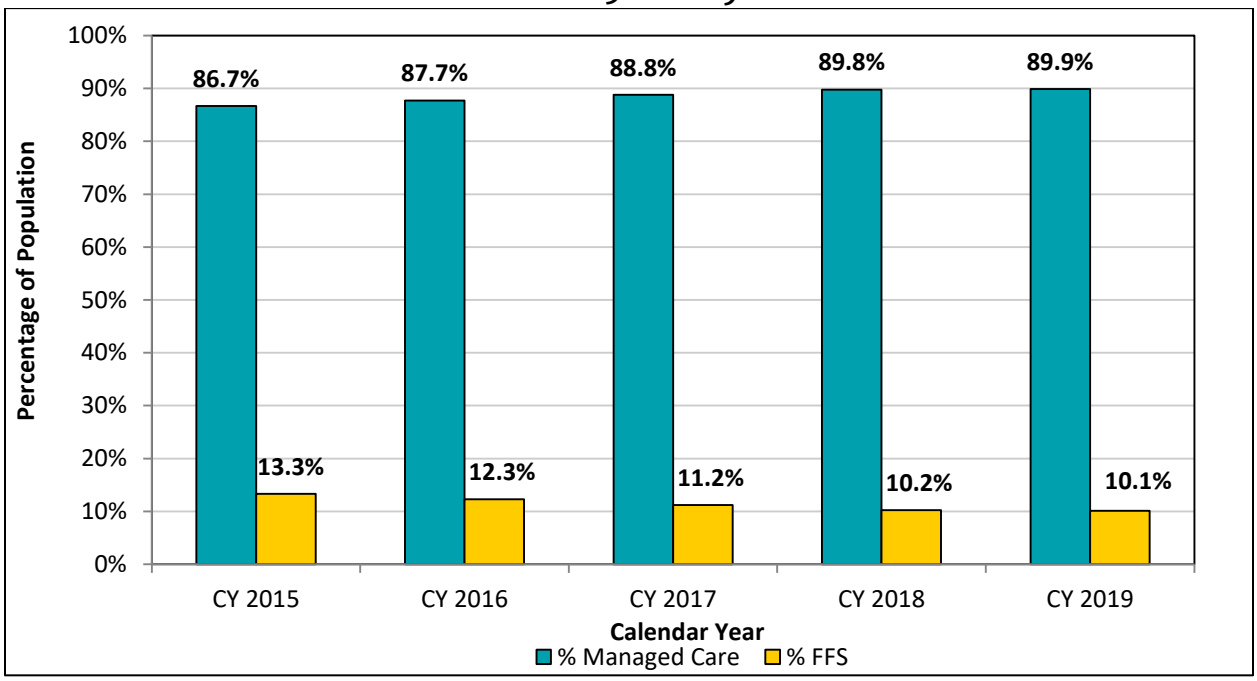
	CY 2015	CY 2016	CY 2017	CY 2018	CY 2019
Maryland Population*	6,000,561	6,024,752	6,052,177	6,042,718	6,045,680
Individuals Enrolled in HealthChoice for Any Period of Time During the Year					
HealthChoice Population	1,304,492	1,285,807	1,355,443	1,389,716	1,377,493
% of Population in HealthChoice	21.7%	21.3%	22.4%	23.0%	22.8%
Individuals Enrolled in HealthChoice as of December 31					
HealthChoice Population	999,252	1,133,524	1,182,745	1,191,110	1,202,718
% of Population in HealthChoice	16.7%	18.8%	19.5%	19.7%	19.9%

*Data source: U.S. Census Bureau, Population Division. Annual Estimates of the Resident Population: April 1, 2010, to July 1, 2019. Retrieved from https://www.census.gov/quickfacts/fact/table/MD,US/PST045218

Managed Care Enrollment

Since its inception, HealthChoice was expected to enroll a high percentage of Medicaid participants into managed care. Figure 2 compares Medicaid managed care and FFS enrollment. Between CY 2015 and CY 2019, managed care enrollment remained consistently above 86.0%, with the highest rate of 89.9% in CY 2019.

Figure 2. Percentage of Medicaid[46] Participants in Managed Care Compared to FFS, CY 2015–CY 2019



Due to a change in the system for eligibility redetermination in CY 2015, the Department began monitoring HealthChoice participants to ensure that they did not have a gap or interruption in Medicaid coverage as a result of this change. Table 3 displays the number and percentage of HealthChoice participants with a gap in Medicaid enrollment of one or more days during the calendar year from CY 2016 through CY 2019, as well as whether the gap lasted longer than 180 days.[47] The percentage of HealthChoice participants with at least one gap in coverage remained stable between CY 2016 and CY 2018 at around 8.0% but decreased to 5.8% in CY 2019. Among participants with a gap in coverage in CY 2019, 72.5% had a gap of 180 days or less, and 27.5% had a gap of 181 days or more. Compared to previous years, CY 2019 had fewer gaps overall, but a greater share of those gaps extended beyond 180 days.

Table 3. Number of HealthChoice Participants with a Gap in Medicaid Coverage, by Length of Gap, CY 2016–CY 2019

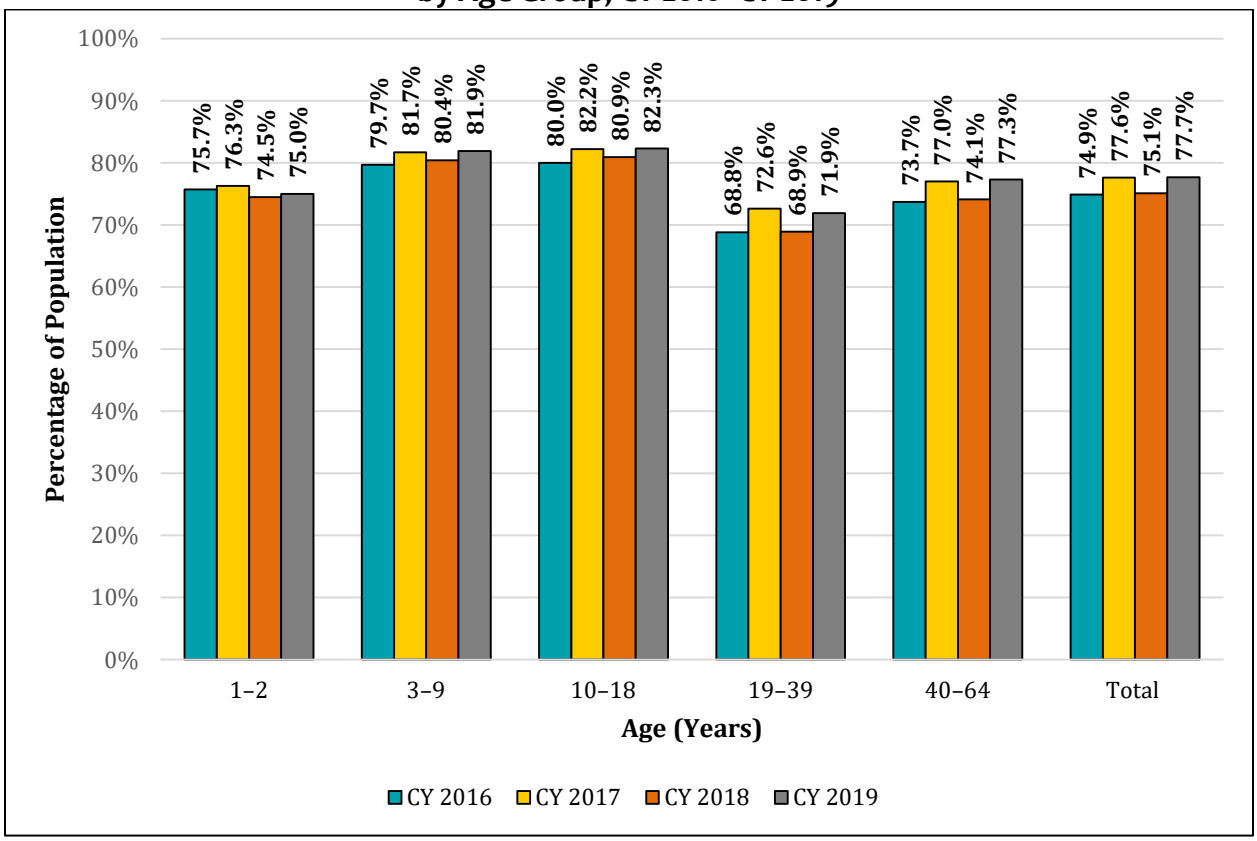
Calendar Year	Total	At Least One Gap in Medicaid Coverage		Length of Coverage Gap			
				180 Days or Less		181 Days or More	
		#	%	#	%	#	%
2016	1,285,347	107,214	8.3%	83,997	78.3%	23,217	21.7%
2017	1,355,225	113,309	8.4%	88,965	78.5%	24,344	21.5%
2018	1,389,716	113,801	8.2%	87,976	77.3%	25,825	22.7%
2019	1,377,493	79,624	5.8%	57,746	72.5%	21,878	27.5%

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

[47] Evaluation of this measure began in CY 2016 because a change in the system for eligibility determinations in CY 2015 resulted in a large amount of people dropping out of Medicaid.

Figure 3 shows the percentage of HealthChoice participants who were continuously enrolled for all 12 months during the calendar year, without interruptions, by age group, from CY 2016 through CY 2019. Participants with continuous enrollment increased by 2.8 percentage points. Participants aged 1 to 2 years were the only age group to experience a decrease in continuous enrollment (by 0.7 percentage points).

Figure 3. Percentage of HealthChoice Participants with Continuous Medicaid Enrollment, by Age Group, CY 2016–CY 2019



Enrollment and MCO Selection through the Maryland Health Connection

Maryland Health Connection (MHC) is the state's official health insurance marketplace, where consumers can apply for and enroll in qualified health plans (QHPs) and income-based Medicaid/MCHP (referred to as modified adjusted gross income, or MAGI). The MHC portal provides a single, streamlined application process for both programs. Consumers who indicate interest in insurance affordability programs on the application are screened for eligibility for Medicaid/MCHP and financial assistance for QHPs. While the majority of HealthChoice participants' eligibility is determined through MHC, MHC only processes those who are eligible for MAGI-based Medicaid. It does not include non-MAGI enrollment, which is processed through a different system, and thus is an undercount of total enrollment. In partnership with the Maryland Health Benefit Exchange (MHBE), the entity that oversees MHC, the Department continues to upgrade the functionality of MHC to improve the enrollment experience and enhance access to care. For example, since Medicaid participant applications can be

redetermined using administrative data, the majority of participants are automatically renewed, facilitating seamless coverage.

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 enough PCPs to serve its enrolled population. HealthChoice regulations require each MCO to have a ratio of 1 PCP to every 200 participants within each of the 40 local access areas (LAAs) in the state that they serve to consider the network coverage to be adequate.[48] The Department assesses network adequacy periodically throughout the year and works with the MCOs to resolve capacity issues. In the case of any issues, the Department discontinues new enrollment for that MCO in the affected region until it increases provider contracts to an adequate level.

Table 4 shows PCP network adequacy as of December 2019. The network adequacy analysis counted the number of PCP offices included in provider networks in each county in Maryland. In CY 2019, all jurisdictions achieved a 200:1 ratio of participants to PCPs.

Table 4. PCP Capacity, by County, December 2019[49]

County	Number of PCP Offices	Capacity at 200:1	Total Dec 2019 Enrollment	Excess Capacity Difference 200:1 Ratio
Allegany	127	25,400	17,778	7,622
Anne Arundel	837	167,400	84,277	83,123
Baltimore City	2075	415,000	215,000	200,000
Baltimore County	1620	324,000	174,371	149,629
Calvert	141	28,200	12,452	15,748
Caroline	91	18,200	10,371	7,829
Carroll	239	47,800	19,392	28,408
Cecil	160	32,000	22,852	9,148
Charles	216	43,200	28,492	14,708
Dorchester	87	17,400	10,903	6,497

[48] COMAR 10.67.05.05(B).

[49] 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 a single MCO, this analysis aggregated data from all nine MCOs.

County	Number of PCP Offices	Capacity at 200:1	Total Dec 2019 Enrollment	Excess Capacity Difference 200:1 Ratio
Frederick	298	59,600	35,821	23,779
Garrett	65	13,000	6,934	6,066
Harford	347	69,400	39,145	30,255
Howard	451	90,200	39,005	51,195
Kent	30	6,000	4,135	1,865
Montgomery	1328	265,600	157,622	107,978
Prince George's	1029	205,800	203,514	2,286
Queen Anne's	95	19,000	7,120	11,880
Somerset	58	11,600	7,396	4,204
St. Mary's	180	36,000	19,741	16,259
Talbot	171	34,200	7,089	27,111
Washington	240	48,000	37,562	10,438
Wicomico	201	40,200	29,784	10,416
Worcester	124	24,800	11,272	13,528
Total (in MD)	**10,210**	**2,042,000**	**1,202,028**	**839,972**
Other	490			
Washington, D.C.	1,065			

Specialty Care Provider Network Adequacy

In addition to ensuring PCP network adequacy, the Department 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.[50] These medical specialties include allergy, cardiology, dermatology, endocrinology, otolaryngology (ENT), gastroenterology, infectious disease, nephrology, neurology, ophthalmology, orthopedics, pulmonology, surgery, and urology. Additionally, for each of the 10 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: cardiology, otolaryngology, gastroenterology, neurology, ophthalmology, orthopedics, surgery, and urology.

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, emergency department (ED) visits, and inpatient admissions. Unless otherwise stated, all

[50] COMAR 10.67.05.05-1.

measures in this section are calculated for HealthChoice participants with any period of enrollment in HealthChoice during the calendar year.

Ambulatory Care Visits

The Department 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 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 4 presents the percentage of HealthChoice participants with an ambulatory care visit during the calendar year by age group. Between CY 2015 and CY 2019, children under the age of 3 had the highest ambulatory care visit rate, while participants aged 19 to 39 years had the lowest rate. Although ambulatory care visit rates remained stable for children under the age of 10 from CY 2015 to CY 2019, there was a range of a 3.3 and 4.3 percentage point increase among participants aged 10 years and older.

Figure 4. Percentage of the HealthChoice Population Who Had an Ambulatory Care Visit, by Age Group, CY 2015–CY 2019

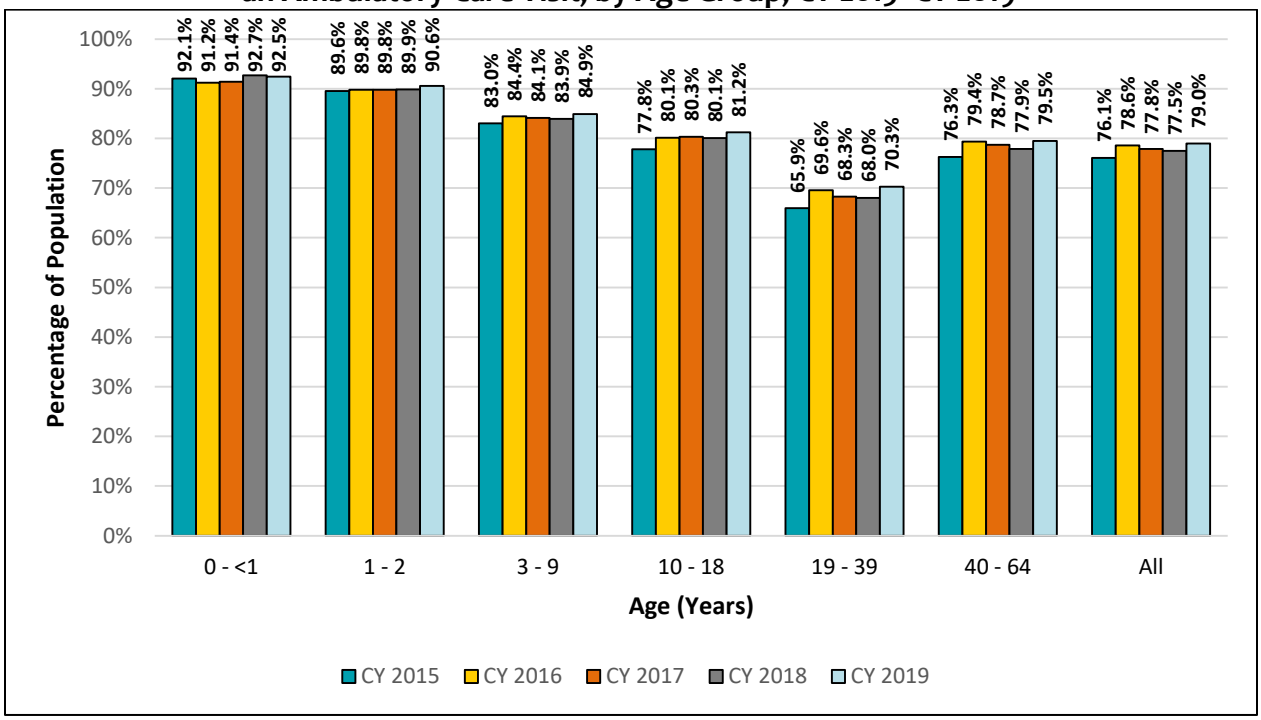


Figure 5 presents ambulatory care use by coverage category. The ACA expansion participants accessed ambulatory care services at lower rates than participants in other coverage categories, but the rate of ambulatory care visits increased by 3.1 percentage points during the evaluation period. ACA expansion participants constitute more than 25% of the HealthChoice population, so their utilization affects the trend for the entire population.

Figure 5. Percentage of the HealthChoice Population Who Had an Ambulatory Care Visit, by Coverage Category, CY 2015–CY 2019

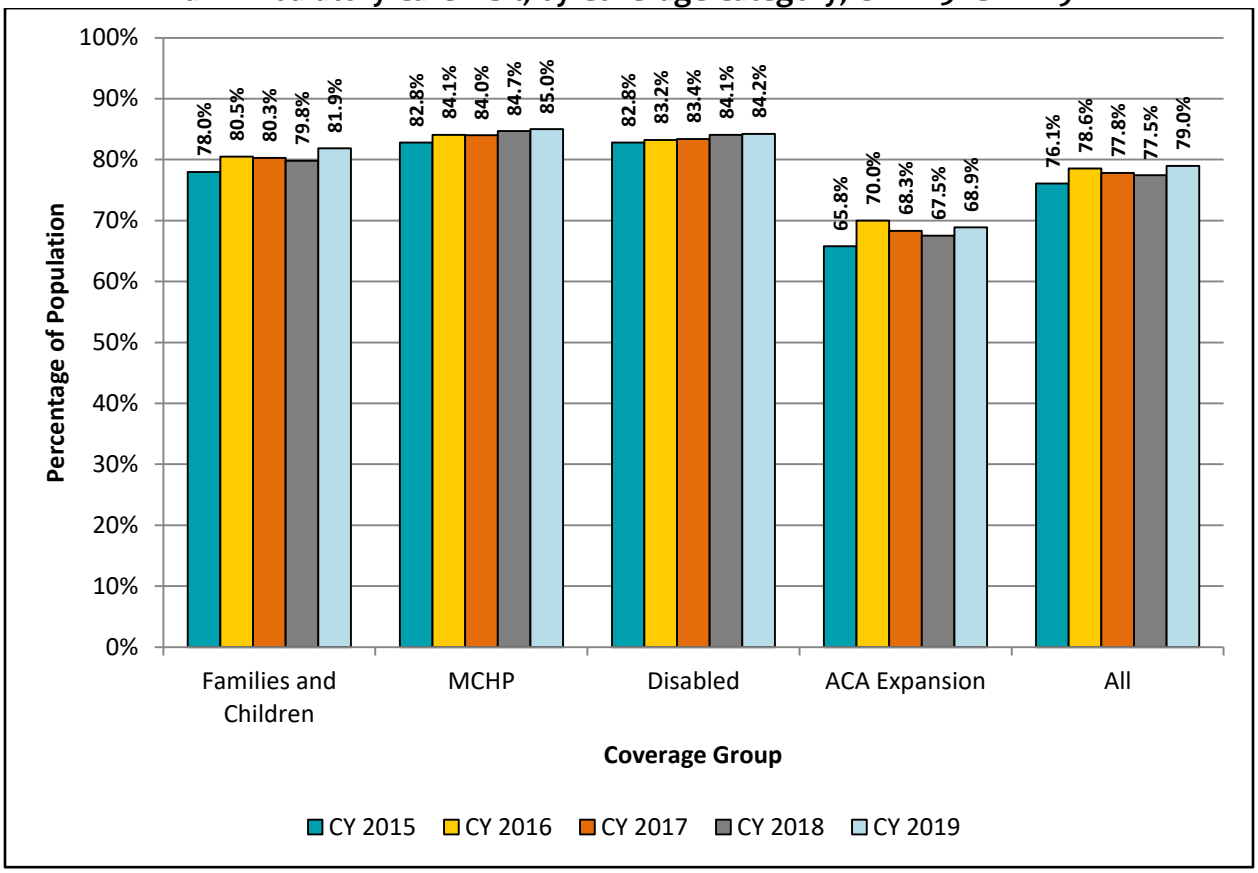
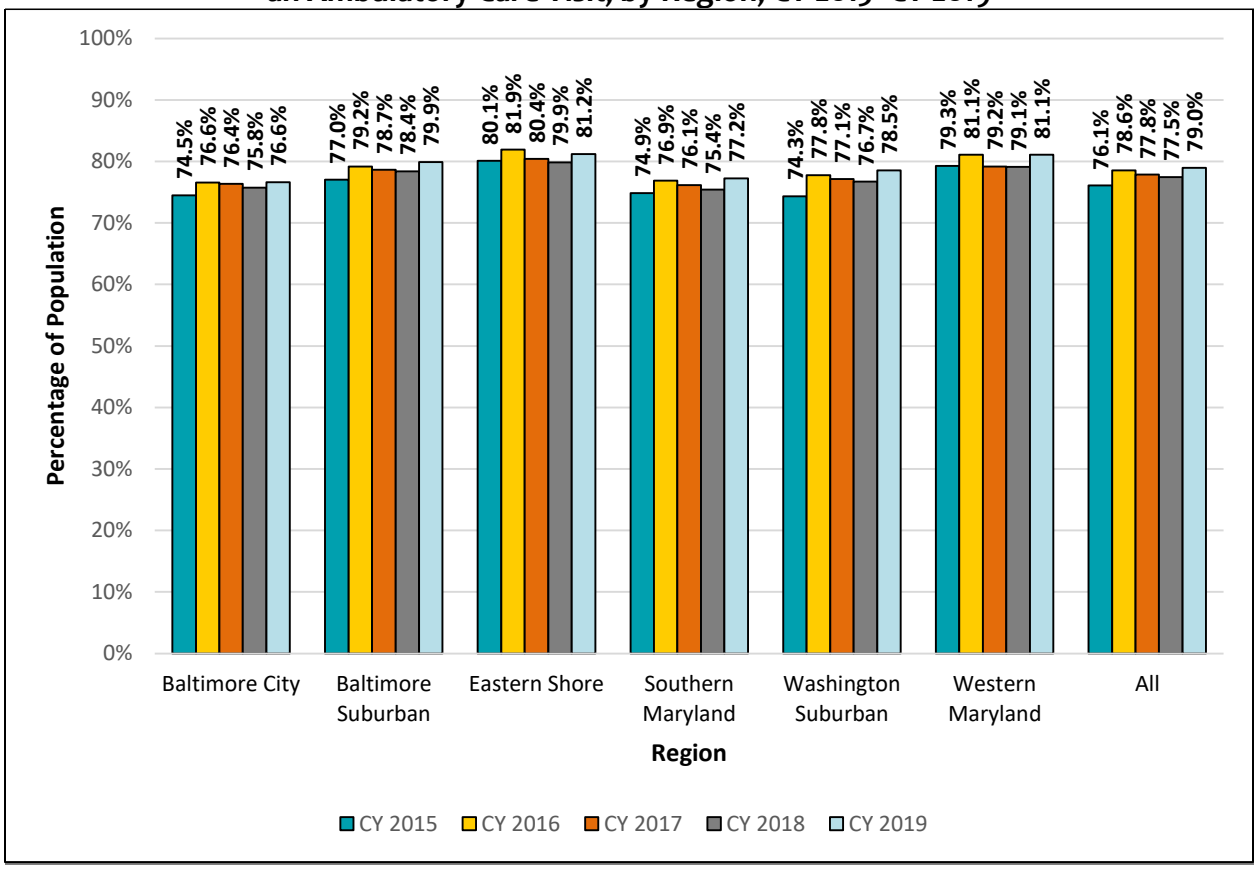


Figure 6 presents the percentage of the HealthChoice population with an ambulatory care visit by region between CY 2015 and CY 2019. Ambulatory care utilization was similar across all regions during the evaluation period. Residents of the Eastern Shore region had the highest rate of ambulatory care use, followed by Western Maryland.

Figure 6. Percentage of the HealthChoice Population Who Had an Ambulatory Care Visit, by Region, CY 2015–CY 2019



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, the Department 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 7 presents the percentage of HealthChoice participants with ED use by age group. The percentage with an outpatient ED visit decreased between CY 2015 and CY 2019 for all age groups. The largest declines were observed in the age groups of 1 to 2 years and 10 to 18 years.

Figure 7. Percentage of the HealthChoice Population Who Had an Outpatient ED Visit, by Age Group, CY 2015–CY 2019

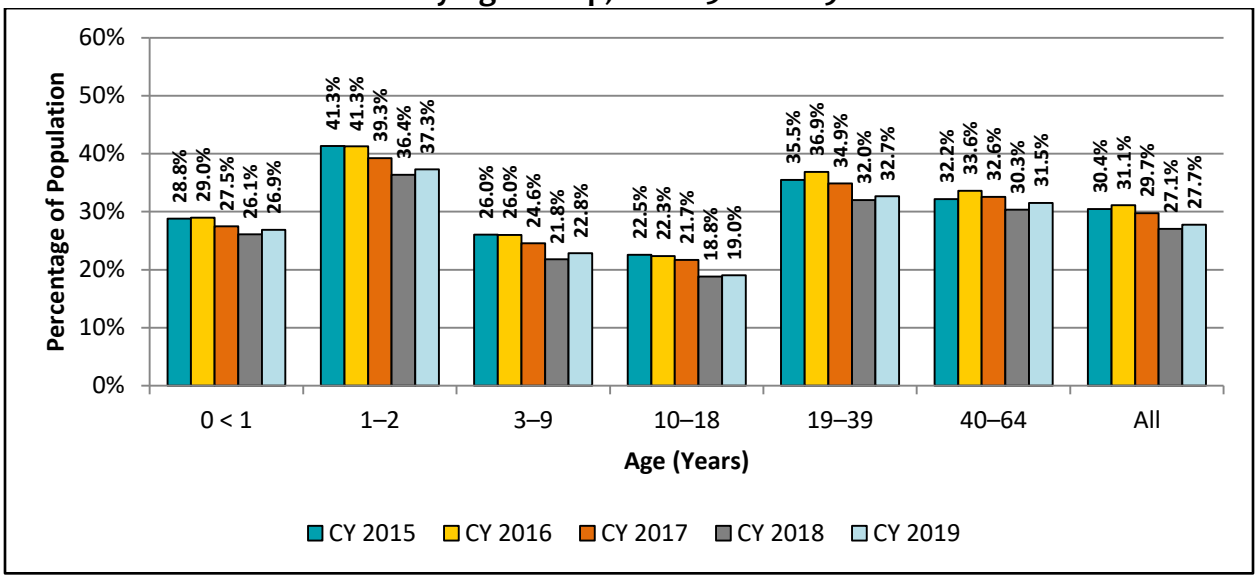


Figure 8 shows ED use by coverage category. Overall, the outpatient ED visit rate among all HealthChoice participants declined from CY 2015 to CY 2019. Among the coverage categories, participants with disabilities were the most likely to utilize ED services, although they still experienced a decrease: from 43.4% in CY 2015 to 39.5% in CY 2019.

Figure 8. Percentage of the HealthChoice Population Who Had an Outpatient ED Visit, by Coverage Category, CY 2015–CY 2019

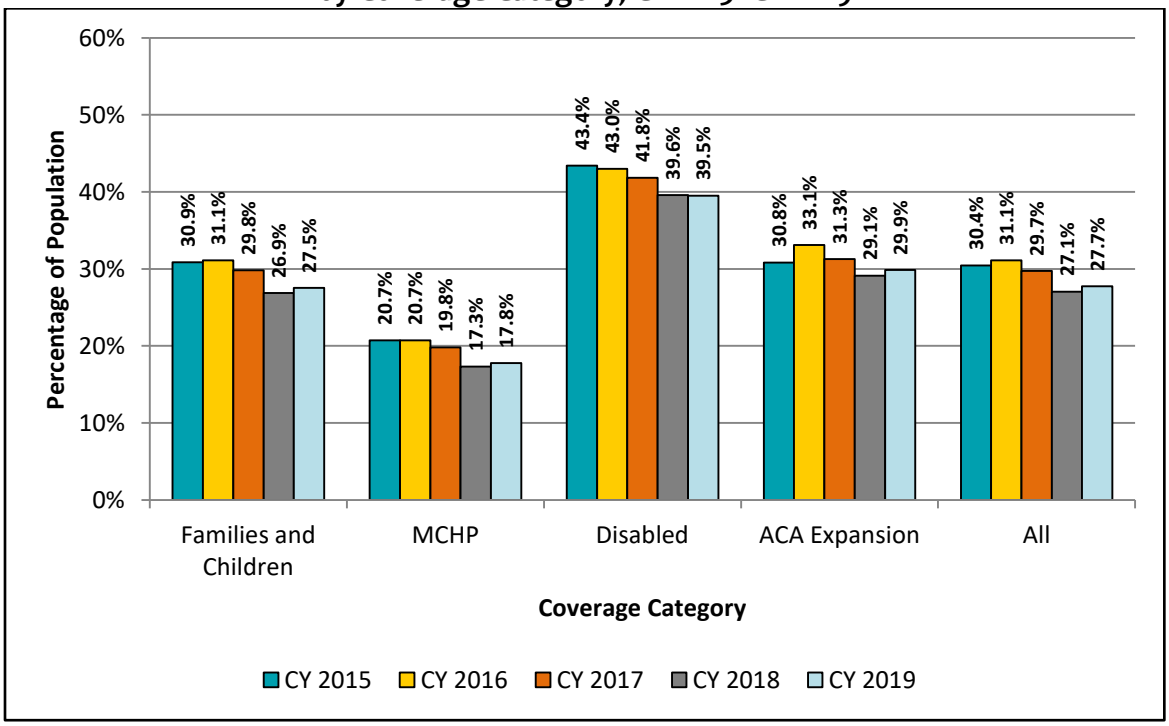


Figure 9 shows the percentage of HealthChoice participants with an ED visit by region between CY 2015 and CY 2019. Participants living in Baltimore City used ED services at the highest rates throughout the evaluation period; however, the rates fell by 3.1 percentage points from CY 2015 to CY 2019. In other regions, rates also declined, ranging from a reduction of 1.5 percentage points in the Eastern Shore to 3.7 percentage points in Southern Maryland.

Figure 9. Percentage of the HealthChoice Population Who Had an Outpatient ED Visit, by Region, CY 2015–CY 2019

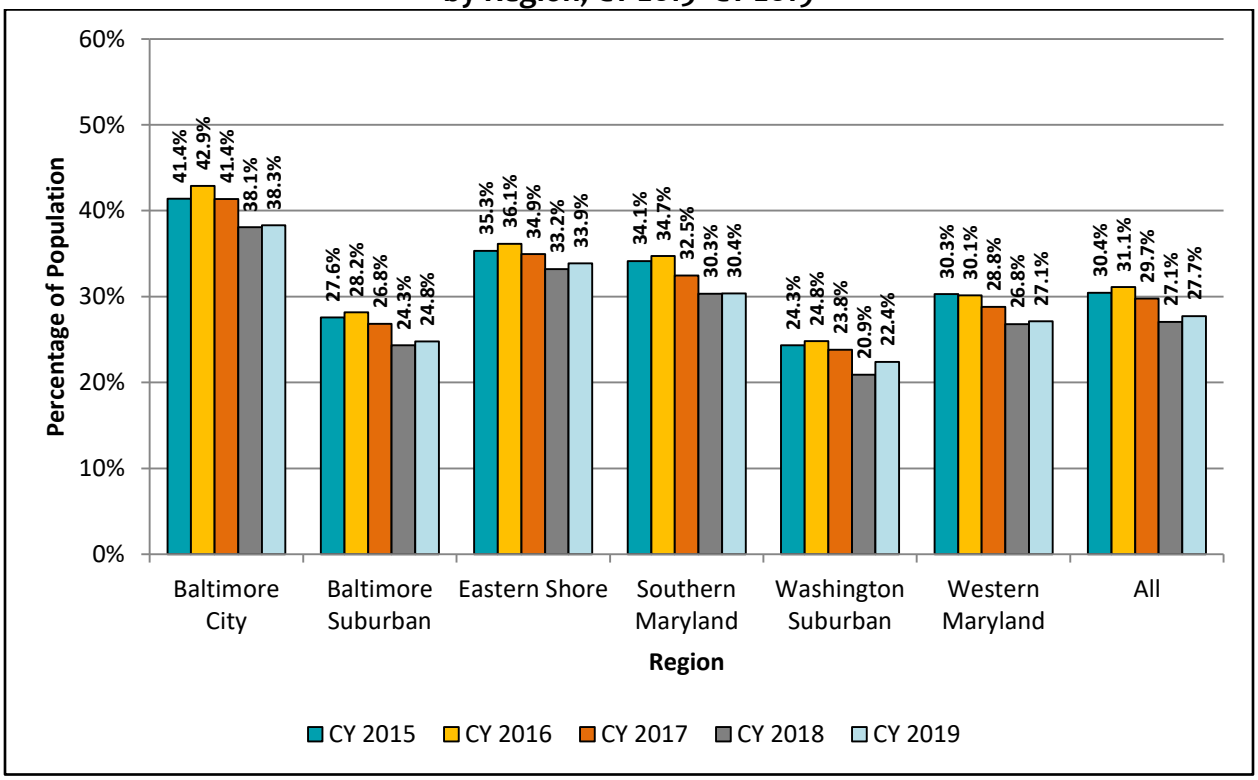


Table 5 presents the number and percentage of HealthChoice participants aged 0 to 64 years with an outpatient ED visit, by age group, during CY 2015 and CY 2019. The percentage of participants with an ED visit decreased in each age group from CY 2015 to CY 2019, with the largest decline of 4% in 1- to 2-year-olds. The average number of ED visits by user remained steady.

Table 5. Percentage of HealthChoice Participants Who Had an Outpatient ED Visit and Average Number of Visits per User, by Age Group, CY 2015 and CY 2019

Age (Years)	Outpatient ED Visits							
	CY 2015				CY 2019			
	# of Participants	# with Visit	% with Visit	Average # Visits by User	# of Participants	# with Visit	% with Visit	Average # Visits by User
0 < 1	36,034	10,376	28.8%	1.7	35,920	9,648	26.9%	1.7
1–2	78,655	32,519	41.3%	1.9	77,233	28,823	37.3%	1.8
3–9	262,519	68,325	26.0%	1.5	258,852	59,089	22.8%	1.5
10–18	264,997	59,755	22.5%	1.6	298,755	56,889	19.0%	1.6
19–39	391,934	139,095	35.5%	2.4	428,714	140,013	32.7%	2.2
40–64	269,758	86,820	32.2%	2.4	278,019	87,603	31.5%	2.3
All	**1,303,897**	**396,890**	**30.4%**	**1.9**	**1,377,493**	**382,065**	**27.7%**	**1.9**

ED Visits with Inpatient Admission

Table 6 presents the number and percentage of HealthChoice participants who had an ED Visit that resulted in an inpatient admission, by demographic characteristics, in CY 2015 and CY 2019. The overall percentage of participants with an ED visit that resulted in an inpatient admission decreased slightly from 3.7% in CY 2015 to 3.6% in CY 2019.

In CY 2019, Baltimore City had the highest percentage (5.5%) of participants with an ED visit that resulted in an inpatient hospitalization; however, the overall rate decreased slightly (by 0.2 percentage points) from CY 2015. Among coverage groups, those who were disabled had the highest percentage (11.9%) of ED visits that resulted in an inpatient admission.

Table 6. Percentage of the HealthChoice Population Who Had an ED Visit that Resulted in an Inpatient Admission, by Demographic and Coverage Category, CY 2015 and CY 2019

Demographic and Coverage Characteristics	CY 2015			CY 2019		
	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)						
<1	36,034	1,389	3.9%	35,920	1,372	3.8%
1–2	78,655	1,952	2.5%	77,233	1,698	2.2%
3–9	262,519	2,305	0.9%	258,852	1,881	0.7%

Demographic and Coverage Characteristics	CY 2015			CY 2019		
	Total Participants	# ED Visit with Inpatient Admission	% ED Visit with Inpatient Admission	Total Participants	# ED Visit with Inpatient Admission	% ED Visit with Inpatient Admission
10–18	264,997	2,712	1.0%	298,755	2,716	0.9%
19–39	391,934	18,307	4.7%	428,714	19,582	4.6%
40–64	269,758	21,739	8.1%	278,019	21,929	7.9%
Total	**1,303,897**	**48,404**	**3.7%**	**1,377,493**	**49,178**	**3.6%**
Region*						
Baltimore City	241,091	13,837	5.7%	241,141	13,295	5.5%
Baltimore Suburban	377,518	13,639	3.6%	407,957	14,333	3.5%
Eastern Shore	120,548	3,904	3.2%	126,577	4,143	3.3%
Southern Maryland	66,561	2,711	4.1%	69,660	2,937	4.2%
Washington Suburban	390,911	10,232	2.6%	418,203	10,477	2.5%
Western Maryland	105,300	3,962	3.8%	112,932	3,939	3.5%
Out of State	1,968	119	6.0%	1,023	54	5.3%
Total	**1,303,897**	**48,404**	**3.7%**	**1,377,493**	**49,178**	**3.6%**
Managed Care Organization**						
Aetna	N/A			36,226	1,431	4.0%
Amerigroup	321,851	10,532	3.3%	313,254	9,282	3.0%
Jai Medical Systems	29,692	2,045	6.9%	30,412	1,960	6.4%
Kaiser	37,587	916	2.4%	83,727	1,870	2.2%
Maryland Physicians Care	243,050	9,793	4.0%	242,928	9,811	4.0%
MedStar	91,474	4,018	4.4%	105,911	4,451	4.2%
Priority Partners	302,930	10,471	3.5%	341,545	12,269	3.6%
UnitedHealthcare	236,759	8,936	3.8%	167,542	5,714	3.4%
Univ of MD Health Partners	40,554	1,693	4.2%	55,948	2,390	4.3%
Total	**1,303,897**	**48,404**	**3.7%**	**1,377,493**	**49,178**	**3.6%**
Medicaid Coverage Category**						
Families and Children	755,600	17,571	2.3%	765,243	17,275	2.3%
MCHP	160,193	1,182	0.7%	163,935	1,156	0.7%
Disabled	88,636	11,670	13.2%	87,003	10,379	11.9%
ACA Expansion	299,553	17,985	6.0%	361,312	20,368	5.6%
Total	**1,303,897**	**48,408**	**3.7%**	**1,377,493**	**49,178**	**3.6%**

*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.

Inpatient Admissions

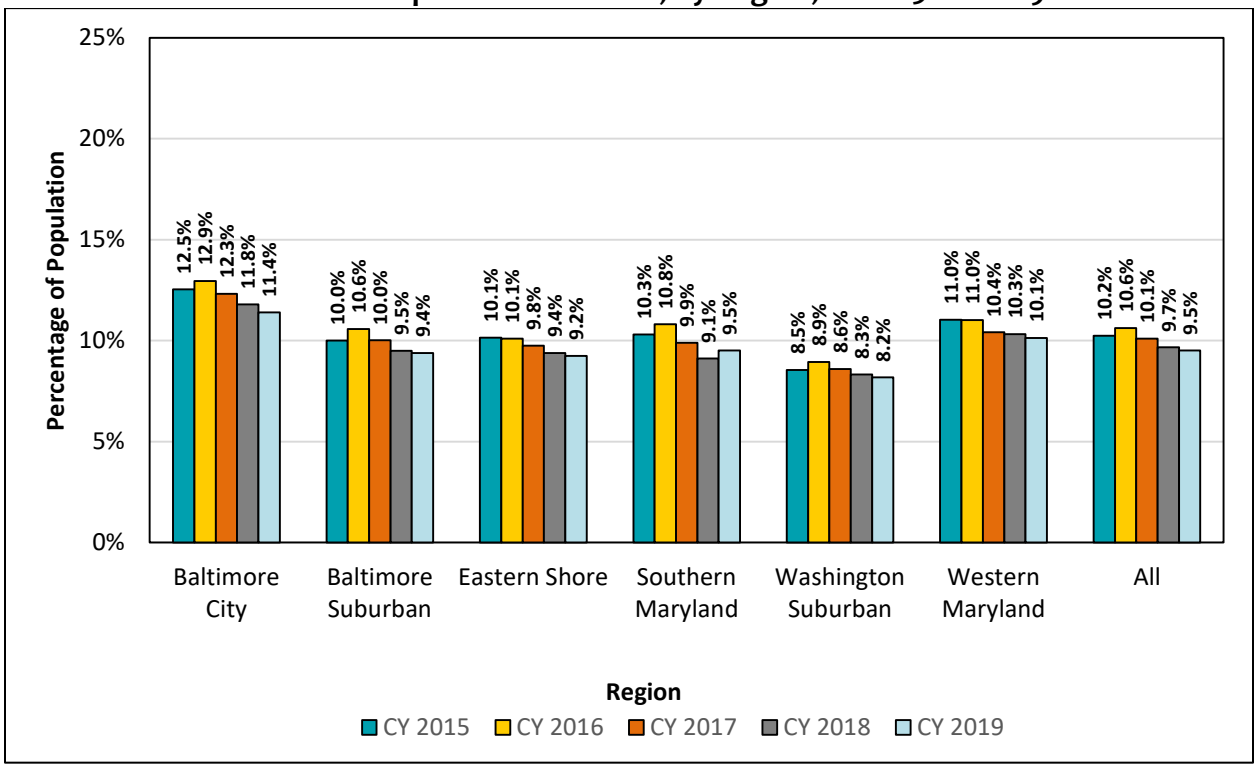
The percentage of participants aged 18 to 64 years with any period of HealthChoice enrollment who had an inpatient admission during the calendar year is one measure used to assess inpatient utilization. Another measure for assessing inpatient utilization is to calculate the average total number of inpatient hospital days or average length of stay (LOS), by days. Table 7 presents HealthChoice participants with at least one inpatient hospital admission, by age group, and the average length of stay by participant. Participants aged 18 to 40 years had a lower rate of both inpatient admissions and average LOS compared to participants aged 41 to 64 years. Both age groups remained stable in inpatient admissions and LOS during the evaluation period.

Table 7. Percentage of HealthChoice Participants Aged 18–64 Years Who Had an Inpatient Admission and Average LOS, by Age Group, CY 2015 and CY 2019

Age Group	All Inpatient Admissions							
	CY 2015				CY 2019			
	Total Participants	# with Inpatient Admission	% with Inpatient Admission	Average LOS (Days) by Participant	Total Participants	# with Inpatient Admission	% with Inpatient Admission	Average LOS (Days) by Participant
18–40	429,796	43,402	10.1%	0.6	471,271	43,483	9.2%	0.6
41–64	257,828	27,003	10.5%	1.1	263,736	26,380	10.0%	1.2
Total	**687,624**	**70,405**	**10.2%**	**0.9**	**735,007**	**69,863**	**9.5%**	**0.9**

Figure 10 displays the percentages of HealthChoice participants aged 18 to 64 years with an inpatient admission by region. Between CY 2015 and CY 2019, inpatient admission rates decreased across all regions. The Washington Suburban region had the lowest admission rate during the evaluation period, with 8.2% in CY 2019 and 8.5% in CY 2015. The greatest decline was observed in Baltimore City, which decreased by 1.1 percentage points. Baltimore City and Western Maryland are the only regions whose admission rates remained above 10% throughout the evaluation period.

Figure 10. Percentage of HealthChoice Participants Aged 18–64 Years Who Had an Inpatient Admission, by Region, CY 2015–CY 2019



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. 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.[51] 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 8 displays HealthChoice children in foster care by age group for CY 2015 and CY 2019. Across the evaluation period, children aged 10 to 21 years made up the largest proportion of HealthChoice children in foster care (67.0% in CY 2015 and 66.2% in CY 2019).

[51] Children in the subsidized adoption and guardianship programs are included in the foster children counts.

Table 8. HealthChoice Children in Foster Care, by Age Group, CY 2015 and CY 2019

Age Group (Years)	CY 2015		CY 2019	
	Number of Participants	Percentage of Total	Number of Participants	Percentage of Total
0 to <1	230	1.5%	206	1.4%
1–2	841	5.6%	846	5.7%
3–5	1,428	9.5%	1,552	10.5%
6–9	2,482	16.4%	2,415	16.3%
10–14	3,629	24.0%	3,687	24.8%
15–18	3,815	25.3%	3,645	24.6%
19–21	2,673	17.7%	2,496	16.8%
Total	**15,098**	**100.0%**	**14,847**	**100.0%**

Table 9 shows the percentage of HealthChoice children in foster care, by service received and age group, for calendar years 2015 and 2019. Overall, the percentage of children in foster care who did not receive any services or who had an inpatient admission declined across the measurement period. As participants aged, the percentage of foster children with an ambulatory care visit fell by 31 and 29 percentage points in CY 2015 and CY 2019, respectively. However, children younger than 2 and older than 19 years have the highest rate of outpatient ED visits in both CY 2015 and CY 2019.

Table 9. Percentage of HealthChoice Children in Foster Care, by Service and Age Group, CY 2015 and CY 2019

Age Group (Years)	CY 2015			CY 2019		
	Total Participants	Number of Participants	Percentage of Total	Total Participants	Number of Participants	Percentage of Total
No Medicaid Service						
0 to <1	230	*	*	206	*	*
1–2	841	*	*	846	*	*
3–5	1,428	139	9.7%	1,552	131	8.4%
6–9	2,482	302	12.2%	2,415	223	9.2%
10–14	3,629	443	12.2%	3,687	437	11.9%
15–18	3,815	497	13.0%	3,645	416	11.4%
19–21	2,673	546	20.4%	2,496	551	22.1%
Total	**15,098**	**1,969**	**13.0%**	**14,847**	**1,806**	**12.2%**
Ambulatory Care Visit						
0 to <1	230	219	95.2%	206	196	95.1%
1–2	841	779	92.6%	846	775	91.6%
3–5	1,428	1,210	84.7%	1,552	1,332	85.8%
6–9	2,482	1,955	78.8%	2,415	1,975	81.8%
10–14	3,629	2,858	78.8%	3,687	2,947	79.9%
15–18	3,815	2,950	77.3%	3,645	2,876	78.9%
19–21	2,673	1,727	64.6%	2,496	1,643	65.8%

Age Group (Years)	CY 2015			CY 2019		
	Total Participants	Number of Participants	Percentage of Total	Total Participants	Number of Participants	Percentage of Total
Total	**15,098**	**11,698**	**77.5%**	**14,847**	**11,744**	**79.1%**
Outpatient ED Visit						
0 to <1	230	88	38.3%	206	71	34.5%
1–2	841	325	38.6%	846	302	35.7%
3–5	1,428	378	26.5%	1,552	375	24.2%
6–9	2,482	526	21.2%	2,415	408	16.9%
10–14	3,629	827	22.8%	3,687	752	20.4%
15–18	3,815	1,244	32.6%	3,645	1,102	30.2%
19–21	2,673	1,043	39.0%	2,496	894	35.8%
Total	**15,098**	**4,431**	**29.3%**	**14,847**	**3,904**	**26.3%**
Inpatient Admission						
0 to <1	230	181	78.7%	206	176	85.4%
1–2	841	57	6.8%	846	61	7.2%
3–5	1,428	45	3.2%	1,552	28	1.8%
6–9	2,482	89	3.6%	2,415	78	3.2%
10–14	3,629	256	7.1%	3,687	234	6.3%
15–18	3,815	454	11.9%	3,645	344	9.4%
19–21	2,673	231	8.6%	2,496	204	8.2%
Total	**15,098**	**1,313**	**8.7%**	**14,847**	**1,125**	**7.6%**

*Cell values of 10 or less have been suppressed.

Table 10 compares the percentage of HealthChoice children in foster care and non-foster care children by service received. Overall, the percentage of foster children who did not receive a service is higher than non-foster care children in CY 2015 and in CY 2019. A higher percentage of children in foster care did have an outpatient ED visit and an inpatient admission compared to non-foster care children. However, ED visits and inpatient admissions for foster care children decreased between CY 2015 to CY 2019 indicating a positive trend.

Table 10. Percentage of HealthChoice Foster Care Children vs. Non-Foster Care Children by Service, CY 2015 and CY 2019

Age Group (Years)	CY 2015			CY 2019		
	Total Participants	Number of Participants	Percentage of Total	Total Participants	Number of Participants	Percentage of Total
	No Medicaid Service					
Foster	15,098	1,969	13.0%	14,847	1,806	12.2%
Non-Foster	694,889	70,119	10.1%	729,993	64,789	8.9%
	Ambulatory Care Visit					
Foster	15,098	11,698	77.5%	14,847	11,744	79.1%
Non-Foster	694,889	559,352	80.5%	729,993	605,286	82.9%

Age Group (Years)	CY 2015			CY 2019		
	Total Participants	Number of Participants	Percentage of Total	Total Participants	Number of Participants	Percentage of Total
	Outpatient ED Visit					
Foster	15,098	4,431	29.3%	14,847	3,904	26.3%
Non-Foster	694,889	187,728	27.0%	729,993	171,809	23.5%
	Inpatient Admission					
Foster	15,098	1,313	8.7%	14,847	1,125	7.6%
Non-Foster	694,889	47,400	6.8%	729,993	44,979	6.2%

Table 11 compares the dental utilization rate in CY 2019 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 (65.9%) than other HealthChoice children (63.7%). The largest differences between the two populations were observed in the older age groups. The dental visit rate was 47.2% for children in foster care aged 19 to 20 years and 38.9% for other HealthChoice children: a difference of 8.3 percentage points.

Table 11. Percentage of HealthChoice Foster Care Children Aged 4–20 Years vs. Non-Foster Care Children with a Dental Visit, by Age Group, CY 2019

Age Group (Years)	CY 2019 HealthChoice Foster Care Status					
	Foster Care			Non-Foster Care		
	Number of Participants	Total Number of Participants	Percent	Number of Participants	Total Number of Participants	Percent
4–5	775	1,047	74.0%	49,893	74,548	66.9%
6–9	1,794	2,415	74.3%	101,678	143,074	71.1%
10–14	2,543	3,687	69.0%	119,021	176,825	67.3%
15–18	2,319	3,645	63.6%	65,951	114,598	57.5%
19–20	803	1,701	47.2%	19,426	49,899	38.9%
Total	**8,234**	**12,495**	**65.9%**	**355,969**	**558,944**	**63.7%**

Table 12 shows the rates of MHDs, SUDs, and co-occurring MHD and SUD conditions among foster care and non-foster care HealthChoice participants in CY 2015 and CY 2019. The percentage of participants diagnosed 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 both foster care and non-foster care participants with an MHD-only diagnosis increased across the evaluation period. In contrast, the percentage of participants with SUD-only diagnoses decreased slightly from CY 2015 to CY 2019 for both foster care and non-foster care participants. The percentage of participants with a co-occurring MHD and SUD remained stable for non-foster care participants between CY 2015 and CY 2019, while the rate for foster care participants fell by 0.7 percentage points.

Table 12. Behavioral Health Diagnosis of HealthChoice Foster Care Children vs. Non-Foster Care Children Aged 0–21 Years, CY 2015 and CY 2019

Foster Care Status	CY 2015			CY 2019		
	Total Participants	Number of Participants	Percentage of Total	Total Participants	Number of Participants	Percentage of Total
MHD-Only						
Foster	5,724	15,098	37.9%	5,799	14,847	39.1%
Non-Foster	66,296	694,889	9.5%	83,275	729,993	11.4%
SUD-Only						
Foster	106	15,098	0.7%	65	14,847	0.4%
Non-Foster	3,553	694,889	0.5%	2,827	729,993	0.4%
Dual Diagnosis (MHD and SUD)						
Foster	334	15,098	2.2%	224	14,847	1.5%
Non-Foster	2,057	694,889	0.3%	1,831	729,993	0.3%
No Behavioral Health Diagnosis						
Foster	8,934	15,098	59.2%	8,759	14,847	59.0%
Non-Foster	622,983	694,889	89.7%	642,060	729,993	88.0%

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. 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.

REM Enrollment

Table 13 presents REM enrollment[52] by age group, sex, and status for children in foster care for CY 2015 and CY 2019. In both years, most REM participants were males aged 18 years or younger. There was a lower percentage of female participants in the REM population than in the general HealthChoice population. The majority of REM participants were not in foster care.

Table 13. REM Enrollment by Age Group, Sex, and Foster Care Status, CY 2015 and CY 2019

	CY 2015		CY 2019	
Demographic Characteristic	**Number of Enrollees**	**Percentage of Total**	**Number of Enrollees**	**Percentage of Total**
Age Group (Years)				
0-18	3,259	67.1%	3,025	64.8%
19 and over	1,600	32.9%	1,644	35.2%
Total	**4,859**	**100.0%**	**4,669**	**100.0%**
Sex/Gender				
Female	2,128	43.8%	1,994	42.7%
Male	2,731	56.2%	2,675	57.3%
Total	**4,859**	**100.0%**	**4,669**	**100.0%**
Foster Care				
Foster Care	376	7.7%	341	7.3%
Non-Foster Care	4,483	92.3%	4,328	92.7%
Total	**4,859**	**100.0%**	**4,669**	**100.0%**

REM Service Utilization

Figure 11 shows the percentage of REM participants who received at least one dental, inpatient, ambulatory care, or outpatient ED visit between CY 2015 and CY 2019. The dental, inpatient, and ambulatory care visit measures serve as indicators of access to care. The percentage of participants with a dental visit increased during the evaluation period, from 52.1% in CY 2015 to 55.1% in CY 2019. The

[52] REM enrollment differs from last year's evaluation because it includes all participants with at least one day in the REM program during the calendar year based on special program enrollment.

percentage of REM participants who had an inpatient visit declined by 2.4 percentage points between CY 2015 and CY 2019. Ambulatory care utilization decreased by 0.1 percentage points throughout the evaluation period. Outpatient ED visits decreased by 1.9 percentage points over the entire evaluation period; however, the largest decline occurred between CY 2017 and CY 2018, when the rate went from 44.1 to 42.3%—a decrease of 1.8 percentage points. Due to the nature of qualifying conditions for the REM program, nearly 100% of REM participants received at least one service per year during the evaluation period.

Figure 11. Percentage of REM Participants with a Dental, Inpatient, Ambulatory Care, or Outpatient ED Visit, CY 2015–CY 2019

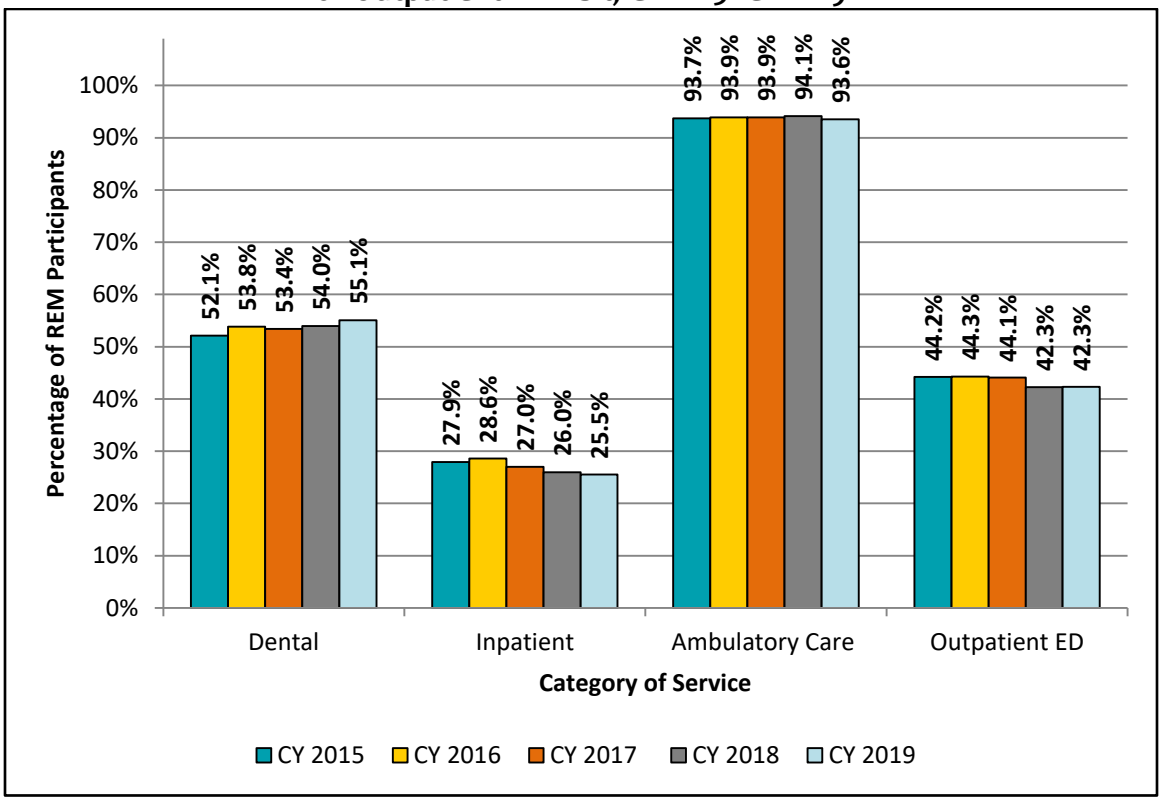


Table 14 shows the behavioral health diagnosis rates among REM participants at the beginning and end of the evaluation period. The rates for MDH-only and SUD-only increased slightly (both by 0.5 percentage points), while the percentage of REM participants with a dual diagnosis (MHD and SUD) also increased slightly (by 0.1 percentage points). The category of no behavioral health diagnosis decreased by 1.1 percentage points over the evaluation period.

Table 14. Behavioral Health Diagnoses of REM Participants, CY 2015 and CY 2019

CY 2015			CY 2019		
Number of Participants	Total Participants	Percentage of Total	Number of Participants	Total Participants	Percentage of Total
MHD-Only					
920	4,859	18.9%	907	4,669	19.4%
SUD-Only					
134	4,859	2.8%	153	4,669	3.3%
Dual Diagnosis (MHD + SUD)					
41	4,859	0.8%	40	4,669	0.9%
No Behavioral Health Diagnosis					
3,764	4,859	77.5%	3,569	4,669	76.4%

Racial and Ethnic Disparities

Racial and ethnic disparities in health care are nationally recognized challenges. The Department is committed to improving health service utilization among racial and ethnic groups through its Managing for Results (MFR) program. The Department'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 several measures of service utilization.

When reading this section, please note that there was a substantial change to the quality of the race and ethnicity information beginning in 2014. The approach to selecting race and ethnicity on the Medicaid eligibility application changed with Medicaid's new eligibility process. As a result, the number of individuals reporting their race or ethnicity decreased, and the proportion represented as "Other/Unknown" increased sharply.

Enrollment

Table 15 displays HealthChoice enrollment by race and ethnicity. The percentage of Hispanic, White, and Black participants decreased in enrollment between CY 2015 and CY 2019, the percentage of Asian and Native American participants remained the same, and the percentage of "Other/Unknown" participants increased by 8.6 percentage points.

Table 15. HealthChoice Enrollment by Race/Ethnicity, CY 2015 and CY 2019

Race/Ethnicity	CY 2015		CY 2019	
	# of Participants	% of Total	# of Participants	% of Total
Asian	58,077	4.5%	62,445	4.5%
Black	584,775	44.8%	566,300	41.1%
White	381,336	29.2%	360,123	26.1%
Hispanic	123,785	9.5%	105,872	7.7%
Native American	3,708	0.3%	4,032	0.3%
Other	152,216	11.7%	278,721	20.2%

Total	**1,303,897**	**100.0%**	**1,377,493**	**100.0%**

Ambulatory Care Visits

Figure 12 presents the percentage of children aged 0 through 18 years with at least one ambulatory visit in CY 2015 and CY 2019, by race and ethnicity. The overall rate of ambulatory care visits increased from 82.2% in CY 2015 to 84.3% in CY 2019. All racial and ethnic groups except for Native Americans experienced a slight increase throughout the evaluation period. In CY 2015, the disparity between the racial/ethnic group with the highest percentage of ambulatory care visits (Hispanic) and the lowest percentage (Black) was 11.3 percentage points. In CY 2019, this difference decreased slightly to 10.1 percentage points.

Figure 12. Percentage of HealthChoice Participants Aged 0–18 Years with an Ambulatory Care Visit, by Race/Ethnicity, CY 2015 and CY 2019

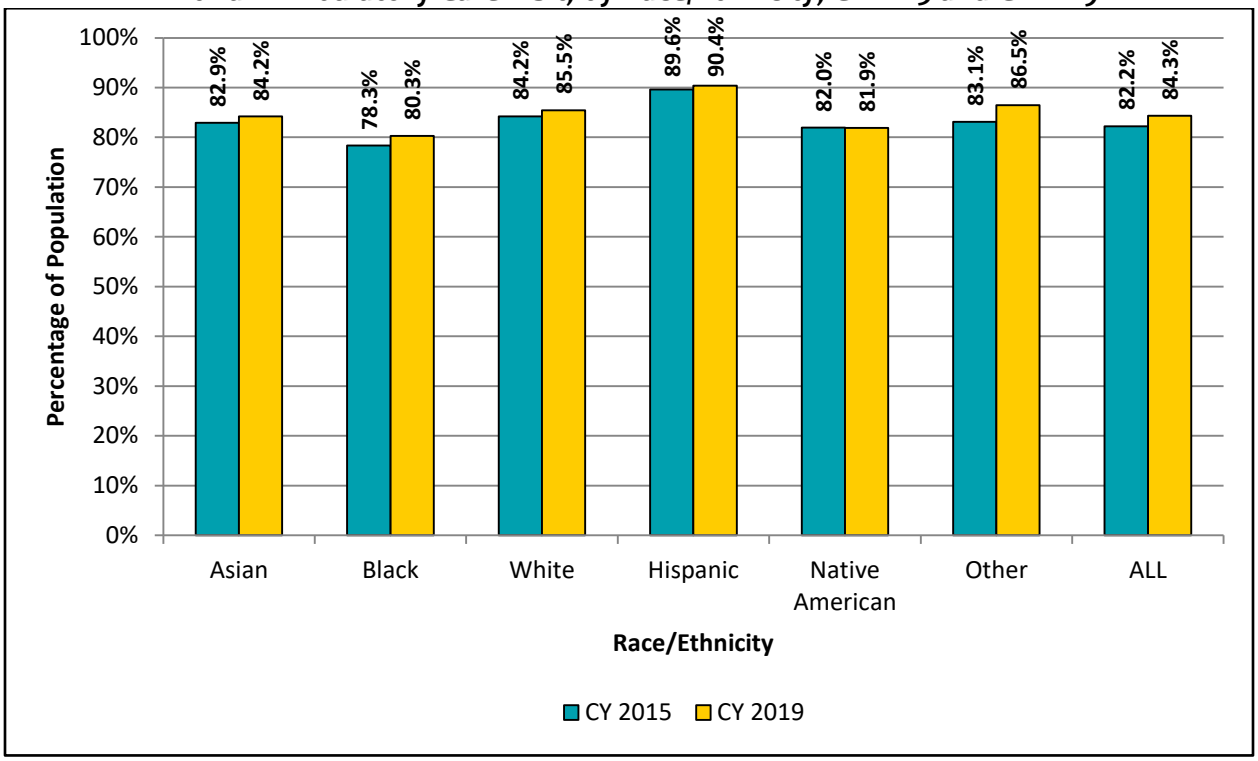
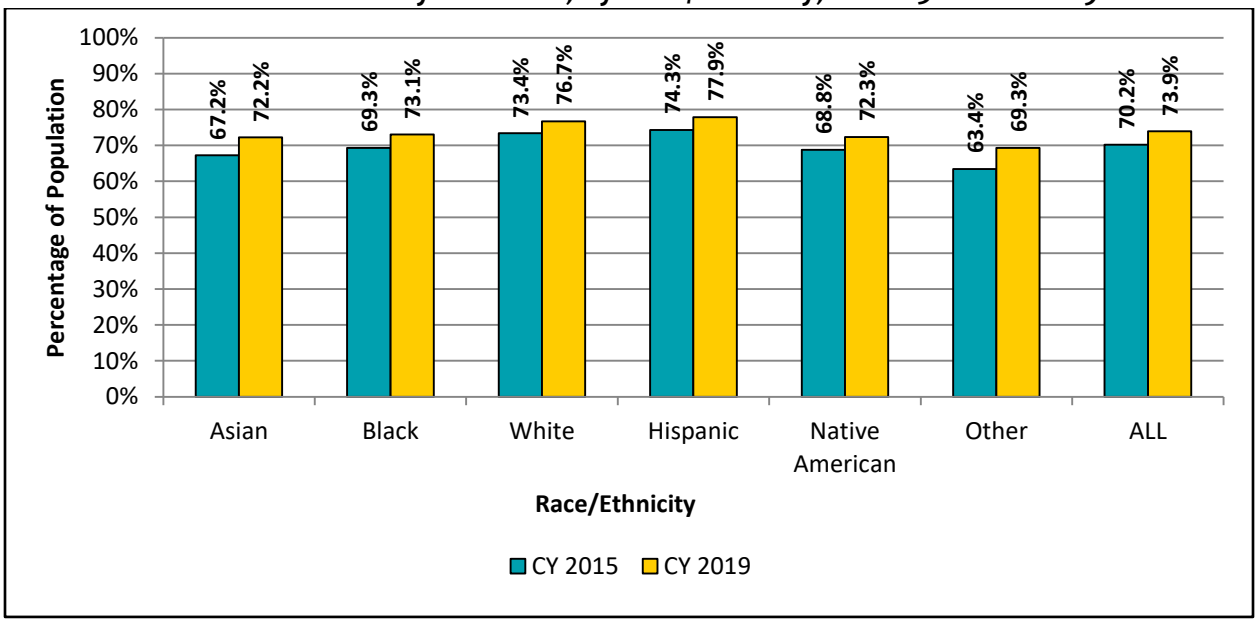


Figure 13 presents the percentage of adults aged 19 to 64 years with at least one ambulatory care visit in CY 2015 and CY 2019, by race and ethnicity. In CY 2015, 70.2% of adult HealthChoice participants received an ambulatory care visit. The rate of ambulatory care visits increased to 73.9% in CY 2019, with a corresponding increase observed among all racial and ethnic groups.

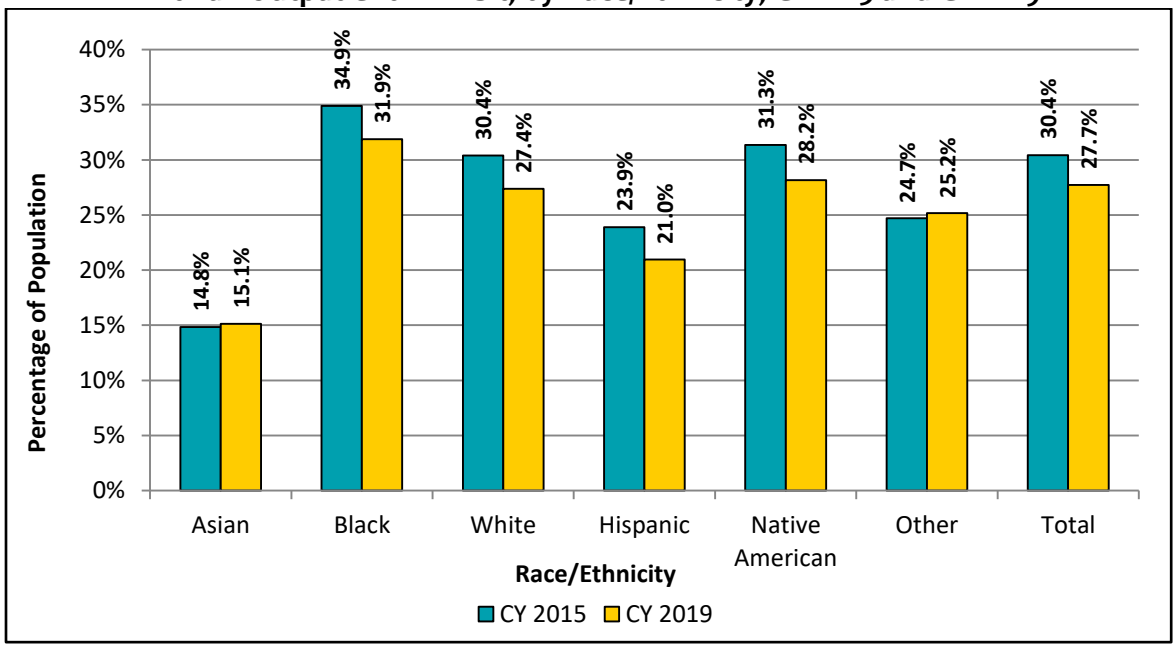
Figure 13. Percentage of HealthChoice Participants Aged 19–64 Years with an Ambulatory Care Visit, by Race/Ethnicity, CY 2015 and CY 2019



Outpatient ED Visits

Figure 14 displays the percentage of HealthChoice participants aged 0 to 64 years with at least one outpatient ED visit by race and ethnicity in CY 2015 and CY 2019. During the evaluation period, each racial and ethnic group except for Asian participants and "Other/Unknown" experienced a drop in ED services. Black participants continued to have the highest ED visit rate, while Asian participants continued to have the lowest.

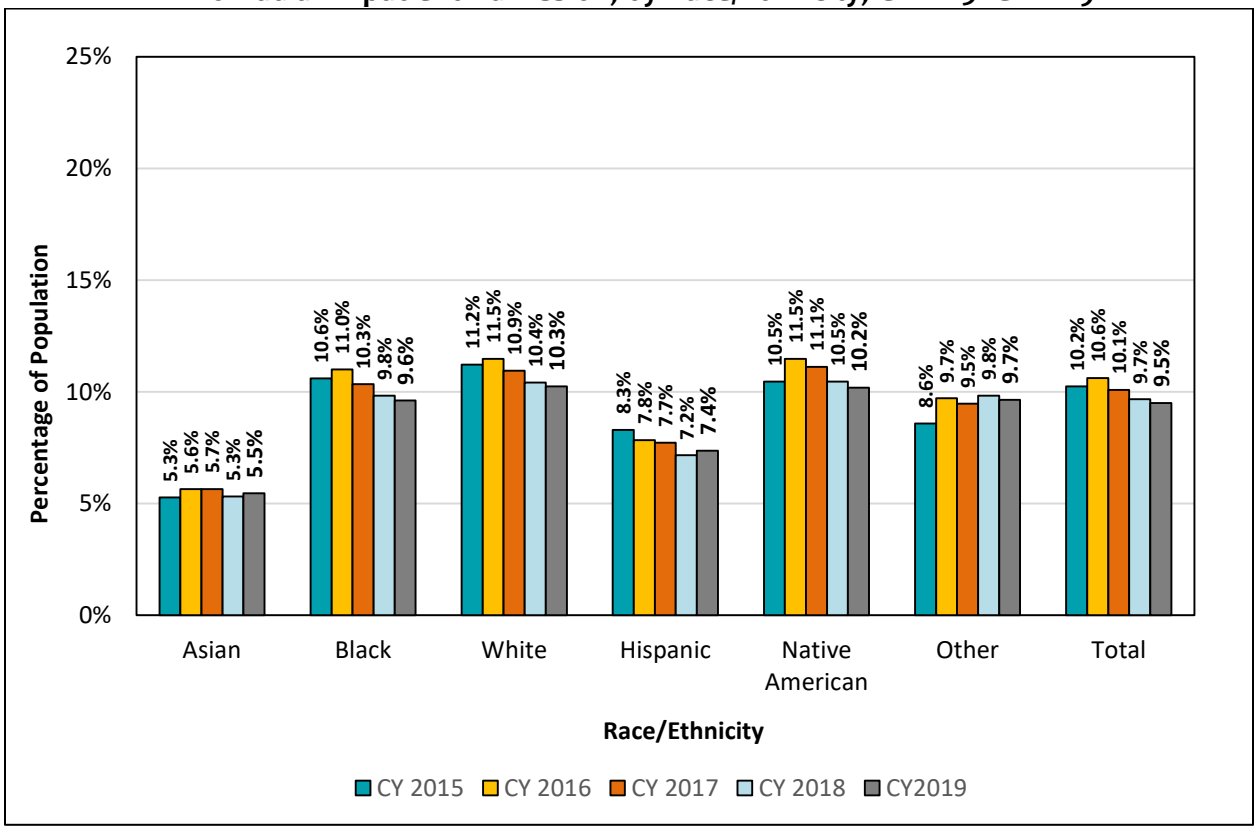
Figure 14. Percentage of HealthChoice Participants Aged 0–64 Years with an Outpatient ED Visit, by Race/Ethnicity, CY 2015 and CY 2019



Inpatient Admissions

Figure 15 presents the percentage of HealthChoice participants aged 18 to 64 years by race and ethnicity with an inpatient admission between CY 2015 and CY 2019. Each group's rate declined between CY 2015 and CY 2019 except for Asian participants and "Other/Unknown," which increased 0.2 and 1.1 percentage points, respectively.

Figure 15. Percentage of HealthChoice Participants Aged 18–64 Years Who Had an Inpatient Admission, by Race/Ethnicity, CY 2015–CY 2019



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 2015 and CY 2019. The ACA Medicaid expansion population consists of three different coverage groups:

1. Former PAC participants
2. Childless adults not previously enrolled in PAC[53]
3. Parents and caretaker relatives

[53] Though these individuals may have had prior enrollment in PAC, they were not enrolled in PAC as of December 2013. Only participants enrolled in PAC in December 2013 were automatically transferred into a Medicaid expansion coverage group.

This section presents demographic and service utilization measures for participants with any 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, resulting in reduced access to care until they become more familiar with accessing care through Medicaid.

ACA Medicaid Expansion Population Demographics

The Maryland Medicaid program enrolled 365,992 adults through the ACA Medicaid expansion with any period of enrollment in CY 2015. The number of participants who received coverage for at least one month in an ACA expansion coverage group increased to 391,784 in CY 2019.

Table 16 displays demographic characteristics of the expansion population for those with any period of enrollment in CY 2015 through CY 2019. Participants aged 19 to 34 years composed the largest portion of the ACA expansion population.

Table 16. ACA Medicaid Expansion Population Aged 19–64 Years, by Demographics and Any Enrollment Period, CY 2015–CY 2019

Demographic Characteristic	CY 2015		CY 2016		CY 2017		CY 2018		CY 2019	
	# of Participants	% of Total	# of Participants	% of Total	# of Participants	% of Total	# of Participants	% of Total	# of Participants	% of Total
Race/Ethnicity										
Asian	19,469	5.3%	18,270	5.1%	20,344	5.2%	20,980	5.3%	20,222	5.2%
Black	158,659	43.4%	152,532	42.9%	165,673	42.7%	170,306	42.9%	169,903	43.4%
White	130,211	35.6%	127,416	35.9%	135,107	34.8%	134,702	33.9%	130,104	33.2%
Hispanic	11,742	3.2%	11,683	3.3%	13,335	3.4%	14,028	3.5%	13,764	3.5%
Other	45,911	12.5%	45,370	12.8%	53,539	13.8%	57,387	14.4%	57,791	14.8%
Total	**365,992**	**100%**	**355,271**	**100%**	**387,998**	**100.0%**	**397,403**	**100%**	**391,784**	**100%**
Sex										
Female	176,731	48.3%	169,710	47.8%	182,629	47.1%	185,902	46.8%	182,264	46.5%
Male	189,261	51.7%	185,561	52.2%	205,369	52.9%	211,501	53.2%	209,520	53.5%
Total	**365,992**	**100%**	**355,271**	**100%**	**387,998**	**100.0%**	**397,403**	**100%**	**391,784**	**100%**
Region										
Baltimore City	75,295	20.6%	73,183	20.6%	78,355	20.2%	79,582	20.0%	78,669	20.1%
Baltimore Suburban	104,316	28.5%	103,563	29.2%	113,780	29.3%	116,984	29.4%	116,089	29.6%
Eastern Shore	34,867	9.5%	34,517	9.7%	37,115	9.6%	37,799	9.5%	36,896	9.4%
Southern Maryland	19,085	5.2%	18,783	5.3%	20,609	5.3%	21,173	5.3%	20,860	5.3%
Washington Suburban	103,187	28.2%	96,027	27.0%	106,174	27.4%	108,865	27.4%	106,443	27.2%
Western Maryland	28,530	7.8%	28,390	8.0%	31,090	8.0%	32,179	8.1%	32,144	8.2%
Out of State	712	0.2%	808	0.2%	875	0.2%	821	0.2%	683	0.2%

Demographic Characteristic	CY 2015		CY 2016		CY 2017		CY 2018		CY 2019	
	# of Participants	% of Total	# of Participants	% of Total	# of Participants	% of Total	# of Participants	% of Total	# of Participants	% of Total
Total	**365,992**	**100%**	**355,271**	**100%**	**387,998**	**100.0%**	**397,403**	**100%**	**391,784**	**100%**
Age Group (Years)										
19–34	157,449	43.0%	157,804	44.4%	177,340	45.7%	184,973	46.6%	184,408	47.1%
35–49	95,190	26.0%	87,520	24.6%	93,685	24.2%	96,276	24.2%	93,936	24.0%
50–64	113,353	31.0%	109,947	31.0%	116,973	30.2%	116,154	29.2%	113,440	29.0%
Total	**365,992**	**100%**	**355,271**	**100%**	**387,998**	**100.0%**	**397,403**	**100%**	**391,784**	**100%**
Member Months										
1	10,564	2.9%	17,097	4.8%	13,928	3.6%	12,270	3.1%	11,433	2.9%
2	10,207	2.8%	12,954	3.7%	12,460	3.2%	10,760	2.7%	11,095	2.8%
3	41,699	11.4%	9,951	2.8%	9,920	2.6%	10,761	2.7%	10,219	2.6%
4	20,537	5.6%	8,977	2.5%	9,103	2.4%	11,035	2.8%	9,689	2.5%
5	14,514	4.0%	9,139	2.6%	10,162	2.6%	13,062	3.3%	10,272	2.6%
6	12,976	3.6%	9,444	2.7%	9,603	2.5%	12,181	3.1%	9,696	2.5%
7	15,189	4.2%	10,062	2.8%	10,039	2.6%	10,645	2.7%	10,490	2.7%
8	15,505	4.2%	10,833	3.1%	10,603	2.7%	11,849	3.0%	11,631	3.0%
9	16,377	4.5%	11,610	3.3%	11,018	2.8%	11,632	2.9%	11,684	3.0%
10	14,477	4.0%	13,360	3.8%	12,474	3.2%	12,464	3.1%	12,966	3.3%
11	25,265	6.9%	19,167	5.4%	15,093	3.9%	16,228	4.1%	15,022	3.8%
12	168,682	46.1%	222,677	62.7%	263,595	67.9%	264,516	66.6%	267,587	68.3%
Total	**365,992**	**100%**	**355,271**	**100%**	**387,998**	**100.0%**	**397,403**	**100.0%**	**391,784**	**100%**

Table 17 displays demographic characteristics of the expansion population with a full 12 months of enrollment in CY 2015 through CY 2019. 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.

Table 17. ACA Medicaid Expansion Population Demographics for Participants Aged 19–64 Years, 12 Months of Enrollment, CY 2015–CY 2019

Demographic Characteristic	CY 2015		CY 2016		CY 2017		CY 2018		CY 2019	
	# of Participants	% of Total	# of Participants	% of Total	# of Participants	% of Total	# of Participants	% of Total	# of Participants	% of Total
Race/Ethnicity										
Asian	9,245	5.5%	11,764	5.3%	13,689	5.2%	13,757	5.2%	13,674	5.1%
Black	71,433	42.4%	96,225	43.2%	116,103	44.0%	116,955	44.2%	119,136	44.5%
White	65,172	38.6%	82,122	36.9%	93,301	35.4%	91,318	34.5%	90,680	33.9%
Hispanic	5,829	3.5%	7,723	3.5%	9,081	3.4%	9,222	3.5%	9,320	3.5%
Other	17,003	10.1%	24,843	11.2%	31,421	11.9%	33,264	12.6%	34,777	13.0%
Total	**168,682**	**100%**	**222,677**	**100%**	**263,595**	**100%**	**264,516**	**100%**	**267,587**	**100%**
Sex										
Female	90,271	53.5%	110,197	49.5%	125,907	47.8%	124,280	47.0%	124,508	46.5%
Male	78,411	46.5%	112,480	50.5%	137,688	52.2%	140,236	53.0%	143,079	53.5%
Total	**168,682**	**100%**	**222,677**	**100%**	**263,595**	**100%**	**264,516**	**100%**	**267,587**	**100%**
Region										
Baltimore City	35,615	21.1%	47,279	21.2%	56,187	21.3%	56,391	21.3%	56,616	21.2%
Baltimore Suburban	49,413	29.3%	64,706	29.1%	76,786	29.1%	77,767	29.4%	79,363	29.7%
Eastern Shore	17,707	10.5%	22,574	10.1%	25,896	9.8%	25,735	9.7%	25,501	9.5%
Southern Maryland	9,021	5.4%	11,920	5.4%	14,203	5.4%	14,117	5.3%	14,565	5.4%
Washington Suburban	42,572	25.2%	57,669	25.9%	68,901	26.1%	68,947	26.1%	69,766	26.1%
Western Maryland	14,089	8.4%	18,105	8.1%	21,093	8.0%	21,105	8.0%	21,357	8.0%
Out of State	265	0.2%	424	0.2%	529	0.2%	454	0.2%	419	0.2%
Total	**168,682**	**100%**	**222,677**	**100%**	**263,595**	**100%**	**264,516**	**100%**	**267,587**	**100%**
Age Group (Years)										
19–34	63,047	37.4%	94,136	42.3%	116,572	44.2%	118,398	44.8%	120,885	45.2%
35–49	46,217	27.4%	55,774	25.1%	65,267	24.8%	65,144	24.6%	65,438	24.5%
50–64	59,418	35.2%	72,767	32.7%	81,756	31.0%	80,974	30.6%	81,264	30.4%
Total	**168,682**	**100%**	**222,677**	**100%**	**263,595**	**100%**	**264,516**	**100%**	**267,587**	**100%**

ACA Medicaid Expansion Population Service Utilization

This section presents the health care utilization of participants who received Medicaid coverage through the ACA Medicaid expansion. Table 18 displays the number and percentage of participants with an ambulatory visit, outpatient ED visit, or inpatient admission in CY 2015 through CY 2019 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 compared to participants with any period of enrollment. Key findings from Table 18 include the following:

- In CY 2015, roughly 62% of ACA Medicaid expansion participants with any period of enrollment had an ambulatory care visit; the rate increased to roughly 68% in CY 2019. Visit rates decreased over the evaluation period for expansion participants enrolled for the entire year. Among those with 12 months of enrollment, 82.2% of participants in CY 2015 and 75.7% of participants in CY 2019 had an ambulatory care visit.
- In CY 2015, 30.1% of ACA Medicaid expansion participants with any period of enrollment had an outpatient ED visit. This rate increased to 38.9% for those enrolled for the entire year. ED Visit rates remained stable during the evaluation period, at roughly 30% for participants with any period of enrollment. The rates for participants with 12 months of enrollment decreased from 38.9 in CY 2015 to 33.5 in CY 2019.
- Overall, 8.5% of ACA Medicaid expansion participants with any period of enrollment had an inpatient admission in CY 2015, decreasing to 8.2% in CY 2019. Participants who were enrolled for the entire year experienced a higher rate of inpatient admissions; their rates were 11.3% in CY 2014 and 8.5% in CY 2019.

Table 18. Service Utilization of ACA Medicaid Expansion Population Aged 19–64 Years, by Enrollment Period, CY 2015–CY 2019

Enrollment Period	CY 2015			CY 2016			CY 2017			CY 2018			CY 2019		
	# 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	225,794	365,992	61.7%	236,729	355,271	66.6%	257,280	387,998	66.3%	264,710*	397,403	66.6%	267,294	391,784	68.2%
12 Months	138,728	168,682	82.2%	172,901	222,677	77.7%	197,885	263,595	75.1%	200,499	264,516	75.8%	202,589	267,587	75.7%
Outpatient ED Visits															
Any	110,071	365,992	30.1%	114,624	355,271	32.3%	120,342	387,998	31.0%	116,393*	397,403	29.3%	117,383	391,784	30.0%
12 Months	65,587	168,682	38.9%	82,894	222,677	37.2%	93,130	263,595	35.3%	88,507	264,516	33.5%	89,555	267,587	33.5%
Inpatient Admissions															
Any	31,087	365,992	8.5%	32,622	355,271	9.2%	34,303	387,998	8.8%	33,421	397,403	8.4%	31,941	391,784	8.2%
12 Months	19,088	168,682	11.3%	22,670	222,677	10.2%	25,203	263,595	9.6%	24,248	264,516	9.2%	22,876	267,587	8.5%

*The number of users reported for CY 2018 any enrollment period for ambulatory care and outpatient ED visits were 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 presents the rates of behavioral health diagnoses among ACA expansion participants. Table 19 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 2015 through CY 2019.

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 than participants with any period of enrollment. However, the difference narrows across the evaluation period for all participant groups. For participants with an MHD-only, the difference between participants who were enrolled for a 12-month period and participants who were enrolled for any period decreased by 2.5 percentage points from CY 2015 to CY 2019. The percentage of participants with any period of enrollment and an MHD-only increased slightly (by 1.7 percentage points) across the evaluation period. The percentage of participants with any period of enrollment and an SUD was 5.9% in CY 2015 and 6.8% in CY 2019. The percentage of participants with any period of enrollment and a dual diagnosis also increased by 1.4 percentage points.

Table 19. Behavioral Health Diagnosis of ACA Medicaid Expansion Population Aged 19–64 Years, by Enrollment Period, CY 2015–CY 2019

Enrollment Period	CY 2015			CY 2016			CY 2017			CY 2018			CY 2019		
	# 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	35,123	365,992	9.6%	37,637	355,271	10.6%	40,635	387,998	10.5%	42,558	397,403	10.7%	44,184	391,784	11.3%
12 Months	22,559	168,682	13.4%	27,742	222,677	12.5%	31,291	263,595	11.9%	32,129	264,516	12.2%	33,509	267,587	12.5%
SUD-Only															
Any Period	21,529	365,992	5.9%	23,739	355,271	6.7%	26,450	387,998	6.8%	27,258	397,403	6.9%	26,745	391,784	6.8%
12 Months	12,518	168,682	7.4%	16,717	222,677	7.5%	20,400	263,595	7.7%	20,818	264,516	7.9%	20,496	267,587	7.7%
Dual Diagnosis (MHD and SUD)															
Any Period	15,899	365,992	4.3%	18,100	355,271	5.1%	19,815	387,998	5.1%	20,719	397,403	5.2%	22,213	391,784	5.7%
12 Months	11,252	168,682	6.7%	14,501	222,677	6.5%	16,545	263,595	6.3%	17,159	264,516	6.5%	18,185	267,587	6.8%
No Behavioral Health Diagnosis															
Any Period	293,441	365,992	80.2%	275,795	355,271	77.6%	301,098	387,998	77.6%	90,535	397,403	77.2%	298,642	391,784	76.2%
12 Months	122,353	168,682	72.5%	163,717	222,677	73.5%	195,359	263,595	74.1%	194,410	264,516	73.5%	195,397	267,587	73.0%

Section III Conclusion

During CY 2019, HealthChoice maintained access to primary care for its members, with each county containing sufficient PCPs to outperform the benchmark ratio of 200 patients per practice. Specialty care access continued as a focus for HealthChoice in MCO contracting requirements. Between CY 2015 and CY 2019, managed care enrollment remained consistently above 86.0%, increasing each year with the highest rate of 89.9% in CY 2019. Across a wide variety of measures, HealthChoice utilization trends were largely consistent with program goals. The percentage of HealthChoice participants who received ambulatory care increased from CY 2015 to CY 2019. Outpatient ED visits and inpatient admissions generally declined over the evaluation period.

HealthChoice is prioritizing 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 increased and utilization of the ED and inpatient admissions for this population decreased. However, the outpatient ED visits and inpatient admissions were higher for children in foster care than for children not in foster care in CY 2019. The percentage of REM participants with a dental visit during the evaluation period also increased, while utilization of the ED and inpatient admissions for this population decreased.

Section IV. Quality of Care

Value-Based Purchasing Program

The Center for Health Care Strategies helped the Department develop a value-based purchasing (VBP) initiative for HealthChoice beginning in 1999. VBP pays incentives to MCOs that demonstrate high-quality care, increased access, and administrative efficiency by using standardized measures of performance on population health goals.

VBP measures may change according to the Department'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. VBP strives for consistency with CMS's national performance measures for Medicaid and should reflect areas that are possible for MCOs to affect change. Measures included in the CY 2019 VBP program (see Table 20) are chosen from National Committee for Quality Assurance's (NCQA's) Healthcare Effectiveness Data and Information Set (HEDIS®), using encounter data and data supplied by the HealthChoice MCOs and subsequently validated by the Department's external quality review organization (EQRO) and HEDIS® auditor. Changes in the components of the VBP program may result in changes in plan performance with respect to that measure. Therefore, decisions to make changes to the list of VBP measures are taken with due consideration by the Department. Moreover, the measures are applied to MCOs without adjustments for differing risks in the populations each serves. This has the effect of assuming that each MCO's VBP performance is not affected by differences among an MCO's enrollees.

Table 20. Value-Based Purchasing Measures and Averages across All MCOs,* CY 2019

Value-Based Purchasing Measures	Average Percentage Goal Achieved
Adolescent Well-Care Visits	70%
Ambulatory Care Visits for SSI Adults	85%
Ambulatory Care Visits for SSI Children	85%
Breast Cancer Screening	72%
Comprehensive Diabetes Care - Hba1c testing	59%
Lead Screenings for Children - Ages 12–23 months	68%
Controlling High Blood Pressure	65%
Asthma Medication Ratio	69%
Well-Child Visits for Children - Ages 3–6	73%

*Aetna started reporting Maryland Medicaid data in CY 2018. However, due to continuous enrollment criteria, Aetna's data were not included in the analysis.

Per regulation,[54] the Department sets aside 1% of MCO revenue to generate financial incentives and disincentives to promote performance improvement. Using data on the listed measures collected from the MCOs, the Department identified three levels of performance: incentive, neutral, and disincentive. Each measure is accorded equal weight. Total incentive payments may not exceed the total amount of disincentives collected in the same year, plus any additional funds allocated by the Department for a quality initiative.

Figure 16 indicates how many measures met the incentives and disincentives for each MCO, and those with neutral performances on the VBP measures from CY 2015 to CY 2019. Between CY 2015 and CY 2018, MCOs were scored on 13 measures. Beginning in CY 2019, the measures were consolidated to 9. The individual MCOs' measures show mixed results; some MCOs tend to have consistently high or low performance, while some experienced increases in the number of their disincentive penalties, indicated in orange on the chart. Because the incentive and disincentive levels are based on the average of all plans' performance, when plans improve their measures across the board, they increase the standard for earning incentive payments and losing disincentives. Therefore, a decrease in the number of plans earning incentives may reflect the rising standards for care in HealthChoice as a whole. Since HealthChoice typically exceeds the National HEDIS® mean on most measures, VBP targets are usually higher than the national means.

[54] COMAR 10.67.04.03.

Figure 16. Count of VBP Incentives and Disincentives by MCO,* CY 2015–CY 2019

*ABH: Aetna Better Health; ACC: AMERIGROUP Community Care; JMS: Jai Medical Systems; KPMAS: Kaiser Permanente of the Mid-Atlantic States; MPC: Maryland Physicians Care; MSFC: MedStar Family Choice; PP: Priority Partners; UHC: UnitedHealthcare; UMHP: University of Maryland Health Partners. Complete data were not available for KP in 2015, UMHP in 2016, and ABH in 2019.

In early 2021, the Department requested that Hilltop develop new methodology for the VPB program. This model would move the program to an incentive only model. The overall goal remained the same: allocate financial incentives annually to HealthChoice MCOs that demonstrate high-quality care based on standardized measures of performance.

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. 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 the Department and MCOs.

EPSDT (Healthy Kids) Review

Federal regulations[55] 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 and increase the availability of quality health care. The Department has a 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 with their provider networks age-appropriate encounter forms, risk assessment forms, and questionnaires 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 2015 and CY 2019, provider compliance remained stable or decreased for the five EPSDT components (Table 21).[56] The HealthChoice aggregate total score increased between CY 2015 and CY 2018, however there was a decrease in CY 2019, resulting in an overall decline in performance during the evaluation period (Qlarant, 2021). The Department achieved the minimum compliance score of 80% for all components for CY 2015 and maintained it through CY 2019, with the exception of two components that are baseline results because of the change in the MRR process due to the COVID-19 public health emergency. MCOs use the Healthy Kids review results to develop education efforts to inform participants and providers about EPSDT services.

Table 21. HealthChoice MCO Aggregate Composite Scores for Components of the EPSDT/Healthy Kids Review, CY 2015–CY 2019

EPSDT Component	CY 2015	CY 2016	CY 2017	CY 2018	CY 2019
Health and Developmental History	92%	92%	92%	94%	88%
Comprehensive Physical Exam	93%	96%	96%	97%	93%
Laboratory Tests/At-Risk Screenings	78%	85%	82%	87%	66%*
Immunizations	84%	85%	90%	93%	71%*
Health Education/Anticipatory Guidance	92%	95%	94%	94%	92%

[55] 42 CFR § 440.345.

[56] Please read CY 2019 data with caution as two of the components—Laboratory Tests/At-Risk Screenings and Immunizations—are baseline results because of the change in the MRR process due to the COVID-19 public health emergency.

EPSDT Component	CY 2015	CY 2016	CY 2017	CY 2018	CY 2019
HealthChoice Aggregate Total	**89%**	**91%**	**92%**	**94%**	**83%**

***** CY 2019 results are baseline as a result of the change in the MRR process due to the COVID-19 public health emergency. Scores are below the 80% minimum compliance requirement.

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, the VBP program incentivizes MCOs to maintain and improve performance by adjusting a portion of their payments according to their scores on measures of clinical outcomes and care delivery defined in advance. Performance by all of the MCOs sets standards by which each MCO is evaluated, and those MCOs that exceed a performance threshold receive enhance incentive payments. MCOs, whose performance is less than the standard, receive disincentive payments. Although MCOs may vary with respect to which measures earn incentive payments and which create disincentive penalties, the VBP program overall supports quality improvement across the HealthChoice population.

Second, the EPSDT annual review assesses plan performance on services to children under age 21. Because EPSDT services are a national requirement for Medicaid, and the EPSDT review measures whether all HealthChoice plans achieve minimum levels of performance in delivering EPSDT, results from the most recent review show the plans meeting or exceeding standards across the board in CY 2015 through CY 2018. In CY 2019, MCOs did not attain the minimum compliance requirement for two measures, however these results should be interpreted with caution as changes to measures were implemented due to the COVID-19 public health emergency.

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, and 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 appropriate care settings 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. HealthChoice participants 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. Understanding the resources available to them, participants should 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, the Department began collecting information from MCOs on HealthChoice participants' PCP assignment, as well as information on the PCPs within a group practice. This information helps the Department track whether participants visited their assigned PCPs or whether they are using other providers to oversee their medical care and provide a medical home.

Table 22 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 2016 to CY 2019. 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 except Kaiser, MedStar, and Priority Partners experienced declines in the proportions of their HealthChoice participants with at least one visit to their assigned PCP. All MCOs experienced increases in the proportion of their participants with at least one visit to any PCP within the MCO network. In CY 2019, excluding Aetna and Jai, the proportion of continuously enrolled participants who had at least one visit with their assigned PCP ranged from 24.9% (Priority Partners) to 63.8% (Kaiser). When the medical home was defined to include all PCPs within the MCO network, all the MCOs except for Aetna saw that over 70% of their participants had a visit to any PCP within their provider network.

Table 22. Percentage of HealthChoice Participants (12 Months of Enrollment) with a PCP Visit, by MCO,* CY 2016–CY 2019

MCO	# of Participants[1] (12 Months of Enrollment)	% of Participants with a Visit with 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 2016				
Amerigroup	172,839	48.3%	65.7%	75.5%
Jai Medical Systems	15,056	38.9%	68.2%	77.5%
Kaiser	18,449	63.0%	67.2%	67.7%

MCO	# of Participants[1] (12 Months of Enrollment)	% of Participants with a Visit with 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
Maryland Physicians Care	129,463	38.1%	60.4%	71.6%
MedStar	44,200	25.1%	32.4%	69.3%
Priority Partners**	172,615	8.4%	8.5%	68.8%
UnitedHealthcare	119,968	46.3%	62.0%	74.9%
University of MD Health Partners	18,875	33.0%	50.3%	62.7%
Total	**691,465**	**34.4%**	**47.3%**	**72.1%**
CY 2017				
Amerigroup	212,537	47.2%	66.4%	74.6%
Jai Medical Systems	19,502	31.6%	64.4%	73.8%
Kaiser	38,888	57.6%	63.0%	63.5%
Maryland Physicians Care	163,805	36.1%	58.7%	69.0%
MedStar	60,897	32.9%	49.0%	67.7%
Priority Partners	220,219	22.8%	25.0%	67.5%
UnitedHealthcare	120,463	44.9%	60.6%	73.5%
University of MD Health Partners	26,709	30.4%	47.0%	60.5%
Total	**863,078**	**37.1%**	**51.5%**	**70.1%**
CY 2018				
Aetna***	1,504	0.7%	1.3%	4.7%
Amerigroup	214,350	46.3%	66.2%	83.4%
Jai Medical Systems******	20,148	****	56.5%	79.5%
Kaiser	44,640	62.3%	67.5%	72.0%
Maryland Physicians Care	164,748	35.8%	56.9%	76.8%
MedStar	65,480	35.5%	54.7%	74.4%
Priority Partners	227,405	23.2%	25.4%	79.5%
UnitedHealthcare	114,013	41.8%	55.5%	76.5%
University of MD Health Partners	30,257	31.2%	47.3%	71.4%
Total	**882,545**	**30.9%**	**47.9%**	**68.7%**
CY 2019				
Aetna***	10,391	0.5%	1.0%	2.7%
Amerigroup	217,501	45.1%	70.1%	82.8%
Jai Medical Systems******	21,530	****	60.7%	78.6%
Kaiser	46,402	63.8%	73.0%	76.0%
Maryland Physicians Care	167,221	35.2%	59.7%	77.3%
MedStar	68,440	30.2%	54.6%	75.6%
Priority Partners	234,761	24.9%	28.0%	80.7%
UnitedHealthcare	112,879	39.8%	55.9%	79.7%
University of MD Health Partners	32,527	28.4%	47.9%	70.7%
Total	**911,652**	**35.1%**	**52.8%**	**78.5%**

*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.
**Please read Priority Partners' results with caution as our analysis relied heavily on National Provider Identifiers (NPIs), and Priority's files had missing NPIs.
***Aetna had no participants who were enrolled in CY 2017 for 12 months. Aetna started reporting Maryland Medicaid data in CY 2018.
****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.

Table 23 shows the proportion of participants who received at least one ambulatory care visit by MCO in CY 2015 and CY 2019. The total number of participants enrolled in HealthChoice grew by 5.6% between CY 2015 and CY 2019, while the proportion receiving an ambulatory care visit grew by 9.6%. There was considerable variation in this measure among MCOs. Four out of eight MCOs operating in CY 2015 and four out of nine MCOs in CY 2019 had at least 75% of participants completing an ambulatory care visit in both years.

Table 23. Percentage of HealthChoice Participants Aged 0–64 Years Who Had an Ambulatory Care Visit, by MCO, CY 2015 and CY 2019

MCO*	CY 2015			CY 2019		
	Total Participants	# with Ambulatory Care Visit	% with Ambulatory Care Visit	Total Participants	# with Ambulatory Care Visit	% with Ambulatory Care Visit
Aetna	N/A**			36,226	21,799	60.2%
Amerigroup	321,851	255,452	79.4%	313,254	258,502	82.5%
Jai Medical Systems	29,692	20,373	68.6%	30,412	22,691	74.6%
Kaiser	37,587	25,216	67.1%	83,727	62,520	74.7%
Maryland Physicians Care	243,050	184,796	76.0%	242,928	192,084	79.1%
MedStar	91,474	63,350	69.3%	105,911	79,292	74.9%
Priority Partners	302,930	242,898	80.2%	341,545	281,112	82.3%
UnitedHealthcare	236,759	178,375	75.3%	167,542	131,320	78.4%
University of Maryland Health Partners	40,554	22,357	55.1%	55,948	38,707	69.2%
ALL MCOs	**1,303,897**	**992,817**	**76.1%**	**1,377,493**	**1,088,027**	**79.0%**

*It is important to consider that the data contained have not been risk-adjusted, meaning that they do not account for variances in risk profiles across MCOs.
**N/A = not applicable (i.e., the MCO did not participate in HealthChoice during the given year).

Table 24 displays the ED utilization of HealthChoice participants aged 0 to 64 years by MCO during CY 2015 and CY 2019. There were eight MCOs actively participating in HealthChoice in CY 2015 and nine in CY 2019. Between CY 2015 and CY 2019, all but two MCOs experienced a decrease in the percentage of participants with an ED visit; Medstar and the University of Maryland Health Partners experienced an increase in ED use by 0.4 and 4.3 percentage points, respectively. In CY 2015 at least 30% of participants in three of the eight MCOs (Jai, Maryland

Physicians Care, and Priority Partners) used ED services. By CY 2019, the same three MCOs were the only ones that had an ED utilization rate greater than 30%.

Table 24. Percentage of HealthChoice Participants Aged 0–64 Years Who Had an Outpatient ED Visit, by MCO, CY 2015 and CY 2019*

MCO*	CY 2015			CY 2019		
	Total Participants	# with ED Visit	% with ED Visit	Total Participants	# with ED Visit	% with ED Visit
Aetna	N/A**			36,226	8,505	23.5%
Amerigroup	321,851	95,858	29.8%	313,254	80,324	25.6%
Jai Medical Systems	29,692	11,491	38.7%	30,412	10,910	35.9%
Kaiser	37,587	6,266	16.7%	83,727	11,616	13.9%
Maryland Physicians Care	243,050	82,264	33.8%	242,928	75,361	31.0%
MedStar	91,474	26,186	28.6%	105,911	30,714	29.0%
Priority Partners	302,930	95,798	31.6%	341,545	103,013	30.2%
UnitedHealthcare	236,759	69,340	29.3%	167,542	45,860	27.4%
University of Maryland Health Partners	40,554	9,687	23.9%	55,948	15,762	28.2%
ALL MCOs	**1,303,897**	**396,890**	**30.4%**	**1,377,493**	**382,065**	**27.7%**

*It is important to consider that the data contained have not been risk-adjusted, meaning that they do not account for variances in risk profiles across MCOs.
**N/A = not applicable (i.e., the MCO did not participate in HealthChoice during the given year).

Appropriateness of ED Care

A fundamental goal of managed care programs such as 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 years 2001 through 2014 (Johnston et al., 2017). Hilltop has not yet applied this update for classifying ED visits. 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).

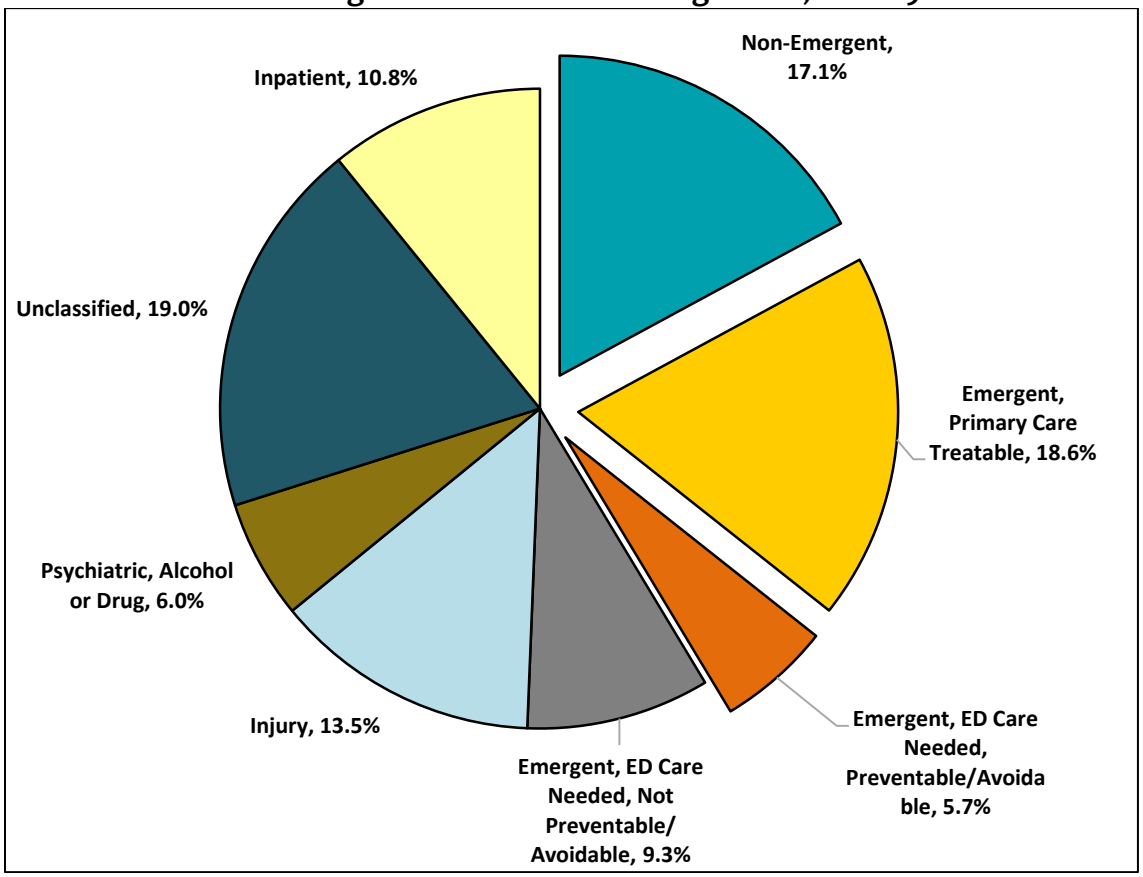
4. *Emergent, ED care needed, not preventable/avoidable*: Ambulatory care could not have prevented the condition (e.g., trauma or appendicitis).
5. *Injury*: Injury was the principal diagnosis.
6. *Alcohol-related*: The principal diagnosis was related to alcohol.
7. *Drug-related*: The principal diagnosis 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 17 presents the distribution of all CY 2019 ED visits by NYU classification for individuals with any period of HealthChoice enrollment. In CY 2019, 41.4% 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 22.7% of all ED visits in CY 2019.

Adults aged 40 through 64 years had more ED visits related to category 4 (emergent, ED care needed, not preventable/avoidable), than all other age groups; children aged 3 through 18 years had more category 5 (injury) ED visits than other age groups.[57] The inpatient category in Figure 17, which is not a part of the NYU classification, represents ED visits that resulted in a hospital admission. As would be expected, participants with disabilities had a much higher rate of ED visits that led to an inpatient admission than participants in the F&C (families, children, and pregnant women) and MCHP coverage groups.

[57] Data not presented.

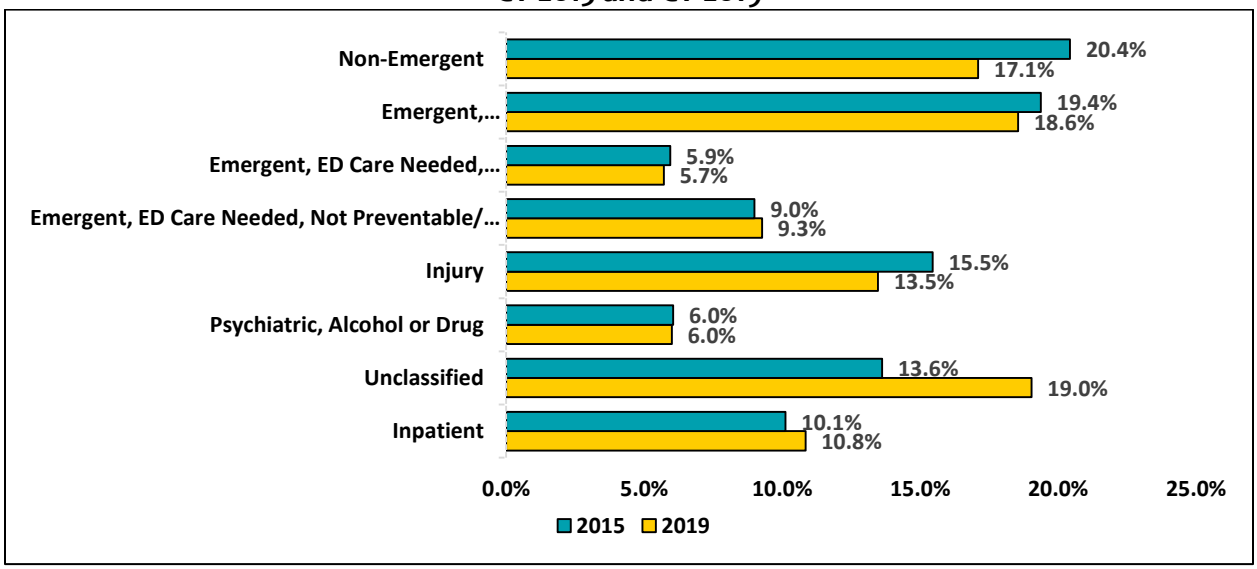
Figure 17. ED Visits by HealthChoice Participants Classified According to NYU Avoidable ED Algorithm, CY 2019



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 18 compares the ED visit classifications for CY 2015 with the classifications for CY 2019. The data show that potentially avoidable ED visits decreased during the evaluation period: from 45.7% of all ED visits in CY 2015 to 41.4% in CY 2019. To maintain this trend, the Department will continue to monitor ED use with the goal of reducing potentially avoidable ED visits. ED visits for psychiatric-, alcohol-, or drug-related reasons remained stable at 6% in CY 2015 and CY 2019. These visits decreased slightly (by .7 percentage points) from CY 2018.[58] This is in line with the trends of ED visits for non-fatal overdoses for Maryland. Between February 2019 and February 2020, the overall rate of overdoses per 10,000 ED visits in Maryland had no significant change and while many states had significant increases (CDC, 2021).

Figure 18. Classification of ED Visits, by HealthChoice Participants, CY 2015 and CY 2019



Preventable or Avoidable Admissions

Ambulatory care sensitive hospitalizations (ACSHs), 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. The Department monitors potentially avoidable admissions using AHRQ's Prevention Quality Indicators (PQIs) methodology. 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:[59]

[58] Data not shown.

[59] The measure estimation logic has been updated using AHRQ PQI Version 2020. Please note that PQI #2, PQI #10,

- 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
- 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[60]: Prevention Quality Overall Composite
- PQI #91[61]: Prevention Quality Acute Composite
- PQI #92[62]: Prevention Quality Chronic 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 them for a PQI designation.

Table 25 presents the number of potentially avoidable inpatient admissions per 100,000 HealthChoice participants aged 18 to 64 years during CY 2015 through CY 2019. COPD or asthma in older adults (PQI #5) was responsible for the highest number of potentially avoidable admissions throughout the evaluation period. The number of potentially avoidable admissions for lower-extremity amputation in patients with diabetes (PQI #16) was the smallest across the evaluation period.

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and PQI #13 have been retired and removed from PQI composites. In addition, the code list for PQI #14 has been modified sufficiently as to change the numerator. A full description of the methodological revisions is available here: https://www.qualityindicators.ahrq.gov/Downloads/Modules/PQI/V2020/ChangeLog_PQI_v2020.pdf.

[60] PQI #90 includes PQI #s 1, 3, 5, 7, 8, 10, 11, 12, 14, 15, and 16.

[61] PQI #91 includes PQI #s 11 and 12.

[62] PQI #92 includes PQI #s 1, 3, 5, 7, 8, 14, 15, and 16.

Table 25. Number of Potentially Avoidable Admissions per 100,000 HealthChoice Participants Aged 18–64 Years (Any Period of Enrollment), CY 2015–CY 2019[63]

Any PQI #	CY 2015	CY 2016	CY 2017	CY 2018	CY 2019
1: Diabetes Short-Term Complications Admissions[64]	166	134	147	200	206
3: Diabetes Long-Term Complications Admissions	129	118	139	133	148
5: COPD or Asthma in Older Adults Admissions (Ages 40-64)	713	731	805	721	639
7: Hypertension Admissions	58	61	86	81	76
8: Congestive Heart Failure Admissions	230	225	221	236	241
11: Bacterial Pneumonia Admissions	159	177	126	127	121
12: Urinary Tract Infection Admissions	95	90	87	69	73
14: Uncontrolled Diabetes Admissions*	18	50	47	37	41
15: Asthma in Younger Adults Admissions (Ages 18-39)	94	85	85	73	82
16: Lower-Extremity Amputation in Patients with Diabetes	15	20	23	29	34
90: Prevention Quality Overall Composite*	**1,290**	**1,202**	**1,224**	**1,224**	**1,214**
91: Prevention Quality Acute Composite*	**344**	**267**	**213**	**198**	**194**
92: Prevention Quality Chronic Composite	**946**	**935**	**1,012**	**1,026**	**1,019**

*The measure preparation logic for PQI #14 was revised, and changes were applied to all years in the measurement period. PQI #2 and PQI #10 have been retired; changes in the overall and acute composites were applied to all years.

Table 26 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 0.9% in CY 2014 to 0.8% in CY 2019. During the same period, the percentage of participants with at least one inpatient admission initially increased from 7.9% in CY 2015 to 8.3% in CY 2016, then decreased through the remaining years to 7.8% in CY 2019. Among HealthChoice adults with an inpatient admission, the percentage of participants with a PQI-designated admission decreased from 11.7% in CY 2015 to 10.2% in CY 2019.

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

Table 26. Potentially-Avoidable Admission Rates, Participants Aged 18–64 Years (Any Period of Enrollment), with ≥1 Inpatient Admission, CY 2013–CY 2017

Calendar Year	# of Participants in HealthChoice	# of Participants with ≥1 Admissions	% of Participants with ≥1 Admission	# of Participants with Any PQI	% of Participants with Any PQI	% of Participants With ≥1 Admission that had a PQI
2015	687,624	54,582	7.9%	6,368	0.9%	11.7%
2016	675,320	56,358	8.3%	5,769	0.9%	10.2%
2017	724,666	59,320	8.2%	6,022	0.8%	10.2%
2018	748,161	58,397	7.8%	6,092	0.8%	10.4%
2019	735,007	57,606	7.8%	5,848	0.8%	10.2%

*This measure includes only MCO inpatient admissions.

Section V Conclusion

Over the course of the evaluation period, the percentage of participants who saw their assigned PCPs only increased for Kaiser, MedStar, and Priority Partners.[65] However, the overall percentage of participants who saw any PCP in their MCOs' network increased. When the medical home was defined to include all PCPs within the MCO network, all the MCOs except for Aetna saw that over 70% of their participants had a visit in CY 2018 and CY 2019 to any PCP within their provider network. Avoidable ED use declined between CY 2015 and CY 2019. However, the proportion of inpatient admissions with a PQI increased slightly over the evaluation period. The Department will continue to monitor this trend to ensure that PQI results are consistent with the continuing use of medical homes to provide preventive care.

[65] Aetna started reporting Maryland Medicaid data in CY 2018. Jai did not report CY 2018 and CY 2019 data.

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 related adverse outcomes. For example, such as prenatal care and low birthweight, and antidepressant medication adherence and depression related ED visits. These preventive and chronic disease care measures align with Maryland's SIHIS.

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

The Department uses HEDIS® measures to report childhood immunization status and well-child visit rates. Table 27 presents the immunization and well-child measures for the HealthChoice population. HealthChoice performed above the national HEDIS® mean across all measures from CY 2015 through CY 2019. Childhood Immunization Combination 3, well-child visits for three- to six-year-olds, and well-care visits for adolescents are part of the VBP program.

Table 27. HEDIS® Immunizations and Well-Child Visits: HealthChoice Compared with the National HEDIS® Mean, CY 2015–CY 2019*

HEDIS® Measure	CY 2015	CY 2016	CY 2017	CY 2018	CY 2019
Childhood Immunization Status: Combination 2					
HealthChoice	83.8%	82.2%	78.0%	79.7%	77.9%
National HEDIS® Mean	+	+	+	+	+
Childhood Immunization Status: Combination 3					
HealthChoice	82.1%	80.1%	75.9%	77.4%	75.4%
National HEDIS® Mean	+	+	+	+	+
Well-Child Visits: 15 Months of Life					
HealthChoice	81.8%	82.2%	84.7%	83.6%	84.9%

National HEDIS® Mean	+	+	+	+	+
Well-Child Visits: 3- to 6-year-olds					
HealthChoice	82.7%	81.3%	81.1%	80.1%	81.8%
National HEDIS® Mean	+	+	+	+	+
Well-Care Visits: Adolescents					
HealthChoice	65.6%	64.6%	64.2%	61.6%	64.4%
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.

Childhood Lead Testing

The Department 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. The Department'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. The Department 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.

The Department provides each MCO with monthly reports on children who received blood lead tests and those found to have elevated blood lead levels to ensure that these children receive appropriate follow-up, which can include case management services and home environmental lead testing. In addition to complying with the EPSDT mandate for blood lead testing, the Department also includes blood lead testing measures in several of its quality assurance activities, including the VBP and MFR programs (Maryland Department of Health, n.d.a).[66]

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. Table 28 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 rates of lead testing for both age groups increased over the five-year evaluation period.

[66] 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 28. 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 2015–CY 2019

Age Group (Months)	CY 2015	CY 2016	CY 2017	CY 2018	CY 2019
12–23	60.7%	60.7%	62.7%	62.2%	62.4%
24–35	77.6%	78.3%	80.4%	80.8%	81.5%

HPV Vaccine for Adolescents

The Department has increased efforts to vaccinate adolescents against human papillomavirus (HPV). According to the CDC (2015a), about 14 million people, including teens, are infected with HPV each year, posing a significant public health risk. The CDC (2016) 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, 2015b).

Administering widespread vaccinations for HPV will potentially reduce the number of cervical cancer cases drastically. In 2014, for the first time, the HEDIS® HPV vaccination measure assessed the percentage of 13-year-old females who received three doses of the HPV vaccine by their 13th birthday.[67] Beginning in CY 2016, HPV was added as a component of the measure of immunization for adolescents rather than as a standalone measure and included both females and males. In alignment with the recommendations from the CDC, the measure was updated in CY 2017 to reduce the requirement from three doses of the HPV vaccine to two doses.

In CY 2015, 22.7% of adolescents (females and males[68]) received two HPV vaccine doses between their 9th and 13th birthdays (Table 29). In CY 2019, that rate increased to 34.8%; an increase of 12.1 percentage points. The Federal Advisory Committee on Immunization Practices (ACIP) recommends vaccination for adolescents, but it is not a requirement. All ACIP-recommended vaccines are provided at no cost to the state by the federal government.

Table 29. HPV Vaccination Rates, 13-Year-Old Medicaid Participants, CY 2015–CY 2019

Calendar Year	Medicaid Enrollees who Turned 13 Years Old	Two HPV Vaccine Doses between Their 9th and 13th Birthdays	
	Number	Number	Percentage
2015	28,329	6,443	22.7%

[67] The HPV vaccine is recommended for both males and females, although the HEDIS measure focused exclusively on females until CY 2016. Other state initiatives, including Healthy People 2020, track vaccination for both males and females at an older age, from 13 to 15 years of age.

[68] The HEDIS measure used as a basis for this measure was updated in CY 2016 to include both females and male participants and was updated in CY 2017 to allow for two rather than three vaccinations. The measure was revised, and changes were applied to all years in the measurement period. The minimum amount of time between the two doses of the vaccine has been corrected to at least 146 days apart.

2016	27,579	7,763	28.1%
2017	29,683	9,288	31.3%
2018	31,194	10,504	33.7%
2019	34,030	11,850	34.8%

Breast Cancer Screening

Breast cancer is the most prevalent type of cancer among women (U.S. Cancer Statistics Working Group, 2019). In Maryland, the breast cancer incidence rate was 131.1 cases per 100,000 women, compared to the 125.1 cases per 100,000 women nationally (U.S. Cancer Statistics Working Group, 2019). When detected early, breast cancer is easier to treat, and women have a greater chance of survival (CDC, 2014). Mammograms are the most effective technique for early detection of breast cancer.

Table 30 demonstrates a .6 percentage point increase in the percentage of female HealthChoice participants who received a mammogram for breast cancer screening from CY 2015 to CY 2019 (MetaStar, Inc., 2020). Maryland performed above the national HEDIS® mean for the entire evaluation period.

Table 30. Percentage of Women in HealthChoice Aged 50–64 Years Who Had a Mammogram for Breast Cancer Screening, Compared with the National HEDIS® Mean, CY 2015–CY 2019*

	CY 2015	CY 2016	CY 2017	CY 2018	CY 2019
Maryland Percentage	70.0%	69.8%	69.7%	69.3%	70.6%
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 HealthChoice averages in CYs 2015 and 2017 were influenced by the inclusion of HEDIS® rates from newer MCOs.

**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 recommends cervical cancer screenings for women starting at age 21 (CDC, n.d.b). According to the National Cancer Institute (NCI) (n.d.), 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 31 presents the percentage of women aged 21 to 64 years in HealthChoice who received a cervical cancer screening in CY 2015 through CY 2019. Despite a decrease of 1.3 percentage points, HealthChoice performed above the national HEDIS® mean throughout the evaluation period.

Table 31. Percentage of Women in HealthChoice Aged 21–64 Years Who Had a Cervical Cancer Screening, Compared with the National HEDIS® Mean, CY 2015–CY 2019*

	CY 2015	CY 2016	CY 2017	CY 2018	CY 2019
Maryland Percentage	65.1%	64.9%	62.4%	62.2%	63.8%
National HEDIS® Mean**	+	+	+	+	+

*HealthChoice averages in CYs 2015 and 2017 were influenced by the inclusion of HEDIS® rates from newer MCOs.
**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 (2019), 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 2017. 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). Between 2008 and 2012, colorectal cancer was the third-leading cause of cancer mortality in Maryland; between 2013 and 2017, it dropped to the fourth-leading cause of mortality (U.S. Cancer Statistics Working Group, 2019). 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 32 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.[69] The colorectal cancer screening rate increased by 6.5 percentage points between CY 2015 and CY 2019.

Table 32. Percentage of HealthChoice Participants Aged 50–64 Years Who Had a Colorectal Cancer Screening, CY 2015–CY 2019

	CY 2015	CY 2016	CY 2017	CY 2018	CY 2019
Percentage of HealthChoice Participants	35.0%	37.2%	39.0%	40.7%	41.5%

[69] 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. Additionally, the measure was modified in CYs 2016 and 2017 to include additional procedures that were not included in previous years.

Dental Services

The Maryland Medicaid program covers dental benefits through the Maryland Healthy Smiles Dental program. Dental services are covered for children aged 20 and younger under EPSDT, 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 to their members as a part of their benefit package using their own revenues. In addition, on June 1, 2019, the Department 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.

Maryland continues to improve its dental program by confronting barriers to providing comprehensive oral health services to Medicaid participants. The Department prepared data for its 2020 Annual Oral Health Legislative Report, which includes Medicaid dental care and access measures from CY 2015 through CY 2019. The Medicaid program delivered oral health services to 523,841 children and adults (aged 0 to 64) during CY 2019—up from 504,533 in CY 2018. In CY 2019, 69.4% of children received dental services, which is greater than the national HEDIS® mean. The percentage of pregnant women 14 years and older, with any period of enrollment in CY 2019, 28.5% had at least one dental service; a slight increase from CY 2018, which had 28.0% of pregnant women receiving dental services.

Maternal Health and Reproductive Health

The Department 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 SIHIS. HealthChoice participants identified as pregnant 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. The Department 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 the local health departments. The ACCUs connect HealthChoice 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 33 assesses 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 2015 through CY 2019 (MetaStar, Inc., 2020). HealthChoice outperformed the national HEDIS® mean each year.

Table 33. HEDIS® Timeliness of Prenatal Care, HealthChoice Compared with the National HEDIS® Mean, CY 2015–CY 2019*

	CY 2015	CY 2016	CY 2017	CY 2018	CY 2019

Percentage of deliveries in which the mother received a prenatal care visit in the 1st trimester or within 42 days of HealthChoice enrollment	84.4%	87.6%	84.9%	86.1%	88.2%
National HEDIS® Mean	+	+	+	+	+

*The HealthChoice averages in CYs 2015 and 2017 were influenced by the inclusion of HEDIS® rates from newer MCOs.

**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.

Frequency of Ongoing Prenatal Care

The Department measures the frequency of ongoing prenatal care to assess MCO performance in providing appropriate prenatal care.[70] For the first part of the measure—the percentage of women who received more than 80% of expected prenatal visits—higher scores are preferable. For the second part of the measure—women who received less than 21% of expected prenatal visits—lower scores are preferable. Maryland consistently outperformed the national HEDIS® means for both aspects of this measure. See Table 34. This measure was retired by HEDIS® in CY 2017.

Table 34. Percentage of HealthChoice Deliveries Receiving the Expected Number of Prenatal Visits (≥ 81 Percent or < 21 Percent of Recommended Visits), Compared with the National HEDIS® Mean, CY 2015–CY 2016*

	CY 2015		CY 2016	
	MD	National	MD	National
Greater than or equal to 81% of Expected Prenatal Visits	67.9%	+	71.0%	+
Less than 21% of Expected Prenatal Visits**	6.1%	+	5.0%	+

*The HealthChoice averages in CY 2015 were influenced by the inclusion of HEDIS® rates from newer MCOs. 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 is an inverse measure: a lower calculated performance rate for measures, which indicates better clinical care or control. A "+" means that the rate is below the national HEDIS® mean.

Prenatal Care and Birth Weight Outcomes

Table 35 compares HealthChoice birth mothers who did and did not receive prenatal care in their first trimester according to HEDIS® standard measures,[71] as well as their subsequent birth weight outcomes.

[70] The American College of Obstetricians and Gynecologists recommends a visit once every four weeks during the first 28 weeks of pregnancy, once every two to three weeks during the next seven weeks, and weekly for the remainder of the pregnancy, for a total of 13 to 15 visits.

[71] This measure was calculated using the HEDIS® proprietary software from Cognizant, an NCQA certified software vendor, which begins with CY 2017 data.

Pooling CY 2017 through CY 2019 data on birth outcomes and controlling for possible confounding variables by a multinomial regression shows that HealthChoice participants who received 1st trimester prenatal care experienced 28% lower odds (OR=0.720, p<0.001) of a low birth weight (LBW) baby (between 1500 and 2500 grams) and nearly 70% lower odds (OR=0.306, p<0.001) of a very low birth weight (VLBW) baby (less than 1500 grams).

Among the influences of LBW and VLBW outcomes estimated for confounders that reached levels of statistical significance, Black women were 40% more likely (OR=1.404) to have a LBW baby and 85% more likely to have a VLBW baby (OR=1.854) than White women, controlling for other comorbidities, region, and age, at a significance level of p<0.001. Asian women (OR=1.56) and women of other ethnicities (OR=1.312) also had increased odds of VLBW at less significant likelihood of prediction (p<0.05).

Birth mothers' age itself is a highly significant (p<0.001) predictor of LBW and VLBW. Each additional year of maternal age increases the odds of LBW by 1% (OR=1.013), and of VLBW nearly 3% (OR=1.026). As a control for other maternal health factors affecting birthweight outcomes, the model incorporates the comorbidity measures used by ACG[72] risk adjustment in the HealthChoice capitation payment system. Jointly, the comorbidity groups contribute significantly to the precision of the model (Wald $\chi^2 = 68.5$, p<0.001). However, the effects of comorbidity levels vary. Very high comorbidity is associated with large and significant increases in risk for LBW compared to low morbidity (OR=3.697, p<0.001) but does not have a significant effect on VLBW. Moderate comorbidity had slightly improved odds of LBW (OR=0.782) but was less significant (p<0.01).

Controlling for annual random effects creating potential biases for standard error estimates through pooling multiple years of data, dummy variables for CY 2018 and CY 2019 were tested against the CY 2017 group. LBW cases in CY 2019 were the only effect observed to be different across the three years of data.

Table 35. Associations between 1st Trimester Prenatal Care and Birth Weight Outcomes, CY 2017–CY 2019

Variable	Birth Outcomes			
	Birth Weight Outcome‡	Odds Ratio	95% Confidence Interval	
1st Trimester Prenatal Care				
	VLBW	0.306***	0.26	0.36
	LBW	0.720***	0.65	0.80
Age				
	VLBW	1.026***	1.01	1.04
	LBW	1.013***	1.01	1.02
Region†				

[72] A person's comorbidity level is estimated based on the Johns Hopkins Adjusted Clinical Groups (ACG) methodology, which uses claims data to classify individuals based on their projected and/or actual utilization of health care services. For our analyses, Hilltop assigned individuals to one of four comorbidity categories (Low, Moderate, High, Very High) based on their claims records in the measurement years (2017, 2018, 2019).

Variable	Birth Outcomes			
	Birth Weight Outcome‡	Odds Ratio	95% Confidence Interval	
Baltimore Suburban	VLBW	0.705 ***	0.58	0.86
	LBW	0.822***	0.74	0.91
Eastern Shore	VLBW	0.667**	0.50	0.89
	LBW	0.763***	0.66	0.88
Southern Maryland	VLBW	0.641*	0.45	0.92
	LBW	0.826*	0.70	0.98
Washington Suburban	VLBW	0.610***	0.50	0.75
	LBW	0.703***	0.64	0.78
Western Maryland	VLBW	0.637**	0.46	0.88
	LBW	0.835*	0.72	0.97
Race†				
Asian	VLBW	1.560*	1.11	2.20
	LBW	0.924	0.77	1.10
Black	VLBW	1.854***	1.52	2.26
	LBW	1.404***	1.28	1.53
Hispanic	VLBW	0.975	0.65	1.45
	LBW	0.894	0.75	1.06
Other	VLBW	1.312*	1.02	1.69
	LBW	0.939	0.83	1.06
Comorbidity Score†				
Moderate	VLBW	0.891	0.64	1.24
	LBW	0.782**	0.67	0.91
High	VLBW	1.367	0.98	1.91
	LBW	1.185*	1.02	1.38
Very High	VLBW	2.067	0.48	8.90
	LBW	3.697***	2.06	6.64
Year†				
2018	VLBW	0.922	0.78	1.09
	LBW	0.929	0.86	1.01
2019	VLBW	1.047	0.83	1.33
	LBW	1.223***	1.10	1.36

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

† Reference Groups: Baltimore City, White, Low, 2017

‡VLBW<1500g; LBW=1500-<2500g

Contraceptive Care

Contraception is a highly effective clinical preventive service that can help women fulfil 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 36 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, ring, or diaphragm

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 increased slightly from 6.5% in CY 2015 to 6.9% in CY 2019. The percentage of women enrolled in HealthChoice with at least one moderately effective type of contraception remained stable throughout the evaluation period.

Table 36. Contraceptive Care Rates, Women Enrolled in HealthChoice Aged 15–44 Years, CY 2015–CY 2019*

	CY 2015	CY 2016	CY 2017	CY 2018	CY 2019
Percentage receiving most effective contraception	6.5%	6.2%	6.8%	6.8%	6.9%
Percentage receiving moderately effective contraception	22.5%	21.7%	22.8%	23.1%	22.5%
Number of HealthChoice women at risk of unintended pregnancy	219,577	247,162	269,703	264,786	271,262

*New codes have been added to the contraceptive care measure, changing the data for CY 2015 to CY 2018 from the 2020 HealthChoice Evaluation.

Care for Chronic Diseases

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).

Service Utilization and Medication Management for People with Asthma

Asthma is a common chronic disease that affected close to 25 million Americans in 2018, including 5.5 million children under the age of 18 (CDC, 2019d). In 2018, 439,909 adults in Maryland had asthma (CDC, 2019d).

The Department monitors service utilization for HealthChoice participants with asthma and uses HEDIS® to report their medication management. The diagnosis of asthma was defined based on 2020 HEDIS® clinical criteria for Medication Management for People with Asthma (MMA). If asthma medications are used correctly, asthma-related hospitalizations, ED visits, and missed school and workdays decrease (CDC, n.d.a).

Although asthma is often thought of as a problem for children, the proportion of older individuals with asthma 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 37 for the number of HealthChoice participants with an asthma diagnosis[73] and their distribution by race/ethnicity, sex, region, and age group.

Table 37. Demographic Characteristics of HealthChoice Participants with an Asthma Diagnosis, CY 2015–CY 2019

Demographic Characteristic	Percentage of Total				
	CY 2015	CY 2016	CY 2017	CY 2018	CY 2019
Race/Ethnicity					
Asian	2.1%	2.1%	2.2%	2.4%	2.5%
Black	51.7%	50.3%	50.0%	49.6%	49.1%
White	32.3%	32.9%	32.7%	31.9%	31.4%
Hispanic	7.3%	7.3%	6.7%	6.9%	6.7%
Native American	0.4%	0.4%	0.3%	0.3%	0.3%
Other	6.3%	7.1%	8.1%	8.9%	10.0%
Sex					
Female	57.4%	57.7%	57.8%	58.2%	58.1%
Male	42.6%	42.3%	42.2%	41.8%	41.9%
Region					
Baltimore City	27.8%	27.1%	26.5%	25.9%	25.3%
Baltimore Suburban	28.3%	28.5%	28.8%	28.9%	28.8%
Eastern Shore	10.0%	10.8%	10.8%	10.4%	10.3%
Southern Maryland	4.4%	4.7%	4.7%	4.6%	4.7%
Washington Suburban	21.0%	20.6%	20.7%	21.6%	22.1%
Western Maryland	8.3%	8.3%	8.4%	8.5%	8.6%

[73] The methodology for identifying participants with asthma was corrected to address an error that resulted in over counting the number of people with the condition. Due to changes in HEDIS® measure specifications, the methodology was also updated to allow telehealth visits to count toward the measure requirements. Hilltop applied these changes to all years in the measurement period.

Out of State	0.2%	0.2%	0.2%	0.1%	0.1%
Age Group (Years)					
5–9	20.5%	19.4%	17.7%	16.6%	16.1%
10–14	15.3%	15.3%	15.4%	15.8%	15.8%
15–18	7.3%	6.9%	6.9%	6.9%	7.1%
19–20	1.9%	1.9%	1.9%	2.2%	2.2%
21–39	16.8%	17.4%	18.4%	18.9%	18.9%
40–64	38.3%	39.0%	39.7%	39.7%	39.9%
Total Number of Participants	**50,827**	**51,230**	**53,037**	**54,344**	**55,106**

Table 38 presents the number and percentage of HealthChoice participants with an asthma diagnosis who had an ambulatory care visit. The percentage remained stable overall from CY 2015 to CY 2019.

Table 38. Number and Percentage of HealthChoice Participants with an Asthma Diagnosis Who Had an Ambulatory Care Visit, CY 2015–CY 2019

Calendar Year	Total Number of Participants	At Least One Ambulatory Care Visit	
		Number	Percentage of Total
2015	50,827	49,377	97.1%
2016	51,230	50,023	97.6%
2017	53,037	51,761	97.6%
2018	54,344	53,082	97.7%
2019	55,106	53,892	97.8%

Table 39 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 52.0% to 46.7%. Asthma-related ED visit rates also declined for this population, from 13.9 to 10.4%.

Table 39. HealthChoice Participants Who Had an Outpatient ED Visit, by Diagnosis, CY 2015–CY 2019

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
2015	50,827	26,427	52.0%	7,086	13.9%
2016	51,230	26,448	51.6%	6,902	13.5%
2017	53,037	26,598	50.1%	6,522	12.3%
2018	54,344	25,042	46.1%	5,526	10.2%

2019	55,106	25,726	46.7%	5,736	10.4%

Table 40 presents 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. Despite an increase in the denominator, the percentage of participants with asthma who had an inpatient admission decreased from 14.3 to 13.0% during the evaluation period. The percentage of participants with asthma who had an inpatient admission with asthma as the primary diagnosis decreased from 2.7 to 1.6%.

Table 40. Number and Percentage of HealthChoice Participants with Asthma Who Had an Inpatient Admission, by Diagnosis, CY 2015–CY 2019

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
2015	50,827	7,260	14.3%	1,383	2.7%
2016	51,230	7,255	14.2%	991	1.9%
2017	53,037	7,559	14.3%	1,036	2.0%
2018	54,344	7,410	13.6%	964	1.8%
2019	55,106	7,167	13.0%	876	1.6%

Table 41 presents the percentage of HealthChoice participants aged 5 through 64 years with persistent asthma who remained on asthma controller medication for at least 50% and at least 75% of their treatment period in CY 2015 through CY 2019 (MetaStar, Inc., 2020). In CY 2019, 61.6% of this population demonstrated at least 50% compliance. Despite the overall increase in medication compliance, the program did not consistently meet the HEDIS® average during the evaluation period. The program outperformed the national HEDIS® mean in CY 2015 but fell below the mean from CY 2016 through CY 2018. In CY 2019, participants who demonstrated at least 50% compliance performed above the HEDIS® mean, but participants who demonstrated at least 75% compliance during their treatment period performed below the HEDIS® mean.

Table 41. Percentage of HealthChoice Members Aged 5–64 Years with Persistent Asthma Who Remained on a Prescribed Controller Medication for at Least 50% and 75% of Their Treatment Period, CY 2015–CY 2019*

	CY 2015	CY 2016	CY 2017	CY 2018	CY 2019
Remained on Prescribed Controller Medication for at Least 50% of Treatment Period					
HealthChoice	56.9%	55.8%	58.2%	59.6%	61.6%
National HEDIS® Mean	+	-	-	-	+
Remained on Prescribed Controller Medication for at Least 75% of Treatment Period					
HealthChoice	34.1%	31.1%	32.9%	33.7%	35.3%
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.

Medication Management for People with Asthma (MMA)

Table 42 presents the results of a logistic regression that examines—using HEDIS® standard measures[74]—whether HealthChoice participants aged 5 to 64 years who remained on asthma controller medication for either at least 50% or 75% of their treatment period (i.e., the measurement year) were less likely to experience an ED visit with a primary diagnosis of asthma that calendar year or the following calendar year, compared to participants who remained on their medication for less than 50% of the treatment period. The regression controlled for demographic characteristics (race/ethnicity, age, and gender), comorbidity levels, and regression 1b, also included whether participants had an ED visit the previous year. The population only includes participants with persistent asthma defined as those who had asthma claims or encounters in the measurement year or the year prior. Medication adherence is calculated only for the measurement year.

Participants who remained on their medication for at least 50% of their treatment period had 14.1% lower odds of having an ED visit with a primary diagnosis of asthma than those who remained on their medication for less than 50% (OR 0.859, P<0.001). Similarly, participants who remained on their medication for at least 75% of their treatment period were 22.6% less likely to have an ED visit that calendar year compared to participants who remained on their medication for less than 50% (OR 0.774, p<0.001). Age lowered odds of ED use; with each additional year of age, participants were 2.4% less likely to have an ED visit (OR 0.976 p<0.001). Residents in all regions were less likely to have an ED visit than Baltimore City residents, with the Washington Suburban area having the lowest odds (OR 0.527 p<0.001). Hispanic, Black, and other/unknown group of participants were more likely to have an ED visit compared to White participants, with Black participants being over two times as likely (OR 2.358, p<0.001). Furthermore, all comorbidity groups[75] 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).

When examining odds of having an ED visit with a primary diagnosis of asthma the following calendar year, participants who remained on their medication for at least 50% of their treatment period had 13.6% lower odds than those who remained on their medication for less than 50% of the treatment period (OR 0.864, p<0.01). Participants with an adherence level of at least 75% were 29.8% less likely to have an asthma-related ED visit compared to participants with less than a 50% adherence level (OR 0.702, p<0.01). Older participants were again less likely to have an ED visit the following year, while female participants were more likely (p<0.001 and p<0.05, respectively). Black participants were more than two times as likely to have an ED visit the following year compared to White participants (OR 2.034, p <0.001). Participants with higher comorbidity scores had between 25 and 49% higher odds of having an ED visit with an asthma primary diagnosis the following year compared to participants with a low comorbidity score.

[74] This measure was calculated using the HEDIS® proprietary software from Cognizant, an NCQA certified software vendor, which begins with CY 2017 data.

[75] A person's comorbidity level is estimated based on the Johns Hopkins Adjusted Clinical Groups (ACG) methodology, which uses claims data to classify individuals based on their projected and/or actual utilization of health care services. For our analyses, Hilltop assigned individuals to one of four comorbidity categories (Low, Moderate, High, Very High) based on their claims records in the measurement years (2017, 2018, 2019).

Table 42. Associations between Asthma Controller Medication Adherence and ED Visits with a Primary Diagnosis of Asthma, HealthChoice Participants Aged 5–64 Years, CY 2017–CY 2019

Variable	ED Visit with Asthma as a Primary Diagnosis					
	Regression 1: Current CY			Regression 1b: Following CY		
	Odds Ratio	95% CI		Odds Ratio	95% CI	
Adherence 50%	0.859 ***	0.81	0.91	0.864*	0.78	0.96
Adherence 75%	0.774***	0.73	0.82	0.702***	0.64	0.78
Lagged ED Visit✡				6.308***	5.76	6.90
Age	0.976***	0.97	0.98	0.985***	0.98	0.99
Female	1.05	1.00	1.11	1.093*	1.00	1.19
Region†						
Baltimore Suburban	0.646***	0.60	0.69	0.679***	0.61	0.76
Eastern Shore	0.593***	0.54	0.66	0.723***	0.62	0.85
Southern Maryland	0.665***	0.58	0.76	0.836	0.68	1.03
Washington Suburban	0.527***	0.49	0.57	0.492***	0.43	0.56
Western Maryland	0.656***	0.58	0.74	0.741*	0.61	0.91
Race†						
Asian	1.00	0.81	1.24	1.03	0.72	1.48
Black	2.358***	2.18	2.55	2.034***	1.78	2.32
Hispanic	1.35***	1.20	1.53	1.473**	1.20	1.81
Other	1.642***	1.47	1.84	1.602***	1.32	1.94
Comorbidity Score†						
Moderate	2.256***	2.05	2.48	1.253**	1.08	1.45
High	3.04***	2.74	3.38	1.491***	1.27	1.76
Very High	2.923***	2.56	3.34	1.315**	1.06	1.64
Year†						
2018	0.82***	0.77	0.87			
2019	0.833***	0.78	0.89	1.208***	1.11	1.31

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

†, Reference Groups: Baltimore City, White, Low, 2017, [Regression 2b] 2018

✡ Variable included in regression b only

Table 43 examines whether HealthChoice participants aged 5 to 64 years who remained on asthma controller medication for either at least 50 or 75% of their treatment period (i.e., the measurement year) were less likely to incur an inpatient admission with an asthma primary diagnosis that calendar year or the following year, compared to participants who remained on their medication for less than 50% of their treatment period.

Regression 2 indicates that older participants had slightly lower odds of having an inpatient admission (OR 0.956, p<0.001). Participants in all regions were less likely to have an inpatient admission compared to participants in Baltimore City, with participants in Western Maryland having 72% lower odds (OR 0.282, p<0.001). Black participants were over two times as likely to incur an inpatient admission compared to White participants (OR 2.003 p<0.001). Higher comorbidities were associated with higher odds of inpatient admission; participants with a very high comorbidity score had 14 times higher odds of

incurring an inpatient admission (OR 13.72, p<0.001).

In regression 2b, participants with a medication adherence level of at least 50% had roughly 26% lower odds of having an asthma-related inpatient admission the following year (OR 0.743, p<0.05). With each year of participants age (older) participants had lower odds of having an inpatient admission the following year (OR 0.973, p<0.01). Whereas Black participants were 47.9% more likely to have an inpatient admission. Participants in all regions had lower odds of having an asthma-related inpatient admission the following year compared to participants in Baltimore City, but results for Southern Maryland were not significant. Similar to regression 2, higher comorbidities were associated with higher odds of inpatient admission the following year, with odds ranging from 75% to 163% higher.

Table 43. Associations between Asthma Controller Medication Adherence and Inpatient Admissions with a Primary Diagnosis of Asthma, HealthChoice Participants Aged 5–64 Years, CY 2017–CY 2019

Variable	Inpatient Admission with Asthma as a Primary Diagnosis					
	Regression 2: Current CY			Regression 2b: Following CY		
	Odds Ratio	95% CI		Odds Ratio	95% CI	
MMA 50 Percent	1.08	0.92	1.27	0.743*	0.56	0.98
MMA 75 Percent	1.02	0.88	1.20	0.845	0.65	1.09
Lagged Inpt Admission✡				9.321***	6.87	12.65
Age	0.956***	0.95	0.96	0.973***	0.96	0.98
Female	0.98	0.85	1.12	1.216	0.97	1.53
Region†						
Baltimore Suburban	0.6***	0.51	0.71	0.613**	0.46	0.82
Eastern Shore	0.46***	0.35	0.61	0.498**	0.31	0.79
Southern Maryland	0.461**	0.31	0.68	0.641	0.36	1.15
Washington Suburban	0.489***	0.40	0.60	0.418***	0.29	0.59
Western Maryland	0.282***	0.18	0.44	0.405**	0.21	0.77
Race†						
Asian	0.63	0.31	1.31	1.118	0.44	2.85
Black	2.003***	1.62	2.48	1.479*	1.04	2.10
Hispanic	1.502**	1.09	2.07	1.572	0.94	2.62
Other	1.71**	1.27	2.30	1.279	0.77	2.14
Comorbidity Score†						
Moderate	2.857***	2.05	3.99	1.753*	1.12	2.74
High	8.217***	5.85	11.54	2.062**	1.27	3.35
Very High	13.72***	9.46	19.90	2.633**	1.48	4.69
Year†						
2018	0.824**	0.71	0.96			
2019	0.625***	0.53	0.74	0.823	0.66	1.03

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

†, Reference Groups: Baltimore City, White, Low, 2017, [Regression 2b] 2018

✡ Variable included in regression b only

Comprehensive Diabetes Care

The Department 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 inpatient admissions, outpatient ED visits, 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 use of ED services.

Table 44 shows HealthChoice participants with a diabetes diagnosis according to the numbers and percentages within categories of race/ethnicity, sex, region, and age group. The distribution of participants with a diabetes diagnosis remained relatively consistent within demographic characteristics throughout the evaluation period.

Black participants with diabetes exceeded the proportion of White participants with diabetes by a ratio of nearly two to one. Both groups, as well as Hispanic participants, experienced a decrease in their share of the HealthChoice population with diabetes during the five-year evaluation period, while the proportion among the "Other" race category increased from 9.8% in CY 2015 to 13.0% in CY 2019. The proportion of male HealthChoice participants with diabetes increased from 41.5% in CY 2015 to 43.8% in CY 2019, likely because of the expansion of coverage under the ACA. The proportion of older age groups with diabetes stayed relatively consistent throughout the evaluation period.

Table 44. Demographic Characteristics of HealthChoice Participants with Diabetes, CY 2015–CY 2019

Demographic Characteristic	Percentage of Total				
	CY 2015	CY 2016	CY 2017	CY 2018	CY 2019
Race/Ethnicity					
Asian	5.8%	5.9%	5.9%	5.9%	6.0%
Black	50.2%	50.1%	49.8%	49.5%	49.3%
White	29.7%	29.2%	28.5%	27.9%	27.8%
Hispanic	4.2%	3.9%	3.7%	3.7%	3.7%
Native American	0.4%	0.3%	0.3%	0.3%	0.3%
Other	9.8%	10.6%	11.7%	12.7%	13.0%
Sex					
Female	58.6%	58.1%	57.3%	56.7%	56.2%
Male	41.5%	41.9%	42.7%	43.3%	43.8%
Region					
Baltimore City	24.0%	23.9%	23.5%	23.2%	22.9%
Baltimore Suburban	26.0%	26.3%	26.6%	26.9%	27.6%
Eastern Shore	10.0%	10.1%	10.0%	9.8%	9.8%
Southern Maryland	5.2%	5.2%	5.3%	5.3%	5.3%
Washington Suburban	26.9%	26.6%	26.8%	27.0%	26.6%

Demographic Characteristic	Percentage of Total				
	CY 2015	CY 2016	CY 2017	CY 2018	CY 2019
Western Maryland	7.7%	7.8%	7.7%	7.8%	7.8%
Out of State	0.2%	0.1%	0.2%	0.2%	0.1%
Age Group (Years)					
18-40	22.2%	22.1%	22.1%	22.2%	22.3%
41-64	77.8%	77.8%	78.0%	77.9%	77.8%
Total Number of Participants	**55,915**	**57,162**	**59,100**	**59,566**	**58,767**

Note: "Other" race/ethnicity category includes Pacific Islanders, Alaskan Natives, and unknown.

Table 45 presents the number and percentage of HealthChoice participants with diabetes who had an ambulatory care visit. The rate increased by 1.1 percentage points during the evaluation period.

Table 45. Number and Percentage of HealthChoice Participants with Diabetes Who Had an Ambulatory Care Visit, CY 2015–CY 2019

Calendar Year	Total Number of Participants	At Least One Ambulatory Care Visit	
		Number	Percentage of Total
2015	55,915	52,435	93.8%
2016	57,162	53,949	94.4%
2017	59,100	55,828	94.5%
2018	59,566	56,177	94.3%
2019	58,767	55,787	94.9%

Table 46 presents the number and percentage of HealthChoice participants with diabetes who had an outpatient ED visit. The number of participants with diabetes who had an ED visit decreased from 46.1% in CY 2015 to 42.7% in CY 2018 before increasing to 44.0% in CY 2019.

Table 46. Number and Percentage of HealthChoice Participants with Diabetes Who Had an Outpatient ED Visit, CY 2015–CY 2019

Calendar Year	Total Number of Participants	At Least One ED Visit	
		Number	Percentage of Total
2015	55,915	25,762	46.1%
2016	57,162	26,333	46.1%
2017	59,100	26,771	45.3%
2018	59,566	25,422	42.7%
2019	58,767	25,846	44.0%

Table 47 presents the number and percentage of HealthChoice participants with diabetes who had at least one inpatient admission. This measure slightly decreased during the evaluation period—from 21.2% in CY 2015 to 20.3% in CY 2018—indicating the potential success of the HealthChoice program in proactively targeting diabetes management.

Table 47. Number and Percentage of HealthChoice Participants with Diabetes Who Had an Inpatient Admission, CY 2015–CY 2019

Calendar Year	Total Number of Participants	At Least One Inpatient Admission	
		Number	Percentage of Total
2015	55,915	11,860	21.2%
2016	57,162	12,162	21.3%
2017	59,100	12,481	21.1%
2018	59,566	12,405	20.8%
2019	58,767	11,956	20.3%

Controlling diabetes requires monitoring blood glucose levels and looking for damaged nerve tissue in the eye that may threaten sight. Table 48 presents the annual HealthChoice performance on these measures for CY 2015 through CY 2019. 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 2015 through CY 2017. However, in CY 2018 and CY 2019, HealthChoice fell below the HEDIS® average on eye exams. The observed decrease in the eye exam measure may have resulted from the removal of this measure from the VBP program in CY 2015.

Table 48. Percentage of HealthChoice Members Aged 18–64 Years with Diabetes Who Received Comprehensive Diabetes Care, Compared with the National HEDIS® Average, CY 2015–CY 2019*

HEDIS® Measure	CY 2015	CY 2016	CY 2017	CY 2018	CY 2019
Eye (Retinal) Exam					
HealthChoice	60.2%	57.0%	57.8%	54.1%	54.7%
National HEDIS® Average	+	+	+	-	-
HbA1c Test					
HealthChoice	88.8%	88.9%	87.9%	88.8%	88.3%
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.

*HealthChoice averages in CYs 2015 and 2017 were influenced by the inclusion of HEDIS® rates from newer MCOs.

Under the HealthChoice demonstration waiver, the Department received approval to expand coverage of the National Diabetes Prevention Program (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 has partnered with the Department and HealthChoice MCOs to develop an algorithm that MCOs can use to search their members' electronic medical records and identify individuals who may be at risk for developing type 2 diabetes, and therefore potentially eligible for enrollment in the DPP. The MCOs have been provided with this algorithm and are still in the testing stages. By identifying participants early with this algorithm as well as through routine screening and testing for prediabetes, the Department 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 SIHIS.

Diabetes Screenings and Utilization

Controlling diabetes requires monitoring blood glucose levels and looking for damaged nerve tissue in the eye that may threaten sight. Table 49 presents the logistic regression results for estimating the odds of a HealthChoice participant with diabetes who received an eye (retina) exam, a hemoglobin A1c (HbA1c) test, or both—using HEDIS® standard screening measures—of having a diabetes-related ED visit that year or the following year. In addition to the three screening conditions, the regression controlled for demographic characteristics (race/ethnicity and sex), comorbidity levels,[76] and, in regression 1b, whether participants had an ED visit the previous year.

Although receiving either screening increased the odds of a participant having a diabetes-related ED visit during the calendar year, participants with both the eye and HbA1c screening had 65.1% lower odds of having a diabetes-related ED visit than participants who had just one screening or neither (OR= 0.349 $p<0.001$). This may indicate that having both screenings is more preventative than only having one. Older and female participants had 4.8 and 26.2% lower odds of having an ED visit, respectively ($p<0.001$). Residents in the Baltimore Suburban, Washington Suburban, and Western Maryland regions had lower odds of having a diabetes-related ED visit compared to Baltimore City Residents ($p<0.001$). Comparing race and ethnicity differences with White participants, Asian participants were 64.5% less likely to have an ED visit, while Black participants were 34.6% more likely to have an ED visit($p<0.001$). Higher levels of comorbidity were also associated increased odds of a diabetes-related ED visit the same year.

When examining odds of having an ED visit with a primary diagnosis of diabetes the following year, none of screening conditions had a statistically significantly relationship. Having an ED visit the prior year significantly increased the odds of a participant having an ED visit the following year (OR= 6.14, $p<0.001$). As in regression 1, older and female participants had 3.8 and 15.3% lower odds of having an ED visit, respectively ($p<0.001$). Participants in the Baltimore Suburban, Washington Suburban, and Western Maryland regions had lower odds of having a diabetes-related ED visit compared to participants in Baltimore City. Asian participants were 61% less likely to have an ED visit and "Other/Unknown" participants were 14.5% less likely to have an ED visit the following year compared to White participants ($p<0.001$ and $p<0.01$, respectively). Black participants were 22.9% more likely to have an ED visit the following year than White participants ($p<0.001$). Only the highest level of comorbidity was associated with increased odds of a diabetes-related ED visit the following year (OR= 1.151,

[76] A person's comorbidity level is estimated based on the Johns Hopkins Adjusted Clinical Groups (ACG) methodology, which uses claims data to classify individuals based on their projected and/or actual utilization of health care services. For our analyses, Hilltop assigned individuals to one of four comorbidity categories (Low, Moderate, High, Very High) based on their claims records in the measurement years (2017, 2018, 2019).

p<0.001).

Table 49. Associations between Diabetes Screenings and ED Visits with a Primary Diagnosis of Diagnosis, HealthChoice Participants Aged 5–64 Years, CY 2017–CY 2019

Variable	ED Visit with Diabetes as a Primary Diagnosis					
	Regression 1: Current CY			Regression 1b: Following CY		
	Odds Ratio	95% CI		Odds Ratio	95% CI	
Screenings						
CDC Eye	1.993***	1.64	2.42	1.243	0.98	1.58
CDC Hba1c	4.149***	2.95	5.83	0.923	0.53	1.61
CDC Eye X Hba1c	0.349***	0.25	0.49	0.968	0.55	1.70
Lagged ED Visit✡				6.14***	5.666	6.654
Age	0.952***	0.95	0.95	0.962***	0.96	0.97
Female	0.738***	0.70	0.77	0.847***	0.79	0.91
Region†						
Baltimore Suburban	0.778***	0.73	0.83	0.77***	0.70	0.85
Eastern Shore	0.995	0.92	1.08	1.035	0.92	1.16
Southern Maryland	0.931	0.84	1.03	0.988	0.85	1.15
Washington Suburban	0.727***	0.68	0.78	0.738***	0.67	0.82
Western Maryland	0.81***	0.73	0.90	0.851*	0.74	0.98
Race†						
Asian	0.355***	0.29	0.44	0.39***	0.29	0.52
Black	1.346***	1.27	1.43	1.229***	1.13	1.34
Hispanic	0.873	0.75	1.02	0.979	0.79	1.21
Other	1	0.91	1.10	0.855**	0.74	0.99
Comorbidity Score†						
Moderate	0.977	0.84	1.13	0.874	0.68	1.13
High	1.911***	1.65	2.21	1.263	0.98	1.63
Very High	4.292***	3.72	4.96	2.23***	1.73	2.87
Year†						
2018	0.915**	0.87	0.97			
2019	1.069*	1.01	1.13	1.151***	1.08	1.23

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

†, Reference Groups: Baltimore City, White, Low, 2017, [Regression 1b] 2018

✡ Variable included in regression b only

Table 50 presents the results of a logistic regression that examined the odds of a HealthChoice participant with diabetes who received an eye exam, an HbA1c test, or both having a diabetes-related inpatient admission the following year. In addition to the three screening conditions, the regression controlled for demographic characteristics (race/ethnicity and sex), comorbidity levels, and, in regression 2b, whether participants had a diabetes-related inpatient admission the previous year.

As with the result for ED visits, receiving either screening increased the odds that a participant had an inpatient admission during the calendar year. Specifically, participants with both the eye and HbA1c screening had 37.1% lower odds of having a diabetes-related inpatient admission, compared to

participants who had just one screening or neither (OR= 0.621 p<0.01). Residents in all regions except for Washington Suburban had lower odds of having an inpatient admission compared to Baltimore City residents. Asian and Hispanic participants were 68.5% and 25.9% (respectively) less likely to have a diabetes-related inpatient admission compared to White participants (p<0.001 and p<0.01, respectively). Participants with a very high comorbidity score were five times more likely to have a diabetes inpatient admission compared to participants with a low score (OR= 5.501, p<0.001). Participants with a moderate comorbidity score had 71.1% lower odds of having a diabetes admission (OR= 0.289, p<0.001).

Regression 2b examines the odds of having an inpatient admission with a primary diagnosis of diabetes the following year. HbA1c testing was associated with increased odds of having an inpatient admission the following year (OR= 1.867, p<0.05). Participants with both the eye and HbA1c screening had 53.1% lower odds of a having a diabetes-related admission the following year compared to participants who had just one screening or neither (OR= 0.469, p<0.01). Having an inpatient admission in the prior year significantly increased the odds of a participant having an admission the following year (OR= 11.02, p<0.001). Residents in all regions had lower odds of having a diabetes-related inpatient admission the following year compared to Baltimore City residents. As with regression 2, Asian participants were the least likely to have a diabetes inpatient admission when compared to White participants (OR= 0.211, P<0.001). Participants with a very high comorbidity score were over two times more likely to have a diabetes inpatient admission the following year compared to participants with a low score, whereas participants with a moderate comorbidity score had 45.4% lower odds of having a diabetes admission (p<0.001).

Table 50. Associations between Diabetes Screenings and Inpatient Admissions with a Primary Diagnosis of Diabetes, HealthChoice Participants Aged 5–64 Years, CY 2017–CY2019

Variable	Inpatient Admission with Diabetes as a Primary Diagnosis					
	Regression 2: Current CY			Regression 2b: Following CY		
	Odds Ratio	95% CI		Odds Ratio	95% CI	
Screenings						
CDC Eye	1.311**	1.08	1.59	1.116	0.83	1.50
CDC Hba1c	1.711*	1.12	2.62	1.867*	1.06	3.28
CDC Eye X Hba1c	0.621**	0.40	0.96	0.469**	0.26	0.83
Lagged Inpt. Admission✡				11.018***	9.92	12.24
Age	0.938***	0.94	0.94	0.958***	0.95	0.96
Female	0.639***	0.60	0.68	0.779***	0.71	0.85
Region†						
Baltimore Suburban	0.915*	0.84	0.99	0.807***	0.72	0.91
Eastern Shore	0.688***	0.61	0.77	0.693***	0.59	0.82
Southern Maryland	0.828**	0.72	0.95	0.75**	0.61	0.92
Washington Suburban	0.921	0.85	1.00	0.76***	0.67	0.86
Western Maryland	0.726***	0.64	0.83	0.688***	0.57	0.83
Race†						
Asian	0.315***	0.24	0.42	0.211***	0.13	0.34
Black	1.057	0.98	1.14	0.904	0.81	1.01

Variable	Inpatient Admission with Diabetes as a Primary Diagnosis					
	Regression 2: Current CY			Regression 2b: Following CY		
	Odds Ratio	95% CI		Odds Ratio	95% CI	
Hispanic	0.741**	0.60	0.91	0.614**	0.45	0.84
Other	0.898	0.80	1.01	0.787*	0.66	0.94
Comorbidity Score†						
Moderate	0.289***	0.24	0.35	0.546***	0.40	0.74
High	1.151	0.98	1.36	0.835	0.62	1.13
Very High	5.502***	4.70	6.45	2.024***	1.51	2.72
Year†						
2018	0.972	0.90	1.05			
2019	1.088*	1.01	1.17	1.045	0.96	1.14

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

†, Reference Groups: Baltimore City, White, Low, 2017, [Regression 2b] 2018

☼ Variable included in regression b only

HIV/AIDS

The Department 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. Antiretroviral therapy (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, 2019c). Early initiation of ART lowers the risk of an individual with HIV of developing AIDS and other complications (Lundgren et al., 2015).

Table 51 presents the percentage of participants with HIV/AIDS by age group and race/ethnicity for CY 2015 and CY 2019.

Table 51. Distribution of HealthChoice Participants with HIV/AIDS, by Age Group and Race/Ethnicity, CY 2015 and CY 2019

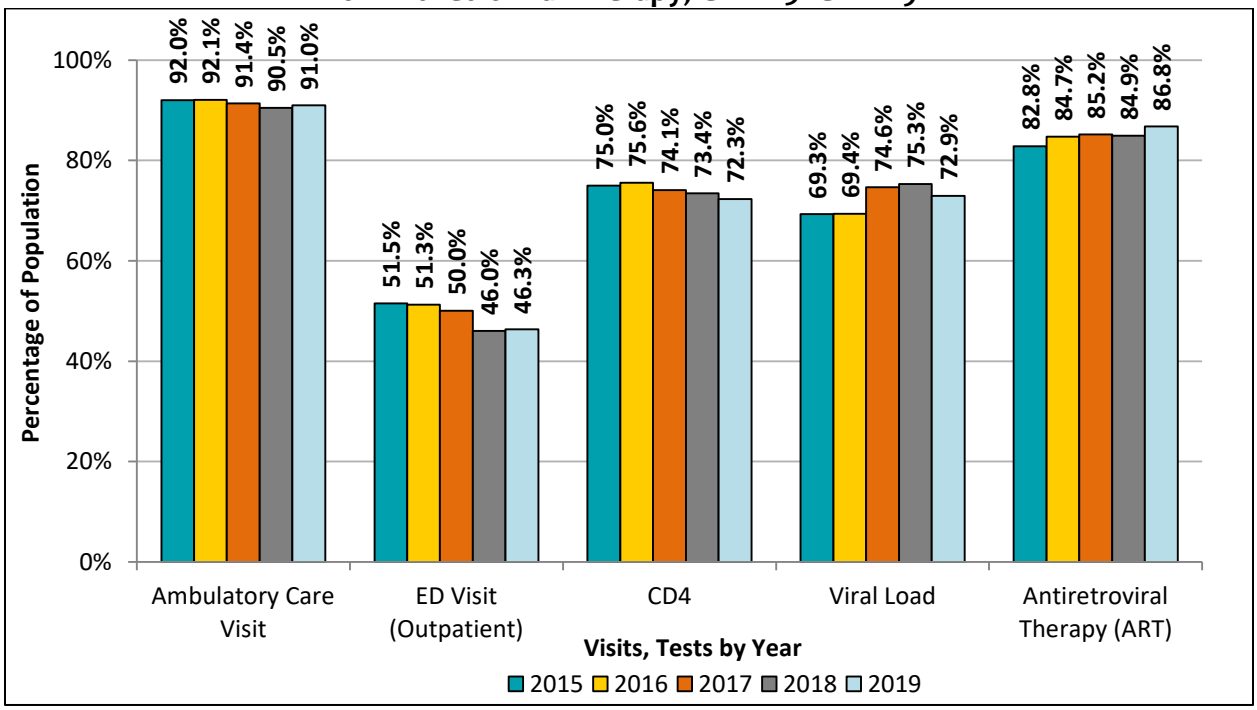
Demographic Characteristic	CY 2015		CY 2019	
	Number of Participants	Percentage of Total	Number of Participants	Percentage of Total
Age Group (Years)				
0–18	244	3.5%	125	2.1%
19–39	2,017	29.3%	1,785	29.7%
40–64	4,619	67.1%	4,103	68.2%
Total	**6,880**	**100%**	**6,013**	**100%**
Race/Ethnicity				
Asian	37	0.5%	46	0.8%

Demographic Characteristic	CY 2015		CY 2019	
	Number of Participants	Percentage of Total	Number of Participants	Percentage of Total
Black	5,743	83.5%	4,903	81.5%
White	674	9.8%	558	9.3%
Hispanic	95	1.4%	81	1.3%
Native American	11	0.2%	13	0.2%
Other	320	4.7%	412	6.9%
Total	**6,880**	**100%**	**6,013**	**100.0%**

Note: "Other" race/ethnicity category includes Pacific Islanders, Alaskan Natives, and unknown.

Figure 19 shows service utilization by HealthChoice participants with HIV/AIDS during the study period. The percentage of participants with an outpatient ED visit fell by 5.2 percentage points between CY 2015 and CY 2019. The HealthChoice program also experienced an increase in one HIV/AIDS-related quality measure during the evaluation period. The percentage of individuals with HIV/AIDS who received viral load testing increased by 3.6 percentage points, but the percentage of individuals who received CD4 testing decreased slightly, by 2.7 percentage point.

Figure 19. 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 2015–CY 2019



According to the CDC (2019b) as published in its annual HIV Surveillance Report, there was a national HIV incidence rate of 11.4 per 100,000 people in 2018. In Maryland, the incidence rate of HIV diagnoses for 2018 was 16.2 per 100,000 people, a decrease from the previous year's rate of 17.0 (CDC, 2019b). The CDC (2020) 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 52 shows HIV screenings for HealthChoice participants aged 15 to 64 years from CY 2015 through CY 2019.

Table 52. HIV Screening in the HealthChoice Population for Participants Aged 15–64 Years, CY 2015–CY 2019

HealthChoice Participants	CY 2015	CY 2016	CY 2017	CY 2018	CY 2019
Total Number	771,917	758,495	811,183	836,653	824,976
Number Received HIV Screening	109,523	123,061	130,107	142,678	148,213
Percentage Received HIV Screening	14.2%	16.2%	16.0%	17.1%	18.0%

For people who are not HIV positive but are at risk of contracting the infection, pre-exposure prophylaxis (PrEP) can help prevent HIV (CDC, 2019a). PrEP is a daily medication that reduces the risk of HIV infection (CDC, 2019a). Table 53 presents the percentage of HealthChoice participants who received PrEP from CY 2015 to CY 2019.

Table 53. HealthChoice Participants Who Received HIV PrEP, CY 2015–CY 2019

HealthChoice Participants	CY 2015	CY 2016	CY 2017	CY 2018	CY 2019
Total Number	1,304,107	1,285,431	1,355,443	1,389,716	1,377,493
Number Received HIV Screening	3,027	2,802	2,146	1,949	1,958
Percentage Received HIV Screening	0.2%	0.2%	0.2%	0.1%	0.1%

Behavioral Health

The Department 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 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 54 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, or none of these diagnoses. Overall, the percentage of HealthChoice participants without a behavioral health diagnosis decreased from 84.2% in CY 2015 to 81.8% in CY 2019, accompanied by corresponding increases across all categories of behavioral health diagnoses.

Table 54. Number and Percentage of HealthChoice Participants with a Behavioral Health Diagnosis, by Diagnosis, CY 2015–CY 2019

Diagnosis	CY 2015	CY 2016	CY 2017	CY 2018	CY 2019
MHD-Only	142,223 (10.9%)	148,186 (11.5%)	156,694 (11.6%)	165,198 (11.9%)	171,971 (12.5%)
SUD-Only	35,628 (2.7%)	37,938 (3.0%)	41,632 (3.1%)	43,274 (3.1%)	42,062 (3.1%)
Dual Diagnosis (MHD + SUD)	27,601 (2.1%)	30,646 (2.4%)	33,085 (2.4%)	34,615 (2.5%)	36,812 (2.7%)
No Behavioral Health Diagnosis	1,098,828 (84.2%)	1,069,037 (83.1%)	1,124,032 (82.9%)	1,146,629 (82.5%)	1,126,648 (81.8%)
Total	**1,304,280**	**1,285,807**	**1,355,443**	**1,389,716**	**1,377,493**

The Department monitors the extent to which participants with a behavioral health diagnosis access ambulatory care services. In CY 2019, 94.7% of all participants with an MHD—which includes participants diagnosed with an MHD only and those with a co-occurring MHD and SUD—visited a health care provider for an ambulatory care visit (Table 55).

Across the evaluation period, the ambulatory care visit rate among all participants with an MHD-only diagnosis remained stable, while the rate increased 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 were participants with an SUD-only diagnosis. However, the ambulatory care visit rate of SUD-only participants increased by 11.7 percentage points between CY 2015 and CY 2019. Participants with a dual diagnosis of MHD and SUD and MHD-only had similar ambulatory care utilization across the evaluation period.

Table 55. HealthChoice Participants Who Had an Ambulatory Care Visit, by Behavioral Health Diagnosis, CY 2015–CY 2019

Calendar Year	Total Number of Participants	At Least One Ambulatory Care Visit	
		Number of Participants	Percentage of Total Participants
MHD-Only			
2015	142,223	131,875	92.7%
2016	148,186	137,679	92.9%
2017	156,694	145,397	92.8%
2018	165,198	153,182	92.7%
2019	171,971	159,515	92.8%
SUD-Only			
2015	35,628	25,355	71.2%
2016	37,938	27,154	71.6%
2017	41,632	32,222	77.4%
2018	43,274	35,152	81.2%
2019	42,062	34,839	82.8%
Dual Diagnosis (MHD + SUD)			

Calendar Year	Total Number of Participants	At Least One Ambulatory Care Visit	
		Number of Participants	Percentage of Total Participants
2015	27,601	25,257	91.5%
2016	30,646	27,973	91.3%
2017	33,085	30,674	92.7%
2018	34,615	32,499	93.9%
2019	36,812	34,876	94.7%
Total			
2015	205,452	182,487	88.8%
2016	216,770	192,806	88.9%
2017	231,411	208,293	90.0%
2018	243,087	220,833	90.8%
2019	250,845	229,230	91.4%

Table 56 displays the number and percentage of all HealthChoice participants with a behavioral health diagnosis who had at least one outpatient ED visit.[77] Overall, the percentage of participants with an MHD-only diagnosis who visited the ED declined from 44.5% in CY 2015 to 39.2% in CY 2019. 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.

Table 56. HealthChoice Participants Who Had at Least One Outpatient ED Visit, by Behavioral Health Diagnosis, CY 2015–CY 2019

Calendar Year	Total Number of Participants	At Least One ED Visit	
		Number of Participants	Percentage of Total Participants
MHD-Only			
2015	142,223	63,326	44.5%
2016	148,186	65,571	44.3%
2017	156,694	67,557	43.1%
2018	165,198	65,561	39.7%
2019	171,971	67,352	39.2%
SUD-Only			
2015	35,628	18,010	50.6%
2016	37,938	19,251	50.7%
2017	41,632	20,972	50.4%
2018	43,274	20,430	47.2%
2019	42,062	19,965	47.5%
Dual Diagnosis (MHD + SUD)			
2015	27,601	18,685	67.7%

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

Calendar Year	Total Number of Participants	At Least One ED Visit	
		Number of Participants	Percentage of Total Participants
2016	30,646	20,887	68.2%
2017	33,085	22,530	68.1%
2018	34,615	22,663	65.5%
2019	36,812	23,419	63.6%
Total			
2015	205,452	100,021	48.7%
2016	216,770	105,709	48.8%
2017	231,411	111,059	48.0%
2018	243,087	108,654	44.7%
2019	250,845	110,736	44.1%

Table 57 displays the number and percentage of all 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 15.9% in CY 2015 to 13.5% in CY 2019. 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 impatient admissions than participants with an MHD-only or SUD-only diagnosis.

Table 57. HealthChoice Participants Who Had an Inpatient Admission, by Behavioral Health Diagnosis, CY 2015–CY 2019

Calendar Year	Total Number of Participants	At Least One Inpatient Visit	
		Number of Participants	Percentage of Total Participants
MHD-Only			
2015	142,223	18,406	12.9%
2016	148,186	18,544	12.5%
2017	156,694	19,198	12.3%
2018	165,198	19,172	11.6%
2019	171,971	18,363	10.7%
SUD-Only			
2015	35,628	5,195	14.6%
2016	37,938	5,434	14.3%
2017	41,632	6,176	14.8%
2018	43,274	6,126	14.2%
2019	42,062	5,772	13.7%
Dual Diagnosis (MHD + SUD)			
2015	27,601	8,974	32.5%
2016	30,646	9,731	31.8%
2017	33,085	10,352	31.3%

Calendar Year	Total Number of Participants	At Least One Inpatient Visit	
		Number of Participants	Percentage of Total Participants
2018	34,615	10,166	29.4%
2019	36,812	9,850	26.8%
Total			
2015	205,452	32,575	15.9%
2016	216,770	33,709	15.6%
2017	231,411	35,726	15.4%
2018	243,087	35,464	14.6%
2019	250,845	33,985	13.5%

Table 58 shows the rates of MHD, SUD, and co-occurring MHD and SUD among HealthChoice participants by race and ethnicity during CY 2015 and CY 2019. Between CY 2015 and CY 2019, the percentage of HealthChoice participants who had a behavioral health condition increased. An increase in behavioral health conditions was noted across all racial and ethnic groups except for Hispanic and Native American members with an SUD-only, whose rates remained stable.

Table 58. Distribution of HealthChoice Participants Aged 0–64 Years, by Race/Ethnicity and Behavioral Health Conditions, CY 2015 and CY 2019

Race/Ethnicity	CY 2015		CY 2019	
	Number of Participants	Percentage of Total Race/Ethnicity	Number of Participants	Percentage of Total Race/Ethnicity
MHD-Only				
Black	67,241	11.5%	80,399	14.2%
White	55,923	14.7%	59,256	16.5%
Hispanic	7,588	6.1%	10,252	9.7%
Asian	1,819	3.1%	2,967	4.8%
Native American	456	12.3%	535	13.3%
Other	9,155	6.0%	18,562	6.7%
Total	**142,182**	**10.9%**	**171,971**	**12.5%**
SUD-Only				
Black	13,809	2.4%	14,732	2.6%
White	18,599	4.9%	22,214	6.2%
Hispanic	876	0.7%	785	0.7%
Asian	238	0.4%	383	0.6%
Native American	142	3.8%	154	3.8%
Other	1,961	1.3%	3,794	1.4%
Total	**35,625**	**2.7%**	**42,062**	**3.1%**
Dual Diagnosis (MHD + SUD)				
Black	10,678	1.8%	14,350	2.5%
White	15,225	4.0%	19,103	5.3%

Race/Ethnicity	CY 2015		CY 2019	
	Number of Participants	Percentage of Total Race/Ethnicity	Number of Participants	Percentage of Total Race/Ethnicity
Hispanic	337	0.3%	500	0.5%
Asian	122	0.2%	188	0.3%
Native American	91	2.5%	149	3.7%
Other	1,166	0.8%	2,522	0.9%
Total	**27,619**	**2.1%**	**36,812**	**2.7%**
No Behavioral Health Diagnosis				
Black	493,047	84.3%	456,819	80.7%
White	291,589	76.5%	259,550	72.1%
Hispanic	114,984	92.9%	94,335	89.1%
Asian	55,898	96.2%	58,907	94.3%
Native American	3,019	81.4%	3,194	79.2%
Other	139,934	91.9%	253,843	91.1%
Total	**1,098,471**	**84.2%**	**1,126,648**	**81.8%**

Note: "Other" race/ethnicity category includes Pacific Islanders, Alaskan Natives, and unknown.

Mental Health Services

Table 59 displays the key demographic characteristics of HealthChoice participants with a diagnosis of an MHD.[78] The proportion of participants having an MHD who were Black or White decreased across the evaluation period: from 45.9 and 41.9% in CY 2015 to 45.4 and 37.5% in CY 2019, respectively. In CY 2015, children and adults made up 39.4 and 60.7%, respectively, of participants with an MHD. The proportion of adults rose to 61.4% in CY 2019. These increases may result from the large influx of adults during the 2014 ACA expansion.

Table 59. Demographic Characteristics of HealthChoice Participants with an MHD, CY 2015–CY 2019

Demographic Characteristic	CY 2015	CY 2016	CY 2017	CY 2018	CY 2019
	% of Total	% of Total	% of Total	% of Total	% of Total
Race/Ethnicity					
Asian	1.1%	1.2%	1.3%	1.4%	1.5%
Black	45.9%	45.6%	45.1%	44.8%	45.4%
White	41.9%	41.1%	40.2%	38.9%	37.5%
Hispanic	4.7%	4.8%	5.1%	5.3%	5.2%
Native American	0.3%	0.3%	0.3%	0.3%	0.3%
Other	6.0%	7.1%	8.1%	9.2%	10.1%

[78] Individuals are identified as having an MHD if they have any ICD-10 diagnosis codes that begin with F200-203, F205, F2081, F2089, F209, F21-24, F250, F251, F258, F259, F28-29, F301-304, F308-325, F328-334, F338-341, F348-349, F39-45, F48, F50, F53-54, F60, F63-66, F68-69, F843, F900-902, F908-913, F918-919, F930, F938-942, F948-949, F980-981, F984, F9888-989, F99, G21, G24-25, R45, O99, Z046; OR any ICD-9 diagnosis codes that begin with 295-302, 307-309, 311- 314, 332.1, 333.90, 333.99, 648 according to the COMAR definition of MHD.

Demographic Characteristic	CY 2015	CY 2016	CY 2017	CY 2018	CY 2019
	% of Total	% of Total	% of Total	% of Total	% of Total
Total	**100%**	**100%**	**100%**	**100%**	**100%**
Sex					
Female	54.4%	54.1%	54.3%	54.6%	54.9%
Male	45.6%	45.9%	45.7%	45.5%	45.1%
Total	**100%**	**100%**	**100%**	**100%**	**100.%**
Region					
Baltimore City	27.1%	26.8%	26.1%	25.3%	25.4%
Baltimore Suburban	30.1%	30.0%	30.2%	30.7%	31.2%
Eastern Shore	11.3%	11.3%	11.2%	10.9%	10.9%
Southern Maryland	4.7%	4.6%	4.7%	4.7%	4.6%
Washington Suburban	16.4%	16.9%	17.3%	18.0%	17.9%
Western Maryland	10.3%	10.3%	10.3%	10.2%	9.9%
Out of State	0.2%	0.1%	0.1%	0.1%	0.1%
Total	**100%**	**100%**	**100%**	**100%**	**100%**
Age Group (Years)					
0–18	39.4%	38.7%	38.5%	38.7%	38.6%
19–64	60.7%	61.3%	61.5%	61.3%	61.4%
Total	**100%**	**100%**	**100%**	**100%**	**100%**
Total Participants	**169,824**	**178,832**	**189,779**	**199,813**	**208,783**

Note: "Other" race/ethnicity category includes Pacific Islanders, Alaskan Natives, and unknown.

Table 60 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. From CY 2015 to CY 2019, the percentage of HealthChoice participants with an MHD-only with at least one ambulatory care visit remained steady. Whereas the percentage of participants who had an ambulatory care visit with MHD as a primary diagnosis increased from 8.5% in CY 2015 to 18.5% in CY 2018 and then decreased slightly to 17.1% in CY 2019.

The percentage of participants with a dual diagnosis of MHD and SUD who had at least one ambulatory care visit increased by 3.2 percentage points between CY 2015 and CY 2019. The percentage of participants with a co-occurring MHD and SUD with MHD as a primary diagnosis increased from 6.7% in CY 2015 to 16.2% in CY 2018. However, the percentage fell slightly between CY 2018 and CY 2019 by 1.3 percentage points.

Between CY 2015 and CY 2019, the percentage of participants with any MHD—which includes participants diagnosed with only an MHD and those with a co-occurring MHD and SUD—with at least one ambulatory care visit increased slightly from 92.5% to 93.1%. Among those with an ambulatory visit where MHD was a primary diagnosis, the percentage with at least one ambulatory care visit more than doubled between CY 2015 and CY 2019 from 8.2% to 16.7%, although the percentage decreased by 1.4 percentage point from CY 2018.

Table 60. HealthChoice Participants Who Had an Ambulatory Care Visit, MHD Diagnosis, CY 2015–CY 2019

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					
2015	142,223	131,875	92.7%	12,033	8.5%
2016	148,186	137,679	92.9%	28,177	19.0%
2017	156,694	145,397	92.8%	28,962	18.5%
2018	165,198	153,182	92.7%	30,601	18.5%
2019	171,971	159,515	92.8%	29,391	17.1%
Dual Diagnosis (MHD + SUD)					
2015	27,601	25,257	91.5%	1,844	6.7%
2016	30,646	27,973	91.3%	5,047	16.5%
2017	33,085	30,674	92.7%	5,270	15.9%
2018	34,615	32,499	93.9%	5,594	16.2%
2019	36,812	34,876	94.7%	5,477	14.9%
Total					
2015	169,824	157,132	92.5%	13,877	8.2%
2016	178,832	165,652	92.6%	33,224	18.6%
2017	189,779	176,071	92.8%	34,232	18.0%
2018	199,813	185,681	92.9%	36,195	18.1%
2019	208,783	194,391	93.1%	34,868	16.7%

Table 61 displays the number and percentage of HealthChoice participants with any MHD diagnosis with at least one outpatient ED visit, as well as showing participants with at least one outpatient ED visit a primary diagnosis of MHD.

Between CY 2015 and CY 2019, the percentage of participants with any MHD—which includes participants diagnosed with only an SUD and those with a co-occurring MHD and SUD—with at least one outpatient ED visited decreased by 4.8 percentage points. Among those with a primary MHD diagnosis, the percentage with an ED visit decreased by 2.1 percentage points.

Similar trends were observed for HealthChoice participants with a dual diagnosis (MHD and SUD) and MHD-only, with a decrease of 4.1 and a 5.3 percentage points, respectively. The percentage of HealthChoice participants with a dual diagnosis and at least one outpatient ED visit with a primary MHD diagnosis decreased by 5.1 percentage points, whereas participants with an MHD-only diagnosis decreased by 1.5 percentage points.

Table 61. HealthChoice Participants Who Had an Outpatient ED Visit, by MHD Diagnosis, CY 2015–CY 2019

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					
2015	142,223	63,326	44.5%	12,564	8.8%
2016	148,186	65,571	44.3%	12,731	8.6%
2017	156,694	67,557	43.1%	13,516	8.6%
2018	165,198	65,561	39.7%	13,915	8.4%
2019	171,971	67,352	39.2%	12,504	7.3%
Dual Diagnosis (MHD + SUD)					
2015	27,601	18,685	67.7%	4,599	16.7%
2016	30,646	20,887	68.2%	4,934	16.1%
2017	33,085	22,530	68.1%	5,201	15.7%
2018	34,615	22,663	65.5%	4,846	14.0%
2019	36,812	23,419	63.6%	4,273	11.6%
Total					
2015	169,824	82,011	48.3%	17,163	10.1%
2016	178,832	86,458	48.4%	17,665	9.9%
2017	189,779	90,087	47.5%	18,717	9.9%
2018	199,813	88,224	44.2%	18,761	9.4%
2019	208,783	90,771	43.5%	16,777	8.0%

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

Table 62 displays the number of ED visits with a primary diagnosis of 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) during CY 2017 to CY 2019.[79] Among participants with only an MHD, a higher percentage completed follow-up visits when compared to ED visits among 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, the percentage of ED visits with a primary MHD diagnosis with a follow-up appointment within 7 days increased slightly from 36.9% in CY 2017 to 37.3% in CY 2019; the percentage of follow-up visits within 30 days increased from 56.9% in CY 2017 to 58.1% in CY 2019.

[79] This measure—*Follow-Up* After Emergency Department *Visit* for Mental Illness, or FUM—was calculated using the HEDIS® proprietary software from Cognizant, an NCQA certified software vendor, which begins with CY 2017 data.

Table 62. Number and Percentage of ED Visits for MHD with a Follow-Up Visit within 7 or 30 Days, CY 2017–CY 2019

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					
2017	9,307	3,854	41.4%	5,661	60.8%
2018	9,702	4,011	41.3%	5,992	61.8%
2019	8,947	3,682	41.2%	5,525	61.8%
Dual Diagnosis (MHD + SUD)					
2017	4,424	1,209	27.3%	2,149	48.6%
2018	4,195	1,124	26.8%	2,037	48.6%
2019	3,916	1,113	28.4%	1,953	49.9%
Total					
2017	13,731	5,063	36.9%	7,810	56.9%
2018	13,897	5,135	37.0%	8,029	57.8%
2019	12,863	4,795	37.3%	7,478	58.1%

Antipsychotic Medication Coverage and Utilization

Table 63 shows the results of the logistic regression models using standard HEDIS® measures of antipsychotic medication utilization to estimate the association between someone being dispensed antipsychotic medication and remaining on antipsychotic medication coverage for 80% or more of a measurement year and having at least one ED (Model 1) or inpatient (Model 2) claim with a primary diagnosis of schizophrenia or schizoaffective disorder during CY 2017 to CY 2019. Both Model 1 and Model 2 controlled for age, gender, geographic region of residence, race, and comorbidity score.[80]

According to the results of Model 1, holding all other covariates constant, individuals with 80% antipsychotic medication compliance in a measurement year had significantly lower odds of having an ED visit with a primary diagnosis of schizophrenia or schizoaffective disorder in that measurement year (OR = 0.71, $p<0.001$). The odds of an ED visit with these primary diagnoses appeared to decrease with a person's age: 35- to 49-year-olds (OR = 0.55, $p<0.001$) and 50- to 64-year-olds (OR = 0.31, $p<0.001$) were much less likely than 18- to 34-year-olds to have an ED visit with a primary diagnosis of schizophrenia or schizoaffective disorder in that measurement year. Females were also found to have lower odds than males (OR = 0.71, $p<0.001$). No statistically significant associations were observed for race.

Relative to Baltimore City residents, residents of all regions except Baltimore Suburban had significantly lower odds of an ED visit with schizophrenia or schizoaffective disorder as the primary diagnosis, with the lowest odds among Western Maryland residents (OR = 0.58, $p<0.001$). The odds of an ED visit for Baltimore Suburban residents were lower compared to Baltimore City residents but were not

[80] A person's comorbidity level is estimated based on the Johns Hopkins Adjusted Clinical Groups (ACG) methodology, which uses claims data to classify individuals based on their projected and/or actual utilization of health care services. For these analyses, Hilltop assigned individuals to one of four comorbidity categories (Low, Moderate, High, Very High) based on their claims records in the measurement years (2017, 2018, 2019)

statistically significant at the 95% level (OR = 0.91; 95% CI: 0.81, 1.01).

Relative to those with a low score for comorbidities according to the ACG grouper, individuals with very high comorbidities had 64% higher odds (OR = 1.64, p<0.01) for an ED visit with a schizophrenia or schizoaffective disorder primary diagnosis, while no statistically significant associations were found for those in the moderate or high comorbidity groups.

Many of the associations with ED utilization estimated by Model 1 remained for inpatient admissions tested in Model 2. Most importantly, people with antipsychotic medication coverage for 80% of a measurement year had much lower odds of an inpatient admission with a primary diagnosis of schizophrenia or schizoaffective disorder than those without (OR = 0.61, p<0.001), when holding all included covariates constant. Individuals in the 35- to 49-year-old (OR = 0.51 p<0.001) and 50- to 64-year-old (OR = 0.28, p<0.001) age groups again had much lower odds than 18- to 34-year-olds of experiencing the outcome of interest, as did females relative to males (OR = 0.84, p<0.001). Individuals categorized in the "other" race group had higher odds than White participants (OR = 1.25, p<0.01), but no other statistically significant associations were found for race.

Compared to the odds of an inpatient admission for schizophrenia or schizoaffective disorder for residents of Baltimore City, Model 2 also estimated similar associations as Model 1 for residents of the Eastern Shore (OR = 0.76, p<0.001) and Southern Maryland (OR = 0.69, p<0.001), though the reduced odds did not persist for Western Maryland. Interestingly, residents of the Washington Suburban region had higher odds compared to Baltimore City residents (OR = 1.17, p<0.01). People with a moderate comorbidity score had much lower odds of an inpatient admission than those in the low category (OR = 0.58, p<0.001), but no statistically significant associations were found for those with a high or very high comorbidity score.

Table 63. Association between Antipsychotic Medication Coverage and ED Visits or Inpatient Admissions with a Primary Diagnosis of Schizophrenia or Schizoaffective Disorder, CY 2017–CY 2019

Variable	Model 1: ED Visit with Primary Diagnosis of Schizophrenia			Model 2: Inpatient Admission with Primary Diagnosis of Schizophrenia		
	Odds Ratio	95% CI		Odds Ratio	95% CI	
Antipsychotic Medication Coverage&	0.71***	0.66	0.77	0.61***	0.57	0.65
Age, Years						
35–49	0.55***	0.50	0.60	0.51***	0.47	0.56
50–64	0.31***	0.28	0.35	0.28***	0.26	0.31
Female†	0.71***	0.65	0.77	0.84***	0.78	0.90
Region†						
Baltimore Suburban	0.91	0.81	1.01	0.97	0.87	1.07
Eastern Shore	0.65***	0.54	0.77	0.76***	0.66	0.89
Southern Maryland	0.74**	0.60	0.91	0.69***	0.57	0.83
Washington Suburban	0.83***	0.75	0.93	1.17**	1.06	1.28

Variable	Model 1: ED Visit with Primary Diagnosis of Schizophrenia			Model 2: Inpatient Admission with Primary Diagnosis of Schizophrenia		
	Odds Ratio	95% CI		Odds Ratio	95% CI	
Western Maryland	0.58***	0.47	0.71	0.97	0.83	1.13
Race†						
Asian	0.80	0.60	1.06	0.85	0.68	1.08
Black	0.99	0.89	1.09	0.93	0.85	1.02
Hispanic	1.09	0.82	1.45	1.11	0.87	1.40
Other	1.05	0.88	1.25	1.25**	1.09	1.45
Comorbidity Score†						
Moderate	0.74	0.54	1.02	0.58***	0.45	0.74
High	1.26	0.91	1.73	0.82	0.63	1.05
Very High	1.64**	1.19	2.27	1.04	0.80	1.34

[&] Defined as being dispensed and remaining on an antipsychotic medication for at least 80% of the treatment period, with treatment period beginning on the index prescription start date and ending on the last day of the measurement year.

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

†, Reference Groups: 18-34, Baltimore City, White, Low

Antidepressant Adherence and ED Visits

Tables 64 and 65 present the results of the logistic regression analyses examining the relationships between antidepressant medication adherence and ED visits in the HealthChoice population aged 18 to 64 years from CY 2017 to CY 2019. The regression controlled for demographic characteristics (race/ethnicity, age, and gender) and comorbidity levels.[81]

Hilltop examined two levels of antidepressant adherence: 12-week adherence and 6-month adherence, which are derived from the HEDIS® standards. Detailed HEDIS® measurements and methodology have been described at length in Section II.[82]

Hilltop also examined two different outcomes: ED visits with a primary diagnosis of depression in the same calendar year and ED visits with a primary diagnosis of depression in the following calendar year.

There was no significant association between 12-week (Table 64) or 6-month (Table 65) adherence to antidepressants and ED visit with a primary diagnosis of depression within the same calendar year. However, comparing these measures to outcomes in the following year, Hilltop found that 12-week antidepressant adherence was associated with slightly higher odds of an ED visit with a primary diagnosis of depression in the following year (Odds Ratio OR=: 1.27, p<0.05; 95% CI: 1.04-1.55). Hilltop continued to observe no statistically significant association between 6-month antidepressant adherence and ED visits.

[81] A person's comorbidity level is estimated based on the Johns Hopkins Adjusted Clinical Groups (ACG) methodology, which uses claims data to classify individuals based on their projected and/or actual utilization of health care services. For our analyses, Hilltop assigned individuals to one of four comorbidity categories (Low, Moderate, High, Very High) based on their claims records in the measurement years (2017, 2018, 2019).

[82] See https://www.ncqa.org/hedis/.

Table 64. Association between 12-Week Antidepressant Adherence and ED Visit with a Primary Diagnosis of Depression, HealthChoice Participants Aged 18–64 Years, CY 2017–CY 2019

Variable	ED Visit with a Primary Diagnosis of Depression					
	Regression 1: Current Calendar Year			Regression 2: Following Calendar Year		
	Odds Ratio	95% CI		Odds Ratio	95% CI	
12-Week Adherence	1.06	0.98	1.14	1.27*	1.04	1.55
Male	2.15***	1.99	2.32	3.00***	2.46	3.68
Age Category (Years) †						
35–49	0.61***	0.56	0.67	0.61***	0.49	0.78
50–64	0.39***	0.35	0.43	0.53***	0.40	0.70
Region†						
Baltimore Suburban	0.97	0.88	1.08	0.91	0.69	1.21
Eastern Shore	0.79**	0.68	0.91	0.67	0.44	1.03
Southern Maryland	0.82*	0.68	0.99	0.95	0.57	1.58
Washington Suburban	0.83**	0.73	0.96	0.79	0.53	1.17
Western Maryland	0.90	0.77	1.04	0.95	0.65	1.40
Race†						
Asian	0.71	0.50	1.02	0.84	0.33	2.15
Black	0.96	0.88	1.06	0.87	0.67	1.12
Hispanic	0.78	0.60	1.02	0.75	0.35	1.59
Other	0.97	0.84	1.12	0.93	0.61	1.44
Comorbidity Score†						
Moderate	1.55***	1.24	1.94	2.52	0.80	7.94
High	2.70***	2.17	3.37	3.05	0.97	9.60
Very High	4.70***	3.76	5.88	4.73**	1.51	14.85

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

†, Reference Groups: 18-34, Baltimore City, White, Low

Table 65. Association between 6-Month Antidepressant Adherence and ED Visit with a Primary Diagnosis of Depression, HealthChoice Participants Aged 18–64 Years, CY 2017–CY 2019

Variable	ED Visit with a Primary Diagnosis of Depression					
	Regression 1b: Current Calendar Year			Regression 2b: Following Calendar Year		
	Odds Ratio	95% CI		Odds Ratio	95% CI	
6-Month Adherence	1.06	0.98	1.14	1.08	0.85	1.38
Male	2.15***	1.99	2.32	2.99***	2.44	3.66
Age Category (Years) †						
35-49	0.61***	0.56	0.67	0.62***	0.49	0.79
50-64	0.39***	0.35	0.43	0.53***	0.40	0.71
Region†						
Baltimore Suburban	0.97	0.88	1.08	0.91	0.69	1.21
Eastern Shore	0.79**	0.68	0.91	0.66	0.43	1.02
Southern Maryland	0.82*	0.68	0.99	0.95	0.57	1.59
Washington Suburban	0.83*	0.73	0.96	0.79	0.53	1.17
Western Maryland	0.90	0.77	1.04	0.96	0.65	1.41
Race†						
Asian	0.71	0.50	1.02	0.84	0.33	2.13
Black	0.96	0.88	1.06	0.85	0.66	1.10
Hispanic	0.78	0.60	1.02	0.75	0.35	1.58
Other	0.97	0.84	1.12	0.93		
Comorbidity Score†						
Moderate	1.55***	1.24	1.94	2.53	0.81	7.94
High	2.70***	2.17	3.37	3.07	0.98	9.60
Very High	4.70***	3.76	5.88	4.75**	1.52	14.83

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

†, Reference Groups: 18-34, Baltimore City, White, Low

Tables 66 and 67 present the results of Hilltop's logistic regression analyses examining the relationships between antidepressant medication adherence in the HealthChoice population aged 18 to 64 years from CY 2017 to CY 2019 and the following: 1) inpatient admission with a primary diagnosis of depression in the same calendar year and 2) inpatient admission with a primary diagnosis of depression in the following calendar year.

Hilltop found that both 12-week antidepressant adherence (OR= 1.13, 95% CI: 1.05-1.22) and 6-month antidepressant adherence (OR=1.14, 95% CI: 1.06-1.24) were associated with higher odds of an inpatient admission with a primary diagnosis of depression in the same calendar year. There was no significant association between 12-week or 6-month antidepressant adherence and inpatient admission with a primary diagnosis of depression in the following measurement year.

Table 66. Association between 12-Week Antidepressant Adherence and Inpatient Admission with a Primary Diagnosis of Depression, HealthChoice Participants Aged 18–64 Years, CY 2017–CY 2019

Variable	Inpatient Admission with Depression as a Primary Diagnosis					
	Regression 1: Current Calendar Year			Regression 2: Following Calendar Year		
	Odds Ratio	95% CI		Odds Ratio	95% CI	
12-Week Adherence	1.13**	1.05	1.22	1.22	1.00	1.50
Male	2.32***	2.15	2.50	3.11***	2.51	3.85
Age Category (Years) †						
35-49	0.67***	0.61	0.72	0.88	0.70	1.12
50-64	0.47***	0.42	0.52	0.72	0.53	0.96
Region†						
Baltimore Suburban	1.01	0.90	1.13	0.96	0.71	1.31
Eastern Shore	0.71***	0.60	0.83	0.58*	0.36	0.93
Southern Maryland	0.93	0.77	1.12	0.69	0.38	1.24
Washington Suburban	1.24***	1.18	1.51	1.17	0.82	1.67
Western Maryland	1.35***	1.18	1.55	1.43	0.99	2.07
Race†						
Asian	0.87	0.65	1.16	0.46	0.14	1.50
Black	0.89*	0.81	0.98	0.74*	0.56	0.97
Hispanic	1.01	0.80	1.26	1.26	0.70	2.28
Other	1.09	0.94	0.25	1.31	0.88	1.93
Comorbidity Score†						
Moderate	1.42**	1.15	1.75	0.77	0.37	1.62
High	2.21***	1.79	2.72	1.02	0.49	2.15
Very High	4.43***	3.60	5.45	1.63	0.78	3.41

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

†, Reference Groups: 18-34, Baltimore City, White, Low

Table 67. Association between 6-Month Antidepressant Adherence and Inpatient Admission with a Primary Diagnosis of Depression, HealthChoice Participants Aged 18–64 Years, CY 2017– CY 2019

Variable	Inpatient Admission with Depression as a Primary Diagnosis					
	Regression 1b: Current Calendar Year			Regression 2b: Following Calendar Year		
	Odds Ratio	95% CI		Odds Ratio	95% CI	
6-Month Adherence	1.14***	1.06	1.24	1.04	0.81	1.34
Male	2.32***	2.15	2.50	3.09***	2.50	3.83
Age Category (Years)†						
35– 49	0.66***	0.61	0.73	0.89	0.70	1.13
50– 64	0.46***	0.42	0.51	0.72*	0.54	0.97

Variable	Inpatient Admission with Depression as a Primary Diagnosis					
	Regression 1b: Current Calendar Year			Regression 2b: Following Calendar Year		
	Odds Ratio	95% CI		Odds Ratio	95% CI	
Region†						
Baltimore Suburban	1.01	0.91	1.13	0.97	0.71	1.31
Eastern Shore	0.70***	0.60	0.83	0.58*	0.36	0.92
Southern Maryland	0.93	0.77	1.13	0.69	0.39	1.25
Washington Suburban	1.34***	1.18	1.51	1.17	0.83	1.67
Western Maryland	1.35***	1.18	1.55	1.55	1.00	2.09
Race†						
Asian	0.87	0.65	1.17	0.45	0.14	1.49
Black	0.89*	0.81	0.99	0.73*	0.56	0.96
Hispanic	1.01	0.81	1.27	1.26	0.70	2.28
Other	1.09	0.95	1.25	1.30	0.88	1.92
Comorbidity Score†						
Moderate	1.42**	1.15	1.75	0.77	0.37	1.62
High	2.20***	1.79	2.71	1.03	0.50	2.16
Very High	4.41***	3.58	5.43	1.63	0.78	3.41

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

†, Reference Groups: 18-34, Baltimore City, White, Low

The relationship between medication adherence and higher ED and inpatient utilization seems counter-intuitive. Perhaps persons with more severe depression are more likely to adhere to their prescribed medications but remain at high risk of ED and inpatient utilization because of the nature of the disorder.

Outside of antidepressant adherence status, Hilltop identified several variables that may be of interest in terms of their association with ED visits or inpatient admission with a primary diagnosis of depression. Being male was consistently associated with significantly higher odds of an ED or inpatient admission. This held true regardless of adherence status (12-week vs. 6-month adherence) and outcome timing (current year vs. following year). Outside of sex, we found that, regardless of adherence status, participants aged 35-49 or 50-64 had lower odds of a same-year visit, lagged ED visit, or same-year inpatient admission as compared to participants aged 18 to 34. While there were no significant associations between race/ethnicity and odds of an ED visit, we found that participants identifying as Black had lower odds of an in inpatient admission with a primary diagnosis of depression within the same year or within the following year as compared to participants identifying as White. This held true regardless of adherence status. Participants in moderate or higher comorbidity groups had increased odds of same-year ED or inpatient admission with a primary diagnosis of depression.

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.[83] Table 68 presents the demographic characteristics of HealthChoice participants with an SUD diagnosis. Among racial and ethnic groups, White participants made up the highest proportion of persons with an SUD, followed by Black participants. The share of White and Black participants with an SUD decreased from CY 2015 to CY 2019, with the percentage of Black participants decreasing by close to 2 percentage points. Between CY 2015 and CY 2019, males remained the majority of persons with an SUD, making up 56.8% of the CY 2019 population. Also, the region with the highest share of persons with SUD switched from Baltimore City in CY 2015 to the Baltimore Suburban region in CY 2019.

Table 68. Demographic Characteristics of HealthChoice Participants with an SUD, CY 2015–CY 2019

Demographic Characteristics	CY 2015	CY 2016	CY 2017	CY 2018	CY 2019
	% of Total	% of Total	% of Total	% of Total	% of Total
Race/Ethnicity					
Asian	0.6%	0.6%	0.6%	0.7%	0.7%
Black	38.8%	37.8%	37.5%	37.3%	36.9%
White	53.5%	53.9%	53.6%	52.6%	52.4%
Hispanic	1.9%	1.6%	1.5%	1.6%	1.6%
Native American	0.4%	0.4%	0.4%	0.4%	0.4%
Other	4.9%	5.7%	6.5%	7.4%	8.0%
Total	**100%**	**100%**	**100%**	**100%**	**100%**
Sex					
Female	44.4%	43.8%	43.4%	43.6%	43.2%
Male	55.6%	56.2%	56.6%	56.4%	56.8%
Total	**100%**	**100%**	**100%**	**100%**	**100%**
Region					
Baltimore City	32.0%	30.5%	30.1%	29.3%	28.9%
Baltimore Suburban	30.2%	31.3%	31.6%	32.0%	32.1%
Eastern Shore	12.1%	12.5%	12.7%	12.6%	12.9%
Southern Maryland	5.3%	5.7%	5.8%	5.7%	5.7%
Washington Suburban	9.8%	9.1%	8.5%	8.9%	8.8%
Western Maryland	10.5%	10.9%	11.2%	11.3%	11.6%
Out of State	0.2%	0.1%	0.1%	0.1%	0.1%
Total	**100%**	**100%**	**100%**	**100%**	**100%**
Age Group (Years)					
0-18	6.3%	4.9%	4.1%	4.2%	4.0%

[83] Individuals were identified as having an SUD if they had a claim that met the COMAR 10.67.08.02 definition of SUD, which includes presence of one of the following: (ICD-10 diagnosis codes: F10-19, O99310-99315, O99320-99325, R780-785; OR ICD-9 diagnosis codes:291-292, 303-304, 305.0, 305.2-305.9),648.3; WITH (Revenue codes 0114, 0116, 0124, 0126, 0134, 0136, 0154, 0156, 0762, 0900, 0905-0906, 0911-0916, 0918-0919, 0944-0945, 0450-0452, 0456, 0459 OR Procedure codes 99.201-99.205, 99.211-99.215, J8499, J2315); HCPCS H0001, H0004, H0005, H0014-H0016, H0020, H0047, H2036, J8499 –OR Revenue code of "0100" and a provider type of "55."

Demographic Characteristics	CY 2015	CY 2016	CY 2017	CY 2018	CY 2019
	% of Total	% of Total	% of Total	% of Total	% of Total
19-64	93.7%	95.2%	95.9%	95.8%	96.0%
Total	**100%**	**100%**	**100%**	**100%**	**100%**
Total Participants	**63,229**	**68,584**	**74,717**	**77,889**	**78,874**

Note: "Other" race/ethnicity category includes Pacific Islanders, Alaskan Natives, 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[84] targeting SUD. 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, 2012). In July 2016, new SBIRT codes were introduced to give providers greater flexibility when billing SBIRT services (Maryland Department of Health, 2016).

Table 69 presents the number of HealthChoice participants who received an SBIRT service during the evaluation period. The total number of people receiving SBIRT services increased across the evaluation period. The number of assessments completed per 1,000 HealthChoice participants doubled between CY 2015 and CY 2016, and more than doubled between CY 2017 and CY 2018. The number of assessments between CY 2018 and CY 2019 increased by 65.7%.

Adolescents aged 15 to 18 years had the highest rate of SBIRT services completed in CY 2016 through CY 2019. Adults aged 40 to 64 had the second highest rate from CY 2016 until CY 2019, when adults aged 19 to 20 had the second highest rate for the first time. The number of assessments completed per 1,000 HealthChoice participants aged 15 to 18 increased by 41.5% between CY 2017 and CY 2019.

Table 69. Number and Percentage of Health Choice Participants Receiving an SBIRT Service, by Age Group, CY 2015–CY 2019

	Age Group (Years)					Total
	14 and under	15–18	19–20	21–39	40–64	
CY 2015*						
# of Participants	532,231	110,125	46,193	345,781	269,777	**1,304,107**
# with Service	115	199	65	634	649	**1,662**
Per 1000	0.2	1.8	1.4	1.8	2.4	**1.3**
CY 2016*						
# of Participants	527,049	108,872	46,018	341,629	261,863	**1,285,431**
# with Service	491	571	159	1,108	1,052	**3,381**
Per 1000	0.9	5.2	3.5	3.2	4	**2.6**
CY 2017*						
# of Participants	544,260	113,790	49,229	371,558	276,606	**1,355,443**

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

	Age Group (Years)					Total
# with Service	717	1,131	256	1,676	2,005	**5,785**
Per 1000	1.3	9.9	5.2	4.5	7.2	**4.3**
CY 2018*						
# of Participants	553,063	117,167	51,214	385,419	282,853	**1,389,716**
# with Service	3,321	3,485	704	3,577	3,870	**14,957**
Per 1000	6	29.7	13.7	9.3	13.7	**10.8**
CY 2019*						
# of Participants	552,517	118,243	51,600	377,114	278,019	**1,377,493**
# with Service	6,590	6,076	1,278	4,164	4,537	**22,645**
Per 1000	11.9	51.4	24.8	11.0	16.3	**16.4**

*SBIRT services began in CY 2015 and new codes were introduced in CY 2016, which influenced the increase.

The Department also monitors the extent to which HealthChoice participants with an SUD access ambulatory care services. Table 70 displays the percentage of HealthChoice participants with an SUD with an ambulatory care visit, and those having at least one ambulatory care visit whose primary diagnosis was SUD. From CY 2015 to CY 2016, ambulatory care utilization by participants with an SUD increased from 71.2% to 82.8%.

The percentage of participants with any SUD—which includes participants diagnosed with only an SUD and those with a co-occurring MHD and SUD—who had at least one ambulatory care visit increased from 80.0% in 2015 to 88.4% in 2019. 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 91.5% in CY 2015 to 94.7% in CY 2019.

Participants diagnosed with an SUD-only experienced the greatest increase—5.8 percentage points—between CY 2016 and CY 2017. The percentage of participants who had at least one ambulatory care visit with a primary diagnosis of an SUD increased across the measurement period as well. Among all participants with an SUD, the percentage with at least one SUD-related ambulatory care visit increased by 30.5 percentage points between CY 2015 and CY 2019.

Table 70. HealthChoice Participants Who Had an Ambulatory Care Visit, by SUD Status, CY 2015–CY 2019

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					
2015	35,628	25,355	71.2%	6,027	16.9%
2016	37,938	27,154	71.6%	6,837	18.0%
2017	41,632	32,222	77.4%	15,038	36.1%

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
2018	43,274	35,152	81.2%	19,060	44.0%
2019	42,062	34,839	82.8%	19,859	47.2%
Dual Diagnosis (MHD + SUD)					
2015	27,601	25,257	91.5%	5,836	21.1%
2016	30,646	27,973	91.3%	6,909	22.5%
2017	33,085	30,674	92.7%	12,773	38.6%
2018	34,615	32,499	93.9%	16,146	46.6%
2019	36,812	34,876	94.7%	19,059	51.8%
Total					
2015	63,229	50,612	80.0%	11,863	18.8%
2016	68,584	55,127	80.4%	13,746	20.0%
2017	74,717	62,896	84.2%	27,811	37.2%
2018	77,889	67,651	86.9%	35,206	45.2%
2019	78,874	69,715	88.4%	38,918	49.3%

Table 71 displays the percentage of HealthChoice participants with an SUD who had at least one outpatient ED visit and at least one ED visit with an SUD as a primary diagnosis.[85] From CY 2015 to CY 2019, the number of participants with an SUD-only and dual diagnosis (MHD and SUD) who had at least one ED visit decreased by 3.1 and 4.1 percentage points, respectively. The percentage of participants who had at least one SUD-related ED visit decreased slightly, from 13.0% in CY 2015 to 12.0% in CY 2019.

Table 71. HealthChoice Participants Who Had an Outpatient ED Visit, by SUD Status, CY 2015–CY 2019

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					
2015	35,628	18,010	50.6%	3,410	9.6%
2016	37,938	19,251	50.7%	3,407	9.0%
2017	41,632	20,972	50.4%	3,884	9.3%
2018	43,274	20,430	47.2%	3,969	9.2%
2019	42,062	19,965	47.5%	3,929	9.3%

[85] 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
Dual Diagnosis (MHD + SUD)					
2015	27,601	18,685	67.7%	4,833	17.5%
2016	30,646	20,887	68.2%	4,794	15.6%
2017	33,085	22,530	68.1%	5,430	16.4%
2018	34,615	22,663	65.5%	5,437	15.7%
2019	36,812	23,419	63.6%	5,564	15.1%
All					
2015	63,229	36,695	58.0%	8,243	13.0%
2016	68,584	40,138	58.5%	8,201	12.0%
2017	74,717	43,502	58.2%	9,314	12.5%
2018	77,889	43,093	55.3%	9,406	12.1%
2019	78,874	43,384	55.0%	9,493	12.0%

Table 72 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).[86] Overall, the percentage of all participants with an SUD-only diagnosis who received at least one methadone replacement therapy decreased across the evaluation period—from 39.2% in CY 2015 to 35.2% in CY 2019. The percentage of all participants with an SUD-only who received at least one MAT consistently increased during the evaluation period—from 56.6% in CY 2015 to 61.5% in CY 2019.

Table 72. Number and Percentage of HealthChoice Participants Who Received Methadone Replacement Therapy or MAT, by SUD Status, CY 2015–CY 2019

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					
2015	35,628	13,973	39.2%	20,164	56.6%
2016	37,938	15,215	40.1%	22,185	58.5%
2017	41,632	16,344	39.3%	24,830	59.6%
2018	43,274	16,109	37.2%	26,323	60.8%
2019	42,062	14,799	35.2%	25,884	61.5%
Dual Diagnosis (MHD + SUD)					
2015	27,601	8,891	32.2%	15,784	57.2%

[86] MAT was defined as any treatment with buprenorphine, naloxone, methadone, or naltrexone.

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
2016	30,646	10,132	33.1%	18,374	60.0%
2017	33,085	10,221	30.9%	20,131	60.8%
2018	34,615	10,141	29.3%	21,440	61.9%
2019	36,812	10,870	29.5%	23,894	64.9%
All					
2015	63,229	22,864	36.2%	35,948	56.9%
2016	68,584	25,347	37.0%	40,559	59.1%
2017	74,717	26,565	35.6%	44,961	60.2%
2018	77,889	26,250	33.7%	47,763	61.3%
2019	78,874	25,669	32.5%	49,778	63.1%

The Department 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 73 shows the number and percentage of ED visits with a primary diagnosis of SUD with an outpatient follow-up visit (FUA) from CY 2017 to CY 2019.[87] The results are displayed by the participant's status as having an SUD-only or co-occurring MHD and SUD. In CY 2017 among all HealthChoice participants with an SUD, 17.4% of all ED visits with a primary diagnosis of SUD had a follow-up visit within 7 days and 29.2% had an appointment within 30 days. In CY 2019, the percentage of ED visits with a follow-up appointment increased to 21.9% for an appointment within 7 days and 33.6% for an appointment within 30 days. The percentage of ED visits 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.

Table 73. Number of ED Visits for SUD with a Follow-Up Visit within 7 or 30 days, CY 2017–CY 2019

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					
2017	4,708	581	12.3%	953	20.2%
2018	4,562	649	14.2%	1,045	22.9%
2019	4,644	673	14.5%	1,034	22.3%

[87] This measure was calculated using the HEDIS® proprietary software from Cognizant, an NCQA certified software vendor, which begins with CY 2017 data.

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
Dual Diagnosis (MHD + SUD)					
2017	7,097	1,475	20.8%	2,489	35.1%
2018	7,327	1,743	23.8%	2,801	38.2%
2019	7,567	2,004	26.5%	3,066	40.5%
Total					
2017	11,805	2,056	17.4%	3,442	29.2%
2018	11,889	2,392	20.1%	3,846	32.3%
2019	12,211	2,677	21.9%	4,100	33.6%

Section VI Conclusion

The HealthChoice program focuses on providing a variety of preventive services to participants. Over the evaluation period, many performance measures improved, such as breast cancer screening rates, colorectal cancer screening rates, rates for well-child visits, well-care visits, immunizations, and blood lead screening rates. In addition, the percentage of pregnant women who received prenatal services in a timely manner increased by 3.8 percentage points from CY 2015 to CY 2019. Hilltop's multiple regression analysis of the effects of obtaining early prenatal care in the HealthChoice population found it was associated with a 28% decrease in the odds of low birth weight and nearly 70% reduction in the odds of a very low birth weight. Greater adherence to asthma medication was associated with reductions in Asthma ED use although the effects on asthma inpatient admissions only had associations with admissions in the year after measurement. Reductions in diabetes related ED and inpatient utilization were significantly associated with HEDIS® measures if both eye examinations and Hba1c measures occurred. Schizophrenia related ED and inpatient use was reduced as expected with adherence to anti-psychotic medication use. Antidepression medication adherence modestly reduced the odds of inpatient admissions for depression, according to the results of Hilltop's regression analysis. The observed change in depression-related ED was mixed, however.

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 are improving. Although the increases in behavioral health use may represent the need for better access to care for persons with MHD and SUD. The Department will monitor the use of services to assure that necessary care is being delivered and that, where possible, prevention and early intervention can minimize the severity and duration of such conditions. The Department 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 has the opportunity to 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, HVS and ACIS, dental services for former foster care individuals, Adult Dental pilot, Increased Community Services (ICS), and the Family Planning program.

In mid-2018, the Department submitted an amendment to the currently 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 National DPP, and adjust the criteria for the Family Planning program. The waiver amendment application was approved in March 2019.

In mid-2019, the Department submitted an amendment request to implement a Collaborative Care Model (CoCM) pilot. This request was approved in April 2020 and coverage for Collaborative Care program 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.

Residential Treatment for Individuals with 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 for American Society of Addiction Medicine (ASAM) residential levels 3.1, 3.3, 3.5, 3.7, and 3.7-WM (licensed as 3.7D in Maryland) for up to two non-consecutive 30-day stays annually.

On January 1, 2019, the Department phased in coverage of ASAM level 3.1 and, in March 2019, 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. The Department extended coverage to individuals dually eligible for Medicare and Medicaid as of January 1, 2020.

Table 74 displays IMD utilization for individuals aged 21 and older under the HealthChoice

demonstration from FY 2018 through FY 2020 (July 2017 through June 2020). The number of unique users of IMD services increased by 12.3% during the evaluation period. The total count of IMD services (excluding level 3.1 services) increased by 34.1%.

Table 74. Utilization of Residential Treatment for SUDs, FY 2018–FY 2020

Level of Service	FY 2018			FY 2019			FY 2020		
	Recipient Count	Unique Recipient Count**	Service Count	Recipient Count	Unique Recipient Count**	Service Count	Recipient Count	Unique Recipient Count**	Service Count
3.7-WM	4,650	4,391	29,334	5,125	4,819	31,098	3,705	3,435	21,469
3.7	5,689	2,530	87,097	6,126	2,836	96,343	4,159	2,024	61,045
3.5	1,873	886	37,478	2,926	1,871	61,307	3,491	2,520	100,348
3.3	1,243	940	32,484	1,566	1,074	36,840	1,760	1,133	67,062
3.1*	N/A	N/A	N/A	453	192*	11,857	1,821	707	99,371
Total	**13,455**	**8,747**	**186,393**	**16,196**	**10,792**	**237,445**	**14,936**	**9,819**	**349,295**

*Level 3.1 services were covered as of January 1, 2019.

**The unique recipient count (unique number of users) does not equal the sum of all recipients. The unique number of users had at least one service, and some recipients had more than one service.

Evidence-Based Home Visiting Services Community Health Pilot

The HVS Pilot program is based on two evidence-based models focused on the health of pregnant women: Nurse Family Partnership and Healthy Families America (HFA). The HVS program implements evidence-based home visiting services to Medicaid-eligible high-risk pregnant women and children up to age two. Each HVS pilot program is managed locally by a lead local governmental entity (lead entity) that can fund 50% of total HVS pilot costs, provide leadership, and coordinate with key community partners to implement the pilot. Each lead entity may also identify other entities that will participate and assist the lead entity in providing services in the HVS pilot (participating entities).

In 2017, the Department approved the first lead entity—Harford County Health Department—to provide home visiting services for up to 30 families under the HVS pilot. A second applicant—Garrett County Health Department—was approved in 2018 to serve up to 13 families. 'HVS was authorized for the current waiver period, and the dept intends to apply to CMS to extend this program into the next waiver period. Each lead entity chose to implement the HFA model, which uses home visits to assess the family's needs and provides resources for the health and wellbeing of the child and caregiver. The HVS Pilot program allows participants to receive services until the child's second birthday.

The Department and Hilltop monitor and evaluate the health and services provided to each participant in the HVS pilot and will continue to enroll new participants and provide services through December 31, 2021. Table 75 lists the evaluation measures used for the HVS program participants.

Table 75. HVS Annual Evaluation Measures

Measure	Mother	Child

Measure	Mother	Child
Depression screening	✓	
Treatment for a behavioral health condition	✓	
Ambulatory care visit by behavioral health condition	✓	
Initiation and engagement of alcohol and other drug dependence treatment (IET)	✓	
Receipt of an oral contraceptive prescription	✓	
Postpartum visit	✓	
Well-care visit		
Emergency department visit		✓
ED Visit for Injury, poisoning, or trauma		✓
Receipt of NICU services		✓
Inpatient admission		✓
Inpatient admission for injury, poisoning, or trauma		✓
Dental visit		✓
Blood lead screening*		✓
Very low birth rate kick payment	✓	✓

Assistance in Community Integration Services Community Health Pilot

The ACIS Pilot provides case management support services and housing case management services to an at-risk population that meets the needs-based criteria for health and housing. Housing case management includes assisting participants in connecting with health care and social service providers and supporting the acquisition of independent living skills. Tenancy-based case management refers to assisting participants in obtaining the services of state and local housing programs to locate and support the individual's medical needs in the home.[88]

Participation in ACIS is capped at 300 individuals annually. In July 2018, the Department sought a waiver amendment to expand ACIS with an additional 300 participant spaces. This was approved in April 2019. Thus, the new statewide capacity is 600 spaces. Similar to the HVS pilot, each ACIS pilot program is managed by a lead entity that funds 50% of total pilot costs with local dollars, provides leadership, and coordinates with key community partners—including participating entities—to implement the pilots.

The Department currently oversees four lead entities in the implementation of ACIS Pilots:

- Baltimore City Mayor's Office of Homeless Services: 200 individuals

[88] See Assistance in Community Integration Services Pilot Protocol at https://mmcp.health.maryland.gov/Documents/HealthChoice%20Community%20Pilots/Attachment%20E%20-%20FINAL%20MD%20HealthChoice%20STCs%20with%20Approved%20ACIS%20protocol%2006162017.2.pdf

- Montgomery County Department of Health and Human Services: 110 individuals
- Cecil County Health Department: 15 individuals
- Prince George's County Health Department: 75 individuals

In July 2019, the Department released a third round of ACIS Pilot Request for Applications for the remaining available spaces. The Department and Hilltop monitor and evaluate the ACIS pilot. The evaluation measures used for ACIS participants are as follows:

- Programmatic Data Summary Measures
    - General living situation at time of enrollment
    - Specific living situation at time of enrollment
    - ACIS service usage
    - Living situation at time of ACIS service delivery
    - Discharge reason/destination of ACIS participants
    - ACIS participants stably housed
    - Number of months to stable housing from ACIS enrollment date
    - Per member per month (PMPM) billing summaries
- Health Service Utilization Measures
    - ED visits
    - Avoidable ED visits
    - Inpatient admissions
    - MHD inpatient admissions
    - SUD inpatient admissions
    - Nursing facility admissions
    - Ambulatory care visits
    - MHD ambulatory care visits
    - SUD ambulatory care visits
    - Participants with a primary diagnosis of an MHD
    - Participants with a primary diagnosis of an SUD

In CY 2019, the four lead entities enrolled a total of 253 participants; an increase from 107 participants in CY 2018. During CY 2019, Baltimore City served the largest number (123) of ACIS participants, followed by Montgomery County (66); Prince George's and Cecil Counties each served 32 participants. Since the ACIS population is relatively small, the results are not shown.

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. 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 Maryland has provided dental services as a benefit to former foster care individuals since January 1, 2017.

Table 76 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 in CY 2017 through CY 2019. The percentage of former foster care participants who had at least one dental visit increased slightly by 0.5 percentage points from CY 2017 to CY 2018 before increasing by 3.7 percentage points by CY 2019. In CY 2019, the percentage of visits across regions varied from 21.2% to 31.8%. The Department anticipates that, over time, the number and percentage of former foster care participants receiving services will continue to increase.

Table 76. Number and Percentage of Former Foster Care Participants Enrolled in Medicaid for 320 Days Who Had Dental Services, by Region, CY 2017–CY 2019

Region	CY 2017			CY 2018			CY 2019		
	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	563	108	19.2%	540	104	19.3%	415	98	23.6%
Baltimore Suburban	374	88	23.5%	339	86	25.4%	306	84	27.5%
Eastern Shore	*	*	23.3%	*	*	24.3%	*	*	26.3%
Southern Maryland	*	*	19.4%	*	*	25.0%	*	*	21.2%
Washington Suburban	173	43	24.9%	161	37	23.0%	154	49	31.8%
Western Maryland	100	23	23.0%	91	22	24.2%	92	21	22.8%
Total	**1,331**	**289**	**21.7%**	**1,237**	**275**	**22.2%**	**1,076**	**279**	**25.9%**

*Cell values of 10 or less have been suppressed.

Table 77 shows the number and percentage of former foster care participants who had an outpatient ED visit with a dental diagnosis by region in CY 2017 through CY 2019. Overall, the percentage of former foster care participants who had an ED visit with a dental diagnosis decreased from 4.0% to 3.5% from CY 2017 to CY 2019. Participants living in Western Maryland used ED services at the highest rate at 4.9% in CY 2019, a 4.1 percentage point increase from CY 2018. Participants living on the Eastern Shore used ED services at the highest rate of 6.9% in CY 2018, but this decreased to 4.3% in CY 2019.

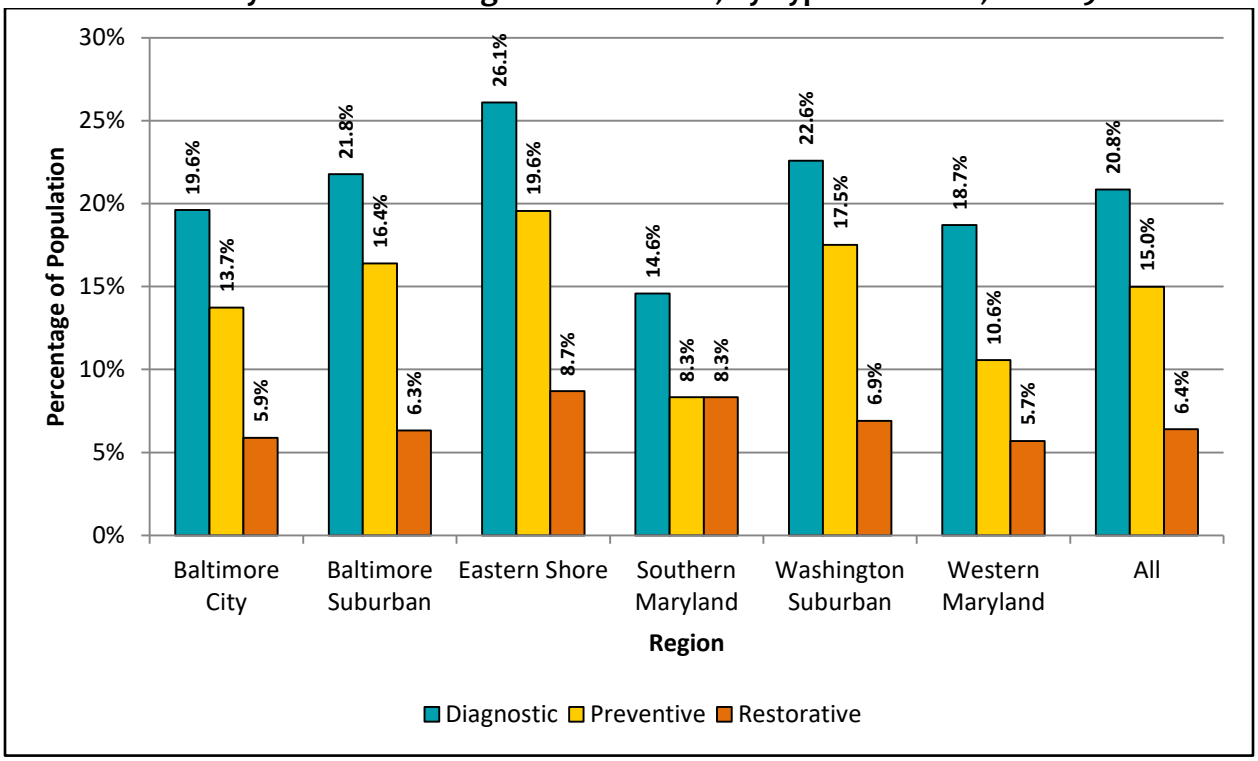
Table 77. Number and Percentage of Former Foster Care Participants Enrolled in Medicaid for Any Period Who Had an Outpatient ED Visit with Any Dental Diagnosis, by Region, CY 2017–CY 2019

Region	CY 2017			CY 2018			CY 2019		
	Total Number of Participants	Total with at Least One ED Visit	Percentage with One ED Visit	Total Number of Participants	Total with at Least One ED Visit	Percentage with One ED Visit	Total Number of Participants	Total with at Least One ED Visit	Percentage with One ED Visit
Baltimore City	750	37	4.9%	692	34	4.9%	561	25	4.5%
Baltimore Suburban	457	15	3.3%	452	13	2.9%	427	11	2.6%
Eastern Shore	*	*	4.6%	*	*	6.9%	*	*	4.3%
Southern Maryland	*	*	0.0%	*	*	4.5%	*	*	4.2%
Washington Suburban	*	*	3.8%	*	*	0.0%	*	*	1.4%
Western Maryland	*	*	2.4%	*	*	0.8%	*	*	4.9%
Total	**1,687**	**68**	**4.0%**	**1,629**	**57**	**3.5%**	**1,468**	**51**	**3.5%**

*Cell values of 10 or less have been suppressed.

Figure 20 shows the percentage of former foster care participants by region and type of service for CY 2019 enrolled in Medicaid for any period of time. Overall, 20.8% received diagnostic services, 15.0% received preventive services, and 6.4% received restorative services. The Department expects the share of preventive and diagnostic services to increase and the percentage of restorative services to decrease as more participants receive dental services on a regular basis.

Figure 20. Percentage of Former Foster Care Participants by Region Enrolled in Medicaid for Any Period Receiving Dental Services, by Type of Service, CY 2019



Adult Dental Pilot Program

On July 2, 2018, the Department 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 and limited coverage through Medicare. The Department received approval in the spring of 2019 and implemented the program effective June 1, 2019. The Department'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 extractions. In the first seven months (June 1, 2019, through December 31, 2019) of the adult dental pilot, 4,508 (12.2%) participants had at least one dental visit, 4,354 (11.8%) had a diagnostic visit, 2,325 (6.3%) had a preventive care visit, and 1,321 (3.6%) had a restorative visit.[89]

National Diabetes Prevention Program

The Department expanded coverage of the National Diabetes Prevention Program (DPP) lifestyle change program to all eligible HealthChoice participants as of September 1, 2019. The National

[89] Data not shown.

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. By identifying participants early through screening and testing for prediabetes, the Department 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.

Increased Community Services

The ICS program provides cost-effective HCBS to certain adults with physical disabilities as an alternative to institutional care in a nursing facility. Identical to the Department'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. The 2016 waiver renewal expanded the program from 30 to 100 potential participants. The ICS program aims to provide quality services for individuals in the community, ensure the safety and wellbeing of its participants, and increase opportunities for self-advocacy and self-reliance. The number of participants in the ICS program increased from 27 in CY 2015 to 35 in December 2019.

The Department monitors the health, welfare, and services rendered to each participant to ensure timely and quality provision of care. All participants from CY 2016 (when results became available) to CY 2019 had a plan of service (POS) that addressed their health and safety risk factors, as well as personal goals. Also, all participants received an annual level of care determination. All participants signed a Freedom of Choice waiver instead of individually selecting institutional care, services, and providers. All the ICS participants and Designated Supports Planning Supervisors received annual training to identify, address, and prevent abuse, neglect, and exploitation. In addition, all supervisors received annual training on falls prevention, and the case management agencies received annual training on behavioral health from the Department.

Family Planning Program

The HealthChoice waiver allows the Department to provide a limited benefit package of family planning services to eligible participants. 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. The Department has expanded eligibility under its Family Planning Program to lift the age limit, and open coverage to include men, as well as cover services for postpartum individuals effective July 1, 2018. Specifically, the §1115 waiver allows women to receive full Medicaid benefits for two months postpartum. 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 in Family Planning program.

Table 78 shows that Family Planning program enrollment decreased from CY 2015 to CY 2017, with a slight increase in CY 2018, followed by a 19.7% increase in CY 2019. The initial decline in enrollment may be attributed to the ACA expansion in CY 2014, which increased the number of women who were eligible for full Medicaid benefits, thereby decreasing the population who needed family planning-only services. The increase in enrollment in CY 2018 and CY 2019 may be attributed to expanded eligibility in July 2018.

Table 78. Number and Percentage of Family Planning Participants (Any Period of Enrollment) Who Received a Corresponding Service, CY 2015–CY 2019

	CY 2015	CY 2016	CY 2017	CY 2018	CY 2019
Number of Participants	19,754	15,447	13,154	13,680	16,375
Number with at Least 1 Service	4,671	2,925	2,271	1,901	2,034
Percentage with at Least 1 Service	23.6%	18.9%	17.3%	13.9%	12.4%

The percentage of participants enrolled in the Family Planning program for 12 months with at least one service decreased from 22.3% in CY 2015 to 8.5% in CY 2019 (Table 79). The number of participants with 12-month enrollment in the program also decreased during the evaluation period. Women who lose Medicaid coverage after their postpartum period will automatically be enrolled in the Family Planning program, and their coverage will auto-renew annually, replacing the limit that provided this coverage for only up to five years. However, some women may be unaware that they are enrolled in the program because no action is required on their part. Consequently, they may not seek services or know they are eligible to receive them.

Table 79. Number and Percentage of Family Planning Participants (12-Month Enrollment) Who Received a Corresponding Service, CY 2015–CY 2019

	CY 2015	CY 2016	CY 2017	CY 2018	CY 2019
Number of Participants	7,488	6,758	6,314	5,965	5,962
Number with at Least 1 Service	1,672	1,198	862	654	507
Percentage with at Least 1 Service	22.3%	17.7%	13.7%	11.0%	8.5%

Section VII Conclusion

Resources generated through managed care efficiencies allowed the Department to establish innovative programs to improve the health status of the HealthChoice population. The year 2017 saw the beginning of three initiatives. 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 HVS pilot program is serving high-risk pregnant women and children up to age two, and the ACIS Pilot program is serving individuals with complex health care needs who are at risk of institutionalization and/or homelessness. An expansion of dental services was created for two groups; former foster care participants receive

dental coverage up to age 26 and a pilot program to offer dental coverage to adults who are dually eligible for both Medicare and Medicaid began in 2019.

The Department monitors several ongoing programs, including the ICS program for disabled adults, whose enrollment grew to 35 participants in 2019. In the long-running Family Planning program, eligibility was expanded by removing the age limit and opening coverage to men as well. The Family Planning program's integration with MHC is now complete; as of 2019, more than 16,300 participants (with any period of enrollment) were enrolled in the program, and 12.4% received a family planning service.

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Appendix. Definitions and Specifications

Table A1. Coverage Category Inclusion Criteria

Coverage Category	Inclusion Criteria		
Disabled	Coverage Group = A04, H01, H98, H99, L01, L98, L99, S01, S02, S03, S04, S05, S06, S07, S08, S10, S13, S14, S16, S98, S99, T01, T02, T03, T04, T05, T99		
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
A01	Childless Adults < 65, 138% FPL, former PAC
A02	Childless Adults < 65, 138% FPL, inc disabled
A03	Parents and Caretaker Relative 124%-138% FPL
A04	Disabled Adults, no Medicare 77% FPL
C13	Presumptive Eligibility
D01	Employer Sponsored Insurance (ESI),200%-250% FPL
D02	MCHP Premium, 212%-264% FPL
D03	Employer Sponsored Insurance (ESI),250%-300% 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
F01	TCA Recipients
F02	Post-TCA: Earnings Extension
F03	Post-TCA: Support Extension
F04	FAC Non-MA Requirement
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

Coverage Group	Description
G99	Refugee Med Needy Spenddown
H01	HCB Waiver
H98	HCB Waiver Med Needy
H99	HCB Waiver Spenddown
L01	SSI Recipient in LTC
L98	ABD Long Term Care
L99	ABD Long Term Care Spenddown
P01	GPA to Pregnant Women (ended 7/97)
P02	Pregnant Women up to 189% FPL
P03	Newborns
P04	Med Needy Newborns (ended 6/30/98)
P05	Newborns of PWC Moms (ended 6/30/98)
P06	Newborns of Elig Mothers and their < 1
P07	Children 1-19, 1-6 143% FPL, 6-19 138% FPL
P08	Child Under 19, up to 100% FPL
P09	Maryland Kids Count (ended 6/30/98)
P10	Family Planning Program (FPP)
P11	Pregnant Women 190% - 264% of FPL
P12	Newborns of P11 Mothers
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	Section 5103
S06	Qualified Disabled Working Individuals
S07	SLMB group I
S08	SLMB/MPAP
S10	QMB and MPAP
S11	TEMHA/MPAP
S12	Family Planning Program/MPAP
S13	ACE or EID
S14	SLMB group II
S15	SLMB group III
S16	Increased Community Services Program (ICS) formerly MPDP
S17	MPDP/SLMB I
S18	MPDP/SLMB II
S98	ABD - Med Needy

Coverage Group	Description
S99	ABD – Spenddown
T01	TCA Adult or Child In LTC
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	MAGI and Non-MAGI Undocumented or Ineligible Aliens, Emergency Services only
X03	MAGI Undocumented or Ineligible Aliens (dropped 2/15/17)

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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