The Hilltop Institute

Evaluation of the HealthChoice Program
CY 2013 to CY 2017

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UMBC

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List of Abbreviations

ACA	Affordable Care Act
ACCU	Administrative Care Coordination Units
ACIP	Advisory Committee on Immunization Practices
ACIS	Assistance in Community Integration Services
AHRQ	U.S. Agency for Healthcare Research and Quality, HHS
AIDS	Acquired immunodeficiency syndrome
ART	Antiretroviral therapy
ASAM	American Society of Addiction Medicine (ASAM)
ASO	Administrative services organization
BHA	Behavioral Health Administration
CD4	Cluster of differentiation 4
CDC	Centers for Disease Control and Prevention
CHCS	Center for Health Care Strategies (CHCS)
CHIP	Children's Health Insurance Program
CLR	Childhood Lead Registry
CMS	Centers for Medicare & Medicaid Services
COMAR	Code of Maryland Regulations
COPD	Chronic obstructive pulmonary disease
CY	Calendar year
Department	Maryland Department of Health
DBA	Dental benefit administrator
DPP	Diabetes Prevention Program
ED	Emergency department
EID	Employed Individuals with Disabilities
ENT	Ear, nose, and throat
EPSDT	Early and Periodic Screening, Diagnosis, and Treatment
F&C	Families and Children
FFS	Fee-for-service
FOBT	Fecal occult blood test
FPL	Federal poverty level
FQHC	Federally qualified health center

FY	Fiscal year
HbA1c	Hemoglobin A1c screening
HCBS	Home- and community-based services
HCHD	Harford County Health Department
HEDIS®	Healthcare Effectiveness Data and Information Set®
HHS	U.S. Department of Health and Human Services
HIV	Human immunodeficiency virus
HPV	Human Papillomavirus
HVS	Home Visiting Service
ICS	Increased Community Services
IMD	Institution for Mental Disease
IUD/IUS	Intrauterine device or system
LAA	Local access area
MAGI	Modified adjusted gross income
MAT	Medication-assisted treatment
MCO	Managed care organization
MCHP	Maryland Children's Health Program
MDE	Maryland Department of the Environment
MFR	Managing for Results
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
OIG	Office of the Inspector General
OPA	Office of Population Affairs
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 Program
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

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Executive Summary

In 1997, HealthChoice—Maryland's statewide mandatory Medicaid and Children's Health Insurance Program (CHIP) managed care program—became operational 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 more low-income Marylanders by calendar year (CY) 2017. Twenty years after its launch, HealthChoice covered more than 88 percent of the state's Medicaid and Maryland Children's Health Program (MCHP) population.[1]

The Maryland Department of Health (the Department) evaluates the program annually; this evaluation covers the period from CY 2013 through CY 2017.

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

- Improving access to health care for the Medicaid population
- 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 low income Marylanders with resources generated through managed care efficiencies

HealthChoice is a mature managed care program that covered nearly one in four Marylanders during CY 2017. 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.

HealthChoice has demonstrated improvement in providing targeted preventive screenings as well as ensuring that participants receive care at the appropriate level. Some of these recent successes include increasing the rates of women receiving breast cancer screenings, the percentage of ambulatory care visits among children in foster care, and the use of HbA1c testing among participants with diabetes. Among individuals with HIV/AIDS, ambulatory care service utilization, CD4 testing and viral load testing rates increased, while ED utilization dropped. The

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

percentage of HealthChoice participants aged 19 to 64 years with at least one inpatient admission declined by 3.7 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 will increase service utilization across the spectrum of somatic and behavioral health services. In addition, the state's chronic health home demonstration—currently underway—seeks to improve health outcomes for individuals with chronic conditions. Other programs, such as the Residential Treatment for Individuals with SUD Program and the Evidence-Based Home Visiting Service Pilot Program, began in July 2017 and are expected to improve access, reduce costs, and improve quality.

Program improvements are a necessary component to ensure that the growing number of participants have access to quality care. Some of these improvements require improving diabetes care, reducing racial and ethnic disparities, and increasing rates of colorectal cancer screening. The Department is committed to working with the Centers for Medicare & Medicaid Services (CMS) and other stakeholders to identify and address necessary changes.

Coverage and Access

A major goal of the HealthChoice program is to expand coverage to residents with low incomes and to improve access to health care services for the Medicaid population. HealthChoice has largely succeeded. Overall, program enrollment increased 42.4 percent, from 830,288 participants in CY 2013 to 1,182,745 participants in CY 2017.[2]

This growth in enrollment was largely driven by the expansion of Medicaid eligibility to adults under the age of 65 years with incomes up to 138 percent of the federal poverty level (FPL) under the ACA. 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 2017, 294,553 HealthChoice participants were eligible because of the ACA expansion and enrolled in an MCO.

The large influx of ACA expansion participants led to changes in overall program access and utilization measures. Participants in this group were less likely to receive any Medicaid services compared to those in other coverage categories. Over 14 percent of the ACA expansion participants did not receive any services, compared to 7.1 percent of those enrolled in previously existing coverage categories for parents and primary caregivers. Expansion participants had a lower rate of ambulatory care visits than the rest of the Medicaid population from CY 2014 through CY 2017, causing the overall ambulatory care visit rate between CY 2013 and CY 2017

[2] 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 41.0 percent between CY 2013 and CY 2017.

to decrease slightly, from 79.3 percent to 77.8 percent. Additional changes occurred in service utilization patterns during the evaluation period, including a large increase in the number of participants who received services for a behavioral health condition.

The addition of new MCOs in CYs 2013, 2014, and 2017 also influenced overall program performance due to initial lower volumes of services. Regardless, trends in service utilization indicate increased health literacy, in alignment with the overall goals of the HealthChoice demonstration. 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. Only Prince George's County was unable to achieve this required ratio in CY 2017.

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. Children in foster care showed positive trends in utilization; however, in CY 2017, they had a 4.4 percentage point-lower rate of ambulatory care service utilization and an 8.3 percent point higher rate of emergency department (ED) visits compared to other children in HealthChoice. The REM program experienced increases in preventive care: the percentage of participants with a dental visit and ambulatory care increased during the evaluation period, while 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 CY 2013 and CY 2017. Among the entire HealthChoice population, Black participants also had the highest ED utilization rates, while Asian participants had the lowest utilization.

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 VPB measures as the VBP 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 receive disincentive payments. The MCO measures demonstrated mixed results with some experiencing consistently high or low performances. Although the MCO measures demonstrated varied results with some experiencing high or low performance, and the incentive levels are based on averages of all plans performance, the VBP program overall supports quality improvement across the HealthChoice population.

The EPSDT annual review assesses plans' 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, the most recent review results show the plans meeting or exceeding 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 "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 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 47.9 percent of all ED visits in CY 2013 to 42.0 percent in CY 2017. The percentage of HealthChoice adults with an inpatient admission designated as potentially preventable also decreased slightly, from 1.1 percent in CY 2013 to 0.9 percent in CY 2017. 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®) compares HealthChoice against nationally recognized performance standards for the use of preventive care and management of chronic disease conditions (MetaStar, Inc., 2018). 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 new MCOs in CYs 2013, 2014, and 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 more than 10 percentage points, contributing to better preventive care for women and remaining above the national Medicaid average since CY 2013. The rate of hemoglobin A1c (HbA1c) screenings among participants with diabetes increased by 2.4 percentage points after being added to the value-based purchasing (VBP) program in 2012. Rates for well-child visits, well-care visits, and immunizations among

the HealthChoice population were consistently higher than national Medicaid averages. Blood lead screening rates for children aged 12 to 23 months and 24 to 35 months improved.

Although the percentage of adult women in HealthChoice who received a cervical cancer screening has declined from 75.2 percent in CY 2013 to 62.4 percent in CY 2017, the rate continues to be above the national HEDIS® mean. Declines in the outcome of cervical precancer are observed with widespread vaccinations for human papillomavirus (HPV) (McClung et al., 2019). Female adolescents who received two HPV vaccine doses between their ninth and thirteenth birthdays increased from 25.7 percent in CY 2013 to 38.4 percent in CY 2017. The rate for colorectal screening increased from 38.7 percent in CY 2013 to 39.0 percent in CY 2017 and is expected to continue to increase as ACA expansion participants have longer enrollment periods.

Measures of access to prenatal care services increased slightly during the evaluation period. For timeliness of prenatal care, HealthChoice outperformed the national HEDIS® mean each calendar year except in CY 2013. HealthChoice also outperformed the national HEDIS® means for frequency of care in all measurement years.

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 49.7 percent in CY 2013 to 58.2 percent in CY 2017. The percentage of participants with diabetes who received an eye exam decreased by 12.3 percentage points between CY 2013 and CY 2016 but increased slightly in CY 2017. The overall observed 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 7.5 and 7.7 percentage points, respectively, among HealthChoice participants with diabetes, while ambulatory care utilization remained stable. Participants with HIV/AIDS maintained stable ambulatory care service utilization and cluster of differentiation 4 (CD4) testing rates during the evaluation period. Viral load testing and antiretroviral therapy (ART) increased by 5.6 and 8.4 percentage points, respectively. ED utilization by this population decreased by 5.9 percentage points during the evaluation period.

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 the population of participants. As part of its waiver renewal in 2016, the Department proposed the following innovative programs: Residential Treatment for Individuals with Substance Use Disorders (SUDs); the Evidence-Based Home Visiting Services (HVS) and Assistance in Community Integration Services (ACIS) Community Health Pilots; Dental Services for Former Foster Care Individuals; Increased Community Services (ICS); and the Family Planning program.

With CMS approval, Maryland Medicaid participants aged 21 years and over with SUDs can now receive residential treatment services—up to two 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 to December 31, 2017, 4,392 participants received these services under the waiver.

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 percent had at least one dental visit. The Department anticipates that these rates will increase over time.

While the previously described programs are new, the ICS and Family Planning programs were renewed from previous waiver periods. The ICS program allows certain adults with physical disabilities to remain in the community as an alternative to institutional care. All ICS measures had 100 percent compliance from implementation through CY 2017. Lastly, the Family Planning program automatically enrolls women for 12 months who no longer qualify for the Medicaid after pregnancy because they are over the income limit. From CY 2013 to CY 2017, the number of women enrolled in the Family Planning Program increased, but the use of services decreased.

Introduction

In 1997, HealthChoice—Maryland's statewide mandatory Medicaid and Children's Health Insurance Program (CHIP) managed care program—became operational 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 2019 annual evaluation—includes data from calendar year (CY) 2013 through CY 2017. The following sections provide a brief overview the HealthChoice program and recent program updates before addressing the following goals:

- Coverage and access to care
- Quality of care
- Medical home utilization and appropriateness of care
- Preventive care and management of chronic diseases
- 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 2017, over 88 percent 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 percent of the federal poverty level (FPL)
- Women with income up to 264 percent 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 recipients are eligible for the HealthChoice managed care program. There are groups that are ineligible for MCO enrollment, including:

- Medicare beneficiaries
- Individuals aged 65 years and older[3]
- 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
- Individuals who reside in an intermediate care facility for intellectual disabilities
- Individuals enrolled in the Model Waiver or the Employed Individuals with Disabilities (EID) programs

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 I of this report, and Family Planning is discussed in Section V.

HealthChoice participants receive the same comprehensive benefits as those available to Maryland Medicaid participants through the FFS system. MCOs are responsible for coverage of most medical services during 2018, 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
- 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 particular limited vision, hearing, and dental benefits)

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

- 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[4]
- 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 waivers[5]

Who Is Enrolled in HealthChoice?

Section I of this report details the characteristics of HealthChoice enrollees and the trends over the evaluation period. The total number of individuals in HealthChoice increased by 41 percent during the evaluation period to 1.4 million, with the proportion of adults over the age of 18 increasing by nearly 40 percent, to encompass over half of HealthChoice enrollees. The expansion of eligibility to childless adults under the Affordable Care Act (ACA) explains many of these trends.

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 have been 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).

[4] 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.

[5] Services covered under the 1915(c) home and community-based 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 January 2018, the Department had approved 92 Chronic Health Home site applications, with more than 6,400 enrolled participants. The Health Home sites include 65 psychiatric rehabilitation programs, 10 mobile treatment providers, and 17 opioid treatment programs.
- Under the ACA, Maryland expanded coverage through the Medicaid program to two new populations:
    - Individuals with income up to 138 percent 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.[6] As of December 2017, there were 387,998 individuals enrolled in Medicaid eligible because of 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 V for additional information on the following initiatives:

- Residential treatment for individuals with SUDs aged 21 through 64 years
- Two community health pilot programs:
    - Evidence-Based Home Visiting Service Pilot Program (HVS)
    - Assistance in Community Integration Services Pilot Program (ACIS)
- Dental benefits for former foster youth between the ages of 21 and 26 years

[6] 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.

Section I. Improve Access to Care for the Medicaid Population

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

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.[7] 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 2013 through CY 2017. The total number of participants increased by 40.9 percent during the evaluation period, with the proportion of adults over the age of 18 increasing by nearly 40 percent to encompass over half of HealthChoice enrollees. The expansion of eligibility to include childless adults under the ACA explains many of these trends.

[7] 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), Demographics, CY 2013 and CY 2017

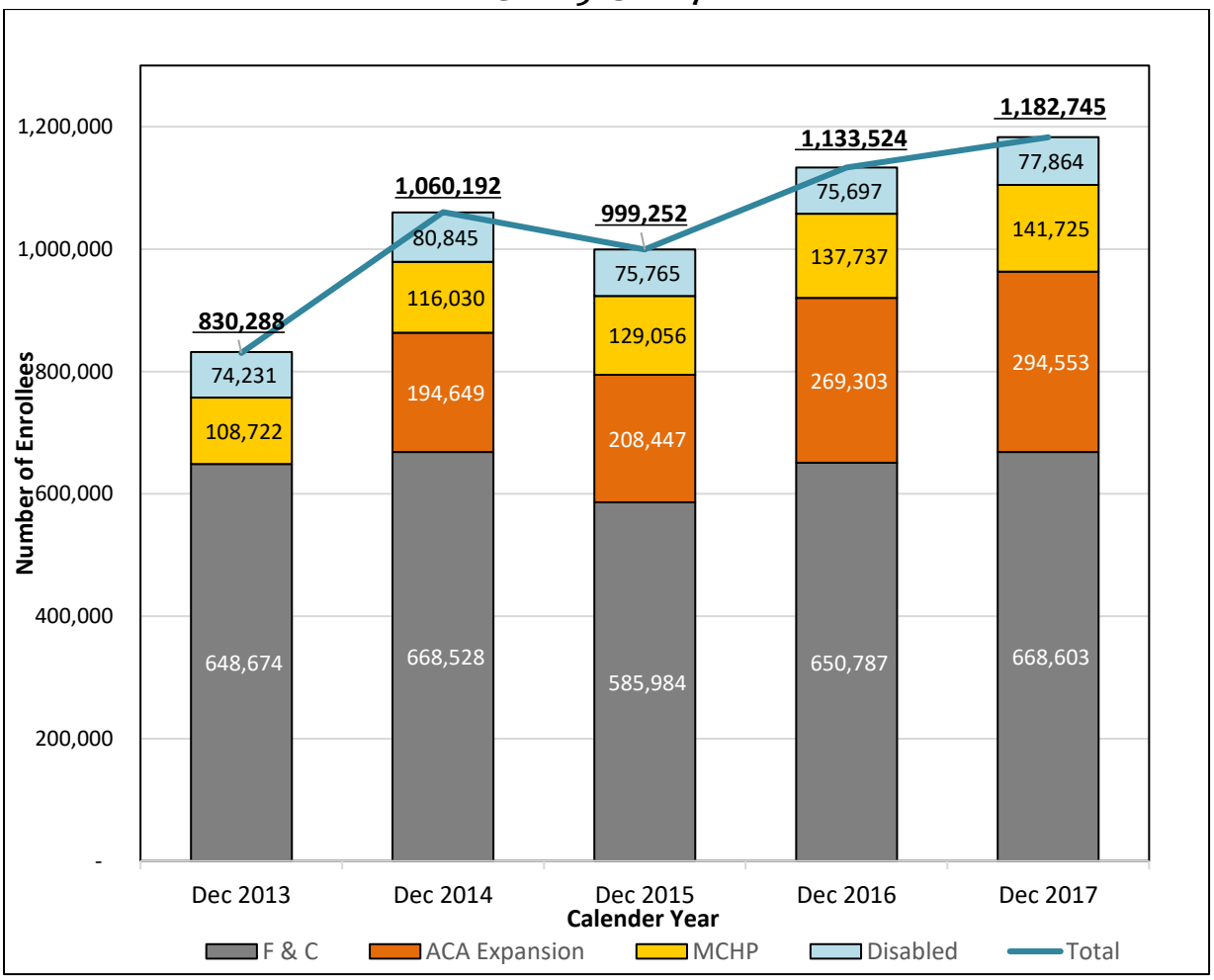
Demographic Characteristic	CY 2013		CY 2017	
	# of Participants	% of Total	# of Participants	% of Total
Sex				
Female	548,087	57.0%	732,179	54.0%
Male	414,198	43.0%	623,264	46.0%
Total	**962,285**	**100%**	**1,355,443**	**100%**
Age Group (Years)				
0 to <1	35,797	3.7%	36,338	2.7%
1–2	77,318	8.0%	79,824	5.9%
3–5	114,091	11.9%	111,650	8.2%
6–9	137,878	14.3%	149,065	11.0%
10–14	143,320	14.9%	167,383	12.3%
15–18	98,703	10.3%	113,790	8.4%
19–20	41,741	4.3%	49,229	3.6%
21–39	202,567	21.1%	371,558	27.4%
40–64	110,870	11.5%	276,606	20.4%
Total	**962,285**	**100%**	**1,355,443**	**100%**
Race/Ethnicity				
Asian	34,253	3.6%	60,375	4.5%
Black	465,794	48.4%	576,009	42.5%
White	274,720	28.5%	378,508	27.9%
Hispanic	122,120	12.7%	114,081	8.4%
Native American	1,875	0.2%	3,796	0.3%
Other*	63,523	6.6%	222,674	16.4%
Total	**962,285**	**100%**	**1,355,443**	**100%**
Region**				
Baltimore City	189,745	19.7%	245,270	18.1%
Baltimore Metro	271,098	28.2%	394,121	29.1%
Eastern Shore	91,158	9.5%	126,088	9.3%
Southern Maryland	48,556	5.0%	68,277	5.0%
Washington Metro	280,923	29.2%	409,702	30.2%
Western Maryland	78,554	8.2%	110,592	8.2%
Out of State	2,251	0.2%	1,393	0.1%
Total	**962,285**	**100%**	**1,355,443**	**100%**

*Other race/ethnicity category includes Pacific Islands/Alaskan Native 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 between CY 2013 and CY 2017.[8] The overall HealthChoice population grew by 42.2 percent, with the largest enrollment increase occurring in CY 2014 as a result of the ACA expansion. However, the enrolled population decreased by 5.7 percent between CY 2014 and CY 2015, when eligibility determinations were re-instated, before increasing again in CY 2016.[9]

Figure 1. HealthChoice Enrollment by Coverage Category as of December 31, CY 2013–CY 2017*



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

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

[9] 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 A for an explanation of which Medicaid coverage groups are included in each category.

HealthChoice enrollment by race and ethnicity is shown in Table 2. Apart from Hispanic participants, each racial and ethnic group increased enrollment between CY 2013 and CY 2017. There was a substantial change to the quality of the race and ethnicity information beginning in CY 2014, when the number of individuals reporting their race or ethnicity decreased, and the proportion represented as "Other/Unknown" increased sharply.

Table 2. HealthChoice Enrollment by Race/Ethnicity, CY 2013 and CY 2017

Race/Ethnicity	CY 2013		CY 2017	
	Number of Enrollees	Percentage of Total Race/Ethnicity	Number of Enrollees	Percentage of Total Race/Ethnicity
Asian	34,253	3.6%	60,375	4.5%
Black	465,794	48.4%	576,009	42.5%
White	274,720	28.5%	378,508	27.9%
Hispanic	122,120	12.7%	114,081	8.4%
Native American	1,875	0.2%	3,796	0.3%
Other	63,523	6.6%	222,674	16.4%
Total	**962,285**	**100%**	**1,355,443**	**100%**

Enrollment Growth

As of October 2018, national enrollment in Medicaid and the CHIP was 72.9 million and in January of 2019, national enrollment was 72.3 million. In FY 2018, overall enrollment declined slightly by 0.6 percent (Rudowitz, Hinton, & Antonisse, 2018). The national enrollment growth has continued to slow partly because of the tapering of the ACA enrollment growth. Between the summer of 2013 and the end of the year, Maryland experienced the 12th 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 State Health Facts, n.d.a). This contributed to a drop in the proportion of Marylanders who are uninsured, from 10 percent in CY 2013 to 6 percent in CY 2017 (The Kaiser Family Foundation State Health Facts, n.d.b).

Table 3 shows the percentage of Maryland's population enrolled in HealthChoice between CY 2013 and CY 2017, which increased substantially, with the largest increase from CY 2013 to CY 2014 due to the ACA Medicaid expansion. Almost all new Maryland Medicaid participants are enrolled in managed care.

Table 3. HealthChoice Enrollment as a Percentage of the Maryland Population, CY 2013–CY 2017

	CY 2013	CY 2014	CY 2015	CY 2016	CY 2017
Maryland Population*	5,932,654	5,970,245	6,000,561	6,024,752	6,052,177
Individuals Enrolled in HealthChoice for Any Period of Time During the Year					
HealthChoice Population	961,597	1,251,023	1,304,492	1,285,807	1,355,443
% of Population in HealthChoice	16.2%	21.0%	21.7%	21.3%	22.4%

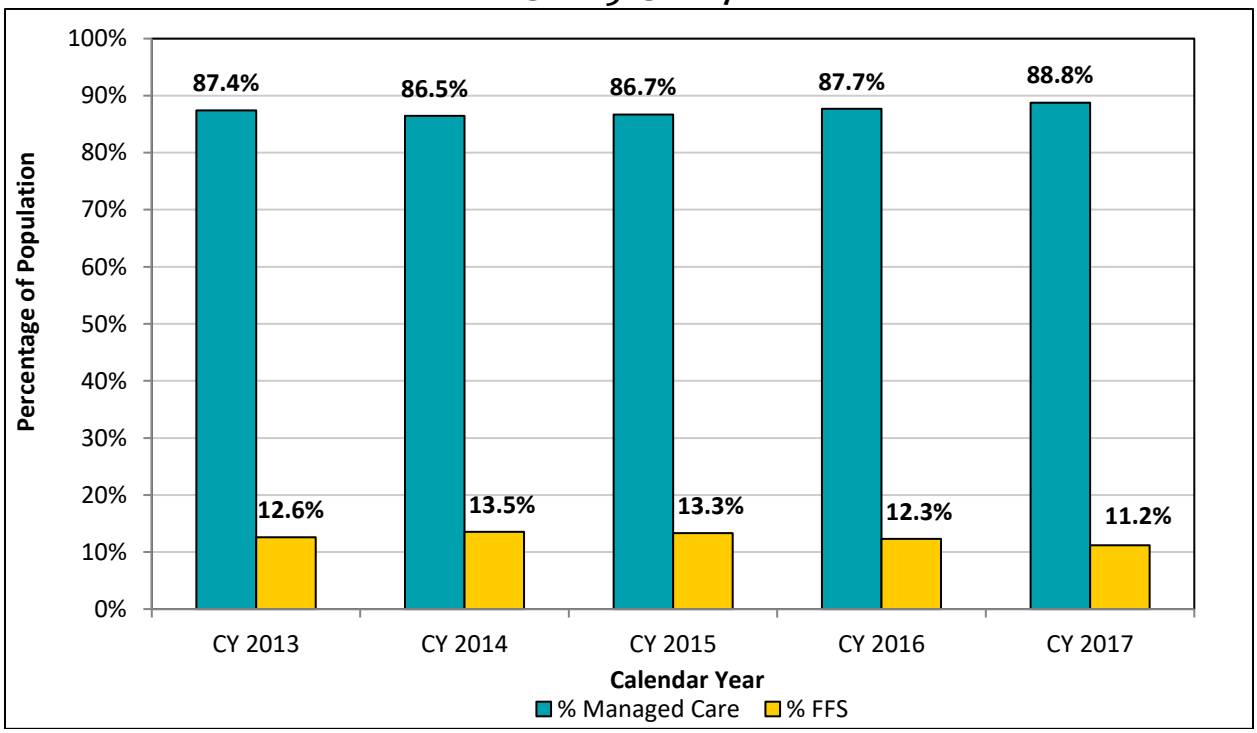
	CY 2013	CY 2014	CY 2015	CY 2016	CY 2017
Individuals Enrolled in HealthChoice as of December 31					
HealthChoice Population	830,288	1,060,192	999,252	1,133,524	1,182,745
% of Population in HealthChoice	14.0%	17.8%	16.7%	18.8%	19.5%

*Data source: U.S. Census Bureau, Population Division. Annual Estimates of the Resident Population: April 1, 2010 to July 1, 2017. Retrieved from https://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?src=bkmk

Managed Care Enrollment

Since its inception, HealthChoice was expected to enroll a high percentage of Medicaid participants into managed care. Figure 2 shows the percentage of Maryland Medicaid enrollment in managed care compared to FFS Medicaid.[10] (Data from 2013 include both HealthChoice and PAC MCOs. The PAC program ended in 2014). Between CY 2013 and CY 2017, managed care enrollment remained consistently above 86 percent, with the highest rate of 88.8 percent in CY 2017.

Figure 2. Percentage of Medicaid[11] Participants in Managed Care Compared to FFS, CY 2013–CY 2017



[10] This year's evaluation updated the methods to identify participants who only received partial Medicaid benefits. Participants who were enrolled in a limited benefit coverage group or were in coverage groups that were dually eligible for Medicaid and Medicare were removed from the data. This change applies to each year included in this year's evaluation.

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

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 Department continues to upgrade the functionality of MHC to improve the enrollment experience and enhance access to care. For example, approximately 60 percent of Medicaid participants are automatically renewed for coverage each month because their applications can be redetermined using administrative data, facilitating seamless coverage. In addition, two recent upgrades further improve the consumer experience—the mobile application and MCO plan shopping.

MHC implemented a nationally recognized smart-phone compatible application, *Enroll MHC*, for iOS and Android devices in October 2016. The application aims to ease enrollment for consumers, including those whose Internet access is smart-phone dependent. *Enroll MHC* allows end-to-end enrollment in both QHPs and Medicaid/MCHP—the first of its kind among the nation's health insurance marketplaces. Mobile application visitors more than doubled between 2017 and 2018, increasing from 144,367 to 287,378.

MCO plan shopping was added to the MHC website and the *Enroll MHC* mobile application in September 2017, allowing MAGI Medicaid participants to select their MCO at the time of enrollment. Previously, participants applying online were mailed an informational packet, detailing each MCO and asking them to make a selection. Participants who did not make a selection within 28 days were automatically assigned ("auto-assigned") to an MCO by the Department. In July 2018, the Department implemented another operational change, reducing the time period between enrollment and auto-assignment from 28 days to 6:00 pm the day after enrollment. The Department is continuing to monitor the impact of the shortened auto-assignment implementation on access to care and quality of care.

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 one PCP to every 200 participants within each of the 40 local access areas (LAAs) in the state

that they serve.[12] 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. The network adequacy analysis counted the number of PCP offices included in provider networks in each county in Maryland. In CY 2017, Prince George's County was the only jurisdiction that was unable to achieve a 200:1 ratio of participants to PCPs. (See Appendix C for additional information on PCP network adequacy by jurisdiction.)

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 the MCO 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.[13] 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.

HealthChoice Network Adequacy Assessment

The following summarizes the development, implementation and evaluation of a provider directory verification survey of PCPs completed in CY 2017 to assess MCOs' online provider directories and compliance with state access and availability requirements:

The Department engages in a range of activities to monitor network adequacy and access and continually explores new methods of holding MCOs accountable for their provider networks. If an MCO fails to meet the network requirements, the Department can use its authority to bring them into compliance. In 2014, the Office of the Inspector General (OIG) issued two reports assessing the strategies used by states to monitor network adequacy and the timely availability of appointments with providers: *State Standards for Access to Care in Medicaid Managed Care* and *Access to Care: Provider Availability in Medicaid Managed Care.* The OIG reports illustrated variability in how states determine Medicaid network adequacy with few using "direct tests" to reliably measure compliance.

In response to the new rules, the Department developed a validation method to test the accuracy of provider directories and evaluate network adequacy. The Department used a modified "secret shopper" approach to conduct the surveys. Traditional secret shopper models mask the surveyors' identity and affiliation with the surveying institution, in this case, based on the provider directory requirements in the Code of Maryland Regulations (COMAR). The Department's modified approach required surveyors to identify their affiliation with the Maryland Medicaid program and the Department, as well as the purpose of their call, at the

[12] COMAR 10.09.66.05B.
[13] COMAR 10.09.66.05-1.

beginning of the survey. However, surveyors did not give the MCOs or providers advance notice of the calls or the survey questions. The project was rolled out in the following three phases:

- Phase 1 (2015): The Department and Hilltop pilot-tested a survey designed to validate the providers' contact information and services provided.
- Phase 2 (2017): The Department and Hilltop targeted a statistically significant sample of providers using a streamlined survey tool to verify the accuracy of the provider directories, whether the provider practices as a PCP, whether the provider was accepting new patients as stated, and the age range of patients.
- Phase 3 (2017): The Department's External Quality Review Organization (EQRO), utilized a similar methodology to the Phase 2 survey and conducted calls to a statistically significant sample of PCPs within each MCO, with the aim of validating the MCOs' online provider directories and assessing compliance with state access and availability requirements, including timely availability of appointments.

In Phase 3, the surveys evaluated all eight MCOs active in CY 2017 and made the following observations:

- Of the 1,319 PCPs contacted, 870 were successful reached, for a response rate of 66 percent
- Of the 1,319 PCPs, 15 percent had an incorrect telephone number, 7 percent had an incorrect address, and 16 percent were no longer with the facility or at the location noted in the directory
- The majority (94 percent) of PCPs surveyed confirmed that they accepted the MCO listed in the provider directory
- The majority (87 percent) of PCPs surveyed confirmed that they were accepting new patients
- The majority (76 percent) of PCPs surveyed accepted patients of all ages rather than specific ages
- MCOs met compliance with routine and urgent care appointment requirements 89 and 67 percent of the time, respectively.

The provider verification survey identifies areas of opportunity for continued MCO education, including methods for improving Medicaid provider directories and COMAR regulations for provider access, as well as ensuring that provider online directories are up-to-date and accurate. The Department will be assessing MCO provider networks on an ongoing basis.

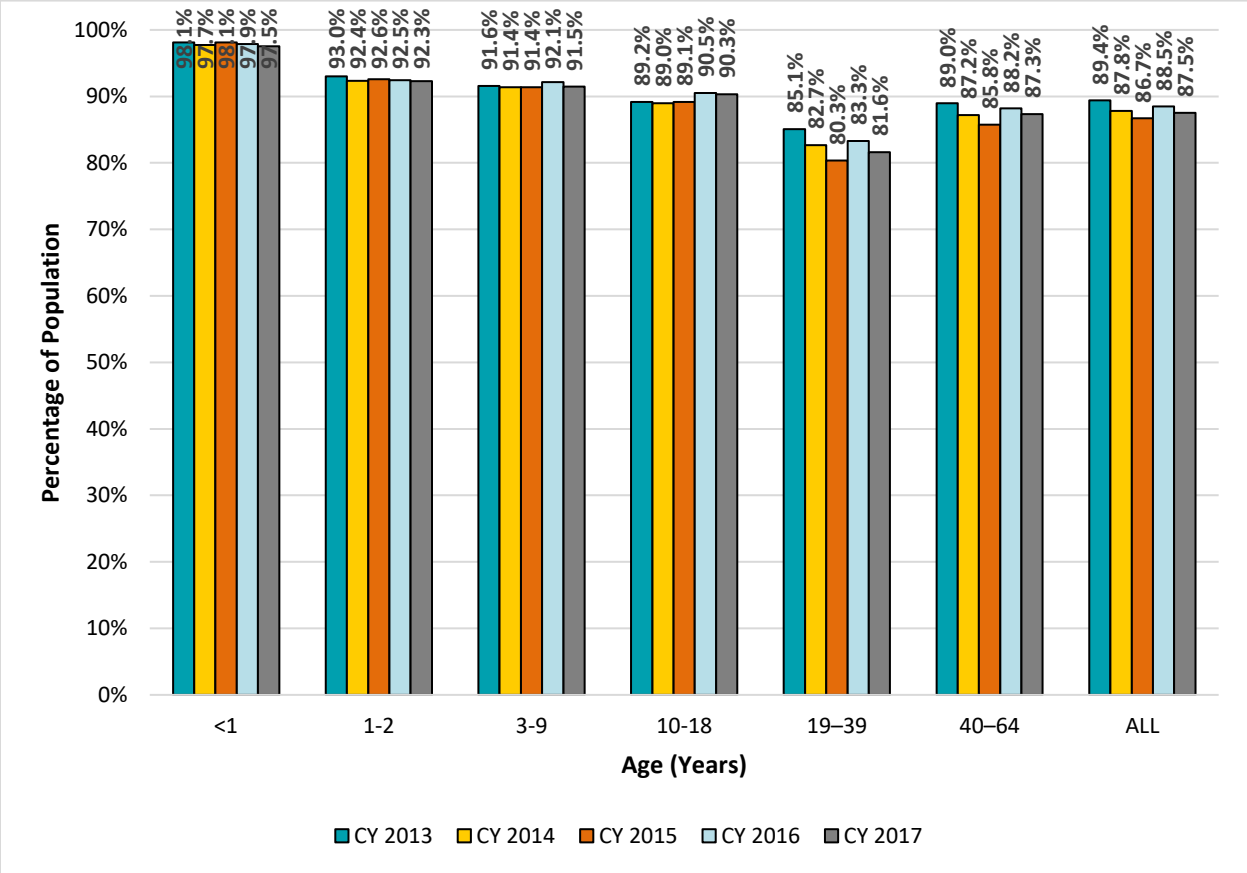
Utilization

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

Any Service

Figure 3 shows the percentage of HealthChoice participants who received at least one Medicaid service during the calendar year by age group. Between CY 2013 and CY 2017, the percentage of participants who received at least one service decreased across all age groups, except for children aged 3 to 9 years and 10 to 18 years. The largest decrease—3.5 percentage points—occurred among adults aged 19 to 39 years. Younger children aged 0 to 9 years had a higher rate of individuals using a Medicaid service, compared to adults aged 19 to 64 years. Required health services, such as immunizations for children, are likely to have contributed to the higher utilization rate among this population.

Figure 3. Percentage of HealthChoice Population Receiving Any Medicaid Service, by Age Group, CY 2013–CY 2017



Non-Users of Service

Hilltop identified HealthChoice participants with 12 months of continuous enrollment during the calendar year who did not have any recorded Medicaid FFS claim or MCO encounter during the year. Table 4 presents the proportions of non-users of services by demographic and coverage characteristics for CY 2013 and CY 2017.

Between CY 2013 and CY 2017, the population of Maryland Medicaid participants grew by 47 percent, from 700,076 to 1,026,366 individuals. Over this period, the proportion of Medicaid

participants enrolled for the entire calendar year without an FFS claim or MCO encounter increased from about 1 in 20 participants (5.4 percent) in CY 2013 to 1 in 12 participants (8.2 percent) in CY 2017. The proportion of non-users was reflected in increases within all demographic and coverage categories.

In CY 2017, non-users made up more than 10 percent of the following groups: male participants, adults aged 19 to 39 years, Asian participants, and participants eligible for Medicaid through the coverage expansion in the ACA. Among adults aged 19 and older, non-users were slightly younger on average (mean age of 34.6 years versus 37.3 years among users). The groups with the lowest proportions of non-users in CY 2017 were children under five years of age and Hispanic participants. Both groups had at least 95 percent of participants who received a covered service.

The trend of more individuals who do not use services may reflect enrollment of a greater numbers of healthy participants who see no need for ambulatory or institutional services. Alternatively, newly enrolled participants may have not been aware of the benefits available.

Table 4. Proportion of Non-Users within Demographic and Coverage Groups of HealthChoice Participants, CY 2013 and CY 2017

Demographic and Coverage Characteristics	CY 2013		CY 2017	
	Number of Participants	Percentage of Non-Users	Number of Participants	Percentage of Non-Users
Age Group (Years)				
<1	3,000	0.7%	2,846	0.8%
1 - 2	59,460	2.1%	60,801	3.0%
3 - 5	90,054	3.2%	90,523	4.4%
6 - 9	111,407	4.0%	122,468	4.8%
10 - 14	115,603	5.1%	138,567	5.2%
15 - 18	77,313	6.5%	92,429	6.7%
19 - 20	24,876	11.5%	34,821	12.5%
21 – 39	135,844	7.7%	270,779	13.3%
40 – 64	82,519	6.3%	213,132	8.9%
Total	**700,076**	**5.4%**	**1,026,366**	**8.2%**
Sex				
Female	399,824	4.6%	558,433	6.3%
Male	300,252	6.5%	467,933	10.5%
Total	**700,076**	**5.4%**	**1,026,366**	**8.2%**
Race/Ethnicity				
Asian	23,862	6.1%	44,256	10.6%
Black	344,130	6.4%	450,877	8.9%
White	195,373	4.7%	291,644	7.9%
Hispanic	93,050	2.7%	92,180	3.9%
Other*	43,661	6.0%	147,409	8.7%

Demographic and Coverage Characteristics	CY 2013		CY 2017	
	Number of Participants	Percentage of Non-Users	Number of Participants	Percentage of Non-Users
Total	**700,076**	**5.4%**	**1,026,366**	**8.2%**
Region **				
Baltimore City	145,703	5.3%	194,733	8.1%
Baltimore Suburban	195,398	5.2%	298,354	8.0%
Eastern Shore	66,804	3.6%	98,043	7.0%
Southern Maryland	34,166	6.2%	51,437	9.4%
Washington Suburban	199,903	6.6%	298,939	8.9%
Western Maryland	56,856	4.2%	83,920	7.6%
Out of State	1,246	8.4%	940	16.9%
Total	**700,076**	**5.4%**	**1,026,366**	**8.2%**
Medicaid Coverage Group* **				
ACA Expansion	N/A		246,444	14.2%
Disabled	74,228	4.9%	79,108	5.2%
Families and Children	533,048	5.9%	577,691	7.1%
MCHP	92,800	3.1%	123,123	3.5%
Total	**700,076**	**5.4%**	**1,026,366**	**8.2%**

*Other race/ethnicity category includes Native Americans, Pacific Islanders/Alaskan, and unknown.
**Regions are defined as the following: Baltimore City (only), Baltimore Suburban (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 Suburban (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 group of 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. 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. This measure also includes ambulatory care visits related to mental health disorders (MHDs) and SUDs.[14] The definition excludes outpatient ED visits, hospital inpatient services, home health, X-rays, and laboratory services.

[14] See Section O, Value Set Directory of the HEDIS 2018 Technical Specifications for Health Plans for a list of diagnosis and procedure codes related to both mental health and substance use.

Figure 4 presents the percentage of HealthChoice participants who received an ambulatory care visit during the calendar year by age group. Between CY 2013 and CY 2017, children aged two and younger had the highest ambulatory care visit rate, while participants aged 19 to 39 years had the lowest rate during the evaluation period. Although ambulatory care visit rates remained stable for each age group from CY 2013 to CY 2017, there was a 2.9 percentage point increase for participants aged 10 to 18 years and a 3.0 percentage point decrease among participants aged 19 to 39 years.

Figure 4. Percentage of the HealthChoice Population with an Ambulatory Care Visit, by Age Group, CY 2013–CY 2017

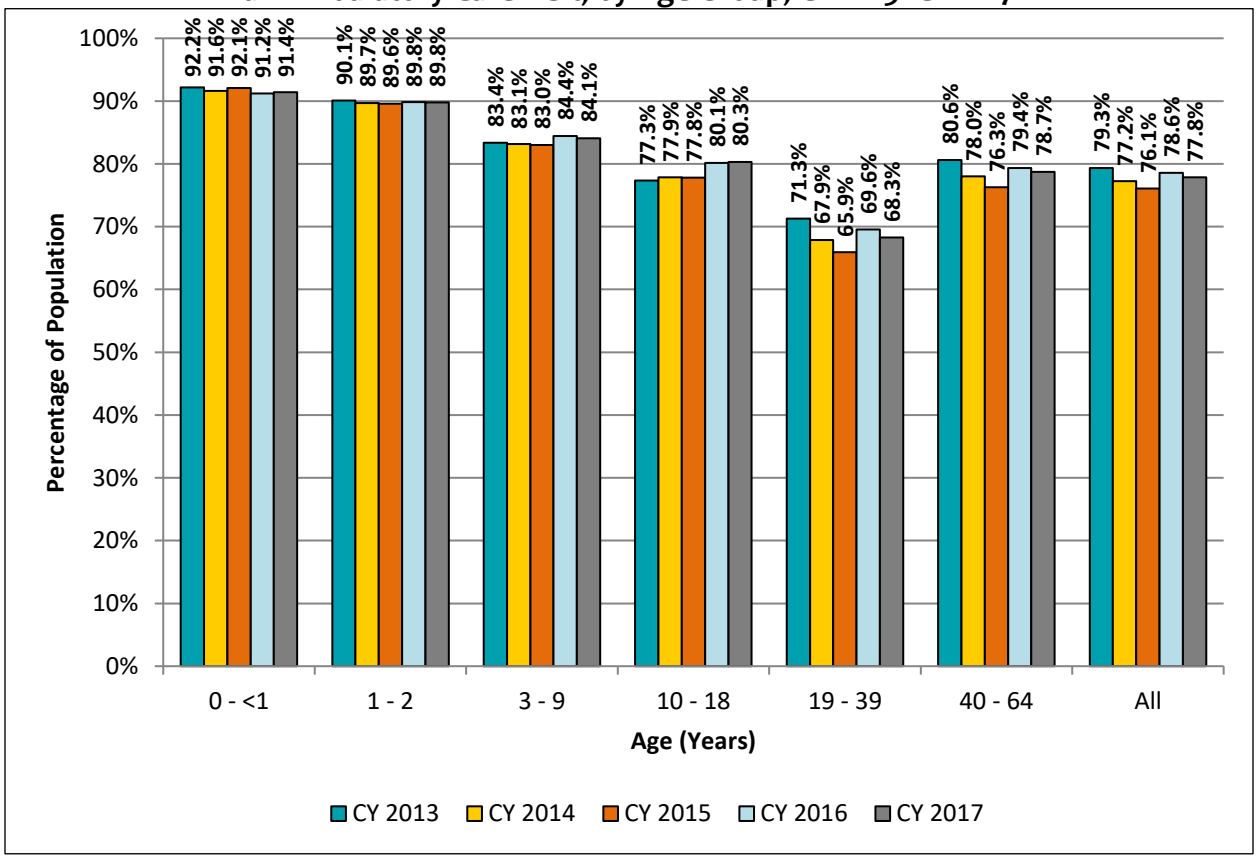


Figure 5 presents ambulatory care use by coverage category. The decrease in utilization among the overall HealthChoice population in CY 2014 and CY 2015 was likely due to the influx of new participants into the ACA expansion coverage category. These individuals accessed ambulatory care services at lower rates than participants in other coverage categories. Given this, ACA expansion participants constitute a large segment of the HealthChoice population, so their utilization affects the trend for the entire population.

Figure 5. Percentage of the HealthChoice Population with an Ambulatory Care Visit, by Coverage Category, CY 2013–CY 2017

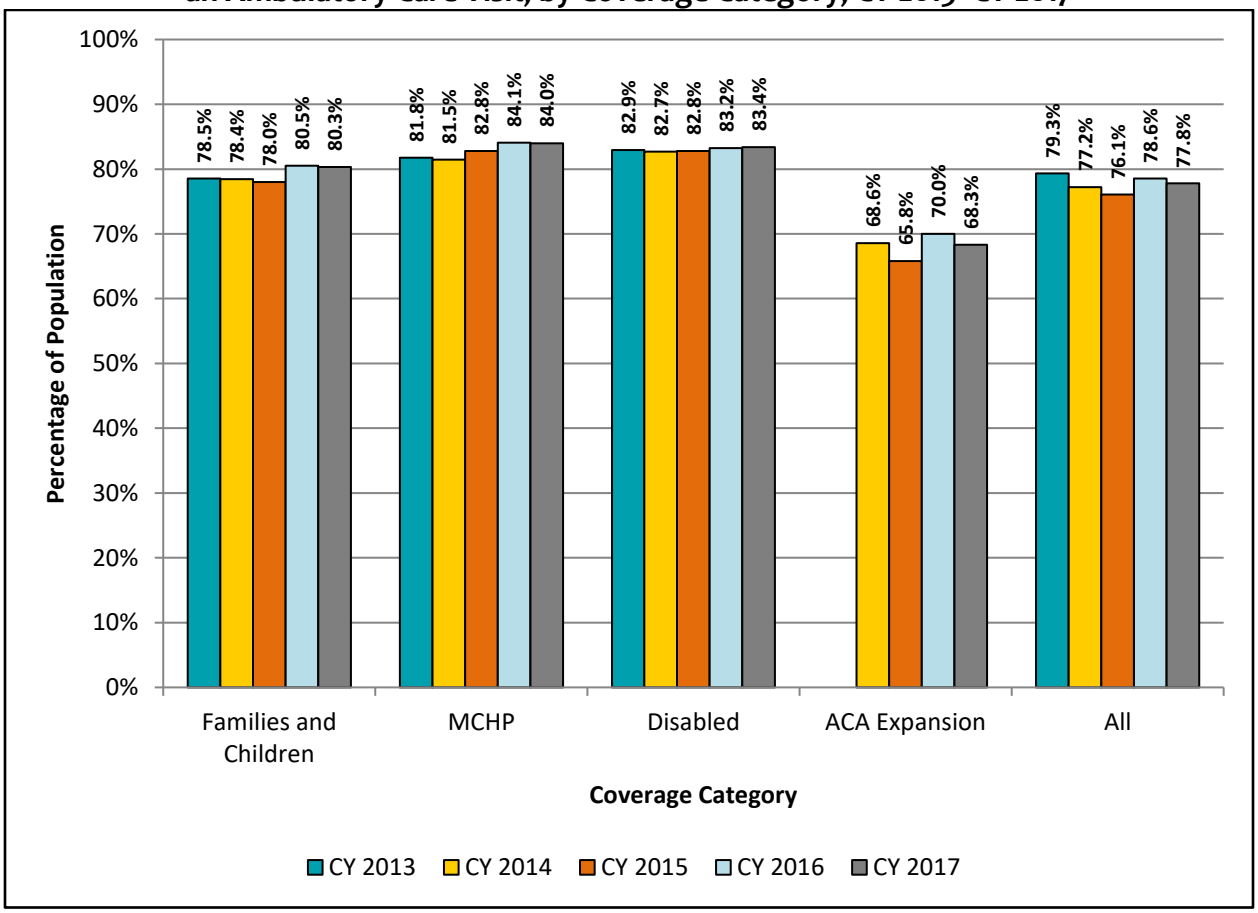


Figure 6 presents the percentage of HealthChoice population who received an ambulatory care visit by region between CY 2013 and CY 2017. HealthChoice participants' utilization of ambulatory care was similar across all regions during the evaluation period. Residents of the Eastern Shore region had the highest rate of ambulatory care use.

Figure 6. Percentage of the HealthChoice Population with an Ambulatory Care Visit, by Region, CY 2013–CY 2017

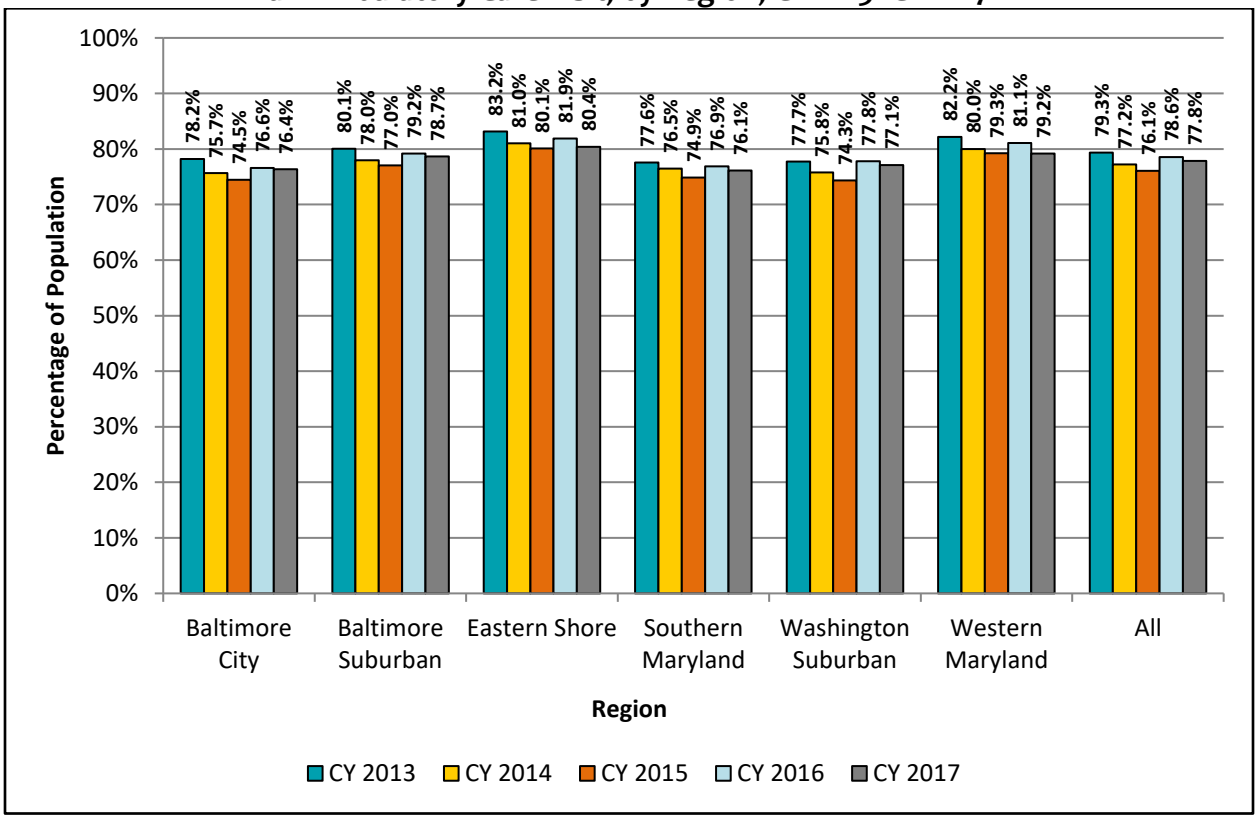


Figure 7 presents the percentage of children aged 0 through 18 years who received at least one ambulatory visit in CY 2013 and CY 2017 by race and ethnicity. The overall rate of ambulatory care visits increased from 82.3 percent in CY 2013 to 83.6 percent in CY 2017. All racial and ethnic groups except for Native Americans experienced a slight increase throughout the evaluation period. Due to the limited numbers of Native American participants enrolled in the HealthChoice program, small changes in the number of Native American children receiving ambulatory care visits can create large percentage changes compared to racial and ethnic groups with larger shares of the population. In CY 2013, the disparity between the racial/ethnic group with the highest percentage of ambulatory care visits (Hispanic) and the lowest percentage (Black) was 11.2 percentage points. In CY 2017, this difference narrowed slightly to 10.1 percentage points.

Figure 7. Percentage of HealthChoice Participants Aged 0–18 Years with an Ambulatory Care Visit, by Race/Ethnicity, CY 2013 and CY 2017

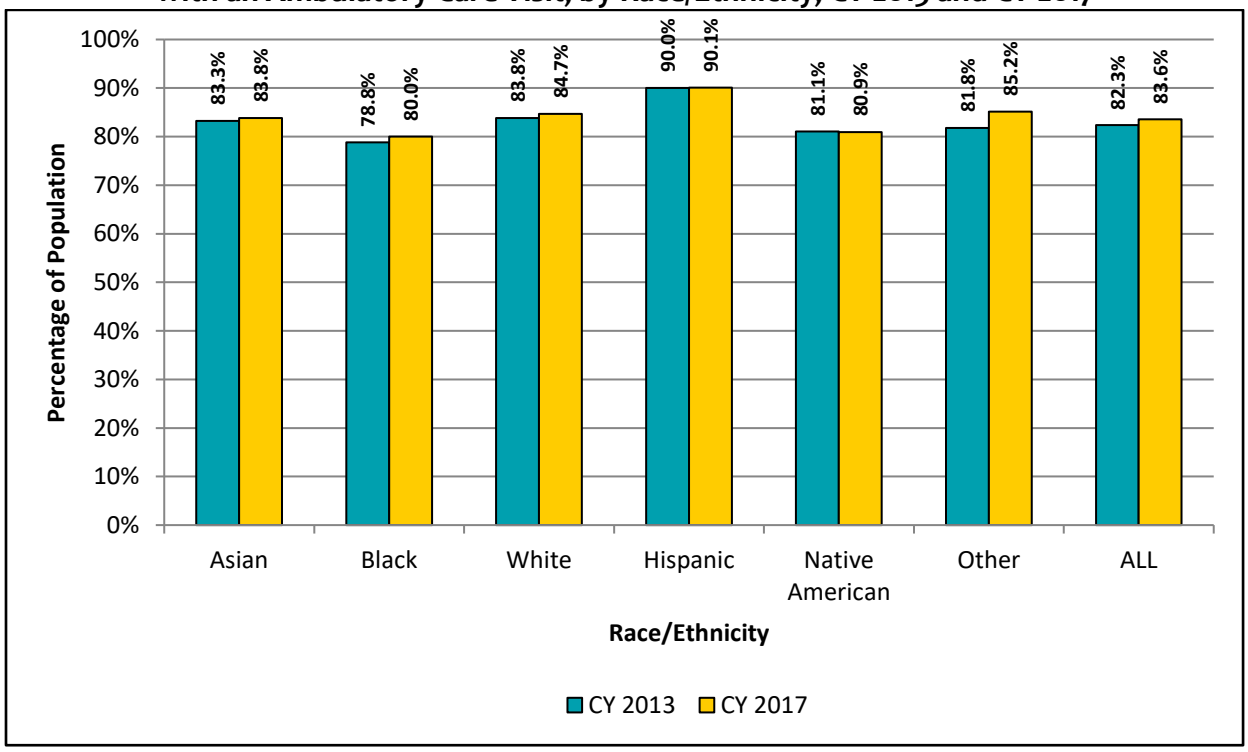


Figure 8 presents the percentage of adults aged 19 to 64 years who received at least one ambulatory care visit in CY 2013 and CY 2017, by race and ethnicity. Close to 75 percent of adult HealthChoice participants recorded an ambulatory care visit in CY 2013. The rate of ambulatory care visits decreased to 72.4 percent in CY 2017, with a corresponding decrease observed in all racial and ethnic groups except among Hispanic participants. This reduction may derive from the influx of new participants receiving Medicaid coverage under the provisions of the ACA expansion.

Figure 8. Percentage of HealthChoice Participants Aged 19–64 Years with an Ambulatory Care Visit, by Race/Ethnicity, CY 2013 and CY 2017

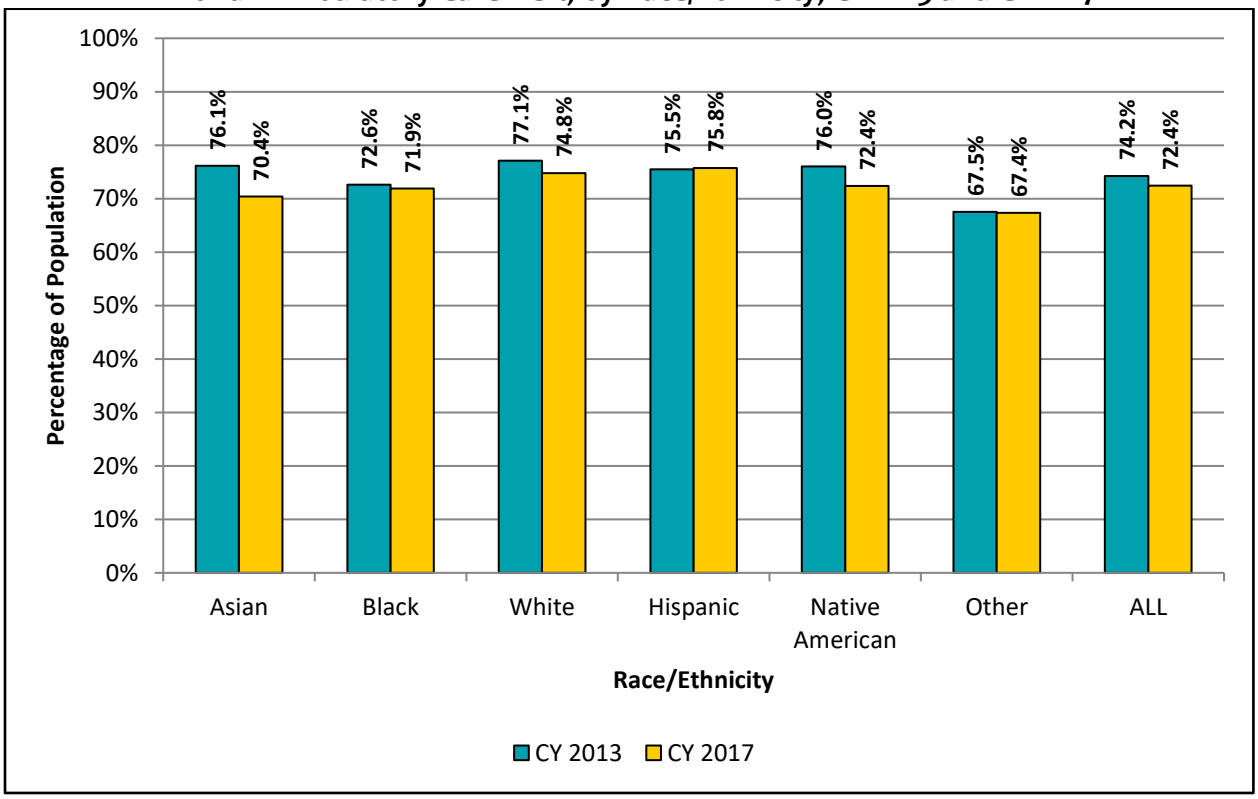


Table 5 shows the proportion of participants who received at least one ambulatory care visit by MCO in CY 2013 and CY 2017. The total number of participants enrolled in HealthChoice grew by 40.8 percent between CY 2013 and CY 2017, while the proportion receiving an ambulatory care visit remained relatively stable at just below 80 percent. There was considerable variation in this measure among MCOs. Four out of seven MCOs operating in both CY 2013 and CY 2017 had at least 75 percent of enrollees completing an ambulatory care visit in both years.

Table 5. Percentage of HealthChoice Participants Aged 0–64 Years with an Ambulatory Care Visit, by MCO, CY 2013 and CY 2017

MCO*	CY 2013			CY 2017		
	Total Participants	# with Ambulatory Care Visit	% with Ambulatory Care Visit	Total Participants	# with Ambulatory Care Visit	% with Ambulatory Care Visit
Aetna	N/A**			1,977	667	33.7%
Amerigroup	258,172	210,250	81.4%	317,115	257,264	81.1%
Coventry	2,166	949	43.8%	N/A		
Jai Medical Systems	17,068	12,459	73.0%	29,738	21,877	73.6%
Kaiser	N/A			77,497	53,690	69.3%
Maryland Physicians Care	196,757	153,572	78.1%	251,696	193,864	77.0%
MedStar	45,991	33,837	73.6%	105,439	77,159	73.2%
Priority Partners	246,565	201,669	81.8%	339,385	276,564	81.5%
University of Maryland Health Partners	8,193	4,277	52.2%	53,045	34,703	65.4%
UnitedHealthcare	187,373	146,546	78.2%	179,551	139,415	77.6%
All MCOs	**962,285**	**763,559**	**79.3%**	**1,355,443**	**1,055,203**	**77.8%**

*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).

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 an outpatient ED visit. 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 9 presents the percentage of HealthChoice participants with ED use by age group. The percentage of participants with an outpatient ED visit decreased between CY 2013 and CY 2017 for all age groups. The largest declines were observed in the age groups 1 to 2, 19 to 39, and 40 to 64 years. Among those aged 19 to 39 and 40 to 64 years, the increase in ED use from CY 2015 to CY 2016 may be partly due to the inflow of newly eligible Medicaid participants resulting from the ACA Medicaid expansion.

Figure 9. Percentage of the HealthChoice Population with an Outpatient ED Visit, by Age Group, CY 2013–CY 2017

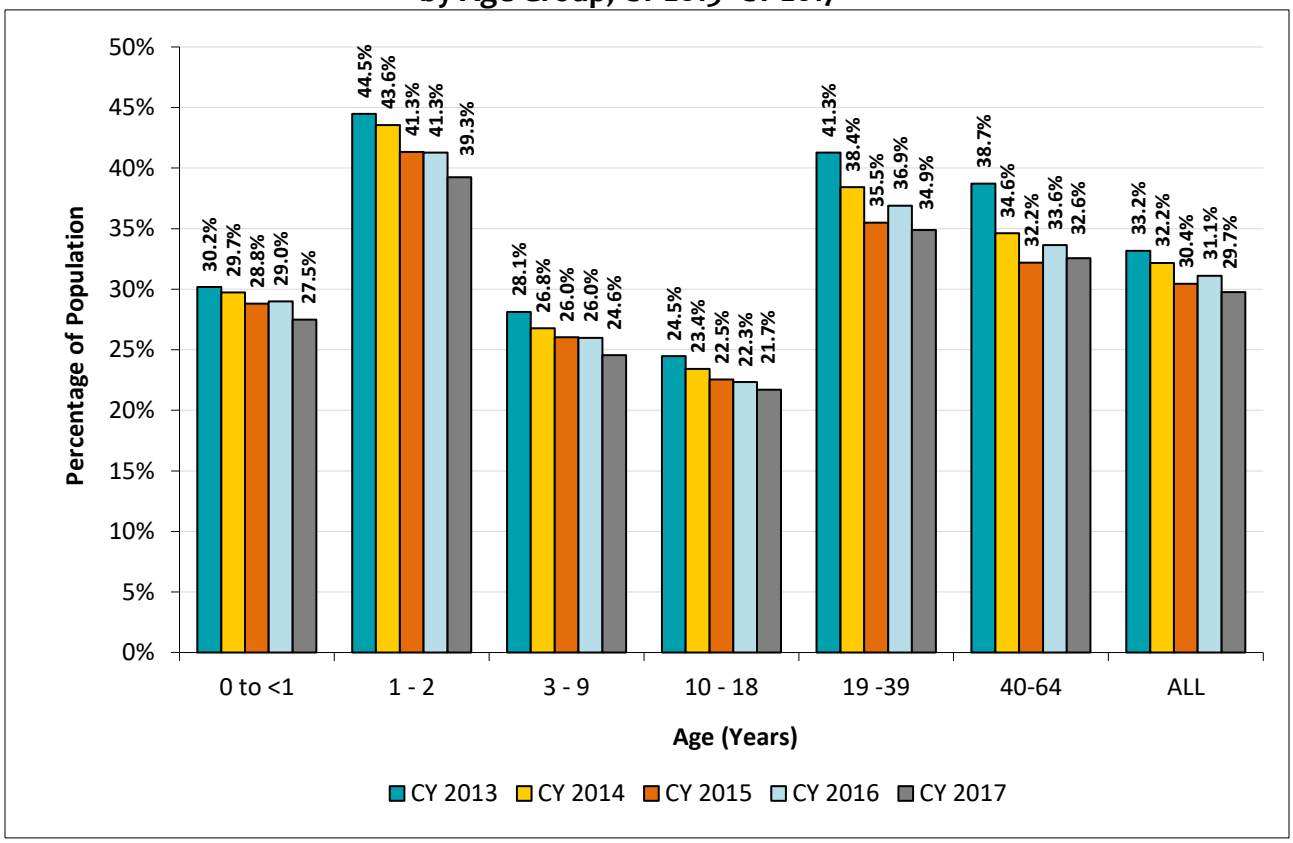


Figure 10 shows ED use by coverage category. Overall, the outpatient ED visit rate among all HealthChoice participants declined from CY 2013 to CY 2017. Among the coverage categories, participants with disabilities were the most likely to utilize ED services throughout the evaluation period: 45.0 percent in CY 2013 and 41.8 percent in CY 2017.

Figure 10. Percentage of the HealthChoice Population with an Outpatient ED Visit, by Coverage Category, CY 2013–CY 2017

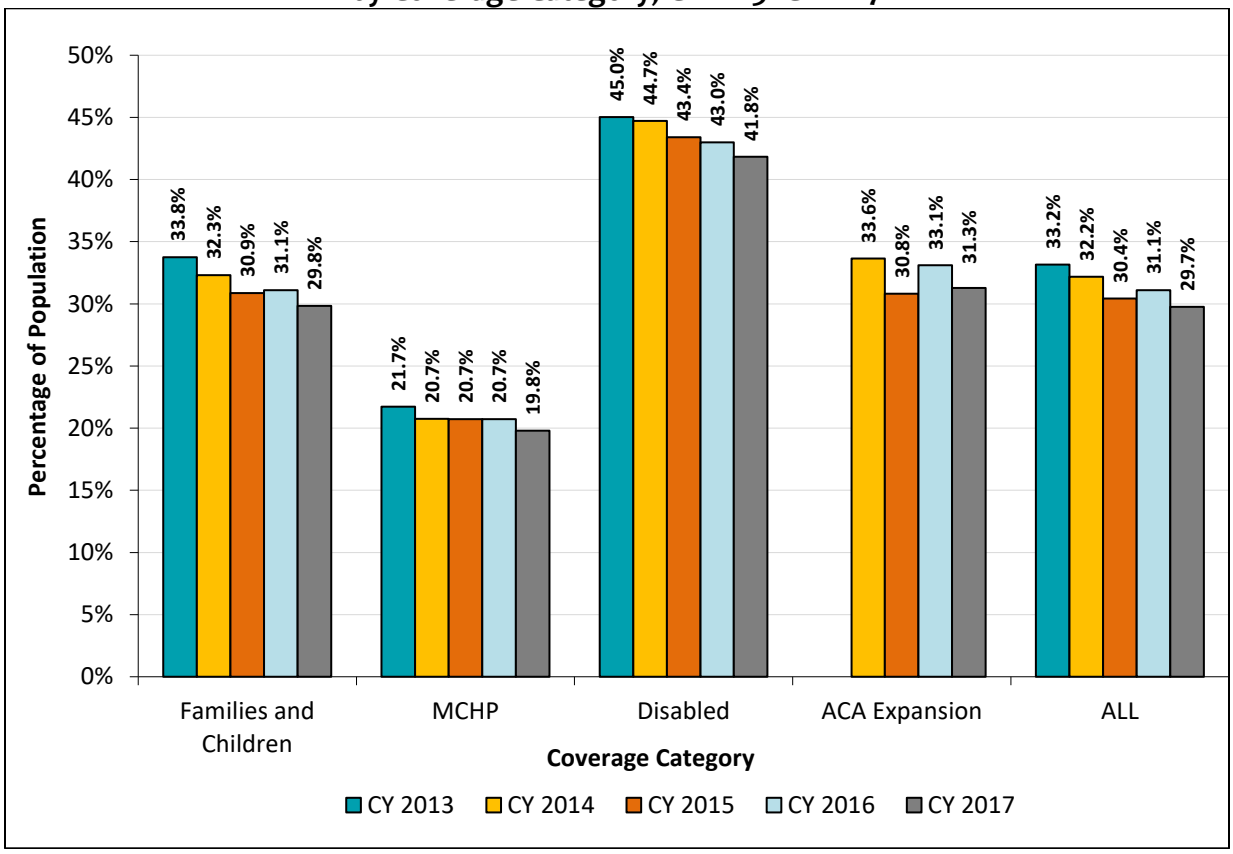


Figure 11 shows the percentage of HealthChoice participants who received an ED visit by region between CY 2013 and CY 2017. Participants living in Baltimore City used ED services at the highest rates throughout the evaluation period; however, the rates fell by 1.7 percentage points from CY 2013 to CY 2017. In other regions, rates also declined, ranging from a reduction of 2.7 percentage points in the Eastern Shore to 4.7 percentage points in Western Maryland.

Figure 11. Percentage of the HealthChoice Population with an Outpatient ED Visit, by Region, CY 2013–CY 2017

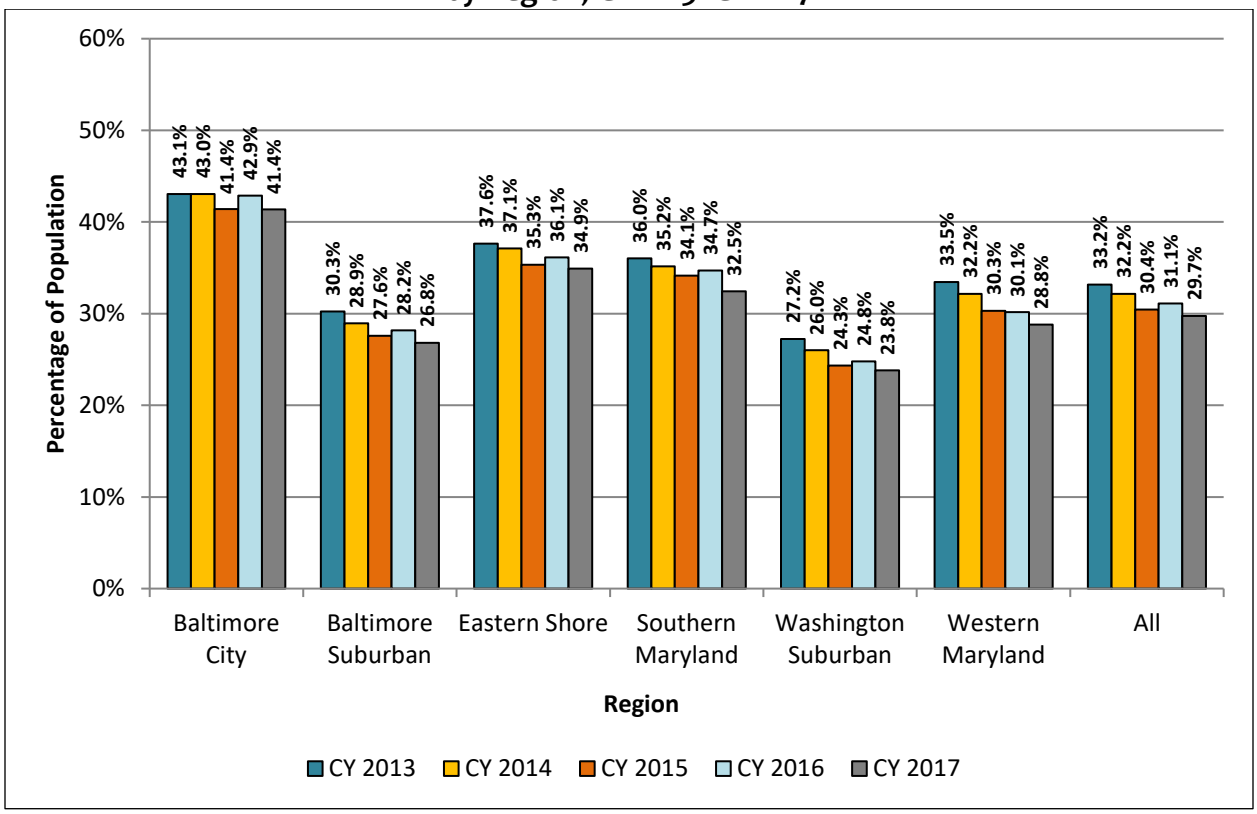


Figure 12 displays the percentage of HealthChoice participants aged 0 to 64 years who had at least one ED visit by race and ethnicity in CY 2013 and CY 2017. During the evaluation period, each racial and ethnic group experienced a drop in ED services. Black participants continued to have the highest ED visit rate, while Asian participants continued to have the lowest.

Figure 12. Percentage of HealthChoice Participants Aged 0–64 with an Outpatient ED Visit, by Race/Ethnicity, CY 2013 and CY 2017

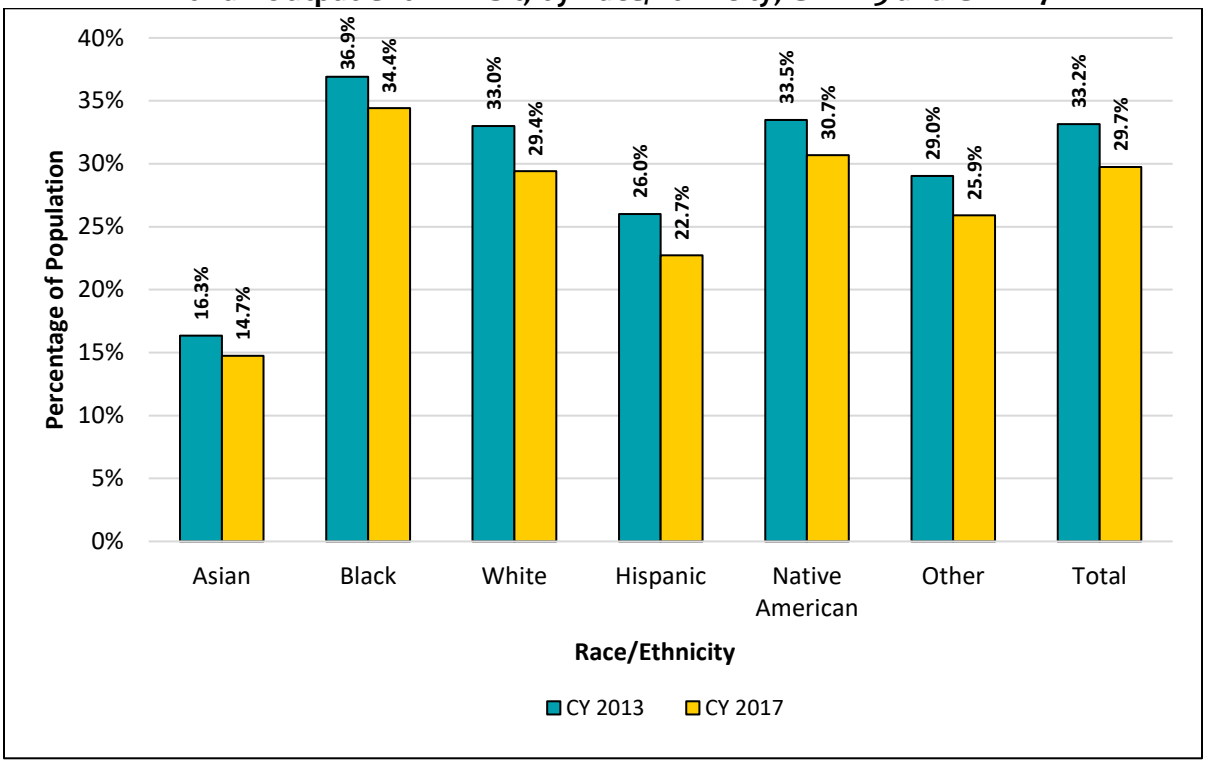


Table 6 displays the ED utilization of HealthChoice participants aged 0 to 64 years by MCO during CY 2013 and CY 2017. There were seven MCOs actively participating in HealthChoice in both calendar years of observation. Between CY 2013 and CY 2017, all but one MCO experienced a smaller percentage of participants with an ED visit; University of Maryland Health Partners experienced an increase in ED use by 3.8 percentage points. In CY 2013, at least 30 percent of participants in six of the eight MCOs used ED services. By CY 2017, only three out of nine MCOs had an ED utilization rate greater than 30 percent.

Table 6. Percentage of HealthChoice Participants Aged 0–64 with an Outpatient ED Visit, by MCO, CY 2013 and CY 2017*

MCO	CY 2013			CY 2017		
	Total Participants	# with ED Visit	% with ED Visit	Total Participants	# with ED Visit	% with ED Visit
Aetna	N/A**			1,977	344	17.4%
Amerigroup	258,172	80,555	31.2%	317,115	93,821	29.6%
Coventry	2,166	485	22.4%	N/A		
Jai Medical Systems	17,068	6,816	39.9%	29,738	11,107	37.3%
Kaiser	N/A			77,497	11,970	15.4%
Maryland Physicians Care	196,757	71,717	36.4%	251,696	82,352	32.7%
MedStar	45,991	14,734	32.0%	105,439	31,273	29.7%
Priority Partners	246,565	83,760	34.0%	339,385	106,187	31.3%
University of Maryland Health Partners	8,193	1,992	24.3%	53,045	14,915	28.1%
United Healthcare	187,373	59,004	31.5%	179,551	51,261	28.5%
ALL MCOs	**962,285**	**319,063**	**33.2%**	**1,355,443**	**403,230**	**29.7%**

*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).

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 to assess inpatient utilization. Table 7 presents HealthChoice participants with at least one inpatient hospital admission by age group. Participants aged 18 to 40 years had a lower rate of inpatient admissions compared to participants aged 41 to 64 years. Both age groups reduced their inpatient admission rates between CY 2013 and CY 2017.

Table 7. Percentage of HealthChoice Participants Aged 18–64 Years with an Inpatient Admission, by Age Group, CY 2013 and CY 2017

Age Group	All Inpatient Admissions					
	CY 2013			CY 2017		
	Total Participants	# with Inpatient Admission	% with Inpatient Admission	Total Participants	# with Inpatient Admission	% with Inpatient Admission
18 – 40	275,153	36,802	13.4%	461,423	45,082	9.8%
41– 64	103,949	14,888	14.3%	263,324	28,051	10.7%
Total	**379,102**	**51,690**	**13.6%**	**724,747**	**73,133**	**10.1%**

Figure 13 displays the percentages of HealthChoice participants aged 18 to 64 years with an inpatient admission by region. Between CY 2013 and CY 2017, all regions decreased the percentage of participants with an inpatient admission, from 13.6 percent in CY 2013 to 10.1 percent in CY 2017. In CY 2017, Washington Suburban region had the lowest admission rate of 8.6 percent, compared to a rate of 12.1 percent in CY 2013. The greatest decline was observed in Baltimore City, from 16.3 percent in CY 2013 to 12.3 percent in CY 2017. However, Baltimore City, alongside Western Maryland, is one of the two regions whose admission rate remained above 10 percent.

Figure 13. Percentage of HealthChoice Participants Aged 18–64 Years with an Inpatient Admission, by Region, CY 2013–CY 2017

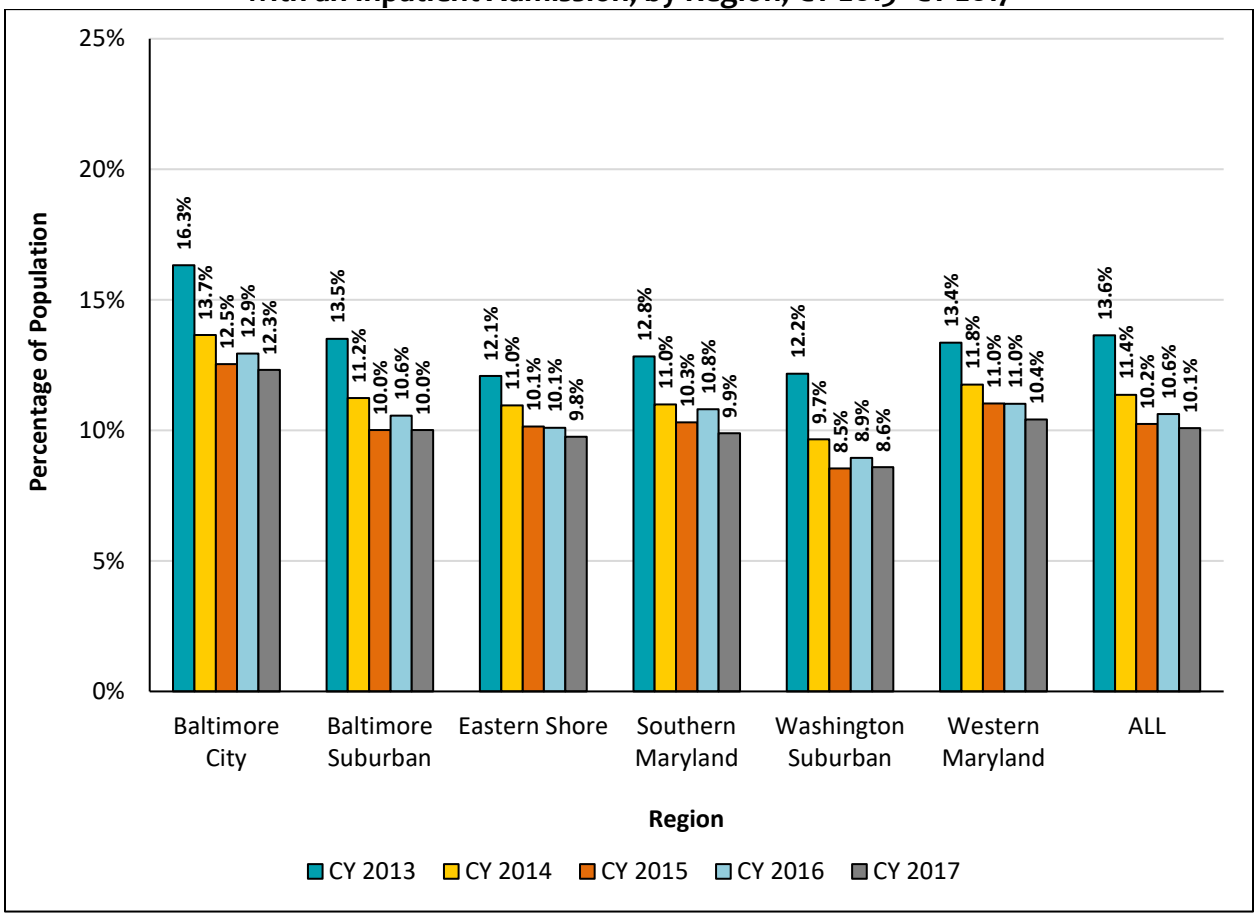
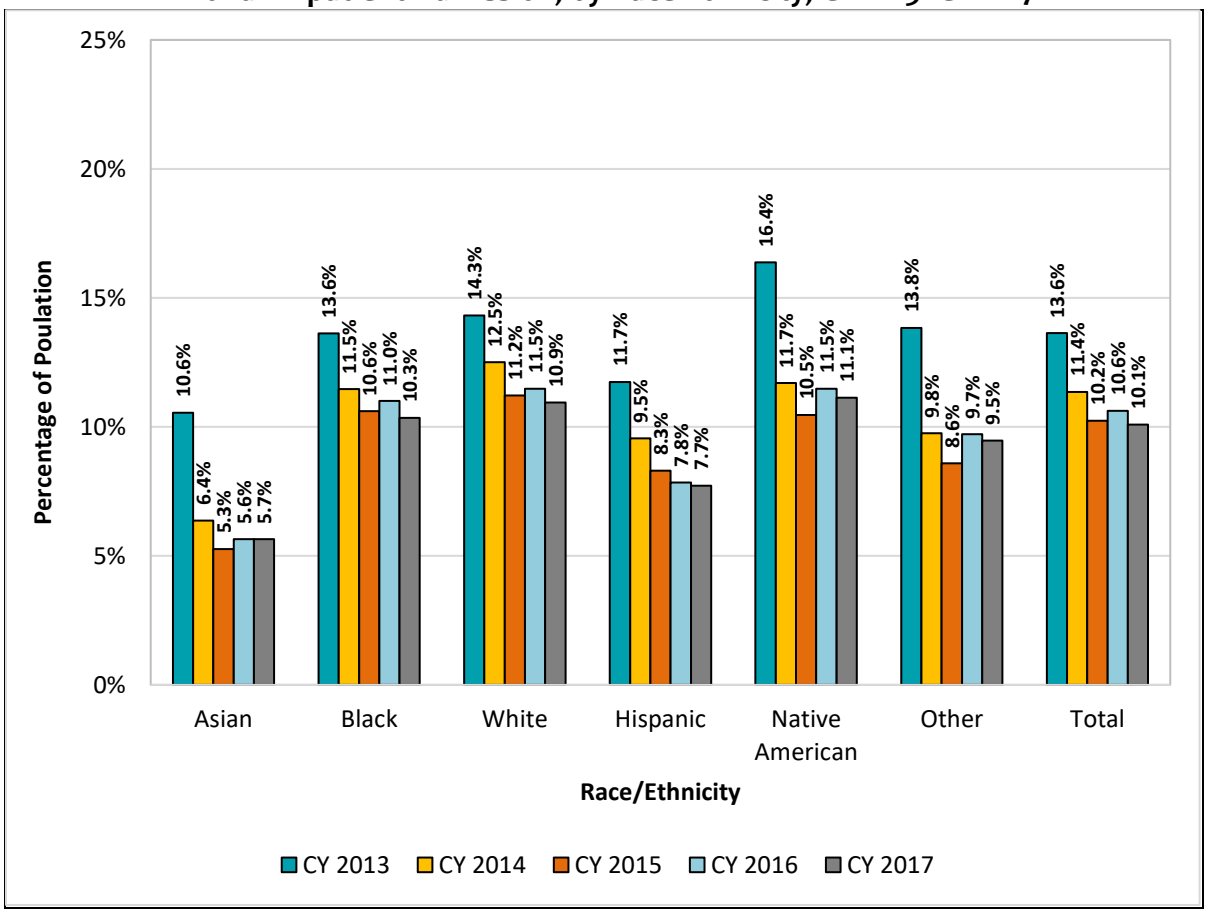


Figure 14 presents the percentage of HealthChoice participants aged 18 to 64 years by race and ethnicity who received an inpatient admission between CY 2013 and CY 2017. Each group's rate declined sharply between CY 2013 and CY 2014. In addition, each group's rate in CY 2017 was lower than in CY 2014.

Figure 14. Percentage of HealthChoice Participants Aged 18–64 Years with an Inpatient Admission, by Race-Ethnicity, CY 2013–CY 2017



Behavioral Health

Table 8 displays the rates of MHDs, SUDs, and co-occurring MHD and SUD among HealthChoice participants by race and ethnicity during CY 2013 and CY 2017. Between CY 2013 and CY 2017, the percentage of HealthChoice participants who had a behavioral health condition increased. Increased rates of behavioral health conditions were seen across all racial and ethnic groups—except for a small decline in the percentage of Hispanic members with an SUD only, as well as among participants of "Other" race/ethnicity with MHD-only diagnoses. However, the percentage of participant in those groups also experienced an increase in the rate of participants with a dual diagnosis (MHD + SUD).

Table 8. Distribution of HealthChoice Participants Aged 0–64, by Race/Ethnicity and Behavioral Health Conditions, CY 2013 and CY 2017

Race/Ethnicity	CY 2013		CY 2017	
	Number of Enrollees	Percentage of Total Enrollees	Number of Enrollees	Percentage of Total Enrollees
MHD-Only				
Black	50,432	10.8%	72,828	12.6%
White	38,646	14.1%	58,317	15.4%
Hispanic	5,387	4.4%	9,201	8.1%
Asian	1,054	3.1%	2,261	3.7%
Native American	237	12.6%	511	13.5%
Other	4,222	6.6%	13,576	6.1%
Total	**99,978**	**10.4%**	**156,694**	**11.6%**
SUD-Only				
Black	8,842	1.9%	15,305	2.7%
White	9,121	3.3%	22,100	5.8%
Hispanic	1,488	1.2%	683	0.6%
Asian	130	0.4%	316	0.5%
Native American	49	2.6%	159	4.2%
Other	851	1.3%	3,069	1.4%
Total	**20,481**	**2.1%**	**41,632**	**3.1%**
Dual Diagnosis (MHD + SUD)				
Black	5,512	1.2%	12,690	2.2%
White	7,170	2.6%	17,913	4.7%
Hispanic	233	0.2%	401	0.4%
Asian	42	0.1%	162	0.3%
Native American	54	2.9%	125	3.3%
Other	406	0.6%	1,794	0.8%
Total	**13,417**	**1.4%**	**33,085**	**2.4%**
No Behavioral Health Condition				
Black	401,070	86.1%	475,186	82.5%
White	219,797	80.0%	280,178	74.0%
Hispanic	115,041	94.2%	103,796	91.0%
Asian	33,019	96.4%	57,636	95.5%
Native American	1,536	81.9%	3,001	79.1%
Other	58,022	91.4%	204,235	91.7%
Total	**828,485**	**86.1%**	**1,124,032**	**82.9%**

Utilization—Special Populations

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.[15] 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 9 displays HealthChoice children in foster care by age group for CY 2013 and CY 2017. Across the evaluation period, children aged 10 to 21 years made up the largest proportion of HealthChoice children in foster care (68.0 percent in CY 2013 and 63.1 percent in CY 2017).

Table 9. HealthChoice Children in Foster Care, by Age Group, CY 2013 and CY 2017

Age Group (Years)	CY 2013		CY 2017	
	Number of Participants	Percentage of Total	Number of Participants	Percentage of Total
0 to <1	276	2.9%	259	2.9%
1–2	661	6.9%	746	8.5%
3–5	873	9.2%	973	11.1%
6–9	1,236	13.0%	1,266	14.4%
10–14	1,699	17.9%	1,737	19.8%
15–18	2,448	25.7%	2,222	25.3%
19–21	2,320	24.4%	1,584	18.0%
Total	**9,513**	**100.0%**	**8,787**	**100.0%**

[15] Children in the subsidized adoption and guardianship programs are excluded from foster children counts.

Figure 15 shows the percentage of children in HealthChoice who received at least one Medicaid service during the calendar year by age group. Overall, the percentage of children in foster care who received at least one service remained generally stable across the measurement period. Although children aged 1 to 14 years increased utilization across the evaluation period, children younger than 1 year and children aged 15 to 21 years decreased use from CY 2013 to CY 2017.

Figure 15. Percentage of HealthChoice Children in Foster Care with Any Medicaid Service, by Age Group, CY 2013 and CY 2017

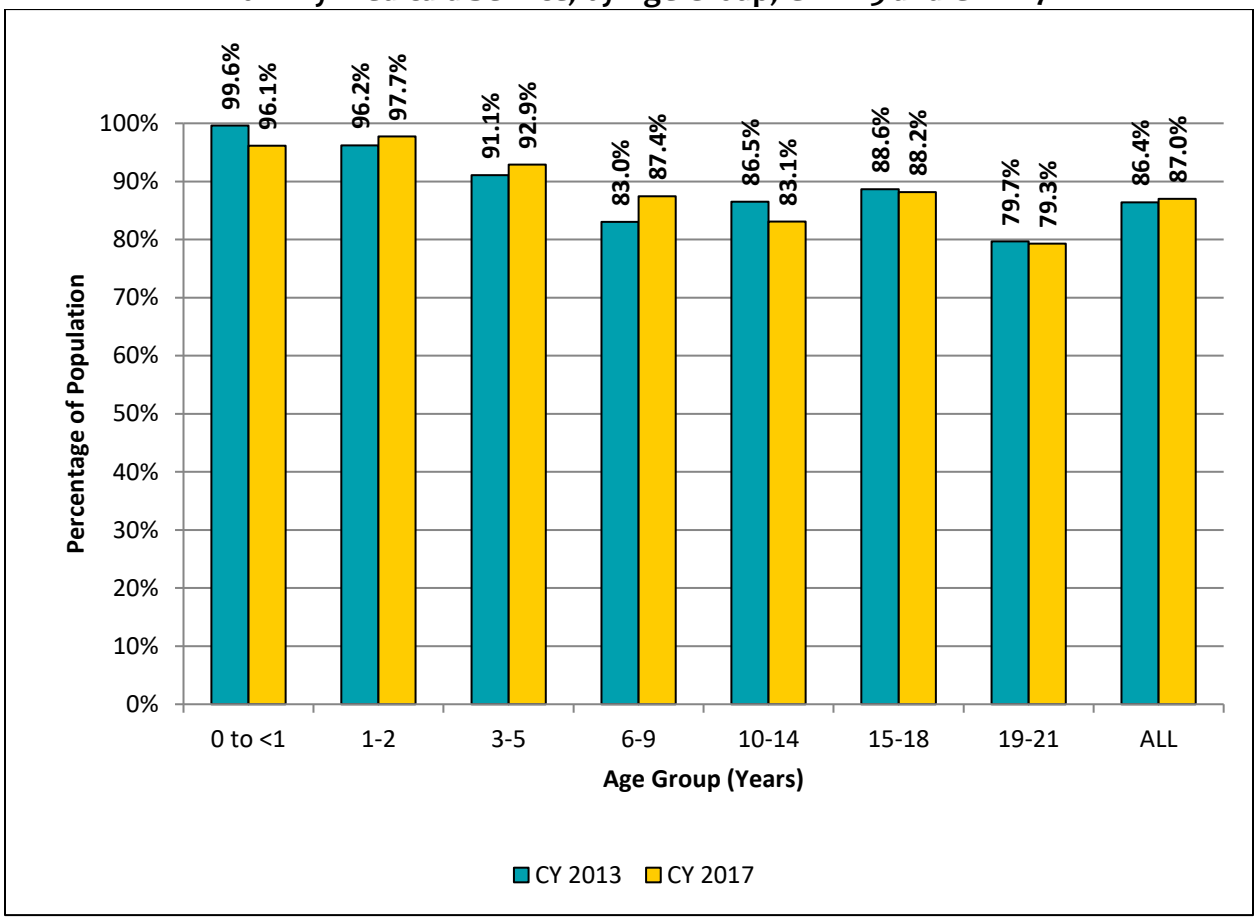


Figure 16 displays the percentage of children in foster care who had at least one ambulatory care visit in CY 2013 and CY 2017, by age group. From CY 2013 to CY 2017, the overall rate of ambulatory care visits increased by 1.5 percentage points. Consistent with the general HealthChoice population, younger children in foster care were more likely than older children to receive ambulatory care services.

Figure 16. Percentage of HealthChoice Children in Foster Care with Ambulatory Care Services, by Age Group, CY 2013 and CY 2017

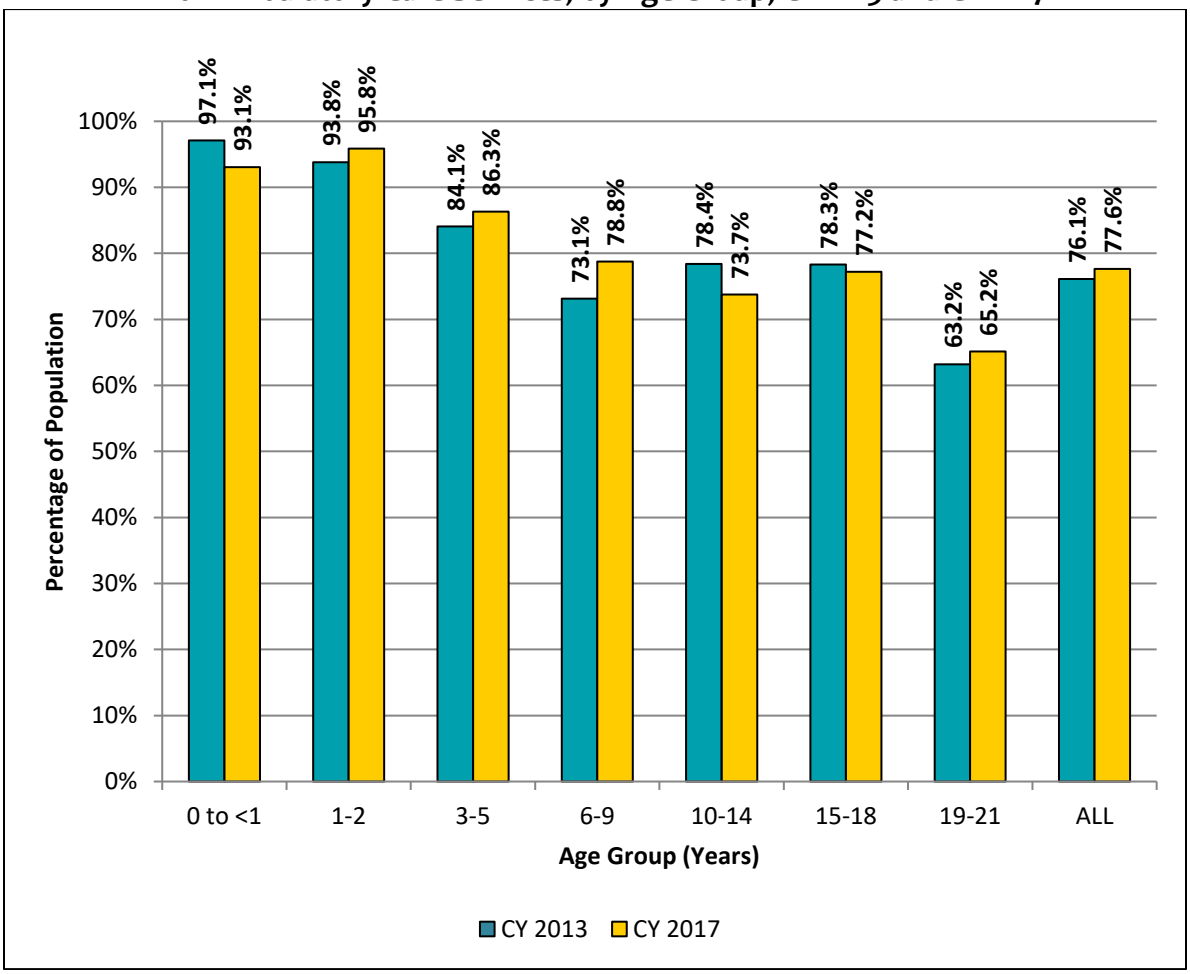


Figure 17 compares the ambulatory care visit rate for foster care children with the rate for non-foster care children enrolled in HealthChoice in CY 2017. Overall, non-foster care children in HealthChoice accessed ambulatory care at a higher rate than did foster care children. However, children in foster care under the age of three years accessed ambulatory care services at a slightly higher rate than other children in HealthChoice.

Figure 17. Percentage of HealthChoice Foster Care Children vs. Non-Foster Care Children with Ambulatory Care Services, by Age Group, CY 2017

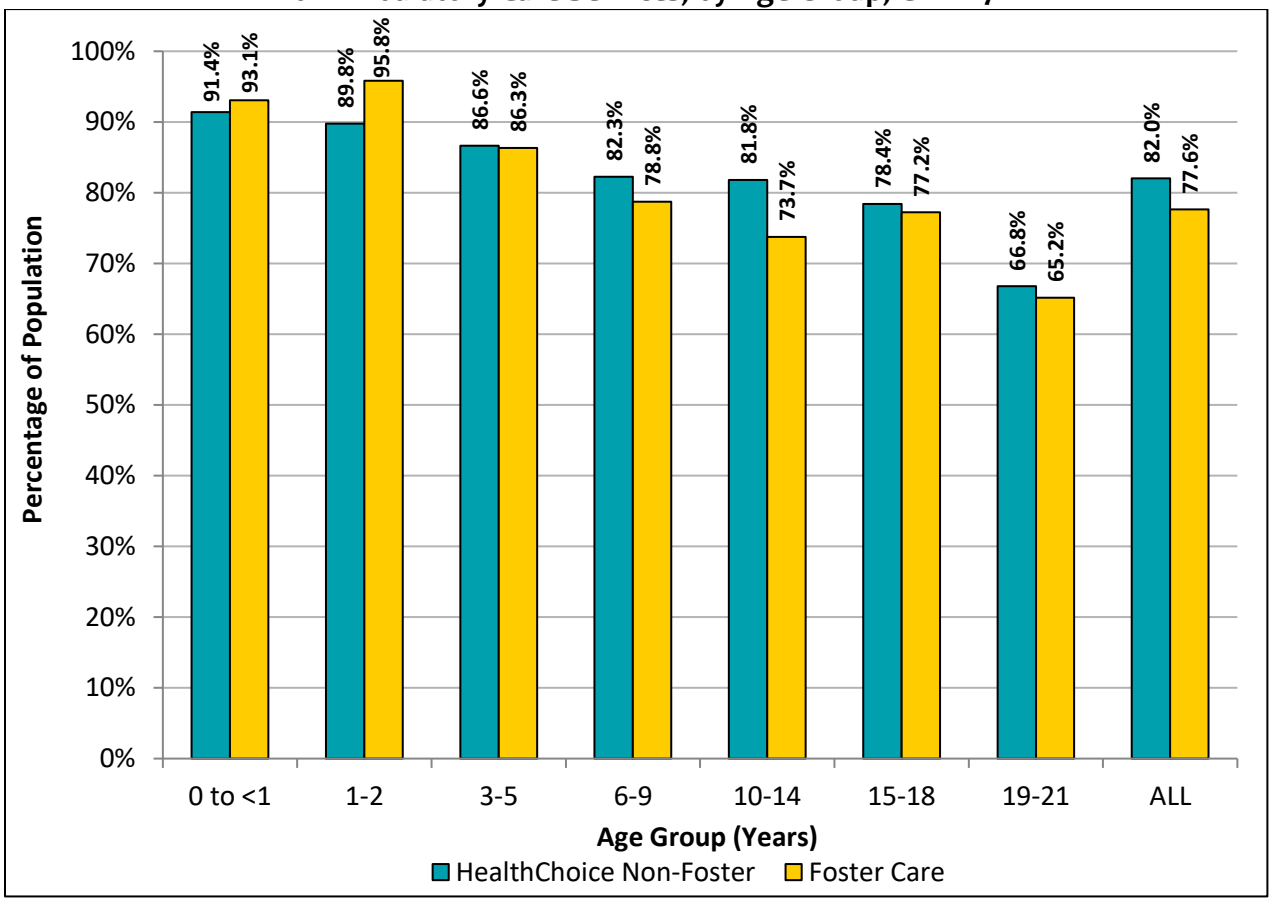
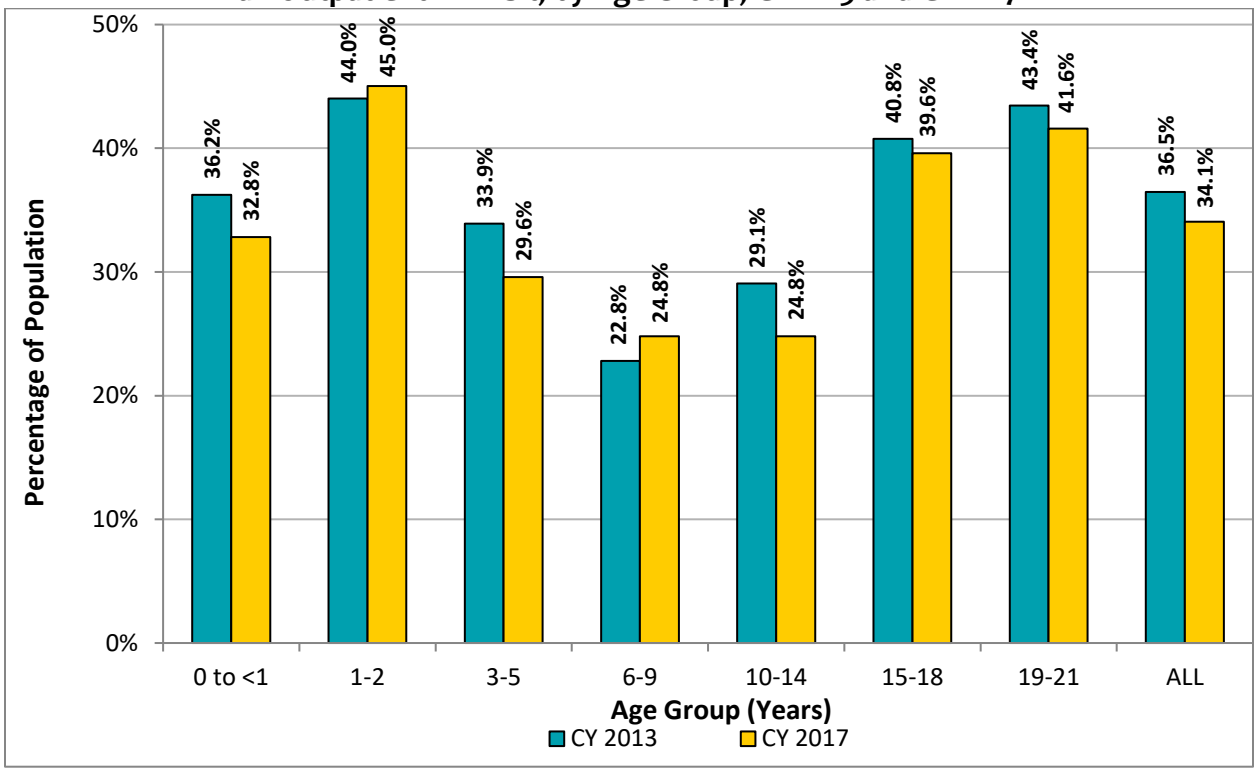


Figure 18 displays the percentage of children in foster care who received at least one outpatient ED visit in CY 2013 and CY 2017, by age group.[16] The overall rate decreased by 2.4 percentage points during the evaluation period. Children aged 1 to 2 years and 19 to 21 years used ED services at the highest rates in CY 2017.

Figure 18. Percentage of HealthChoice Children in Foster Care Who Had an Outpatient ED Visit, by Age Group, CY 2013 and CY 2017



[16] Outpatient ED visits are defined as ED visits for patients who were seen and discharged on an outpatient basis. This measure does not include ED visits that lead to an inpatient admission.

Figure 19 compares the outpatient ED visit rate in CY 2017 for foster care children to the rate for non-foster care children enrolled in HealthChoice. Overall, children in foster care accessed the ED at a higher rate than children not in foster care.

Figure 19. Percentage of HealthChoice Foster Care Children vs. Non-Foster Care Children Who Had an Outpatient ED Visit, by Age Group, CY 2017

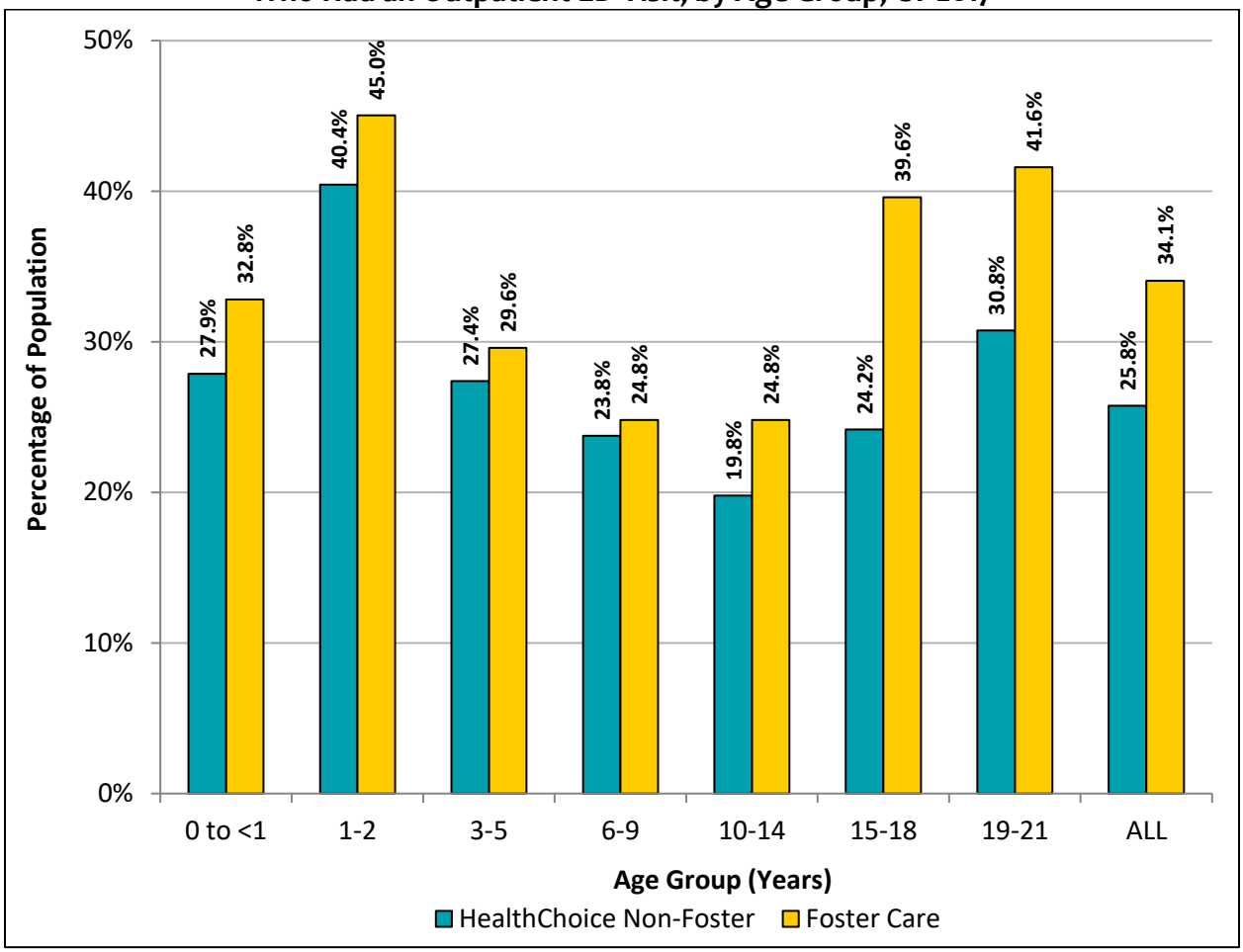


Figure 20 presents the number of HealthChoice children in foster care who have had at least one inpatient hospital admission in CY 2013 and CY 2017. Across the evaluation period, the overall rate of inpatient hospitalization decreased by 1.2 percent, and decreased for all age groups except for children aged 6 to 9 years and 19 to 21 years. Hospitalization at birth means that the rate of inpatient admissions is near 100 percent for infants aged 0 to one year; therefore, this age group is excluded from the results.

Figure 20. Percentage of HealthChoice Children in Foster Care with at Least One Inpatient Admission, by Age Group, CY 2013 and CY 2017

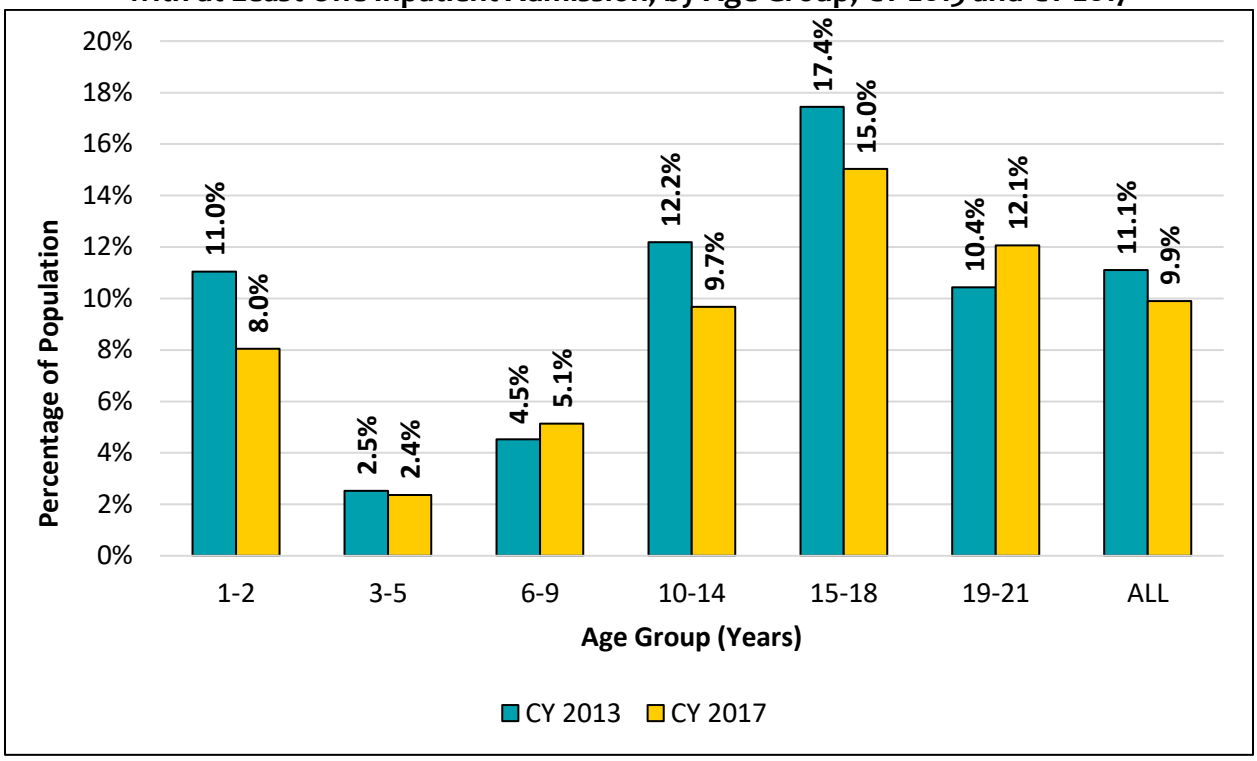


Figure 21 presents the number of non-foster care children enrolled in HealthChoice with at least one inpatient admission compared to foster care children in CY 2017. The rate of inpatient hospitalization was 7.6 percentage points higher for children in foster care than for children not in foster care, and it was consistently higher for foster care children across all age groups.

Figure 21. Percentage of HealthChoice Foster Care Children vs. Non-Foster Care Children with at Least One Inpatient Admission, by Age Group, CY 2017

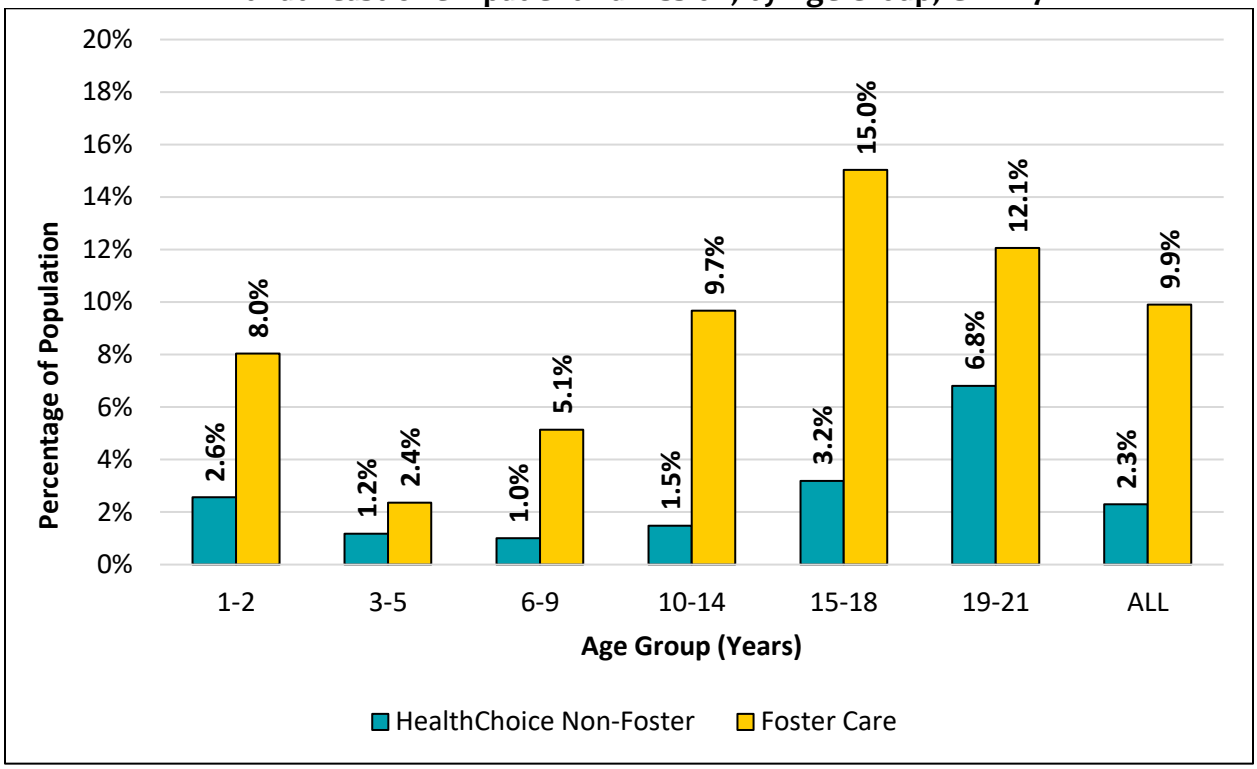


Figure 22 compares the dental utilization rate in CY 2017 for foster care children aged 4 to 20 years to the rate for non-foster care children enrolled in HealthChoice. Overall, children in foster care had a similar dental visit rate (64.4 percent) to other HealthChoice children (62.8 percent). The largest differences between the two populations were observed in the older age groups. The dental visit rate was 51.2 percent for children in foster care aged 19 to 20 years and 37.8 percent for other HealthChoice children—a difference of 13.4 percentage points.

Figure 22. Percentage of HealthChoice Foster Care Children Aged 4–20 Years vs. Non-Foster Care Children with a Dental Visit, by Age Group, CY 2017

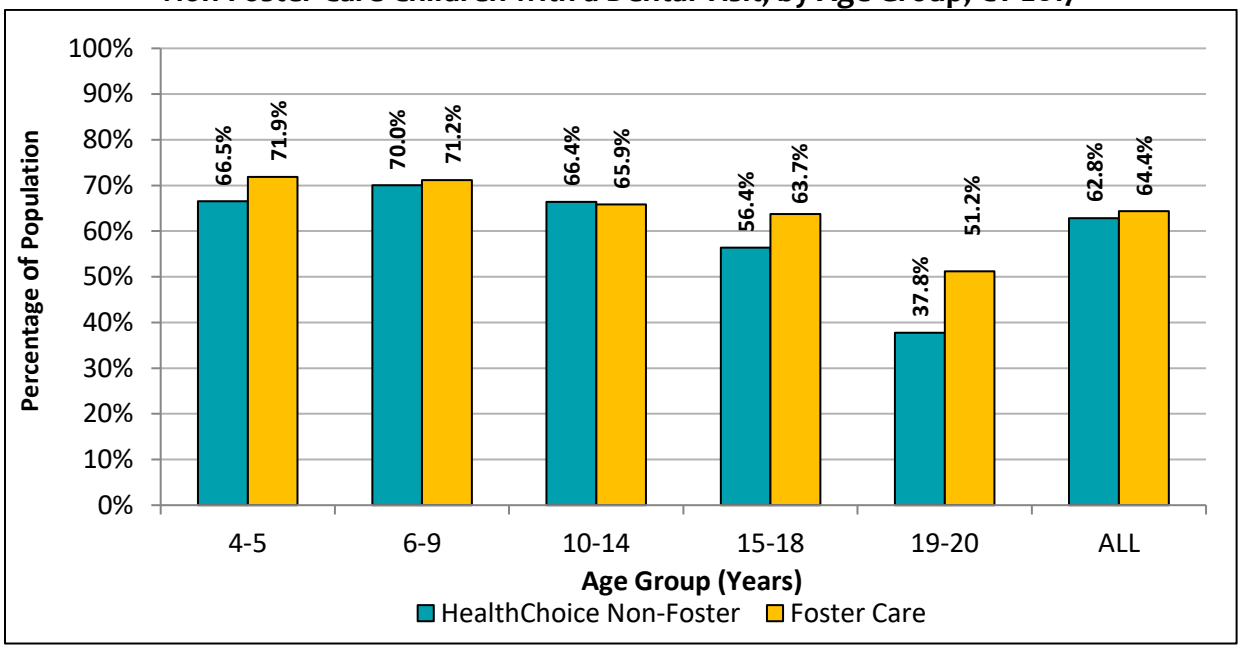


Table 10 shows the rates of MHDs, SUDs, and co-occurring MHD and SUD conditions among foster care and non-foster care HealthChoice participants in CY 2013 and CY 2017. The percentage of participants diagnosed with an MHD-only, SUD-only, or co-occurring MHD and SUD diagnosis were higher among foster care 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 increased slightly across the evaluation period. In contrast, the percentage of participants with SUD-only diagnoses decreased from CY 2013 to CY 2017 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 2013 and CY 2017, while the rate for foster care participants fell by 0.4 percentage points.

Table 10. Behavioral Health Diagnosis of HealthChoice Foster Care Children vs. Non-Foster Care Children Aged 0–21 Years, CY 2013 and CY 2017

Foster Care Status	CY 2013			CY 2017		
	Number of Participants	Total Participants	Percentage of Total	Number of Participants	Total Participants	Percentage of Total
MHD-Only						
Foster Care	3,748	9,513	39.4%	3,706	8,787	42.2%
Non-Foster Care	57,533	656,617	8.8%	76,500	720,557	10.6%
SUD-Only						
Foster Care	128	9,513	1.3%	65	8,787	0.7%
Non-Foster Care	6,544	656,617	1.0%	2,868	720,557	0.4%
Dual Diagnosis (MHD + SUD)						
Foster Care	312	9,513	3.3%	257	8,787	2.9%
Non-Foster Care	2,142	656,617	0.3%	1,934	720,557	0.3%
No Behavioral Health Diagnosis						
Foster Care	5,327	9,513	56.0%	4,764	8,787	54.2%
Non-Foster Care	590,558	656,617	89.9%	639,422	720,557	88.7%

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 11 presents REM enrollment by age group, sex, and status in foster care for CY 2013 and CY 2017. In both years, most REM participants were 18 years of age or younger and male. 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 11. REM Enrollment by Age Group, Sex, and Foster Care Status, CY 2013 and CY 2017

Demographic Characteristic	CY 2013		CY 2017	
	Number of Enrollees	Percentage of Total	Number of Enrollees	Percentage of Total
Age Group (Years)				
0-18	3,167	69.1%	2,926	65.5%
19 and over	1,417	30.9%	1,543	34.5%
Total	**4,584**	**100.0%**	**4,469**	**100.0%**
Sex/Gender				
Female	2,023	44.1%	1,917	42.9%
Male	2,561	55.9%	2,552	57.1%
Total	**4,584**	**100.0%**	**4,469**	**100.0%**
Foster Care				
Foster Care	394	8.6%	335	7.5%
Non-Foster Care	4,190	91.4%	4,134	92.5%
Total	**4,584**	**100.00%**	**4,469**	**100.00%**

REM Service Utilization

Figure 23 shows the percentages of REM participants who received at least one dental, inpatient, ambulatory care, and outpatient ED visit between CY 2013 and CY 2017. 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 51.0 percent in CY 2013 to 54.4 percent in CY 2017. The percentage of REM participants who had an inpatient visit declined by 3.1 percentage points between CY 2013 and CY 2017. Ambulatory care utilization remained steady throughout the evaluation period. Outpatient ED visits decreased by 2.1 percentage points over the entire evaluation period; however, the largest decline occurred between CY 2013 and CY 2014, when the rate went from a high of 46.7 percent to 44.7 percent—a decrease of 2.0 percentage points. Due to the nature of qualifying conditions for the REM program, nearly 100 percent of REM participants received at least one service per year during the evaluation period.

Figure 23. Percentage of REM Participants with a Dental, Inpatient, Ambulatory Care, Outpatient ED Visit, and Any Medicaid Service, CY 2013–CY 2017

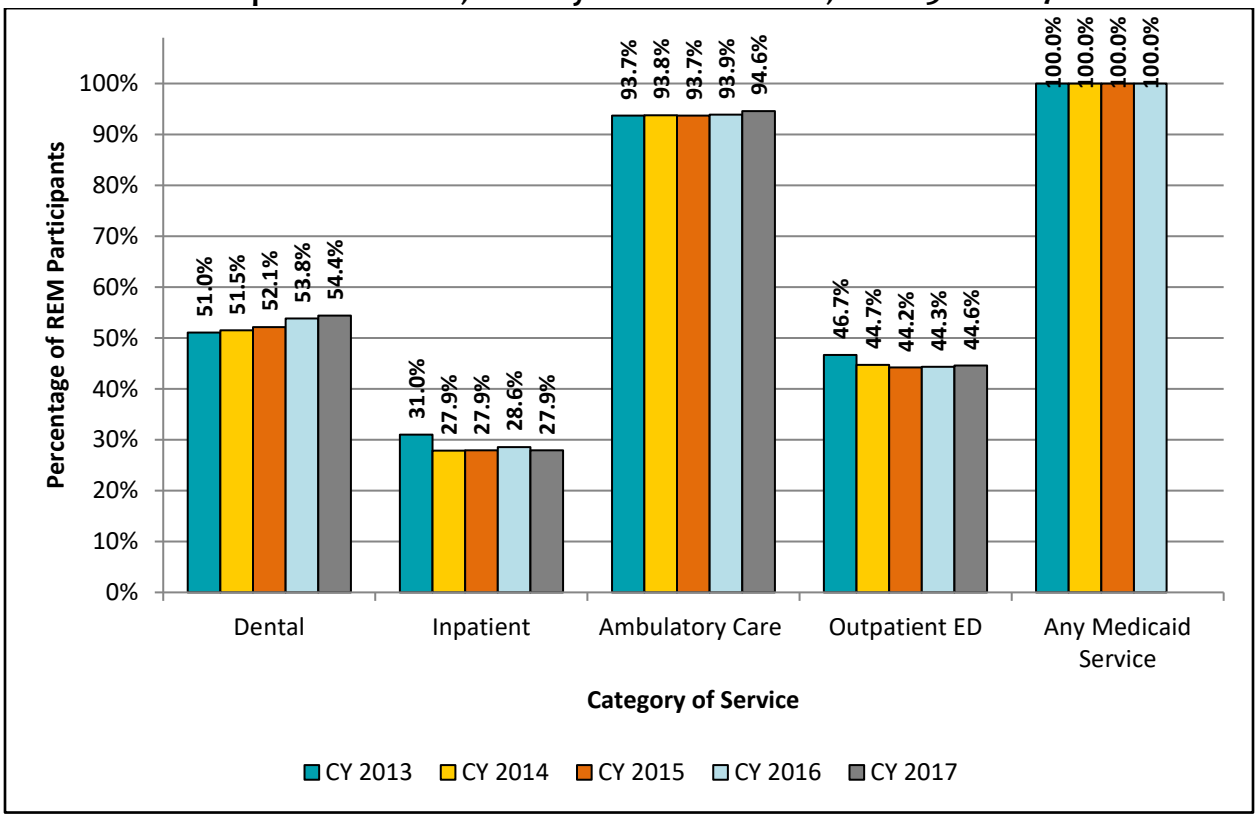


Table 12 shows the diagnosis rates of MHDs, SUDs, co-occurring MHD and SUD, and no MHDs or SUDs among REM participants at the beginning and end of the evaluation period. The percentage of REM participants with an MHD-only diagnosis increased by 4 percentage points between CY 2013 and CY 2017, and the rates for SUD-only and no behavioral health diagnosis decreased. Co-occurring MHD and SUD diagnoses remained stable.

Table 12. Behavioral Health Diagnoses of REM Participants, CY 2013–2017

CY 2013			CY 2017		
Number of Participants	Total Participants	Percentage of Total	Number of Participants	Total Participants	Percentage of Total
MHD-Only					
716	4,584	15.6%	876	4,469	19.6%
SUD-Only					
189	4,584	4.1%	145	4,469	3.2%
Dual Diagnosis (MHD + SUD)					
43	4,584	0.9%	44	4,469	1.0%
No Behavioral Health Diagnosis					
3,636	4,584	79.3%	3,404	4,469	76.2%

Section I Conclusion

Across a wide variety of measures of utilization, and with multiple comparisons among subpopulations, HealthChoice utilization trends were largely consistent with program goals. The percentage of REM participants with a dental visit and ambulatory care increased during the evaluation period, and the rate of behavioral health services increased from CY 2013 to CY 2017. Outpatient ED visits and inpatient admissions generally declined over the evaluation period. The outpatient ED visits and inpatient admissions were higher for children in foster care than for children not in foster care in CY 2017.

Section II. Quality of Care

Value-Based Purchasing Program

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

VBP measures may change according to the Department's priorities and analysis of changing population health needs. The measures chosen intend to improve outcomes for HealthChoice enrollees—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, critically, should reflect areas that are possible for MCOs to affect change. Measures (Table 13) included in the CY 2017 VBP program are chosen from NCQA's HEDIS® data set, using encounter data and data supplied by the HealthChoice MCOs and subsequently validated by the Department's EQRO and HEDIS® auditor. Changes in the components of the VBP program may result in changes in plan performance with respect to that measure. For example, as discussed elsewhere in this report, removing the measure for diabetic vision screening and cervical cancer screening were followed by declines in the proportion of participants receiving these services. Therefore, decisions to make changes to the list of VBP measures are taken with due consideration by the Department.

Table 13. Value-Based Purchasing Measures and Averages across All Plans, CY 2017

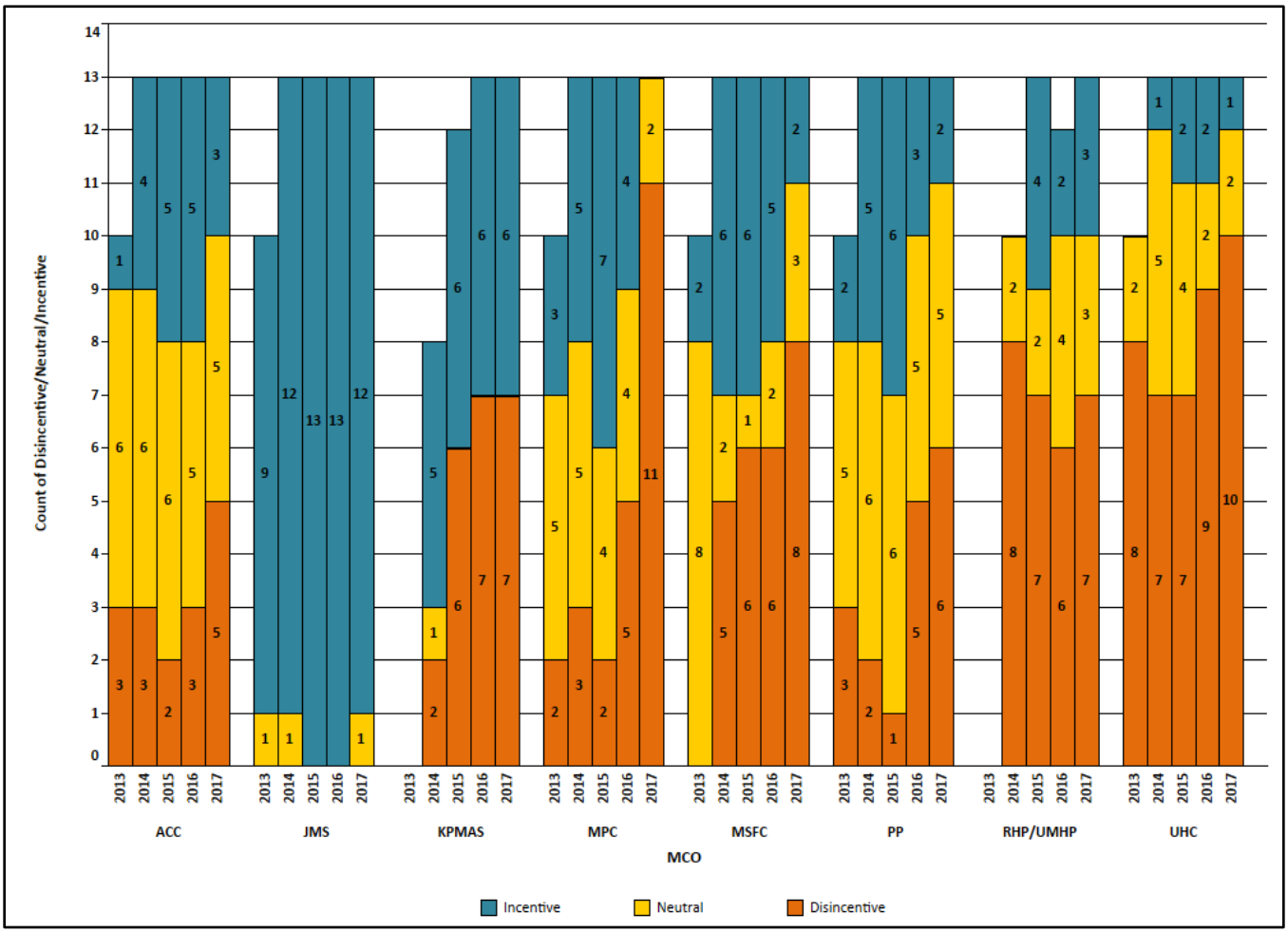
Value-Based Purchasing Measures	Average Percentage Goal Achieved
Adolescent Well-Care Visits	64%
Ambulatory Care Visits for SSI Adults	84%
Ambulatory Care Visits for SSI Children	83%
Adult BMI Assessment	94%
Breast Cancer Screening	70%
Childhood Immunization Status - Combination 3	76%
Comprehensive Diabetes Care - Hba1c testing	88%
Immunization for Adolescents - Combination 1	87%
Lead Screenings for Children - Ages 12-23 months	63%
Controlling High Blood Pressure	63%
Postpartum Care	74%
Asthma Medication Ratio	65%
Well-Child Visits for Children - Ages 3-6	81%

Per regulation,[17] the Department sets aside 1 percent 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. Performance meeting or exceeding the incentive target for a measure earns an incentive. Performance at or below the disincentive target results in a disincentive penalty. Each measure is accorded equal weight. The total of the incentive payments made to the MCOs each year may not exceed the total amount of disincentives collected from the MCOs in the same year, plus any additional funds allocated by the Department for a quality initiative.

Figure 24 indicates how many measures met the incentives and disincentives for each MCO, and those with neutral performances on the VBP measures from CY 2013 to CY 2017. During CY 2013, there were only ten VBP measures. Five of the current VBP measures were introduced beginning in 2014, while two previously used measures were dropped, leaving thirteen measures on which MCOs were scored. The individual MCOs' measures show mixed results, with some MCOs having consistently high or low performance. However, some plans experienced increases in the number of their disincentive penalties, indicated on the chart in red. Because the VBP measure incentive and disincentive levels are based on the average of all plans performance, when plans improve their measures across the board, it increases 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.

[17] COMAR 10.09.65.03

Figure 24. Count of VBP Incentives and Disincentives by MCO,* CY 2013 to CY 2017



*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

EPSDT (Healthy Kids) Review

Federal regulation[18] requires 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, whose nurse consultants 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

[18] 42 CFR § 440.345

questionnaires to assist with documenting preventive services according to the Maryland Schedule of Preventive Health Care.

The annual EPSDT (Healthy Kids) review 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 2013 and CY 2017, provider compliance increased for all five EPSDT components (Table 14). The HealthChoice aggregate total score increased over time during the evaluation period (Qlarant, 2018). Despite slight variations, all components and the aggregate total have remained above the minimum compliance score of 75 percent through CY 2014. In CY 2015, the minimum compliance score increased to 80 percent; the Department achieved this minimum compliance score for all components by CY 2016 and maintained it in CY 2017. MCOs use the review results to develop education efforts to inform participants and providers about EPSDT services.

Table 14. HealthChoice MCO Aggregate Composite Scores for Components of the EPSDT/Healthy Kids Review, CY 2013–CY 2017*

EPSDT Component	CY 2013	CY 2014	CY 2015	CY 2016	CY 2017
Health and Developmental History	89%	88%	92%	92%	92%
Comprehensive Physical Exam	91%	93%	93%	96%	96%
Laboratory Tests/At-Risk Screenings	77%	76%	78%	85%	82%
Immunizations	84%	83%	84%	85%	90%
Health Education/Anticipatory Guidance	89%	91%	92%	95%	94%
HealthChoice Aggregate Total	**87%**	**88%**	**89%**	**91%**	**92%**

*The minimum compliance score increased to 80 percent in CY 2015.

Section II Conclusion

Although many of the HealthChoice performance measures in this report demonstrate quality of health care already delivered, two particular 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 for MCOs to act upon. Performance by all 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 them incentive payments and which create disincentive penalties, the VBP program on the whole supports quality improvement across the HealthChoice population.

Second, the EPSDT annual review assesses plans' 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, the most recent review results show the plans meeting or exceeding standards across the board.

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

The HealthChoice demonstration's medical home provision encourages HealthChoice participants to use appropriate care settings and decrease potentially inappropriate utilization of health services. To this end, HealthChoice participants are asked to select their 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 15 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 in CY 2016 and CY 2017. 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. Several MCOs experienced slight declines in the proportions of their HealthChoice participants with at least one visit to their assigned PCP—except for MedStar and Priority Partners[19]—or at least one visit to any PCP within the MCO network. In CY 2017, the proportion of continuously enrolled participants who had at least one visit with their assigned PCP ranged from 22.8 percent (Priority Partners) to 57.6 percent (Kaiser). When the medical home was defined to include all PCPs within the MCO network, three of the eight MCOs had over 70 percent of their participants with a visit to any PCP within their provider network.

[19] Please read Priority Partners' results with caution as our analysis relied heavily on National Provider Identifiers (NPIs), and Priority's files had missing NPIs.

Table 15. Percentage of HealthChoice Participants (12 Months of Enrollment) with a PCP Visit, by MCO*, CY 2016 and CY 2017

MCO	# of Participants[1] (12 Months of Enrollment)	% of Participants with a Visit with their Assigned PCP	% of Participants with a Visit with Assigned PCP, Group Practice, or Partner PCPs	% of Participants with a Visit with any PCP in MCO's Network
CY 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%
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%**

* The number of participants in a HealthChoice MCO only includes participants who were listed in the data files provided by the MCO and also in the MCO enrollment files according to MMIS2 data.
**Aetna had no participants who were enrolled in CY 2017 for 12 months.

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, Parikh, & Mijanovich, 2000). 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).

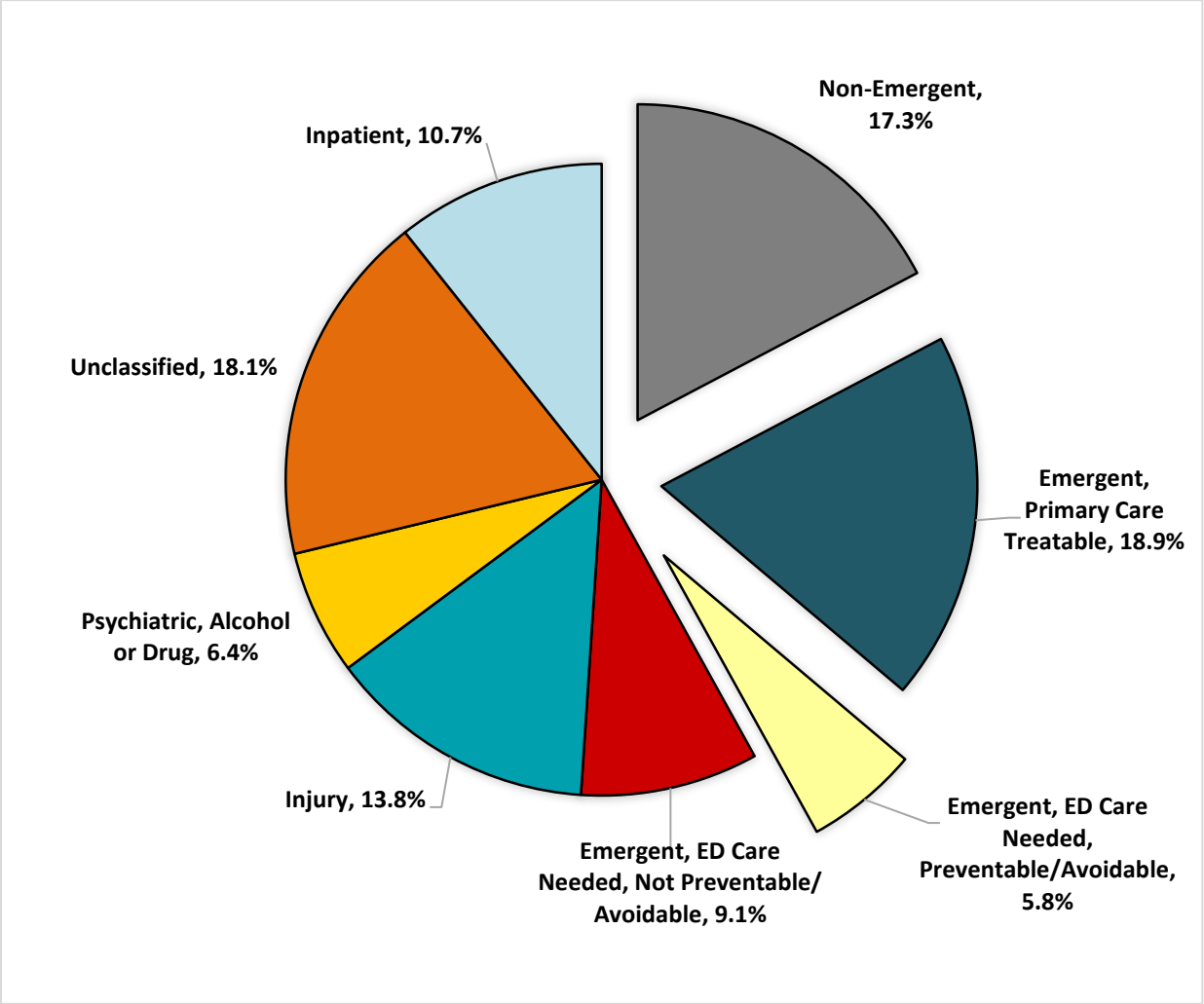
3. *Emergent but preventable/avoidable*: Emergency care was required, but the condition was potentially preventable/avoidable if timely and effective ambulatory care had been accessible and received during the episode of illness (e.g., asthma flare-up).
4. *Emergent, ED care needed, not preventable/avoidable*: 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 categories one through three may indicate problems with access to primary care, including access to primary care and urgent care centers open during non-traditional work hours. Figure 25 presents the distribution of all CY 2017 ED visits by NYU classification for individuals with any period of HealthChoice enrollment. In CY 2017, 42 percent of all ED visits were for potentially avoidable conditions, meaning that the ED visit could have been avoided if the condition had been addressed with high-quality and timely primary care.

ED visits in categories four (emergent, ED care needed, not preventable/avoidable) and five (injury) are the least likely to be prevented with access to primary care. These two categories accounted for 22.9 percent of all ED visits in CY 2017. Adults aged 40 through 64 years had more ED visits related to category four (emergent, ED care needed, not preventable/avoidable) than all other age groups; children aged 3 through 18 years had more category five (injury) ED visits than other age groups.[20] The inpatient category in Figure 25, 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.

[20] Data not presented.

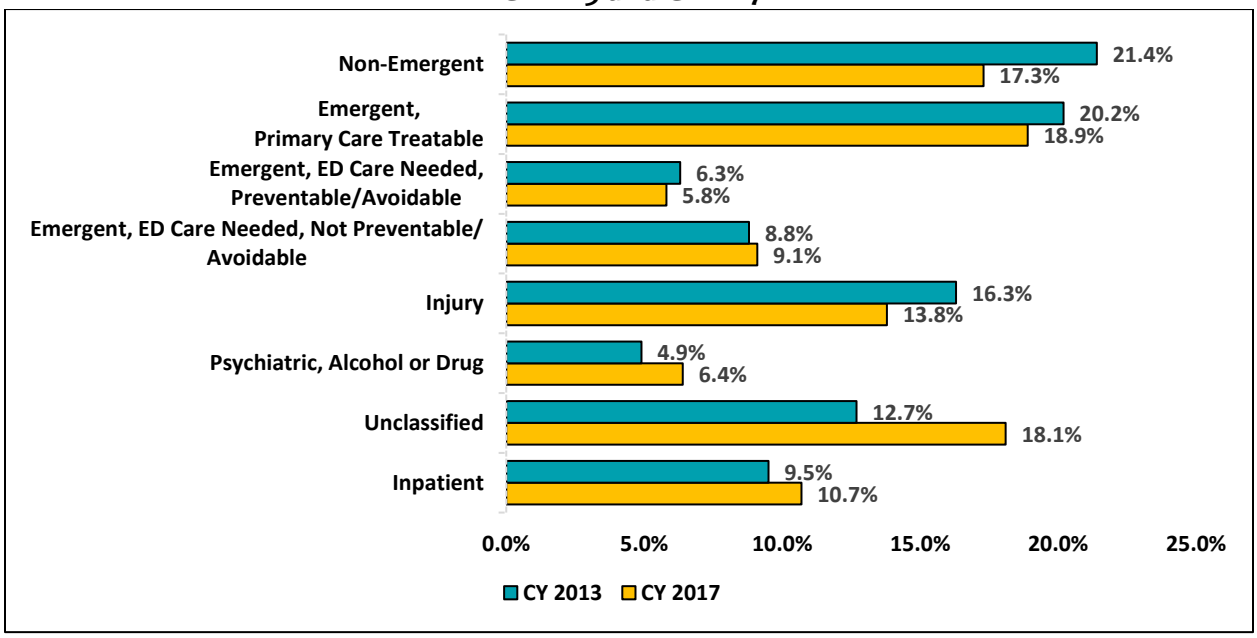
Figure 25. ED Visits by HealthChoice Participants Classified According to NYU Avoidable ED Algorithm, CY 2017



Note: ED visits that result in an inpatient stay are not a part of the NYU algorithm and have been added here in their own category.

Figure 26 compares the ED visit classifications for CY 2013 with the classifications for CY 2017. The data show that potentially avoidable ED visits decreased during the evaluation period: from 47.9 percent of all ED visits in CY 2013 to 42.0 percent in CY 2017. 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 rose from 4.9 percent in CY 2013 to 6.4 percent in CY 2017. This trend is in line with regional and nationwide trends, with the likely cause being the opioid epidemic and increased utility of EDs by patients seeking treatment for mental health issues. Maryland's 1.5 percent increase is lower than other geographical regions, like the Midwest, that reported substantial increases of 25 percent or greater (CDC, 2018c).

Figure 26. Classification of ED Visits, by HealthChoice Participants, CY 2013 and CY 2017



Preventable or Avoidable Admissions

Ambulatory care-sensitive hospitalizations (i.e., 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 (Stranges & Stocks, 2010), one in ten hospital admissions nationwide were avoidable. 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.[21]

Table 16 presents the number of potentially avoidable inpatient admissions per 100,000 HealthChoice participants aged 18 to 64 years during CY 2013 through CY 2017. Chronic obstructive pulmonary disease (COPD) or Asthma in Older Adults was responsible for the highest number of potentially avoidable admissions throughout the evaluation period. The numbers of potentially avoidable admissions for Lower-Extremity Amputation in Patients with Diabetes and Perforated Appendix were the smallest across the evaluation period.

Table 16. Number of Potentially Avoidable Inpatient Admissions per 100,000 HealthChoice Participants Aged 18–64 Years, CY 2013–CY 2017[22]

Any PQI #	CY 2013	CY 2014	CY 2015	CY 2016	CY 2017
1: Diabetes Short-Term Complications Admissions[23]	180	196	166	134	147
2: Perforated Appendix Admissions	16	20	16	19	19
3: Diabetes Long-Term Complications Admissions	183	149	128	118	139
5: COPD or Asthma in Older Adults Admissions (Ages 40-64)	1,325	867	716	730	802
7: Hypertension Admissions	60	71	58	61	86
8: Congestive Heart Failure Admissions	262	245	235	229	225
10: Dehydration Admissions	82	81	90	103	102
11: Bacterial Pneumonia Admissions	205	194	159	177	125
12: Urinary Tract Infection Admissions	137	106	95	90	86
14: Uncontrolled Diabetes Admissions	20	15	18	50	60
15: Asthma in Younger Adults Admissions (Ages 18-39)	133	115	94	85	84
16: Lower-Extremity Amputation in Patients with Diabetes	5	5	3	5	3
90: Prevention Quality Overall Composite	**1,613**	**1,463**	**1,289**	**1,301**	**1,318**
91: Prevention Quality Acute Composite	**424**	**380**	**344**	**370**	**313**
92: Prevention Quality Chronic Composite	**1,189**	**1,083**	**945**	**931**	**1,005**

[21] The measure estimation logic has been updated using AHRQ PQI Version 6.0. PQI #13 was retired and removed from PQI composites. A full description of the methodological revisions is available here: http://www.qualityindicators.ahrq.gov/Downloads/Modules/PQI/V60/ChangeLog_PQI_v60.pdf.

[22] 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.

[23] The AHRQ Quality Indicators PQI specifications for measure PQI-01 were revised to remove ICD-10 codes E10.65 and E11.65 from numerator, resulting in changes to prior estimates for CY 2015 and CY 2016. More information is available here: https://www.qualityindicators.ahrq.gov/Downloads/Modules/PQI/V2018/ChangeLog_PQI_v2018.pdf.

Table 17 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, although the percentage of adults enrolled in HealthChoice with a PQI designation decreased from 1.1 percent in CY 2013 to 0.9 percent in CY 2017, among HealthChoice adults with an inpatient admission, the percentage of participants with a PQI-designated admission increased from 9.1 percent in CY 2013 to 11.4 percent in CY 2017. The proportion of admissions with PQI indicators will be monitored, especially considering the Maryland Total Cost of Care Model.

Table 17. Potentially Avoidable Admission Rates among Participants Aged 18–64 Years with ≥1 Inpatient Admission, CY 2013–CY 2017*

Calendar Year	# of Participants in HealthChoice	# of Participants with ≥1 MCO Admissions	% of Participants with ≥1 MCO Admission	# of Participants with Any PQI	% of Participants with Any PQI	% of Participants With ≥1 MCO Admission that had a PQI
2013	379,149	44,596	11.8%	4,049	1.1%	9.1%
2014	636,719	57,720	9.1%	6,518	1.0%	11.3%
2015	687,777	54,585	7.9%	6,373	0.9%	11.7%
2016	675,447	56,351	8.3%	6,430	1.0%	11.4%
2017	724,747	58,800	8.1%	6,722	0.9%	11.4%

*This measure includes only MCO inpatient admissions.

Section III Conclusion

The effectiveness of HealthChoice's goal in creating medical homes for participants is showing mixed results. The percentage of enrollees who saw their assigned PCPs declined between CY 2016 and CY 2017 for six of the eight MCOs, while the percentage of participants who saw PCPs in their MCOs' network declined for all MCOs. When the medical home was defined to include all PCPs within the MCO network, three of the eight MCOs had over 70 percent of their participants with a visit to any PCP within their provider network. Avoidable ED use declined between CY 2013 and CY 2017. However, the proportion of inpatient admissions with a PQI increased over the evaluation period, albeit declining from peak rate of 11.7 percent in CY 2015 to 11.4 percent in CY 2017. 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.

Section IV. 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 Healthcare Effectiveness Data and Information Set (HEDIS®)—in the areas of preventive health and the management of chronic disease, including behavioral health (mental health and substance use disorders).

Because of the National Committee for Quality Assurance (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 18 presents the immunization and well-child measures for the HealthChoice population. HealthChoice performed above the national HEDIS® mean across all measures from CY 2013 through CY 2017. Childhood Immunization Combination 3, well-child visits for three- to six-year-olds, and well-care visits for adolescents are part of the value-based purchasing (VBP) program.

Table 18. HEDIS® Immunizations and Well-Child Visits: HealthChoice Compared with the National HEDIS® Mean, CY 2013–CY 2017*

HEDIS® Measure	CY 2013	CY 2014	CY 2015	CY 2016	CY 2017
Childhood Immunization Status: Combination 2					
HealthChoice	80.9%	76.5%	83.8%	82.2%	78.0%
National HEDIS® Mean	+	+	+	+	+
Childhood Immunization Status: Combination 3					
HealthChoice	79.1%	73.5%	82.1%	80.1%	75.9%
National HEDIS® Mean	+	+	+	+	+
Well-Child Visits: 15 Months of Life					
HealthChoice	85.7%	79.5%	81.8%	82.2%	84.7%
National HEDIS® Mean	+	+	+	+	+
Well-Child Visits: 3- to 6-year-olds					
HealthChoice	84.0%	82.0%	82.7%	81.3%	81.1%
National HEDIS® Mean	+	+	+	+	+
Well-Care Visits: Adolescents					
HealthChoice	67.3%	62.1%	65.6%	64.6%	64.2%
National HEDIS® Mean	+	+	+	+	+

*The HealthChoice averages in CY 2014 were influenced by the inclusion of HEDIS® rates from newer MCOs.

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 Eliminate 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 lead testing rates for children aged 12 through 23 months and 24 through 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. 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 Managing for Results (MFR) programs (Maryland Department of Health, n.d.a.).[24]

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 19 demonstrates that rates of lead testing for both age groups increased over the five-year evaluation period.

Table 19. 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 2013–CY 2017

Age Group (Months)	CY 2013	CY 2014	CY 2015	CY 2016	CY 2017
12–23	58.7%	59.9%	60.7%	60.7%	62.7%
24–35	76.6%	75.6%	77.6%	78.3%	80.4%

In both CY 2013 and CY 2017, over 50,000 children in HealthChoice aged zero to six years received a lead test as reported to the Maryland Department of the Environment (MDE) Childhood Lead Registry (CLR). Table 20 presents the number of children in CY 2013 and CY 2017, as well as the number and percentage of those children who had an elevated blood lead level, defined as greater than or equal to five micrograms per deciliter.

Table 20. HealthChoice Children Aged 0–6 Years with an Elevated Blood Lead Level, CY 2013 and CY 2017

Calendar Year	Number of Children with a Lead Test	Children with an Elevated Blood Lead Level (≥5µg/dL)	
		#	%
2013	53,289	1,849	3.5%
2017	54,151	1,447	2.7%

HPV Vaccine for Female Adolescents

The Department has increased efforts to vaccinate girls and young women against human papillomavirus (HPV). According to the CDC (2015), 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

[24] 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.

cancer in men. HPV can also cause anal cancer, throat cancer, and genital warts in both men and women (CDC, 2015).

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 rates assessed the percentage of 13-year-old females who received three doses of the HPV vaccine by their 13th birthday.[25] Beginning in CY 2016, HPV was added as a component of the immunization for adolescents (IMA) measure rather than as a standalone measure. In alignment with the recommendations from the CDC, the measure was updated in CY 2017 to reduce the requirement from three doses of HPV vaccine to two doses.

In CY 2013, 25.7 percent of female adolescents received two HPV vaccine doses between their 9th and 13th birthdays (Table 21). In CY 2017, that rate increased to 38.4 percent. For female adolescents who received three HPV vaccine between their 9th and 13th birthdays, the rate improved by 6.8 percentage points between CY 2013 and CY 2017. 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 21. HPV Vaccination Rates, Female 13-Year-Old Medicaid Enrollees, CY 2013–CY 2017

Calendar Year	Female Medicaid Enrollees Who Turned 13 Years Old	Two HPV Vaccine Doses between Their 9th and 13th Birthdays		Three HPV Vaccine Doses between Their 9th and 13th Birthdays	
	Number	Number	Percentage	Number	Percentage
2013	10,170	2,609	25.7%	1,396	13.7%
2014	14,020	3,843	27.4%	2,099	15.0%
2015	13,778	4,336	31.5%	2,384	17.3%
2016	13,545	5,107	37.7%	2,872	21.2%
2017	14,514	5,573	38.4%	2,974	20.5%

Breast Cancer Screening

Breast cancer is the most prevalent type of cancer among women (U.S. Cancer Statistics Working Group, 2018). In Maryland, the breast cancer incidence rate was 131.4 cases per 100,000 women, compared to the 124.8 cases per 100,000 women nationally (U.S. Cancer Statistics Working Group, 2018). Breast cancer is easier to treat when detected early, and women have a greater chance of survival (CDC, 2014). Mammograms are the most effective technique for early detection of breast cancer.

Table 22 demonstrates a 10 percentage point increase in the percentage of women in HealthChoice who received a mammogram for breast cancer screening from CY 2013 to CY 2017 (MetaStar, Inc., 2018). Maryland performed above the national HEDIS® mean for the

[25] The HPV vaccine is recommended for both males and females, although the HEDIS measure focuses exclusively on females. 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.

entire evaluation period. The addition of breast cancer screening to the VBP program in CY 2014 may have increased the screening rate.

Table 22. Percentage of Women in HealthChoice Aged 50-64 Years Who Had a Mammogram for Breast Cancer Screening, Compared with the National HEDIS® Mean, CY 2013–CY 2017*

	CY 2013	CY 2014	CY 2015	CY 2016	CY 2017
Maryland Percentage	58.3%	67.9%	70.0%	69.8%	69.7%
National HEDIS® Mean**	+	+	+	+	+

*The HealthChoice averages in CY 2014 were influenced by the inclusion of HEDIS® rates from newer MCOs.
**The national HEDIS® mean is based on an assessment of women aged 50–74 years. HealthChoice covers adults through age 64; the measures presented in the table are restricted to women aged 50-64 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.a). According to the National Cancer Institute (NCI) (n.d.), women ages 21 to 29 years should be screened with a Papanicolaou (Pap) test every three years. Women ages 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 screening that is more frequent or continue screening beyond age 65 years.

Table 23 presents the percentage of women aged 21 to 64 years in HealthChoice who received a cervical cancer screening in CY 2013 through CY 2017, a decrease of 12.8 percentage points. Despite this decline, HealthChoice performed above the national HEDIS® mean throughout the evaluation period.

Table 23. Percentage of Women in HealthChoice Aged 21–64 Years Who Had a Cervical Cancer Screening, Compared with the National HEDIS® Mean, CY 2013–CY 2017*

	CY 2013	CY 2014	CY 2015	CY 2016	CY 2017
Maryland Percentage	75.2%	65.8%	65.1%	64.9%	62.4%
National HEDIS® Mean	+	+	+	+	+

*HealthChoice averages in CYs 2014 and 2015 were influenced by the inclusion of HEDIS® rates from newer MCOs.

Colorectal Cancer Screening

According to the U.S. Cancer Statistics Working Group (2018), colorectal cancer is one of the most common cancers in both men and women. In the US and in Maryland, colorectal cancer is the fourth most commonly diagnosed cancer among women and men, as well as the fourth-leading cause of cancer mortality as of 2015. 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. Screening tests find precancerous polyps that can be

removed before they become cancerous (CDC, 2018e). 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 incomes to be screened for colorectal cancer.

Table 24 shows the percentage of HealthChoice participants who received at least one of three appropriate screenings—fecal occult blood test (FOBT), flexible sigmoidoscopy or colonoscopy—for colorectal cancer during the study period.[26] Overall, since decreasing in CY 2014 as a result of the ACA expansion, the colorectal cancer-screening rate has rebounded compared with pre-expansion figures.

Table 24. Percentage of HealthChoice Participants Aged 50–64 Years Who Had a Colorectal Cancer Screening, CY 2013–CY 2017

	CY 2013	CY 2014	CY 2015	CY 2016	CY 2017
Percentage of HealthChoice Participants	38.7%	32.1%	35.0%	37.2%	39.0%

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 until they become 26. Non-pregnant adults may receive dental benefits provided as an additional benefit of their MCO. As of February 2019, eight out of nine MCOs voluntarily covered limited adult dental services to their members as a part of their benefit package using their own revenues. In addition, the Department is in the process of implementing an adult dental pilot for adults aged 21 through 64 years who are enrolled in both Medicaid and Medicare. This will be a limited benefit as well compared to the full benefit of the Healthy Smiles Program. The expected start date of the adult dental pilot is June 1, 2019.

Maryland continues to improve its dental program by confronting barriers to providing comprehensive oral health services to Medicaid participants. In its 2018 Annual Oral Health Legislative Report, the Maryland Department of Health (2019) continues to monitor a variety of dental service utilization measures. This evaluation includes a selection of key measures from the legislative report. The Medicaid program delivered oral health services to 485,201 children and adults (ages 0 to 64) during CY 2017 compared to 463,964 in CY 2016; this is consistent with Medicaid's enrollment growth of 5 percent (Maryland Department of Health, 2019). In CY 2017, 68.1 percent of children received dental services, which is greater than the national HEDIS®

[26] HEDIS defines an appropriate screening as follows: a fecal occult blood test (FOBT) during the measurement year, a flexible sigmoidoscopy during the measurement year or the prior four years, and a colonoscopy during the measurement year or the prior nine 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.

mean (Maryland Department of Health, 2019). Table 25 below shows the number of dentists that billed for services in CY 2017.

Table 25. Number of Dentists Participating in Medicaid Who Billed One or More Services in CY 2017

Region	CY 2017
Baltimore Metro	560
Montgomery/Prince George's County	563
Southern Maryland	63
Western Maryland	145
Eastern Shore	97
Other	197
Total*	**1,625**
Unique Total**	**1,600**

* Please note that the total is the sum of all regions.
** Please note that the unique total does not equal the sum of all regions because an individual dentist may have offices in multiple regions. The unique total reflects the number of unique dentists unduplicated statewide. This unique total also includes out-of-state dentists who served Maryland Medicaid enrollees.

Table 26 below displays the dental service utilization rate for children aged 4 to 20 years. The number of children receiving at least one dental service increased from 277,272 in CY 2013 to 316,294 in CY 2017; the percentage receiving services has been relatively stable.

Table 26. Number of Children Aged 4-20 Years Enrolled in Medicaid* for at Least 320 Days Who Received a Dental Service, CY 2013–CY 2017

Calendar Year	Total Number of Children	Children Receiving at Least One Dental Service	Percentage Receiving a Service
2013	405,873	277,272	68.3%
2014	423,625	286,713	67.7%
2015	404,118	278,796	69.0%
2016	440,100	301,367	68.5%
2017	464,585	316,294	68.1%

*The study population for CY 2013 through CY 2017 measured dental utilization for all qualifying individuals in Maryland's Medical Assistance program, including FFS and HealthChoice MCO enrollees. The following coverage groups were excluded from the analysis: S09, X02, W01, and P10.

Dental care is also a benefit for pregnant women. To increase awareness of this benefit, the dental benefit administrator (DBA) administering the Maryland Healthy Smiles Dental program sends targeted communications, such as postcard and flyer mailings, to women enrolled in pregnancy-related coverage groups.

Table 27 presents the percentage of pregnant women aged 21 years and older enrolled in Medicaid for at least 90 days who received at least one dental service in each year between CY

2013 and CY 2017. Dental service utilization fluctuated over the study period. Ultimately, the rate of dental utilization reached its highest level in CY 2017 at 27.4 percent.

Table 27. Number and Percentage of Pregnant Women Aged 21+ Years with at Least 90 Days in Medicaid* Who Received a Dental Service, CY 2013–CY 2017

Calendar Year	Total Number of Enrollees	Number of Enrollees with at Least One Visit	Percentage with a Dental Visit
2013	22,698	6,175	27.2%
2014	25,456	6,878	27.0%
2015	26,795	7,324	27.3%
2016	29,014	7,562	26.1%
2017	29,111	7,981	27.4%

*The study population for CY 2013 through CY 2017 included all qualifying pregnant women in Maryland's Medical Assistance program, including FFS and HealthChoice MCO enrollees. The following coverage groups were excluded from the analysis: S09, X02, W01, and P10.

Maternal Health

The Department and the HealthChoice MCOs engage pregnant women in care through individualized outreach, community events, and prenatal case management. HealthChoice enrollees identified as pregnant are qualified as a Special Needs Population under COMAR 10.09.65.08. 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 health outcomes for the mother and child overall. Table 28 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 2013 through CY 2017 (MetaStar, Inc., 2018). HealthChoice outperformed the national HEDIS® mean each year except CY 2013.

Table 28. HEDIS® Timeliness of Prenatal Care, HealthChoice Compared with the National HEDIS® Mean, CY 2013–CY 2017*

	CY 2013	CY 2014	CY 2015	CY 2016	CY 2017
Percentage of Deliveries in which the Mother Received a Prenatal Care Visit in the 1st Trimester or within 42 days of HealthChoice Enrollment	81.5%	82.8%	84.4%	87.6%	84.9%
National HEDIS® Mean	-	+	+	+	+

*The HealthChoice averages in CY 2013 and CY 2014 were influenced by the inclusion of HEDIS® rates from newer MCOs in the calculation.

Frequency of Ongoing Prenatal Care

The Department measures frequency of ongoing prenatal care to assess MCO performance in providing appropriate prenatal care.[27] For the first part of the measure—the percentage of women who received more than 80 percent of expected prenatal visits—higher scores are preferable. For the second part of the measure—women who received less than 21 percent of expected prenatal visits—lower scores are preferable (Table 29). Maryland consistently outperformed the national HEDIS® means for both aspects of this measure. This measure was retired in CY 2017.

Table 29. 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 2013–CY 2017*

	CY 2013		CY 2014		CY 2015		CY 2016		CY 2017*	
	MD	Nat'l	MD	Nat'l	MD	Nat'l	MD	Nat'l	MD	Nat'l
Greater than or equal to 81% of Expected Prenatal Visits	66.0%	+	64.9%	+	67.9%	+	71.0%	+	N/A	
Less than 21% of Expected Prenatal Visits**	9.7%	+	8.2%	+	6.1%	+	5.0%	+	N/A	

* The HealthChoice averages in CY 2014 were influenced by the inclusion of HEDIS® rates from newer MCOs.
** 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.

Contraceptive Care

Contraception is a highly effective clinical preventive service that can help women achieve 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

[27] The American College of Obstetricians and Gynecologists recommends a visit once every 4 weeks during the first 28 weeks of pregnancy, once every 2 to 3 weeks during the next 7 weeks, and weekly for the remainder of the pregnancy, for a total of 13 to 15 visits.

of Population Affairs (OPA)[28] has developed contraceptive care measures that assess provision of contraception to women.

Table 30 presents the percentage of women at risk of unintended pregnancy that is provided:

1) Most effective contraception: female sterilization, hormonal implants, intrauterine devices or systems (IUD/IUS))

2) Moderately effective contraception: oral pills, patch, injectables, patch, ring, or diaphragm

The table includes women enrolled in HealthChoice aged 15 to 44 as of the end of that calendar year that 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 from 6.5 percent in CY 2013 to 7.5 percent in CY 2017. The percentage of women enrolled in HealthChoice with at least one moderately effective type of contraception decreased from 27.9 percent in CY 2013 to 24.8 percent in CY 2017.

Table 30. Contraceptive Care Rates, Women Enrolled in HealthChoice Aged 15–44 Years, CY 2013–CY 2017

	CY 2013	CY 2014	CY 2015	CY 2016	CY 2017
Percentage receiving most effective contraception	6.5%	6.5%	7.1%	7.3%	7.5%
Percentage receiving moderately effective contraception	27.9%	26.5%	24.5%	26.6%	24.8%
Number of HealthChoice women at risk of unintended pregnancy	178,250	212,603	212,613	233,305	251,210

Care for Chronic Conditions

Service Utilization and Medication Management for People with Asthma

Asthma is a common chronic disease that affected 26.5 million Americans in 2016, including 6.1 million children under the age of 18 (CDC, 2018d). In 2010, approximately 752,000 adults and children in Maryland had a history of asthma (Bankoski, De Pinto, Hess-Mutinda, & McEachern, 2012); and in 2015, 408,914 adults in Maryland had asthma (CDC, 2018d).

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 2018 HEDIS® clinical criteria for Medication Management for People with Asthma (MMA). If

[28] Contraceptive Provision Measures: Technical Documentation. Office of Population Affairs. U.S. Department of Health & Human Services. Retrieved from https://www.hhs.gov/opa/performance-measures/claims-data-sas-program-instructions/index.html

asthma medications are used correctly, asthma-related hospitalizations, ED visits, and missed school and workdays decrease (CDC, n.d.b).

Table 31 presents the number of HealthChoice participants with an asthma diagnosis and their distribution by race/ethnicity, sex, region, and age group. Although asthma is often thought of as a problem for children, the proportion of older age groups with asthma increased as a result of ACA expansion, as persons aged 40-64 now represent the largest share of HealthChoice participants with asthma.

Table 31. Demographic Characteristics of HealthChoice Participants with an Asthma Diagnosis, CY 2013–CY 2017

Demographic Characteristic	Percentage of Total				
	CY 2013	CY 2014	CY 2015	CY 2016	CY 2017
Race/Ethnicity					
Asian	1.6%	1.7%	1.8%	1.9%	2.0%
Black	56.8%	54.8%	53.8%	52.7%	52.8%
White	29.3%	31.1%	31.5%	31.8%	31.2%
Hispanic	7.7%	7.0%	6.7%	6.7%	6.2%
Native American	0.3%	0.3%	0.3%	0.3%	0.3%
Other	4.3%	5.0%	5.9%	6.6%	7.5%
Sex					
Female	58.7%	59.0%	59%	59.3%	59.5%
Male	41.3%	41.0%	41%	40.7%	40.5%
Region					
Baltimore City	31.9%	31.0%	29.4%	29.0%	29.1%
Baltimore Suburban	27.1%	26.6%	27.4%	27.4%	27.5%
Eastern Shore	10.3%	10.2%	10.1%	10.5%	10.7%
Southern Maryland	4.1%	4.6%	4.7%	4.9%	4.9%
Washington Suburban	18.8%	19.5%	19.9%	19.8%	19.7%
Western Maryland	7.6%	8.0%	8.3%	8.2%	8.1%
Out of State	0.3%	0.2%	0.2%	0.1%	0.1%
Age Group (Years)					
3-9	25.7%	20.7%	19.4%	18.1%	16.5%
10-18	27.1%	22.6%	21.7%	21.5%	21.3%
19-39	22.0%	23.0%	23.2%	24.2%	25.7%
40-64	25.2%	33.7%	35.7%	36.3%	36.4%

Table 32 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 2013 to CY 2017.

Table 32. Percentage of HealthChoice Participants with an Asthma Diagnosis Who Had an Ambulatory Care Visit, CY 2013–CY 2017

Calendar Year	Total Number of Participants	At Least One Ambulatory Visit	
		Number	Percentage of Total
2013	43,821	42,165	96.2%
2014	56,392	54,218	96.1%
2015	59,460	57,105	96.0%
2016	60,386	58,285	96.5%
2017	63,660	61,325	96.3%

Table 33 presents the number and percentage of HealthChoice participants with an asthma diagnosis who had an ED visit. During the evaluation period, the percentage of participants with an asthma diagnosis who had at least one ED visit decreased from 60.8 percent to 58.2 percent.

Table 33. Percentage of HealthChoice Participants with an Asthma Diagnosis Who Had an Outpatient ED Visit, CY 2013–CY 2017

Calendar Year	Total Number of Participants	At Least One ED Visit	
		Number	Percentage of Total
2013	43,821	26,622	60.8%
2014	56,392	33,515	59.4%
2015	59,460	34,918	58.7%
2016	60,386	35,450	58.7%
2017	63,660	37,058	58.2%

Table 34 presents the number and percentage of HealthChoice participants with an asthma diagnosis who had at least one inpatient admission. Despite an increase in the denominator, the percentage of participants with an asthma diagnosis who had an inpatient admission remained relatively stable from CY 2013 to CY 2017.

Table 34. Percentage of HealthChoice Participants with an Asthma Diagnosis Who Had an Inpatient Admission, CY 2013–CY 2017

Calendar Year	Total Number of Participants	At Least One Inpatient Admission	
		Number	Percentage of Total
2013	43,821	6,947	15.9%
2014	56,392	9,028	16.0%
2015	59,460	9,079	15.3%
2016	60,386	9,139	15.1%
2017	63,660	9,638	15.1%

Table 35 presents the percentage of HealthChoice participants aged 5 through 64 years with persistent asthma who remained on asthma controller medication for at least 50 percent and at least 75 percent of their treatment period in CY 2013 through CY 2017 (MetaStar, Inc., 2018). In CY 2017, 58.2 percent of this population demonstrated at least 50 percent compliance. Despite the overall increase in medication compliance, the program did not consistently meet the HEDIS® average during the measurement period. The program outperformed the national HEDIS® mean in CY 2015 but fell below in CY 2016 and CY 2017.

Table 35. 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 2013–CY 2017

	CY 2013	CY 2014	CY 2015	CY 2016	CY 2017
Remained on Prescribed Controller Medication for at Least 50% of Treatment Period					
HealthChoice	49.7%	51.5%	56.9%	55.8%	58.2%
National HEDIS® Mean	-	-	+	-	-
Remained on Prescribed Controller Medication for at Least 75% of Treatment Period					
HealthChoice	25.8%	27.0%	34.1%	31.1%	32.9%
National HEDIS® Mean	-	-	+	-	-

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 displays HealthChoice participants with diabetes by their demographic characteristics, 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 36 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; however, the share of enrollees aged 41 to 64 years with a diabetes diagnosis increased. As a likely consequence of the enrollment of new participants through the ACA in CY 2014, the number of HealthChoice participants with diabetes more than doubled between CY 2013 and CY 2017, increasing from 27,031 to 59,100.

Black participants with diabetes exceeded the proportion of White participants with diabetes by a ratio of nearly two to one. Both groups decreased their share of the HealthChoice population with diabetes during the five-year evaluation period, while the proportion among the "Other" race category more than doubled, increasing from 4.3 percent in 2013, to 11.7 percent in CY 2017. Men increased their share of the HealthChoice population with diabetes from 33.7 percent in CY 2013 to 42.7 percent in CY 2017, likely because of the expansion of coverage under the ACA. For similar reasons, older age groups increased their share of the population with diabetes from 69.1 percent in 2013 to 78.0 percent in 2017.

Table 36. Demographic Characteristics of HealthChoice Participants with a Diabetes Diagnosis, CY 2013–CY 2017

Demographic Characteristic	Percentage of Total				
	CY 2013	CY 2014	CY 2015	CY 2016	CY 2017
Race					
Asian	4.8%	5.4%	5.8%	5.9%	5.9%
Black	54.7%	51.4%	50.2%	50.1%	49.8%
White	30.6%	30.5%	29.7%	29.2%	28.5%
Hispanic	5.5%	4.5%	4.2%	3.9%	3.7%
Native American	0.2%	0.3%	0.4%	0.3%	0.3%
Other	4.3%	7.8%	9.8%	10.6%	11.7%
Sex					
Female	66.4%	59.5%	58.6%	58.1%	57.3%
Male	33.7%	40.5%	41.5%	41.9%	42.7%
Region					
Baltimore City	28.8%	25.2%	24.0%	23.9%	23.5%
Baltimore Suburban	24.7%	26.1%	26.0%	26.3%	26.6%
Eastern Shore	10.0%	10.2%	10.0%	10.1%	10.0%
Southern Maryland	4.9%	5.2%	5.2%	5.2%	5.3%
Washington Suburban	22.8%	25.3%	26.9%	26.6%	26.8%
Western Maryland	8.2%	7.8%	7.7%	7.8%	7.7%
Out of State	0.3%	0.2%	0.2%	0.1%	0.2%
Age Group (Years)					
18-40	30.9%	23.6%	22.2%	22.1%	22.1%
41-64	69.1%	76.4%	77.8%	77.8%	78.0%
Total Number of Participants	**27,031**	**49,137**	**55,915**	**57,162**	**59,100**

Table 37 presents the number and percentage of HealthChoice participants with a diabetes diagnosis who had an ambulatory care visit. The rate remained relatively stable despite the increase in the number of participants with diabetes.

Table 37. Percentage of HealthChoice Participants with a Diabetes Diagnosis Who Had an Ambulatory Care Visit, CY 2013–CY 2017

Calendar Year	Total Number of Participants	At Least One Ambulatory Care Visit	
		Number	Percentage of Total
2013	27,031	25,759	95.3%
2014	49,137	46,966	95.6%
2015	55,915	52,435	93.8%
2016	57,162	53,949	94.4%
2017	59,100	55,828	94.5%

Table 38 presents the number and percentage of HealthChoice participants with a diabetes diagnosis who had an outpatient ED visit. During the evaluation period, the number of participants who had an ED visit decreased by 7.7 percentage points, from 53.0 percent in 2013 to 45.3 percent in 2017. This may indicate that comprehensive diabetes care in HealthChoice is successfully preventing diabetes complications leading to ED visits.

Table 38. Percentage of HealthChoice Participants with a Diabetes Diagnosis Who Had an Outpatient ED Visit, CY 2013–CY 2017

Calendar Year	Total Number of Participants	At Least One ED Visit	
		Number	Percentage of Total
2013	27,031	14,336	53.0%
2014	49,137	23,915	48.7%
2015	55,915	25,762	46.1%
2016	57,162	26,333	46.1%
2017	59,100	26,771	45.3%

Table 39 presents the number and percentage of HealthChoice participants with a diabetes diagnosis who had at least one inpatient admission. This measure similarly decreased from 28.6 percent to 21.1 percent, indicating the potential success of the HealthChoice program in proactively targeting diabetes management.

Table 39. Percentage of HealthChoice Participants with a Diabetes Diagnosis Who Had an Inpatient Admission, CY 2013–CY 2017

Calendar Year	Total Number of Participants	At Least One Inpatient Admission	
		Number	Percentage of Total
2013	27,031	7,721	28.6%
2014	49,137	11,806	24.0%
2015	55,915	11,860	21.2%
2016	57,162	12,162	21.3%
2017	59,100	12,481	21.1%

Controlling diabetes requires monitoring blood glucose levels and looking for damaged nerve tissue in the eye that may threaten sight. Table 40 presents the annual HealthChoice performance on these measures for CY 2013 through CY 2017. HEDIS® analysis uses medical chart reviews, whereas the diabetes analyses presented in the rest of this section rely on MCO encounter and FFS claims. HealthChoice consistently performed above the national HEDIS® average on eye exams and HbA1c testing throughout the evaluation period. Although the observed decrease in the eye exam measure may have resulted from the removal of this measure from the VBP program in CY 2015, the inclusion of the HbA1c measure to the VBP program in 2014 may explain the increases occurring earlier in the measurement period.

Table 40. Percentage of HealthChoice Members Aged 19–64 Years with Diabetes Who Received Comprehensive Diabetes Care, Compared with the National HEDIS® Average, CY 2013–CY 2017*

HEDIS® Measure	CY 2013	CY 2014	CY 2015	CY 2016	CY 2017
Eye Exam (Retinal)					
HealthChoice	69.3%	61.5%	60.2%	57.0%	57.8%
National HEDIS® Average	+	+	+	+	+
HbA1c Test					
HealthChoice	85.5%	89.0%	88.8%	88.9%	87.9%
National HEDIS® Average	+	+	+	+	+

*The HealthChoice averages in CY 2014 were influenced by the inclusion of HEDIS® rates from newer MCOs into the calculation.

Although using the Department's MCO encounters and FFS claims to assess performance leads to different results than using HEDIS® methodologies, about four of every five participants (81.9 percent) received hemoglobin A1c (HbA1c) testing during CY 2017 (Table 41). HealthChoice participants aged 18 to 40 years were less likely to receive at least one HbA1c test than participants aged 41 to 64 years of age. Although the proportion of all participants with diabetes receiving a retinal examination was lower than those receiving HbA1c tests (41.2 percent), older participants were similarly more likely than younger members to receive an examination. Specifically, 44.1 percent of participants aged 41 to 64 years—and 31.0 percent of participants aged 18 to 40 years—received a retinal exam.

Additional analysis on service utilization by participants with diabetes showed that 7.1 percent of participants with diabetes had five or more outpatient ED visits during CY 2017. Table 41 shows the respective proportions of patients in each category who were or were not administered comprehensive diabetes care follow-up services and their frequency of ED utilization and receipt of recommended follow-up care for diabetes.

Table 41. Number of Participants with Diabetes by Age, and with Five or More Outpatient ED Visits, by Receipt of Diabetes Follow-Up Care, CY 2017

	Total Participants	Receipt of Diabetes Follow-Up Care					
		No Follow-Up		Completed Diabetes Follow-Up			
				HbA1c		Retinal Exam	
		Number	Percentage	Number	Percentage	Number	Percentage
18 to 40 Years	11,017	2,947	26.7%	8,070	73.3%	3,416	31.0%
41 to 64 Years	38,934	6,116	15.7%	32,818	84.3%	17,168	44.1%
Fewer than 5 outpatient ED visits	46,407	6,549	14.1%	38,163	82.2%	19,299	41.6%
5 or more outpatient ED visits	3,544	652	18.4%	2,725	76.9%	1,285	36.3%
Total	**49,951**	**7,201**	**14.4%**	**40,888**	**81.9%**	**20,584**	**39.8%**

To test the effects of clinical follow-up of diabetes on ED use—accounting for participant's sex, race, age, disease severity, and region of residence—logistic regression techniques were applied to the data. The results show that participants who had at least one HbA1c test were about 23 percent less likely to have high ED use[29] than participants who were not administered screening. This pattern of results was consistent across all five years of the evaluation period.

Participants who had a retinal exam also had significantly lower odds (19 percent) of high ED utilization compared to participants who were not administered the service.[30] These patterns of results were consistent across all five years. These results may demonstrate the effect of follow-up care for diabetes in improving health outcomes during the evaluation period through reductions in ED use and how preventive services can lower potentially avoidable utilization.

Under the HealthChoice demonstration waiver, the Department also recently received approval to expand coverage of the National Diabetes Prevention Program (National DPP) lifestyle change program to all eligible HealthChoice participants. 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.

[29] (adjusted odds ratio), AOR = 0.77 [95% confidence interval, CI: 0.70, 0.84]
[30] (AOR = 0.81 [95% CI: 0.75, 0.87]).

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, 2018f). Early initiation of ART lowers an HIV-infected individual's risk of developing AIDS and other complications (Lundgren et al., 2015).

Table 42 presents the percentage of participants with HIV/AIDS by age group and race/ethnicity for CY 2013 and CY 2017.

Table 42. Distribution of HealthChoice Participants with HIV/AIDS, by Age Group and Race/Ethnicity, CY 2013 and CY 2017

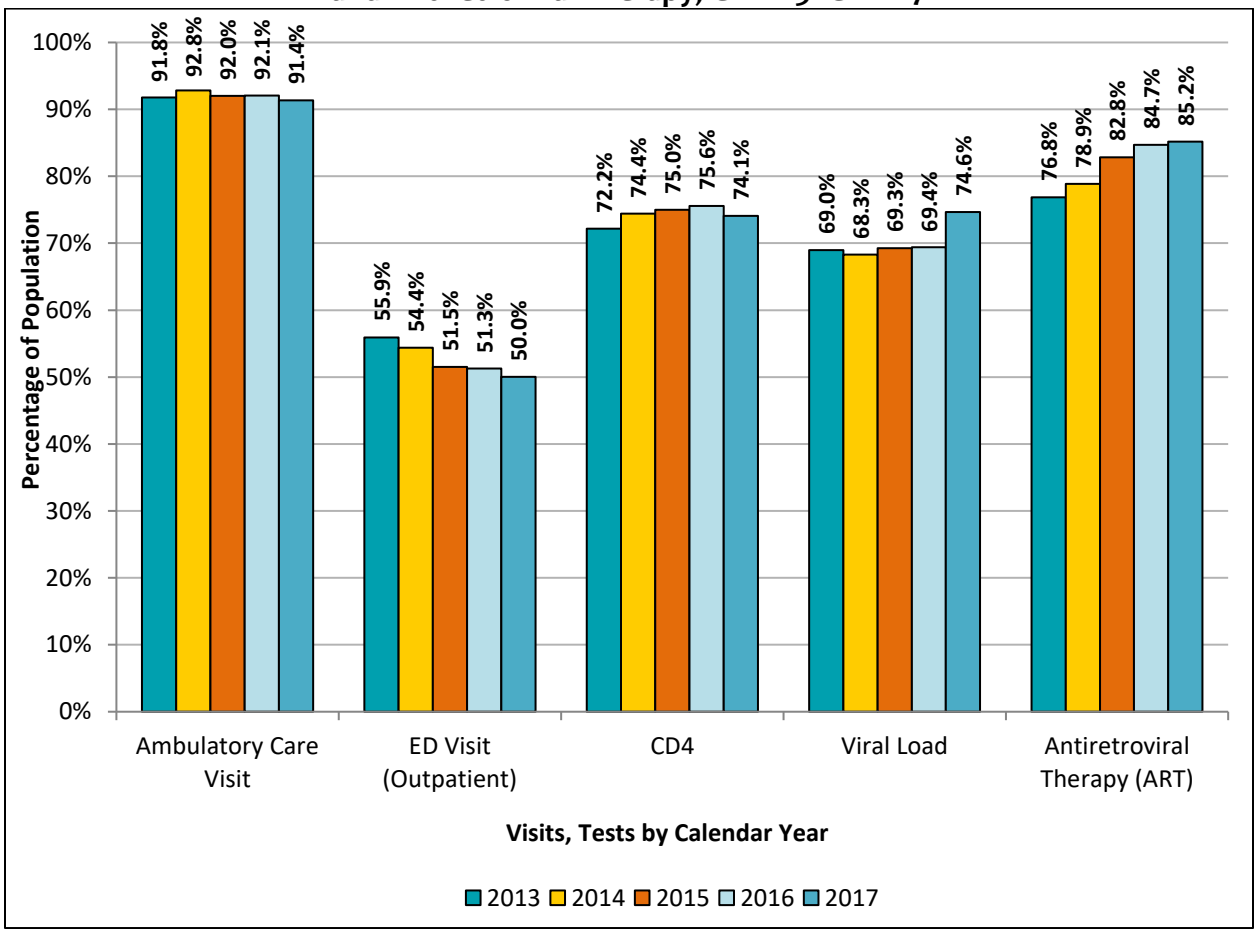
Demographic Characteristic	CY 2013		CY 2017	
	Number of Participants	Percentage of Total	Number of Participants	Percentage of Total
Age Group (Years)				
0–18	289	5.6%	182	2.9%
19–39	1,452	28.2%	1,866	29.4%
40–64	3,412	66.2%	4,290	67.7%
Total	**5,153**	**100%**	**6,338**	**100%**
Race/Ethnicity				
Asian	*	*	*	*
Black	4,410	85.6%	5,238	82.6%
White	496	9.6%	608	9.6%
Hispanic	51	1.0%	77	1.2%
Native American	*	*	*	*
Other	168	3.3%	364	5.7%
Total	**5,153**	**100%**	**6,338**	**100%**

*Cell values of 10 or less have been suppressed.

Figure 26 shows service utilization by participants with HIV/AIDS from CY 2013 through CY 2017. The percentage of participants with an outpatient ED visit fell by 5.9 percentage points between CY 2013 and CY 2017. In addition, nearly all participants who had at least one outpatient ED visit also received care through an ambulatory care visit or treatment from an outpatient pharmacy, indicating that participants with HIV/AIDS have access to health care services and are not exclusively relying on the ED as a source of care. The HealthChoice program also experienced an increase in HIV/AIDS-related quality measures during the

evaluation period. The percentage of individuals with HIV/AIDS who received CD4 testing increased by 1.9 percentage points, and those with viral load testing increased by 5.6 percentage points.

Figure 26. Percentage of HealthChoice Participants with HIV/AIDS Who Had an Ambulatory Care Visit, Outpatient ED Visit, CD4 Testing, Viral Load Testing, and Antiretroviral Therapy, CY 2013–CY 2017



According to the CDC (2017) as published in its annual HIV Surveillance Report, there was a national HIV incidence rate of 12.3 per 100,000 people in 2016. In Maryland, the incidence rate of HIV diagnoses for 2016 was 18.3 per 100,000 people, a decrease from the previous year's rate of 21.7 (CDC, 2017). The CDC (2018a) estimates that 30 percent of new HIV infections are transmitted by people who have undiagnosed HIV. 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 43 shows HIV screenings for HealthChoice participants aged 15 to 64 years from CY 2013 through CY 2017.

Table 43. HIV Screening in the HealthChoice Population for Participants Aged 15–64 years, CY 2013–CY 2017

HealthChoice Participants	CY 2013	CY 2014	CY 2015	CY 2016	CY 2017
Total Number	453,914	718,220	771,917	758,495	811,183
Number Received HIV Screening	70,368	106,484	109,523	123,061	130,107
Percentage Received HIV Screening	15.5%	14.8%	14.2%	16.2%	16.0%

For people who are not HIV positive but are at risk for contracting the infection, pre-exposure prophylaxis (PrEP) can help prevent HIV (CDC, 2018b). PrEP is a daily medication that reduces the risk of HIV infection (CDC, 2018a). Table 44 presents the percentage of HealthChoice participants who received PrEP from CY 2013 to CY 2017.

Table 44. HIV Pre-Exposure Prophylaxis (PrEP) in the HealthChoice Population, CY 2013–CY 2017

HealthChoice Participants	CY 2013	CY 2014	CY 2015	CY 2016	CY 2017
Total Number	962,285	1,247,658	1,304,107	1,285,431	1,355,443
Number Received HIV PrEP	1,873	3,045	3,027	2,802	2,146
Percentage Received HIV PrEP	0.2%	0.2%	0.2%	0.2%	0.2%

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. SUD treatments were included as part of the MCO benefit package until the end of CY 2014. 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 45 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 86.1 percent in CY 2013 to 82.9 percent in CY 2017, accompanied by corresponding increases across all categories of behavioral health diagnoses.

Table 45. Number and Percentage of HealthChoice Participants with a Behavioral Health Diagnosis, by Diagnosis, CY 2013–CY 2017

Diagnosis	CY 2013	CY 2014	CY 2015	CY 2016	CY 2017
MHD-Only	99,978 (10.4%)	128,733 (10.3%)	142,223 (10.9%)	148,186 (11.5%)	156,694 (11.6%)
SUD-Only	20,481 (2.1%)	36,067 (2.9%)	35,628 (2.7%)	37,938 (3.0%)	41,632 (3.1%)
Dual Diagnosis (MHD + SUD)	13,417 (1.4%)	25,076 (2.0%)	27,601 (2.1%)	30,646 (2.4%)	33,085 (2.4%)
No Behavioral Health Diagnosis	828,485 (86.1%)	1,060,960 (84.8%)	1,098,828 (84.2%)	1,069,037 (83.1%)	1,124,032 (82.9%)
Total	**962,361**	**1,250,836**	**1,304,280**	**1,285,807**	**1,355,443**

The Department monitors the extent to which participants with a behavioral health diagnosis access ambulatory care services. In CY 2017, 92.7 percent of all participants with an MHD—that includes both participants diagnosed with MHD-only and those with a co-occurring MHD and SUD—visited a health care provider for an ambulatory care visit (Table 46). Across the evaluation period, the ambulatory care visit rate among all participants with an MHD or SUD decreased slightly from CY 2013 to CY 2017. This decrease may result from the influx of new ACA participants in CY 2014. Participants with a co-occurring MHD and SUD were consistently more likely to receive an ambulatory care visit than were participants with SUD-only diagnosis; however, SUD-only participants' ambulatory care visit rate increased 5.8 percentage points between CY 2016 and CY 2017.

Table 46. HealthChoice Participants with an Ambulatory Care Visit, by Behavioral Health Diagnosis, CY 2013–CY 2017

Calendar Year	Total Number of Participants	At Least One Ambulatory Care Visit	
		Number of Participants	Percentage of Total Participants
MHD-Only			
2013	99,978	93,469	93.5%
2014	128,733	120,059	93.3%
2015	142,223	131,875	92.7%
2016	148,186	137,679	92.9%
2017	156,694	145,397	92.8%
SUD-Only			
2013	20,481	16,642	81.3%
2014	36,067	26,057	72.2%
2015	35,628	25,355	71.2%
2016	37,938	27,154	71.6%
2017	41,632	32,222	77.4%
Dual Diagnosis (MHD + SUD)			
2013	13,417	12,633	94.2%
2014	25,076	23,072	92.0%
2015	27,601	25,257	91.5%
2016	30,646	27,973	91.3%
2017	33,085	30,674	92.7%
Total			
2013	133,876	122,744	91.7%
2014	189,876	169,188	89.1%
2015	205,452	182,487	88.8%
2016	216,770	192,806	88.9%
2017	231,411	208,293	90.0%

Table 47 displays the number and percentage of all participants with a behavioral health diagnosis who had at least one outpatient ED visit. This measure excludes ED visits that resulted in an inpatient hospital admission. Overall, the percentage of participants with an MHD diagnosis only who visited the ED declined from 46.7 percent in CY 2013 to 43.1 percent in CY 2017. In each year of the evaluation period, participants with co-occurring substance use and mental health diagnoses had a higher rate of ED utilization compared to participants with an MHD-only or SUD-only diagnosis.

Table 47. HealthChoice Participants with at Least One Outpatient ED Visit, by Behavioral Health Diagnosis, CY 2013–CY 2017

Calendar Year	Total Number of Participants	At Least One ED Visit	
		Number of Participants	Percentage of Total Participants
MHD Only			
2013	99,978	46,674	46.7%
2014	128,733	60,059	46.7%
2015	142,223	63,326	44.5%
2016	148,186	65,571	44.3%
2017	156,694	67,557	43.1%
SUD Only			
2013	20,481	12,495	61.0%
2014	36,067	18,918	52.5%
2015	35,628	18,010	50.6%
2016	37,938	19,251	50.7%
2017	41,632	20,972	50.4%
Dual Diagnosis (MHD + SUD)			
2013	13,417	9,522	71.0%
2014	25,076	17,341	69.2%
2015	27,601	18,685	67.7%
2016	30,646	20,887	68.2%
2017	33,085	22,530	68.1%
Total			
2013	133,876	68,691	51.3%
2014	189,876	96,318	50.7%
2015	205,452	100,021	48.7%
2016	216,770	105,709	48.8%
2017	231,411	111,059	48.0%

Table 48 displays the number and percentage of all 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 slightly from 16.4 percent in CY 2013 to 15.4 percent in CY 2017. Each of the behavioral health diagnosis groups experienced this same downward trend during this period. In each year of the evaluation period, participants with co-occurring substance use and mental health diagnoses had a higher rate of impatient admissions compared to participants with an MHD-only or SUD-only diagnosis.

Table 48. HealthChoice Participants with an Inpatient Admission, by Behavioral Health Diagnosis, CY 2013–CY 2017

Calendar Year	Total Number of Participants	At Least One Inpatient Admission	
		Number of Participants	Percentage of Total Participants
MHD-Only			
2013	99,978	13,567	13.6%
2014	128,733	18,116	14.1%
2015	142,223	18,406	12.9%
2016	148,186	18,544	12.5%
2017	156,694	19,198	12.3%
SUD-Only			
2013	20,481	3,545	17.3%
2014	36,067	5,579	15.5%
2015	35,628	5,195	14.6%
2016	37,938	5,434	14.3%
2017	41,632	6,176	14.8%
Dual Diagnosis (MHD + SUD)			
2013	13,417	4,898	36.5%
2014	25,076	8,552	34.1%
2015	27,601	8,974	32.5%
2016	30,646	9,731	31.8%
2017	33,085	10,352	31.3%
Total			
2013	133,876	22,010	16.4%
2014	189,876	32,247	17.0%
2015	205,452	32,575	15.9%
2016	216,770	33,709	15.6%
2017	231,411	35,726	15.4%

Mental Health Services

Table 49 displays the key demographic characteristics of HealthChoice participants with a diagnosis of an MHD.[31] The percentage of participants with an MHD who were Black decreased across the evaluation period: from 49.3 percent in CY 2013 to 45.1 percent in CY 2017. In CY 2013, children and adults made up 50.6 and 49.4 percent, respectively, of participants with an

[31] 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.

MHD. The proportion of adults rose to 61.5 percent in CY 2017. These increases may result from the large influx of adults during the ACA expansion.

Table 49. Demographic Characteristics of HealthChoice Participants with an MHD, CY 2013–CY 2017

Demographic Characteristic	CY 2013	CY 2014	CY 2015	CY 2016	CY 2017
	% of Total	% of Total	% of Total	% of Total	% of Total
Race					
Asian	1.0%	1.1%	1.1%	1.2%	1.3%
Black	49.3%	46.5%	45.9%	45.6%	45.1%
White	40.4%	42.6%	41.9%	41.1%	40.2%
Hispanic	5.0%	4.5%	4.7%	4.8%	5.1%
Native American	0.3%	0.3%	0.3%	0.3%	0.3%
Other	4.1%	5.1%	6.0%	7.1%	8.1%
Total	**100%**	**100%**	**100%**	**100%**	**100%**
Sex					
Female	56.2%	54.4%	54.4%	54.1%	54.3%
Male	43.8%	45.7%	45.6%	45.9%	45.7%
Total	**100%**	**100%**	**100%**	**100%**	**100%**
Region					
Baltimore City	28.3%	27.6%	27.1%	26.8%	26.1%
Baltimore Suburban	29.2%	29.9%	30.1%	30.0%	30.2%
Eastern Shore	11.8%	11.3%	11.3%	11.3%	11.2%
Southern Maryland	4.5%	4.6%	4.7%	4.6%	4.7%
Washington Suburban	15.5%	15.8%	16.4%	16.9%	17.3%
Western Maryland	10.5%	10.5%	10.3%	10.3%	10.3%
Out of State	0.3%	0.2%	0.2%	0.1%	0.1%
Total	**100%**	**100%**	**100%**	**100%**	**100%**
Age Group (Years)					
0-18	50.6%	39.6%	39.4%	38.7%	38.5%
19-64	49.4%	60.5%	60.7%	61.3%	61.5%
Total	**100%**	**100%**	**100%**	**100%**	**100%**
Total Participants	**113,395**	**153,809**	**169,824**	**178,832**	**189,779**

Substance Use Disorder Services

This section evaluates the quality and comprehensiveness of care provided to HealthChoice participants, specifically for SUD.

SUD services were provided under the HealthChoice MCO benefit package during the first two years of the evaluation period, prior to being carved out and administered by the ASO in alignment with specialty mental health services.[32] Table 50 presents the demographic characteristics of HealthChoice participants with an SUD diagnosis. The ACA expansion resulted in significant shifts in the demographic characteristics of the HealthChoice population as a whole during the evaluation period. Among racial and ethnic groups, White participants made up the highest proportion of persons with an SUD, followed by Black participants. White participants increased their share of persons with SUD from 48 percent in 2013 to nearly 54 percent in 2017. Between CY 2013 and CY 2017, males switched from a minority of persons with SUD to make up 57 percent of the CY 2017 population with SUD. Also during the evaluation period, the region with the highest share of persons with SUD switched from Baltimore City in CY 2013 to the Baltimore Suburban region, with nearly 32 percent.

[32] Individuals were identified as having an SUD if they had a claim that met the COMAR 10.09.70.02 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."

Table 50. Demographic Characteristics of HealthChoice Participants with an SUD, CY 2013–CY 2017

Demographic Characteristic	CY 2013	CY 2014	CY 2015	CY 2016	CY 2017
	% of Total	% of Total	% of Total	% of Total	% of Total
Race					
Asian	0.5%	0.6%	0.6%	0.6%	0.6%
Black	42.3%	40.6%	38.8%	37.8%	37.5%
White	48.1%	52.3%	53.5%	53.9%	53.6%
Hispanic	5.1%	2.1%	1.9%	1.6%	1.5%
Native American	0.3%	0.4%	0.4%	0.4%	0.4%
Other	3.7%	4.0%	4.9%	5.7%	6.5%
Total	**100%**	**100%**	**100%**	**100%**	**100%**
Sex					
Female	57.5%	44.9%	44.4%	43.8%	43.4%
Male	42.5%	55.1%	55.6%	56.2%	56.6%
Total	**100%**	**100%**	**100%**	**100%**	**100%**
Region					
Baltimore City	30.8%	33.4%	32.0%	30.5%	30.1%
Baltimore Suburban	26.4%	29.5%	30.2%	31.3%	31.6%
Eastern Shore	11.3%	11.3%	12.1%	12.5%	12.7%
Southern Maryland	5.6%	5.4%	5.3%	5.7%	5.8%
Washington Suburban	16.1%	10.2%	9.8%	9.1%	8.5%
Western Maryland	9.6%	10.0%	10.5%	10.9%	11.2%
Out of State	0.2%	0.2%	0.2%	0.1%	0.1%
Total	**100%**	**100%**	**100%**	**100%**	**100%**
Age Group (Years)					
0-18	20.8%	7.8%	6.3%	4.9%	4.1%
19-64	79.2%	92.2%	93.7%	95.2%	95.9%
Total	**100%**	**100%**	**100%**	**100%**	**100%**
Total Participants	**33,898**	**61,143**	**63,229**	**68,584**	**74,717**

Screening, Brief Intervention, and Referral to Treatment (SBIRT)

Screening, Brief Intervention, and Referral to Treatment (SBIRT) is a public health approach for 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, July). Table 51 presents the number of participants who received an SBIRT service during CY 2015 to CY 2017. The number of people receiving SBIRT services increased across the evaluation period. The number of assessments completed per 1,000 Medicaid participants doubled between CY 2015 and CY 2016. Adolescents aged 15 to 18 years had the highest rate of SBIRT services completed in CY 2016 and CY 2017, followed by adults aged 40 to 64.

Table 51. Number and Percentage of Health Choice Participants Receiving an SBIRT Service, by Age Group, CY 2015–CY 2017

Age Group (Years)	CY 2015			CY 2016			CY 2017		
	# of Participants	# with Service	Per 1000 with Service	# of Participants	# with Service	Per 1000 with Service	# of Participants	# with Service	Per 1000 with Service
14 and under	532,231	115	0.2	527,049	491	0.9	544,260	717	1.3
15 - 18	110,125	199	1.8	108,872	571	5.2	113,790	1,131	9.9
19 - 20	46,193	65	1.4	46,018	159	3.5	49,229	256	5.2
21 - 39	345,781	634	1.8	341,629	1,108	3.2	371,558	1,676	4.5
40 - 64	269,777	649	2.4	261,863	1,052	4.0	276,606	2,005	7.2
Total	**1,304,107**	**1,662**	**1.3**	**1,285,431**	**3,381**	**2.6**	**1,355,443**	**5,785**	**4.3**

The Department also monitors the extent to which Medicaid participants with an SUD access ambulatory care services. Table 52 displays the percentage of HealthChoice participants with an SUD who received an ambulatory care visit. From CY 2013 to CY 2015, ambulatory care utilization by participants with an SUD decreased from 81.3 to 71.2, with an increase in CY 2017 to 77.4 percent.

The percentage of participants with any SUD diagnosis—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 decreased from 86.4 percent in CY 2013 to 84.2 percent in CY 2017. As noted above, SUD treatment was included as part of the MCO benefit package until the end of CY 2014. Participants with a co-occurring MHD and SUD were consistently more likely to receive an ambulatory care visit, followed by participants with only an SUD diagnosis. The rate of ambulatory care utilization among participants with a co-occurring MHD and SUD decreased from 94.2 percent in CY 2013 to 92.7 percent in CY 2017.

While ambulatory care visits decreased for both groups during the entire evaluation period, both groups experienced an increase between CY 2016 and CY 2017. Participants diagnosed with an SUD only experienced the greatest increase of 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 rate increased by 21.5 percentage points between CY 2013 and CY 2017.

Table 52. HealthChoice Participants with an Ambulatory Care Visit, by SUD Status, CY 2013–CY 2017

Calendar Year	Total Number of Participants	At Least One Ambulatory Care Visit		At Least One Ambulatory Care Visit with SUD Primary Diagnosis	
		Number of Participants	Percentage of Total Participants	Number of Participants	Percentage of Total Participants
SUD-Only					
2013	20,481	16,642	81.3%	2,982	14.6%
2014	36,067	26,057	72.2%	6,039	16.7%
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%
Dual Diagnosis (MHD + SUD)					
2013	13,417	12,633	94.2%	2,322	17.3%
2014	25,076	23,072	92.0%	4,830	19.3%
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	30674	92.7%	12,773	38.6%
Total					
2013	33,898	29,275	86.4%	5,304	15.6%
2014	61,143	49,129	80.4%	10,869	17.8%
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%

Table 53 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. This measure excludes ED visits that resulted in an inpatient hospital admission. Although the overall ED rate decreased between CY 2013 and CY 2017, the percentage of participants who had at least one SUD-related ED visit increased from 10.9 percent in CY 2013 to 12.5 percent in CY 2017, with the largest increase of 1.7 percentage points occurring in CY 2014.

Table 53. HealthChoice Participants with an Outpatient ED Visit, by SUD Status, CY 2013–CY 2017

Calendar Year	Total Number of Participants	At Least One ED Visit		At Least One ED Visit with SUD Primary Diagnosis	
		Number of Participants	Percentage of Total Participants	Number of Participants	Percentage of Total Participants
SUD Only					
2013	20,481	12,495	61.0%	1,612	7.9%
2014	36,067	18,918	52.5%	3,380	9.4%
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%
Dual Diagnosis (MHD + SUD)					
2013	13,417	9,522	71.0%	2,067	15.4%
2014	25,076	17,341	69.2%	4,306	17.2%
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%
Total					
2013	33,898	22,017	65.0%	3,679	10.9%
2014	61,143	36,259	59.3%	7,686	12.6%
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%

Table 54 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).[33] The percentage of all participants with an SUD who received at least one methadone replacement therapy consistently increased across the evaluation period—from 29.9 percent in CY 2013 to 40.1 in CY 2016—while decreasing to 39.3 percent in CY 2017. The largest increase occurred between CY 2013 and CY 2014. A similar pattern occurred with all participants with an SUD who received at least one MAT.

Table 54. Number and Percentage of HealthChoice Participants Who Had Methadone Replacement Therapy or MAT, by SUD Status, CY 2013–CY 2017

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					
2013	20,481	6,130	29.9%	8,794	42.9%
2014	36,067	12,964	35.9%	18,474	51.2%
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%
Dual Diagnosis (MHD + SUD)					
2013	13,417	4,200	31.3%	7,029	52.4%
2014	25,076	7,798	31.1%	13,663	54.5%
2015	27,601	8,891	32.2%	15,784	57.2%
2016	30,646	10,132	33.1%	18,374	60.0%
2017	33,085	10,221	30.9%	20,131	60.8%
Total					
2013	33,898	10,330	30.5%	15,823	46.7%
2014	61,143	20,762	34.0%	32,137	52.6%
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%

Section IV Conclusion

HealthChoice covers a broad range of populations with low income and various service needs. Therefore, health promotion and disease prevention activities under HealthChoice have an extensive scope. From EPSDT services for children, to care for pregnant women and 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 necessary access to care for persons with MHD and or SUD conditions,

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

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 V. 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; the Evidence-Based Home Visiting Services and Assistance in Community Integration Services Community Health Pilots; Dental Services for Former Foster Care Individuals; 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 Assistance in Community Integration Services programs, provide dental services to dually eligible adults, implement the National Diabetes Prevention Program, and adjust the criteria for the Family Planning Program. The waiver amendment application was approved in March 2019.

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. Table 55 displays IMD utilization for individuals aged 21 and older under the HealthChoice demonstration from July through December 2017.

Table 55. Utilization of Residential Treatment (IMD) for Substance Use Disorders Services, July–December 2017

Level of Service	Recipient Count	Service Count
Level 3.7-WM	2,350	14,123
Level 3.7	2,975	40,423
Level 3.5	885	15,632
Level 3.3	392	8,773
All Unique Users	**4,392**	**78,951**

On January 1, 2019, the Department phased in coverage of ASAM level 3.1 and intends to extend coverage to individuals dually eligible for Medicare and Medicaid by January 1, 2020. The Department recently received approval for a waiver amendment to allow coverage for ASAM level 4.0 for beneficiaries with a primary SUD and a secondary MHD, effective July 1, 2019.

Evidence-Based Home Visiting Services Community Health Pilot

The Evidence-Based Home Visiting Service (HVS) Pilot Program aligns with two evidence-based models focused on the health of pregnant women: Nurse Family Partnership and Healthy Families America. HVS expands 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 percent 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. The Department and The Hilltop Institute are monitoring and evaluating the HVS pilot. This evaluation report will include results as they become available.

Assistance in Community Integration Services Community Health Pilot

The Assistance in Community Integration Services (ACIS) Pilot Program provides case management services, support services, and housing case management services to a tenancy-based population that meets the needs-based criteria for health and housing. Participation is capped at 300 individuals annually. Similar to the HVS pilot, each ACIS pilot program is managed by a lead local governmental entity (lead entity) that funds 50 percent 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 Human Services: 100 individuals
- 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 2018, the Department sought a waiver amendment to expand ACIS with an additional 300 participant spaces. This was approved in April 2019. The new statewide cap has 600 spaces. In May 2019, the Department released a third round of ACIS Pilot Request for Applications, with an expected service effective date of July 1, 2019.

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, and 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.

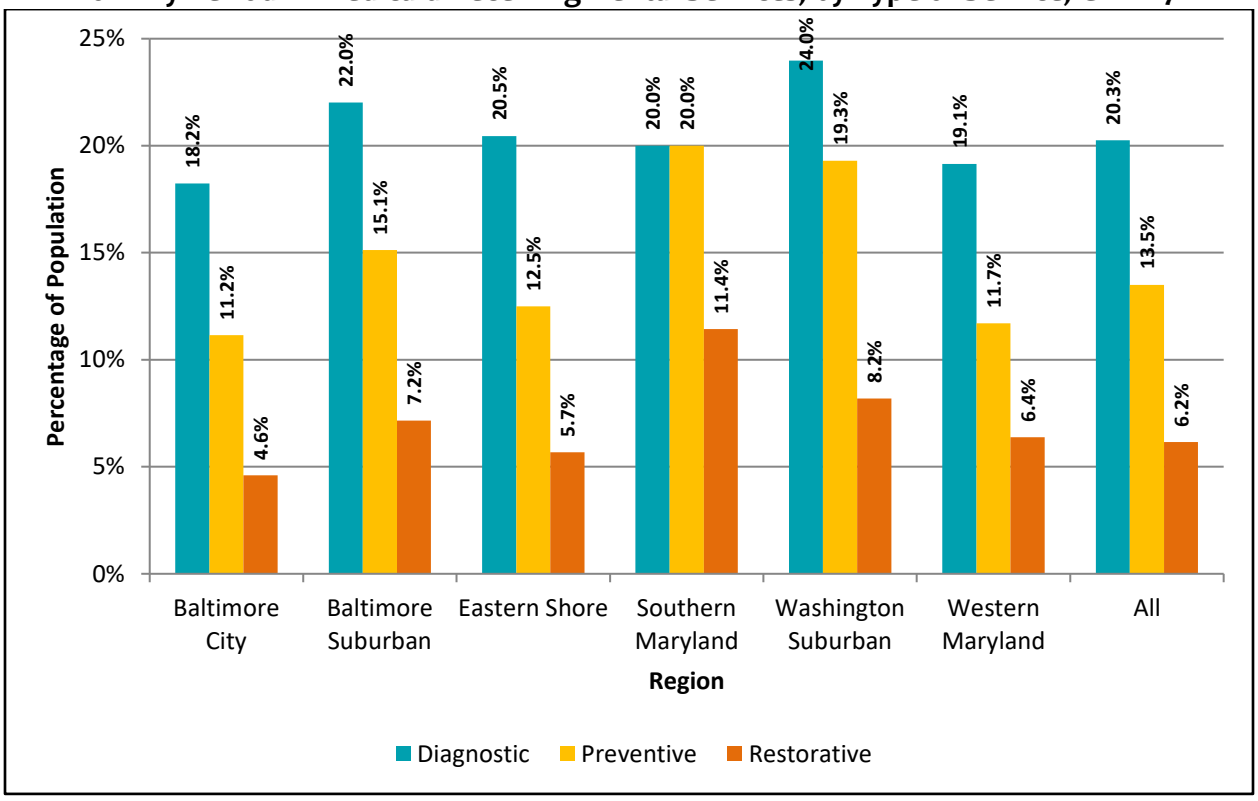
Table 56 shows the number and percentage of former foster care participants who were enrolled in Medicaid for at least 320 days and who received dental services. Overall, 288 (21.6 percent of) former foster care participants had at least one dental visit. Visit percentage across regions varied from 19.1 percent to 24.6 percent. The Department anticipates that over time the number and percentage of former foster care participants receiving services will increase.

Table 56. Number and Percentage of Former Foster Care Participants Enrolled in Medicaid for 320 Days who had Dental Services in CY 2017, by Region

Region	Number of Enrollees	Number with at Least One Visit	Percentage with Dental Visits
Baltimore City	565	108	19.1%
Baltimore Suburban	377	90	23.9%
Eastern Shore	88	21	23.9%
Southern Maryland	*	*	20.0%
Washington Suburban	171	42	24.6%
Western Maryland	*	*	20.2%
Total	**1,333**	**288**	**21.6%**

Figure 27 shows the percentage of participants by region and type of service for CY 2017 enrolled for any period. Overall, 20.3 percent received diagnostic services, 13.5 received preventive services, and 6.2 percent received restorative services. The Department expects the share of preventive and diagnostic services to increase and the percent of restorative services to decrease as more participants receive dental services on a regular basis.

Figure 27. Percentage of Former Foster Care Participants by Region Enrolled for Any Period in Medicaid Receiving Dental Services, by Type of Service, CY 2017



Increased Community Services

The ICS program provides cost-effective home- and community-based services (HCBS) to certain adults with physical disabilities as an alternative to institutional care in a nursing facility. Similar 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 wellbeing and safety of the participants, and increase opportunities for self-advocacy and self-reliance. The number of participants in the ICS program increased from 12 in CY 2013 to 30 in CY 2017.

The Department monitors the health, welfare, and services rendered to each participant to ensure timely and quality provision of care. As the ICS population is relatively small, the quality plan has been successfully implemented, and no areas are in need of improvement at this time. The Department monitors several measures that all had 100 percent compliance. All participants from

CY 2013 to CY 2017 had a plan of service (POS) that addresses health and safety risk factors and signed a Freedom of Choice waiver instead of individually selecting institutional care, services, and providers. All of the Designated Supports Planning Supervisors received annual training to identify, address, and prevent abuse, neglect, and exploitation. In addition, all received annual training on falls prevention, between CY 2016 (first year of implementation) to CY 2017.

Family Planning Program

The HealthChoice waiver allows the Department to provide a limited benefit package of family planning services to eligible women. In CY 2017, women younger than 51 years of age—regardless of postpartum status—who were not otherwise eligible for Medicaid, CHIP, or Medicare and who had a family income at or below 200 percent of the FPL were eligible.

The Department is expanding eligibility under its Family Planning program to lift the age limit, open coverage to men, and cover services for post-partum individuals, effective July 1, 2018. The Department submitted a §1115 waiver amendment to transition authority for the program to a State Plan Amendment (SPA) on July 2, 2018, and submitted a matching SPA with an effective date of July 1, 2018 to CMS. Based on preliminary negotiations with CMS, the Department expects to continue to operate a small portion of its Family Planning program under the HealthChoice waiver until the Family Planning program can be integrated into the Maryland Health Connection (MHC), anticipated in September 2019.

Specifically, the §1115 waiver would continue to cover women for full Medicaid benefits for two months post-partum. Those who no longer qualify for Medicaid pregnancy benefits after the end of the post-partum period because they exceed income limits will be automatically enrolled in the Family Planning program for 12 months. After 12 months, these women would re-apply for benefits to continue their enrollment in Family Planning. Once the Family Planning program is integrated into MHC, the Department will transition all participants to be covered under the SPA.

Table 57 shows that Family Planning program enrollment decreased from CY 2013 to CY 2017. The decline in enrollment may be attributed to the ACA expansion, which increased the number of women who were eligible for full Medicaid benefits, thereby decreasing the population who needed family planning-only services.

Table 57. Percentage of Family Planning Participants (Any Period of Enrollment) Who Received a Corresponding Service, CY 2013–CY 2017

	CY 2013	CY 2014	CY 2015	CY 2016	CY 2017
Number of Participants	26,105	22,042	19,754	15,447	13,154
Number with at Least 1 Service	8,954	6,305	4,671	2,925	2,271
Percentage with at Least 1 Service	34.3%	28.6%	23.6%	18.9%	17.3%

The percentage of women enrolled in the program for 12 months with at least one service decreased from 54.3 percent in CY 2013 to 13.7 percent in CY 2017 (Table 58), while the number of women with 12-month enrollment in the program increased overall. This increase may be attributed to the expansion of the previous post-partum Family Planning program. This allows women who lose Medicaid coverage after their post-partum period to automatically enroll in the Family Planning program annually, replacing the limit that provided this coverage for only up to five years. Women may be unaware that they are enrolled in the program because no action was required on their part. Consequently, they do not seek services or know they are eligible to receive them.

Table 58. Percentage of Family Planning Participants (12-Month Enrollment) Who Received a Corresponding Service, CY 2013–CY 2017

	CY 2013	CY 2014	CY 2015	CY 2016	CY 2017
Number of Participants	4,147	6,032	7,488	6,758	6,314
Number with at Least 1 Service	2,252	2,061	1,672	1,198	862
Percentage with at Least 1 Service	54.3%	34.2%	22.3%	17.7%	13.7%

Section V 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 Evidence-Based Home Visiting Service Pilot program is serving high-risk pregnant women and children up to age two. Dental Services for Former Foster Care Participants allowed former foster care individuals to receive dental coverage up to age 26.

The Department monitors several ongoing programs, including the ICS program for disabled adults, whose enrollment grew to 30 participants in 2017. In the long-running Family Planning program, HealthChoice allows women up to 200 percent of FPL to receive family planning services. Although the program is being integrated with the Maryland Health Connection in 2019, as of 2017, 13,000 women were enrolled in the program and 17.3 percent received a family planning service.

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Appendix A. ACA Medicaid Expansion Population

This appendix examines the demographic characteristics and health care utilization of the ACA Medicaid expansion population between CY 2014 and CY 2017.

The PAC program was launched in 2006, offering a limited benefit package to childless adults aged 19 years and older who were not otherwise eligible for Medicare or Medicaid and whose income was less than or equal to 116 percent of the FPL.[34] Subsequently, under the optional Medicaid expansion in the ACA, states could expand Medicaid eligibility for adults under the age of 65 years with income up to 138 percent of the FPL. Maryland elected to expand Medicaid eligibility, which resulted in the PAC program transitioning into a fully eligible Medicaid population on January 1, 2014. Therefore, the ACA Medicaid expansion population consists of three different coverage groups:

1. Former PAC participants
2. Childless adults not previously enrolled in PAC[35]
3. Parents and caretaker relatives

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 283,697 adults through the ACA Medicaid expansion in CY 2014.[36] The number of participants who received coverage for at least one month in an ACA expansion coverage group increased to 387,998 in CY 2017.

Table A1 displays demographic characteristics of the expansion population for those with any period of enrollment in CY 2014 through CY 2017. Participants aged 19 to 34 years composed the largest portion of the ACA expansion population.

[34] The PAC program offered a limited benefit package to adults with low income, covering primary care visits, certain outpatient mental health and SUD services, outpatient ED visits, and prescription drugs.
[35] 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.
[36] The definition of this measure was updated to include participants with any enrollment in an ACA expansion coverage group during the CY. The definition used in last year's HealthChoice evaluation was based on the participant's last coverage group of the CY or their status as a former PAC participant.

Table A1. ACA Medicaid Expansion Population Aged 19–64 Years, by Demographics and Any Enrollment Period, CY 2014–CY 2017

Demographic Characteristic	CY 2014		CY 2015		CY 2016		CY 2017	
	# of Enrollees	% of Total	# of Enrollees	% of Total	# of Enrollees	% of Total	# of Enrollees	% of Total
Race/Ethnicity								
Asian	14,680	5.2%	19,469	5.3%	18,270	5.1%	20,344	5.2%
Black	125,828	44.4%	158,659	43.4%	152,532	42.9%	165,673	42.7%
White	103,709	36.6%	130,211	35.6%	127,416	35.9%	135,107	34.8%
Hispanic	7,381	2.6%	11,742	3.2%	11,683	3.3%	13,335	3.4%
Other	32,099	11.3%	45,911	12.5%	45,370	12.8%	53,539	13.8%
Total	**283,697**	**100%**	**365,992**	**100%**	**355,271**	**100%**	**387,998**	**100%**
Sex								
Female	132,442	46.7%	176,731	48.3%	169,710	47.8%	182,629	47.1%
Male	151,255	53.3%	189,261	51.7%	185,561	52.2%	205,369	52.9%
Total	**283,697**	**100%**	**365,992**	**100%**	**355,271**	**100%**	**387,998**	**100%**
Region								
Baltimore City	63,790	22.5%	75,295	20.6%	73,183	20.6%	78,355	20.2%
Baltimore Suburban	78,933	27.8%	104,316	28.5%	103,563	29.2%	113,780	29.3%
Eastern Shore	27,722	9.8%	34,867	9.5%	34,517	9.7%	37,115	9.6%
Southern Maryland	14,737	5.2%	19,085	5.2%	18,783	5.3%	20,609	5.3%
Washington Suburban	75,962	26.8%	103,187	28.2%	96,027	27.0%	106,174	27.4%
Western Maryland	22,127	7.8%	28,530	7.8%	28,390	8.0%	31,090	8.0%
Out of State	426	0.2%	712	0.2%	808	0.2%	875	0.2%
Total	**283,697**	**100%**	**365,992**	**100%**	**355,271**	**100%**	**387,998**	**100%**
Age Group (Years)								
19–34	113,747	40.1%	157,449	43.0%	157,804	44.4%	177,340	45.7%
35–49	75,418	26.6%	95,190	26.0%	87,520	24.6%	93,685	24.2%
50–64	94,538	33.3%	113,353	31.0%	109,947	31.0%	116,973	30.2%
Total	**283,697**	**100%**	**365,992**	**100%**	**355,271**	**100%**	**387,998**	**100%**
Member Months								
1	16,108	5.7%	10,564	2.9%	17,097	4.8%	13,928	3.6%
2	10,093	3.6%	10,207	2.8%	12,954	3.7%	12,460	3.2%
3	7,976	2.8%	41,699	11.4%	9,951	2.8%	9,920	2.6%
4	8,981	3.2%	20,537	5.6%	8,977	2.5%	9,103	2.4%
5	7,629	2.7%	14,514	4.0%	9,139	2.6%	10,162	2.6%
6	7,515	2.7%	12,976	3.6%	9,444	2.7%	9,603	2.5%
7	12,784	4.5%	15,189	4.2%	10,062	2.8%	10,039	2.6%
8	13,895	4.9%	15,505	4.2%	10,833	3.1%	10,603	2.7%
9	19,031	6.7%	16,377	4.5%	11,610	3.3%	11,018	2.8%
10	39,867	14.1%	14,477	4.0%	13,360	3.8%	12,474	3.2%
11	21,563	7.6%	25,265	6.9%	19,167	5.4%	15,093	3.9%
12	118,255	41.7%	168,682	46.1%	222,677	62.7%	263,595	67.9%
Total	**283,697**	**100%**	**365,992**	**100%**	**355,271**	**100%**	**387,998**	**100%**

Table A2 displays demographic characteristics of the expansion population with a full 12 months of enrollment in CY 2014 through CY 2017. The racial and regional distribution is similar to the expansion population with any period of enrollment. In CY 2014, participants aged 50 to 64 years composed the largest portion of the ACA expansion population with 12 months of enrollment. However, similar to those with any period of enrollment, by CY 2017, participants aged 19 to 34 years composed the largest portion of the ACA expansion population with 12 months of enrollment.

Table A2. ACA Medicaid Expansion Population Demographics for Participants Aged 19–64 Years, 12 months of Enrollment, CY 2014–CY 2017

Demographic Characteristic	CY 2014		CY 2015		CY 2016		CY 2017	
	# of Enrollees	% of Total	# of Enrollees	% of Total	# of Enrollees	% of Total	# of Enrollees	% of Total
Race/Ethnicity								
Asian	6,176	5.2%	9,245	5.5%	11,764	5.3%	13,689	5.2%
Black	53,201	45.0%	71,433	42.4%	96,225	43.2%	116,103	44.0%
White	46,509	39.3%	65,172	38.6%	82,122	36.9%	93,301	35.4%
Hispanic	3,371	2.9%	5,829	3.5%	7,723	3.5%	9,081	3.4%
Other	8,998	7.6%	17,003	10.1%	24,843	11.2%	31,421	11.9%
Total	**118,255**	**100%**	**168,682**	**100%**	**222,677**	**100%**	**263,595**	**100%**
Sex								
Female	61,213	51.8%	90,271	53.5%	110,197	49.5%	125,907	47.8%
Male	57,042	48.2%	78,411	46.5%	112,480	50.5%	137,688	52.2%
Total	**118,255**	**100%**	**168,682**	**100%**	**222,677**	**100%**	**263,595**	**100%**
Region								
Baltimore City	27,754	23.5%	35,615	21.1%	47,279	21.2%	56,187	21.3%
Baltimore Suburban	33,062	28.0%	49,413	29.3%	64,706	29.1%	76,786	29.1%
Eastern Shore	12,577	10.6%	17,707	10.5%	22,574	10.1%	25,896	9.8%
Southern Maryland	6,346	5.4%	9,021	5.4%	11,920	5.4%	14,203	5.4%
Washington Suburban	28,529	24.1%	42,572	25.2%	57,669	25.9%	68,901	26.1%
Western Maryland	9,809	8.3%	14,089	8.4%	18,105	8.1%	21,093	8.0%
Out of State	178	0.2%	265	0.2%	424	0.2%	529	0.2%
Total	**118,255**	**100%**	**168,682**	**100%**	**222,677**	**100%**	**263,595**	**100%**
Age Group (Years)								
19–34	42,096	35.6%	63,047	37.4%	94,136	42.3%	116,572	44.2%
35–49	33,038	27.9%	46,217	27.4%	55,774	25.1%	65,267	24.8%
50–64	43,121	36.5%	59,418	35.2%	72,767	32.7%	81,756	31.0%
Total	**118,255**	**100%**	**168,682**	**100%**	**222,677**	**100%**	**263,595**	**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 A3 displays the number and percentage of participants who had an ambulatory visit, outpatient ED visit or inpatient admission in CY 2014 through CY 2017 with any period of enrollment and 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 A3, below, include the following:

- In CY 2014, roughly 61 percent of ACA Medicaid expansion participants with any period of enrollment had an ambulatory care visit; the rate increased to roughly 66.0 percent in CY 2017. Visit rates decreased over the evaluation period for expansion participants enrolled for the entire year. Among those with 12 months of enrollment, 80.9 percent of participants in CY 2014 and 75.1 percent of participants in CY 2017 had an ambulatory care visit.
- In CY 2014, 31.4 percent of ACA Medicaid expansion participants with any period of enrollment had an ED visit. This rate increased to 39.6 percent for those enrolled for the entire year. Similar rates were observed in CY 2015 through CY 2017.
- Overall, 9.4 percent of ACA Medicaid expansion participants with any period of enrollment had an inpatient admission in CY 2014, decreasing to 8.8 percent in CY 2017. Participants who were enrolled for the entire year experienced a higher rate of inpatient admissions; their rates were 11.9 percent in CY 2014 and 9.6 percent in CY 2017.

Table A3. Service Utilization of ACA Medicaid Expansion Population Aged 19–64 Years, by Enrollment Period, CY 2014–CY 2017

Enrollment Period	CY 2014			CY 2015			CY 2016			CY 2017		
	Number of Users	Total Enrollees	Percentage of Total	Number of Users	Total Enrollees	Percentage of Total	Number of Users	Total Enrollees	Percentage of Total	Number of Users	Total Enrollees	Percentage of Total
Ambulatory Care Visits												
Any	174,293	283,697	61.4%	225,794	365,992	61.7%	236,729	355,271	66.6%	257,280	387,998	66.3%
12 Months	95,639	118,255	80.9%	138,728	168,682	82.2%	172,901	222,677	77.7%	197,885	263,595	75.1%
Outpatient ED Visits												
Any	89,029	283,697	31.4%	110,071	365,992	30.1%	114,624	355,271	32.3%	120,342	387,998	31.0%
12 Months	46,838	118,255	39.6%	65,587	168,682	38.9%	82,894	222,677	37.2%	93,130	263,595	35.3%
Inpatient Admissions												
Any	26,573	283,697	9.4%	31,087	365,992	8.5%	32,622	355,271	9.2%	34,303	387,998	8.8%
12 Months	14,028	118,255	11.9%	19,088	168,682	11.3%	22,670	222,677	10.2%	25,203	263,595	9.6%

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 A4 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 2014 through CY 2017.

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 enrollment. However, the difference narrows across the evaluation period for all participant groups. For participants with an MHD-only, the difference decreased by 1.2 percent points from CY 2014 to CY 2017. The percentage of participants with any period of enrollment and an MHD only increased slightly (by 1.1 percentage points) across the evaluation period. The percentage of participants with any period of enrollment and an SUD was 6.7 percent in CY 2014 and increased slightly to 6.8 percent in CY 2017. The percentage of participants with any period of enrollment and a dual diagnosis increased slightly (0.6) percentage points.

Table A4. Behavioral Health Diagnosis of ACA Medicaid Expansion Population Aged 19–64 Years, by Enrollment Period, CY 2014–CY 2017

Enrollment Period	CY 2014			CY 2015			CY 2016			CY 2017		
	# 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	26,774	283,697	9.4%	35,123	365,992	9.6%	37,637	355,271	10.6%	40,635	387,998	10.5%
12 Months	15,504	118,255	13.1%	22,559	168,682	13.4%	27,742	222,677	12.5%	31,291	263,595	11.9%
SUD Only												
Any Period	18,911	283,697	6.7%	21,529	365,992	5.9%	23,739	355,271	6.7%	26,450	387,998	6.8%
12 Months	10,234	118,255	8.7%	12,518	168,682	7.4%	16,717	222,677	7.5%	20,400	263,595	7.7%
Dual Diagnosis (MHD + SUD)												
Any Period	12,666	283,697	4.5%	15,899	365,992	4.3%	18,100	355,271	5.1%	19,815	387,998	5.1%
12 Months	8,356	118,255	7.1%	11,252	168,682	6.7%	14,501	222,677	6.5%	16,545	263,595	6.3%
No Behavioral Health Diagnosis												
Any Period	225,346	283,697	79.4%	293,441	365,992	80.2%	275,795	355,271	77.6%	301,098	387,998	77.6%
12 Months	84,161	118,255	71.2%	122,353	168,682	72.5%	163,717	222,677	73.5%	195,359	263,595	74.1%

Appendix B. MCO Enrollment by County

Table B1. MCO Enrollment by County, CY 2017*

County Name	Amerigroup		Aetna		JAI		Kaiser		MPC		MedStar		Priority Partners		UMHP		United		Total	
	# of Enrollees	% of Enrollees	# of Enrollees	% of Enrollees	# of Enrollees	% of Enrollees	# of Enrollees	% of Enrollees	# of Enrollees	% of Enrollees	# of Enrollees	% of Enrollees	# of Enrollees	% of Enrollees	# of Enrollees	% of Enrollees	# of Enrollees	% of Enrollees	# of Enrollees	% of Enrollees
Allegany	1,154	5.8%	*		*		*		16,940	84.9%	29	0.1%	1,194	6.0%	*		606	3.0%	19,951	100.0%
Anne Arundel	19,209	20.7%	116	0.1%	1,258	1.4%	5,248	5.7%	10,228	11.0%	7,050	7.6%	32,042	34.6%	2,944	3.2%	14,518	15.7%	92,613	99.9%
Baltimore City	55,994	22.8%	273	0.1%	20,394	8.3%	7,746	3.2%	52,904	21.6%	21,251	8.7%	58,157	23.7%	7,688	3.1%	20,863	8.5%	245,270	99.9%
Baltimore County	47,299	24.7%	258	0.1%	7,496	3.9%	9,957	5.2%	27,005	14.1%	29,339	15.3%	40,145	21.0%	5,339	2.8%	24,406	12.8%	191,244	99.9%
Calvert	2,155	15.2%	31	0.2%	21	0.1%	578	4.1%	6,996	49.3%	118	0.8%	1,925	13.6%	706	5.0%	1,665	11.7%	14,195	99.8%
Caroline	411	3.6%	0	0.0%	*		*		1,008	8.8%	39	0.3%	8,745	76.4%	824	7.2%	410	3.6%	11,448	100.0%
Carroll	3,226	14.3%	60	0.3%	29	0.1%	59	0.3%	7,165	31.7%	129	0.6%	5,366	23.7%	1,727	7.6%	4,853	21.5%	22,614	99.7%
Cecil	6,155	23.0%	48	0.2%	17	0.1%	18	0.1%	7,605	28.4%	145	0.5%	3,631	13.5%	4,905	18.3%	4,292	16.0%	26,816	99.8%
Charles	4,876	15.4%	*		*		2,255	7.1%	4,964	15.7%	3,699	11.7%	4,729	14.9%	1,034	3.3%	10,046	31.7%	31,667	99.8%
Dorchester	459	3.8%	0	0.0%	*		*		1,314	10.9%	18	0.1%	8,995	74.7%	682	5.7%	566	4.7%	12,038	100.0%
Frederick	7,615	19.0%	96	0.2%	21	0.1%	282	0.7%	12,370	30.9%	133	0.3%	11,421	28.6%	2,358	5.9%	5,683	14.2%	39,979	99.8%
Garrett	416	5.1%	*		0	0.0%	*		7,078	87.5%	*		355	4.4%	*		235	2.9%	8,091	100.0%
Harford	5,122	11.7%	50	0.1%	179	0.4%	1,742	4.0%	6,357	14.5%	6,217	14.2%	12,980	29.6%	2,218	5.1%	8,952	20.4%	43,817	99.9%
Howard	10,497	23.9%	99	0.2%	125	0.3%	3,615	8.2%	7,198	16.4%	560	1.3%	13,111	29.9%	1,585	3.6%	7,043	16.1%	43,833	99.8%
Kent	269	5.8%	0	0.0%	*		*		460	9.8%	*	0.1%	3,026	64.7%	601	12.9%	313	6.7%	4,676	100.0%
Montgomery	63,266	35.3%	301	0.2%	40	0.0%	20,927	11.7%	17,447	9.7%	11,144	6.2%	32,059	17.9%	5,508	3.1%	28,734	16.0%	179,426	99.8%
Out of State	239	17.2%	*		*		112	8.0%	261	18.7%	99	7.1%	388	27.9%	99	7.1%	167	12.0%	1,393	99.9%
Prince George's	78,487	34.1%	537	0.2%	67	0.0%	24,488	10.6%	24,027	10.4%	21,581	9.4%	36,218	15.7%	9,041	3.9%	35,830	15.6%	230,276	99.8%
Queen Anne's	540	6.4%	0	0.0%	0	0.0%	*		627	7.4%	*		5,980	70.9%	660	7.8%	583	6.9%	8,429	100.0%
Somerset	503	6.2%	0	0.0%	0	0.0%	*		825	10.1%	*		5,959	73.1%	535	6.6%	320	3.9%	8,157	100.0%
St. Mary's	2,895	12.9%	*		*		326	1.5%	5,368	23.9%	3,755	16.8%	4,773	21.3%	551	2.5%	4,697	21.0%	22,415	99.8%
Talbot	84	1.1%	*		*		*		642	8.1%	*		6,199	78.3%	676	8.5%	299	3.8%	7,914	100.0%
Washington	3,253	7.6%	*		*		85	0.2%	28,444	66.8%	39	0.1%	7,857	18.5%	120	0.3%	2,751	6.5%	42,571	100.0%
Wicomico	2,029	6.1%	0	0.0%	*		*		3,319	9.9%	32	0.1%	24,731	74.0%	2,361	7.1%	943	2.8%	33,435	100.0%
Worcester	962	7.3%	0	0.0%	*		*		1,144	8.7%	13	0.1%	9,399	71.3%	869	6.6%	776	5.9%	13,175	100.0%
Total	**317,115**	**23.4%**	**1,977**	**0.1%**	**29,738**	**2.2%**	**77,497**	**5.7%**	**251,696**	**18.6%**	**105,439**	**7.8%**	**339,385**	**25.0%**	**53,045**	**3.9%**	**179,551**	**13.2%**	**1,355,443**	**100.0%**

*Cells of 10 or less have been suppressed

Appendix C. PCP Capacity by County

Providers were identified by their license numbers. If a license number was unavailable, 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, D.C. were not included in the analysis. Although regulatory requirements apply to a single MCO, this analysis aggregated data from all nine HealthChoice MCOs active as of the end of the evaluation period.

Table C1. PCP Capacity, by County, December 2017

County	Number of PCP Offices	Capacity at 200:1	Total Dec 2017 Enrollment	Excess Capacity
				Difference 200:1 Ratio
Allegany	97	19,400	17,763	1,637
Anne Arundel	806	161,200	80,717	80,483
Baltimore City	2,120	424,000	218,386	205,614
Baltimore County	1,521	304,200	167,330	136,870
Calvert	125	25,000	12,315	12,685
Caroline	68	13,600	10,235	3,365
Carroll	217	43,400	19,528	23,872
Cecil	138	27,600	23,435	4,165
Charles	197	39,400	27,235	12,165
Dorchester	65	13,000	10,801	2,199
Frederick	232	46,400	34,535	11,865
Garrett	40	8,000	7,127	873
Harford	283	56,600	38,007	18,593
Howard	413	82,600	37,723	44,877
Kent	24	4,800	4,173	627
Montgomery	1,247	249,400	155,614	93,786
Prince George's	974	194,800	197,565	-2,765
Queen Anne's	78	15,600	7,312	8,288
Somerset	48	9,600	7,278	2,322
St. Mary's	171	34,200	19,618	14,582
Talbot	159	31,800	7,097	24,703
Washington	211	42,200	37,309	4,891
Wicomico	170	34,000	29,183	4,817
Worcester	105	21,000	11,511	9,489
Total (in MD)	**9,509**	**1,901,800**	**1,181,797**	**720,003**
Other	437			
Washington, D.C.	929			

Appendix D. Definitions and Specifications

Table D1. 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, S09		
Families & Children	All other Coverage Groups/Coverage Types		

Table D2. 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
G99	Refugee Med Needy Spenddown

Coverage Group	Description
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
S09	MPAP Prior to FY07 (ended 12/31/13)
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
S99	ABD – Spenddown

Coverage Group	Description
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 D3. 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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