Commonwealth of Virginia Department of Medical Assistance Services

2020–21 Foster Care Focus Study

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1.   Executive Summary

The Commonwealth of Virginia Department of Medical Assistance Services (DMAS) contracted with Health Services Advisory Group, Inc. (HSAG) to conduct the sixth annual Foster Care Focus Study in state fiscal year (SFY) 2020–2021 (Contract Year 7). Children in foster care face many barriers to adequate healthcare, and DMAS is committed to improving the quality, access, and timeliness of care for these children.

While historically the Foster Care Focus Study has only assessed children in foster care, DMAS requested that the measurement year (MY) 2020 (i.e., January 1, 2020—December 31, 2020) study also assess children in the adoption assistance program and young adults formerly in foster care in order to establish baseline rates. Therefore, the current study assessed healthcare utilization among children in foster care, children in the adoption assistance program, and young adults formerly in foster care compared to utilization among similar members not in these programs (henceforth referred to as "controls") who were also enrolled with Medicaid managed care organizations (MCOs).[1-1]

Methodology and Study Indicators

HSAG identified the eligible populations for each foster care or adoption assistance program using the specific program's aid category to determine member enrollment at any point during the measurement period:

- Children in Foster Care—All children enrolled in Medicaid under 18 years of age as of January 1, 2020, and identified by DMAS as enrolled in Medicaid under the aid category "076" for children in foster care.
- Adoption Assistance Children—All children enrolled in Medicaid under 18 years of age as of January 1, 2020, and identified by DMAS as enrolled in Medicaid under the aid category "072" for children in the adoption assistance program.
- Former Foster Children—All members enrolled in Medicaid aged 19 to 26 years as of January 1, 2020, and identified by DMAS as enrolled in Medicaid under the aid category "070" for young adults formerly in foster care.

Selected study indicators assessed demographic characteristics among the eligible populations for any length of Medicaid enrollment during the measurement period. For study indicators assessing healthcare utilization, the eligible populations were limited to members enrolled in Medallion 4.0 or Commonwealth Coordinated Care Plus (CCC Plus) managed care programs with any MCO or a combination of MCOs during the measurement year, with enrollment gaps totaling no more than 45 days. This approach ensured that these members were continuously enrolled and covered by Medicaid for study indicators assessing healthcare utilization. Additionally, HSAG compared this group of

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[1-1]   Most children in foster care who received Medicaid benefits were transitioned from fee-for-service (FFS) programs to managed care no later than June 2014. Under Medallion 3.0 and Medallion 4.0, some children in foster care continued to receive Medicaid services on an FFS basis because they met exclusion criteria for managed care participation, such as utilizing Medicaid benefits as secondary insurance (i.e., Third Party Liability [TPL]) or receiving residential care services.

continuously enrolled members to controls meeting the same age and enrollment criteria and sharing similar demographic and health characteristics. Study data included administrative claims and encounters to examine services received by members for MY 2020.

To determine the extent to which children in foster care, children in the adoption assistance program, and former foster children who were continuously enrolled with one or more MCOs throughout the study period utilized healthcare services, HSAG assessed 13 measures, representing 20 study indicators, across five domains, as displayed in Table 1-1.

Table 1-1—Measure Indicators

Measure and Indicators
Primary Care[1-2]
Child and Adolescent Well-Care Visits (WCV)
Well-Child Visits in the First 30 Months of Life—Well-Child Visits in the First 15 Months—Six or More Well-Child Visits (W30–6+)^ and Well-Child Visits for Age 15 Months to 30 Months—Two or More Well-Child Visits (W30–2+)^
Oral Health
Annual Dental Visit (ADV)
Preventive Dental Services (PDENT-CH)
Behavioral Health
Seven-Day Follow-Up After Hospitalization for Mental Illness (FUH)
Thirty-Day Follow-Up After ED Visit for Mental Illness (FUM)
Metabolic Monitoring for Children and Adolescents on Antipsychotics (APM)^
Use of First-Line Psychosocial Care for Children and Adolescents on Antipsychotics (APP)^
Follow-Up Care for Children Prescribed ADHD Medication (ADD)^—One-Month Follow-Up, Two-Month Follow-Up, Three-Month Follow-Up, Six-Month Follow-Up, and Nine-Month Follow-Up
Substance Use
Thirty-Day Follow-Up After ED Visit for AOD Abuse or Dependence (FUA)
Initiation and Engagement of AOD Abuse or Dependence Treatment (IET)
Reproductive Health
Contraceptive Care (CCW-CH)—Most Effective or Moderately Effective Method and Long-Acting Reversible Method

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[1-2] Historically, the Primary Care domain was assessed using the *Children and Adolescents' Annual Access to PCPs* (CAP) measure; however, the MY 2020 HEDIS specifications retired the CAP measure. Therefore, the *Child and Adolescent Well-Care Visits* (WCV) measure and the *Well-Child Visits in the First 30 Months of Life* (W30) measure were introduced to assess primary care for MY 2020.

Measure and Indicators
Respiratory Health
Asthma Medication Ratio (AMR)

^indicates these measure indicators were not calculated for the former foster care population as the measure indicators are not applicable to members 19 to 26 years of age.

Appendix A presents detailed descriptions of each study indicator, including references to the National Committee for Quality Assurance's (NCQA's) Healthcare Effectiveness Data and Information Set (HEDIS®)[1-3] Technical Specifications for Health Plans, Volume 2 and the Centers for Medicare & Medicaid Services' (CMS') Core Set of Adult Health Care Quality Measures for Medicaid and Core Set of Children's Health Care Quality Measures for Medicaid and Children's Health Insurance Program (Adult and Child Core Set) Technical Specifications and Resource Manual for Federal Fiscal Year (FFY) 2021 Reporting.

Findings

The foster care eligible population included 6,890 children in foster care enrolled in Medicaid during MY 2020. Among the foster care eligible population, 3,351 children (48.6 percent) were continuously enrolled with any MCO or combination of MCOs during the measurement year. Finally, 3,203 of the continuously enrolled children in foster care (95.6 percent) were matched to a control member and included in the final study population for comparison to controls. Demographic characteristics of the study population did not differ substantially from the eligible population, except that there were 3.4 percent more Black or African American children and 2.8 percent fewer children aged two years or younger.

Table 1-2 contains study indicator results for the children in foster care study population and the matched controls with p-values indicating whether the rate differences between children in foster care and controls are statistically significant. Among the 20 study indicators, children in foster care demonstrated rates of healthcare utilization higher than or equal to controls in 18 study indicators, eight of which were statistically significant. Appendix C includes detailed findings by members' age, MCO, and region, including numerators and denominators.

Table 1-2—Overall Study Indicator Results for Children in Foster Care and Controls

Measure	Children in Foster Care Rate	Controls Rate	*p*
Primary Care			
Child and Adolescent Well-Care Visits	68.0%	48.5%	<0.001*
Well-Child Visits in the First 30 Months of Life—Well-Child Visits in the First 15 Months—Six or More Well-Child Visits	65.1%	56.1%	0.09
Well-Child Visits in the First 30 Months of Life—Well-Child Visits for Age 15 Months to 30 Months—Two or More Well-Child Visits	77.6%	74.5%	0.48

[1-3]   HEDIS® is a registered trademark of the National Committee for Quality Assurance (NCQA).

Measure	Children in Foster Care Rate	Controls Rate	*p*
Oral Health			
Annual Dental Visit	79.1%	50.0%	<0.001*
Preventive Dental Services	72.0%	42.8%	<0.001*
Behavioral Health			
Seven-Day Follow-Up After Hospitalization for Mental Illness	65.6%	59.2%	0.45
Thirty-Day Follow-Up After Emergency Department (ED) Visit for Mental Illness	87.8%	78.9%	0.45
Metabolic Monitoring for Children and Adolescents on Antipsychotics	38.3%	27.8%	0.05
Use of First-Line Psychosocial Care for Children and Adolescents on Antipsychotics	92.4%	78.9%	0.04*
Follow-Up Care for Children Prescribed Attention-Deficit Hyperactivity Disorder (ADHD) Medication within 1 Month	86.8%	74.8%	0.02*
Follow-Up Care for Children Prescribed ADHD Medication within 2 Months	92.5%	85.4%	0.09
Follow-Up Care for Children Prescribed ADHD Medication within 3 Months	95.3%	87.8%	0.05*
Follow-Up Care for Children Prescribed ADHD Medication within 6 Months	99.1%	95.9%	0.22
Follow-Up Care for Children Prescribed ADHD Medication within 9 Months	99.1%	96.7%	0.38
Substance Abuse			
Thirty-Day Follow-Up After ED Visit for Alcohol and Other Drug (AOD) Abuse or Dependence	S	S	NC
Initiation of AOD Abuse or Dependence Treatment	29.1%	45.8%	0.15
Engagement in AOD Abuse or Dependence Treatment	S	S	0.26
Reproductive Health			
Contraceptive Care (Most Effective or Moderately Effective Method)	46.0%	31.9%	<0.001*
Contraceptive Care (Long-Acting Reversible Method)	8.6%	5.6%	0.09
Respiratory Health			
Asthma Medication Ratio	89.8%	75.9%	0.05*

* Indicates that the rates are statistically different between the children in foster care and controls.

† This indicator has denominators of 2 and 1 for children in foster care and controls, respectively, so rates may be unreliable.

S indicates that the rate has been suppressed due to a small numerator or denominator (i.e., less than or equal to 10).

NC indicates that the p-value could not be calculated since there was no variation in numerator compliance for children in foster care and controls.

P-values were calculated using chi-square tests and Fisher exact tests to quantify the relationship between foster care status and numerator compliance. Measure rates and p-values presented in this table are not adjusted for demographic and health characteristics.

Denominators vary by study indicator; please refer to Appendix A for indicator-specific technical specifications.

The adoption assistance eligible population included 8,519 children in the adoption assistance program enrolled in Medicaid during MY 2020. Among the adoption assistance eligible population, 7,121 children (83.6 percent) were continuously enrolled with any MCO or combination of MCOs during the measurement year. Finally, 7,098 of the continuously enrolled adoption assistance children (99.7 percent) were matched to a control member and included in the final study population for comparison to controls. Demographic characteristics of the study population did not differ substantially from the eligible population, except that there were 2 percent fewer children aged two years or younger.

Table 1-3 contains study indicator results for the adoption assistance study population and the matched controls with *p*-values indicating whether the rate differences between adoption assistance children and controls are statistically significant. Among the 20 study indicators, adoption assistance children demonstrated higher rates of healthcare utilization than controls in 12 study indicators, of which four indicators' rate differences were significantly better than controls, and three were significantly worse than controls. Appendix C includes detailed findings by members' age, MCO, and region, including numerators and denominators.

Table 1-3—Overall Study Indicator Results for Adoption Assistance Children and Controls

Measure	Adoption Assistance Children Rate	Controls Rate	*p*
Primary Care			
Child and Adolescent Well-Care Visits	42.8%	40.8%	0.02*
Well-Child Visits in the First 30 Months of Life—Well-Child Visits in the First 15 Months—Six or More Well-Child Visits	S	52.3%	1.00
Well-Child Visits in the First 30 Months of Life—Well-Child Visits for Age 15 Months to 30 Months—Two or More Well-Child Visits	79.4%	64.3%	0.08
Oral Health			
Annual Dental Visit	54.1%	49.9%	<0.001*
Preventive Dental Services	49.2%	43.5%	<0.001*
Behavioral Health			
Seven-Day Follow-Up After Hospitalization for Mental Illness	60.2%	58.7%	0.83
Thirty-Day Follow-Up After ED Visit for Mental Illness	77.8%	86.8%	0.20
Metabolic Monitoring for Children and Adolescents on Antipsychotics	27.7%	25.1%	0.52
Use of First-Line Psychosocial Care for Children and Adolescents on Antipsychotics	59.3%	61.5%	0.81
Follow-Up Care for Children Prescribed ADHD Medication within 1 Month	57.6%	54.0%	0.41
Follow-Up Care for Children Prescribed ADHD Medication within 2 Months	71.8%	76.1%	0.27
Follow-Up Care for Children Prescribed ADHD Medication within 3 Months	79.2%	85.1%	0.07
Follow-Up Care for Children Prescribed ADHD Medication within 6 Months	89.0%	94.2%	0.03*
Follow-Up Care for Children Prescribed ADHD Medication within 9 Months	91.8%	96.0%	0.04*

Measure	Adoption Assistance Children Rate	Controls Rate	p
Substance Abuse			
Thirty-Day Follow-Up After ED Visit for AOD Abuse or Dependence	S	S	0.25
Initiation of AOD Abuse or Dependence Treatment	57.1%	36.2%	0.07
Engagement in AOD Abuse or Dependence Treatment	S	S	0.04*
Reproductive Health			
Contraceptive Care (Most Effective or Moderately Effective Method)	22.1%	32.0%	<0.001*
Contraceptive Care (Long-Acting Reversible Method)	3.5%	3.5%	0.98
Respiratory Health			
Asthma Medication Ratio	83.4%	76.2%	0.08

* Indicates that the rates are statistically different between the adoption assistance children and controls.
† This indicator has denominators of 3 and 9 for adoption assistance children and controls, respectively, so rates may be unreliable.
S indicates that the rate has been suppressed due to a small numerator or denominator (i.e., less than or equal to 10).
P-values were calculated using chi-square tests and Fisher exact tests to quantify the relationship between adoption assistance status and numerator compliance. Measure rates and p-values presented in this table are not adjusted for demographic and health characteristics.
Denominators vary by study indicator; please refer to Appendix A for indicator-specific technical specifications

The former foster children eligible population included 1,801 former foster children enrolled in Medicaid during MY 2020. Among the former foster children eligible population, 1,297 members (72.0 percent) were continuously enrolled with any MCO or combination of MCOs during the measurement year. Finally, 1,288 of the continuously enrolled former foster children (99.3 percent) were matched to a control member and included in the final study population for comparison to controls. Demographic characteristics of the study population did not differ substantially from the eligible population, except that there were 3.3 percent more male members.

Table 1-4 contains study indicator results for the former foster children study population and the matched controls with *p*-values indicating whether the rate differences between former foster children and controls are statistically significant. Among the 11 study indicators, former foster children demonstrated higher rates of healthcare utilization than controls in five study indicators, and two indicators' rate differences were significantly worse than controls. Appendix C includes detailed findings by members' age, MCO, and region, including numerators and denominators.

Table 1-4—Overall Study Indicator Results for Former Foster Children and Controls

Measure	Former Foster Children Rate	Controls Rate	p
Primary Care			
Child and Adolescent Well-Care Visits	15.3%	14.7%	0.79
Oral Health			
Annual Dental Visit	26.5%	24.8%	0.67

Measure	Former Foster Children Rate	Controls Rate	p
Preventive Dental Services	20.3%	16.1%	0.23
Behavioral Health			
Seven-Day Follow-Up After Hospitalization for Mental Illness	22.6%	S	0.40
Thirty-Day Follow-Up After ED Visit for Mental Illness	36.1%	S	0.24
Substance Abuse			
Thirty-Day Follow-Up After ED Visit for AOD Abuse or Dependence	S	S	0.03*
Initiation of AOD Abuse or Dependence Treatment	43.0%	47.3%	0.57
Engagement in AOD Abuse or Dependence Treatment	13.0%	23.0%	0.09
Reproductive Health			
Contraceptive Care (Most Effective or Moderately Effective Method)	35.8%	41.4%	0.05*
Contraceptive Care (Long-Acting Reversible Method)	5.5%	5.9%	0.76
Respiratory Health			
Asthma Medication Ratio	S	S	0.40

* Indicates that the rates are statistically different between the former foster children and controls.
† This indicator has denominators of 17 and 9 for former foster children and controls, respectively, so rates may be unreliable.
S indicates that the rate has been suppressed due to a small numerator or denominator (i.e., less than or equal to 10).
P-values were calculated using chi-square tests and Fisher exact tests to quantify the relationship between former foster care status and numerator compliance. Measure rates and p-values presented in this table are not adjusted for demographic and health characteristics.
Denominators vary by study indicator; please refer to Appendix A for indicator-specific technical specifications.
Some measures were not calculated for the former foster care population as the measure indicators are not applicable to members 19 to 26 years of age.

Study Limitations

Study findings and conclusions may be affected by limitations related to the study design and source data. As such, caveats include, but are not limited to, the following:

- Study indicator rates must be interpreted with caution given the denominator limitations. The covariate balance between the denominator-limited study populations and the denominator-limited controls group may be disrupted when one member in a matched pair qualifies for a study indicator denominator and the other member does not. The smaller the denominators, the greater the risk of imbalance between the study populations and their controls.

- Study indicator results and the accuracy of demographic characteristics (e.g., region, MCO) may be influenced by the accuracy and timeliness of the administrative claims and encounter data used for calculations and must be interpreted within the broader context of the population. Study indicators are also based on HEDIS and CMS Core Set technical specifications, which may not comprehensively mirror the complete range of clinical practices recommended by AAP for members in the study population (e.g., an enhanced periodicity schedule customized to align with the needs of children in foster care). Furthermore, selected study indicators were originally developed by

NCQA and/or CMS to assess access to care or the degree to which care adhered to clinical guidelines. These measures were not necessarily developed to assess healthcare utilization. For example, most study indicators do not assess the frequency of service utilization; they only assess whether or not a visit occurred. Findings should be interpreted with respect to the intent of the HEDIS and CMS Core Set technical specifications.

- Methodology changes in MY 2020 may impact trending results. The current study trended study indicator rates for children in foster care across MY 2018, MY 2019, and MY 2020. Since adoption assistance children were included as a study population in MY 2020, they were removed from the pool of members from which controls for children in foster care could be selected. Therefore, while the control pool for MY 2018 and MY 2019 included adoption assistance children, the control pool for MY 2020 did not. Of note, only 1.4 percent of members in the control pool for MY 2019 would have been removed by the methodology change. Additionally, while MY 2018 and MY 2019 only assessed members enrolled through Medallion 4.0, the MY 2020 analyses also included members enrolled through CCC Plus. However, only 23 children in foster care in the study population were enrolled in CCC Plus. Therefore, given that the methodology changes only affect a small proportion of members, HSAG expects impacts on trending to be limited.

- The study populations and controls were limited by several factors, including continuous enrollment and having a comparable match; therefore, study findings are not generalizable to other children in foster care, adoption assistance, or former foster children; to other members not in these programs; or to other HEDIS or CMS Core Set measure calculations. However, despite the limitations of the denominators, study indicator results are generalizable to the full study population and controls.

- MY 2020 findings may be impacted by the onset of the COVID-19 pandemic. Therefore, HSAG recommends exercising caution when interpreting MY 2020 findings or making comparisons to prior year results, where applicable.

Conclusions and Recommendations

Children in Foster Care

Children in foster care are children who have been removed from their birth family homes for reasons of neglect, abuse, abandonment, or other issues endangering their health and/or safety.[1-4] While these children are in foster care, the state has custody and therefore primary responsibility for ensuring children receive the appropriate healthcare services. For example, a foster child's service worker must ensure the child meets a schedule of well-child visits and dental examinations based on nationally recognized guidelines.[1-5] This study demonstrated that children in foster care have higher rates of appropriate healthcare utilization than comparable controls for most study indicators, and this finding is consistent across all three measurement years. Study findings show that rate differences between children in foster care and controls were greatest among dental measures, where the rates of annual dental visits and preventive dental services among children in foster care were nearly 30 percentage

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[1-4] Virginia Department of Social Services. Foster Care (FC). Available at: https://www.dss.virginia.gov/family/fc/index.cgi#manuals. Accessed on: Jan 12, 2022.

[1-5] Virginia Department of Social Services. Child and Family Services Manual: Identifying Services to Be Provided. Available at: Child and Family Services Manual.pdf. Accessed on: Nov 18, 2021.

points higher than the rates for controls. Rate differences between children in foster care and controls across study indicators persisted even after matching on many demographic and health characteristics.

During MY 2020, children in foster care had lower rates compared to controls for only two study indicators: *Initiation and Engagement of AOD Abuse or Dependence Treatment.* For initiation of AOD abuse or dependence treatment, children in foster care had a higher rate than controls during MY 2019 and a lower rate during MY 2018. For engagement of AOD abuse or dependence treatment, children in foster care had a higher rate than controls for both MY 2018 and MY 2019. Therefore, despite lower rates in MY 2020, children in foster care have not historically had lower rates than controls for these indicators.

Among children in foster care, nine study indicator rates decreased from MY 2019 to MY 2020, and 13 study indicator rates decreased from MY 2018 to MY 2020. Among controls for children in foster care, six study indicator rates decreased from MY 2019 to MY 2020, and five study indicator rates decreased from MY 2018 to MY 2020. These trends may be attributable to the COVID-19 pandemic during MY 2020. For instance, from March 2020 to May 2020, most elective procedures and outpatient visits were cancelled or postponed nationwide.[1-6] Additionally, while outpatient visits rebounded by summer 2020 for adults, healthcare utilization of children remained low.[1-7] Despite the widespread decline in healthcare utilization, MY 2020 was the first measurement year in which children in foster care had a higher rate for the *7-Day Follow-Up After Hospitalization for Mental Illness* measure compared to controls. Some of this improvement may be attributable to changes to the measure specifications, which allows clinics to be considered mental health providers; however, the increase in children in foster care's MY 2020 rates from MY 2019 (26.9 percentage points) was still larger than the increase in controls' rates (14.6 percentage points) and the increase in the national Medicaid 50th percentile among children (4.5 percentage points). This finding demonstrates that children in foster care more frequently receive mental health follow-up care in a clinic setting compared to controls.

Based on the findings detailed in this report, HSAG offers the following recommendations related to children in foster care:

- While children in foster care demonstrated lower rates of healthcare utilization than controls for the *Initiation and Engagement of AOD Abuse or Dependence Treatment* study indicators during MY 2020, children in foster care had higher rates of utilization during MY 2019, and MY 2020 results may have been impacted by the COVID-19 pandemic. DMAS may consider monitoring the *Initiation and Engagement of AOD Abuse or Dependence Treatment* study indicators, as well as the 14 other study indicators where rates declined in MY 2020 among children in foster care, to ensure that these rates return to pre-pandemic levels.

- While the current study design provides insight into utilization of healthcare services, it does not assess the quality of care received. DMAS may consider having future studies focus on high utilization medical conditions that are specific to children in foster care and whether these members

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[1-6] Choi SE, Simon L, Basu S, Barrow JR. *Changes in dental care use patterns due to COVID-19 among insured patients in the United States*. Journal of the American Dental Association. 2021. Available at: https://jada.ada.org/article/S0002-8177(21)00417-7/pdf. Accessed on: Nov 18, 2021.

[1-7] Mehrotra A, Chernew M, Linetsky D, Hatch H, Cutler D, Schneider E. *The Impact of COVID-19 on Outpatient Visits in 2020: Visits Remained Stable, Despite a Late Surge in Cases.* The Commonwealth Fund. Available at: https://www.commonwealthfund.org/publications/2021/feb/impact-covid-19-outpatient-visits-2020-visits-stable-despite-late-surge. Accessed on: Dec 1, 2021.

are receiving appropriate care for these conditions. For example, a future focus study may assess whether members in these populations with diabetes are receiving and adhering to appropriate medication.

Adoption Assistance Children

Children in the adoption assistance program are children who have been adopted from foster care but who faced additional barriers to adoption compared to other children in foster care, such as special medical conditions and extended time spent in foster care.[1-8] Whereas the state is primarily responsible for ensuring children in foster care receive appropriate healthcare services, the adoptive parents are primarily responsible for children in the adoption assistance program. Furthermore, adoptive parents are not required to ensure the adoption assistance child meets the same medical service requirements as children in foster care, such as a specific schedule of well-child visits.[1-9] SFY 2020–2021 is the first year to introduce analyses for adoption assistance children. Study findings indicate that adoption assistance children had higher rates of appropriate healthcare utilization than comparable controls for 60 percent of study indicators, of which three were significantly better than controls (i.e., *Child and Adolescent Well-Care Visits*, *Annual Dental Visit*, and *Preventive Dental Services*).

During MY 2020, adoption assistance children had lower rates than controls for eight study indicators, of which three were significantly lower than controls (i.e., *Contraceptive Care [Most or Moderately Effective Method]* and *Follow-Up Care for Children Prescribed ADHD Medication—Six-Month Follow-Up* and *Nine-Month Follow-Up)*. Adoption assistance children also had lower rates than children in foster care for 16 study indicators; however, these rate differences may be attributable to external factors, such as program requirements (e.g., service workers must ensure children in foster care meet a mandated schedule of medical services, whereas adoption assistance children are not held to this schedule) and who has responsibility for provision of healthcare services.

Based on the findings detailed in this report, HSAG offers the following recommendations related to adoption assistance children:

- SFY 2020–2021 is the first year to introduce analyses for adoption assistance children. These analyses intended to provide baseline rates for this population. However, considering the impact of the COVID-19 pandemic on children in foster care's rates during MY 2020, adoption assistance children's rates during MY 2020 may not be representative of their historical rates. Therefore, DMAS should consider monitoring adoption assistance children's rates over time to verify appropriate baseline rates, identify areas for improvement, and monitor impacts of program changes.
- Given that healthcare utilization was lower among children in the adoption assistance program compared to controls and to children in foster care, DMAS should conduct a study that follows a

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[1-8] Virginia Department of Social Services. Adoptive Assistance Screening Tool. Available at: https://dss.virginia.gov/files/division/dfs/ap/intro_page/forms/032-04-0091-06-eng.pdf. Accessed on: Nov 12, 2021.

[1-9] Virginia Department of Social Services. Child and Family Services Manual: Adoption Assistance. Available at: https://www.dss.virginia.gov/files/division/dfs/ap/intro_page/manuals/07-01-2019/section_2_adoption_assistance_-July_2019.pdf. Accessed on: Jan 12, 2022.

cohort of children in foster care who continue to be enrolled in Medicaid managed care after adoption, as well as a control group of non-foster care members with similar continuous enrollment, demographic, and health characteristics. The study would look at measure results across multiple years to determine how comparisons between the two populations change as members move between programs (e.g., are rate changes driven by leaving the foster care system or are rate changes driven by the characteristics of members who qualify for the adoption assistance program).

Former Foster Children

For this study, former foster children were defined as young adults age 19 to 26 years who were in foster care and enrolled in Medicaid at the time of their 18th birthday. These members aged out of the foster care program without a permanent home and are eligible to continue receiving Medicaid benefits through age 26. While the state has primary responsibility for children in foster care's healthcare, and adoptive parents have primary responsibility for adoption assistance children's healthcare, former foster children are responsible for their own healthcare. Unlike children in foster care, former foster children are not required by the state to meet a certain schedule of medical services. Furthermore, this population is more likely to experience barriers to healthcare, such as poverty and homelessness.[1-10] The present study found that former foster children had higher rates of appropriate healthcare utilization than comparable controls for 45 percent of study indicators; however, none of these rate differences were statistically significant.

During MY 2020, former foster children had lower rates than controls for more than half of study indicators, of which two study indicators were significantly lower than controls (i.e., *Thirty-Day Follow-Up After ED Visit for AOD Abuse or Dependence* and *Contraceptive Care [Most Effective or Moderately Effective Method]*). Former foster children also had the lowest healthcare utilization among the three study populations; however, these rate differences may be attributable to age (i.e., older adolescent and adult members tend to have lower rates of well-care and dental utilization compared to younger members) and to external factors, such as differences in program requirements between the children in foster care, adoption assistance, and former foster care programs.

Based on the findings detailed in this report, HSAG offers the following recommendations related to former foster children:

- SFY 2020–2021 is the first year to introduce analyses for former foster children. These analyses intended to provide baseline rates for this population. However, considering the impact of the COVID-19 pandemic on children in foster care's rates during MY 2020, former foster children's rates during MY 2020 may not be representative of their historical rates. Therefore, DMAS should consider monitoring former foster children's rates over time to verify appropriate baseline rates, identify areas for improvement, and monitor impacts of program changes.
- Given that healthcare utilization was lower among former foster children compared to controls and to the other study populations, DMAS should conduct a study that follows a cohort of members for

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[1-10] Virginia Department of Social Services. Child and Family Services Manual: Achieving Permanency for Older Youth: Working with Youth 14-17. Available at: https://www.dss.virginia.gov/files/division/dfs/fc/intro_page/guidance_manuals/fc/07_2021/Section_13_achieving_permanency_for_older_youth.pdf. Accessed on: Jan 12, 2022.

both cases and controls over time to identify driving factors behind these lower rates. For example, a study could identify a cohort of children in foster care who continue to be enrolled in Medicaid managed care into young adulthood, as well as a control group of non-foster care members with similar continuous enrollment, demographic, and health characteristics. The study would look at measure results across multiple years to determine how comparisons between the two populations change as members move between programs (e.g., are rate changes driven by leaving the foster care system or are rate changes driven by the characteristics of members who age out of foster care without a permanent home).

DMAS' Input on Prior Focus Study Recommendations

In addition to the recommendations noted above, DMAS provided the following detailed feedback regarding quality improvement actions or initiatives related to the 2019–20 Foster Care Focus Study. Please note, given that the 2019–20 Foster Care Focus Study was limited to the foster care population (i.e., the adoption assistance and former foster care populations were not included), DMAS' input on prior focus study recommendations are also limited to the foster care population.

Data Recommendations

This year, DMAS has worked on a variety of measures with key state partners to improve services for youth in foster care. The agency has also welcomed the opportunity to utilize recommendations posed by HSAG in previous iterations of this report to further enhance services for youth. One such recommendation was to continue to review outcomes during this study stratified by members in foster care and those youth who are not. For the 2020–21 Foster Care Focus Study, DMAS requested an additional population, Former Foster Care members, be included as part of the focused study. These data are also stratified with a statistically derived comparative population of children not in foster care. These data have availed DMAS the opportunity to compare various outcomes for each individual foster care member population (i.e., foster care, adoption assistance, and former foster care) separately, including those related to behavioral health services, a focus of this study and key program area for DMAS.

This year, DMAS requested HSAG to continue to provide comparative analyses by MCO, assisting in DMAS MCO foster care program oversight. DMAS also welcomed data presented in this report demonstrating results by geographic regions aligning with the Medallion 4.0 managed care program. These data are vital to evaluating foster care programs specific to Medallion 4.0 after its regional rollout, which concluded in December 2018.

Community Partnerships

This year, enhanced child welfare community partnerships has continued to be a focus for DMAS. In August 2021, DMAS re-started its Foster Care Partnership meetings with stakeholders from across the state including those from the Virginia Department of Social Services (VDSS), the Virginia Commission on Youth, Local Departments of Social Services (Local DSS), Licensed Child Placement Agencies (LCPAs), DMAS MCOs, the Virginia Office of Children's Services, among others. These meetings have provided an opportunity for various stakeholders to share their role in supporting youth in foster care and ignited a conversation on how stakeholders can collaborate to better serve youth throughout the Commonwealth.

As a result of the Foster Care Partnership continuing this year, two Action Groups have formed in order to focus on actionable goals related to improving services for youth in foster care. These Action Groups are focused on Transition Planning and Increasing Utilization of Services for the foster care member population. Both Action Groups were created based on cross-sector and collaborative discussions around current needs of youth in foster care. It is the goal of DMAS and the Foster Care Partnership to improve outcomes for these youth through these groups and the larger Partnership.

DMAS also continues to maintain managed care contract requirements that all MCOs have Foster Care liaisons with competencies in child welfare to support members in foster care and address foster care specific inquiries from stakeholders such as Local DSS and LCPAs. DMAS also has a dedicated foster care email box to streamline and address inquiries related to foster care and adoption assistance services.

Foster Care Affinity Group

This year, CMS and the Children's Bureau within the Administration of Children and Families (ACF) launched an "Improving Timely Health Care for Children and Youth in Foster Care Affinity Group" to support states in implementing quality improvement (QI) activities to improve timely health care services to meet the needs of children in foster care. In July 2021, DMAS began participating in this two-year Foster Care Affinity Group, along with 10 other states, to develop their QI project related to timely health care services for children entering foster care. The Virginia team Affinity Group is another collaborative, cross-sector group co-led by DMAS and VDSS, with four MCOs also participating. The anticipated outcome of this project will be an improvement in the rate of children entering foster care who receive a medical examination within 30 days, and is expected to conclude in December 2023.

Member Outreach

In May 2020, DMAS planned and executed a campaign for Foster Care Awareness Month, which included outreach materials for members and stakeholders working with the foster care member population. A flyer was created which included Foster Care Medicaid Program highlights, an MCO care coordination success story and brief MCO spotlights, LCPA and Local DSS foster care worker highlights, as well as a link to the DMAS Foster Care Medicaid Tutorial created as a training tool in 2018. Additionally, a Foster Care Awareness posting was created in honor of Foster Care Awareness Month, which included information regarding Medicaid coverage for youth, a statement of thanks to all foster care workers and parents, and information regarding the Fostering Futures Program.

In September 2021, as part of a member outreach effort, DMAS mailed a special flyer to all foster care members and Local DSS agencies. This flyer was created to encourage annual well-visits, immunizations, and the COVID-19 vaccine prior to the start of the school year. Due to the ongoing COVID-19 pandemic and public health emergency (PHE), DMAS prioritized the foster care member population for outreach and education about catching up on important health care services and required vaccinations for school-aged children. DMAS was able to successfully mail this special flyer to 11,075 individuals between both foster care members and their legal guardians at local DSS agencies, to ensure thorough distribution of the information.

Foster Care and Adoption Assistance Annual Report

In August 2020, DMAS compiled a Foster Care and Adoption Assistance Annual Report. This report reviewed program initiatives and updates regarding the DMAS Foster Care and Adoption Assistance

Programs. Included in the report is demographic data provided by HSAG, along with a brief presentation of outcome data provided by HSAG during SFY 2018–2019. The report provided other highlights, accomplishments, and overall DMAS outcomes related to the foster care and adoption assistance member populations, as well as upcoming initiatives such as Family First Prevention Act, enhanced clinical models, and continued stakeholder engagement.

Medallion 4.0 Program Oversight Efforts

DMAS continues to improve efforts to track and analyze a variety of data sources to evaluate Virginia's foster care Medicaid programs. DMAS MCOs continue to report on a variety of measures monthly, including those related to care coordination and member outreach, service utilization and efforts to assist members who age out of the child welfare system with transition planning. These data are tied to both Medallion 4.0 contract compliance and program oversight, presenting DMAS with an opportunity to utilize various data sources, including those in this report, to better understand the status of Medicaid programs serving youth in foster care.

2. Overview and Methodology

Introduction

Beginning in contract year 2015–2016, DMAS contracted with HSAG to conduct, as an optional EQR task under CMS Medicaid guidelines,[2-1] an annual focus study that provides quantitative information about children and adolescents placed in foster care and receiving medical services through Medicaid MCOs. DMAS has taken steps to continually improve the quality and timeliness of care for children in foster care who receive Medicaid benefits. For instance, most children in foster care were transitioned from fee-for-service (FFS) programs to managed care by June 2014.[2-2] Since 2015, DMAS has conducted follow-up training with participating local DSS agencies and Medicaid MCOs to address transition issues among children in foster care.

In contract year 2020–2021, HSAG conducted the sixth annual Foster Care Focus Study to determine the extent to which children in foster care received the expected preventive and therapeutic medical care under a managed care service delivery program compared to children not in foster care and receiving Medicaid managed care benefits during MY 2020 (i.e., January 1, 2020–December 31, 2020). Historically, the Foster Care Focus Study evaluated a single study population (i.e., children in foster care); however, for this year's focus study, DMAS requested HSAG also evaluate children in the adoption assistance program and former foster care children ages 19 to 26 in order to establish baseline rates of healthcare utilization for these populations. Children in the adoption assistance program are children who have been adopted from foster care for whom adoptive placement without financial assistance was unlikely due to medical conditions or risk of future disability, membership in a minority group or sibling group, or extended time spent in foster care.[2-3] Former foster care children are young adults who were in foster care and enrolled in Medicaid at the time of their 18th birthday, who will continue to qualify for Medicaid through age 26. Additionally, historical studies evaluated healthcare utilization of foster care members enrolled in Virginia's Medallion 4.0 managed care program, which primarily provides healthcare services for women, children, and low-income adults. However, for this year's study, DMAS requested HSAG also include children in foster care enrolled in Virginia's CCC Plus managed care program, which covers older adults, children or adults with disabilities, dual eligible members (i.e., members eligible for both Medicare and full Medicaid benefits), Medicaid long-term services and supports (LTSS) members, or medically complex members.

This year's study assessed how the healthcare utilization among members in foster care or adoption assistance programs (i.e., children in foster care, children in the adoption assistance program, and

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[2-1]   Department of Health and Human Services, Centers for Medicare & Medicaid Services. *Protocol 9: Conducting Focus Studies of Health Care Quality*. October 2019. Available at: https://www.medicaid.gov/medicaid/quality-of-care/medicaid-managed-care/quality-of-care-external-quality-review/index.html. Accessed on: Nov 10, 2021.

[2-2]   Under Medallion 3.0 and Medallion 4.0, some children in foster care continued to receive Medicaid services on an FFS basis because they met exclusion criteria for managed care participation, such as utilizing Medicaid benefits as secondary insurance (i.e., TPL) or receiving residential care services.

[2-3]   Virginia Department of Social Services. Adoptive Assistance Screening Tool. Available at: https://dss.virginia.gov/files/division/dfs/ap/intro_page/forms/032-04-0091-06-eng.pdf. Accessed on: Nov 12, 2021.

young adults formerly in foster care) compares to utilization among members not in foster care or adoption assistance programs and receiving Medicaid managed care benefits during MY 2020. Given the changes to this year's study (i.e., evaluating three foster care programs), comparisons to historical results (i.e., MY 2018 and MY 2019) are only presented for the children in foster care population.

During calendar year (CY) 2018, DMAS transitioned from the Medallion 3.0 program to the Medallion 4.0 program. Due to the program change and changes in the participating MCOs, some members were transitioned to new MCOs during CY 2018. Given the MCO must work directly with either the social worker or the foster parent on any decisions regarding their medical care, the Medallion transition may or may not have caused delays in enrollment changes, potentially resulting in an impact to the healthcare and coverage for the children in foster care at that time. Additionally, the Medallion 4.0 program began covering and coordinating services, such as Early Intervention and non-traditional behavioral health services, that were previously paid through traditional FFS Medicaid (i.e., "carved out" of managed care). As a result, MY 2018 and MY 2019 results presented in this report should be evaluated with caution given that the transitional period may have impacted care during these measurement years. Further, stakeholders should continue to monitor children in foster care's healthcare to understand the impact of the program change on study indicators.

A policy statement published in 2015 by the American Academy for Pediatrics (AAP) outlined a significant number of barriers in providing adequate health services to children in foster care.[2-4] These issues, compounded with the complexities of care for children with histories of trauma and potentially limited healthcare access, make the assessment of preventive and baseline healthcare services critical for a population in the developmental stages of life. Additionally, children in foster care are likely to require services from both physical and behavioral health providers,[2-5] necessitating levels of care coordination and follow-up beyond those expected for most children and adolescents. These physical and behavioral health conditions create additional challenges for youth aging out of the foster care system, who were unable to find a permanent home and must now navigate the transition into adulthood and adult healthcare.[2-6] Given the changes to Medicaid managed care benefits and the barriers to healthcare that children in foster care face, this study examined how healthcare utilization among children in foster care, adoption assistance children, and former foster children compared to utilization among comparable members not in a foster care or adoption assistance program.

[2-4] American Academy of Pediatrics. Health care issues for children and adolescents in foster care and kinship care. *Pediatrics*. Oct 2015:136:4. Available at: https://publications.aap.org/pediatrics/article/136/4/e1131/73819/Health-Care-Issues-for-Children-and-Adolescents-in. Accessed on: Nov 10, 2021.

[2-5] Deutsch SA, Lynch A, Zlotnik S, et.al. Mental health, behavioral and developmental issues for youth in foster care. *Curr Probl Pediatr Adolesc Health Care*. 2015; 45:292–297.

[2-6] Dworsky A, Courtney M. Addressing the Mental Health Service Needs of Foster Youth During the Transition to Adulthood: How Big is the Problem and What Can States Do? *Journal of Adolescent Health*.2009; 44:1–2.

Methodology

Data Sources

This study examines services received by members in the foster care program and the adoption assistance program, as well as young adults formerly in foster care, during MY 2020 (i.e., January 1, 2020–December 31, 2020). Additionally, selected study indicators include services occurring up to one year before this measurement year. Appendix A provides detailed information on the measurement period for each study indicator. HSAG extracted information needed for the study from administrative claims and encounter data as well as member, provider, and enrollment data supplied by DMAS. In addition, DMAS supplied HSAG with dental encounter data from the Medicaid Dental Benefit Manager, DentaQuest, and behavioral health encounter data from Magellan. Data for claims and encounters paid through June 30, 2021, were provided to HSAG during July 2021, resulting in a six-month data runout from the end of the measurement period to data extraction.

Eligible Populations and Study Populations

HSAG identified the eligible populations for each foster care or adoption assistance program using the specific program's aid category to determine member enrollment at any point during the measurement period:

- Children in Foster Care—All children enrolled in Medicaid under 18 years of age as of January 1, 2020, and identified by DMAS as enrolled in Medicaid under the aid category "076" for children in foster care.
- Adoption Assistance Children—All children enrolled in Medicaid under 18 years of age as of January 1, 2020, and identified by DMAS as enrolled in Medicaid under the aid category "072" for children in the adoption assistance program.
- Former Foster Children—All members enrolled in Medicaid aged 19 to 26 years as of January 1, 2020, and identified by DMAS as enrolled in Medicaid under the aid category "070" for young adults formerly in foster care.

To identify each study population for the healthcare utilization indicators, the eligible population for each foster care or adoption assistance program was limited to members who were continuously enrolled in their respective aid category (e.g., aid category "076" for children in foster care) through a single managed care program (i.e., Medallion 4.0 or CCC Plus) with any MCO or combination of MCOs during the measurement year. Continuous enrollment was defined as no more than 45 days without enrollment in a single Medicaid managed care program under the foster care or adoption assistance program's aid category during the measurement year. Medallion 4.0 enrollment was identified by the benefit package prefixes of "0103" or "0143," indicating enrollment in Medallion 3.0 Medicaid or Medallion 4.0 Medicaid, respectively. CCC Plus enrollment was identified by benefit package prefixes of "0112" and "0114," indicating enrollment in CCC Program for Dual-Eligibles or CCC Plus, respectively. Limiting to continuously enrolled members at an early step allowed HSAG to better understand the characteristics of the study populations and to identify closely matched comparison groups that supported the continuous enrollment criteria required for the study indicators.

To identify the comparison groups, HSAG first identified members meeting the same age criteria as their respective eligible population (e.g., under 18 years of age for children in foster care) and who were continuously enrolled in Medallion 4.0 or CCC Plus under an aid category other than "076", "072," or "070" over the study period. Continuously enrolled members in the foster or adoption assistance programs were compared to these continuously enrolled members not in foster or adoption assistance programs to identify demographic and health characteristics that differed between the populations.

Health characteristics were assessed through primary diagnoses in the claims and encounter data. Diagnoses were grouped based on the Clinical Classifications Software (CCS),[2-7] clinical expertise, and historical knowledge of the challenges facing each population. Appendix B provides detailed information on the construction of the health characteristics groups.

Next, HSAG calculated propensity scores for the continuously enrolled members and their comparison groups during the study period. To calculate propensity scores, HSAG used a logistic regression model to predict foster care status based on three demographic characteristics and 13 to 15 population-specific health characteristics. Members residing in an unknown managed care geographic region were removed before propensity score calculations because this category was too small for reliable balancing.

For all three populations (i.e., children in foster care, adoption assistance children, and former foster children), HSAG used the following demographic characteristics as categorical variables for propensity score calculations:

- Sex: Male, Female
- Race: White, Black or African American, Other[2-8]
- Medicaid Program: Medallion 4.0, CCC Plus

For all three populations, unless otherwise specified, HSAG used the following healthcare characteristics as binary variables for propensity score calculations:

- Diagnosis of Adjustment Disorder
- Diagnosis of Anxiety Disorder
- Diagnosis of ADHD
- Diagnosis of Congenital Anomaly (Children in Foster Care and Adoption Assistance Children only)
- Diagnosis of Developmental Disorder
- Diagnosis of Intentional Self-Harm
- Diagnosis of Mood Disorder
- Diagnosis of Neurological Disorder (Adoption Assistance Children only)
- Diagnosis of Obesity and Metabolic Syndrome

[2-7] Agency for Healthcare Research and Quality. Clinical Classifications Software (CCS) for ICD-10-PCS (beta version). Available at: https://www.hcup-us.ahrq.gov/toolssoftware/ccsr/ccsr_archive.jsp#ccsr. Accessed on: Dec 6, 2021.

[2-8] Due to the limited number of children in foster care in race categories other than White and Black or African American, other race categories were combined into an "Other" race category. Race categories did not include consideration of ethnicity data.

- Diagnosis of Other Mental Health Disorders
- Diagnosis of Psychotic Disorder
- Diagnosis of Rheumatologic Condition
- Diagnosis of Substance Use Disorder
- ED Visit for Mental Health
- Acute Inpatient Visit for Mental Health

After calculating propensity scores, the continuously enrolled populations and their comparison groups were exact-matched by age category (Infant [≤ 2 Years], Preschool [3 to 5 Years], Elementary School [6 to 10 Years], Middle School [11 to 13 Years], High School [14 to 18 Years], Young Adult [19 to 22 Years], and Adult [23 to 26 Years]),[2-9] continuously enrolled MCO (Aetna Better Health of Virginia; HealthKeepers, Inc.; Magellan Complete Care; Optima Family Care; UnitedHealthcare Community Plan; Virginia Premier Health Plan, Inc.; and Other),[2-10] and Region of Residence (Central, Charlottesville/Western, Northern & Winchester, Roanoke/Alleghany, Southwest, and Tidewater).[2-11, 2-12] HSAG exact-matched on age category because age is tied to health risk, likelihood of diagnosis, and healthcare utilization, and because age determined which healthcare claims were used in the health characteristic assessment. HSAG exact-matched on continuously enrolled MCO to improve the covariate balance when stratifying findings by MCO. HSAG exact-matched on region because region is tied to health risk and provider availability and because soft-matching on region was not sufficient to balance regional distribution for all three study populations.

Finally, HSAG matched the continuously enrolled groups and comparison groups on their propensity scores within exact-matched sub-groups using the greedy 5→1 algorithm.[2-13] Covariate balance between the study populations and their matched controls was assessed by covariate-level Chi-square tests, an omnibus test, and a standardized differences assessment. Statistical tests, like the Chi-square test and the omnibus test, are traditional approaches to balance assessment, which examine individual covariate balance and overall covariate balance, respectively. The standardized differences assessment assesses balance without relying on sample size, which influences the sensitivity of the Chi-square and omnibus tests. Since this study's sample sizes are large and vary across the study

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[2-9] Age categories were calculated using the member's age at the beginning of the measurement year (i.e., January 1, 2020).

[2-10] Since the transition from Medallion 3.0 to Medallion 4.0 concluded, the current study assigned MCO using the member's continuous enrollment. If a member was continuously enrolled with a single MCO during the measurement year with no more than one gap in enrollment of no more than 45 days, then HSAG assigned the MCO as the member's continuously enrolled MCO. Otherwise, HSAG assigned a member's continuously enrolled MCO as Other (e.g., members continuously enrolled with more than one MCO or members who had more than one gap in enrollment). Using continuous enrollment to determine MCO assignment improves the accuracy of which MCO was responsible for a member's healthcare during the measurement year.

[2-11] Regional attribution was based on the demographic file and the SFY 2020–2021 Managed Care Services Agreement provided by DMAS and reflects the managed care regions.

[2-12] Commonwealth of Virginia Department of Medical Assistance Services. Medallion 4.0 Managed Care Services Agreement: July 1, 2020–June 30, 2021. 405–406. Available at: https://www.dmas.virginia.gov/media/2941/medallion-40-contract-sfy21v3.pdf. Accessed on: Feb 1, 2022.

[2-13] Parsons LS. Reducing Bias in a Propensity Score Matched-Pair Sample Using Greedy Matching Techniques. Available at: https://support.sas.com/resources/papers/proceedings/proceedings/sugi26/p214-26.pdf. Accessed on: Nov 10, 2021.

populations, a standardized differences assessment helps provide a more reliable estimate of balance than statistical tests alone. Appendix B details the interpretation of the covariate balance tests.

Measures and Study Indicators

For alignment with other quality initiatives, healthcare utilization measures were based on either the CMS' Adult and Child Core Set Technical Specifications and Resource Manual for FFY 2021 Reporting or the HEDIS Measurement Year 2020 & Measurement Year 2021 Technical Specifications for Health Plans.[2-14] This study assessed 13 measures, representing 20 study indicators, across five domains as displayed in Table 2-1.

Table 2-1—Measure Indicators

Measure and Indicators
Primary Care[2-15]
Child and Adolescent Well-Care Visits (WCV)
Well-Child Visits in the First 30 Months of Life—Well-Child Visits in the First 15 Months—Six or More Well-Child Visits (W30–6+)^ and Well-Child Visits for Age 15 Months to 30 Months—Two or More Well-Child Visits (W30–2+)^
Oral Health
Annual Dental Visit (ADV)
Preventive Dental Services (PDENT-CH)
Behavioral Health
Seven-Day Follow-Up After Hospitalization for Mental Illness (FUH)
Thirty-Day Follow-Up After ED Visit for Mental Illness (FUM)
Metabolic Monitoring for Children and Adolescents on Antipsychotics (APM)^
Use of First-Line Psychosocial Care for Children and Adolescents on Antipsychotics (APP)^
Follow-Up Care for Children Prescribed ADHD Medication (ADD)^—One-Month Follow-Up, Two-Month Follow-Up, Three-Month Follow-Up, Six-Month Follow-Up, and Nine-Month Follow-Up
Substance Use
Thirty-Day Follow-Up After ED Visit for AOD Abuse or Dependence (FUA)
Initiation and Engagement of AOD Abuse or Dependence Treatment (IET)

[2-14] HEDIS Measurement Year 2020 & 2021 Volume 2 Technical Specifications for Health Plans align with indicator results reported to NCQA for the measurement period from January 1, 2020, through December 31, 2020.

[2-15] Historically, the Primary Care domain was assessed using the *Children and Adolescents' Annual Access to PCPs* (CAP) measure; however, the MY 2020 HEDIS specifications retired the CAP measure. Therefore, the *Child and Adolescent Well-Care Visits* (WCV) measure and the *Well-Child Visits in the First 30 Months of Life* (W30) measure were introduced to assess primary care for MY 2020.

Measure and Indicators
Reproductive Health
Contraceptive Care (CCW-CH)—Most Effective or Moderately Effective Method and Long-Acting Reversible Method
Respiratory Health
Asthma Medication Ratio (AMR)

^indicates these measure indicators were not calculated for the former foster care population as the measure indicators are not applicable to members 19 to 26 years of age.

When available, HSAG compared study indicator rates to NCQA's Quality Compass®[2-16] national Medicaid health maintenance organization (HMO) percentiles (henceforth referred to as national Medicaid percentiles) to provide additional context for some measure results.

Appendix A presents detailed descriptions of each measure, including pertinent references to HEDIS and CMS Adult and Child Core Set technical specifications and/or value sets.

To assess whether indicator rates were statistically different between the study populations and their matched controls, HSAG calculated p-values to determine the association between program status (e.g., membership in the foster care program) and numerator-compliance. For measures for which all contingency table cell sizes (i.e., the number of numerator-positive and numerator-negative members for each group) were greater than or equal to 5, HSAG calculated p-values using Chi-square tests.[2-17] For measures with small contingency table cell sizes, HSAG used Fisher's exact test because Fisher's exact test is more accurate than the Chi-square test when cell sizes are small. A p-value less than 0.05 was considered statistically significant.

[2-16] Quality Compass® is a registered trademark of the NCQA.

[2-17] Historically, HSAG calculated p-values that were adjusted for all matched demographic and health characteristics using logistic regression models. Given the additional matching characteristics (e.g., Medicaid Program) and additional populations (e.g., former foster children, which has less members than children in foster care), many of these models encountered convergence errors for MY 2020, such that the models and their resulting p-values were unreliable. Therefore, for MY 2020, HSAG elected to calculate p-values using Chi-square tests and Fisher exact tests instead. While these p-values are not adjusted for the matching characteristics, covariate balance tests indicate that this is the first year of the Foster Care Focus Study where all demographic and health characteristics were balanced after matching. Appendix B provides further information on the matching characteristics.

3. Children in Foster Care Population Findings

Characteristics of the Children in Foster Care Eligible Population and Study Population

This section provides findings describing the demographic characteristics of the 6,890 children in the foster care eligible population and the 3,203 children in the foster care study population. The children in the foster care eligible population includes children in foster care younger than 18 years of age as of January 1, 2020, and receiving healthcare coverage from DMAS at any time during MY 2020. Table 3-1 displays the distribution of children in foster care by age category, sex, and race. Children in foster care were disproportionately male (53.2 percent) and Black or African American (32.8 percent) compared to the general population in Virginia, which was 49.2 percent male and 19.9 percent Black or African American in 2019.[3-1,3-2]

Table 3-1—Age, Sex, and Race Distribution of Children in Foster Care (n=6,890)

Category	Number	Percent
Age Category		
≤ 2 years	1,550	22.5%
3 to 5 years	1,091	15.8%
6 to 10 years	1,474	21.4%
11 to 13 years	995	14.4%
≥ 14 years	1,780	25.8%
Sex		
Male	3,666	53.2%
Female	3,224	46.8%
Race		
Black or African American	2,261	32.8%
White	4,480	65.0%
Other	149	2.2%

Table 3-2 displays the distribution of children in foster care by region, MCO, and Medicaid managed care program for MY 2020. Please note that since the children in foster care population includes every member enrolled in foster care during the measurement year for any length of time, the latest MCO and Medicaid program a member was enrolled with during the measurement year was used. Children in foster care were mostly from the Central (20.7 percent), Charlottesville/Western (18.3 percent), and Tidewater (17.0 percent) regions. The region for a small proportion of children in foster care (0.9 percent) was unknown; these children tended to be missing some address information or had an out-of-state address. Children in foster care were most likely to be enrolled with HealthKeepers

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[3-1] United States Census Bureau. Virginia QuickFacts. Available at: https://www.census.gov/quickfacts/VA. Accessed on: Nov 10, 2021.

[3-2] The United States Census Bureau has not yet published 2020 results for Virginia as of December 2021.

(27.7 percent), Virginia Premier (25.7 percent), or Optima (21.2 percent). MCO attribution was missing for 3.2 percent of children in foster care who were only enrolled in FFS during MY 2020.[3-3] Children in foster care were most likely to be enrolled through the Medallion 4.0 program (95.3 percent). Some children in foster care (3.4 percent) were enrolled through Family Access to Medical Insurance Security Plan (FAMIS) or were only enrolled in FFS during MY 2020.[3-4]

Table 3-2—Region, MCO, and Medicaid Program Distribution of Children in Foster Care (n=6,890)

Category	Number	Percent
Region		
Central	1,428	20.7%
Charlottesville/Western	1,260	18.3%
Northern & Winchester	1,012	14.7%
Roanoke/Alleghany	1,154	16.7%
Southwest	801	11.6%
Tidewater	1,170	17.0%
Unknown	65	0.9%
Latest MCO in the Measurement Year		
Aetna	615	8.9%
HealthKeepers	1,907	27.7%
Magellan	424	6.2%
Optima	1,458	21.2%
UnitedHealthcare	497	7.2%
Virginia Premier	1,768	25.7%
FFS	221	3.2%
Latest Medicaid Program in the Measurement Year		
CCC Plus	91	1.3%
Medallion 4.0	6,563	95.3%
Other	236	3.4%

The study population were children in the children in foster care population who were continuously enrolled in either Medallion 4.0 or CCC Plus managed care programs with any MCO or a combination of MCOs during the study period, for whom a match not in a foster care or adoption assistance program could be found. Continuous enrollment was defined as enrollment gaps totaling no more than 45 days. Among the children in foster care eligible population, 46.5 percent (n=3,203) of children met the requirements for the study population, compared to 38.5 percent for MY 2019. The demographic makeup of the study population mirrored the demographic makeup of the foster care eligible population, except that there were 3.4 percent more Black or African American children and 2.8 percent fewer

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[3-3] Children in foster care may temporarily move to FFS and may not be enrolled with an MCO during the measurement year.

[3-4] Children in foster care may temporarily move to FFS and may not be enrolled through a managed care program during the measurement year.

children aged two years or younger. The disproportionate exclusion of infants can be attributed to the inability of children born more than 45 days into the measurement year to meet the continuous enrollment criteria, since these children would have an enrollment gap greater than 45 days.

Table B-1 and Table B-4 present the demographic and health characteristics of continuously enrolled children in foster care and the continuously enrolled comparison group prior to matching (n=3,351). Continuously enrolled children in foster care tended to be older, male, White, less likely to be enrolled with HealthKeepers, and less likely to be enrolled through CCC Plus compared to the continuously enrolled comparison group. Furthermore, continuously enrolled children in foster care were less likely to live in the Tidewater or Northern & Winchester regions and more likely to live in the Charlottesville/Western, Roanoke/Alleghany, and Southwest regions. In terms of health characteristics, continuously enrolled children in foster care were more likely to have diagnoses for several health conditions, primarily mental illnesses. Additionally, children in foster care were more likely to have ED and acute inpatient visits for mental health than the comparison group, which may indicate greater severity of mental illness among children in foster care. The higher rate of ED visits and acute inpatient visits may also indicate that children in foster care are more likely to seek care for mental illness through these means, especially if prior access to psychiatric care had been limited prior to entering foster care. The 2017–2018, 2018–2019, and 2019–2020 Foster Care Focus Study reports demonstrated that rates often differ by member characteristics such as age and MCO, and these findings provided justification for matching children in foster care and children in the comparison group.

HSAG was able to match 95.6 percent (n=3,203) of continuously enrolled children in foster care to children in the comparison group with similar demographic and health characteristics. Table B-7 and Table B-10 present the demographic and health characteristics of the final study population and their matched controls. Matching successfully balanced all demographic and health characteristics between the study population and the controls.

Appendix B presents detailed descriptions of the demographic and health characteristics of children in foster care and children in the comparison group prior to matching, as well as covariate balance findings.

Healthcare Utilization Among Children in Foster Care and Controls

This section provides findings from the study indicators used to assess healthcare utilization for children in foster care in the study population, as well as findings for the matched controls not enrolled through a foster care or adoption assistance program. In addition to the summarized findings presented in the remainder of this section, Appendix C presents detailed study indicator results stratified by age category, MCO, and region.

Although the controls have been matched to the children in foster care on a variety of demographic and health characteristics, HSAG advises caution in comparing the study indicator results between the children in foster care and controls. Due to the different criteria for denominators across measures, one child in a matched pair may be included in a measure calculation while the other child is not. When matched pairs are separated, the distribution of characteristics in the denominator-eligible study population and the denominator-eligible controls may differ from the overall distribution, and balanced covariates are no longer guaranteed. Furthermore, HSAG advises caution in interpreting the *p*-values,

as denominator sizes vary by measure, and sample size influences the precision of the *p*-value calculation. When interpreting trending (e.g., comparing measure rates across measurement years), HSAG advises to consider changes in the study methodology across measurement years, such as the inclusion of the CCC Plus population and the removal of additional aid categories from the control group in MY 2020 (i.e., "072" for Adoption Assistance). However, HSAG expects impacts from these methodology changes to be minimal. The Study Limitations section provides further discussion on methodology changes and trending. Healthcare utilization in MY 2020 may also be impacted by the COVID-19 pandemic; however, rate comparisons within MY 2020 (i.e., to controls) are still reliable.

Primary Care

Child and Adolescent Well-Care Visits (WCV)[3-5]

Among children in foster care who were at least 3 years old by December 31, 2020, 68.0 percent had a well-care visit with a primary care practitioner (PCP) or an obstetrician-gynecologist (OB/GYN) practitioner (Figure 3-1). Children in foster care had a significantly higher rate of well-care visits than the controls (48.5 percent, *p*<0.001). However, some children in foster care may not be meeting VDSS' requirements for well-child visits (i.e., a well-child visit annually for children in foster care age 3 years to 18 years).[3-6]

Findings are also presented by age category, using the categories from the CMS Child Core Set technical specifications for this measure (3 to 11 years, 12 to 17 years, and 18 to 21 years). Since children in foster care are defined as children younger than 18 years old at the beginning of the measurement year, and the CMS Child Core Set age categories are based on age at the end of the measurement year, the 18 to 21 years category includes only children in foster care who are 18 years old at the end of the measurement year. The rates of well-care visits for children in foster care decreased as age increased, such that 72.6 percent of children in foster care ages 3 to 11 had a well-care visit, compared to 65.4 percent of children in foster care ages 12 to 17 and 50.9 percent of children in foster care age 18. Since children were exact-matched on a different categorization of age, comparisons of rates for children in foster care and controls within the CMS Child Core Set age categories must be interpreted with caution, as matched pairs may be separated across age categories. The gap between the rates of children in foster care and controls was widest for the 12 to 17 years age category, whereby the rate for children in foster care was 65.4 percent, and the rate for controls was 42.4 percent.

[3-5] For MY 2018 and MY 2019, the Primary Care domain was assessed using the *Children and Adolescents' Annual Access to PCPs* (CAP) measure; however, the MY 2020 HEDIS specifications retired the CAP measure. Therefore, the *Child and Adolescent Well-Care Visits* (WCV) measure and the *Well-Child Visits in the First 30 Months of Life* (W30) measure were introduced to assess primary care for MY 2020 and do not have reportable results for MY 2018 and MY 2019.

[3-6] Virginia Department of Social Services. Child and Family Services Manual: Identifying Services to Be Provided. Available at: Child and Family Services Manual.pdf. Accessed on: Nov 18, 2021.

Figure 3-1—Rates of Child and Adolescent Well-Care Visits Among Children in Foster Care and Controls, by Age Category
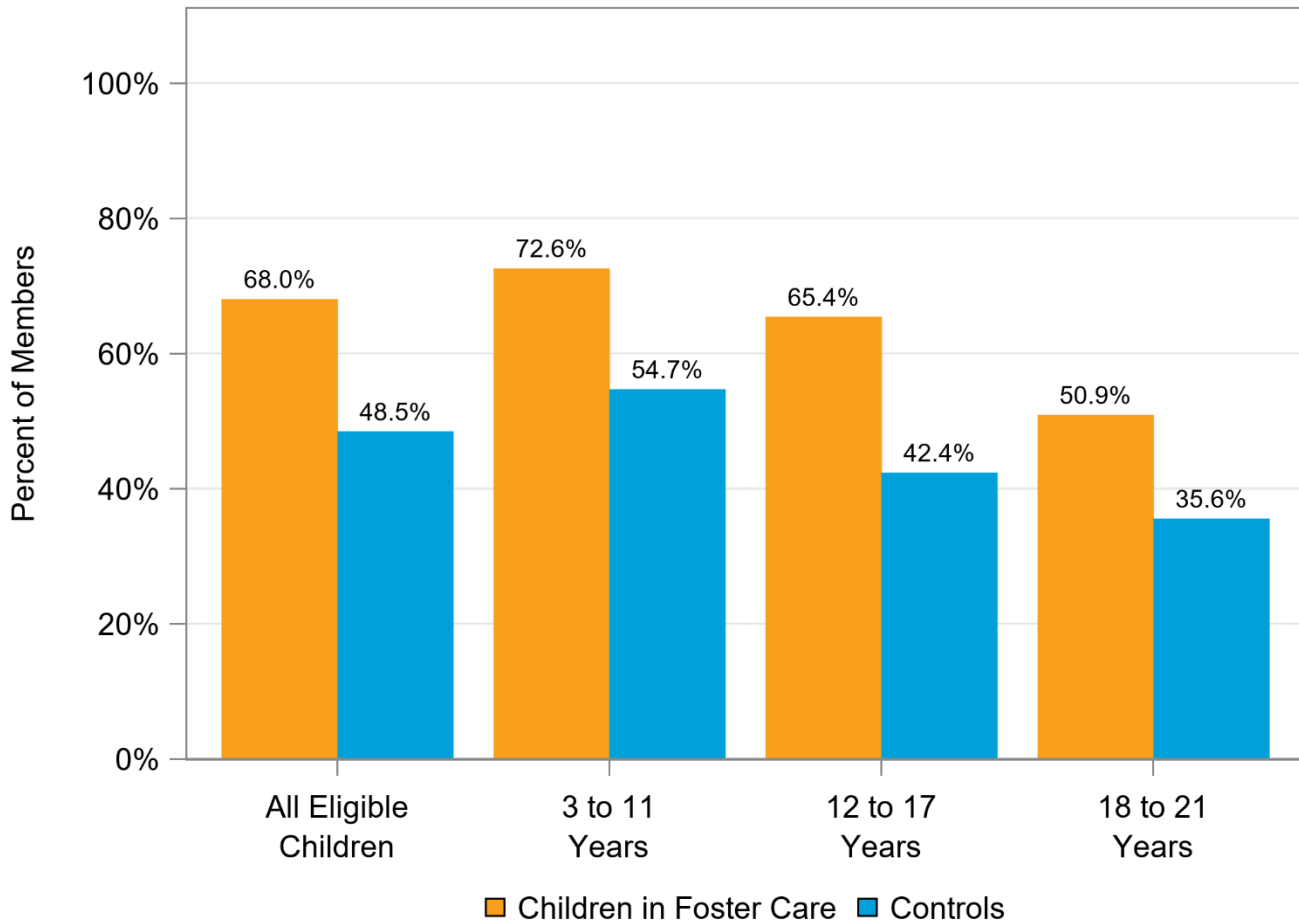
NOTE: The 3 to 11 Years category has 1,444 children in foster care and 1,481 controls. The 12 to 17 Years category has 1,073 children in foster care and 1,126 controls. The 18 to 21 Years category has 220 children in foster care and 180 controls.

Well-Child Visits in the First 30 Months of Life—Well-Child Visits in the First 15 Months—Six or More Well-Child Visits (W30–6+) and Well-Child Visits for Age 15 Months to 30 Months—Two or More Well-Child Visits (W30–2+)

Among children in foster care who turned 15 months old during MY 2020, 65.1 percent had six or more well-child visits with a PCP (Figure 3-2). The rate for children in foster care age 15 months was 9.0 percentage points higher than the rate for controls (56.1 percent). Among children in foster care who turned 30 months old during MY 2020, 77.6 percent had two or more well-child visits with a PCP (Figure 3-3), which was similar to the rate for controls (74.5 percent). These rate differences were not statistically significant. While children in foster care have higher rates of well-child visits compared to controls, some children in foster care may not be meeting VDSS' requirements for well-child visits (i.e.,

a well-child visit at the following ages: 3 to 5 days, 1 month, 2 months, 4 months, 6 months, 9 months, 12 months, 15 months, 18 months, 24 months, and 30 months).[3-7]

Figure 3-2—Rates of Well-Child Visits in the First 30 Months of Life—Well-Child Visits in the First 15 Months—Six or More Well-Child Visits Among Children in Foster Care and Controls

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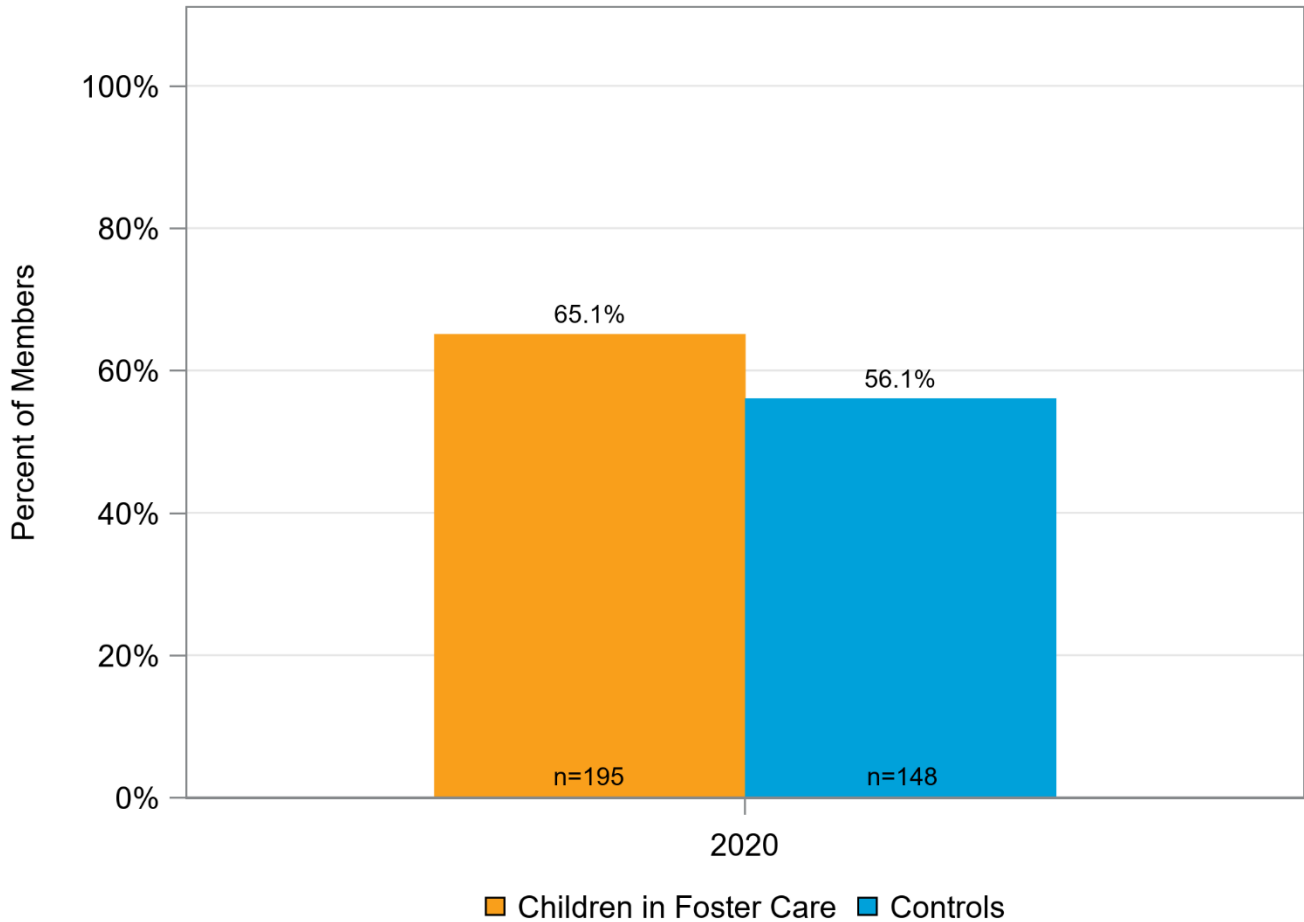
[3-7] Ibid.

Figure 3-3—Rates of Well-Child Visits in the First 30 Months of Life—Well-Child Visits for Age 15 Months to 30 Months—Two or More Well-Child Visits Among Children in Foster Care and Controls
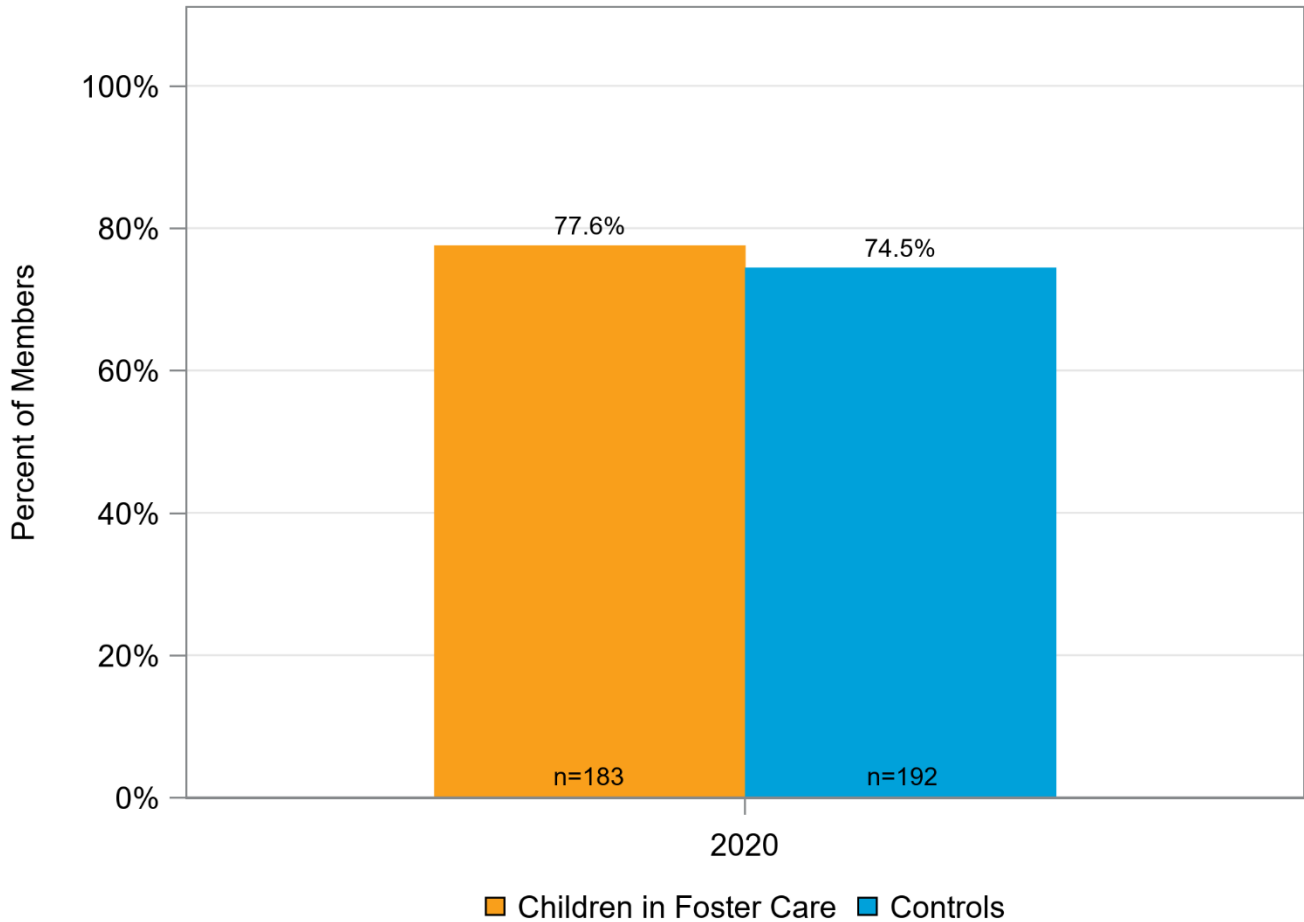
Oral Health

Annual Dental Visit (ADV) and *Preventive Dental Services (PDENT-CH)*

Among children in foster care who were at least two years old by the end of the measurement year, 79.1 percent had a dental visit during MY 2020 (Figure 3-4). Similarly, among children in foster care who were at least one year old by the end of the measurement year, 72.0 percent received preventive dental services (Figure 3-6). Rates of annual dental visits and preventive dental services for children in foster care were almost 30 percentage points higher than the rates among controls ($p<0.001$). Therefore, children in foster care are accessing dental healthcare services at much higher rates than similar children not in foster care or adoption assistance programs.

Figure 3-4 and Figure 3-6 also present the findings for annual dental visits and preventive dental services, respectively, stratified by age category. For both dental measures, infants (i.e., children aged two years or younger) in foster care demonstrated a notably lower rate than children in foster care of

other ages, despite that dental examination requirements for children in foster care start at 6 months of age and are required once every six months thereafter.[3-8] Rates, and rate differences between children in foster care and controls, were fairly consistent across the other age groups for annual dental visits. For preventive dental services, 71.3 percent of children in foster care age 14 years or older had an annual dental visit, compared to 77.2 percent of age 11 to 13, 79.6 percent of age 6 to 10, and 79.3 percent of age 3 to 5. Ultimately, children in foster care have greater dental healthcare utilization than similar children not in foster care or adoption assistance programs across all age categories.

Additionally, Figure 3-5 and Figure 3-7 provide comparisons for the total rate (i.e., the rate for all eligible children) of dental utilization between MY 2018 and MY 2019 from previous Foster Care Focus Studies and MY 2020 from the current study. While results for MY 2018 and MY 2019 were generally consistent, dental healthcare utilization for children in foster care during MY 2020 declined by 7.8 percentage points for annual dental visits and 9.7 percentage points for preventive dental services compared to MY 2019. However, dental healthcare utilization for controls declined by 13.4 percentage points and 13.7 percentage points for annual dental visits and preventive dental services, respectively, and children in foster care's annual dental visit rate exceeds the MY 2020 national Medicaid 50th percentile. The MY 2020 national Medicaid 50th percentile saw a similar decline of 14.3 percentage points compared to MY 2019. Therefore, while children in foster care's rates of dental health utilization declined in MY 2020, the decline was less severe than the decline in the control rates and national rates. The decline in dental healthcare utilization nationally and among children in foster care may be attributable to the COVID-19 pandemic.[3-9]

[3-8] Virginia Department of Social Services. Child and Family Services Manual: Identifying Services to Be Provided. Available at: Child and Family Services Manual. Accessed on: Nov 18, 2021.

[3-9] Choi SE, Simon L, Basu S, Barrow JR. Changes in dental care use patterns due to COVID-19 among insured patients in the United States. *Journal of the American Dental Association*. 2021. Available at: https://jada.ada.org/article/S0002-8177(21)00417-7/pdf. Accessed on: Nov 18, 2021.

Figure 3-4—Rates of Annual Dental Visits Among Children in Foster Care and Controls, by Age Category
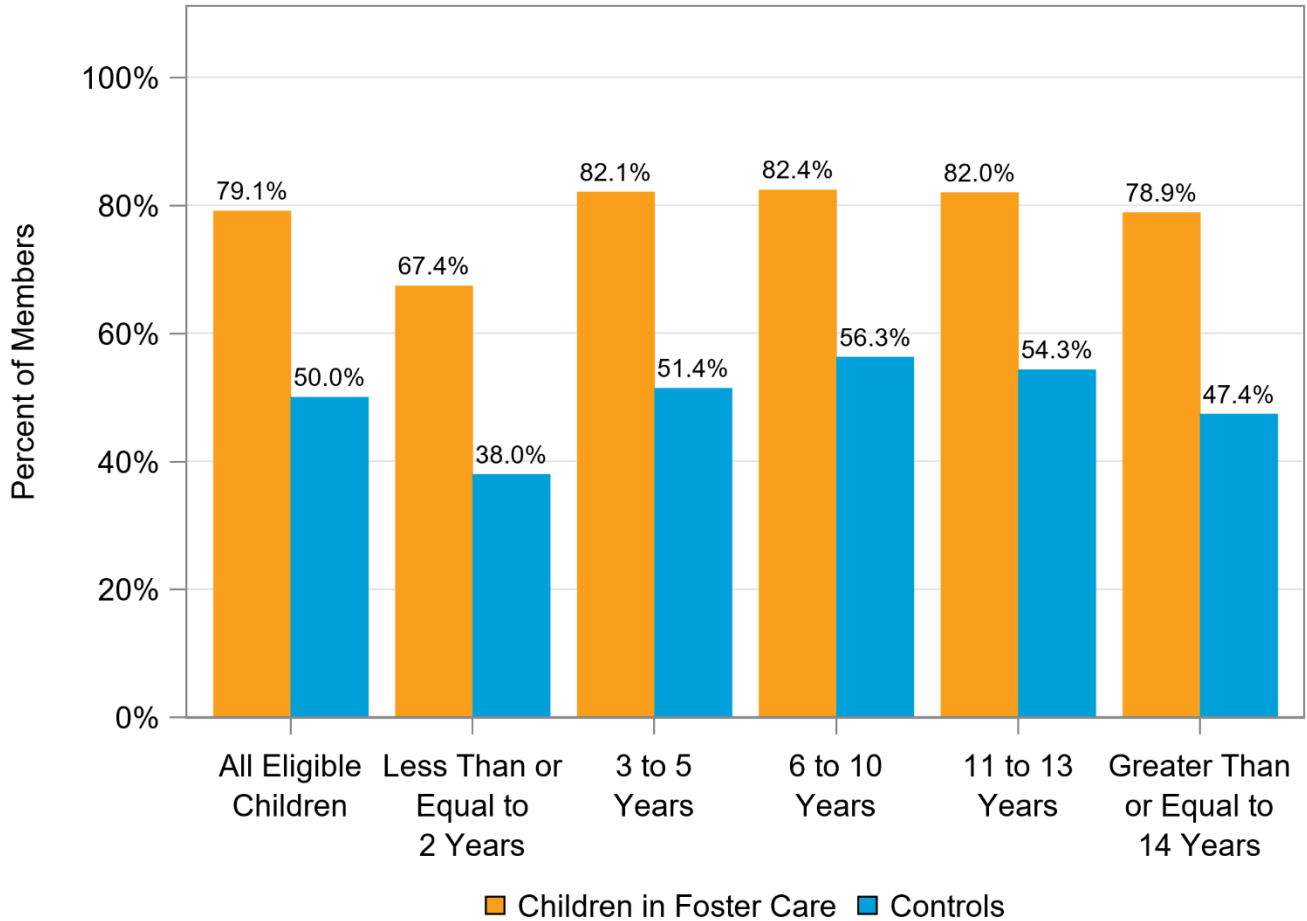
NOTE: The Less Than or Equal to 2 Years category has 430 children in foster care and 424 controls. The 3 to 5 Years category has 520 children in foster care and 523 controls. The 6 to 10 Years category has 723 children in foster care and 737 controls. The 11 to 13 Years category has 456 children in foster care and 460 controls. The Greater Than or Equal to 14 Years category has 838 children in foster care and 846 controls.

Figure 3-5—Rates of Annual Dental Visits Among Children in Foster Care and Controls, by Measurement Year
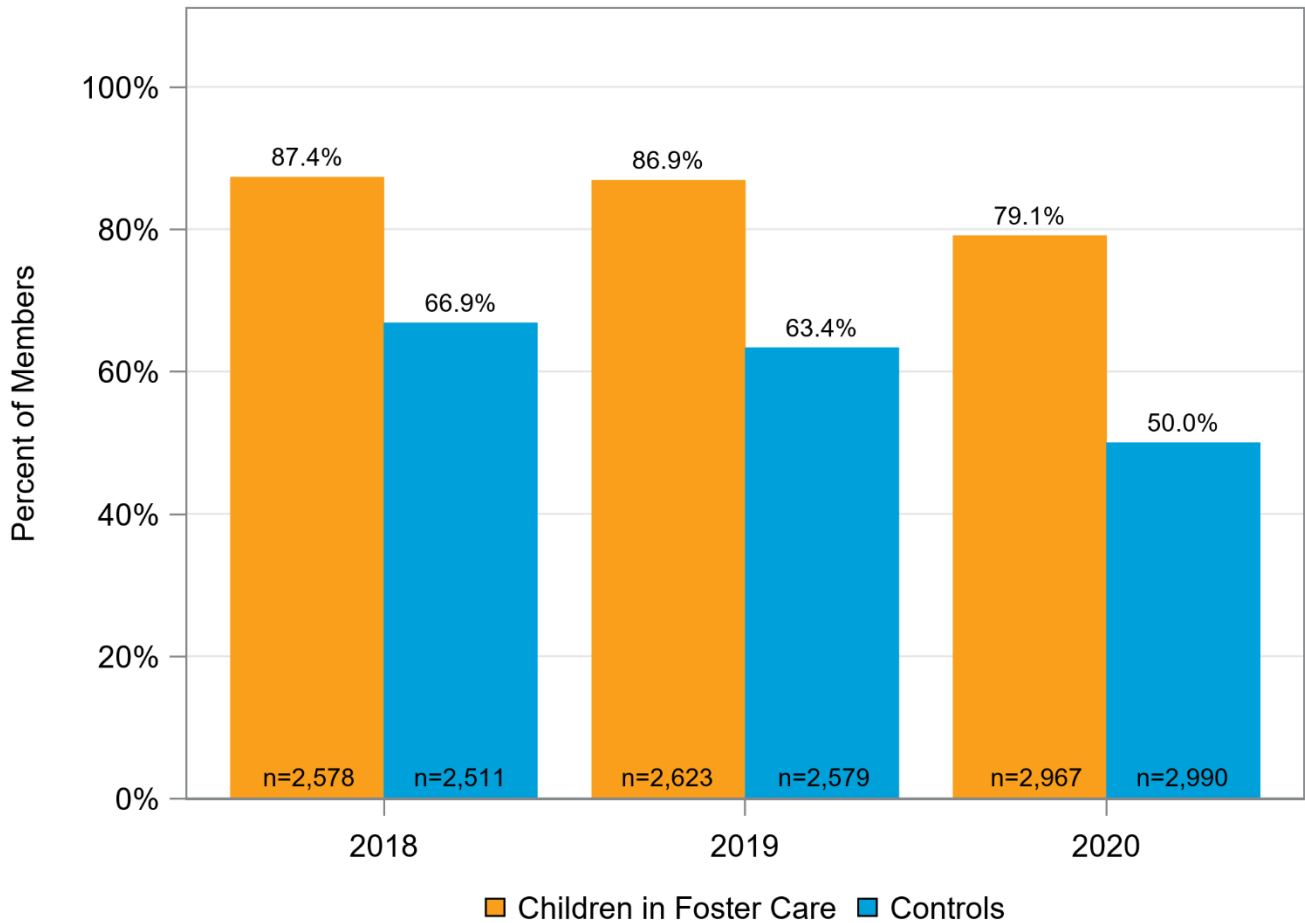
Figure 3-6—Rates of Preventive Dental Services Among Children in Foster Care and Controls, by Age Category
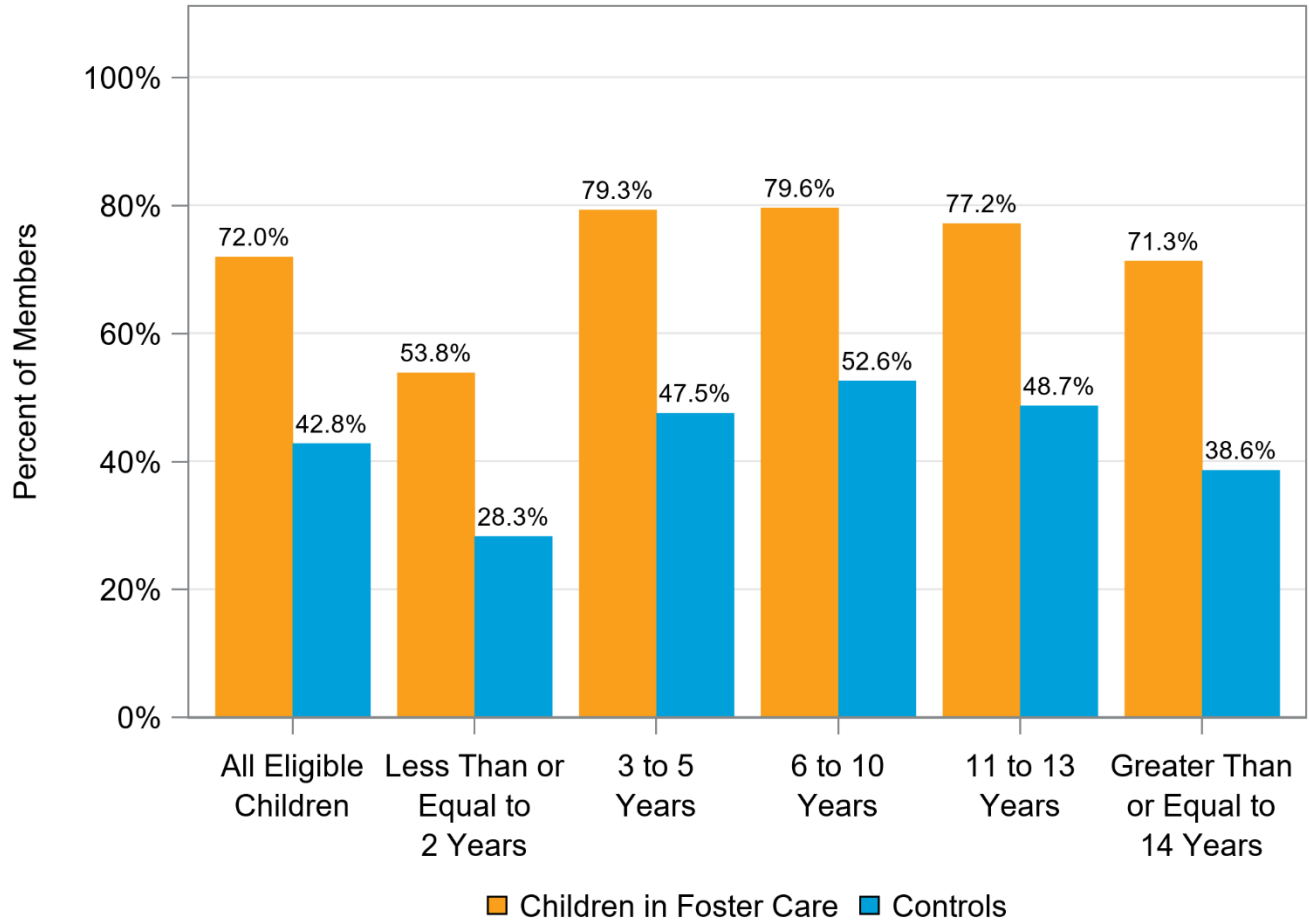
NOTE: The Less Than or Equal to 2 Years Category has 626 children in foster care and 612 controls. The 3 to 5 Years category has 526 children in foster care and 526 controls. The 6 to 10 Years category has 740 children in foster care and 740 controls. The 11 to 13 Years category has 460 children in foster care and 460 controls. The Greater Than or Equal to 14 Years category has 847 children in foster care and 847 controls.

Figure 3-7—Rates of Preventive Dental Services Among Children in Foster Care and Controls, by Measurement Year
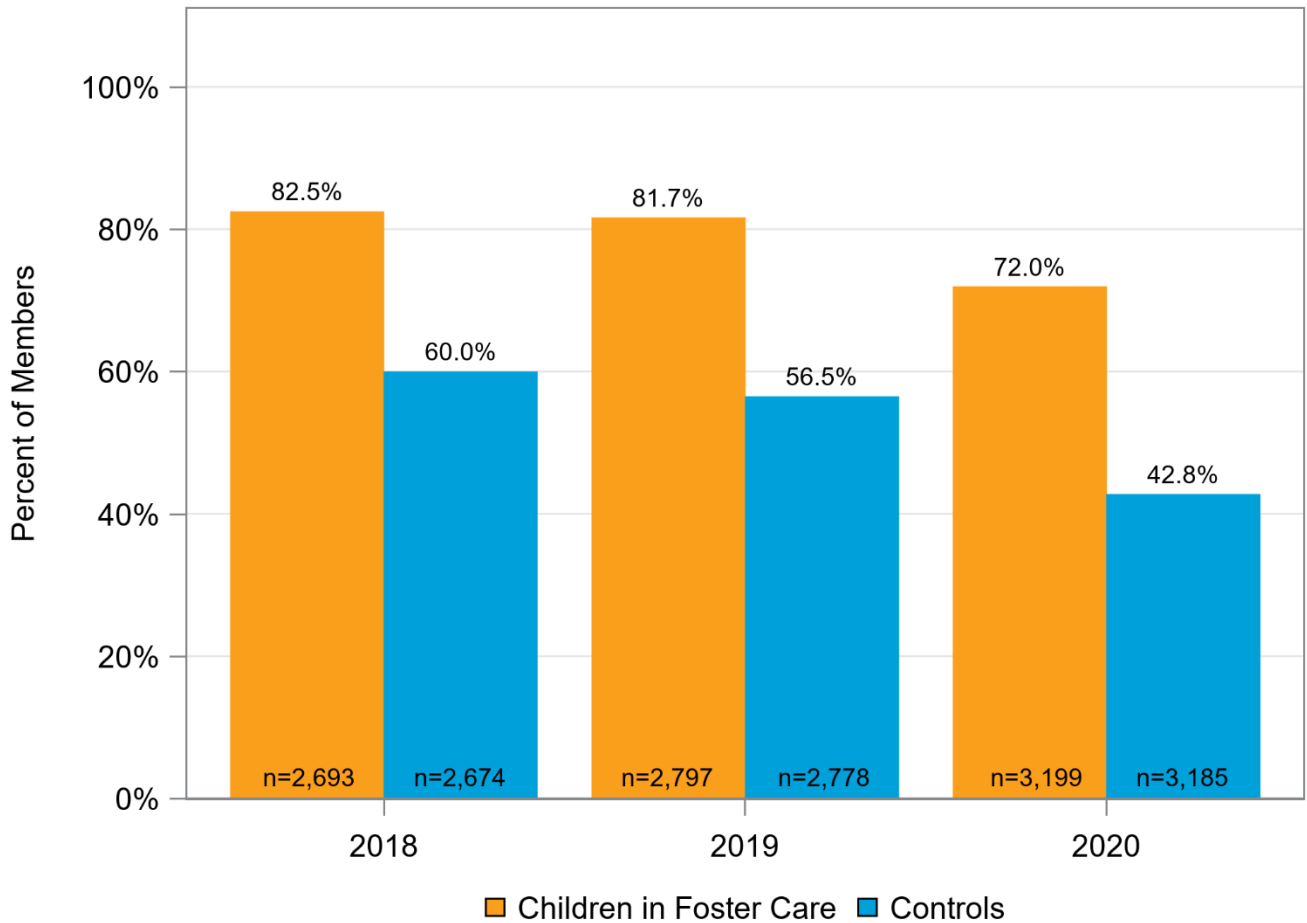
Behavioral Health

7-Day Follow-Up After Hospitalization for Mental Illness (FUH)

For MY 2020, Figure 3-8 shows among hospitalizations of children aged 6 years or older for mental illness or intentional self-harm, 65.6 percent of children in foster care's hospitalizations and 59.2 percent of controls' hospitalizations had a follow-up visit with a mental health provider within seven days, though this difference was not statistically significant (p=0.45). The denominators for this measure demonstrate that both children in foster care and controls had few instances of hospitalizations for mental illness (n=93 hospitalizations and n=49 hospitalizations, respectively) and hospitalizations declined slightly from MY 2019 to MY 2020, although children in foster care had more hospitalizations than controls.

While rates were consistent for foster and control children across MY 2018 and MY 2019, rates increased by 26.9 percentage points for children in foster care and 14.6 percentage points for controls during MY 2020. These rate changes may be partially attributable to changes in the *Follow-Up After Hospitalization for Mental Illness* measure specifications for MY 2020, which added behavioral healthcare setting visits and telephone visits to the numerator, removed the mental health provider requirement for some numerator visits, and redefined mental health provider to include certified Community Mental Health Centers and Community Behavioral Health Clinics. For example, among the 61 follow-up visits in the MY 2020 numerator for children in foster care, 21 follow-up visits (34.4 percent) occurred at a Community Mental Health Center or Community Behavioral Health Clinic. The MY 2020 national Medicaid 50th percentile for the *7-Day Follow-Up After Hospitalization for Mental Illness* measure also increased by 4.5 percentage points among members ages 6 to 17 years. However, the increase in children in foster care's rates was greater than the increase in control rates and national rates, and even without these changes to the measure specifications, children in foster care still demonstrated similar rates of follow-up compared to controls. If the definition for mental health providers was not updated, then MY 2020 rates would be 43.0 percent and 42.9 percent for children in foster care and controls, respectively. Ultimately, children in foster care had a higher rate of follow-up after hospitalizations for mental illness during MY 2020 compared to controls and demonstrated substantial improvement compared to MY 2019.

Figure 3-8—Rates of 7-Day Follow-Up After Hospitalization for Mental Illness Among Children in Foster Care and Controls, by Measurement Year
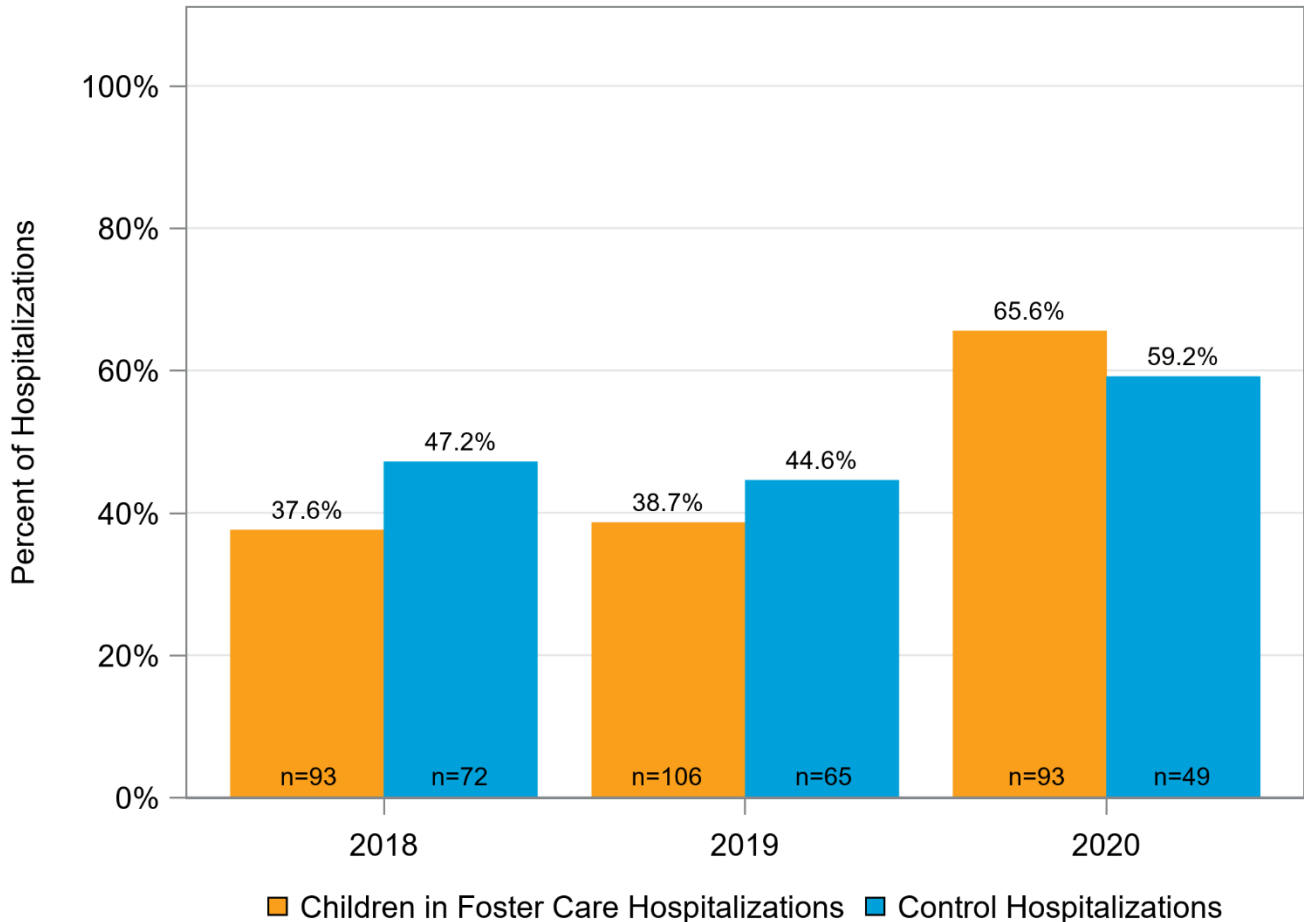
30-Day Follow-Up After ED Visit for Mental Illness (FUM)

For MY 2020, Figure 3-9 shows that, among ED visits of children aged 6 years old or older for mental illness or intentional self-harm, 87.8 percent of children in foster care's ED visits and 78.9 percent of controls' ED visits had a follow-up visit for mental illness within 30 days of the ED visit. The denominators for this measure demonstrate that children in foster care and controls had very few instances of ED visits (n=49 ED visits and n=19 ED visits, respectively), and there were less ED visits during MY 2020 than MY 2019. However, children in foster care were more likely to have an ED visit compared to children not in foster care.

Both foster and control children demonstrated high rates of follow-up visits after an ED visit for mental illness. The rate for children in foster care was 8.9 percentage points higher than the rate for controls, although this finding was not statistically significant (*p*=0.45). Furthermore, the rate difference between foster and control children for MY 2020 was similar to the rate difference for MY 2019 (8.7 percent). However, children in foster care's rate of follow-up visits declined by 7.1 percentage points from MY 2018 to MY 2020. Whereas the MY 2020 national Medicaid 50th percentile for this measure among children age 6 to 17 years increased by 1.7 percentage points from MY 2018.

Figure 3-9—Rates of 30-Day Follow-Up After ED Visit for Mental Illness Among Children in Foster Care and Controls, by Measurement Year
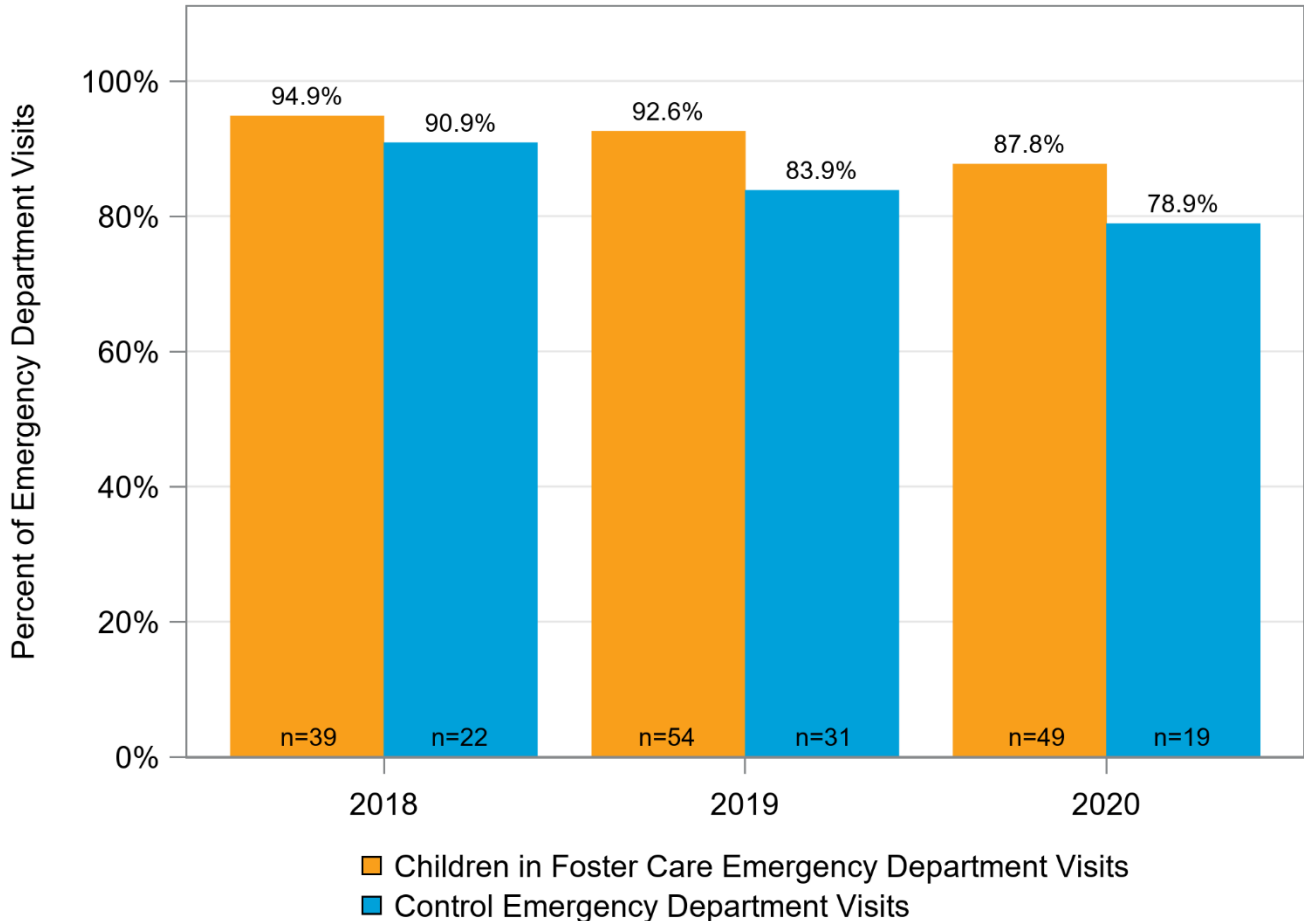
Metabolic Monitoring for Children and Adolescents on Antipsychotics (APM) and Use of First-Line Psychosocial Care for Children and Adolescents on Antipsychotics (APP)

Figure 3-10 shows that, among children aged 1 to 17 years who had two or more antipsychotic prescriptions, 38.3 percent of children in foster care and 27.8 percent of controls had metabolic testing. The difference in rates during MY 2020 was not statistically significant (p=0.05). Between MY 2018 and MY 2020, the rates for both children in foster care and controls decreased by 10.0 percentage points. Among children aged 1 to 17 years who had a new prescription for an antipsychotic medication without a diagnosis approved by the Food and Drug Administration (FDA) for antipsychotic use, 92.4 percent of children in foster care and 78.9 percent of controls had documentation of psychosocial care as first-line treatment, as shown in Figure 3-11. This rate difference was statistically significant (p=0.04). Rates of psychosocial care as first-line treatment for children in foster care increased by 4.6 percentage points between MY 2018 and MY 2020, though rates may fluctuate given the small denominators for this measure.

For both measures and all three measurement years, children in foster care were more than twice as likely as controls to meet the denominator criteria for this measure. Therefore, children in foster care

were far more likely than similar children not in foster care or adoption assistance programs to have multiple antipsychotic prescriptions as well as new antipsychotic prescriptions without a diagnosis approved for antipsychotic use, even though these findings also suggest that children in foster care were more likely to have tried another treatment approach.

Figure 3-10—Rates of Metabolic Monitoring for Children and Adolescents on Antipsychotics Among Children in Foster Care and Controls, by Measurement Year
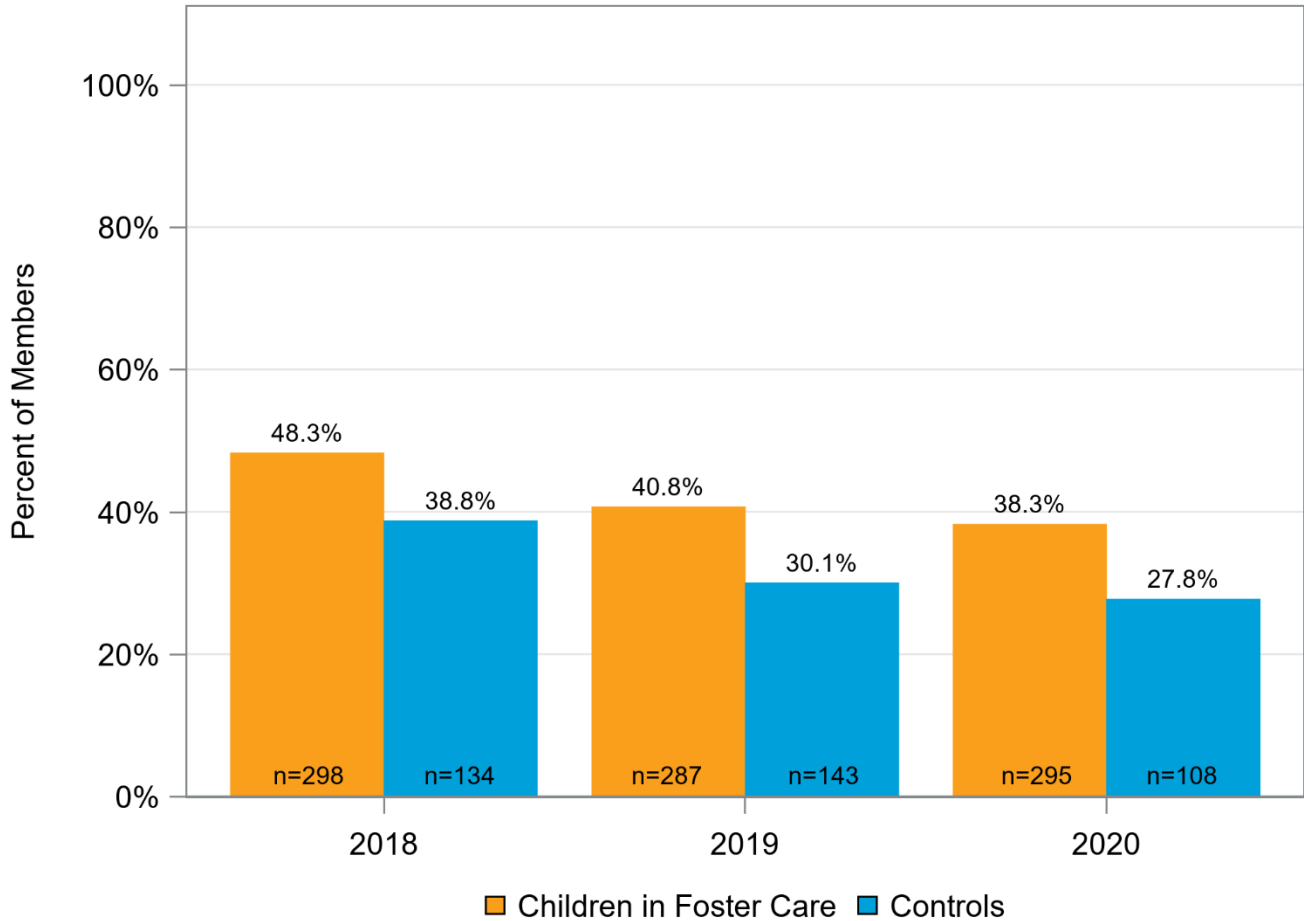
Figure 3-11—Rates of Use of First-Line Psychosocial Care for Children and Adolescents on Antipsychotics Among Children in Foster Care and Controls, by Measurement Year
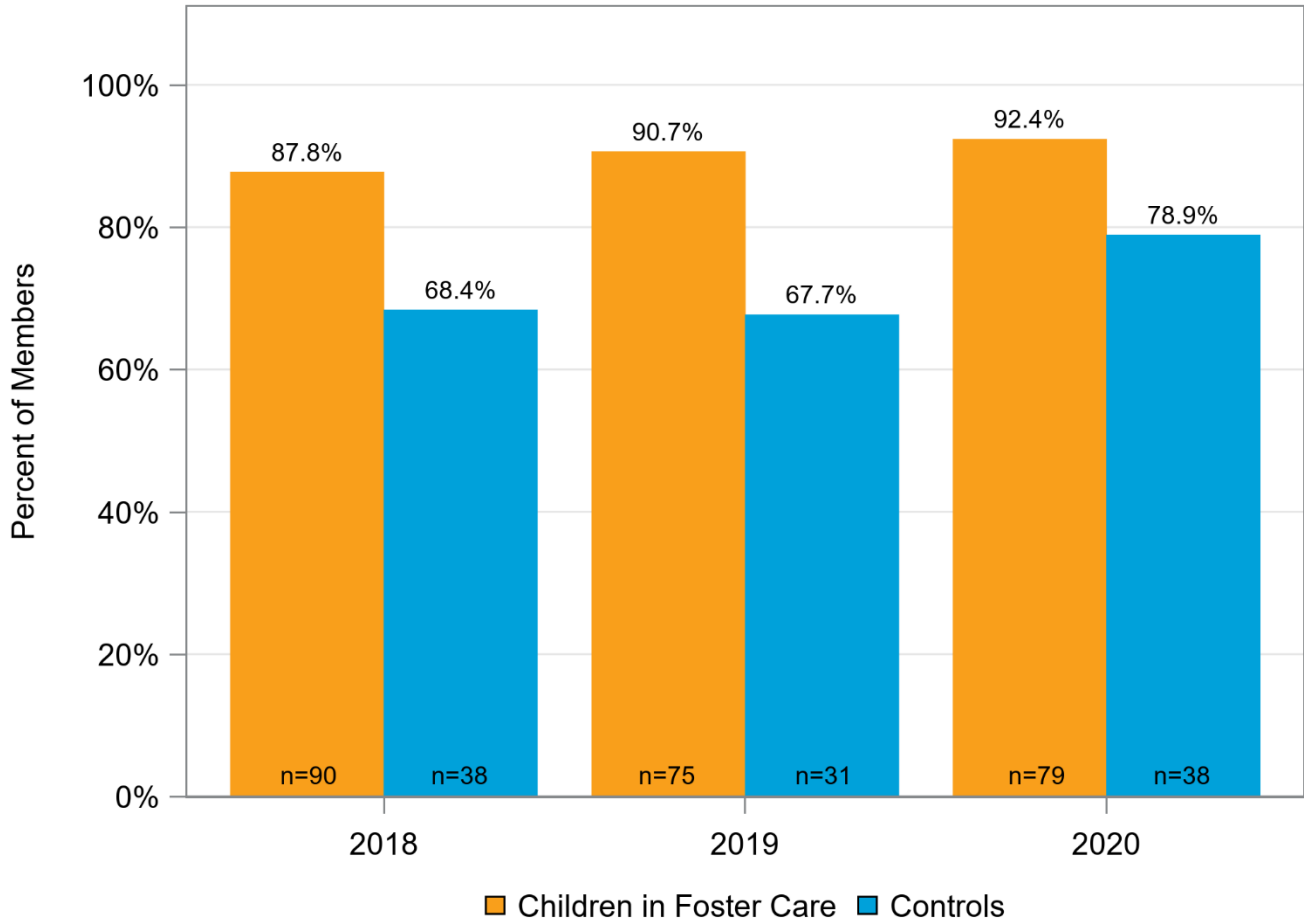
Follow-Up Care for Children Prescribed ADHD Medication (ADD)

Figure 3-12 shows that, among children aged 6 to 12 years old with a newly prescribed ADHD medication, 86.8 percent of children in foster care and 74.8 percent of controls initiated follow-up care within one month of the prescription. Children in foster care also showed higher rates of follow-up at two, three, six, and nine months after an ADHD medication prescription. The rate differences between children in foster care and controls for one month follow-up and three months follow-up were statistically significant (p=0.02 and p<0.05, respectively). Figure 3-13 shows the rates of follow-up at one month by measurement year. The rate for children in foster care during MY 2020 was 6 percentage points higher than the rate for MY 2019 and was consistent with MY 2018. However, rates may fluctuate between measurement years, since the denominators for this measure are small.

Figure 3-12—Rates of Follow-Up Care for Children Prescribed ADHD Medication Among Children in Foster Care and Controls
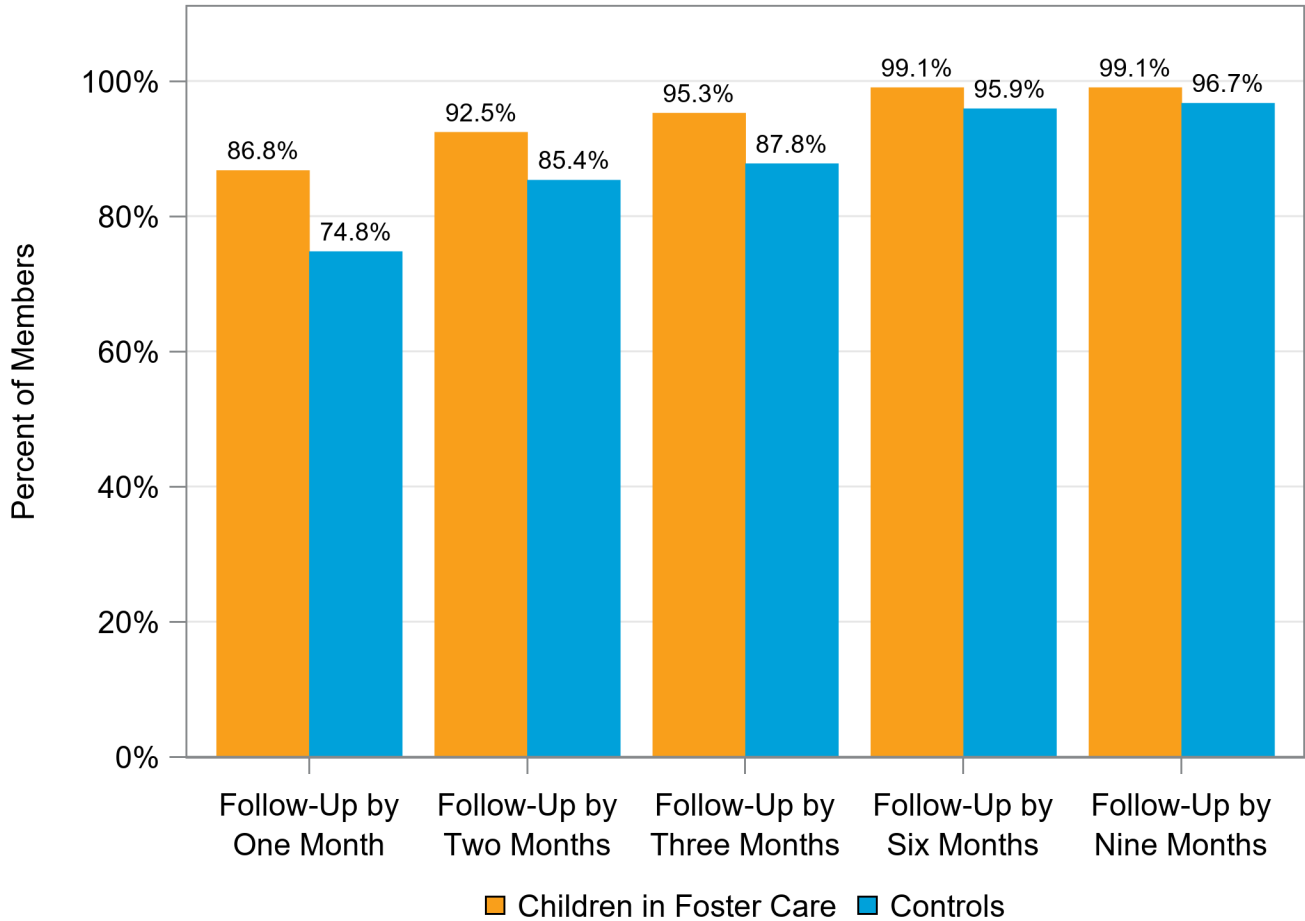
NOTE: The denominators for children in foster care and controls are 106 and 123, respectively.

Figure 3-13—Rates of Follow-Up Care for Children Prescribed ADHD Medication within 1 Month Among Children in Foster Care and Controls, by Measurement Year
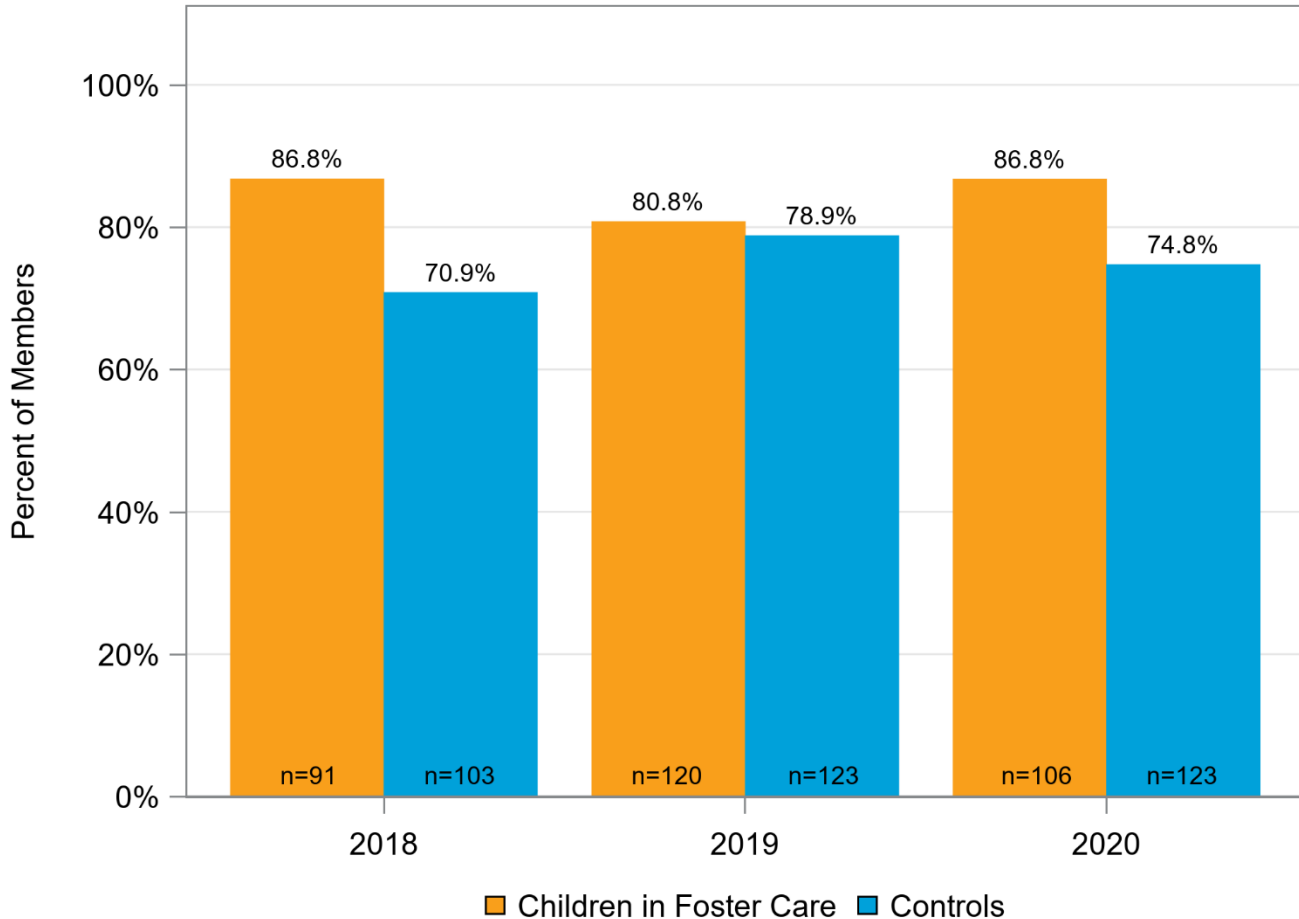
Substance Use

30-Day Follow-Up After ED Visit for AOD Abuse or Dependence (FUA)

The *30-Day Follow-Up After ED Visit for AOD Abuse or Dependence* measure is not presented as a chart because the denominators for children in foster care and controls were too small to ensure reliable rates. These denominator sizes are smaller than MY 2018 and MY 2019 and indicate that very few children had ED visits for AOD use or dependence.

Initiation and Engagement of AOD Abuse or Dependence Treatment (IET)

Among children 13 years or older who had a new episode of AOD use or dependence, 29.1 percent of children in foster care and 45.8 percent of controls initiated treatment within 14 days of diagnosis (Figure 3-14). Whereas in MY 2019 children in foster care had higher rates of initiation than controls, in MY 2020, children in foster care had lower rates than controls, and initiation rates look similar to MY 2018. Rates of engagement were consistent for children in foster care across measurement years.

However, denominators and numerators are small; therefore, the *Engagement of AOD Abuse or Dependence Treatment* measure is not presented as a chart.

Rate differences between children in foster care and controls were not statistically significant, although denominator sizes are small (55 children in foster care and 24 controls). Treatment rates were low for both children in foster care and controls, such that less than half of children received timely care for substance use. Children in foster care were also more than twice as likely to have a substance use diagnosis during the measurement year, even after matching on previous diagnoses of substance use. However, since older children are more likely to be diagnosed, matching may have missed yet undiagnosed cases.

Figure 3-14—Rates of Initiation of AOD Abuse or Dependence Treatment Among Children in Foster Care and Controls, by Measurement Year
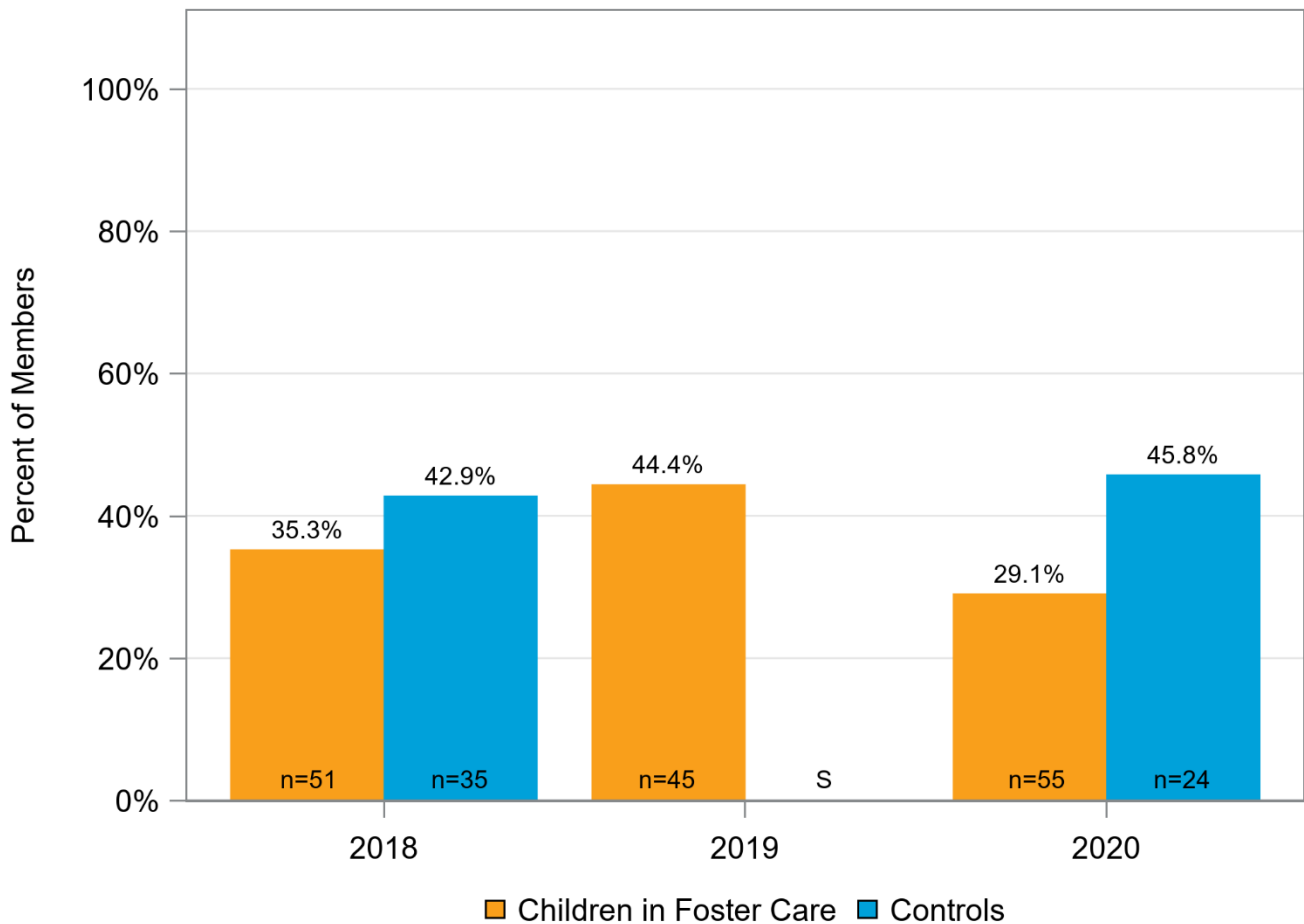
S indicates that the rate has been suppressed due to a small numerator (i.e., less than or equal to 10).

Reproductive Health

Contraceptive Care (CCW)

Among females aged 15 years or older who were at risk of unintended pregnancy, 46.0 percent of children in foster care were provided a most effective or moderately effective method of contraception (Figure 3-15), and 8.4 percent of children in foster care were provided a long-acting reversible method of contraception (Figure 3-16). In contrast, 31.9 percent of controls were provided a most effective or moderately effective method of contraception, and 5.6 percent of controls were provided a long-acting reversible method of contraception. The difference between children in foster care and controls was statistically significant for the most or moderately effective method of contraceptive care ($p<0.001$). Therefore, children in foster care were substantially more likely to receive contraceptive care. However, the rate for most or moderately effective methods of contraceptive care has decreased by 11.7 percentage points from MY 2018 to MY 2020, whereas rates were consistent across years for long-acting reversible methods of contraceptive care.

Figure 3-15—Rates of Contraceptive Care (Most Effective or Moderately Effective Method) Among Children in Foster Care and Controls, by Measurement Year
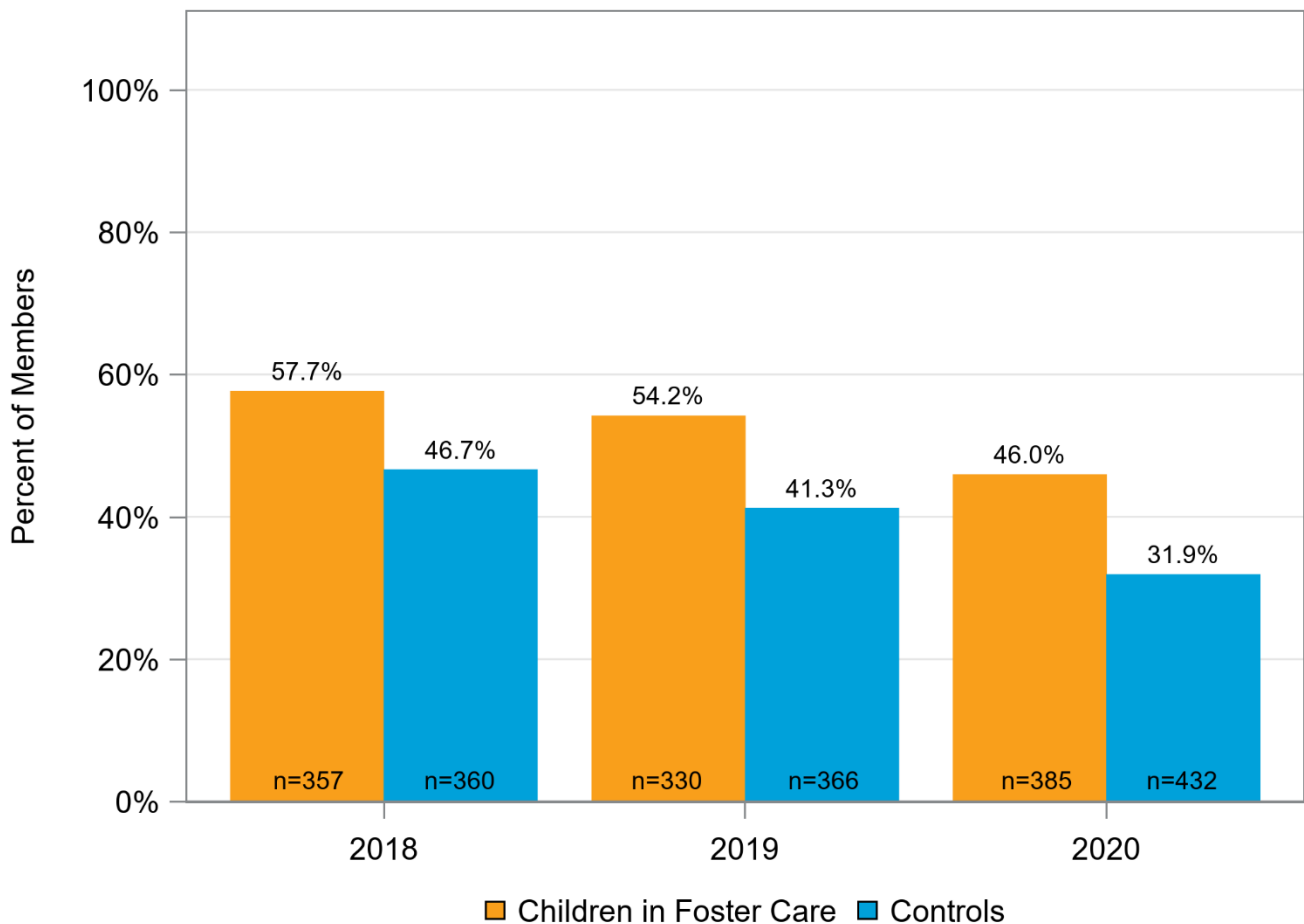
Figure 3-16—Rates of Contraceptive Care (Long-Acting Reversible Method) Among Children in Foster Care and Controls, by Measurement Year
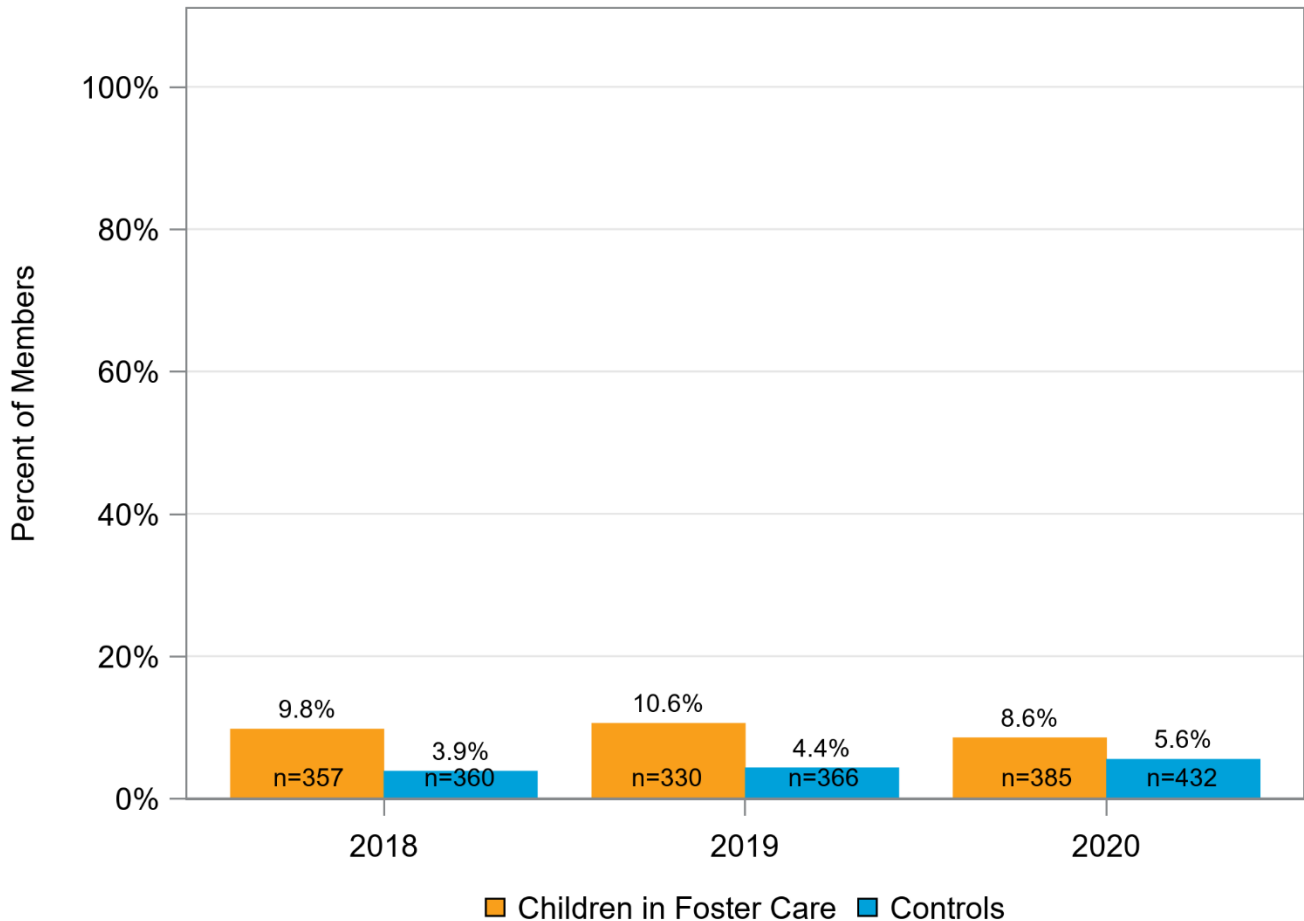
Respiratory Health

Asthma Medication Ratio (AMR)

Figure 3-17 shows that, among children ages 5 years or older who were identified as having persistent asthma, 89.8 percent of children in foster care and 75.9 percent of controls had a ratio of controller medications to total asthma medications of 0.50 or greater during the measurement year. Therefore, children in foster care were more likely to have an appropriate asthma medication ratio, and findings were statistically significant for MY 2020 (p<0.05). Results for MY 2020 were 4.1 percentage points higher than MY 2019 but 2.8 percentage points lower than MY 2018. These small fluctuations should be interpreted with caution as the small denominators mean that a single numerator event could have a large impact on rates. More than twice as many controls were identified as having persistent asthma as children in foster care, and this finding has been consistent across all three measurement years.

Figure 3-18 presents asthma medication ratio findings stratified by age category using the CMS Child Core Set technical specifications for this measure (i.e., 5 to 11 Years and 12 to 18 Years). Rates of appropriate asthma medication ratio decline as age increases, such that 94.7 percent of children in foster care in the 5 to 11 Years category have an appropriate asthma medication ratio compared to 86.7 percent of children in foster care in the 12 to 18 Years category. The rate difference between children in foster care and controls is greatest for 5 to 11 Years, where children in foster care's rate is 24.4 percentage points higher than the control's rate (70.3 percent).

Figure 3-17—Rates of Appropriate Asthma Medication Ratio Among Children in Foster Care and Controls, by Measurement Year
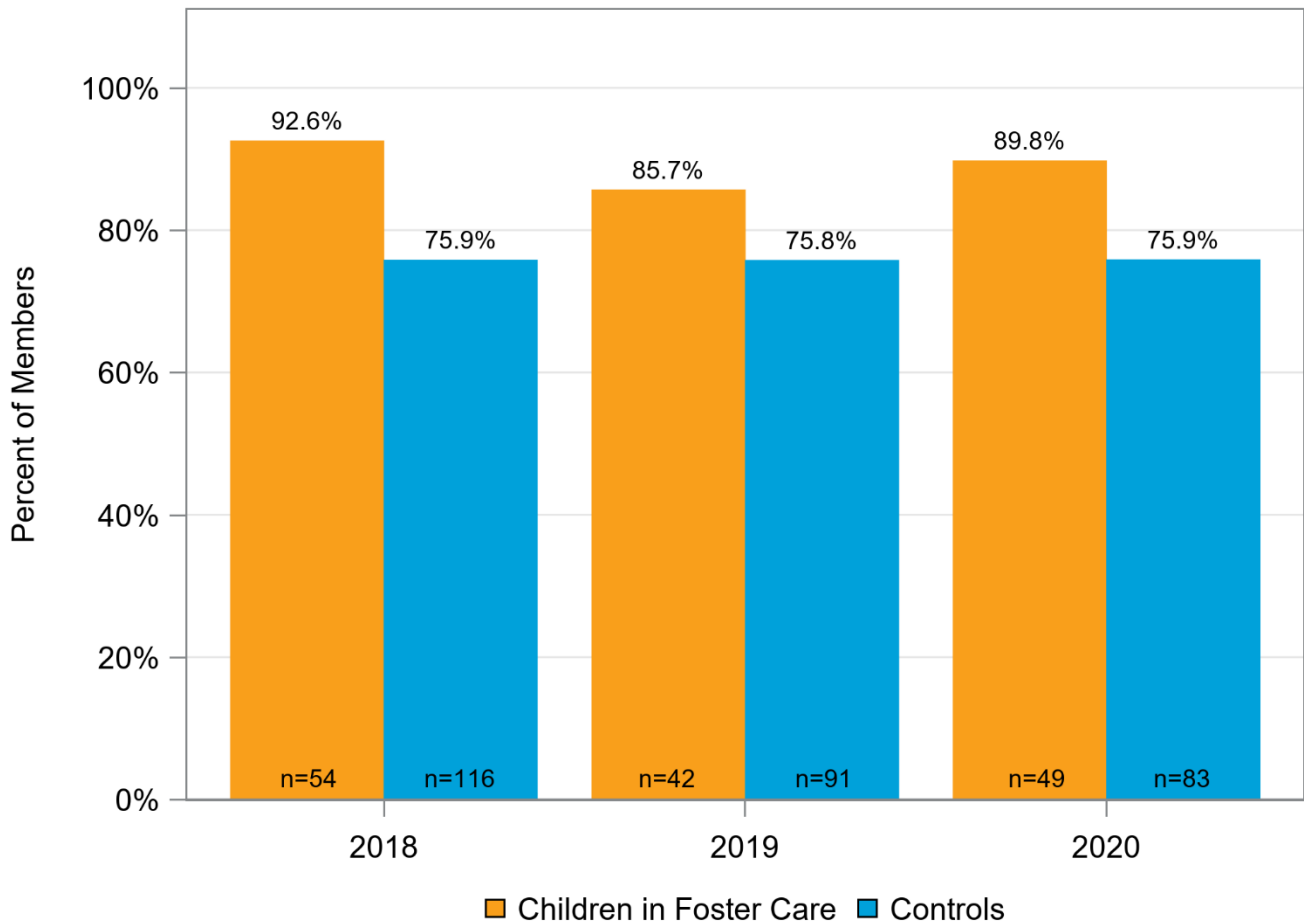
Figure 3-18—Rates of Appropriate Asthma Medication Ratio Among Children in Foster Care and Controls, by Age Category
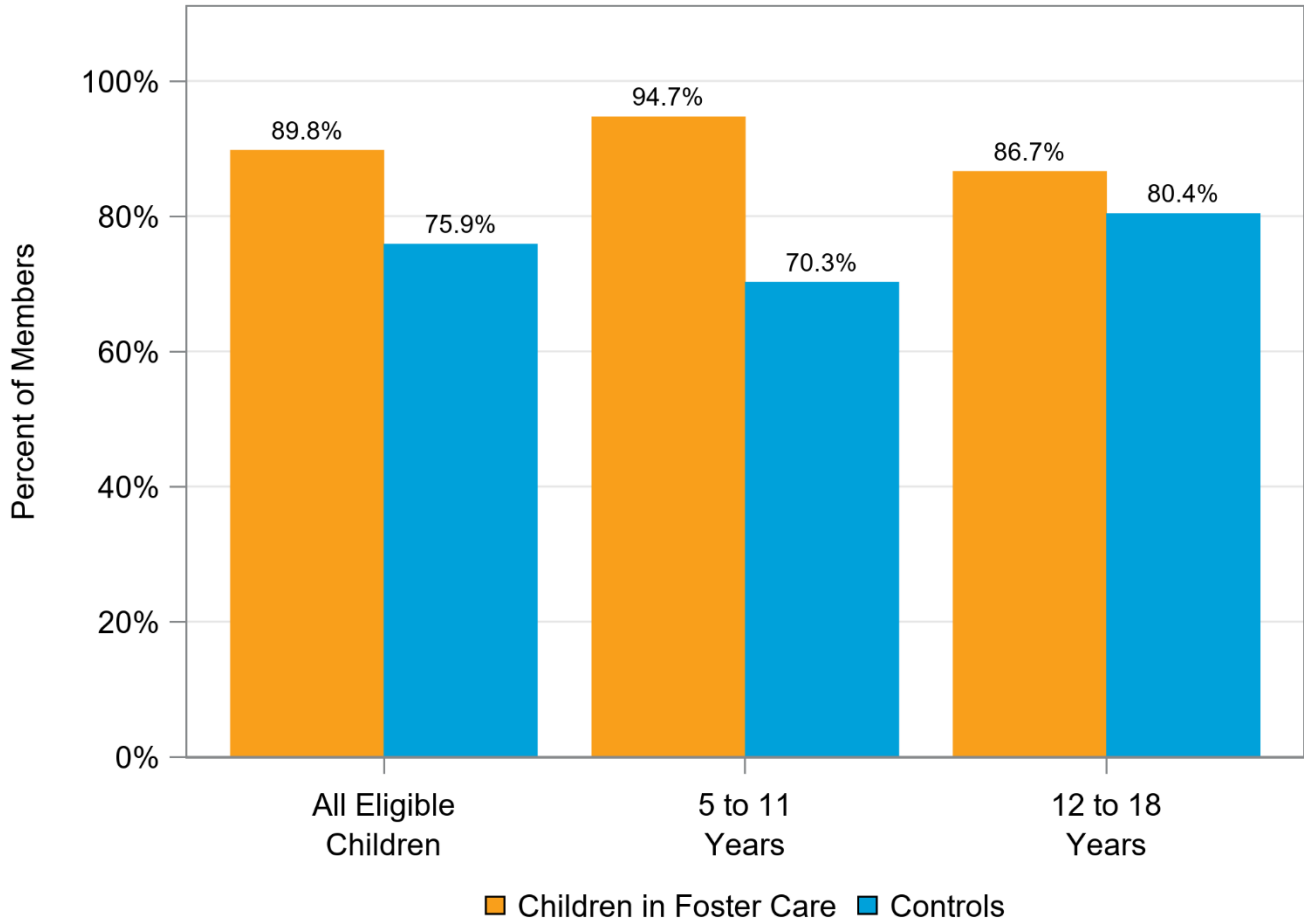
NOTE: The 5 to 11 Years category has 19 children in foster care and 37 controls. The 12 to 18 Years category has 30 children in foster care and 46 controls.

4. Adoption Assistance Population Findings

Characteristics of the Adoption Assistance Eligible Population and Study Population

This section provides findings describing the demographic characteristics of the 8,519 children in the adoption assistance eligible population and the 7,098 children in the adoption assistance study population. The children in the adoption assistance eligible population were children in the adoption assistance program younger than 18 years of age as of January 1, 2020, and receiving healthcare coverage from DMAS at any time during MY 2020. Table 4-1 displays the distribution of children in the adoption assistance program by age category, sex, and race. Children in the adoption assistance program were disproportionately male (53.8 percent) and Black or African American (30.8 percent) compared to the general population in Virginia, which was 49.2 percent male and 19.9 percent Black or African American in 2019.[4-1,4-2]

Table 4-1—Age, Sex, and Race Distribution of Adoption Assistance Children (n=8,519)

Category	Number	Percent
Age Category		
≤ 2 years	366	4.3%
3 to 5 years	1,001	11.8%
6 to 10 years	2,430	28.5%
11 to 13 years	1,947	22.9%
≥ 14 years	2,775	32.6%
Sex		
Male	4,579	53.8%
Female	3,940	46.2%
Race		
Black or African American	2,627	30.8%
White	5,710	67.0%
Other	182	2.1%

Table 4-2 displays the distribution of adoption assistance children by region, MCO, and Medicaid managed care program in the measurement year. Please note that since the adoption assistance eligible population includes every member enrolled in adoption assistance during the measurement year for any length of time, the latest MCO and Medicaid program a member was enrolled with during the measurement year was used. Adoption assistance children were mostly from the Central (21.8 percent), Charlottesville/Western (15.5 percent), and Tidewater (18.9 percent) regions. The region for a small proportion of adoption assistance children (0.1 percent) was unknown; these children tended to

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4-1 United States Census Bureau. Virginia QuickFacts. Available at: https://www.census.gov/quickfacts/VA. Accessed on: Nov 10, 2021.

4-2 The United States Census Bureau has not yet published 2020 results for Virginia as of December 2021.

be missing some address information or had an out-of-state address. Adoption assistance children were most likely to be enrolled with HealthKeepers (29.6 percent), Virginia Premier (28.6 percent), or Optima (20.5 percent). MCO attribution was missing for 1.7 percent of adoption assistance children who were only enrolled in FFS during the measurement year.[4-3] Adoption assistance children were most likely to be enrolled through the Medallion 4.0 program (95.1 percent). Some adoption assistance children (1.7 percent) were enrolled through FAMIS or were only enrolled in FFS during the measurement year.[4-4]

Table 4-2—Region, MCO, and Medicaid Program Distribution of Adoption Assistance Children (n=8,519)

Category	Number	Percent
Region		
Central	1,860	21.8%
Charlottesville/Western	1,322	15.5%
Northern & Winchester	1,332	15.6%
Roanoke/Alleghany	1,387	16.3%
Southwest	S	S
Tidewater	1,609	18.9%
Unknown	S	S
Latest MCO in the Measurement Year		
Aetna	744	8.7%
HealthKeepers	2,521	29.6%
Magellan	348	4.1%
Optima	1,744	20.5%
UnitedHealthcare	579	6.8%
Virginia Premier	2,438	28.6%
FFS	145	1.7%
Latest Medicaid Program in the Measurement Year		
CCC Plus	271	3.2%
Medallion 4.0	8,101	95.1%
Other	147	1.7%

S indicates that the rate has been suppressed due to a small numerator (i.e., less than or equal to 10).

The study population were children in the adoption assistance population who were continuously enrolled in either Medallion 4.0 or CCC Plus Medicaid managed care programs with any MCO or a combination of MCOs during the study period, for whom a match not in a foster care or adoption

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[4-3] Adoption assistance children may temporarily move to FFS and may not be enrolled with an MCO during the measurement year.
[4-4] Adoption assistance children may temporarily move to FFS and may not be enrolled through a managed care program during the measurement year.

assistance program could be found. Continuous enrollment was defined as enrollment gaps totaling no more than 45 days. Among the adoption assistance eligible population, 83.3 percent (n=7,098) of children met the requirements for the study population, compared to 46.5 percent of children in foster care. Adoption assistance children may be more likely to meet the continuous enrollment criteria than children in foster care, since one of the qualifications for adoption assistance is having been in foster care for 18 months or longer.[4-5] The demographic characteristics of the study population mirrored the demographic characteristics of the adoption assistance eligible population, except that there were 2 percent fewer children aged two years or younger. The disproportionate exclusion of infants can be attributed to the inability of children born more than 45 days into the measurement year to meet the continuous enrollment criteria, since these children would have an enrollment gap greater than 45 days.

Table B-2 and Table B-5 present the demographic and health characteristics of continuously enrolled adoption assistance children and the continuously enrolled comparison group prior to matching (n=7,121). Continuously enrolled adoption assistance children tended to be older, male, White, less likely to be enrolled with HealthKeepers, and less likely to be enrolled through CCC Plus compared to the continuously enrolled comparison group. Furthermore, continuously enrolled adoption assistance children were less likely to live in the Central, Northern & Winchester, or Tidewater regions and more likely to live in the Charlottesville/Western, Roanoke/Alleghany, or Southwest regions. In terms of health characteristics, continuously enrolled adoption assistance children were more likely to have diagnoses for health conditions, notably ADHD, developmental disorders, and mood disorders. Additionally, adoption assistance children were more likely to have ED and acute inpatient visits for mental health than the comparison group, which may indicate greater severity of mental illness among adoption assistance children. The higher rate of ED visits and acute inpatient visits may also indicate that adoption assistance children are more likely to seek care for mental illness through these means, especially if prior access to psychiatric care had been limited prior to entering the adoption assistance program.

HSAG was able to match 99.7 percent (n=7,098) of continuously enrolled adoption assistance children to children in the comparison group with similar demographic and health characteristics. Table B-8 and Table B-11 present the demographic and health characteristics of the final study population and their matched controls. Matching successfully balanced all demographic and health characteristics between the study population and the controls.

Appendix B presents detailed descriptions of the demographic and health characteristics of adoption assistance children and children in the comparison group prior to and after matching, as well as covariate balance findings.

[4-5] Virginia Department of Social Services. Adoptive Assistance Screening Tool. Available at: https://dss.virginia.gov/files/division/dfs/ap/intro_page/forms/032-04-0091-06-eng.pdf. Accessed on: Nov 12, 2021.

Healthcare Utilization Among Adoption Assistance Children and Controls

This section provides findings from the study indicators used to assess healthcare utilization for adoption assistance children in the study population, as well as findings for the matched controls not enrolled through a foster care or adoption assistance program. In addition to the summarized findings presented in the remainder of this section, Appendix C presents detailed study indicator results stratified by age category, MCO, and region.

Although the controls have been matched to the adoption assistance children on a variety of demographic and health characteristics, HSAG advises caution in comparing the study indicator results between the adoption assistance children and controls. Due to the different criteria for denominators across measures, one child in a matched pair may be included in a measure calculation while the other child is not. When matched pairs are separated, the distribution of characteristics in the denominator-eligible study population and the denominator-eligible controls may differ from the overall distribution, and balanced covariates are no longer guaranteed. Furthermore, HSAG advises caution in interpreting the p-values, as denominator sizes vary by measure, and sample size influences the precision of the p-value calculation. Additionally, while HSAG compares the adoption assistance population findings to the foster care population findings within the narrative to provide additional context, HSAG recommends exercising caution when interpreting the findings as the differences may be due to external factors, such as differing program requirements. Healthcare utilization in MY 2020 may also be impacted by the COVID-19 pandemic; however, rate comparisons within MY 2020 (i.e., to controls and children in foster care) are still reliable.

Primary Care

Child and Adolescent Well-Care Visits (WCV)

Among adoption assistance children who were at least 3 years old by December 31, 2020, 42.8 percent had a well-care visit with a PCP or an OB/GYN practitioner (Figure 4-1) during MY 2020. Adoption assistance children had a significantly higher rate of well-care visits compared to their controls (40.8 percent, $p = 0.02$). However, some adoption assistance children may not be meeting the EPSDT periodicity schedule for well-child visits (i.e., a well-child visit annually for children age 3 years to 18 years).[4-6] Furthermore, the rate of well-care visits for adoption assistance children was 25.2 percentage points lower than the rate for children in foster care (68.0 percent).

Findings are also presented by age category, using the categories from the CMS Child Core Set technical specifications for this measure (3 to 11 years, 12 to 17 years, and 18 to 21 years). Since adoption assistance children are defined as children younger than 18 years old at the beginning of the measurement year, and the CMS Child Core Set age categories are based on age at the end of the measurement year, the 18 to 21 years category includes only adoption assistance children who are 18 years old at the end of the measurement year. Rates of *Child and Adolescent Well-Care Visits* for

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[4-6] Virginia Department of Social Services. Child and Family Services Manual: Identifying Services to Be Provided. Available at: Child and Family Services Manual. Accessed on: Nov 18, 2021.

adoption assistance children were highest among the 3 to 11 age group (47.1 percent). As age increased, the rate decreased to 41.5 percent among children ages 12 to 17 and 27.6 percent in children age 18. Since children were exact-matched on a different categorization of age, comparisons of rates for adoption assistance children and controls within the CMS Child Core Set age categories must be interpreted with caution, as matched pairs may be separated across age categories. The gap between the rates of adoption assistance children and controls was widest for the 12 to 17 years age category, where the rate for adoption assistance children was 41.5 percent and the rate for controls was 38.2 percent.

Figure 4-1—Rates of Child and Adolescent Well-Care Visits Among Adoption Assistance Children and Controls, by Age Category
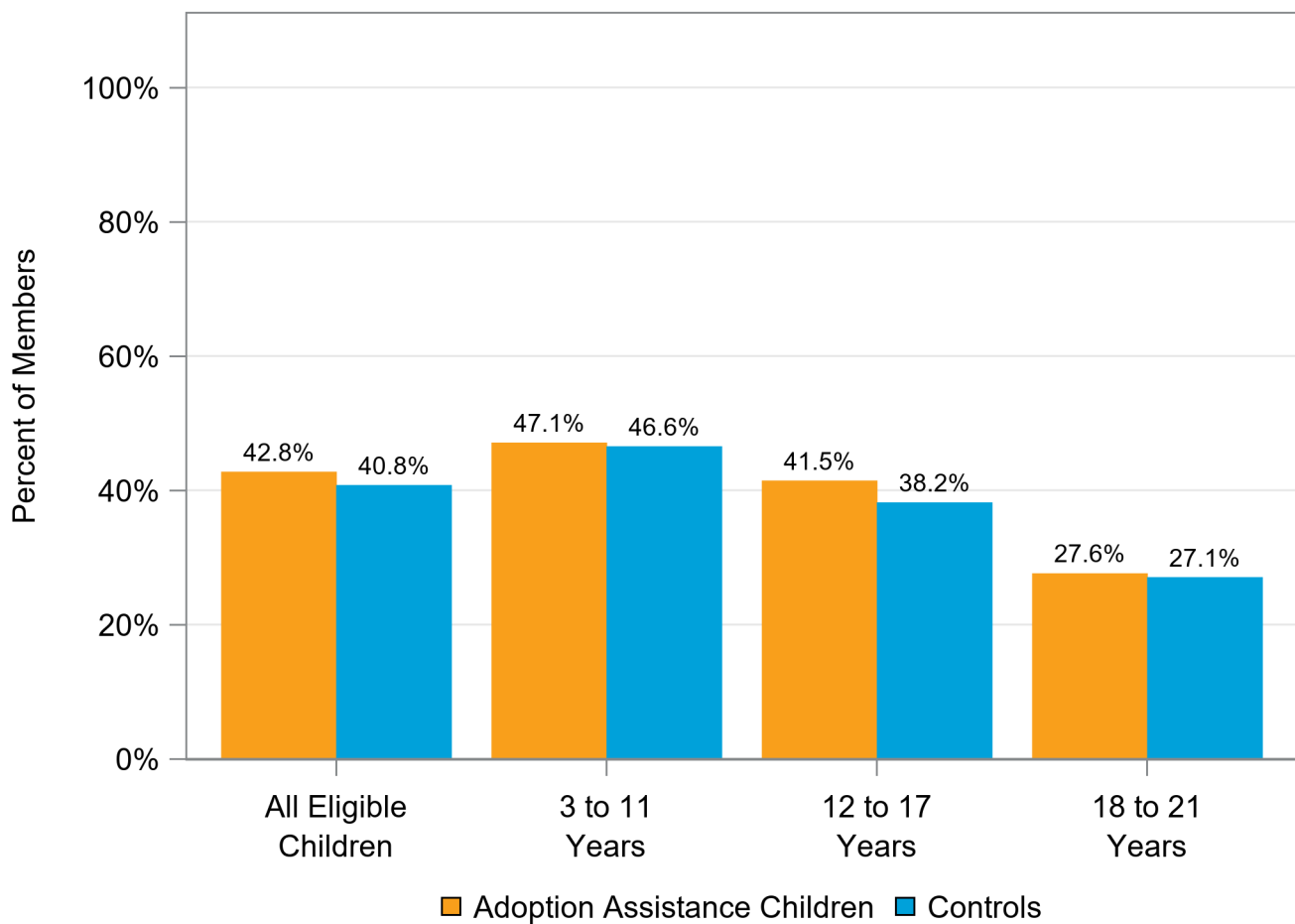
NOTE: The 3 to 11 Years category has 1,394 adoption assistance and 1,342 controls. The 12 to 17 Years category has 1,471 adoption assistance children and 1,357 controls. The 18 to 21 Years category has 149 adoption assistance children and 147 controls.

Well-Child Visits in the First 30 Months of Life—Well-Child Visits in the First 15 Months—Six or More Well-Child Visits (W30–6+) and Well-Child Visits for Age 15 Months to 30 Months—Two or More Well-Child Visits (W30–2+)

The denominator for the adoption assistance children was too small for children who turned 15 months old and had six or more well-child visits with a PCP; therefore, this rate is suppressed in the chart below. While the rate for adoption assistance children age 15 months was lower than the rate for controls, the rate difference was not statistically significant. Among adoption assistance children who turned 30 months old during MY 2020, 79.4 percent had two or more well-child visits with a PCP (Figure 4-3), which was greater than the rate for controls (64.3 percent). The rate for adoption assistance children also exceeds the MY 2020 national Medicaid 50th percentile. However, some adoption assistance children may not be meeting the EPSDT periodicity schedule for well-child visits (i.e., a well-child visit at the following ages: 3 to 5 days, 1 month, 2 months, 4 months, 6 months, 9 months, 12 months, 15 months, 18 months, 24 months, and 30 months).[4-7]

[4-7] Virginia Department of Social Services. Child and Family Services Manual: Identifying Services to Be Provided. Available at: Child and Family Services Manual. Accessed on: Nov 18, 2021.

Figure 4-2—Rates of Well-Child Visits in the First 30 Months of Life—Well-Child Visits in the First 15 Months—Six or More Well-Child Visits Among Adoption Assistance Children and Controls
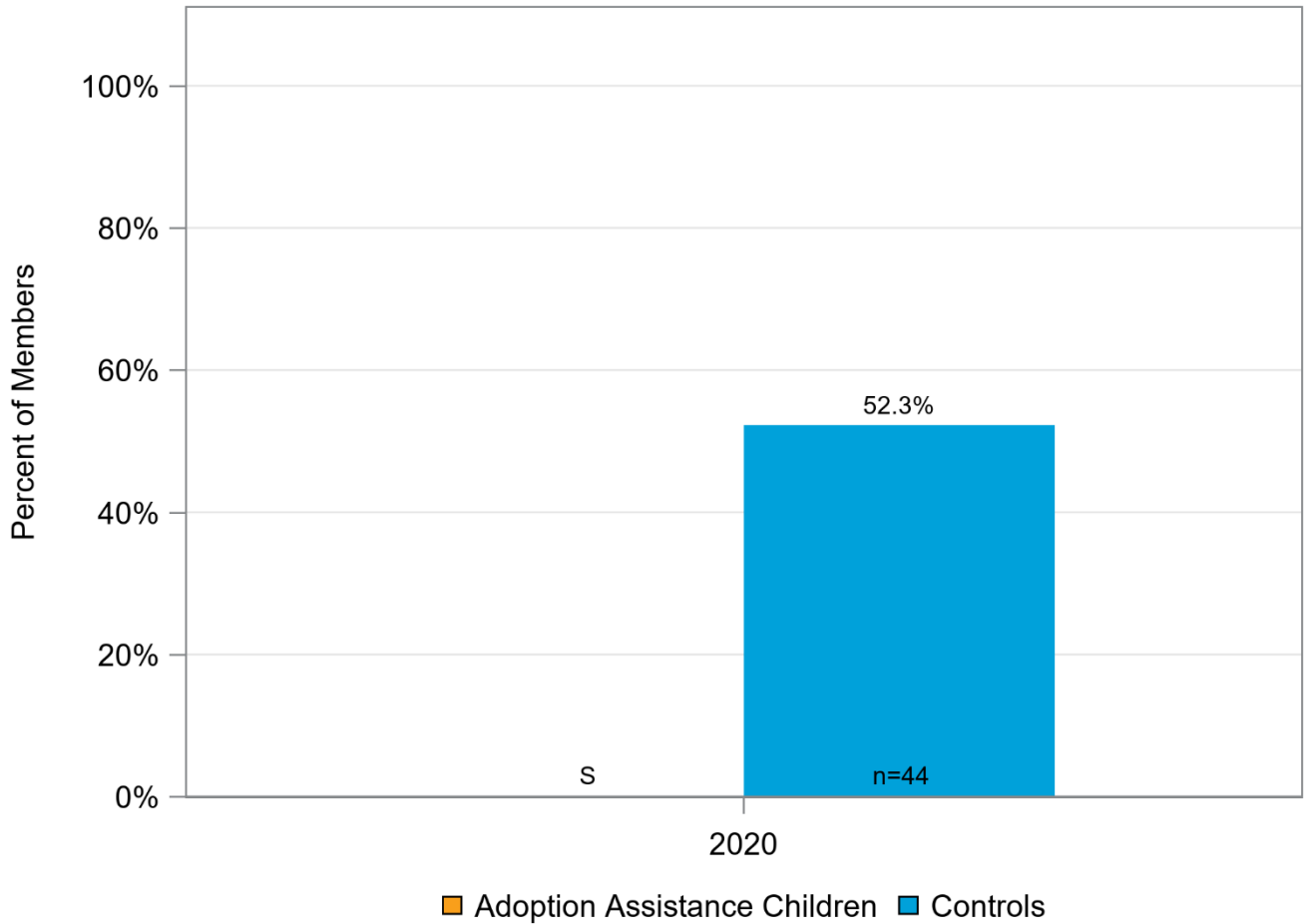
S indicates that the rate has been suppressed due to a small numerator or denominator (i.e., less than or equal to 10).

Figure 4-3—Rates of Well-Child Visits in the First 30 Months of Life—Well-Child Visits for Age 15 Months to 30 Months—Two or More Well-Child Visits Among Adoption Assistance Children and Controls
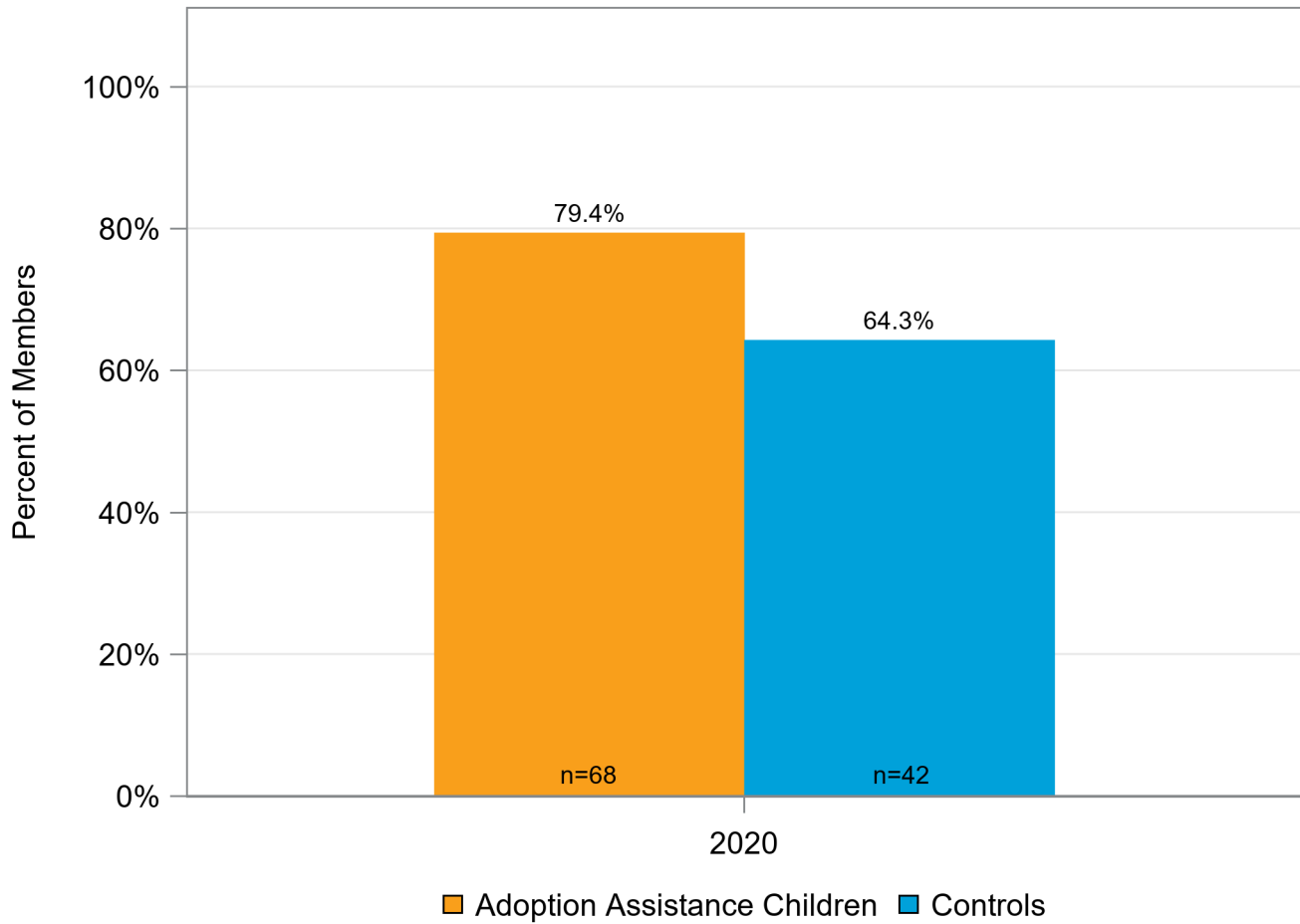
Oral Health

Annual Dental Visit (ADV) and Preventive Dental Services (PDENT-CH)

Among adoption assistance children who were at least two years old by the end of the measurement year, 54.1 percent had a dental visit during MY 2020 (Figure 4-5). This rate exceeds the MY 2020 national Medicaid 50th percentile. Similarly, among adoption assistance children who were at least one year old by the end of the measurement year, 49.2 percent received preventive dental services (Figure 4-7). Rates of annual dental visits and preventive dental services for adoption assistance children were 4.2 and 5.7 percentage points higher than the rates among controls, respectively (*p*<0.001). Therefore, adoption assistance children are accessing dental healthcare services at higher rates than similar children not in a foster care or adoption assistance program. Although, rates of annual dental visits and preventive dental services were 25.0 and 22.8 percentage points lower, respectively, for adoption assistance children compared to children in foster care.

Figure 4-4 and Figure 4-6 present the findings for annual dental visits and preventive dental services stratified by age category. For both dental measures, infants (i.e., children aged 2 years or younger) in the adoption assistance program demonstrated a lower rate than adoption assistance children of other ages, although the rate among children aged 14 years and greater was similar. In accordance with DMAS' Smiles for Children Program, dental health guidelines recommend a dental examination at 6 months of age and once every six months thereafter.[4-8] Rates of preventive dental visits among adoption assistance children ranged from 47.9 percent in those ages 3 to 5 years to 55.7 percent in those ages 6 to 10 years. Rates of annual dental visits were similar and ranged from 46.3 percent among adoption assistance children age 2 years or younger to 59 percent among children ages 6 to 10. Ultimately, adoption assistance children have greater dental healthcare utilization than similar children not in foster care or adoption assistance programs across all age categories.

Figure 4-4—Rates of Annual Dental Visits Among Adoption Assistance Children and Controls, by Age Category

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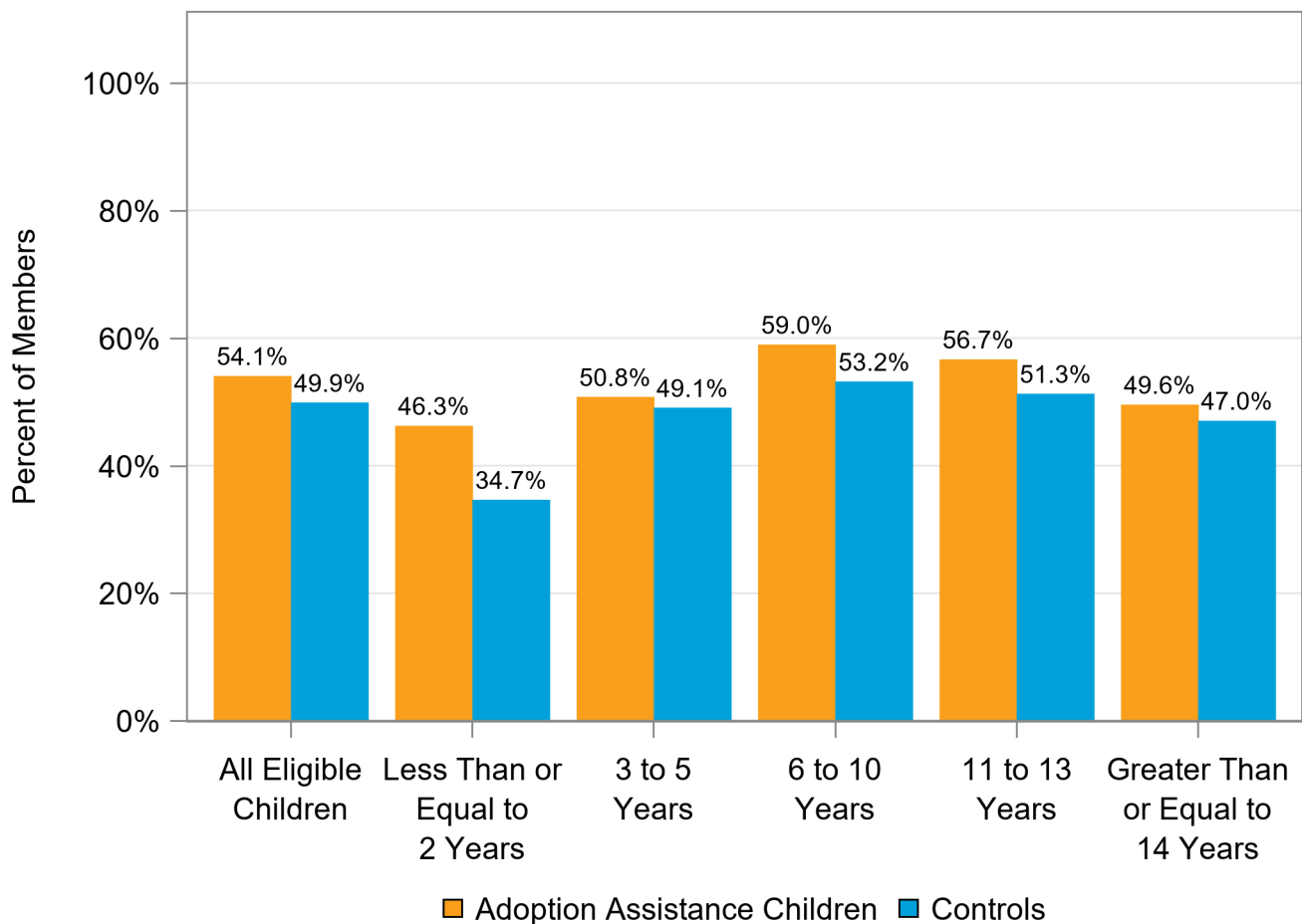
[4-8] Virginia Department of Social Services. Child and Family Services Manual: Identifying Services to Be Provided. Available at: Child and Family Services Manual. Accessed on: Nov 22, 2021.

Figure 4-5—Rates of Annual Dental Visits Among Adoption Assistance Children and Controls
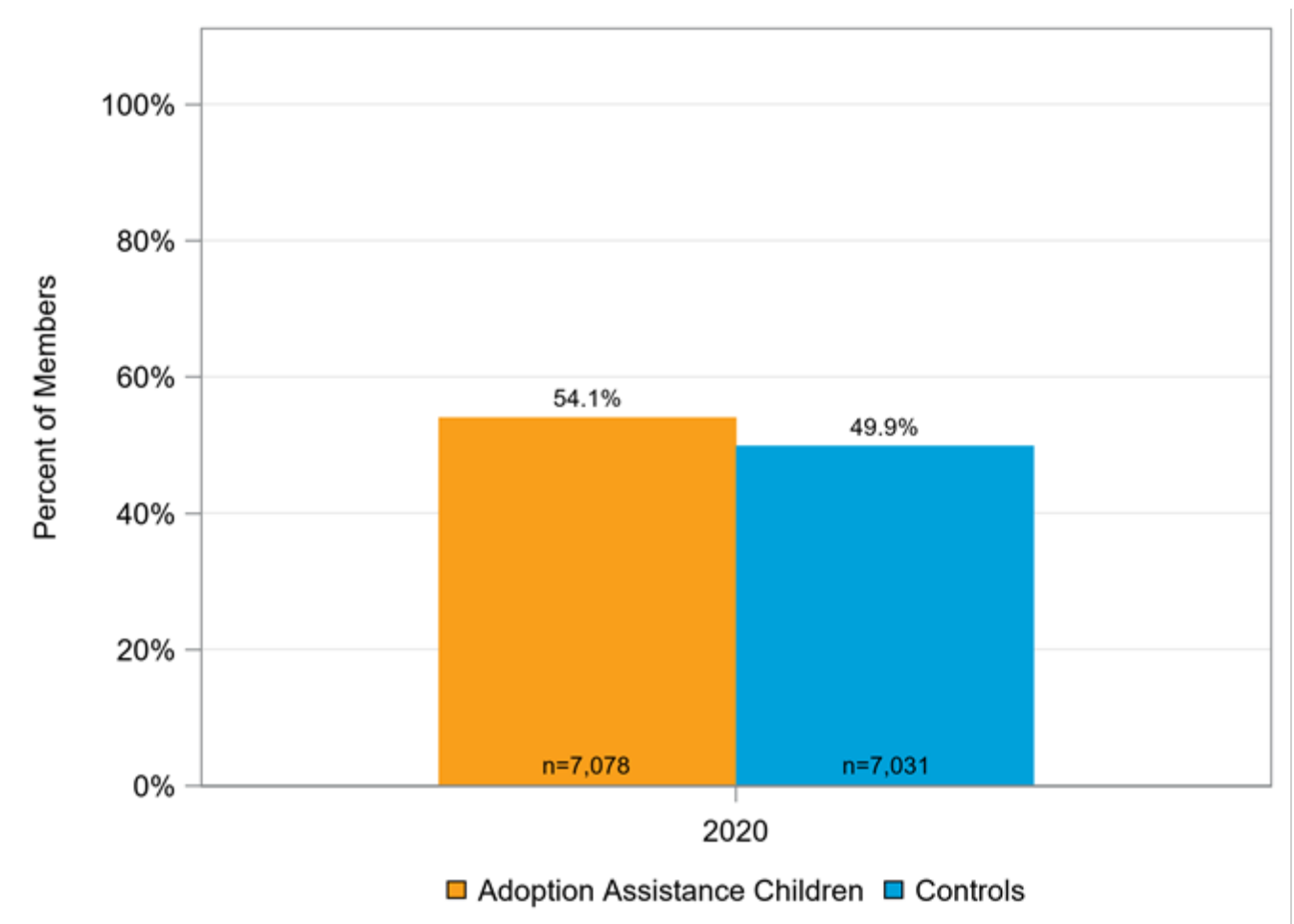
Figure 4-6—Rates of Preventive Dental Services Among Adoption Assistance Children and Controls, by Age Category
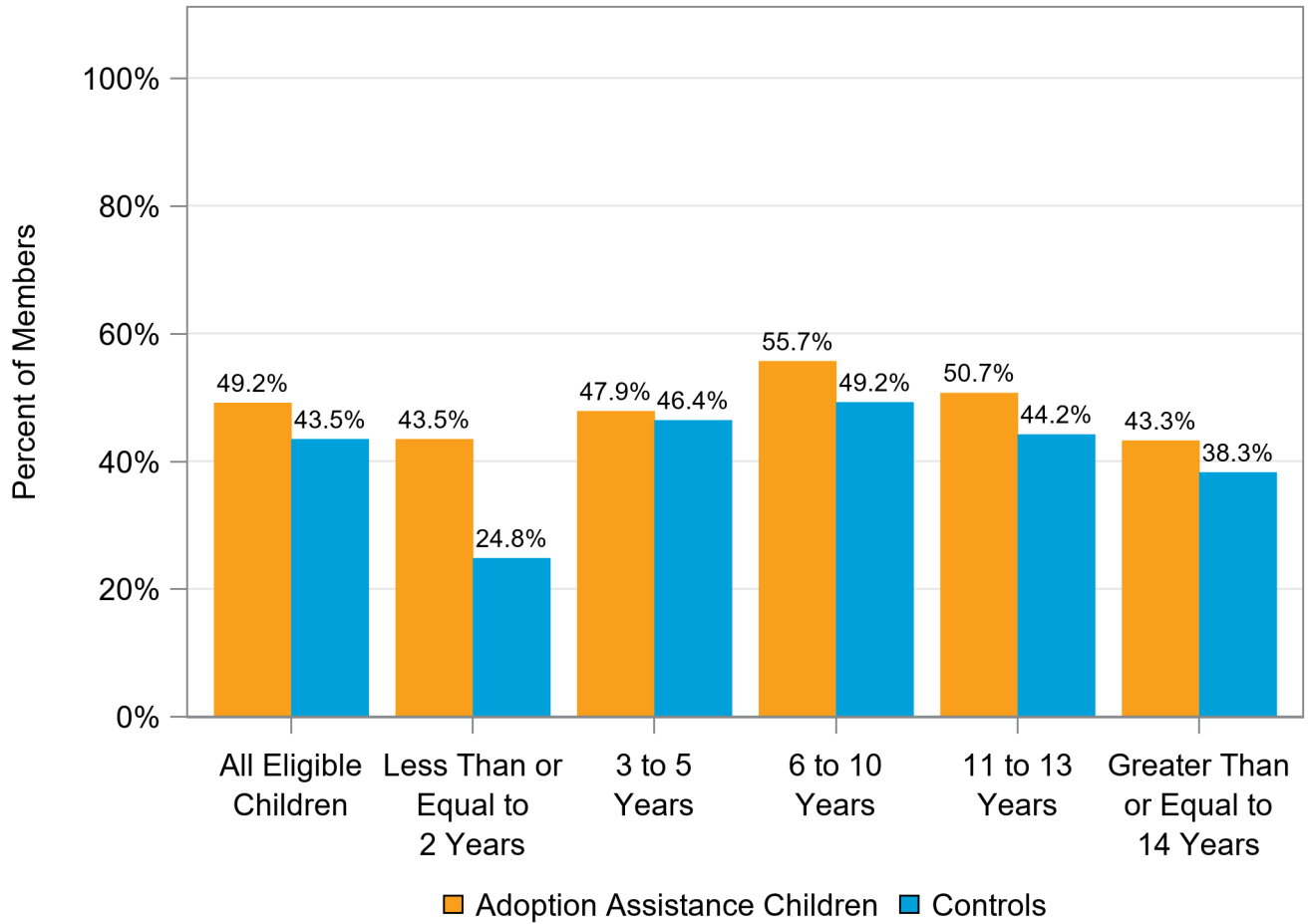
Figure 4-7—Rates of Preventive Dental Services Among Adoption Assistance Children and Controls
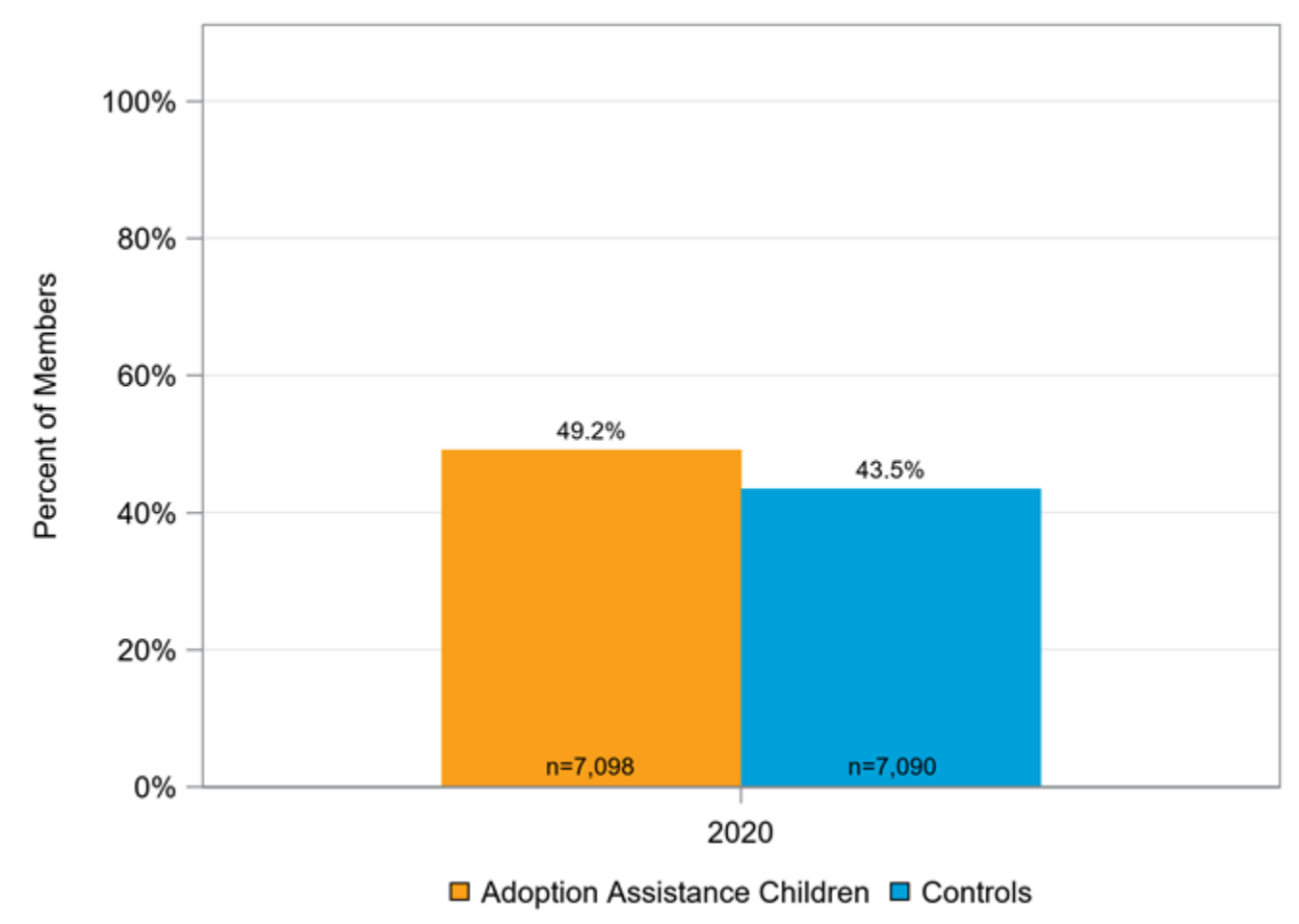
Behavioral Health

7-Day Follow-Up After Hospitalization for Mental Illness (FUH)

Figure 4-8 shows that for MY 2020, adoption assistance children had a higher rate of follow-up after hospitalizations for mental illness during MY 2020 compared to controls. Among hospitalizations of children aged 6 years or older for mental illness or intentional self-harm, 60.2 percent of adoption assistance children's hospitalizations and 58.7 percent of controls' hospitalizations had a follow-up visit with a mental health provider within seven days, though this difference was not statistically significant (p=0.83). The denominators for this measure demonstrate that both adoption assistance children and controls had few instances of hospitalization for mental illness (n=113 hospitalizations and n=92 hospitalizations, respectively). This rate was higher than the MY 2020 national Medicaid 50th percentile for the *7-Day Follow-Up After Hospitalization for Mental Illness* measure for members 6 to 17 years of age.

Figure 4-8—Rates of 7-Day Follow-Up After Hospitalization for Mental Illness Among Adoption Assistance Children and Controls

☐ Adoption Assistance Children Hospitalizations ☐ Control Hospitalizations
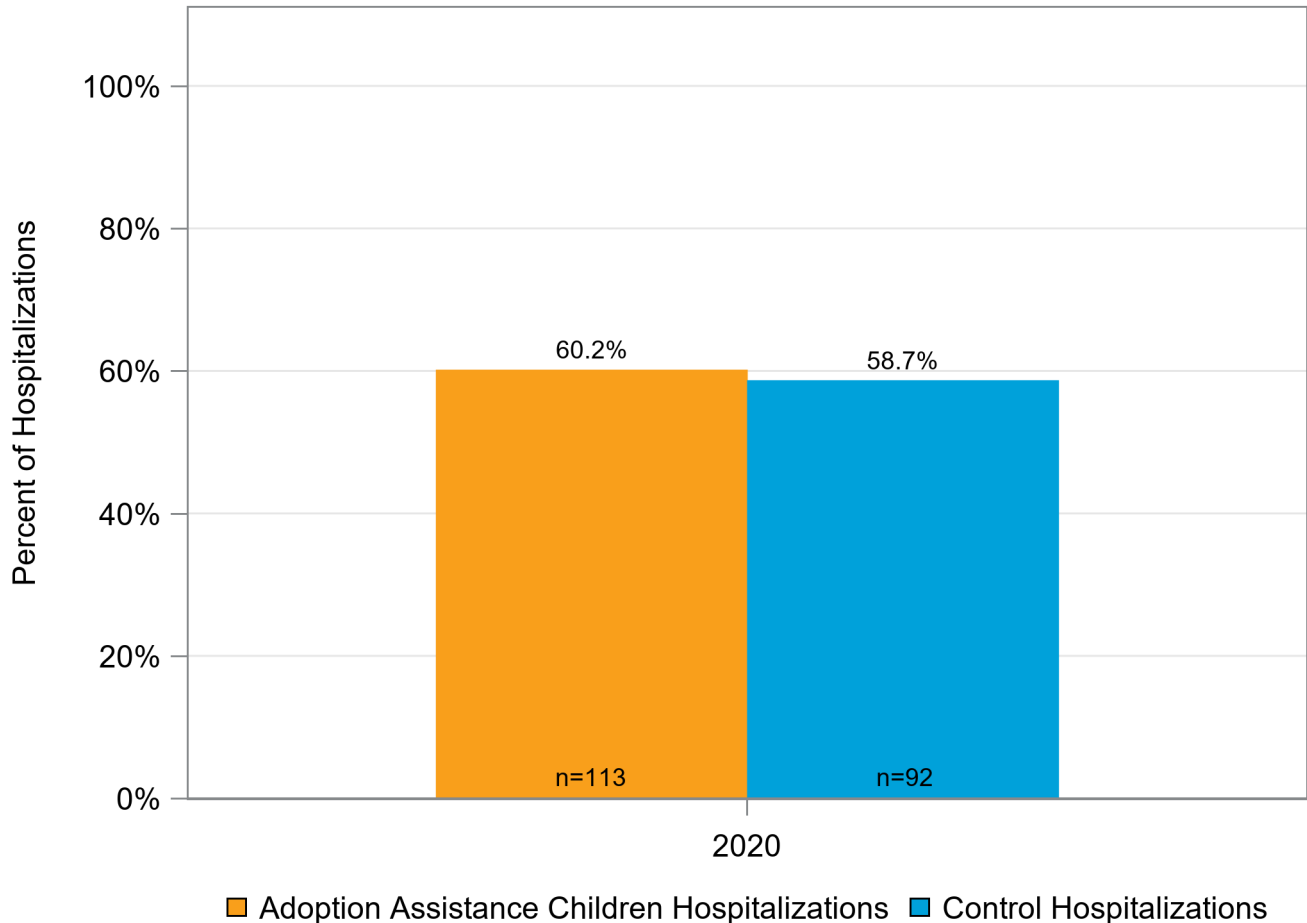
30-Day Follow-Up After ED Visit for Mental Illness (FUM)

For MY 2020, Figure 4-9 shows that 77.8 percent of ED visits for mental illness or intentional self-harm among adoption assistance members 6 years of age and older had a follow-up visit for mental illness within 30 days. The rate for adoption assistance children was 9.0 percentage points lower than the rate for controls (86.8 percent), although this finding was not statistically significant (p=0.20). The rate of follow-up visits was also 10.0 percentage points lower than adoption assistance children compared to children in foster care (87.8 percent). However, the rate among adoption assistance children was higher than the MY 2020 national Medicaid 50th percentile for children 6 to 17 years of age. The denominators for this measure demonstrate that adoption assistance children had more instances of ED visits (n=72 ED visits) compared to controls (n=53 ED visits). In general, there were very few instances of ED visits for adoption assistance children and controls.

Figure 4-9—Rates of 30-Day Follow-Up After ED Visit for Mental Illness Among Adoption Assistance Children and Controls
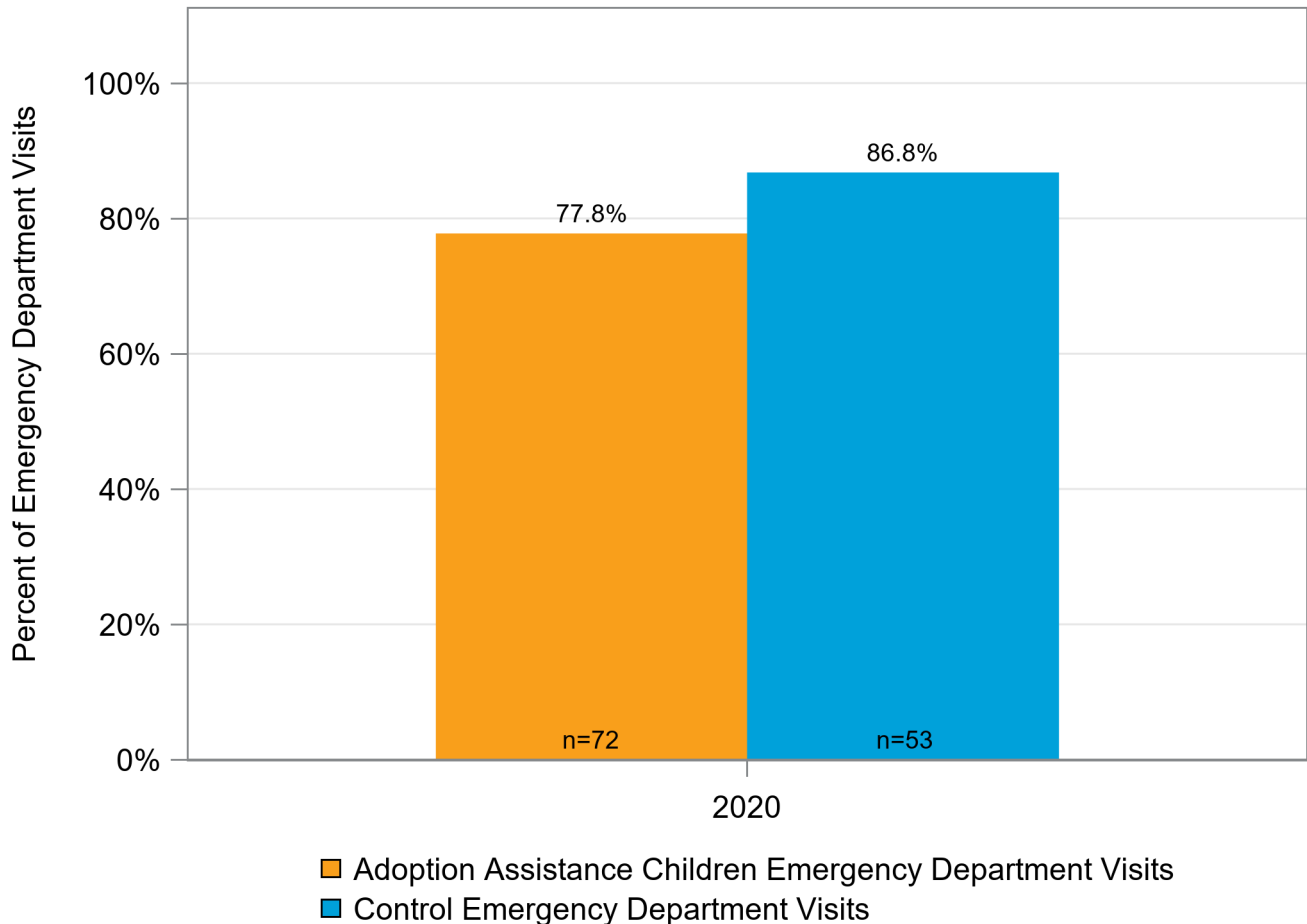
Metabolic Monitoring for Children and Adolescents on Antipsychotics (APM)* and *Use of First-Line Psychosocial Care for Children and Adolescents on Antipsychotics (APP)

Figure 4-10 shows that, among children aged 1 to 17 years who had two or more antipsychotic prescriptions, 27.7 percent of adoption assistance children and 25.1 percent of controls had metabolic testing. The difference in rates during MY 2020 was not statistically significant (p=0.52). Of note, adoption assistance children (n=520) were more than three times as likely as controls (n=171) to qualify for the denominator (i.e., have two or more antipsychotic prescriptions). Among children aged 1 to 17 years who had a new prescription for an antipsychotic medication without a diagnosis approved by the FDA for antipsychotic use, 59.3 percent of adoption assistance children and 61.5 percent of controls had documentation of psychosocial care as first-line treatment (p=0.81), as shown in Figure 4-11. Adoption assistance children had a lower rate compared to the MY 2020 Medicaid 50th percentiles for the *Metabolic Monitoring for Children and Adolescents on Antipsychotics* and *Use of First-Line Psychosocial Care for Children and Adolescents on Antipsychotics* measures. Adoption assistance children's rates were also 10.6 percentage points and 33.1 percentage points lower than children in foster care's rates for *Metabolic Monitoring for Children and Adolescents on Antipsychotics* (38.3 percent) and *Use of First-Line Psychosocial Care for Children and Adolescents on Antipsychotics* (92.4

percent), respectively. Therefore, adoption assistance children had a much lower rate of first-line psychosocial care compared to controls and the children in foster care study population; however, they had a similar rate of metabolic monitoring compared to controls despite a lower rate of metabolic monitoring compared to children in foster care.

Figure 4-10—Rates of Metabolic Monitoring for Children and Adolescents on Antipsychotics Among Adoption Assistance Children and Controls
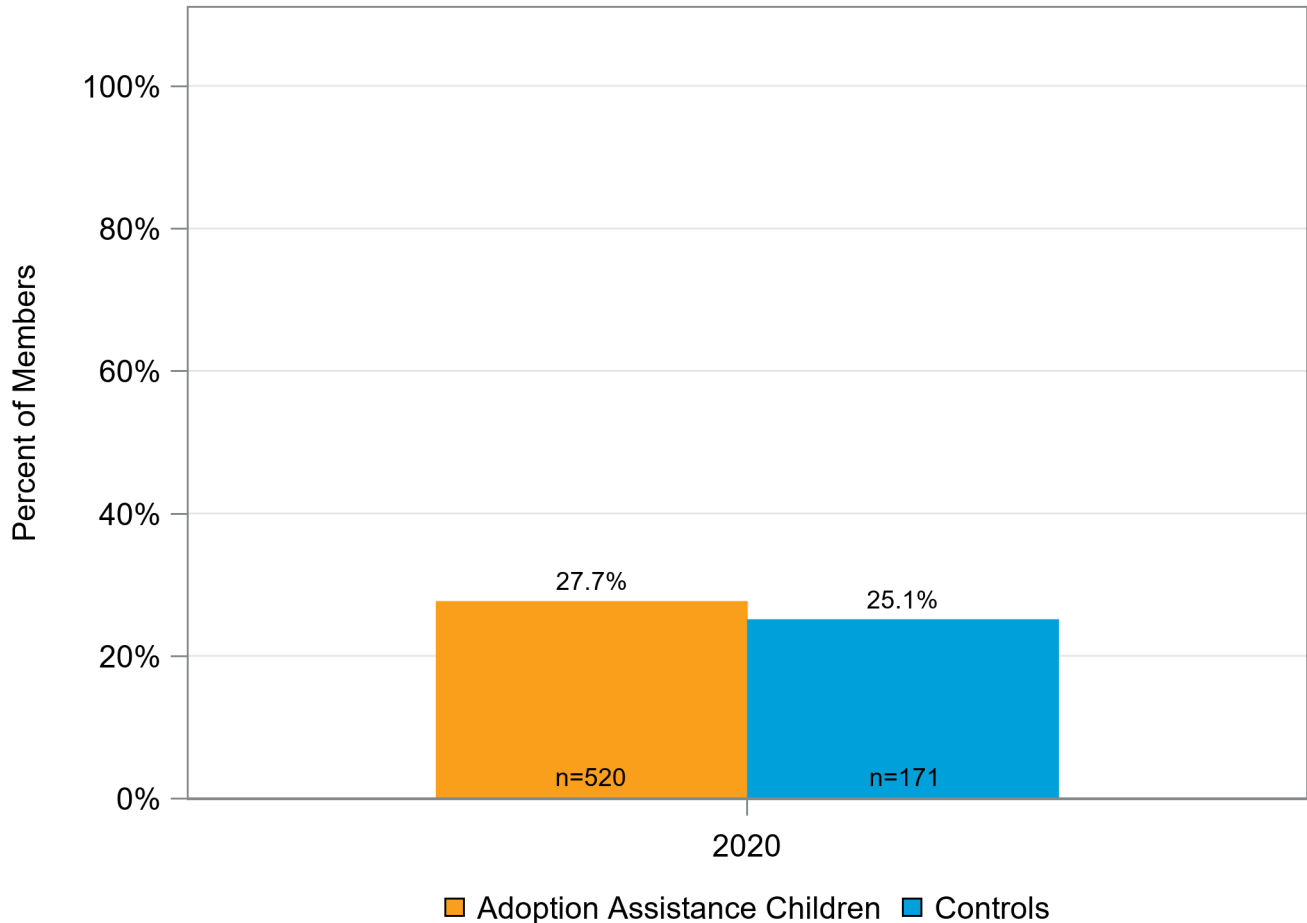
Figure 4-11—Rates of Use of First-Line Psychosocial Care for Children and Adolescents on Antipsychotics Among Adoption Assistance Children and Controls
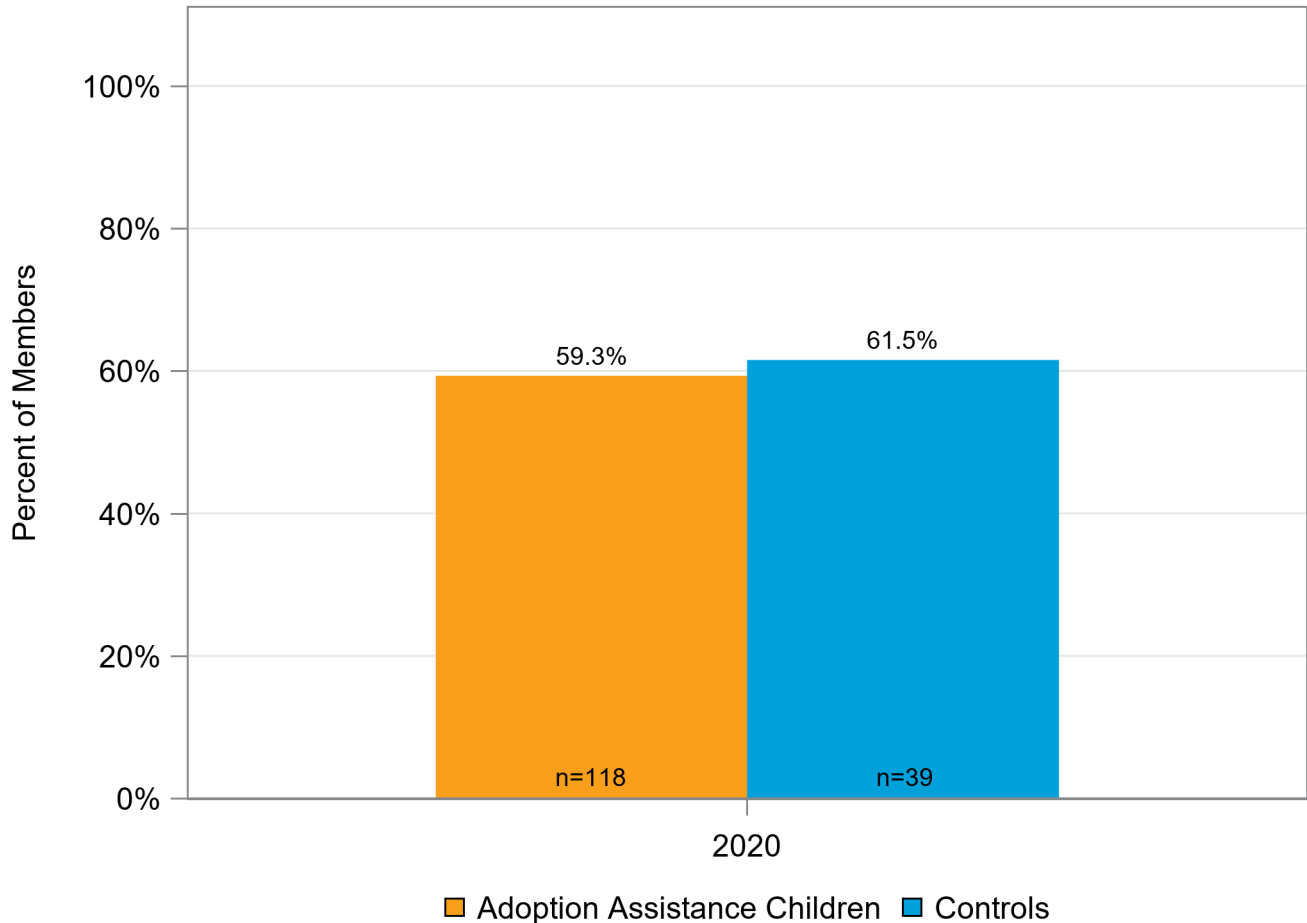
Follow-Up Care for Children Prescribed ADHD Medication (ADD)

Figure 4-12 shows that, among children aged 6 to 12 years old with a newly prescribed ADHD medication, 57.6 percent of adoption assistance children and 54 percent of controls initiated follow-up care within one month of the prescription (p=0.41). The rate of follow-up care within one month for adoption assistance children is 29.2 percentage points lower than the rate for children in foster care (86.8 percent). Of note, Figure 4-12 also shows that adoption assistance children had lower rates of follow-up at two, three, six, and nine months after an ADHD medication prescription compared to controls; these differences were significant only for six and nine months of follow-up care (p=0.03 and p=0.04, respectively).

Figure 4-12—Rates of Follow-Up Care for Children Prescribed ADHD Medication Among Adoption Assistance Children and Controls
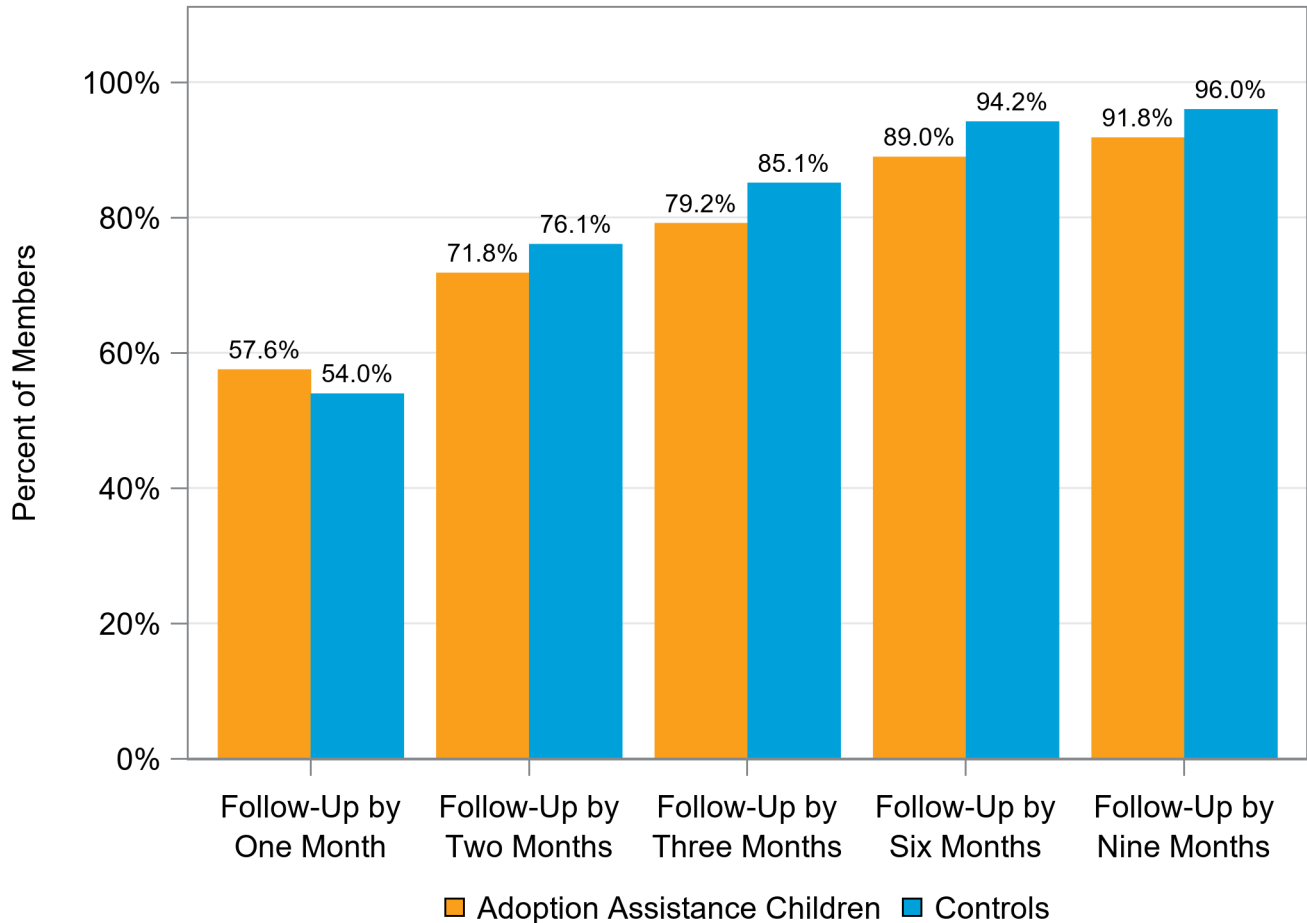
NOTE: The denominators for adoption assistance children and controls are 245 and 276, respectively.

Substance Use

30-Day Follow-Up After ED Visit for AOD Abuse or Dependence (FUA)

The *30-Day Follow-Up After ED Visit for AOD Abuse or Dependence* measure is not presented as a chart because the denominators for adoption assistance children and controls were too small to ensure reliable rates.

Initiation and Engagement of AOD Abuse or Dependence Treatment (IET)

Among children 13 years or older who had a new episode of AOD abuse or dependence, 57.1 percent of adoption assistance children and 36.2 percent of controls initiated treatment within 14 days of diagnosis (Figure 4-13). However, denominators and numerators are small; therefore, the *Engagement of AOD Abuse or Dependence Treatment* measure is not presented as a chart.

The rate difference between adoption assistance children and controls was not statistically significant for initiation of AOD abuse or dependence treatment (*p*=0.07) but was statistically significant for engagement in AOD abuse or dependence treatment (*p*=0.04). Compared to children in foster care, adoption assistance children's rates of initiation were 28.0 percentage points higher. Therefore, adoption assistance children had higher rates of initiation in AOD abuse or dependence treatment compared to the controls and the children in foster care study population. Although, denominators for these measures were small, so rate differences must be interpreted with caution, since a single numerator event can have a large impact on a rate.

Figure 4-13—Rates of Initiation of AOD Abuse or Dependence Treatment Among Adoption Assistance Children and Controls
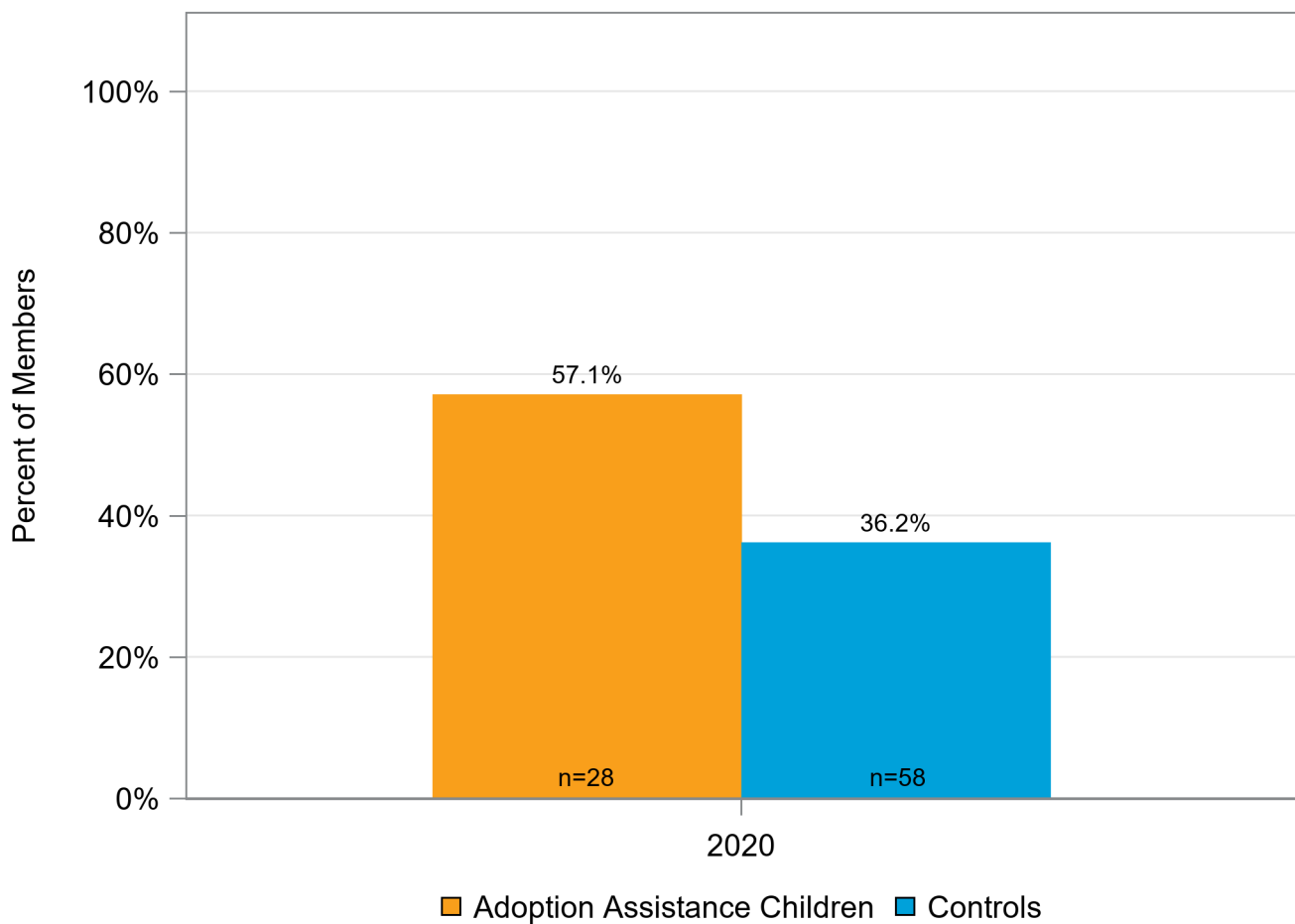
Reproductive Health

Contraceptive Care (CCW)

Among females aged 15 years or older who were at risk of unintended pregnancy, 22.1 percent of adoption assistance children were provided a most effective or moderately effective method of contraception (Figure 4-14), and 3.5 percent of adoption assistance children were provided a long-acting reversible method of contraception (Figure 4-15). In contrast, 32 percent of controls were provided a most effective or moderately effective method of contraception, and 3.5 percent of controls were provided a long-acting reversible method of contraception. The difference between adoption assistance children and controls was statistically significant for the most or moderately effective method ($p<0.001$). Compared to children in foster care, adoption assistance children's rates were 23.9 percentage points and 5.1 percentage points lower for the most effective or moderately effective methods and long-acting reversible methods, respectively. Therefore, adoption assistance had lower rates of contraceptive care compared to both controls and the children in foster care study population.

Figure 4-14—Rates of Contraceptive Care (Most Effective or Moderately Effective Method) Among Adoption Assistance Children and Controls
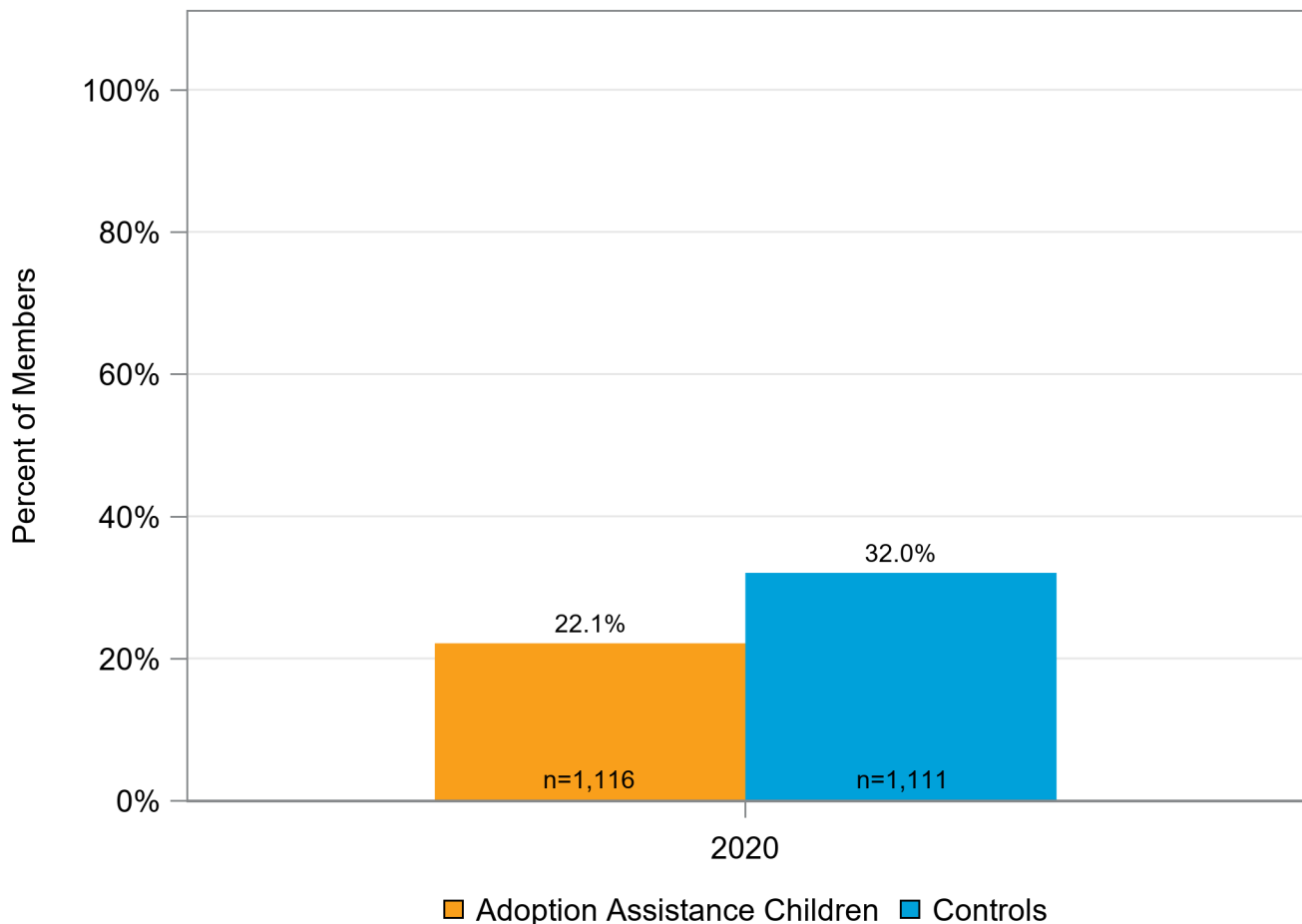
Figure 4-15—Rates of Contraceptive Care (Long-Acting Reversible Method) Among Adoption Assistance Children and Controls
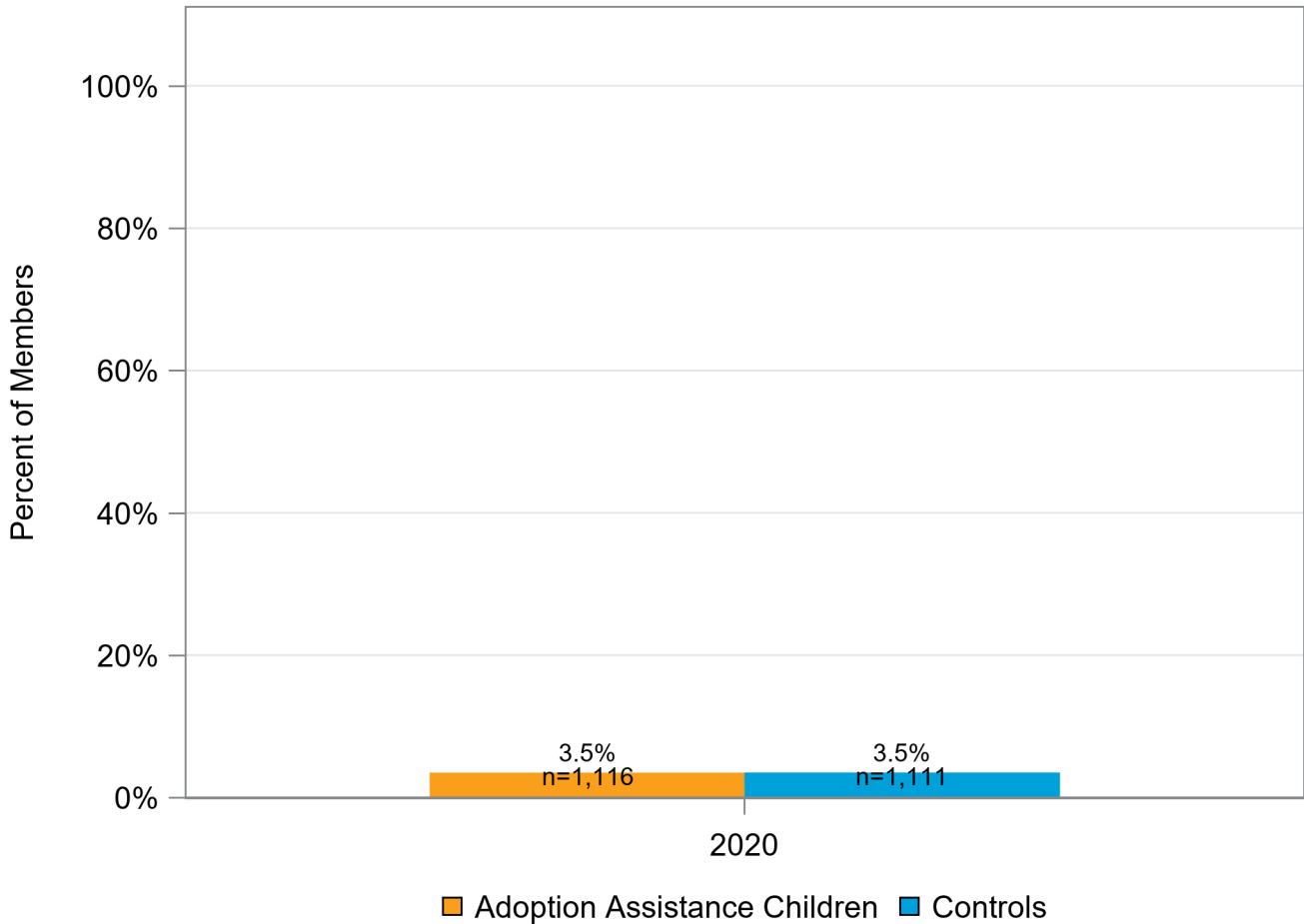
Respiratory Health

Asthma Medication Ratio (AMR)

Figure 4-16 shows that, among children ages 5 years or older who were identified as having persistent asthma, 83.4 percent of adoption assistance children and 76.2 percent of controls had a ratio of controller medications to total asthma medications of 0.50 or greater during the measurement year. Therefore, adoption assistance children were more likely to have an appropriate asthma medication ratio, although findings were not statistically significant for MY 2020 (p=0.08). The rate among adoption assistance children is higher than the MY 2020 national Medicaid 50th percentile for children 5 to 11 years of age and adolescents 12 to 18 years of age.

Figure 4-17 presents asthma medication ratio findings stratified by age category using the CMS Child Core Set technical specifications for this measure (i.e., 5 to 11 Years and 12 to 18 Years). Among children 5 to 11 years of age, adoption assistance children had a slightly lower rate of appropriate asthma medication ratio (84.9 percent) compared to controls (85.9 percent). However, among children

12 to 18 years of age, the opposite trend is observed; adoption assistance children had a higher rate of appropriate asthma medication ratio (82.4 percent) compared to controls (70.2 percent).

Figure 4-16—Rates of Appropriate Asthma Medication Ratio Among Adoption Assistance Children and Controls
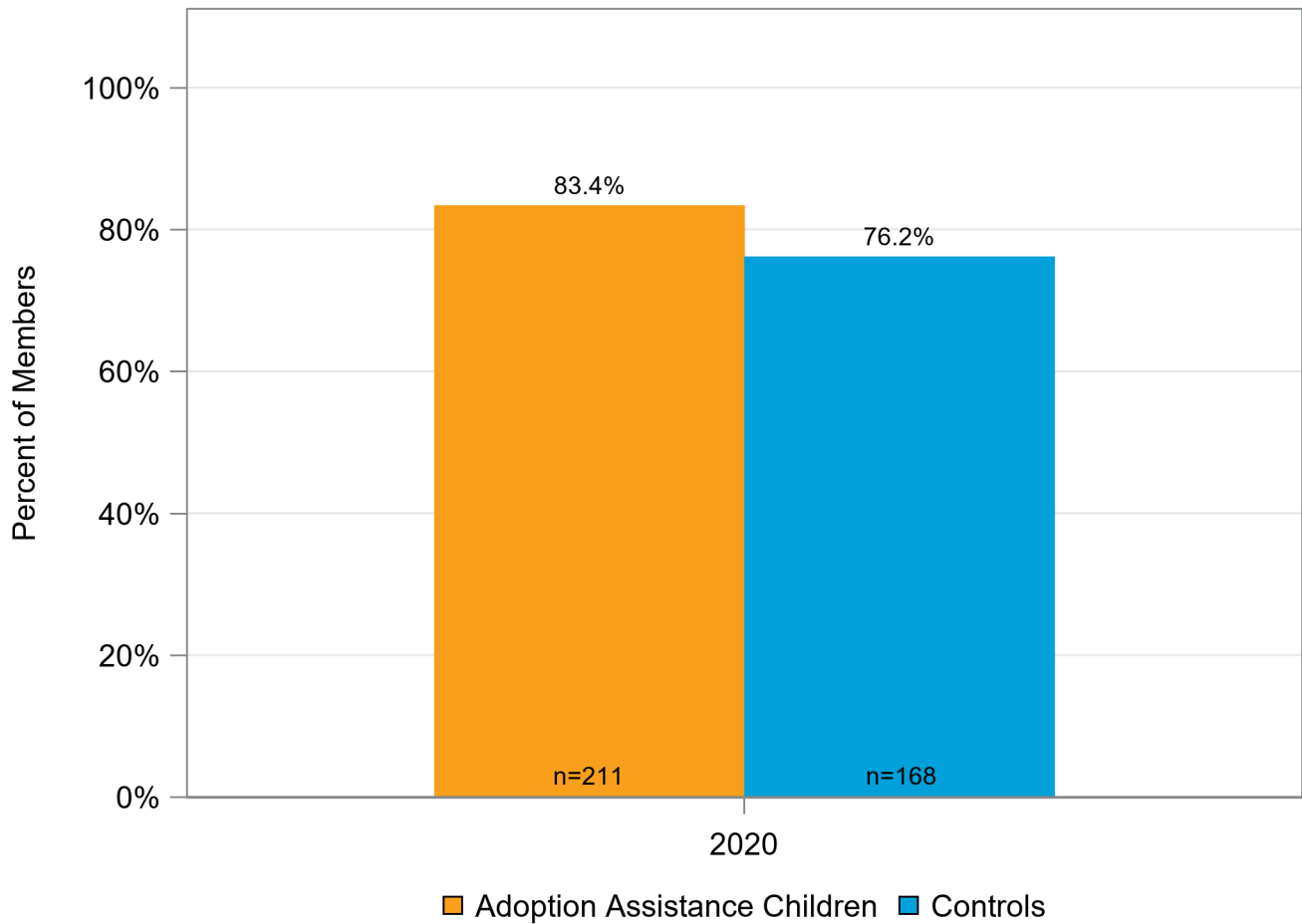
Figure 4-17—Rates of Appropriate Asthma Medication Ratio Among Adoption Assistance Children and Controls, by Age Category
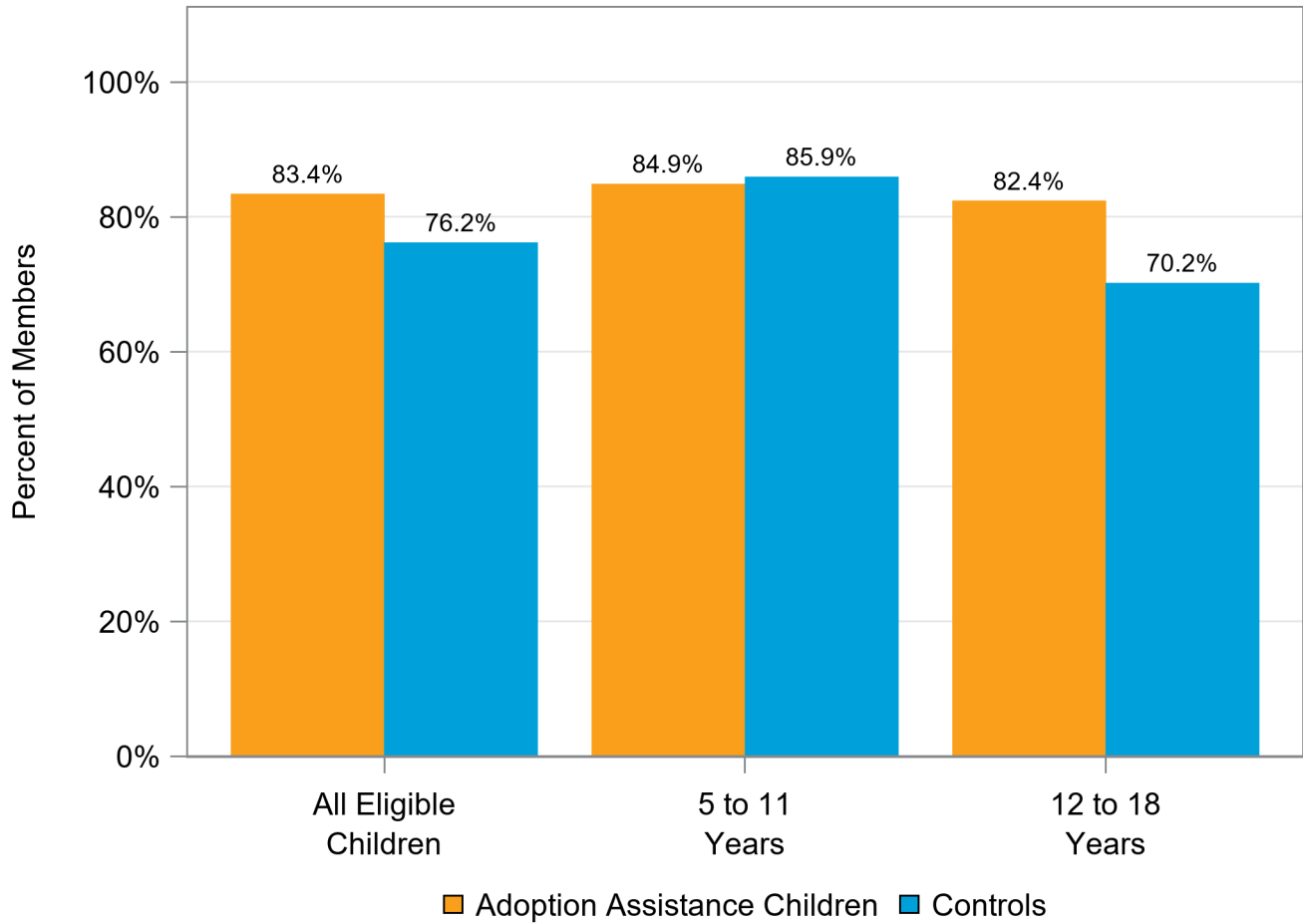
5. Former Foster Care Population Findings

Characteristics of the Former Foster Care Eligible Population and Study Population

This section provides findings describing the demographic characteristics of the 1,801 members in the former foster care eligible population and the 1,288 members in the former foster care study population. The former foster care eligible population includes former foster care members from 19 to 26 years of age as of January 1, 2020, and receiving healthcare coverage from DMAS at any time during MY 2020. Table 5-1 displays the distribution of members in the former foster care eligible population by age category, sex, and race. Members in the former foster care population were disproportionately female (54.7 percent) and Black or African American (36.6 percent) compared to the general population in Virginia, which was 49.2 percent male and 19.9 percent Black or African American in 2019.[5-1,5-2]

Table 5-1—Age, Sex, and Race Distribution of Former Foster Children (n=1,801)

Category	Number	Percent
Age Category		
19 to 22 years	1,281	71.1%
23 to 26 years	520	28.9%
Sex		
Male	816	45.3%
Female	985	54.7%
Race		
Black or African American	660	36.6%
White	1,081	60.0%
Other	60	3.3%

Table 5-2 displays the distribution of members in the former foster care eligible population by region, MCO, and Medicaid managed care program in the measurement year. Please note that since the former foster care eligible population includes every member enrolled in the former foster care program during the measurement year for any length of time, the latest MCO and Medicaid program a member was enrolled with during the measurement year was used. Former foster care members were mostly from the Central (23.5 percent), Tidewater (20.5 percent), or Charlottesville/Western (17.7 percent) regions. The region for a small proportion of former foster care members (0.4 percent) was unknown; these members tended to be missing some address information or had an out-of-state address. Former foster care members were most likely to be enrolled with HealthKeepers (26.0 percent), Virginia Premier (25.6 percent), or Optima (21.4 percent). MCO attribution was missing for 2.4 percent of former

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[5-1] United States Census Bureau. Virginia QuickFacts. Available at: https://www.census.gov/quickfacts/VA. Accessed on: Nov 10, 2021.

[5-2] The United States Census Bureau has not yet published 2020 results for Virginia as of December 2021.

foster care members who were only enrolled in FFS during the measurement year.[5-3] Former foster care members were most likely to be enrolled through the Medallion 4.0 program (93.0 percent). Some former foster care members (2.4 percent) were only enrolled in FFS during the measurement year.[5-4]

Table 5-2—Region, MCO, and Medicaid Program Distribution of Former Foster Children (n=1,801)

Category	Number	Percent
Region		
Central	423	23.5%
Charlottesville/Western	319	17.7%
Northern & Winchester	215	11.9%
Roanoke/Alleghany	278	15.4%
Southwest	S	S
Tidewater	369	20.5%
Unknown	S	S
Latest MCO in the Measurement Year		
Aetna	169	9.4%
HealthKeepers	469	26.0%
Magellan	126	7.0%
Optima	385	21.4%
Virginia Premier	461	25.6%
UnitedHealthcare	147	8.2%
FFS	44	2.4%
Latest Medicaid Program in the Measurement Year		
CCC Plus	82	4.6%
Medallion 4.0	1,675	93.0%
Other	44	2.4%

S indicates that the rate has been suppressed due to a small numerator (i.e., less than or equal to 10).

The study population were members in the former foster care population who were continuously enrolled in either Medallion 4.0 or CCC Plus Medicaid managed care programs with any MCO or a combination of MCOs during the study period, for whom a match not in the former foster care program could be found. Continuous enrollment was defined as enrollment gaps totaling no more than 45 days. Among the former foster care eligible population, 72.0 percent (n=1,297) of members met the requirements for the study population. The demographic makeup of the study population mirrored the

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[5-3] Former foster children may temporarily move to FFS and may not be enrolled with an MCO during the measurement year.

[5-4] Former foster children may temporarily move to FFS and may not be enrolled through a managed care program during the measurement year.

demographic makeup of the former foster care eligible population, except that there were 3.3 percent more male members.

Table B-3 and Table B-6 present the demographic and health characteristics of continuously enrolled former foster care members (n=1,297) and the continuously enrolled comparison group (n=117,015) prior to matching. Continuously enrolled former foster care members tended to be younger, male, White, less likely to be enrolled with Aetna, and less likely to be enrolled through CCC Plus compared to the continuously enrolled comparison group. Furthermore, continuously enrolled former foster care members were less likely to live in the Tidewater or Northern & Winchester regions and more likely to live in the Charlottesville/Western, Roanoke/Alleghany, and Southwest regions. In terms of health characteristics, continuously enrolled former foster care members were more likely to have diagnoses for several health conditions, primarily mood disorders and anxiety disorders. Additionally, former foster care members were more likely to have ED and acute inpatient visits for mental health than the comparison group, which may indicate greater severity of mental illness among former foster care members. The higher rate of ED visits and acute inpatient visits may also indicate that former foster care members are more likely to seek care for mental health through these means, especially if prior access to psychiatric care had been limited prior to entering foster care.

HSAG was able to match 99.3 percent (n=1,288) of continuously enrolled former foster care members to members in the comparison group with similar demographic and health characteristics. Table B-9 and Table B-12 present the demographic and health characteristics of the final study population and their matched controls. Matching successfully balanced all demographic and health characteristics between the study population and the controls.

Appendix B presents detailed descriptions of the demographic and health characteristics of former foster care members and members in the comparison group prior to matching, as well as covariate balance findings.

Healthcare Utilization Among Former Foster Children and Controls

This section provides findings from the study indicators used to assess healthcare utilization for the former foster care members in the study population, as well as findings for the matched controls not enrolled through the former foster care program. In addition to the summarized findings presented in the remainder of this section, Appendix C presents detailed study indicator results stratified by age category, MCO, and region.

Although the controls have been matched to the former foster care members on a variety of demographic and health characteristics, HSAG advises caution in comparing the study indicator results between the former foster care members and controls. Due to the different criteria for denominators across measures, one member in a matched pair may be included in a measure calculation while the other member is not. When matched pairs are separated, the distribution of characteristics in the denominator-eligible study population and the denominator-eligible controls may differ from the overall distribution, and balanced covariates are no longer guaranteed. Furthermore, HSAG advises caution in interpreting the *p*-values, as denominator sizes vary by measure, and sample size influences the precision of the *p*-value calculation. Healthcare utilization in MY 2020 may be impacted by the COVID-19 pandemic; however, rate comparisons within MY 2020 (i.e., to controls) are still reliable.

Primary Care

Child and Adolescent Well-Care Visits (WCV)

For MY 2020 Figure 5-1 shows that among members who were 21 years old or younger as of December 31, 2020, 15.3 percent of former foster care members and 14.7 percent of controls had a well-care visit with a PCP or an OB/GYN; however, the difference was not statistically significant (p=0.79). Since former foster care members are 19 to 26 years of age at the beginning of the measurement year, and the CMS Child Core Set age categories are based on age at the end of the measurement year, the 18 to 21 years category includes only former foster care members who were 19 to 21 years old at the end of the measurement year. Both of these rates fall below the MY 2020 national Medicaid 25th percentile.

Figure 5-1—Rates of Child and Adolescent Well-Care Visits Among Former Foster Children and Controls
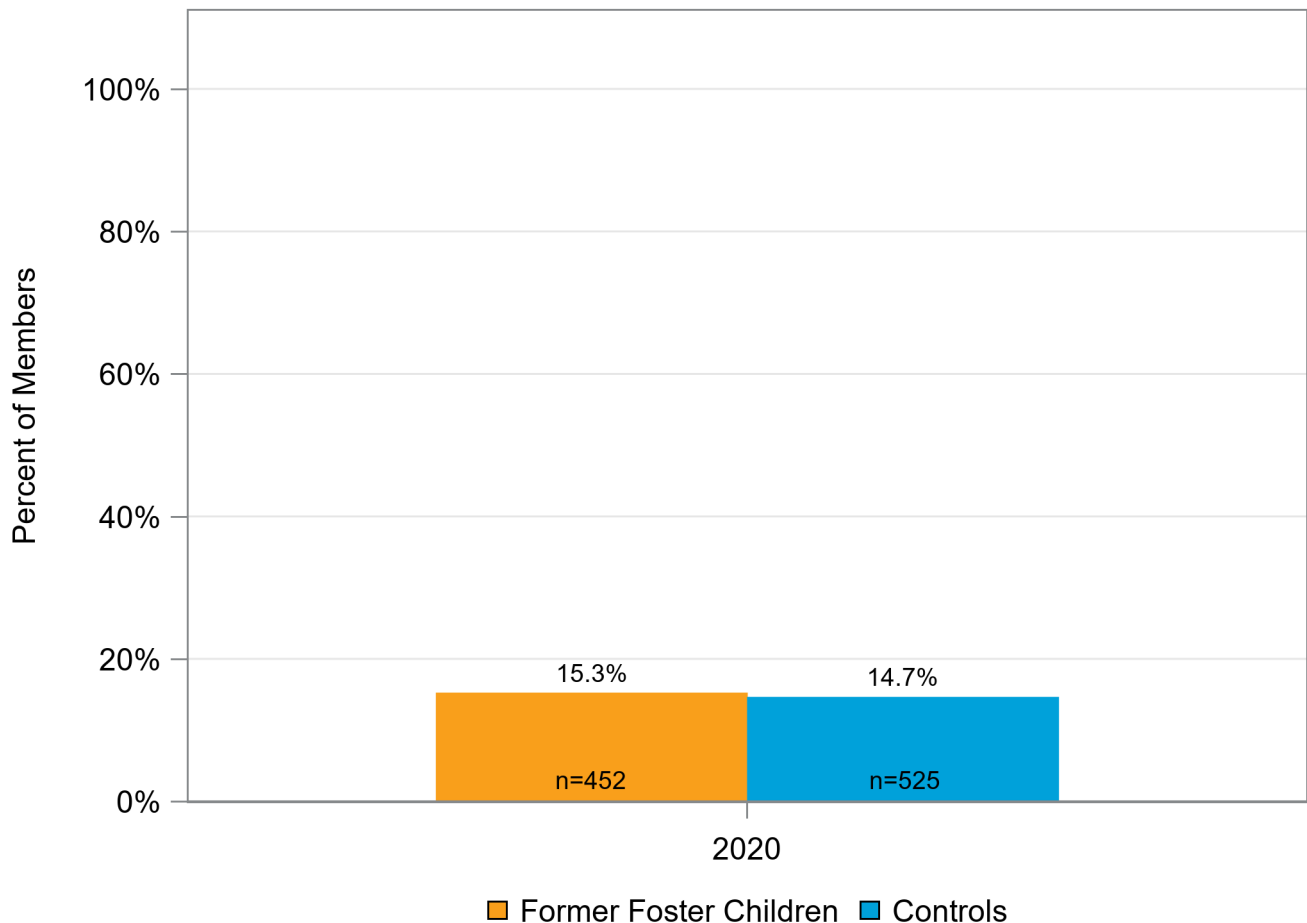
Oral Health

Annual Dental Visit (ADV) and *Preventive Dental Services (PDENT-CH)*

Among former foster care members who were 21 years old or younger by the end of the measurement year, 26.5 percent had a dental visit during MY 2020 (Figure 5-2). Similarly, among former foster care members who were 21 years old or younger by the end of the measurement year, 20.3 percent received preventive dental services (Figure 5-3). Rates of annual dental visits and preventive dental services for controls were 24.8 percent and 16.1 percent, respectively. The rate differences between former foster care members and controls were not significantly different for either the annual dental visits or preventive dental visits measures (p=0.67 and p=0.23, respectively). Additionally, for the annual dental visit measure, the rates for the former foster care members were below the MY 2020 national Medicaid 33rd percentile, and the rates for the controls were below the MY 2020 national Medicaid 25th percentile for the 19 to 21 years group. Therefore, former foster children's rates of dental healthcare utilization rates were higher than controls but lower than national benchmarks.

Figure 5-2—Rates of Annual Dental Visits Among Former Foster Children and Controls
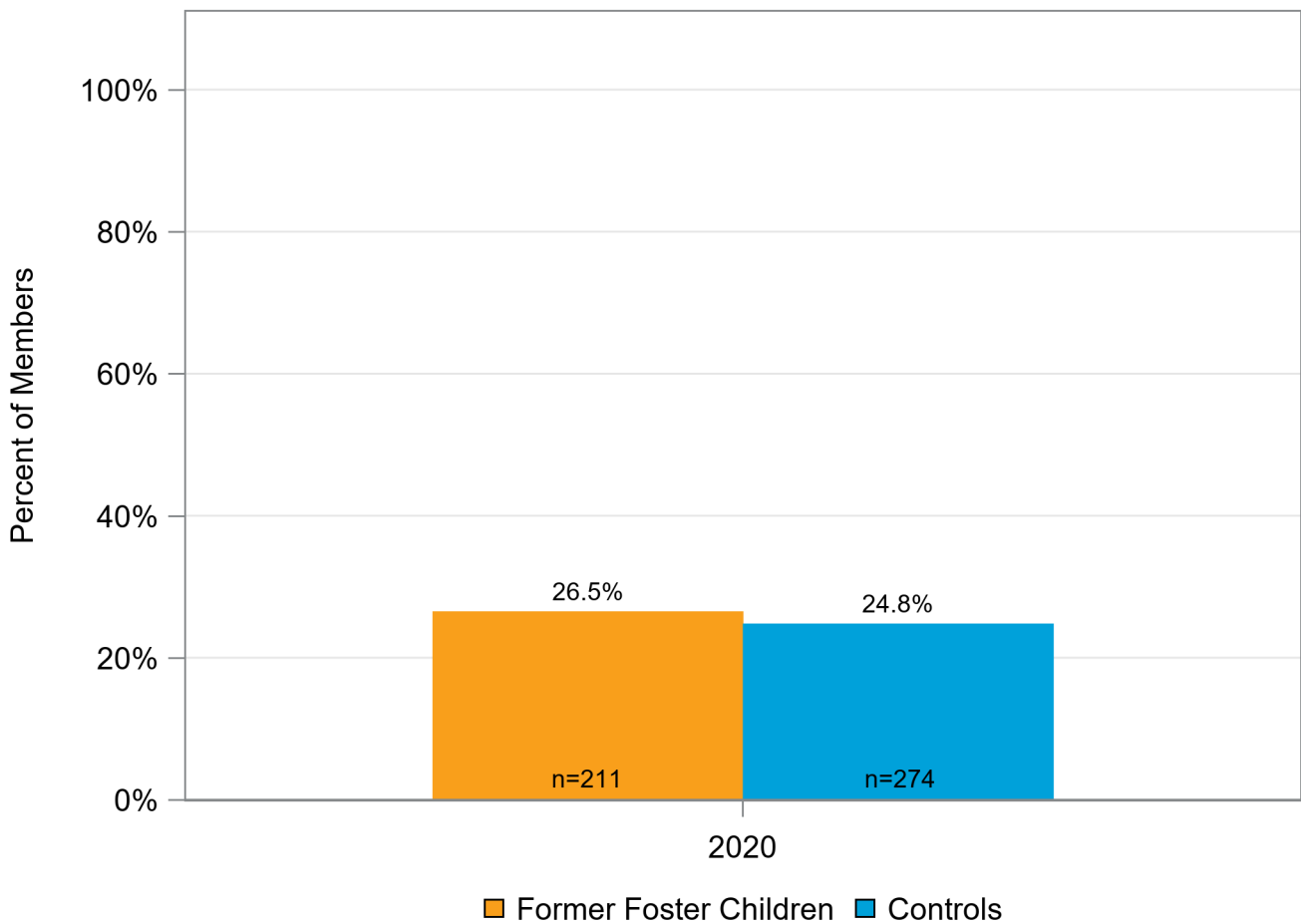
Figure 5-3—Rates of Preventive Dental Services Among Former Foster Children and Controls
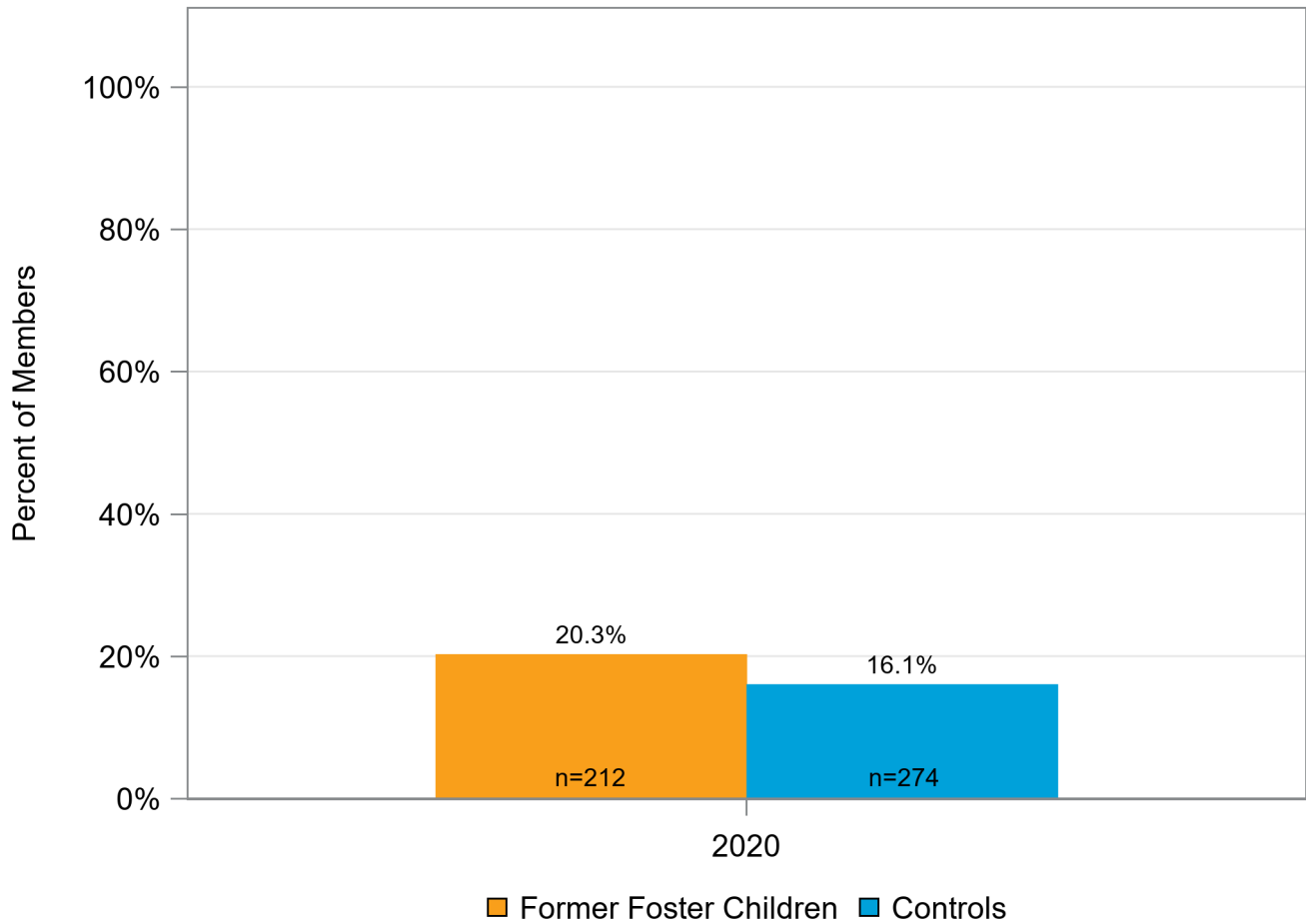
Behavioral Health

7-Day Follow-Up After Hospitalization for Mental Illness (FUH)

For MY 2020, Figure 5-4 shows that among hospitalizations of members aged 19 years or older for mental illness or intentional self-harm, 22.6 percent of former foster care members' hospitalizations had a follow-up visit with a mental health provider within seven days. Although the rate for the controls was suppressed due to a small numerator, the difference between the rates for the former foster care population and controls was not statistically significant (p=0.40). The denominators for this measure demonstrate that both former foster care members and controls had few instances of hospitalization for mental illness (n=62 hospitalizations and n=31 hospitalizations, respectively) although former foster care members had twice as many hospitalizations as the controls. Additionally, both of these rates fall below the MY 2020 national 25th Medicaid percentile for the 18 to 64 years age group.

Figure 5-4—Rates of 7-Day Follow-Up After Hospitalization for Mental Illness Among Former Foster Children and Controls
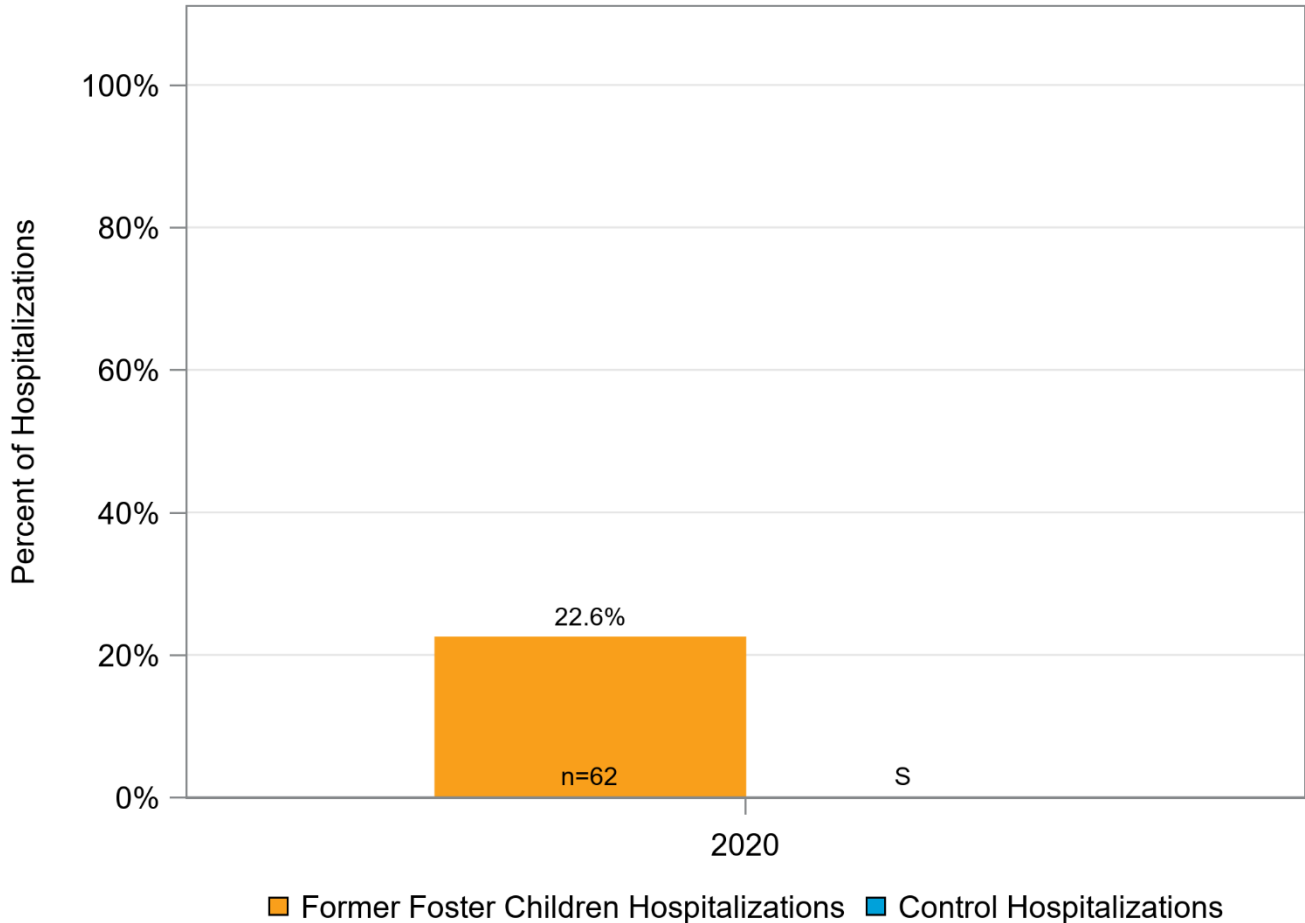
S indicates that the rate has been suppressed due to a small numerator (i.e., less than or equal to 10).

30-Day Follow-Up After ED Visit for Mental Illness (FUM)

Figure 5-5 shows that for MY 2020, among ED visits for members aged 19 years or older for mental illness or intentional self-harm, 36.1 percent of former foster care member's ED visits had a follow-up visit for mental illness within 30 days. Although the rate for the controls was suppressed due to a small numerator, the difference between the rates for the former foster care population and controls was not statistically significant (*p*=0.24). The denominators for this measure demonstrate that both former foster care members and controls had few instances of ED visits for mental illness (n=36 ED visits and n=19 ED visits, respectively) although former foster care members had more ED visits for mental illness compared to the controls. Additionally, the rate for the former foster care population falls below the MY 2020 national Medicaid 25th percentile for the 18 to 64 years age group; however, the rate for controls is above the national Medicaid 50th percentile for the 18 to 64 years age group.

Figure 5-5—Rates of 30-Day Follow-Up After ED Visit for Mental Illness Among Former Foster Children and Controls
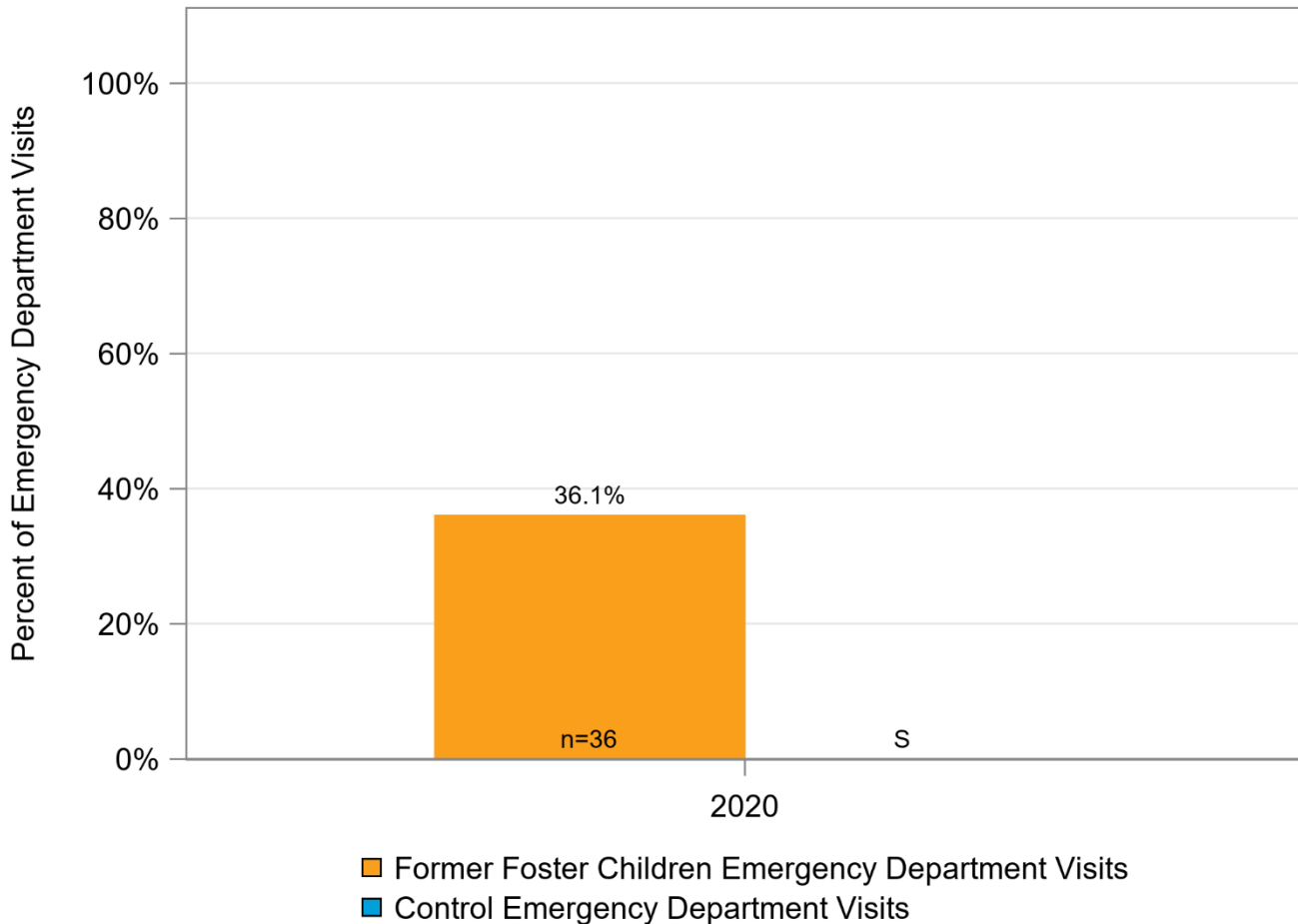
S indicates that the rate has been suppressed due to a small numerator (i.e., less than or equal to 10).

Substance Use

30-Day Follow-Up After ED Visit for AOD Abuse or Dependence (FUA)

The *30-Day Follow-Up After ED Visit for AOD Abuse or Dependence* measure is not presented as a chart because the numerators and denominators for adoption assistance children and controls were suppressed (i.e., numerators and/or denominators were less than 11). Rates of follow-up after ED visits for AOD abuse or dependence for former foster care members were approximately 40 percentage points lower than the rates among controls ($p<0.03$). Therefore, former foster care members are receiving follow-up after ED visits for AOD abuse or dependence at much lower rates than similar members not in the former foster care program. The denominators for this measure demonstrate that both former foster care members and controls had few instances of ED visits for AOD abuse or dependence although former foster care members had more ED visits for AOD abuse or dependence

compared to the controls. Additionally, the rate for the former foster care population falls below the MY 2020 national Medicaid 10th percentile for the 18 years and older age group; however, the rate for controls is above the MY 2020 national Medicaid 90th percentile for the 18 years and older age group.

Initiation and Engagement of AOD Abuse or Dependence Treatment (IET)

Among members 19 years or older who had a new episode of AOD abuse or dependence, 43.0 percent of former foster care members initiated treatment within 14 days of diagnosis (Figure 5-6), and 13.0 percent of former foster care members engaged with ongoing AOD treatment by initiating treatment and having two or more additional services or treatments within 34 days of the initiation visit (Figure 5-7). In contrast, 47.3 percent of controls initiated treatment, and 23.0 percent of controls engaged in treatment. Rate differences between former foster care members and controls were not statistically significant. Treatment rates for former foster care members were just below the MY 2020 national Medicaid 50th percentile for the 18 years and older age group; however, the treatment rates for controls were above the MY 2020 national Medicaid 50th percentile for the 18 years and older age group (with the engagement rate for controls above the national Medicaid 75th percentile). Therefore, former foster children's rates of initiation and engagement were lower than controls but similar to national benchmarks.

Figure 5-6—Rates of Initiation of AOD Abuse or Dependence Treatment Among Former Foster Children and Controls
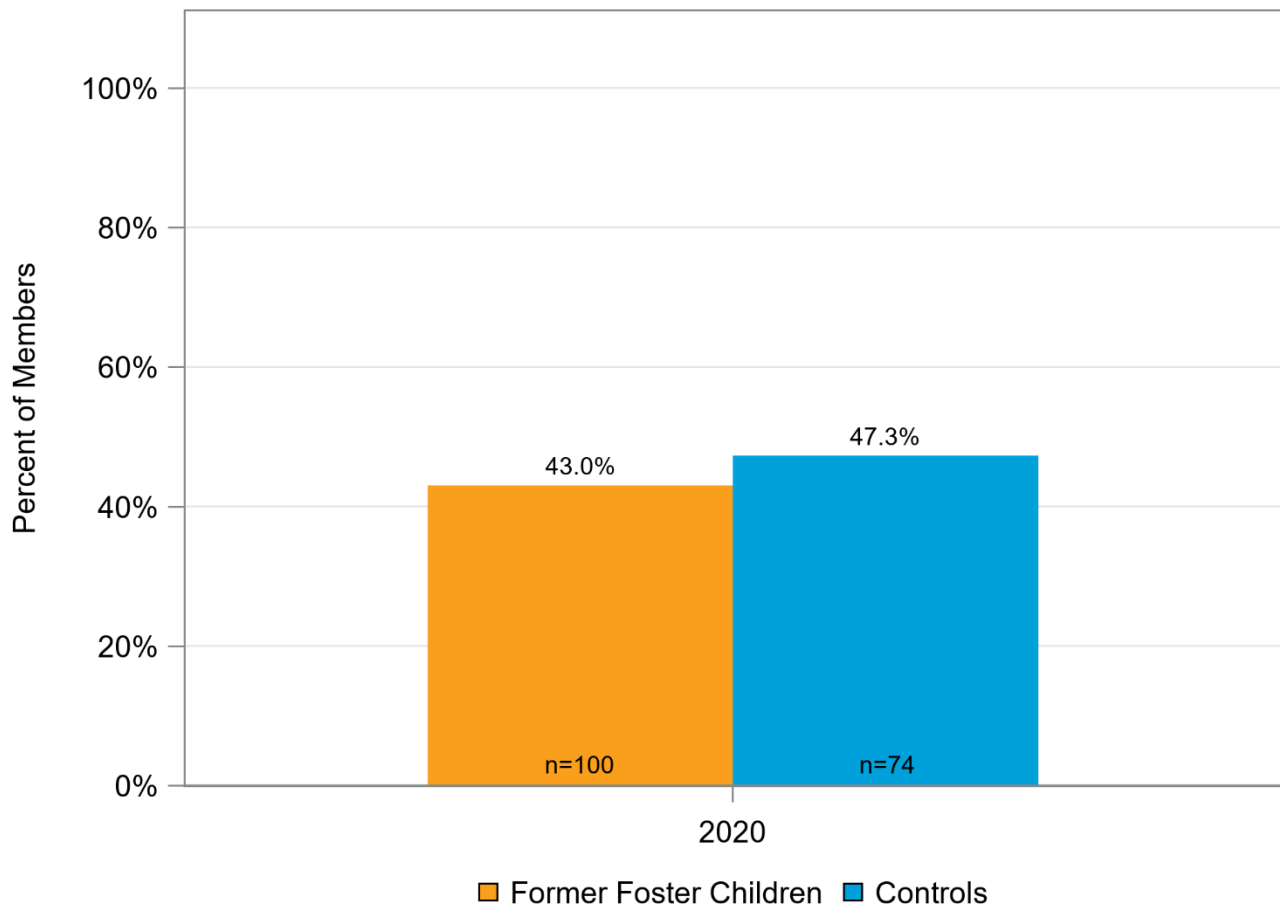
Figure 5-7—Rates of Engagement of AOD Abuse or Dependence Treatment Among Former Foster Children and Controls
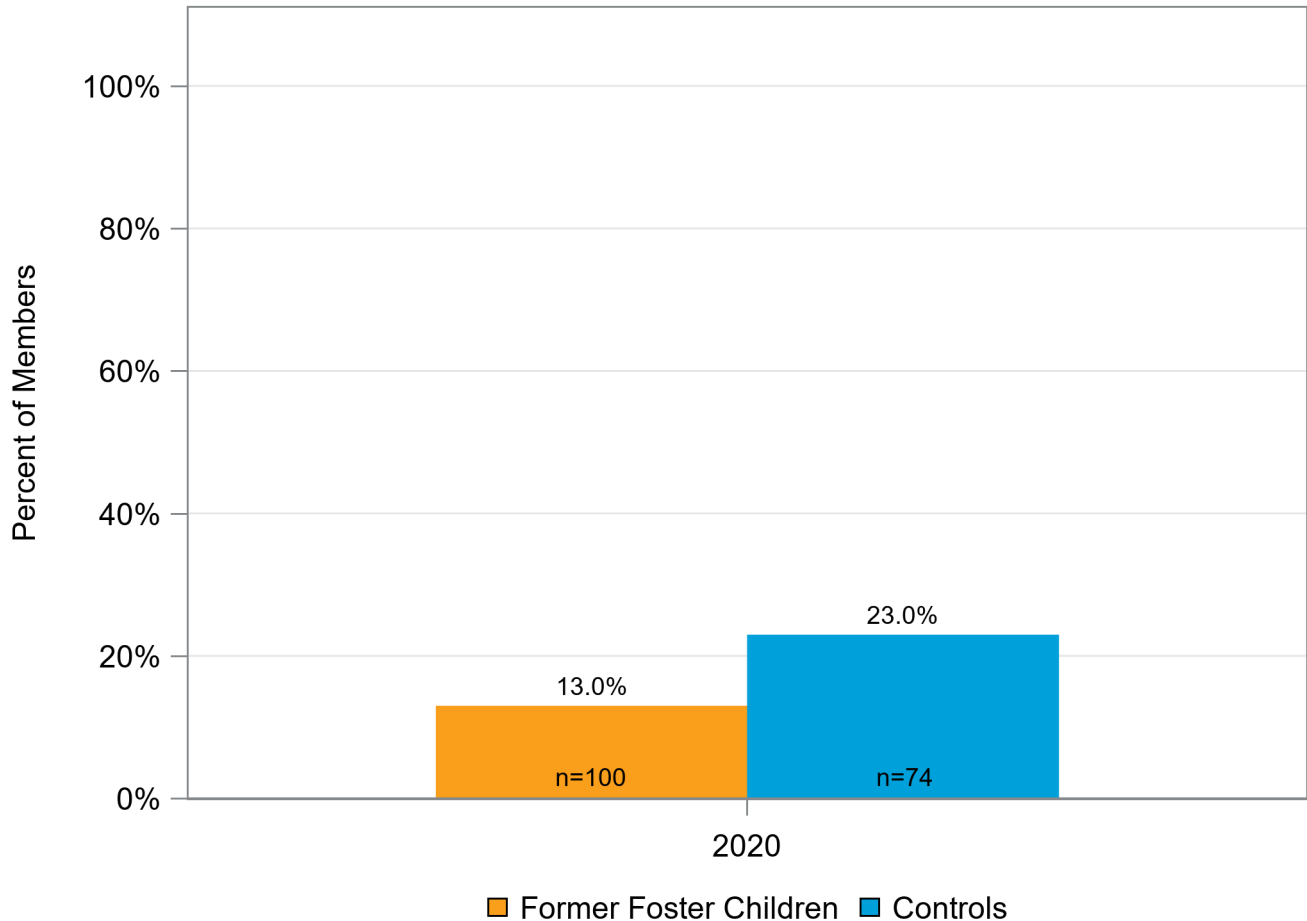
Reproductive Health

Contraceptive Care (CCW)

Among females aged 19 years or older who were at risk of unintended pregnancy, 35.8 percent of former foster care members were provided a most effective or moderately effective method of contraception (Figure 5-8), and 5.5 percent of former foster care members were provided a long-acting reversible method of contraception (Figure 5-9). In contrast, 41.4 percent of controls were provided a most effective or moderately effective method of contraception, and 5.9 percent of controls were provided a long-acting reversible method of contraception. The difference between former foster care members and controls was statistically significant for the most or moderately effective method of contraception (p=0.05). Therefore, former foster care members were substantially less likely to receive some form of contraceptive care.

Figure 5-8—Rates of Contraceptive Care (Most Effective or Moderately Effective Method) Among Former Foster Children and Controls
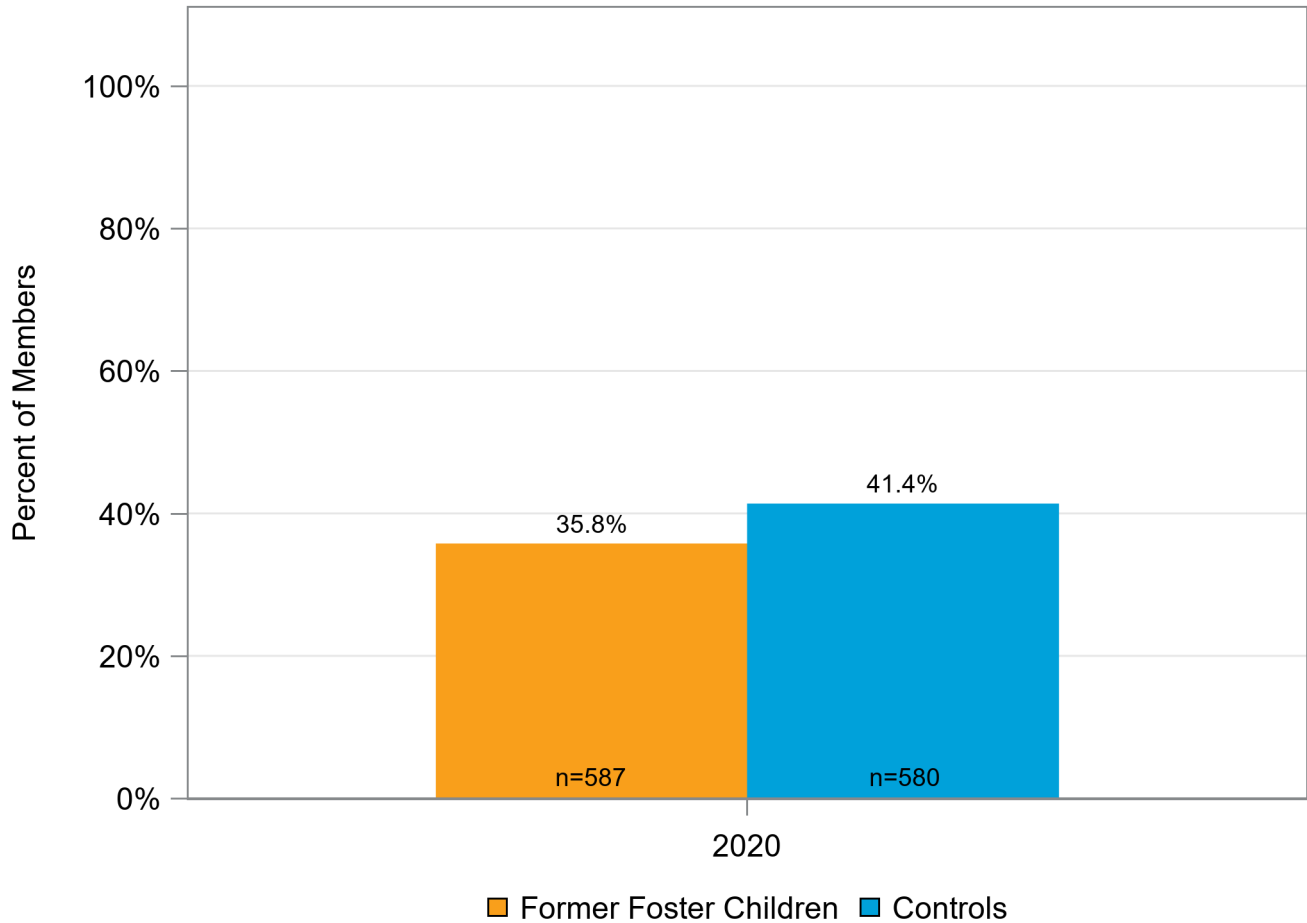
Figure 5-9—Rates of Contraceptive Care (Long-Acting Reversible Method) Among Former Foster Children and Controls
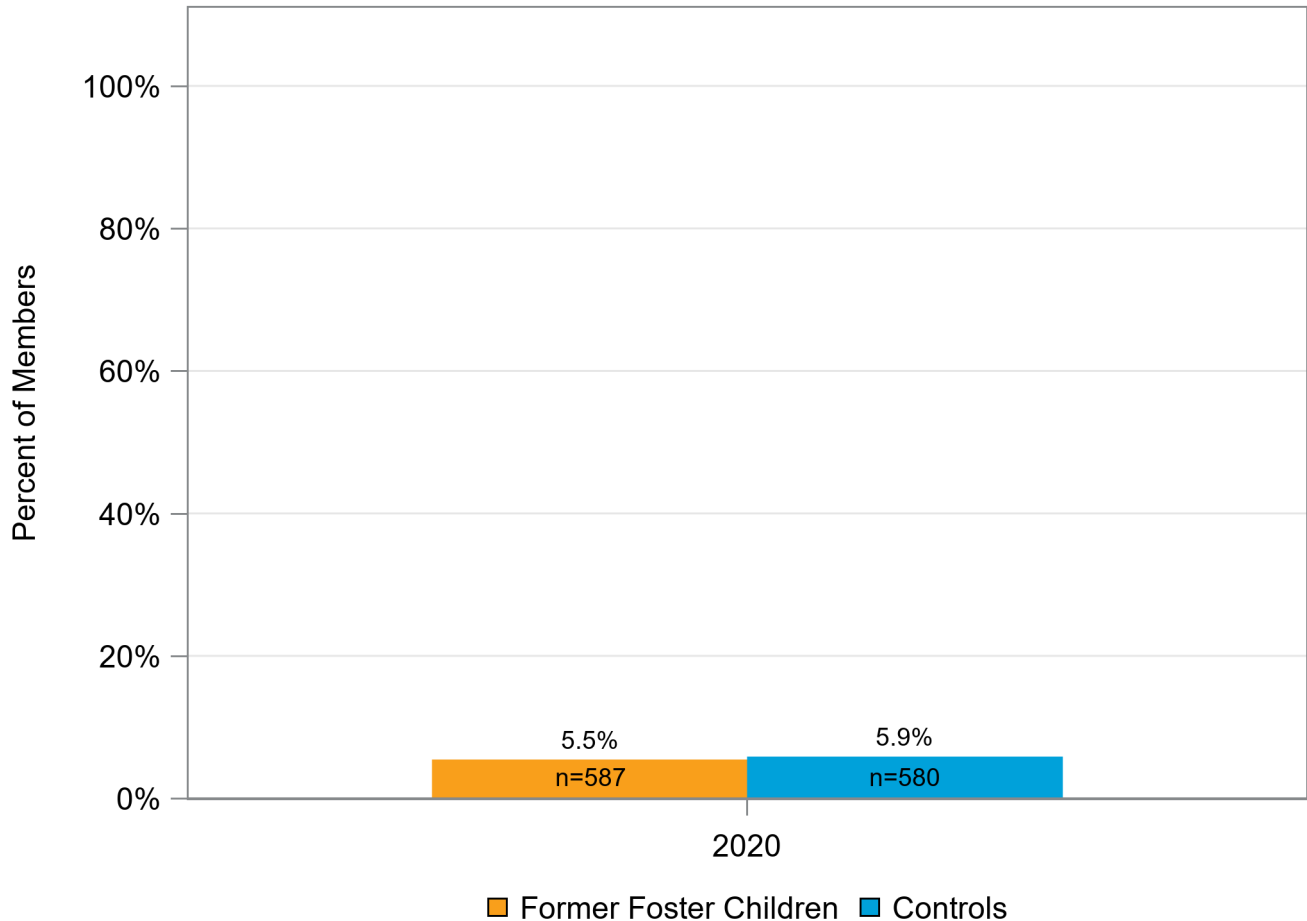
Respiratory Health

Asthma Medication Ratio (AMR)

The *Asthma Medication Ratio* measure is not presented as a chart because the numerators or denominators for adoption assistance children and controls were suppressed (i.e., numerators and/or denominators were less than 11). Former foster care members were more likely to have an appropriate asthma medication ratio, although findings were not statistically significant for MY 2020 (p=0.40). The denominators for this measure demonstrate that both former foster care members and controls had few instances of persistent asthma, although more controls were identified as having persistent asthma compared former foster care members. The rate for former foster care members was just below the MY 2020 national Medicaid 50th percentile for the 19 to 50 years age group; however, the rate for controls was below the MY 2020 national Medicaid 10th percentile for the 19 to 40 years age group.

6. Conclusions and Recommendations

SFY 2020–2021 is the sixth year of the Foster Care Focus Study and the third year to conduct a comparative analysis to similar children also enrolled in Medicaid (i.e., controls). Additionally, this study trends children in foster care's healthcare utilization rates over time and provides baseline rates for two new study populations: adoption assistance children and former foster children. HSAG collaborated with DMAS to ensure that this study may inform current and future quality improvement actions affecting children in foster care, children in the adoption assistance program, and young adults formerly in foster care. Comparing children in foster care, adoption assistance children, and former foster children to similar members offers a comprehensive investigation of the unique successes and challenges in these members' healthcare. The present rates for the study populations can be understood in the context of the indicator results for controls, after accounting for Medicaid managed care enrollment, age, race, sex, region, MCO, Medicaid program, and pertinent health characteristics. Furthermore, tracking rates over time provides insight into the impact of the Medallion 4.0 program, the COVID-19 pandemic, and other variables correlated with time on healthcare utilization. The following section discusses limitations of the study and then provides conclusions and recommendations specific to each study population.

Study Limitations

Study findings and conclusions may be affected by limitations related to the study design and source data. As such, caveats include, but are not limited to, the following:

- Study indicator rates must be interpreted with caution given the denominator limitations. The covariate balance between the denominator-limited study populations and the denominator-limited controls group may be disrupted when one member in a matched pair qualifies for a study indicator denominator and the other member does not. The smaller the denominators, the greater the risk of imbalance between the study populations and their controls.

- Study indicator results and the accuracy of demographic characteristics (e.g., region, MCO) may be influenced by the accuracy and timeliness of the administrative claims and encounter data used for calculations and must be interpreted within the broader context of the population. Study indicators are also based on HEDIS and CMS Core Set technical specifications, which may not comprehensively mirror the complete range of clinical practices recommended by AAP for members in the study population (e.g., an enhanced periodicity schedule customized to align with the needs of children in foster care). Furthermore, selected study indicators were originally developed by NCQA and/or CMS to assess access to care or the degree to which care adhered to clinical guidelines. These measures were not necessarily developed to assess healthcare utilization. For example, most study indicators do not assess the frequency of service utilization; they only assess whether or not a visit occurred. Findings should be interpreted with respect to the intent of the HEDIS and CMS Core Set technical specifications.

- Methodology changes in MY 2020 may impact trending results. The current study trended study indicator rates for children in foster care across MY 2018, MY 2019, and MY 2020. Since adoption assistance children were included as a study population in MY 2020, they were removed from the pool of members from which controls for children in foster care could be selected. Therefore, while the control pool for MY 2018 and MY 2019 included adoption assistance children, the control pool

for MY 2020 did not. Of note, only 1.4 percent of members in the control pool for MY 2019 would have been removed by the methodology change. Additionally, while MY 2018 and MY 2019 only assessed members enrolled through Medallion 4.0, the MY 2020 analyses also included members enrolled through CCC Plus. However, only 23 children in foster care in the study population were enrolled in CCC Plus. Therefore, given that the methodology changes only affect a small proportion of members, HSAG expects impacts on trending to be limited.

- The study populations and controls were limited by several factors, including continuous enrollment and having a comparable match; therefore, study findings are not generalizable to other children in foster care, adoption assistance, or former foster children; to other members not in these programs; or to other HEDIS or CMS Core Set measure calculations. However, despite the limitations of the denominators, study indicator results are generalizable to the full study population and controls.

- MY 2020 findings may be impacted by the onset of the COVID-19 pandemic. Therefore, HSAG recommends exercising caution when interpreting MY 2020 findings or making comparisons to prior year results, where applicable.

Conclusions and Recommendations

Children in Foster Care

Children in foster care are children who have been removed from their birth family homes for reasons of neglect, abuse, abandonment, or other issues endangering their health and/or safety.[6-1] While these children are in foster care, the state has custody and therefore primary responsibility for ensuring children receive the appropriate healthcare services. For example, a foster child's service worker must ensure the child meets a schedule of well-child visits and dental examinations based on nationally recognized guidelines.[6-2] This study demonstrated that children in foster care have higher rates of appropriate healthcare utilization than comparable controls for most study indicators, and this finding is consistent across all three measurement years. Study findings show that rate differences between children in foster care and controls were greatest among dental measures, where the rates of annual dental visits and preventive dental services among children in foster care were nearly 30 percentage points higher than the rates for controls. Rate differences between children in foster care and controls across study indicators persisted even after matching on many demographic and health characteristics.

During MY 2020, children in foster care had lower rates compared to controls for only two study indicators: *Initiation and Engagement of AOD Abuse or Dependence Treatment.* For initiation of AOD abuse or dependence treatment, children in foster care had a higher rate than controls during MY 2019 and a lower rate during MY 2018. For engagement of AOD abuse or dependence treatment, children in foster care had a higher rate than controls for both MY 2018 and MY 2019. Therefore, despite lower rates in MY 2020, children in foster care have not historically had lower rates than controls for these indicators.

[6-1] Virginia Department of Social Services. Foster Care (FC). Available at: https://www.dss.virginia.gov/family/fc/index.cgi#manuals. Accessed on: Jan 12, 2022.
[6-2] Virginia Department of Social Services. Child and Family Services Manual: Identifying Services to Be Provided. Available at: Child and Family Services Manual.pdf. Accessed on: Nov 18, 2021.

Among children in foster care, nine study indicator rates decreased from MY 2019 to MY 2020, and 13 study indicator rates decreased from MY 2018 to MY 2020. Among controls for children in foster care, six study indicator rates decreased from MY 2019 to MY 2020, and five study indicator rates decreased from MY 2018 to MY 2020. These trends may be attributable to the COVID-19 pandemic during MY 2020. For instance, from March 2020 to May 2020, most elective procedures and outpatient visits were cancelled or postponed nationwide.[6-3] Additionally, while outpatient visits rebounded by summer 2020 for adults, healthcare utilization of children remained low.[6-4] Despite the widespread decline in healthcare utilization, MY 2020 was the first measurement year in which children in foster care had a higher rate for the *7-Day Follow-Up After Hospitalization for Mental Illness* measure compared to controls. Some of this improvement may be attributable to changes to the measure specifications, which allows clinics to be considered mental health providers; however, the increase in children in foster care's MY 2020 rates from MY 2019 (26.9 percentage points) was still larger than the increase in controls' rates (14.6 percentage points) and the increase in the national Medicaid 50th percentile among children (4.5 percentage points). This finding demonstrates that children in foster care more frequently receive mental health follow-up care in a clinic setting compared to controls.

Based on the findings detailed in this report, HSAG offers the following recommendations related to children in foster care:

- While children in foster care demonstrated lower rates of healthcare utilization than controls for the *Initiation and Engagement of AOD Abuse or Dependence Treatment* study indicators during MY 2020, children in foster care had higher rates of utilization during MY 2019, and MY 2020 results may have been impacted by the COVID-19 pandemic. DMAS may consider monitoring the *Initiation and Engagement of AOD Abuse or Dependence Treatment* study indicators, as well as the 14 other study indicators where rates declined in MY 2020 among children in foster care, to ensure that these rates return to pre-pandemic levels.
- While the current study design provides insight into utilization of healthcare services, it does not assess the quality of care received. DMAS may consider having future studies focus on high utilization medical conditions that are specific to children in foster care and whether these members are receiving appropriate care for these conditions. For example, a future focus study may assess whether members in these populations with diabetes are receiving and adhering to appropriate medication.

Adoption Assistance Children

Children in the adoption assistance program are children who have been adopted from foster care but who faced additional barriers to adoption compared to other children in foster care, such as special

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[6-3] Choi SE, Simon L, Basu S, Barrow JR. *Changes in dental care use patterns due to COVID-19 among insured patients in the United States*. Journal of the American Dental Association. 2021. Available at: https://jada.ada.org/article/S0002-8177(21)00417-7/pdf. Accessed on: Nov 18, 2021.

[6-4] Mehrotra A, Chernew M, Linetsky D, Hatch H, Cutler D, Schneider E. *The Impact of COVID-19 on Outpatient Visits in 2020: Visits Remained Stable, Despite a Late Surge in Cases.* The Commonwealth Fund. Available at: https://www.commonwealthfund.org/publications/2021/feb/impact-covid-19-outpatient-visits-2020-visits-stable-despite-late-surge. Accessed on: Dec 1, 2021.

medical conditions and extended time spent in foster care.[6-5] Whereas the state is primarily responsible for ensuring children in foster care receive appropriate healthcare services, the adoptive parents are primarily responsible for children in the adoption assistance program. Furthermore, adoptive parents are not required to ensure the adoption assistance child meets the same medical service requirements as children in foster care, such as a specific schedule of well-child visits.[6-6] SFY 2020–2021 is the first year to introduce analyses for adoption assistance children. Study findings indicate that adoption assistance children had higher rates of appropriate healthcare utilization than comparable controls for 60 percent of study indicators, of which three were significantly better than controls (i.e., *Child and Adolescent Well-Care Visits*, *Annual Dental Visit*, and *Preventive Dental Services*).

During MY 2020, adoption assistance children had lower rates than controls for eight study indicators, of which three were significantly lower than controls (i.e., *Contraceptive Care [Most or Moderately Effective Method]* and *Follow-Up Care for Children Prescribed ADHD Medication—Six-Month Follow-Up* and *Nine-Month Follow-Up)*. Adoption assistance children also had lower rates than children in foster care for 16 study indicators; however, these rate differences may be attributable to external factors, such as program requirements (e.g., service workers must ensure children in foster care meet a mandated schedule of medical services, whereas adoption assistance children are not held to this schedule) and who has responsibility for provision of healthcare services.

Based on the findings detailed in this report, HSAG offers the following recommendations related to adoption assistance children:

- SFY 2020–2021 is the first year to introduce analyses for adoption assistance children. These analyses intended to provide baseline rates for this population. However, considering the impact of the COVID-19 pandemic on children in foster care's rates during MY 2020, adoption assistance children's rates during MY 2020 may not be representative of their historical rates. Therefore, DMAS should consider monitoring adoption assistance children's rates over time to verify appropriate baseline rates, identify areas for improvement, and monitor impacts of program changes.

- Given that healthcare utilization was lower among children in the adoption assistance program compared to controls and to children in foster care, DMAS should conduct a study that follows a cohort of children in foster care who continue to be enrolled in Medicaid managed care after adoption, as well as a control group of non-foster care members with similar continuous enrollment, demographic, and health characteristics. The study would look at measure results across multiple years to determine how comparisons between the two populations change as members move between programs (e.g., are rate changes driven by leaving the foster care system or are rate changes driven by the characteristics of members who qualify for the adoption assistance program).

[6-5] Virginia Department of Social Services. Adoptive Assistance Screening Tool. Available at: https://dss.virginia.gov/files/division/dfs/ap/intro_page/forms/032-04-0091-06-eng.pdf. Accessed on: Nov 12, 2021.

[6-6] Virginia Department of Social Services. Child and Family Services Manual: Adoption Assistance. Available at: https://www.dss.virginia.gov/files/division/dfs/ap/intro_page/manuals/07-01-2019/section_2_adoption_assistance_-July_2019.pdf. Accessed on: Jan 12, 2022.

Former Foster Children

For this study, former foster children were defined as young adults age 19 to 26 years who were in foster care and enrolled in Medicaid at the time of their 18th birthday. These members aged out of the foster care program without a permanent home and are eligible to continue receiving Medicaid benefits through age 26. While the state has primary responsibility for children in foster care's healthcare, and adoptive parents have primary responsibility for adoption assistance children's healthcare, former foster children are responsible for their own healthcare. Unlike children in foster care, former foster children are not required by the state to meet a certain schedule of medical services. Furthermore, this population is more likely to experience barriers to healthcare, such as poverty and homelessness.[6-7] The present study found that former foster children had higher rates of appropriate healthcare utilization than comparable controls for 45 percent of study indicators; however, none of these rate differences were statistically significant.

During MY 2020, former foster children had lower rates than controls for more than half of study indicators, of which two study indicators were significantly lower than controls (i.e., *Thirty-Day Follow-Up After ED Visit for AOD Abuse or Dependence* and *Contraceptive Care [Most Effective or Moderately Effective Method]*). Former foster children also had the lowest healthcare utilization among the three study populations; however, these rate differences may be attributable to age (i.e., older adolescent and adult members tend to have lower rates of well-care and dental utilization compared to younger members) and to external factors, such as differences in program requirements between the foster care, adoption assistance, and former foster care programs.

Based on the findings detailed in this report, HSAG offers the following recommendations related to former foster children:

- SFY 2020–2021 is the first year to introduce analyses for former foster children. These analyses intended to provide baseline rates for this population. However, considering the impact of the COVID-19 pandemic on children in foster care's rates during MY 2020, former foster children's rates during MY 2020 may not be representative of their historical rates. Therefore, DMAS should consider monitoring former foster children's rates over time to verify appropriate baseline rates, identify areas for improvement, and monitor impacts of program changes.

- Given that healthcare utilization was lower among former foster children compared to controls and to the other study populations, DMAS should conduct a study that follows a cohort of members for both cases and controls over time to identify driving factors behind these lower rates. For example, a study could identify a cohort of children in foster care who continue to be enrolled in Medicaid managed care into young adulthood, as well as a control group of non-foster care members with similar continuous enrollment, demographic, and health characteristics. The study would look at measure results across multiple years to determine how comparisons between the two populations change as members move between programs (e.g., are rate changes driven by leaving the foster care system or are rate changes driven by the characteristics of members who age out of foster care without a permanent home).

[6-7] Virginia Department of Social Services. Child and Family Services Manual: Achieving Permanency for Older Youth: Working with Youth 14-17. Available at: https://www.dss.virginia.gov/files/division/dfs/fc/intro_page/guidance_manuals/fc/07_2021/Section_13_achieving_permanency_for_older_youth.pdf. Accessed on: Jan 12, 2022.

DMAS' Input on Prior Focus Study Recommendations

In addition to the recommendations noted above, DMAS provided the following detailed feedback regarding quality improvement actions or initiatives related to the 2019–20 Foster Care Focus Study. Please note, given that the 2019–20 Foster Care Focus Study was limited to the foster care population (i.e., the adoption assistance and former foster care populations were not included), DMAS' input on prior focus study recommendations are also limited to the foster care population.

Data Recommendations

This year, DMAS has worked on a variety of measures with key state partners to improve services for youth in foster care. The agency has also welcomed the opportunity to utilize recommendations posed by HSAG in previous iterations of this report to further enhance services for youth. One such recommendation was to continue to review outcomes during this study stratified by members in foster care and those youth who are not. For the 2020–21 Foster Care Focus Study, DMAS requested an additional population, Former Foster Care members, be included as part of the focused study. These data are also stratified with a statistically derived comparative population of children not in foster care. These data have availed DMAS the opportunity to compare various outcomes for each individual foster care member population (i.e., foster care, adoption assistance, and former foster care) separately, including those related to behavioral health services, a focus of this study and key program area for DMAS.

This year, DMAS requested HSAG to continue to provide comparative analyses by MCO, assisting in DMAS MCO foster care program oversight. DMAS also welcomed data presented in this report demonstrating results by geographic regions aligning with the Medallion 4.0 managed care program. These data are vital to evaluating foster care programs specific to Medallion 4.0 after its regional rollout, which concluded in December 2018.

Community Partnerships

This year, enhanced child welfare community partnerships has continued to be a focus for DMAS. In August 2021, DMAS re-started its Foster Care Partnership meetings with stakeholders from across the state including those from the VDSS, the Virginia Commission on Youth, Local DSS, LCPAs, DMAS MCOs, the Virginia Office of Children's Services, among others. These meetings have provided an opportunity for various stakeholders to share their role in supporting youth in foster care and ignited a conversation on how stakeholders can collaborate to better serve youth throughout the Commonwealth.

As a result of the Foster Care Partnership continuing this year, two Action Groups have formed in order to focus on actionable goals related to improving services for youth in foster care. These Action Groups are focused on Transition Planning and Increasing Utilization of Services for the foster care member population. Both Action Groups were created based on cross-sector and collaborative discussions around current needs of youth in foster care. It is the goal of DMAS and the Foster Care Partnership to improve outcomes for these youth through these groups and the larger Partnership.

DMAS also continues to maintain managed care contract requirements that all MCOs have Foster Care liaisons with competencies in child welfare to support members in foster care and address foster care specific inquiries from stakeholders such as Local DSS and LCPAs. DMAS also has a dedicated foster

care email box to streamline and address inquiries related to foster care and adoption assistance services.

Foster Care Affinity Group

This year, CMS and the Children's Bureau within ACF launched an "Improving Timely Health Care for Children and Youth in Foster Care Affinity Group" to support states in implementing QI activities to improve timely health care services to meet the needs of children in foster care. In July 2021, DMAS began participating in this two-year Foster Care Affinity Group, along with 10 other states, to develop their QI project related to timely health care services for children entering foster care. The Virginia team Affinity Group is another collaborative, cross-sector group co-led by DMAS and VDSS, with four MCOs also participating. The anticipated outcome of this project will be an improvement in the rate of children entering foster care who receive a medical examination within 30 days, and is expected to conclude in December 2023.

Member Outreach

In May 2020, DMAS planned and executed a campaign for Foster Care Awareness Month, which included outreach materials for members and stakeholders working with the foster care member population. A flyer was created which included Foster Care Medicaid Program highlights, an MCO care coordination success story and brief MCO spotlights, LCPA and Local DSS foster care worker highlights, as well as a link to the DMAS Foster Care Medicaid Tutorial created as a training tool in 2018. Additionally, a Foster Care Awareness posting was created in honor of Foster Care Awareness Month, which included information regarding Medicaid coverage for youth, a statement of thanks to all foster care workers and parents, and information regarding the Fostering Futures Program.

In September 2021, as part of a member outreach effort, DMAS mailed a special flyer to all foster care members and Local DSS agencies. This flyer was created to encourage annual well-visits, immunizations, and the COVID-19 vaccine prior to the start of the school year. Due to the ongoing COVID-19 pandemic and PHE, DMAS prioritized the foster care member population for outreach and education about catching up on important health care services and required vaccinations for school-aged children. DMAS was able to successfully mail this special flyer to 11,075 individuals between both foster care members and their legal guardians at local DSS agencies, to ensure thorough distribution of the information.

Foster Care and Adoption Assistance Annual Report

In August 2020, DMAS compiled a Foster Care and Adoption Assistance Annual Report. This report reviewed program initiatives and updates regarding the DMAS Foster Care and Adoption Assistance Programs. Included in the report is demographic data provided by HSAG, along with a brief presentation of outcome data provided by HSAG during 2018–2019 SFY. The report provided other highlights, accomplishments, and overall DMAS outcomes related to the foster care and adoption assistance member populations, as well as upcoming initiatives such as Family First Prevention Act, enhanced clinical models, and continued stakeholder engagement.

Medallion 4.0 Program Oversight Efforts

DMAS continues to improve efforts to track and analyze a variety of data sources to evaluate Virginia's foster care Medicaid programs. DMAS MCOs continue to report on a variety of measures monthly, including those related to care coordination and member outreach, service utilization and efforts to assist members who age out of the child welfare system with transition planning. These data are tied to both Medallion 4.0 contract compliance and program oversight, presenting DMAS with an opportunity to utilize various data sources, including those in this report, to better understand the status of Medicaid programs serving youth in foster care.

Appendix A: Study Indicators

For reference, Appendix A provides the technical specifications set, description, denominator, and numerator(s) for each of the 20 study indicators calculated for the study populations and their matched controls, by domain.

Primary Care

Child and Adolescent Well-Care Visits (WCV)

- *Specifications Set*: FFY 2021 Child Core Set technical specifications, with study-specific continuous enrollment modifications
- *Description:* The percentage of members who had at least one comprehensive well-care visit with a PCP or OB/GYN
- *Denominator:* Members in the study population split into three groups: members 3–11 years, members 12–17 years, and members 18–21 years as of the end of the measurement year
- *Numerator:* One or more well-care visits (Well-Care Value Set) during the measurement year with a PCP or an OB/GYN

Well-Child Visits in the First 30 Months of Life (W30)

- *Specifications Set*: FFY 2021 Child Core Set technical specifications, with study-specific continuous enrollment modifications
- *Description:* The percentage of children who turned 15 months of age who had six or more well-child visits with a PCP and the percentage of children who turned 30 months of age who had two or more well-child visits with a PCP
- *Denominator:* Members in the study population split into two groups: children who turn 15 months of age during the measurement year and children who turn 30 months of age during the measurement year
- *Numerator:* For children who turn 15 months of age during the measurement year, six or more well-child visits (Well-Care Value Set) with a PCP on different dates of service on or before the child's 15-month birthday; for children who turn age 30 months during the measurement year, two or more well-child visits (Well-Care Value Set) with a PCP on different dates of service between the day after the child's 15-month birthday and their 30-month birthday

Oral Health

Annual Dental Visit (ADV)

- *Specifications Set:* HEDIS MY 2020 technical specifications, with study-specific continuous enrollment modifications
- *Description:* The percentage of members who had at least one dental visit during the measurement year
- *Denominator:* Members in the study population who are at least 2 years old as of the end of the measurement year
- *Numerator:* One or more visits with a dental practitioner during the measurement year

Preventive Dental Services (PDENT-CH)

- *Specifications Set:* FFY 2021 Child Core Set technical specifications, with study-specific continuous enrollment modifications
- *Description:* Percentage of members who received at least one preventive dental service during the measurement year
- *Denominator:* Members in the study population who are 1–20 years old as of the end of the measurement year and who are eligible for EPSDT services
- *Numerator:* One or more instances of preventive dental service by or under the supervision of a dentist

Behavioral Health

7-Day Follow-Up After Hospitalization for Mental Illness (FUH)

- *Specifications Set:* FFY 2021 Adult and Child Core Set technical specifications, with study-specific continuous enrollment modifications
- *Description:* Percentage of discharges for members who were hospitalized for treatment of selected mental illness or intentional self-harm diagnosis and who had a follow-up visit with a mental health provider
- *Denominator:* Discharges of the members in the study population who are at least 6 years old as of the date of the discharge with a hospitalization for treatment of selected mental illness or intentional self-harm diagnosis (Mental Illness Value Set, Intentional Self-Harm Dataset)
- *Numerator:* A follow-up visit with a mental health provider within seven days after discharge

30-Day Follow-Up After ED Visit for Mental Illness (FUM)

- *Specifications Set:* HEDIS MY 2020 technical specifications, with study-specific continuous enrollment modifications
- *Description:* Percentage of ED visits for members with a principal diagnosis of mental illness or intentional self-harm who had a follow-up visit for mental illness within 30 days
- *Denominator:* ED visits (ED Value Set) of the members in the study population who are at least 6 years old as of the date of the ED visit with a principal diagnosis of mental illness or intentional self-harm (Mental Illness Value Set, Intentional Self Harm Dataset)
- *Numerator:* A follow-up visit with any practitioner, with a principal diagnosis of a mental health disorder or with a principal diagnosis of intentional self-harm (Mental Illness Value Set, Intentional Self Harm Dataset) and any diagnosis of a mental health disorder within 30 days of the ED visit

Metabolic Monitoring for Children and Adolescents on Antipsychotics (APM)

- *Specifications Set:* FFY 2021 Child Core Set technical specifications, with study-specific continuous enrollment modifications
- *Description:* Percentage of members who had two or more antipsychotic prescriptions and had metabolic testing
- *Denominator:* Members in the study population who are 1–17 years old by the end of the measurement year and who have two or more antipsychotic prescriptions (Antipsychotic Medications List, Antipsychotic Combination Medications List, Prochlorperazine Medications List) on different dates of service during the measurement year
- *Numerator:* At least one test for blood glucose (Glucose Lab Test Value Set, Glucose Test Result or Finding Value Set) or hemoglobin A1c (HbA1c) (HbA1c Lab Test Value Set, HbA1c Test Result or Finding Value Set) during the measurement year AND at least one test for low-density lipoprotein cholesterol (LDL-C) (LDL-C Lab Test Value Set, LDL-C Test Result or Finding Value Set) or cholesterol (Cholesterol Lab Test Value Set, Cholesterol Test Result or Finding Value Set)

Use of First-Line Psychosocial Care for Children and Adolescents on Antipsychotics (APP)

- *Specifications Set:* FFY 2021 Child Core Set technical specifications, with study-specific continuous enrollment modifications and a four-month look-back period from the earliest prescription dispensing data for eligible children
- *Description:* Percentage of members who had a new prescription for an antipsychotic medication and had documentation of psychosocial care as first-line treatment
- *Denominator:* Members in the study population who were 1–17 years old by the end of the measurement year and who have a new prescription for an antipsychotic medication (Antipsychotic Medications List, Antipsychotic Combination Medications List) during the intake period
- *Numerator:* Documentation of psychosocial care (Psychosocial Care Value Set) during the look-back period

Follow-Up Care for Children Prescribed ADHD Medication (ADD)

- *Specifications Set:* FFY 2021 Child Core Set technical specifications, with study-specific continuous enrollment modifications and modifications to the follow-up windows
- *Description:* Percentage of members newly prescribed ADHD medication who had at least three follow-up visits within a 10-month period, one of which was within one, two, three, six, or nine months of when the first ADHD medication was dispensed
- *Denominator:* Members in the study population who have a prescription for ADHD medication (ADHD Medications List) and who are ages 6 to 12 years old as of the earliest prescription dispensing date
- Numerator:
  - *One-Month Follow-Up*: A follow-up visit with a practitioner with prescribing authority, within one month after the earliest prescription dispensing date
  - *Two-Month Follow-Up*: A follow-up visit with a practitioner with prescribing authority, within two months after the earliest prescription dispensing date
  - *Three-Month Follow-Up*: A follow-up visit with a practitioner with prescribing authority, within three months after the earliest prescription dispensing date
  - *Six-Month Follow-Up*: A follow-up visit with a practitioner with prescribing authority, within six months after the earliest prescription dispensing date
  - *Nine-Month Follow-Up*: A follow-up visit with a practitioner with prescribing authority, within nine months after the earliest prescription dispensing date

Substance Use

30-Day Follow-Up After ED Visit for AOD Abuse or Dependence (FUA)

- *Specifications Set:* HEDIS MY 2020 technical specifications, with study-specific continuous enrollment modifications
- *Description:* Percentage of ED visits for members with a principal diagnosis of AOD use or dependence who had a follow-up visit for AOD use or dependence within 30 days of the ED visit
- *Denominator:* ED visits of the members in the study population who are at least 13 years of age or older as of the date of the ED visit with an ED visit (ED Value Set) with a principal diagnosis of AOD use or dependence (AOD Abuse and Dependence Value Set)
- *Numerator:* A follow-up visit with any practitioner, with a principal diagnosis of AOD within 30 days after the ED visit, including visits that occur on the date of the ED visit

Initiation and Engagement of AOD Abuse or Dependence Treatment (IET)

- *Specifications Set:* HEDIS MY 2020 technical specifications, with study-specific continuous enrollment modifications and a two-month look-back period from the earliest eligible encounter with a diagnosis of AOD use or dependence for all eligible children

- *Description:* Percentage of members with a new episode of AOD use or dependence who initiated AOD treatment and who were engaged in AOD treatment
- *Denominator:* Members in the study population who are at least 13 years old as of the end of the measurement year with a new episode of AOD use or dependence during the measurement year (AOD Abuse and Dependence Value Set, Opioid Abuse and Dependence Value Set, Other Drug Abuse and Dependence Value Set)
- *Numerator:*
  - *Initiation:* An initiation visit, defined as an inpatient AOD admission, outpatient visit, intensive outpatient encounter or partial hospitalization, telehealth or medication treatment within 14 days of diagnosis
  - *Engagement:* An initiation visit AND two or more additional AOD services or medication treatment within 34 days of the initiation visit

Reproductive Health

Contraceptive Care (CCW)

- *Specifications Set:* FFY 2021 Adult and Child Core Set technical specifications, with study-specific continuous enrollment modifications
- *Description:* Percentage of women at risk of unintended pregnancy that were provided a most effective or moderately effective method of contraception or were provided a long-acting reversible method of contraception
- *Denominator:* Members in the study population who are female, at least 15 years old as of the end of the measurement year, and are identified as being at risk of unintended pregnancy
- *Numerator:*
  - *Most effective or moderately effective method:* Provision of a most effective method of contraception (i.e., sterilization, contraceptive implants, or intrauterine devices or systems) or moderately effective method of contraception (i.e., injectables, oral pills, patch, ring, or diaphragm)
  - *Long-acting reversible method:* Provision of a long-acting reversible method of contraception (i.e., contraceptive implants or intrauterine devices or systems)

Respiratory Health

Asthma Medication Ratio (AMR)

- *Specifications Set:* FFY 2021 Adult and Child Core Set technical specifications, with study-specific continuous enrollment modifications and a one-year look-back period for all eligible children
- *Description:* Percentage of members who were identified as having persistent asthma and had a ratio of controller medications to total asthma medications of 0.50 or greater during the measurement year

- *Denominator:* Members in the study population who are at least 5 years old as of the end of the measurement year and are identified as having persistent asthma
- *Numerator:* Medication ratio of controller medications (Asthma Controller Medications List) to total asthma medications (Asthma Controller Medications List and Asthma Reliever Medications List) of 0.50 or greater during the measurement year

Appendix B: Characteristics of the Controls

Appendix B lists the following reference information related to HSAG's approach to identifying matched controls for the children in foster care population, adoption assistance children population, and former foster children population:

- Demographic and health characteristics prior to matching
  - Continuously enrolled children in foster care compared to their continuously enrolled controls (Table B-1 and Table B-4)
  - Continuously enrolled adoption assistance children compared to their continuously enrolled controls (Table B-2 and Table B-5)
  - Continuously enrolled former foster children compared to their continuously enrolled controls (Table B-3 and Table B-6)
- Detailed information on the health characteristic methodology
- Demographic and health characteristics after matching
  - Children in foster care study population compared to their final matched controls (Table B-7 and Table B-10)
  - Adoption assistance study population compared to their final matched controls (Table B-8 and Table B-11)
  - Former foster children study population compared to their final matched controls (Table B-9 and Table B-12)
- Detailed findings and discussion of the covariate balance checks

Characteristics Before Matching

Table B-1 presents the findings of the demographic characteristic assessment of continuously enrolled children in foster care compared to their continuously enrolled controls, prior to matching.

Table B-1—Demographic Distribution of Children in Foster Care (n=3,351) and Controls (n=556,252) Continuously Enrolled in Managed Care, Before Matching

Category	Number of Children in Foster Care	Percent of Children in Foster Care	Number of Controls	Percent of Controls
Age Category				
≤ 2 years	648	19.3%	105,080	18.9%
3 to 5 years	578	17.2%	96,989	17.4%
6 to 10 years	781	23.3%	156,573	28.1%
11 to 13 years	480	14.3%	94,453	17.0%
≥ 14 years	864	25.8%	103,157	18.5%
Sex				
Male	1,832	54.7%	284,131	51.1%

Category	Number of Children in Foster Care	Percent of Children in Foster Care	Number of Controls	Percent of Controls
Female	1,519	45.3%	272,121	48.9%
Race				
Black or African American	1,193	35.6%	211,757	38.1%
White	2,080	62.1%	299,805	53.9%
Other	78	2.3%	44,690	8.0%
Region				
Central	718	21.4%	140,580	25.3%
Charlottesville/Western	634	18.9%	64,380	11.6%
Northern & Winchester	462	13.8%	137,256	24.7%
Roanoke/Alleghany	510	15.2%	52,687	9.5%
Southwest	420	12.5%	S	S
Tidewater	595	17.8%	129,513	23.3%
Unknown	12	0.4%	S	S
Continuously Enrolled MCO				
Aetna	251	7.5%	51,731	9.3%
HealthKeepers	938	28.0%	188,202	33.8%
Magellan	180	5.4%	23,139	4.2%
Optima	756	22.6%	116,543	21.0%
Virginia Premier	896	26.7%	120,452	21.7%
UnitedHealthcare	220	6.6%	49,232	8.9%
FFS	110	3.3%	6,953	1.2%
Medicaid Program				
CCC Plus	23	0.7%	23,454	4.2%
Medallion 4.0	3,328	99.3%	532,798	95.8%

S indicates that the rate has been suppressed due to a small numerator or denominator (i.e., less than or equal to 10).

Table B-2 presents the findings of the demographic characteristic assessment of continuously enrolled adoption assistance children compared to their continuously enrolled controls, prior to matching.

Table B-2—Demographic Distribution of Adoption Assistance Children (n=7,121) and Controls (n=556,252) Continuously Enrolled in Managed Care, Before Matching

Category	Number of Adoption Assistance Children	Percent of Adoption Assistance Children	Number of Controls	Percent of Controls
Age Category				
≤ 2 years	162	2.3%	105,080	18.9%
3 to 5 years	775	10.9%	96,989	17.4%
6 to 10 years	2,071	29.1%	156,573	28.1%

Category	Number of Adoption Assistance Children	Percent of Adoption Assistance Children	Number of Controls	Percent of Controls
11 to 13 years	1,696	23.8%	94,453	17.0%
≥ 14 years	2,417	33.9%	103,157	18.5%
Sex				
Male	3,824	53.7%	284,131	51.1%
Female	3,297	46.3%	272,121	48.9%
Race				
Black or African American	2,245	31.5%	211,757	38.1%
White	4,721	66.3%	299,805	53.9%
Other	155	2.2%	44,690	8.0%
Region				
Central	1,556	21.9%	140,580	25.3%
Charlottesville/Western	1,131	15.9%	64,380	11.6%
Northern & Winchester	1,078	15.1%	137,256	24.7%
Roanoke/Alleghany	1,140	16.0%	52,687	9.5%
Southwest	S	S	S	S
Tidewater	1,358	19.1%	129,513	23.3%
Unknown	S	S	S	S
Continuously Enrolled MCO				
Aetna	617	8.7%	51,731	9.3%
HealthKeepers	2,116	29.7%	188,202	33.8%
Magellan	265	3.7%	23,139	4.2%
Optima	1,474	20.7%	116,543	21.0%
Virginia Premier	2,071	29.1%	120,452	21.7%
UnitedHealthcare	473	6.6%	49,232	8.9%
FFS	105	1.5%	6,953	1.2%
Medicaid Program				
CCC Plus	230	3.2%	23,454	4.2%
Medallion 4.0	6,891	96.8%	532,798	95.8%

S indicates that the rate has been suppressed due to a small numerator or denominator (i.e., less than or equal to 10).

Table B-3 presents the findings of the demographic characteristic assessment of continuously enrolled former foster children compared to their continuously enrolled controls, prior to matching.

Table B-3—Demographic Distribution of Former Foster Children (n=1,297) and Controls (n=117,015) Continuously Enrolled in Managed Care, Before Matching

Category	Number of Former Foster Children	Percent of Former Foster Children	Number of Controls	Percent of Controls
Age Category				
19 to 22 years	930	71.7%	60,797	52.0%
23 to 26 years	367	28.3%	56,218	48.0%
Sex				
Male	630	48.6%	41,189	35.2%
Female	667	51.4%	75,826	64.8%
Race				
Black or African American	464	35.8%	45,914	39.2%
White	790	60.9%	58,268	49.8%
Other	43	3.3%	12,833	11.0%
Region				
Central	314	24.2%	31,066	26.5%
Charlottesville/Western	226	17.4%	14,626	12.5%
Northern & Winchester	161	12.4%	21,387	18.3%
Roanoke/Alleghany	202	15.6%	12,459	10.6%
Southwest	S	S	S	S
Tidewater	250	19.3%	28,983	24.8%
Unknown	S	S	S	S
Continuously Enrolled MCO				
Aetna	111	8.6%	18,634	15.9%
HealthKeepers	347	26.8%	30,239	25.8%
Magellan	91	7.0%	10,252	8.8%
Optima	275	21.2%	22,799	19.5%
Virginia Premier	352	27.1%	22,194	19.0%
UnitedHealthcare	103	7.9%	11,508	9.8%
FFS	18	1.4%	1,389	1.2%
Medicaid Program				
CCC Plus	48	3.7%	16,091	13.8%
Medallion 4.0	1,249	96.3%	100,924	86.2%

S indicates that the rate has been suppressed due to a small numerator or denominator (i.e., less than or equal to 10).

Health Characteristic Methodology

In order to identify controls with similar health characteristics to the continuously enrolled children in foster care, adoption assistance children, and former foster children populations (i.e., cases), HSAG identified primary diagnoses which occurred at different rates within the claims for continuously enrolled cases and the claims for continuously enrolled controls. For children older than two years of age as of January 1, 2020, the claims assessment period was January 1, 2019, through December 31, 2019. For children two years of age or younger as of January 1, 2020, the claims assessment period was January 1, 2020, through December 31, 2020.

These diagnoses were grouped into 13 categories using CCS:[B-1,B-2] For the health characteristics used in the MY 2018 and MY 2019 Foster Care Focus Studies (e.g., adjustment disorder), HSAG verified that there were no new pertinent diagnosis codes and continued to use the version 2019 CCS. For the health characteristics that are new to the Foster Care Focus Study (e.g., neurological disorders), HSAG used the version 2020 CCS.

- **Adjustment Disorder**: At least one primary diagnosis during the claims assessment period meeting any of the following second-level CCS Categories:
  - Adjustment disorders [5.1]
- **ADHD**: At least one primary diagnosis during the claims assessment period meeting any of the following second-level CCS Categories:
  - Attention deficit, conduct, and disruptive behavior disorders [5.3]
  - Impulse control disorders not elsewhere classified [5.7]
- **Anxiety Disorder**: At least one primary diagnosis during the claims assessment period meeting any of the following second-level CCS Categories:
  - Anxiety disorders [5.2]
- **Congenital Anomaly**: At least one primary diagnosis during the claims assessment period meeting any of the following second-level CCS Categories: [B-3]
  - Cardiac and circulatory congenital anomalies [14.1]
  - Digestive congenital anomalies [14.2]
  - Genitourinary congenital anomalies [14.3]
  - Nervous system congenital anomalies [14.4]
  - Other congenital anomalies [14.5]
- **Developmental Disorder**: At least one primary diagnosis during the claims assessment period meeting any of the following second-level CCS Categories:

[B-1] Agency for Healthcare Research and Quality. Clinical Classifications Software (CCS) for ICD-10-CM (beta version). Available at: www.hcup-us.ahrq.gov/toolssoftware/ccs10/ccs10.jsp. Accessed on: Nov 14, 2019.

[B-2] Agency for Healthcare Research and Quality. Clinical Classifications Software (CCS) for ICD-10-CM (beta version). Available at: https://www.hcup-us.ahrq.gov/toolssoftware/ccsr/ccsr_archive.jsp#ccsr. Accessed on: Nov 23, 2021.

[B-3] The percent of members with a congenital anomaly differed between cases and controls for children in foster care and adoption assistance children but did not differ for former foster children. Therefore, congenital anomaly is not used in the matching for former foster children.

- – Developmental disorders [5.5]
- – Disorders usually diagnosed in infancy, childhood, or adolescence [5.6]
- **Intentional Self-Harm**: At least one primary diagnosis during the claims assessment period meeting any of the following second-level CCS Categories:
  - – Suicide and intentional self-inflicted injury [5.13]
- **Mood Disorder**: At least one primary diagnosis during the claims assessment period meeting any of the following second-level CCS Categories:
  - – Mood disorders [5.8]
- **Neurological Disorder**: At least one primary diagnosis during the claims assessment period meeting any of the following first-level CCS Categories:[B-4]
  - – Cerebral palsy [NVS007]
  - – Epilepsy; convulsions [NVS009]
- **Obesity and Metabolic Syndrome**: At least one primary diagnosis during the claims assessment period meeting any of the following second-level CCS Categories:
  - – Diabetes mellitus without complication [3.2]
  - – Diabetes mellitus with complications [3.3]
  - – Other endocrine disorders [3.4]
  - – Nutritional deficiencies [3.5]
  - – Disorders of lipid metabolism [3.6]
  - – Other nutritional; endocrine; and metabolic disorders [3.11]
- **Other Mental Health Disorder**: At least one primary diagnosis during the claims assessment period meeting any of the following second-level CCS Categories:
  - – Miscellaneous mental disorders [5.15]
- **Psychotic Disorder**: At least one primary diagnosis during the claims assessment period meeting any of the following second-level CCS Categories:
  - – Schizophrenia and other psychotic disorders [5.10]
- **Substance Use Disorder**: At least one primary diagnosis during the claims assessment period meeting any of the following second-level CCS Categories:
  - – Alcohol-related disorders [5.11]
  - – Substance-related disorders [5.12]
- **Rheumatologic Condition**: At least one primary diagnosis during the claims assessment period meeting any of the following second-level CCS Categories:
  - – Other connective tissue disease [13.8]

Additionally, since mental health diagnoses featured prominently among claims for the cases, HSAG also sought to ensure comparability in the severity of mental health conditions between the cases and

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[B-4] The percent of members with a neurological disorder differed between cases and controls for adoption assistance children but did not differ for children in foster care or former foster children. Therefore, neurological disorders are not used in the matching for children in foster care or former foster children.

controls. Therefore, HSAG also identified ED visits and acute inpatient visits with a primary diagnosis relating to mental health. These visits were defined as:

- **ED Visit for Mental Health**: At least one claim during the claims assessment period meeting both of the following conditions:
    - The claim's revenue code starts with: [045].
    - The claim's primary diagnosis is included in the HEDIS MY 2020 Mental Health Diagnosis Value Set.
- **Acute Inpatient Visit for Mental Health**: At least one claim during the claims assessment period meeting all the following conditions:
    - The claim's revenue code is included in the HEDIS MY 2020 Inpatient Stay Value Set.
    - The claim's revenue code and type of bill code is not included in the HEDIS MY 2020 Nonacute Inpatient Stay Value Set.
    - The claim's primary diagnosis is included in the HEDIS MY 2020 Mental Health Diagnosis Value Set.

Table B-4 presents the health characteristic assessment findings for continuously enrolled children in foster care and controls, prior to matching.

Table B-4—Distribution of Health Characteristics Among Children in Foster Care (n=3,351) and Controls (n=556,252) Continuously Enrolled in Managed Care, Before Matching

Category	Number of Children in Foster Care	Percent of Children in Foster Care	Number of Controls	Percent of Controls
Adjustment Disorder	1,338	39.9%	18,805	3.4%
Attention Deficit Hyperactivity Disorder	1,271	37.9%	52,292	9.4%
Anxiety Disorder	881	26.3%	17,551	3.2%
Congenital Anomaly	198	5.9%	18,539	3.3%
Developmental Disorder	945	28.2%	49,000	8.8%
Intentional Self-Harm	142	4.2%	2,721	0.5%
Mood Disorder	798	23.8%	18,835	3.4%
Obesity and Metabolic Syndrome	783	23.4%	63,235	11.4%
Other Mental Health Disorder	344	10.3%	3,087	0.6%
Psychotic Disorder	38	1.1%	739	0.1%
Rheumatologic Condition	245	7.3%	28,016	5.0%
Substance Use Disorder	91	2.7%	1,304	0.2%
Emergency Department Visit for Mental Health	60	1.8%	1,341	0.2%
Acute Inpatient Visit for Mental Health	154	4.6%	2,449	0.4%

Table B-5 presents the health characteristic assessment findings for continuously enrolled adoption assistance children and controls, prior to matching.

Table B-5—Distribution of Health Characteristics Among Adoption Assistance Children (n=7,121) and Controls (n=556,252) Continuously Enrolled in Managed Care, Before Matching

Category	Number of Adoption Assistance Children	Percent of Adoption Assistance Children	Number of Controls	Percent of Controls
Adjustment Disorder	791	11.1%	18,805	3.4%
Attention Deficit Hyperactivity Disorder	2,474	34.7%	52,292	9.4%
Anxiety Disorder	925	13.0%	17,551	3.2%
Congenital Anomaly	346	4.9%	18,539	3.3%
Developmental Disorder	1,425	20.0%	49,000	8.8%
Intentional Self-Harm	114	1.6%	2,721	0.5%
Mood Disorder	856	12.0%	18,835	3.4%
Neurological Disorder	224	3.1%	7,515	1.4%
Obesity and Metabolic Syndrome	890	12.5%	63,235	11.4%
Other Mental Health Disorder	103	1.4%	3,087	0.6%
Psychotic Disorder	35	0.5%	739	0.1%
Rheumatologic Condition	508	7.1%	28,016	5.0%
Substance Use Disorder	73	1.0%	1,304	0.2%
Emergency Department Visit for Mental Health	47	0.7%	1,341	0.2%
Acute Inpatient Visit for Mental Health	108	1.5%	2,449	0.4%

Table B-6 presents the health characteristic assessment findings for continuously enrolled former foster children and controls, prior to matching.

Table B-6—Distribution of Health Characteristics Among Former Foster Children (n=1,297) and Controls (n=117,015) Continuously Enrolled in Managed Care, Before Matching

Category	Number of Former Foster Children	Percent of Former Foster Children	Number of Controls	Percent of Controls
Adjustment Disorder	80	6.2%	2,427	2.1%
Attention Deficit Hyperactivity Disorder	135	10.4%	4,017	3.4%
Anxiety Disorder	247	19.0%	10,099	8.6%
Developmental Disorder	56	4.3%	5,489	4.7%
Intentional Self-Harm	72	5.6%	1,918	1.6%
Mood Disorder	343	26.4%	12,848	11.0%
Obesity and Metabolic Syndrome	138	10.6%	10,914	9.3%
Other Mental Health Disorder	34	2.6%	1,627	1.4%
Psychotic Disorder	41	3.2%	2,379	2.0%

Category	Number of Former Foster Children	Percent of Former Foster Children	Number of Controls	Percent of Controls
Rheumatologic Condition	146	11.3%	9,642	8.2%
Substance Use Disorder	122	9.4%	5,381	4.6%
Emergency Department Visit for Mental Health	45	3.5%	1,559	1.3%
Acute Inpatient Visit for Mental Health	76	5.9%	2,279	1.9%

Characteristics After Matching

Table B-7 presents the demographic characteristic assessment findings for the final children in foster care study population and controls, after matching the populations of continuously enrolled children in foster care and controls.

Table B-7—Demographic Distribution of Children in Foster Care (n=3,203) and Controls (n=3,203) Continuously Enrolled in Managed Care After Matching

Category	Number of Children in Foster Care	Percent of Children in Foster Care	Number of Controls	Percent of Controls	Chi-square Balance Test p	Standardized Differences Assessment d
Age Category						
≤ 2 years	630	19.7%	630	19.7%	1.00	0.000
3 to 5 years	526	16.4%	526	16.4%		0.000
6 to 10 years	740	23.1%	740	23.1%		0.000
11 to 13 years	460	14.4%	460	14.4%		0.000
≥ 14 years	847	26.4%	847	26.4%		0.000
Sex						
Male	1,746	54.5%	1,747	54.5%	0.98	-0.001
Female	1,457	45.5%	1,456	45.5%		0.001
Race						
Black or African American	1,159	36.2%	1,072	33.5%	0.07	0.057
White	1,968	61.4%	2,057	64.2%		-0.058
Other	76	2.4%	74	2.3%		0.004
Region						
Central	693	21.6%	693	21.6%	1.00	0.000
Charlottesville/Western	608	19.0%	608	19.0%		0.000
Northern & Winchester	451	14.1%	451	14.1%		0.000
Roanoke/Alleghany	474	14.8%	474	14.8%		0.000
Southwest	397	12.4%	397	12.4%		0.000
Tidewater	580	18.1%	580	18.1%		0.000

Category	Number of Children in Foster Care	Percent of Children in Foster Care	Number of Controls	Percent of Controls	Chi-square Balance Test p	Standardized Differences Assessment d
Continuously Enrolled MCO						
Aetna	230	7.2%	230	7.2%	1.00	0.000
HealthKeepers	917	28.6%	917	28.6%		0.000
Magellan	165	5.2%	165	5.2%		0.000
Optima	733	22.9%	733	22.9%		0.000
Virginia Premier	866	27.0%	866	27.0%		0.000
UnitedHealthcare	198	6.2%	198	6.2%		0.000
FFS	94	2.9%	94	2.9%		0.000
Medicaid Program						
CCC Plus	23	0.7%	42	1.3%	0.02*	-0.059
Medallion 4.0	3,180	99.3%	3,161	98.7%		0.059

The age category, MCO, and region distributions were identical in the children in foster care study population and the controls due to exact matching on these characteristics. Neither the covariate-level Chi-square tests nor the standardized differences test identified any significant differences in sex or race. While the Chi-square test identified imbalance in Medicaid Program, the standardized differences assessment did not. Due to the large sample size, and since larger sample sizes increase the sensitivity of the Chi-square test, HSAG only considered a characteristic to be imbalanced if both the Chi-square test and standardized differences assessment indicated imbalance.

Table B-8 presents the demographic characteristic assessment findings for the final adoption assistance children study population and controls, after matching the populations of continuously enrolled adoption assistance children and controls.

Table B-8—Demographic Distribution of Adoption Assistance Children (n=7,098) and Controls (n=7,098) Continuously Enrolled in Managed Care, After Matching

Category	Number of Adoption Assistance Children	Percent of Adoption Assistance Children	Number of Controls	Percent of Controls	Chi-square Balance Test p	Standardized Differences Assessment d
Age Category						
≤ 2 years	161	2.3%	161	2.3%	1.00	0.000
3 to 5 years	771	10.9%	771	10.9%		0.000
6 to 10 years	2,065	29.1%	2,065	29.1%		0.000
11 to 13 years	1,692	23.8%	1,692	23.8%		0.000
≥ 14 years	2,409	33.9%	2,409	33.9%		0.000
Sex						
Male	3,813	53.7%	3,832	54.0%	0.75	-0.005
Female	3,285	46.3%	3,266	46.0%		0.005

Category	Number of Adoption Assistance Children	Percent of Adoption Assistance Children	Number of Controls	Percent of Controls	Chi-square Balance Test p	Standardized Differences Assessment d
Race						
Black or African American	2,241	31.6%	2,235	31.5%	0.59	0.002
White	4,702	66.2%	4,725	66.6%		-0.007
Other	155	2.2%	138	1.9%		0.017
Region						
Central	1,552	21.9%	1,552	21.9%	1.00	0.000
Charlottesville/Western	1,128	15.9%	1,128	15.9%		0.000
Northern & Winchester	1,077	15.2%	1,077	15.2%		0.000
Roanoke/Alleghany	1,136	16.0%	1,136	16.0%		0.000
Southwest	850	12.0%	850	12.0%		0.000
Tidewater	1,355	19.1%	1,355	19.1%		0.000
Continuously Enrolled MCO						
Aetna	612	8.6%	612	8.6%	1.00	0.000
HealthKeepers	2,115	29.8%	2,115	29.8%		0.000
Magellan	264	3.7%	264	3.7%		0.000
Optima	1,471	20.7%	1,471	20.7%		0.000
Virginia Premier	2,063	29.1%	2,063	29.1%		0.000
UnitedHealthcare	472	6.6%	472	6.6%		0.000
FFS	101	1.4%	101	1.4%		0.000
Medicaid Program						
CCC Plus	230	3.2%	268	3.8%	0.08	-0.029
Medallion 4.0	6,868	96.8%	6,830	96.2%		0.029

The age category, MCO, and region distributions were identical in the adoption assistance study population and the controls due to exact matching on these characteristics. Neither the covariate-level Chi-square tests nor the standardized differences test identified any significant differences in the demographic characteristics of the matched adoption assistance children and controls.

Table B-9 presents the demographic characteristic assessment findings for the final former foster children study population and controls, after matching the populations of continuously enrolled former foster children and controls.

Table B-9—Demographic Distribution of Former Foster Children (n=1,288) and Controls (n=1,288) Continuously Enrolled in Managed Care, After Matching

Category	Number of Former Foster Children	Percent of Former Foster Children	Number of Controls	Percent of Controls	Chi-square Balance Test p	Standardized Differences Assessment d
Age Category						
19 to 22 years	923	71.7%	923	71.7%	1.00	0.000
23 to 26 years	365	28.3%	365	28.3%		0.000
Sex						
Male	624	48.4%	644	50.0%	0.43	-0.031
Female	664	51.6%	644	50.0%		0.031
Race						
Black or African American	461	35.8%	464	36.0%	0.85	-0.005
White	784	60.9%	786	61.0%		-0.003
Other	43	3.3%	38	3.0%		0.022
Region						
Central	313	24.3%	313	24.3%	1.00	0.000
Charlottesville/Western	226	17.5%	226	17.5%		0.000
Northern & Winchester	161	12.5%	161	12.5%		0.000
Roanoke/Alleghany	199	15.5%	199	15.5%		0.000
Southwest	140	10.9%	140	10.9%		0.000
Tidewater	249	19.3%	249	19.3%		0.000
Continuously Enrolled MCO						
Aetna	109	8.5%	109	8.5%	1.00	0.000
HealthKeepers	346	26.9%	346	26.9%		0.000
Magellan	91	7.1%	91	7.1%		0.000
Optima	273	21.2%	273	21.2%		0.000
Virginia Premier	352	27.3%	352	27.3%		0.000
UnitedHealthcare	101	7.8%	101	7.8%		0.000
FFS	16	1.2%	16	1.2%		0.000
Medicaid Program						
CCC Plus	48	3.7%	53	4.1%	0.61	-0.020
Medallion 4.0	1,240	96.3%	1,235	95.9%		0.020

The age category, MCO, and region distributions were identical in the former foster children study population and the controls due to exact matching on these characteristics. Neither the covariate-level Chi-square tests nor the standardized differences test identified any significant differences in the demographic characteristics of the matched former foster children and controls.

Table B-10 presents the health characteristic assessment findings for the final children in foster care study population and comparison group, after matching continuously enrolled children in foster care and controls.

Table B-10—Distribution of Health Characteristics Among Children in Foster Care (n=3,203) and Controls (n=3,203) Continuously Enrolled in Managed Care, After Matching

Category	Number of Children in Foster Care	Percent of Children in Foster Care	Number of Controls	Percent of Controls	Chi-square Balance Test *p*	Standardized Differences Assessment *d*
Adjustment Disorder	1,208	37.7%	1,240	38.7%	0.41	-0.021
Attention Deficit Hyperactivity Disorder	1,173	36.6%	1,113	34.7%	0.12	0.039
Anxiety Disorder	800	25.0%	757	23.6%	0.21	0.031
Congenital Anomaly	188	5.9%	196	6.1%	0.67	-0.011
Developmental Disorder	842	26.3%	883	27.6%	0.25	-0.029
Intentional Self-Harm	128	4.0%	95	3.0%	0.02*	0.056
Mood Disorder	737	23.0%	667	20.8%	0.03*	0.053
Obesity and Metabolic Syndrome	717	22.4%	761	23.8%	0.19	-0.033
Other Mental Health Disorder	256	8.0%	211	6.6%	0.03*	0.054
Psychotic Disorder	34	1.1%	18	0.6%	0.03*	0.056
Rheumatologic Condition	225	7.0%	222	6.9%	0.88	0.004
Substance Use Disorder	85	2.7%	59	1.8%	0.03*	0.055
Emergency Department Visit for Mental Health	49	1.5%	48	1.5%	0.92	0.003
Acute Inpatient Visit for Mental Health	135	4.2%	98	3.1%	0.01*	0.062

* Indicates that the covariate balance test found imbalance between the children in foster care and controls.

The health characteristics distributions for the children in foster care study population and the controls were balanced by matching. While the Chi-square tests found imbalance for several health characteristics (e.g., intentional self-harm, mood disorder) and the omnibus test (*p*=0.01) identified imbalance in at least one covariate, the standardized differences assessment found no imbalances in the health characteristics. Due to the large sample size, and since larger sample sizes increase the sensitivity of the Chi-square test, HSAG only considered a characteristic to be meaningfully imbalanced if both the Chi-square test and standardized differences assessment indicated imbalance. The largest imbalance was 1.1 percent for Acute Inpatient Visit for Mental Health; however, this was a substantial improvement from the 4.2 percent difference between cases and controls prior to matching.

Table B-11 presents the health characteristic assessment findings for the final adoption assistance children study population and controls, after matching continuously enrolled adoption assistance children and controls.

Table B-11—Distribution of Health Characteristics Among Adoption Assistance Children (n=7,098) and Controls (n=7,098) Continuously Enrolled in Managed Care, After Matching

Category	Number of Adoption Assistance Children	Percent of Adoption Assistance Children	Number of Controls	Percent of Controls	Chi-square Balance Test p	Standardized Differences Assessment d
Adjustment Disorder	778	11.0%	842	11.9%	0.09	-0.028
Attention Deficit Hyperactivity Disorder	2,453	34.6%	2,510	35.4%	0.32	-0.017
Anxiety Disorder	906	12.8%	958	13.5%	0.20	-0.022
Congenital Anomaly	341	4.8%	314	4.4%	0.28	0.018
Developmental Disorder	1,406	19.8%	1,197	16.9%	<0.001*	0.076
Intentional Self-Harm	111	1.6%	113	1.6%	0.89	-0.002
Mood Disorder	843	11.9%	864	12.2%	0.59	-0.009
Neurological Disorder	216	3.0%	154	2.2%	0.001*	0.055
Obesity and Metabolic Syndrome	885	12.5%	810	11.4%	0.05	0.033
Other Mental Health Disorder	101	1.4%	97	1.4%	0.77	0.005
Psychotic Disorder	34	0.5%	29	0.4%	0.53	0.011
Rheumatologic Condition	504	7.1%	437	6.2%	0.02*	0.038
Substance Use Disorder	68	1.0%	73	1.0%	0.67	-0.007
Emergency Department Visit for Mental Health	47	0.7%	47	0.7%	1.00	0.000
Acute Inpatient Visit for Mental Health	106	1.5%	83	1.2%	0.09	0.028

Indicates that the covariate balance test found imbalance between the adoption assistance children and controls.

The health characteristics distributions for the adoption assistance children study population and the controls were balanced by matching. While the Chi-square tests found imbalance for three health characteristics (i.e., developmental disorder, neurological disorder, and rheumatologic condition) and the omnibus test (p<0.001) identified imbalance in at least one covariate, the standardized differences assessment found no imbalances in the health characteristics. Due to the large sample size, and since larger sample sizes increase the sensitivity of the Chi-square test, HSAG only considered a characteristic to be meaningfully imbalanced if both the Chi-square test and standardized differences assessment indicated imbalance. The largest imbalance was 2.9 percent for Developmental Disorder; however, this was a substantial improvement from the 11.2 percent difference between cases and controls prior to matching.

Table B-12 presents the health characteristic assessment findings for the final former foster children study population and controls, after matching continuously enrolled former foster children and controls.

Table B-12—Distribution of Health Characteristics Among Former Foster Children (n=1,288) and Controls (n=1,288) Continuously Enrolled in Managed Care, After Matching

Category	Number of Former Foster Children	Percent of Former Foster Children	Number of Controls	Percent of Controls	Chi-square Balance Test p	Standardized Differences Assessment d
Adjustment Disorder	78	6.1%	69	5.4%	0.44	0.030
Attention Deficit Hyperactivity Disorder	131	10.2%	125	9.7%	0.69	0.016
Anxiety Disorder	241	18.7%	240	18.6%	0.96	0.002
Developmental Disorder	56	4.3%	51	4.0%	0.62	0.019
Intentional Self-Harm	69	5.4%	57	4.4%	0.27	0.043
Mood Disorder	337	26.2%	322	25.0%	0.50	0.027
Obesity and Metabolic Syndrome	137	10.6%	120	9.3%	0.26	0.044
Other Mental Health Disorder	33	2.6%	27	2.1%	0.43	0.031
Psychotic Disorder	38	3.0%	32	2.5%	0.47	0.029
Rheumatologic Condition	142	11.0%	144	11.2%	0.90	-0.005
Substance Use Disorder	116	9.0%	116	9.0%	1.00	0.000
Emergency Department Visit for Mental Health	41	3.2%	30	2.3%	0.19	0.052
Acute Inpatient Visit for Mental Health	73	5.7%	65	5.0%	0.48	0.028

* *Indicates that the covariate balance test found imbalance between the former foster children and controls.*

The health characteristics distributions for the former foster children study population and the controls were balanced by matching. Neither the Chi-square tests nor the standard differences assessment identified any imbalances in the health characteristics. The omnibus test also did not identify any imbalance (p=0.99).

Appendix C: Detailed Findings by Study Indicator

Appendix C provides the numerators, denominators, and rates for each study indicator applicable to the children in foster care, adoption assistance children, or former foster care children study populations and their matched controls. Results are presented for all members in each study indicator's denominator, as well as stratified by age category, the member's continuously enrolled MCO, and the member's region of residence. The age categories included in each table differ by measure due to the age restrictions outlined in the technical specifications for each measure, as shown in Appendix A. The value "NC" indicates that the rate could not be calculated due to a denominator of zero.

Children in Foster Care Population

Primary Care

Table C-1—Rates of Child and Adolescent Well-Care Visits Among Children in Foster Care and Controls, by Age Category, MCO, and Region

Category	Children in Foster Care			Controls		
	Numerator	Denominator	Rate	Numerator	Denominator	Rate
All Eligible Children	1,862	2,737	68.0%	1,351	2,787	48.5%
Age Category						
≤ 2 years	156	200	78.0%	151	221	68.3%
3 to 5 years	394	520	75.8%	325	523	62.1%
6 to 10 years	498	723	68.9%	334	737	45.3%
11 to 13 years	306	456	67.1%	209	460	45.4%
≥ 14 years	508	838	60.6%	332	846	39.2%
Continuously Enrolled MCO						
Aetna	107	186	57.5%	81	189	42.9%
HealthKeepers	540	776	69.6%	428	800	53.5%
Magellan	77	121	63.6%	40	131	30.5%
Optima	442	628	70.4%	332	649	51.2%
Virginia Premier	534	780	68.5%	349	778	44.9%
UnitedHealthcare	106	164	64.6%	78	160	48.8%
FFS	56	82	68.3%	43	80	53.8%
Region						
Central	391	605	64.6%	256	603	42.5%
Charlottesville/Western	355	525	67.6%	275	546	50.4%
Northern & Winchester	253	372	68.0%	218	384	56.8%
Roanoke/Alleghany	265	411	64.5%	179	415	43.1%
Southwest	232	354	65.5%	135	347	38.9%
Tidewater	366	470	77.9%	288	492	58.5%

Table C-2—Rates of Well-Child Visits in the First 30 Months of Life—Well-Child Visits in the First 15 Months—Six or More Well-Child Visits Among Children in Foster Care and Controls, by MCO and Region

Category	Children in Foster Care			Controls		
	Numerator	Denominator	Rate	Numerator	Denominator	Rate
All Eligible Children	127	195	65.1%	83	148	56.1%
Continuously Enrolled MCO						
Aetna	S	S	S	S	S	S
HealthKeepers	39	53	73.6%	22	39	56.4%
Magellan	S	S	S	S	S	S
Optima	37	51	72.5%	28	37	75.7%
Virginia Premier	21	36	58.3%	19	36	52.8%
UnitedHealthcare	S	S	S	S	S	S
FFS	S	S	S	S	S	S
Region						
Central	23	45	51.1%	17	33	51.5%
Charlottesville/Western	S	S	S	S	S	S
Northern & Winchester	23	33	69.7%	16	28	57.1%
Roanoke/Alleghany	17	30	56.7%	15	23	65.2%
Southwest	S	S	S	S	S	S
Tidewater	35	46	76.1%	14	24	58.3%

S indicates that the rate has been suppressed due to a small numerator or denominator (i.e., less than or equal to 10).

Table C-3—Rates of Well-Child Visits in the First 30 Months of Life—Well-Child Visits for Age 15 Months to 30 Months—Two or More Well-Child Visits Among Children in Foster Care and Controls, by MCO and Region

Category	Children in Foster Care			Controls		
	Numerator	Denominator	Rate	Numerator	Denominator	Rate
All Eligible Children	142	183	77.6%	143	192	74.5%
Continuously Enrolled MCO						
Aetna	S	S	S	12	20	60.0%
HealthKeepers	45	58	77.6%	45	51	88.2%
Magellan	S	S	S	S	S	S
Optima	35	39	89.7%	38	47	80.9%
Virginia Premier	38	51	74.5%	29	42	69.0%
UnitedHealthcare	S	S	S	11	19	57.9%
FFS	S	S	S	S	S	S
Region						
Central	22	30	73.3%	23	33	69.7%
Charlottesville/Western	36	39	92.3%	29	38	76.3%
Northern & Winchester	18	24	75.0%	18	23	78.3%
Roanoke/Alleghany	12	23	52.2%	22	31	71.0%

Category	Children in Foster Care			Controls		
	Numerator	Denominator	Rate	Numerator	Denominator	Rate
Southwest	20	27	74.1%	19	25	76.0%
Tidewater	34	40	85.0%	32	42	76.2%

S indicates that the rate has been suppressed due to a small numerator or denominator (i.e., less than or equal to 10).

Oral Health

Table C-4—Rates of Annual Dental Visits Among Children in Foster Care and Controls, by Age Category, MCO, and Region

Category	Children in Foster Care			Controls		
	Numerator	Denominator	Rate	Numerator	Denominator	Rate
All Eligible Children	2,348	2,967	79.1%	1,496	2,990	50.0%
Age Category						
≤ 2 years	290	430	67.4%	161	424	38.0%
3 to 5 years	427	520	82.1%	269	523	51.4%
6 to 10 years	596	723	82.4%	415	737	56.3%
11 to 13 years	374	456	82.0%	250	460	54.3%
≥ 14 years	661	838	78.9%	401	846	47.4%
Continuously Enrolled MCO						
Aetna	156	206	75.7%	90	209	43.1%
HealthKeepers	663	854	77.6%	453	857	52.9%
Magellan	121	146	82.9%	58	147	39.5%
Optima	517	671	77.0%	345	694	49.7%
Virginia Premier	672	828	81.2%	406	815	49.8%
UnitedHealthcare	142	177	80.2%	95	184	51.6%
FFS	77	85	90.6%	49	84	58.3%
Region						
Central	504	644	78.3%	300	649	46.2%
Charlottesville/Western	440	573	76.8%	303	573	52.9%
Northern & Winchester	332	412	80.6%	237	412	57.5%
Roanoke/Alleghany	337	438	76.9%	201	443	45.4%
Southwest	306	376	81.4%	179	375	47.7%
Tidewater	429	524	81.9%	276	538	51.3%

Table C-5—Rates of Preventive Dental Services Among Children in Foster Care and Controls, by Age Category, MCO, and Region

Category	Children in Foster Care			Controls		
	Numerator	Denominator	Rate	Numerator	Denominator	Rate
All Eligible Children	2,302	3,199	72.0%	1,363	3,185	42.8%

Category	Children in Foster Care			Controls		
	Numerator	Denominator	Rate	Numerator	Denominator	Rate
Age Category						
≤ 2 years	337	626	53.8%	173	612	28.3%
3 to 5 years	417	526	79.3%	250	526	47.5%
6 to 10 years	589	740	79.6%	389	740	52.6%
11 to 13 years	355	460	77.2%	224	460	48.7%
≥ 14 years	604	847	71.3%	327	847	38.6%
Continuously Enrolled MCO						
Aetna	149	230	64.8%	83	226	36.7%
HealthKeepers	654	917	71.3%	419	913	45.9%
Magellan	121	165	73.3%	53	164	32.3%
Optima	517	730	70.8%	308	731	42.1%
Virginia Premier	647	865	74.8%	367	862	42.6%
UnitedHealthcare	139	198	70.2%	90	197	45.7%
FFS	75	94	79.8%	43	92	46.7%
Region						
Central	488	693	70.4%	272	690	39.4%
Charlottesville/Western	435	607	71.7%	273	607	45.0%
Northern & Winchester	336	450	74.7%	235	450	52.2%
Roanoke/Alleghany	312	473	66.0%	174	470	37.0%
Southwest	290	397	73.0%	160	396	40.4%
Tidewater	441	579	76.2%	249	572	43.5%

Behavioral Health

Table C-6—Rates of 7-Day Follow-Up After Hospitalization for Mental Illness Among Children in Foster Care and Controls, by Age Category, MCO, and Region

Category	Children in Foster Care			Controls		
	Numerator	Denominator	Rate	Numerator	Denominator	Rate
All Eligible Children	61	93	65.6%	29	49	59.2%
Age Category						
3 to 5 years	S	S	S	S	S	S
6 to 10 years	S	S	S	S	S	S
11 to 13 years	16	22	72.7%	S	S	S
≥ 14 years	30	53	56.6%	15	26	57.7%
Continuously Enrolled MCO						
Aetna	S	S	S	S	S	S
HealthKeepers	S	S	S	S	S	S
Magellan	S	S	S	S	S	S
Optima	26	32	81.3%	S	S	S

Category	Children in Foster Care			Controls		
	Numerator	Denominator	Rate	Numerator	Denominator	Rate
Virginia Premier	11	19	57.9%	S	S	S
UnitedHealthcare	S	S	S	S	S	S
FFS	S	S	S	S	S	S
Region						
Central	12	17	70.6%	S	S	S
Charlottesville/Western	S	S	S	S	S	S
Northern & Winchester	S	S	S	S	S	S
Roanoke/Alleghany	12	21	57.1%	S	S	S
Southwest	S	S	S	S	S	S
Tidewater	18	21	85.7%	S	S	S

S indicates that the rate has been suppressed due to a small numerator or denominator (i.e., less than or equal to 10).

Table C-7—Rates of 30-Day Follow-Up After ED Visit for Mental Illness Among Children in Foster Care and Controls, by Age Category, MCO, and Region

Category	Children in Foster Care			Controls		
	Numerator	Denominator	Rate	Numerator	Denominator	Rate
All Eligible Children	43	49	87.8%	15	19	78.9%
Age Category						
3 to 5 years	S	S	S	0	0	NC
6 to 10 years	11	11	100%	S	S	S
11 to 13 years	S	S	S	S	S	S
≥ 14 years	21	26	80.8%	S	S	S
Continuously Enrolled MCO						
Aetna	S	S	S	S	S	S
HealthKeepers	17	19	89.5%	S	S	S
Magellan	0	0	NC	S	S	S
Optima	S	S	S	S	S	S
Virginia Premier	11	13	84.6%	S	S	S
UnitedHealthcare	0	0	NC	0	0	NC
FFS	S	S	S	S	S	S
Region						
Central	13	14	92.9%	S	S	S
Charlottesville/Western	S	S	S	S	S	S
Northern & Winchester	S	S	S	S	S	S
Roanoke/Alleghany	S	S	S	S	S	S
Southwest	S	S	S	0	0	NC
Tidewater	S	S	S	S	S	S

S indicates that the rate has been suppressed due to a small numerator or denominator (i.e., less than or equal to 10).

Table C-8—Rates of Metabolic Monitoring for Children and Adolescents on Antipsychotics Among Children in Foster Care and Controls, by Age Category, MCO, and Region

Category	Children in Foster Care			Controls		
	Numerator	Denominator	Rate	Numerator	Denominator	Rate
All Eligible Children	113	295	38.3%	30	108	27.8%
Age Category						
≤ 2 years	S	S	S	0	0	NC
3 to 5 years	S	S	S	S	S	S
6 to 10 years	22	76	28.9%	S	S	S
11 to 13 years	30	77	39.0%	11	31	35.5%
≥ 14 years	53	125	42.4%	13	36	36.1%
Continuously Enrolled MCO						
Aetna	S	S	S	S	S	S
HealthKeepers	28	100	28.0%	13	40	32.5%
Magellan	S	S	S	S	S	S
Optima	30	68	44.1%	S	S	S
Virginia Premier	37	81	45.7%	S	S	S
UnitedHealthcare	S	S	S	S	S	S
FFS	S	S	S	S	S	S
Region						
Central	26	66	39.4%	S	S	S
Charlottesville/Western	12	34	35.3%	S	S	S
Northern & Winchester	14	32	43.8%	S	S	S
Roanoke/Alleghany	18	51	35.3%	S	S	S
Southwest	17	41	41.5%	S	S	S
Tidewater	26	71	36.6%	S	S	S

S indicates that the rate has been suppressed due to a small numerator or denominator (i.e., less than or equal to 10).

Table C-9—Rates of Use of First-Line Psychosocial Care for Children and Adolescents on Antipsychotics Among Children in Foster Care and Controls, by Age Category, MCO, and Region

Category	Children in Foster Care			Controls		
	Numerator	Denominator	Rate	Numerator	Denominator	Rate
All Eligible Children	73	79	92.4%	30	38	78.9%
Age Category						
≤ 2 years	S	S	S	0	0	NC
3 to 5 years	S	S	S	S	S	S
6 to 10 years	25	28	89.3%	S	S	S
11 to 13 years	19	21	90.5%	S	S	S
≥ 14 years	18	18	100%	12	14	85.7%
Continuously Enrolled MCO						
Aetna	S	S	S	S	S	S

Category	Children in Foster Care			Controls		
	Numerator	Denominator	Rate	Numerator	Denominator	Rate
HealthKeepers	19	22	86.4%	S	S	S
Magellan	S	S	S	S	S	S
Optima	15	15	100%	S	S	S
Virginia Premier	28	31	90.3%	S	S	S
UnitedHealthcare	S	S	S	0	0	NC
FFS	S	S	S	S	S	S
Region						
Central	13	14	92.9%	S	S	S
Charlottesville/Western	S	S	S	S	S	S
Northern & Winchester	S	S	S	S	S	S
Roanoke/Alleghany	18	18	100%	S	S	S
Southwest	14	14	100%	0	0	NC
Tidewater	16	18	88.9%	S	S	S

S indicates that the rate has been suppressed due to a small numerator or denominator (i.e., less than or equal to 10).

Table C-10—Rates of Follow-Up Care for Children Prescribed ADHD Medication within 1 Month Among Children in Foster Care and Controls, by Age Category, MCO, and Region

Category	Children in Foster Care			Controls		
	Numerator	Denominator	Rate	Numerator	Denominator	Rate
All Eligible Children	92	106	86.8%	92	123	74.8%
Age Category						
6 to 10 years	65	75	86.7%	71	89	79.8%
11 to 13 years	27	31	87.1%	21	34	61.8%
Continuously Enrolled MCO						
Aetna	S	S	S	S	S	S
HealthKeepers	28	31	90.3%	30	45	66.7%
Magellan	S	S	S	S	S	S
Optima	21	25	84.0%	23	27	85.2%
Virginia Premier	23	29	79.3%	26	35	74.3%
UnitedHealthcare	S	S	S	S	S	S
FFS	S	S	S	S	S	S
Region						
Central	26	31	83.9%	21	28	75.0%
Charlottesville/Western	26	30	86.7%	18	22	81.8%
Northern & Winchester	S	S	S	S	S	S
Roanoke/Alleghany	11	13	84.6%	15	23	65.2%
Southwest	S	S	S	S	S	S
Tidewater	19	21	90.5%	20	26	76.9%

S indicates that the rate has been suppressed due to a small numerator or denominator (i.e., less than or equal to 10).

Table C-11—Rates of Follow-Up Care for Children Prescribed ADHD Medication within 2 Months Among Children in Foster Care and Controls, by Age Category, MCO, and Region

Category	Children in Foster Care			Controls		
	Numerator	Denominator	Rate	Numerator	Denominator	Rate
All Eligible Children	98	106	92.5%	105	123	85.4%
Age Category						
6 to 10 years	69	75	92.0%	79	89	88.8%
11 to 13 years	29	31	93.5%	26	34	76.5%
Continuously Enrolled MCO						
Aetna	S	S	S	S	S	S
HealthKeepers	30	31	96.8%	35	45	77.8%
Magellan	S	S	S	S	S	S
Optima	23	25	92.0%	24	27	88.9%
Virginia Premier	24	29	82.8%	31	35	88.6%
UnitedHealthcare	S	S	S	S	S	S
FFS	S	S	S	S	S	S
Region						
Central	28	31	90.3%	24	28	85.7%
Charlottesville/Western	26	30	86.7%	21	22	95.5%
Northern & Winchester	S	S	S	S	S	S
Roanoke/Alleghany	12	13	92.3%	18	23	78.3%
Southwest	S	S	S	S	S	S
Tidewater	21	21	100%	21	26	80.8%

S indicates that the rate has been suppressed due to a small numerator or denominator (i.e., less than or equal to 10).

Table C-12—Rates of Follow-Up Care for Children Prescribed ADHD Medication within 3 Months Among Children in Foster Care and Controls, by Age Category, MCO, and Region

Category	Children in Foster Care			Controls		
	Numerator	Denominator	Rate	Numerator	Denominator	Rate
All Eligible Children	101	106	95.3%	108	123	87.8%
Age Category						
6 to 10 years	71	75	94.7%	80	89	89.9%
11 to 13 years	30	31	96.8%	28	34	82.4%
Continuously Enrolled MCO						
Aetna	S	S	S	S	S	S
HealthKeepers	31	31	100%	38	45	84.4%
Magellan	S	S	S	S	S	S
Optima	24	25	96.0%	24	27	88.9%
Virginia Premier	25	29	86.2%	31	35	88.6%
UnitedHealthcare	S	S	S	S	S	S
FFS	S	S	S	S	S	S

Category	Children in Foster Care			Controls		
	Numerator	Denominator	Rate	Numerator	Denominator	Rate
Region						
Central	30	31	96.8%	25	28	89.3%
Charlottesville/Western	27	30	90.0%	21	22	95.5%
Northern & Winchester	S	S	S	S	S	S
Roanoke/Alleghany	12	13	92.3%	18	23	78.3%
Southwest	S	S	S	S	S	S
Tidewater	21	21	100%	22	26	84.6%

S indicates that the rate has been suppressed due to a small numerator or denominator (i.e., less than or equal to 10).

Table C-13—Rates of Follow-Up Care for Children Prescribed ADHD Medication within 6 Months Among Children in Foster Care and Controls, by Age Category, MCO, and Region

Category	Children in Foster Care			Controls		
	Numerator	Denominator	Rate	Numerator	Denominator	Rate
All Eligible Children	105	106	99.1%	118	123	95.9%
Age Category						
6 to 10 years	75	75	100%	87	89	97.8%
11 to 13 years	30	31	96.8%	31	34	91.2%
Continuously Enrolled MCO						
Aetna	S	S	S	S	S	S
HealthKeepers	31	31	100%	43	45	95.6%
Magellan	S	S	S	S	S	S
Optima	25	25	100%	25	27	92.6%
Virginia Premier	28	29	96.6%	34	35	97.1%
UnitedHealthcare	S	S	S	S	S	S
FFS	S	S	S	S	S	S
Region						
Central	31	31	100%	26	28	92.9%
Charlottesville/Western	29	30	96.7%	21	22	95.5%
Northern & Winchester	S	S	S	S	S	S
Roanoke/Alleghany	13	13	100%	23	23	100%
Southwest	S	S	S	S	S	S
Tidewater	21	21	100%	25	26	96.2%

S indicates that the rate has been suppressed due to a small numerator or denominator (i.e., less than or equal to 10).

Table C-14—Rates of Follow-Up Care for Children Prescribed ADHD Medication within 9 Months Among Children in Foster Care and Controls, by Age Category, MCO, and Region

Category	Children in Foster Care			Controls		
	Numerator	Denominator	Rate	Numerator	Denominator	Rate
All Eligible Children	105	106	99.1%	119	123	96.7%

Category	Children in Foster Care			Controls		
	Numerator	Denominator	Rate	Numerator	Denominator	Rate
Age Category						
6 to 10 years	75	75	100%	88	89	98.9%
11 to 13 years	30	31	96.8%	31	34	91.2%
Continuously Enrolled MCO						
Aetna	S	S	S	S	S	S
HealthKeepers	31	31	100%	43	45	95.6%
Magellan	S	S	S	S	S	S
Optima	25	25	100%	26	27	96.3%
Virginia Premier	28	29	96.6%	34	35	97.1%
UnitedHealthcare	S	S	S	S	S	S
FFS	S	S	S	S	S	S
Region						
Central	31	31	100%	27	28	96.4%
Charlottesville/Western	29	30	96.7%	21	22	95.5%
Northern & Winchester	S	S	S	S	S	S
Roanoke/Alleghany	13	13	100%	23	23	100%
Southwest	S	S	S	S	S	S
Tidewater	21	21	100%	25	26	96.2%

S indicates that the rate has been suppressed due to a small numerator or denominator (i.e., less than or equal to 10).

Substance Use

Table C-15—Rates of 30-Day Follow-Up After ED Visit for AOD Abuse or Dependence Among Children in Foster Care and Controls, by Age Category, MCO, and Region

All cells in the table were either unreportable or suppressed; therefore, no results are displayed.

Table C-16—Rates of Initiation of AOD Abuse or Dependence Treatment Among Children in Foster Care and Controls, by Age Category, MCO, and Region

Category	Children in Foster Care			Controls		
	Numerator	Denominator	Rate	Numerator	Denominator	Rate
All Eligible Children	16	55	29.1%	11	24	45.8%
Age Category						
11 to 13 years	S	S	S	0	0	NC
≥ 14 years	S	S	S	11	24	45.8%
Continuously Enrolled MCO						
Aetna	S	S	S	S	S	S
HealthKeepers	S	S	S	S	S	S
Magellan	S	S	S	0	0	NC
Optima	S	S	S	S	S	S

Category	Children in Foster Care			Controls		
	Numerator	**Denominator**	**Rate**	**Numerator**	**Denominator**	**Rate**
Virginia Premier	S	S	S	S	S	S
UnitedHealthcare	S	S	S	S	S	S
FFS	S	S	S	S	S	S
Region						
Central	S	S	S	S	S	S
Charlottesville/Western	S	S	S	0	0	NC
Northern & Winchester	S	S	S	S	S	S
Roanoke/Alleghany	S	S	S	S	S	S
Southwest	S	S	S	S	S	S
Tidewater	S	S	S	S	S	S

S indicates that the rate has been suppressed due to a small numerator or denominator (i.e., less than or equal to 10).

Table C-17—Rates of Engagement of AOD Abuse or Dependence Treatment Among Children in Foster Care and Controls, by Age Category, MCO, and Region

Category	Children in Foster Care			Controls		
	Numerator	**Denominator**	**Rate**	**Numerator**	**Denominator**	**Rate**
All Eligible Children	S	S	S	S	S	S
Age Category						
11 to 13 years	S	S	S	0	0	NC
≥ 14 years	S	S	S	S	S	S
Continuously Enrolled MCO						
Aetna	S	S	S	S	S	S
HealthKeepers	S	S	S	S	S	S
Magellan	S	S	S	0	0	NC
Optima	0	11	0.0%	S	S	S
Virginia Premier	S	S	S	S	S	S
UnitedHealthcare	S	S	S	S	S	S
FFS	S	S	S	S	S	S
Region						
Central	S	S	S	S	S	S
Charlottesville/Western	S	S	S	0	0	NC
Northern & Winchester	S	S	S	S	S	S
Roanoke/Alleghany	S	S	S	S	S	S
Southwest	S	S	S	S	S	S
Tidewater	S	S	S	S	S	S

S indicates that the rate has been suppressed due to a small numerator or denominator (i.e., less than or equal to 10).

Reproductive Health

Table C-18—Rates of Contraceptive Care (Most Effective or Moderately Effective Method) Among Children in Foster Care and Controls, by MCO and Region

Category	Children in Foster Care			Controls		
	Numerator	Denominator	Rate	Numerator	Denominator	Rate
All Eligible Children	177	385	46.0%	138	432	31.9%
Continuously Enrolled MCO						
Aetna	14	34	41.2%	13	37	35.1%
HealthKeepers	41	112	36.6%	33	126	26.2%
Magellan	11	16	68.8%	S	S	S
Optima	42	83	50.6%	34	88	38.6%
Virginia Premier	55	109	50.5%	43	131	32.8%
UnitedHealthcare	S	S	S	S	S	S
FFS	S	S	S	S	S	S
Region						
Central	42	94	44.7%	33	109	30.3%
Charlottesville/Western	37	58	63.8%	27	67	40.3%
Northern & Winchester	18	57	31.6%	11	59	18.6%
Roanoke/Alleghany	28	55	50.9%	21	65	32.3%
Southwest	31	60	51.7%	21	60	35.0%
Tidewater	21	61	34.4%	25	72	34.7%

S indicates that the rate has been suppressed due to a small numerator or denominator (i.e., less than or equal to 10).

Table C-19—Rates of Contraceptive Care (Long-Acting Reversible Method) Among Children in Foster Care and Controls, by MCO and Region

Category	Children in Foster Care			Controls		
	Numerator	Denominator	Rate	Numerator	Denominator	Rate
All Eligible Children	33	385	8.6%	24	432	5.6%
Continuously Enrolled MCO						
Aetna	S	S	S	S	S	S
HealthKeepers	S	S	S	S	S	S
Magellan	S	S	S	0	17	0.0%
Optima	S	S	S	S	S	S
Virginia Premier	S	S	S	S	S	S
UnitedHealthcare	S	S	S	0	25	0.0%
FFS	S	S	S	S	S	S
Region						
Central	12	94	12.8%	S	S	S
Charlottesville/Western	S	S	S	S	S	S
Northern & Winchester	S	S	S	S	S	S
Roanoke/Alleghany	S	S	S	S	S	S

Category	Children in Foster Care			Controls		
	Numerator	Denominator	Rate	Numerator	Denominator	Rate
Southwest	S	S	S	S	S	S
Tidewater	S	S	S	S	S	S

S indicates that the rate has been suppressed due to a small numerator or denominator (i.e., less than or equal to 10).

Respiratory Health

Table C-20—Rates of Appropriate Asthma Medication Ratio Among Children in Foster Care and Controls, by Age Category, MCO, and Region

Category	Children in Foster Care			Controls		
	Numerator	Denominator	Rate	Numerator	Denominator	Rate
All Eligible Children	44	49	89.8%	63	83	75.9%
Age Category						
3 to 5 years	S	S	S	S	S	S
6 to 10 years	14	15	93.3%	19	28	67.9%
11 to 13 years	S	S	S	S	S	S
≥ 14 years	13	16	81.3%	22	30	73.3%
Continuously Enrolled MCO						
Aetna	S	S	S	S	S	S
HealthKeepers	13	13	100%	12	17	70.6%
Magellan	S	S	S	S	S	S
Optima	S	S	S	20	28	71.4%
Virginia Premier	16	18	88.9%	22	24	91.7%
UnitedHealthcare	S	S	S	S	S	S
FFS	0	0	NC	S	S	S
Region						
Central	S	S	S	S	S	S
Charlottesville/Western	S	S	S	11	15	73.3%
Northern & Winchester	S	S	S	S	S	S
Roanoke/Alleghany	S	S	S	S	S	S
Southwest	S	S	S	S	S	S
Tidewater	S	S	S	18	26	69.2%

S indicates that the rate has been suppressed due to a small numerator or denominator (i.e., less than or equal to 10).

Adoption Assistance Population

Primary Care

Table C-21—Rates of Child and Adolescent Well-Care Visits Among Adoption Assistance Children and Controls, by Age Category, MCO, and Region

Category	Adoption Assistance Children			Controls		
	Numerator	Denominator	Rate	Numerator	Denominator	Rate
All Eligible Children	3,014	7,046	42.8%	2,846	6,977	40.8%
Age Category						
≤ 2 years	84	128	65.6%	25	47	53.2%
3 to 5 years	432	768	56.3%	471	768	61.3%
6 to 10 years	876	2,060	42.5%	845	2,064	40.9%
11 to 13 years	740	1,689	43.8%	698	1,689	41.3%
≥ 14 years	882	2,401	36.7%	807	2,409	33.5%
Continuously Enrolled MCO						
Aetna	210	608	34.5%	217	602	36.0%
HealthKeepers	939	2,093	44.9%	916	2,085	43.9%
Magellan	86	263	32.7%	69	261	26.4%
Optima	683	1,463	46.7%	629	1,445	43.5%
Virginia Premier	908	2,049	44.3%	784	2,021	38.8%
UnitedHealthcare	148	469	31.6%	180	462	39.0%
FFS	40	101	39.6%	51	101	50.5%
Region						
Central	619	1,543	40.1%	589	1,523	38.7%
Charlottesville/Western	543	1,124	48.3%	445	1,114	39.9%
Northern & Winchester	346	1,065	32.5%	509	1,066	47.7%
Roanoke/Alleghany	513	1,124	45.6%	442	1,111	39.8%
Southwest	335	846	39.6%	275	831	33.1%
Tidewater	658	1,344	49.0%	586	1,332	44.0%

Table C-22—Rates of Well-Child Visits in the First 30 Months of Life—Well-Child Visits in the First 15 Months—Six or More Well-Child Visits Among Adoption Assistance Children and Controls, by MCO and Region

Category	Adoption Assistance Children			Controls		
	Numerator	Denominator	Rate	Numerator	Denominator	Rate
All Eligible Children	S	S	S	23	44	52.3%
Continuously Enrolled MCO						
Aetna	S	S	S	S	S	S
HealthKeepers	0	0	NC	S	S	S
Magellan	0	0	NC	S	S	S

Category	Adoption Assistance Children			Controls		
	Numerator	Denominator	Rate	Numerator	Denominator	Rate
Optima	0	0	NC	S	S	S
Virginia Premier	S	S	S	S	S	S
UnitedHealthcare	0	0	NC	S	S	S
FFS	0	0	NC	0	0	NC
Region						
Central	0	0	NC	S	S	S
Charlottesville/Western	0	0	NC	S	S	S
Northern & Winchester	0	0	NC	S	S	S
Roanoke/Alleghany	S	S	S	S	S	S
Southwest	0	0	NC	S	S	S
Tidewater	0	0	NC	S	S	S

S indicates that the rate has been suppressed due to a small numerator or denominator (i.e., less than or equal to 10).

Table C-23—Rates of Well-Child Visits in the First 30 Months of Life—Well-Child Visits for Age 15 Months to 30 Months—Two or More Well-Child Visits Adoption Assistance Children and Controls, by MCO and Region

Category	Adoption Assistance Children			Controls		
	Numerator	Denominator	Rate	Numerator	Denominator	Rate
All Eligible Children	54	68	79.4%	27	42	64.3%
Continuously Enrolled MCO						
Aetna	S	S	S	S	S	S
HealthKeepers	16	21	76.2%	S	S	S
Magellan	0	0	NC	0	0	NC
Optima	11	11	100%	S	S	S
Virginia Premier	20	26	76.9%	S	S	S
UnitedHealthcare	S	S	S	S	S	S
FFS	0	0	NC	0	0	NC
Region						
Central	12	15	80.0%	S	S	S
Charlottesville/Western	S	S	S	S	S	S
Northern & Winchester	S	S	S	S	S	S
Roanoke/Alleghany	12	13	92.3%	S	S	S
Southwest	S	S	S	S	S	S
Tidewater	11	13	84.6%	S	S	S

S indicates that the rate has been suppressed due to a small numerator or denominator (i.e., less than or equal to 10).

Oral Health

Table C-24—Rates of Annual Dental Visits Among Adoption Assistance Children and Controls, by Age Category, MCO, and Region

Category	Adoption Assistance Children			Controls		
	Numerator	Denominator	Rate	Numerator	Denominator	Rate
All Eligible Children	3,826	7,078	54.1%	3,509	7,031	49.9%
Age Category						
≤ 2 years	74	160	46.3%	35	101	34.7%
3 to 5 years	390	768	50.8%	377	768	49.1%
6 to 10 years	1,215	2,060	59.0%	1,098	2,064	53.2%
11 to 13 years	957	1,689	56.7%	866	1,689	51.3%
≥ 14 years	1,190	2,401	49.6%	1,133	2,409	47.0%
Continuously Enrolled MCO						
Aetna	288	611	47.1%	292	609	47.9%
HealthKeepers	1,161	2,105	55.2%	1,033	2,100	49.2%
Magellan	101	264	38.3%	96	263	36.5%
Optima	829	1,468	56.5%	726	1,455	49.9%
Virginia Premier	1,181	2,060	57.3%	1,065	2,038	52.3%
UnitedHealthcare	211	469	45.0%	233	465	50.1%
FFS	55	101	54.5%	64	101	63.4%
Region						
Central	856	1,550	55.2%	735	1,537	47.8%
Charlottesville/Western	644	1,127	57.1%	569	1,118	50.9%
Northern & Winchester	483	1,067	45.3%	620	1,071	57.9%
Roanoke/Alleghany	615	1,134	54.2%	544	1,123	48.4%
Southwest	526	849	62.0%	418	838	49.9%
Tidewater	702	1,351	52.0%	623	1,344	46.4%

Table C-25—Rates of Preventive Dental Services Among Adoption Assistance Children and Controls, by Age Category, MCO, and Region

Category	Adoption Assistance Children			Controls		
	Numerator	Denominator	Rate	Numerator	Denominator	Rate
All Eligible Children	3,489	7,098	49.2%	3,083	7,090	43.5%
Age Category						
≤ 2 years	70	161	43.5%	38	153	24.8%
3 to 5 years	369	771	47.9%	358	771	46.4%
6 to 10 years	1,150	2,065	55.7%	1,017	2,065	49.2%
11 to 13 years	858	1,692	50.7%	748	1,692	44.2%
≥ 14 years	1,042	2,409	43.3%	922	2,409	38.3%
Continuously Enrolled MCO						
Aetna	257	612	42.0%	243	611	39.8%

Category	Adoption Assistance Children			Controls		
	Numerator	Denominator	Rate	Numerator	Denominator	Rate
HealthKeepers	1,051	2,115	49.7%	910	2,113	43.1%
Magellan	88	264	33.3%	77	264	29.2%
Optima	762	1,471	51.8%	633	1,469	43.1%
Virginia Premier	1,091	2,063	52.9%	954	2,062	46.3%
UnitedHealthcare	188	472	39.8%	209	470	44.5%
FFS	52	101	51.5%	57	101	56.4%
Region						
Central	784	1,552	50.5%	645	1,549	41.6%
Charlottesville/Western	576	1,128	51.1%	480	1,128	42.6%
Northern & Winchester	435	1,077	40.4%	573	1,077	53.2%
Roanoke/Alleghany	560	1,136	49.3%	458	1,135	40.4%
Southwest	491	850	57.8%	374	848	44.1%
Tidewater	643	1,355	47.5%	553	1,353	40.9%

Behavioral Health

Table C-26—Rates of 7-Day Follow-Up After Hospitalization for Mental Illness Among Adoption Assistance Children and Controls, by Age Category, MCO, and Region

Category	Adoption Assistance Children			Controls		
	Numerator	Denominator	Rate	Numerator	Denominator	Rate
All Eligible Children	68	113	60.2%	54	92	58.7%
Age Category						
3 to 5 years	0	0	NC	0	0	NC
6 to 10 years	12	15	80.0%	13	17	76.5%
11 to 13 years	21	31	67.7%	16	23	69.6%
≥ 14 years	35	67	52.2%	25	52	48.1%
Continuously Enrolled MCO						
Aetna	S	S	S	S	S	S
HealthKeepers	18	30	60.0%	12	20	60.0%
Magellan	S	S	S	S	S	S
Optima	16	30	53.3%	S	S	S
Virginia Premier	22	33	66.7%	31	38	81.6%
UnitedHealthcare	S	S	S	S	S	S
FFS	S	S	S	S	S	S
Region						
Central	15	24	62.5%	15	27	55.6%
Charlottesville/Western	S	S	S	13	19	68.4%
Northern & Winchester	S	S	S	S	S	S
Roanoke/Alleghany	23	32	71.9%	15	21	71.4%

Category	Adoption Assistance Children			Controls		
	Numerator	Denominator	Rate	Numerator	Denominator	Rate
Southwest	S	S	S	S	S	S
Tidewater	15	23	65.2%	S	S	S

S indicates that the rate has been suppressed due to a small numerator or denominator (i.e., less than or equal to 10).

Table C-27—Rates of 30-Day Follow-Up After ED Visit for Mental Illness Among Adoption Assistance Children and Controls, by Age Category, MCO, and Region

Category	Adoption Assistance Children			Controls		
	Numerator	Denominator	Rate	Numerator	Denominator	Rate
All Eligible Children	56	72	77.8%	46	53	86.8%
Age Category						
3 to 5 years	S	S	S	S	S	S
6 to 10 years	S	S	S	S	S	S
11 to 13 years	12	14	85.7%	15	17	88.2%
≥ 14 years	38	50	76.0%	23	28	82.1%
Continuously Enrolled MCO						
Aetna	S	S	S	S	S	S
HealthKeepers	18	21	85.7%	14	15	93.3%
Magellan	S	S	S	S	S	S
Optima	14	17	82.4%	14	16	87.5%
Virginia Premier	19	26	73.1%	S	S	S
UnitedHealthcare	S	S	S	S	S	S
FFS	S	S	S	S	S	S
Region						
Central	S	S	S	12	14	85.7%
Charlottesville/Western	S	S	S	S	S	S
Northern & Winchester	13	18	72.2%	S	S	S
Roanoke/Alleghany	11	12	91.7%	12	12	100%
Southwest	S	S	S	S	S	S
Tidewater	S	S	S	11	13	84.6%

S indicates that the rate has been suppressed due to a small numerator or denominator (i.e., less than or equal to 10).

Table C-28—Rates of Metabolic Monitoring for Children and Adolescents on Antipsychotics Among Adoption Assistance Children and Controls, by Age Category, MCO, and Region

Category	Adoption Assistance Children			Controls		
	Numerator	Denominator	Rate	Numerator	Denominator	Rate
All Eligible Children	144	520	27.7%	43	171	25.1%
Age Category						
≤ 2 years	S	S	S	S	S	S
3 to 5 years	S	S	S	S	S	S
6 to 10 years	36	134	26.9%	11	56	19.6%

Category	Adoption Assistance Children			Controls		
	Numerator	Denominator	Rate	Numerator	Denominator	Rate
11 to 13 years	44	161	27.3%	15	36	41.7%
≥ 14 years	62	214	29.0%	15	72	20.8%
Continuously Enrolled MCO						
Aetna	S	S	S	S	S	S
HealthKeepers	43	170	25.3%	S	S	S
Magellan	S	S	S	S	S	S
Optima	34	104	32.7%	S	S	S
Virginia Premier	48	158	30.4%	21	59	35.6%
UnitedHealthcare	S	S	S	S	S	S
FFS	S	S	S	S	S	S
Region						
Central	27	98	27.6%	S	S	S
Charlottesville/Western	20	66	30.3%	S	S	S
Northern & Winchester	13	68	19.1%	S	S	S
Roanoke/Alleghany	39	118	33.1%	12	37	32.4%
Southwest	18	47	38.3%	S	S	S
Tidewater	27	123	22.0%	S	S	S

S indicates that the rate has been suppressed due to a small numerator or denominator (i.e., less than or equal to 10).

Table C-29—Rates of Use of First-Line Psychosocial Care for Children and Adolescents on Antipsychotics Among Adoption Assistance Children and Controls, by Age Category, MCO, and Region

Category	Adoption Assistance Children			Controls		
	Numerator	Denominator	Rate	Numerator	Denominator	Rate
All Eligible Children	70	118	59.3%	24	39	61.5%
Age Category						
≤ 2 years	0	0	NC	0	0	NC
3 to 5 years	S	S	S	S	S	S
6 to 10 years	S	S	S	S	S	S
11 to 13 years	24	38	63.2%	S	S	S
≥ 14 years	22	41	53.7%	S	S	S
Continuously Enrolled MCO						
Aetna	S	S	S	S	S	S
HealthKeepers	21	46	45.7%	12	19	63.2%
Magellan	S	S	S	0	0	NC
Optima	12	17	70.6%	S	S	S
Virginia Premier	22	32	68.8%	S	S	S
UnitedHealthcare	S	S	S	S	S	S
FFS	S	S	S	0	0	NC

Category	Adoption Assistance Children			Controls		
	Numerator	Denominator	Rate	Numerator	Denominator	Rate
Region						
Central	13	29	44.8%	S	S	S
Charlottesville/Western	S	S	S	S	S	S
Northern & Winchester	12	21	57.1%	S	S	S
Roanoke/Alleghany	20	25	80.0%	S	S	S
Southwest	S	S	S	S	S	S
Tidewater	13	24	54.2%	S	S	S

S indicates that the rate has been suppressed due to a small numerator or denominator (i.e., less than or equal to 10).

Table C-30—Rates of Follow-Up Care for Children Prescribed ADHD Medication within 1 Month Among Adoption Assistance Children and Controls, by Age Category, MCO, and Region

Category	Adoption Assistance Children			Controls		
	Numerator	Denominator	Rate	Numerator	Denominator	Rate
All Eligible Children	141	245	57.6%	149	276	54.0%
Age Category						
6 to 10 years	101	161	62.7%	103	185	55.7%
11 to 13 years	40	84	47.6%	46	91	50.5%
Continuously Enrolled MCO						
Aetna	S	S	S	11	14	78.6%
HealthKeepers	43	79	54.4%	47	87	54.0%
Magellan	S	S	S	S	S	S
Optima	31	47	66.0%	31	67	46.3%
Virginia Premier	40	70	57.1%	46	79	58.2%
UnitedHealthcare	11	17	64.7%	S	S	S
FFS	S	S	S	S	S	S
Region						
Central	32	60	53.3%	35	65	53.8%
Charlottesville/Western	21	31	67.7%	24	42	57.1%
Northern & Winchester	13	27	48.1%	16	33	48.5%
Roanoke/Alleghany	25	45	55.6%	24	42	57.1%
Southwest	23	29	79.3%	19	28	67.9%
Tidewater	27	53	50.9%	31	66	47.0%

S indicates that the rate has been suppressed due to a small numerator or denominator (i.e., less than or equal to 10).

Table C-31—Rates of Follow-Up Care for Children Prescribed ADHD Medication within 2 Months Among Adoption Assistance Children and Controls, by Age Category, MCO, and Region

Category	Adoption Assistance Children			Controls		
	Numerator	Denominator	Rate	Numerator	Denominator	Rate
All Eligible Children	176	245	71.8%	210	276	76.1%

Category	Adoption Assistance Children			Controls		
	Numerator	Denominator	Rate	Numerator	Denominator	Rate
Age Category						
6 to 10 years	124	161	77.0%	143	185	77.3%
11 to 13 years	52	84	61.9%	67	91	73.6%
Continuously Enrolled MCO						
Aetna	S	S	S	13	14	92.9%
HealthKeepers	56	79	70.9%	63	87	72.4%
Magellan	S	S	S	S	S	S
Optima	35	47	74.5%	45	67	67.2%
Virginia Premier	51	70	72.9%	66	79	83.5%
UnitedHealthcare	13	17	76.5%	12	17	70.6%
FFS	S	S	S	S	S	S
Region						
Central	41	60	68.3%	47	65	72.3%
Charlottesville/Western	24	31	77.4%	35	42	83.3%
Northern & Winchester	17	27	63.0%	24	33	72.7%
Roanoke/Alleghany	32	45	71.1%	33	42	78.6%
Southwest	25	29	86.2%	25	28	89.3%
Tidewater	37	53	69.8%	46	66	69.7%

S indicates that the rate has been suppressed due to a small numerator or denominator (i.e., less than or equal to 10).

Table C-32—Rates of Follow-Up Care for Children Prescribed ADHD Medication within 3 Months Among Adoption Assistance Children and Controls, by Age Category, MCO, and Region

Category	Adoption Assistance Children			Controls		
	Numerator	Denominator	Rate	Numerator	Denominator	Rate
All Eligible Children	194	245	79.2%	235	276	85.1%
Age Category						
6 to 10 years	135	161	83.9%	159	185	85.9%
11 to 13 years	59	84	70.2%	76	91	83.5%
Continuously Enrolled MCO						
Aetna	S	S	S	14	14	100%
HealthKeepers	62	79	78.5%	72	87	82.8%
Magellan	S	S	S	S	S	S
Optima	39	47	83.0%	50	67	74.6%
Virginia Premier	55	70	78.6%	72	79	91.1%
UnitedHealthcare	15	17	88.2%	16	17	94.1%
FFS	S	S	S	S	S	S
Region						
Central	45	60	75.0%	52	65	80.0%
Charlottesville/Western	26	31	83.9%	38	42	90.5%
Northern & Winchester	19	27	70.4%	28	33	84.8%

Category	Adoption Assistance Children			Controls		
	Numerator	Denominator	Rate	Numerator	Denominator	Rate
Roanoke/Alleghany	36	45	80.0%	37	42	88.1%
Southwest	27	29	93.1%	27	28	96.4%
Tidewater	41	53	77.4%	53	66	80.3%

S indicates that the rate has been suppressed due to a small numerator or denominator (i.e., less than or equal to 10).

Table C-33—Rates of Follow-Up Care for Children Prescribed ADHD Medication within 6 Months Among Adoption Assistance Children and Controls, by Age Category, MCO, and Region

Category	Adoption Assistance Children			Controls		
	Numerator	Denominator	Rate	Numerator	Denominator	Rate
All Eligible Children	218	245	89.0%	260	276	94.2%
Age Category						
6 to 10 years	149	161	92.5%	176	185	95.1%
11 to 13 years	69	84	82.1%	84	91	92.3%
Continuously Enrolled MCO						
Aetna	12	14	85.7%	14	14	100%
HealthKeepers	68	79	86.1%	81	87	93.1%
Magellan	S	S	S	S	S	S
Optima	44	47	93.6%	62	67	92.5%
Virginia Premier	62	70	88.6%	75	79	94.9%
UnitedHealthcare	16	17	94.1%	17	17	100%
FFS	S	S	S	S	S	S
Region						
Central	49	60	81.7%	60	65	92.3%
Charlottesville/Western	30	31	96.8%	40	42	95.2%
Northern & Winchester	22	27	81.5%	30	33	90.9%
Roanoke/Alleghany	40	45	88.9%	39	42	92.9%
Southwest	28	29	96.6%	28	28	100%
Tidewater	49	53	92.5%	63	66	95.5%

S indicates that the rate has been suppressed due to a small numerator or denominator (i.e., less than or equal to 10).

Table C-34—Rates of Follow-Up Care for Children Prescribed ADHD Medication within 9 Months Among Adoption Assistance Children and Controls, by Age Category, MCO, and Region

Category	Adoption Assistance Children			Controls		
	Numerator	Denominator	Rate	Numerator	Denominator	Rate
All Eligible Children	225	245	91.8%	265	276	96.0%
Age Category						
6 to 10 years	151	161	93.8%	180	185	97.3%
11 to 13 years	74	84	88.1%	85	91	93.4%
Continuously Enrolled MCO						
Aetna	S	S	S	14	14	100%

Category	Adoption Assistance Children			Controls		
	Numerator	Denominator	Rate	Numerator	Denominator	Rate
HealthKeepers	73	79	92.4%	83	87	95.4%
Magellan	13	14	92.9%	S	S	S
Optima	44	47	93.6%	63	67	94.0%
Virginia Premier	63	70	90.0%	77	79	97.5%
UnitedHealthcare	16	17	94.1%	17	17	100%
FFS	S	S	S	S	S	S
Region						
Central	50	60	83.3%	62	65	95.4%
Charlottesville/Western	30	31	96.8%	40	42	95.2%
Northern & Winchester	22	27	81.5%	31	33	93.9%
Roanoke/Alleghany	44	45	97.8%	39	42	92.9%
Southwest	28	29	96.6%	28	28	100%
Tidewater	51	53	96.2%	65	66	98.5%

S indicates that the rate has been suppressed due to a small numerator or denominator (i.e., less than or equal to 10).

Substance Use

Table C-35—Rates of 30-Day Follow-Up After ED Visit for AOD Abuse or Dependence Among Adoption Assistance Children and Controls, by Age Category, MCO, and Region

All cells in the table were either unreportable or suppressed; therefore, no results are displayed.

Table C-36—Rates of Initiation of AOD Abuse or Dependence Treatment Among Adoption Assistance Children and Controls, by Age Category, MCO, and Region

Category	Adoption Assistance Children			Controls		
	Numerator	Denominator	Rate	Numerator	Denominator	Rate
All Eligible Children	16	28	57.1%	21	58	36.2%
Age Category						
11 to 13 years	S	S	S	S	S	S
≥ 14 years	S	S	S	S	S	S
Continuously Enrolled MCO						
Aetna	S	S	S	S	S	S
HealthKeepers	S	S	S	S	S	S
Magellan	S	S	S	0	0	NC
Optima	S	S	S	S	S	S
Virginia Premier	S	S	S	S	S	S
UnitedHealthcare	0	0	NC	S	S	S
FFS	S	S	S	S	S	S
Region						
Central	S	S	S	S	S	S

Category	Adoption Assistance Children			Controls		
	Numerator	Denominator	Rate	Numerator	Denominator	Rate
Charlottesville/Western	S	S	S	S	S	S
Northern & Winchester	S	S	S	S	S	S
Roanoke/Alleghany	S	S	S	S	S	S
Southwest	S	S	S	S	S	S
Tidewater	S	S	S	S	S	S

S indicates that the rate has been suppressed due to a small numerator or denominator (i.e., less than or equal to 10).

Table C-37—Rates of Engagement of AOD Abuse or Dependence Treatment Among Adoption Assistance Children and Controls, by Age Category, MCO, and Region

Category	Adoption Assistance Children			Controls		
	Numerator	Denominator	Rate	Numerator	Denominator	Rate
All Eligible Children	S	S	S	S	S	S
Age Category						
11 to 13 years	S	S	S	S	S	S
≥ 14 years	S	S	S	S	S	S
Continuously Enrolled MCO						
Aetna	S	S	S	S	S	S
HealthKeepers	S	S	S	0	12	0.0%
Magellan	S	S	S	0	0	NC
Optima	S	S	S	S	S	S
Virginia Premier	S	S	S	S	S	S
UnitedHealthcare	0	0	NC	S	S	S
FFS	S	S	S	S	S	S
Region						
Central	S	S	S	S	S	S
Charlottesville/Western	S	S	S	S	S	S
Northern & Winchester	S	S	S	S	S	S
Roanoke/Alleghany	S	S	S	S	S	S
Southwest	S	S	S	S	S	S
Tidewater	S	S	S	S	S	S

S indicates that the rate has been suppressed due to a small numerator or denominator (i.e., less than or equal to 10).

Reproductive Health

Table C-38—Rates of Contraceptive Care (Most Effective or Moderately Effective Method) Among Adoption Assistance Children and Controls, by MCO and Region

Category	Adoption Assistance Children			Controls		
	Numerator	Denominator	Rate	Numerator	Denominator	Rate
All Eligible Children	247	1,116	22.1%	356	1,111	32.0%

Category	Adoption Assistance Children			Controls		
	Numerator	Denominator	Rate	Numerator	Denominator	Rate
Continuously Enrolled MCO						
Aetna	25	112	22.3%	36	108	33.3%
HealthKeepers	69	322	21.4%	103	326	31.6%
Magellan	S	S	S	S	S	S
Optima	52	238	21.8%	85	236	36.0%
Virginia Premier	74	314	23.6%	109	318	34.3%
UnitedHealthcare	16	68	23.5%	11	68	16.2%
FFS	S	S	S	S	S	S
Region						
Central	51	234	21.8%	73	241	30.3%
Charlottesville/Western	45	174	25.9%	65	168	38.7%
Northern & Winchester	24	160	15.0%	33	161	20.5%
Roanoke/Alleghany	42	166	25.3%	55	149	36.9%
Southwest	36	124	29.0%	45	128	35.2%
Tidewater	49	258	19.0%	85	264	32.2%

S indicates that the rate has been suppressed due to a small numerator or denominator (i.e., less than or equal to 10).

Table C-39—Rates of Contraceptive Care (Long-Acting Reversible Method) Among Adoption Assistance Children and Controls, by MCO and Region

Category	Adoption Assistance Children			Controls		
	Numerator	Denominator	Rate	Numerator	Denominator	Rate
All Eligible Children	39	1,116	3.5%	39	1,111	3.5%
Continuously Enrolled MCO						
Aetna	S	S	S	S	S	S
HealthKeepers	13	322	4.0%	11	326	3.4%
Magellan	S	S	S	S	S	S
Optima	S	S	S	S	S	S
Virginia Premier	S	S	S	15	318	4.7%
UnitedHealthcare	S	S	S	S	S	S
FFS	0	19	0.0%	0	13	0.0%
Region						
Central	S	S	S	S	S	S
Charlottesville/Western	S	S	S	S	S	S
Northern & Winchester	S	S	S	S	S	S
Roanoke/Alleghany	S	S	S	S	S	S
Southwest	S	S	S	S	S	S
Tidewater	11	258	4.3%	S	S	S

S indicates that the rate has been suppressed due to a small numerator or denominator (i.e., less than or equal to 10).

Respiratory Health

Table C-40—Rates of Appropriate Asthma Medication Ratio Among Adoption Assistance Children and Controls, by Age Category, MCO, and Region

Category	Adoption Assistance Children			Controls		
	Numerator	Denominator	Rate	Numerator	Denominator	Rate
All Eligible Children	176	211	83.4%	128	168	76.2%
Age Category						
3 to 5 years	18	21	85.7%	S	S	S
6 to 10 years	55	65	84.6%	46	53	86.8%
11 to 13 years	40	48	83.3%	S	S	S
≥ 14 years	63	77	81.8%	44	70	62.9%
Continuously Enrolled MCO						
Aetna	15	17	88.2%	S	S	S
HealthKeepers	45	55	81.8%	37	47	78.7%
Magellan	S	S	S	S	S	S
Optima	39	46	84.8%	27	39	69.2%
Virginia Premier	60	72	83.3%	49	62	79.0%
UnitedHealthcare	S	S	S	S	S	S
FFS	S	S	S	S	S	S
Region						
Central	34	42	81.0%	33	41	80.5%
Charlottesville/Western	28	33	84.8%	27	35	77.1%
Northern & Winchester	15	18	83.3%	14	18	77.8%
Roanoke/Alleghany	35	42	83.3%	15	20	75.0%
Southwest	25	29	86.2%	11	16	68.8%
Tidewater	39	47	83.0%	28	38	73.7%

S indicates that the rate has been suppressed due to a small numerator or denominator (i.e., less than or equal to 10).

Former Foster Care Population

Primary Care

Table C-41—Rates of Child and Adolescent Well-Care Visits Among Former Foster Children and Controls, by MCO and Region

Category	Former Foster Children			Controls		
	Numerator	Denominator	Rate	Numerator	Denominator	Rate
All Eligible Members	69	452	15.3%	77	525	14.7%
Continuously Enrolled MCO						
Aetna	S	S	S	S	S	S

Category	Former Foster Children			Controls		
	Numerator	Denominator	Rate	Numerator	Denominator	Rate
HealthKeepers	26	135	19.3%	22	142	15.5%
Magellan	S	S	S	S	S	S
Optima	17	98	17.3%	19	116	16.4%
Virginia Premier	18	115	15.7%	21	159	13.2%
UnitedHealthcare	S	S	S	S	S	S
FFS	S	S	S	S	S	S
Region						
Central	26	127	20.5%	18	127	14.2%
Charlottesville/Western	12	77	15.6%	11	100	11.0%
Northern & Winchester	S	S	S	S	S	S
Roanoke/Alleghany	S	S	S	14	80	17.5%
Southwest	S	S	S	S	S	S
Tidewater	12	75	16.0%	19	100	19.0%

S indicates that the rate has been suppressed due to a small numerator or denominator (i.e., less than or equal to 10).

Oral Health

Table C-42—Rates of Annual Dental Visits Among Former Foster Children and Controls, by Age Category, MCO, and Region

Category	Former Foster Children			Controls		
	Numerator	Denominator	Rate	Numerator	Denominator	Rate
All Eligible Members	56	211	26.5%	68	274	24.8%
Age Category						
19 to 22 years	56	211	26.5%	68	274	24.8%
23 to 26 years	0	0	NC	0	0	NC
Continuously Enrolled MCO						
Aetna	S	S	S	S	S	S
HealthKeepers	20	63	31.7%	23	73	31.5%
Magellan	S	S	S	S	S	S
Optima	14	50	28.0%	13	64	20.3%
Virginia Premier	13	60	21.7%	23	87	26.4%
UnitedHealthcare	S	S	S	S	S	S
FFS	S	S	S	0	0	NC
Region						
Central	24	64	37.5%	14	67	20.9%
Charlottesville/Western	S	S	S	16	51	31.4%
Northern & Winchester	S	S	S	S	S	S
Roanoke/Alleghany	S	S	S	12	46	26.1%

Category	Former Foster Children			Controls		
	Numerator	Denominator	Rate	Numerator	Denominator	Rate
Southwest	S	S	S	S	S	S
Tidewater	S	S	S	12	54	22.2%

S indicates that the rate has been suppressed due to a small numerator or denominator (i.e., less than or equal to 10).

Table C-43—Rates of Preventive Dental Services Among Former Foster Children and Controls, by Age Category, MCO, and Region

Category	Former Foster Children			Controls		
	Numerator	Denominator	Rate	Numerator	Denominator	Rate
All Eligible Members	43	212	20.3%	44	274	16.1%
Age Category						
19 to 22 years	43	212	20.3%	44	274	16.1%
23 to 26 years	0	0	NC	0	0	NC
Continuously Enrolled MCO						
Aetna	S	S	S	S	S	S
HealthKeepers	13	63	20.6%	17	73	23.3%
Magellan	S	S	S	S	S	S
Optima	12	50	24.0%	S	S	S
Virginia Premier	11	61	18.0%	12	87	13.8%
UnitedHealthcare	S	S	S	S	S	S
FFS	S	S	S	0	0	NC
Region						
Central	22	64	34.4%	11	67	16.4%
Charlottesville/Western	S	S	S	S	S	S
Northern & Winchester	S	S	S	S	S	S
Roanoke/Alleghany	S	S	S	S	S	S
Southwest	S	S	S	S	S	S
Tidewater	S	S	S	S	S	S

S indicates that the rate has been suppressed due to a small numerator or denominator (i.e., less than or equal to 10).

Behavioral Health

Table C-44—Rates of 7-Day Follow-Up After Hospitalization for Mental Illness Among Former Foster Children and Controls, by Age Category, MCO, and Region

Category	Former Foster Children			Controls		
	Numerator	Denominator	Rate	Numerator	Denominator	Rate
All Eligible Members	14	62	22.6%	S	S	S
Age Category						
19 to 22 years	S	S	S	S	S	S
23 to 26 years	S	S	S	S	S	S
Continuously Enrolled MCO						
Aetna	S	S	S	S	S	S
HealthKeepers	S	S	S	S	S	S
Magellan	S	S	S	0	0	NC
Optima	S	S	S	S	S	S
Virginia Premier	S	S	S	S	S	S
UnitedHealthcare	S	S	S	S	S	S
FFS	0	0	NC	S	S	S
Region						
Central	S	S	S	S	S	S
Charlottesville/Western	S	S	S	S	S	S
Northern & Winchester	S	S	S	S	S	S
Roanoke/Alleghany	S	S	S	S	S	S
Southwest	S	S	S	S	S	S
Tidewater	S	S	S	S	S	S

S indicates that the rate has been suppressed due to a small numerator or denominator (i.e., less than or equal to 10).

Table C-45—Rates of 30-Day Follow-Up After ED Visit for Mental Illness Among Former Foster Children and Controls, by Age Category, MCO, and Region

Category	Former Foster Children			Controls		
	Numerator	Denominator	Rate	Numerator	Denominator	Rate
All Eligible Members	13	36	36.1%	S	S	S
Age Category						
19 to 22 years	S	S	S	S	S	S
23 to 26 years	S	S	S	S	S	S
Continuously Enrolled MCO						
Aetna	S	S	S	S	S	S
HealthKeepers	S	S	S	S	S	S
Magellan	S	S	S	S	S	S
Optima	S	S	S	S	S	S
Virginia Premier	S	S	S	S	S	S
UnitedHealthcare	S	S	S	S	S	S

	Former Foster Children			Controls		
Category	**Numerator**	**Denominator**	**Rate**	**Numerator**	**Denominator**	**Rate**
FFS	0	0	NC	0	0	NC
Region						
Central	S	S	S	S	S	S
Charlottesville/Western	S	S	S	S	S	S
Northern & Winchester	S	S	S	S	S	S
Roanoke/Alleghany	S	S	S	S	S	S
Southwest	S	S	S	S	S	S
Tidewater	S	S	S	S	S	S

S indicates that the rate has been suppressed due to a small numerator or denominator (i.e., less than or equal to 10).

Substance Use

Table C-46—Rates of 30-Day Follow-Up After ED Visit for AOD Abuse or Dependence Among Former Foster Children and Controls, by Age Category, MCO, and Region

All cells in the table were either unreportable or suppressed; therefore, no results are displayed.

Table C-47—Rates of Initiation of AOD Abuse or Dependence Treatment Among Former Foster Children and Controls, by Age Category, MCO, and Region

	Former Foster Children			Controls		
Category	**Numerator**	**Denominator**	**Rate**	**Numerator**	**Denominator**	**Rate**
All Eligible Members	43	100	43.0%	35	74	47.3%
Age Category						
19 to 22 years	32	71	45.1%	22	44	50.0%
23 to 26 years	11	29	37.9%	13	30	43.3%
Continuously Enrolled MCO						
Aetna	S	S	S	S	S	S
HealthKeepers	S	S	S	S	S	S
Magellan	S	S	S	S	S	S
Optima	S	S	S	S	S	S
Virginia Premier	13	31	41.9%	11	19	57.9%
UnitedHealthcare	S	S	S	S	S	S
FFS	S	S	S	0	0	NC
Region						
Central	S	S	S	S	S	S
Charlottesville/Western	S	S	S	S	S	S
Northern & Winchester	S	S	S	S	S	S
Roanoke/Alleghany	S	S	S	S	S	S
Southwest	S	S	S	S	S	S
Tidewater	S	S	S	S	S	S

S indicates that the rate has been suppressed due to a small numerator or denominator (i.e., less than or equal to 10).

Table C-48—Rates of Engagement of AOD Abuse or Dependence Treatment Among Former Foster Children and Controls, by Age Category, MCO, and Region

Category	Former Foster Children			Controls		
	Numerator	Denominator	Rate	Numerator	Denominator	Rate
All Eligible Members	13	100	13.0%	17	74	23.0%
Age Category						
19 to 22 years	S	S	S	S	S	S
23 to 26 years	S	S	S	S	S	S
Continuously Enrolled MCO						
Aetna	S	S	S	S	S	S
HealthKeepers	0	22	0.0%	S	S	S
Magellan	S	S	S	S	S	S
Optima	S	S	S	S	S	S
Virginia Premier	S	S	S	S	S	S
UnitedHealthcare	S	S	S	S	S	S
FFS	S	S	S	0	0	NC
Region						
Central	S	S	S	S	S	S
Charlottesville/Western	S	S	S	S	S	S
Northern & Winchester	S	S	S	S	S	S
Roanoke/Alleghany	S	S	S	S	S	S
Southwest	S	S	S	S	S	S
Tidewater	0	12	0.0%	S	S	S

S indicates that the rate has been suppressed due to a small numerator or denominator (i.e., less than or equal to 10).

Reproductive Health

Table C-49—Rates of Contraceptive Care (Most Effective or Moderately Effective Method) Among Former Foster Children and Controls, by Age Category, MCO, and Region

Category	Former Foster Children			Controls		
	Numerator	Denominator	Rate	Numerator	Denominator	Rate
All Eligible Members	210	587	35.8%	240	580	41.4%
Age Category						
19 to 22 years	155	408	38.0%	170	406	41.9%
23 to 26 years	55	179	30.7%	70	174	40.2%
Continuously Enrolled MCO						
Aetna	15	56	26.8%	29	50	58.0%
HealthKeepers	64	150	42.7%	59	151	39.1%
Magellan	S	S	S	S	S	S
Optima	45	122	36.9%	51	119	42.9%
Virginia Premier	64	176	36.4%	68	174	39.1%

Category	Former Foster Children			Controls		
	Numerator	Denominator	Rate	Numerator	Denominator	Rate
UnitedHealthcare	S	S	S	14	40	35.0%
FFS	S	S	S	S	S	S
Region						
Central	51	127	40.2%	45	122	36.9%
Charlottesville/Western	42	121	34.7%	48	112	42.9%
Northern & Winchester	27	78	34.6%	30	75	40.0%
Roanoke/Alleghany	32	86	37.2%	49	92	53.3%
Southwest	17	58	29.3%	25	61	41.0%
Tidewater	41	117	35.0%	43	118	36.4%

S indicates that the rate has been suppressed due to a small numerator or denominator (i.e., less than or equal to 10).

Table C-50—Rates of Contraceptive Care (Long-Acting Reversible Method) Among Former Foster Children and Controls, by Age Category, MCO, and Region

Category	Former Foster Children			Controls		
	Numerator	Denominator	Rate	Numerator	Denominator	Rate
All Eligible Members	32	587	5.5%	34	580	5.9%
Age Category						
19 to 22 years	S	S	S	S	S	S
23 to 26 years	S	S	S	S	S	S
Continuously Enrolled MCO						
Aetna	S	S	S	S	S	S
HealthKeepers	S	S	S	S	S	S
Magellan	S	S	S	S	S	S
Optima	S	S	S	S	S	S
Virginia Premier	S	S	S	S	S	S
UnitedHealthcare	0	41	0.0%	S	S	S
FFS	S	S	S	S	S	S
Region						
Central	S	S	S	S	S	S
Charlottesville/Western	S	S	S	S	S	S
Northern & Winchester	0	78	0.0%	S	S	S
Roanoke/Alleghany	S	S	S	S	S	S
Southwest	S	S	S	S	S	S
Tidewater	S	S	S	S	S	S

S indicates that the rate has been suppressed due to a small numerator or denominator (i.e., less than or equal to 10).

Respiratory Health

Table C-51—Rates of Appropriate Asthma Medication Ratio Among Former Foster Children and Controls, by Age Category, MCO, and Region

All cells in the table were either unreportable or suppressed; therefore, no results are displayed.