

Assessing Dental Care Disparities Among Foster and Non-Foster Children with MaineCare Coverage

Urja Patel, MPH Candidate
Muskie School of Public Service
University of Southern Maine

Capstone 699: Capstone
Spring 2024

Capstone Advisor: Ben Greenfield, PhD

Second Reader: Becca Matusovich, MPPM, Children's Oral Health Network of Maine
May 1, 2024

Table of Contents

Acknowledgements2
Abstract3
Introduction4
Methods7
Results8
Discussion.....15
Conclusion.....17
References19

Acknowledgements

I would like to express my deep gratitude to Dr. Ben Greenfield and Becca Matusovich for their valuable and constructive feedback that significantly improved my work. I sincerely appreciate their help, advice, and guidance throughout this project. I also want to thank Dr. Greenfield for his mentoring and all his help throughout my time in the MPH program. Additionally, I want to thank the Catherine Cutler Institute (Kim Fox, Thara Kumarage, and Catherine McGuire) for providing the data from the Maine All Payer Claims Database and for reviewing my drafts. I also extend my gratitude to Courtney Vannah from MCD Global Health for her review of my capstone.

DENTAL DISPARITIES IN MAINECARE: FOSTER VS. NON-FOSTER CHILDREN

Abstract

Introduction: Dental health is an important yet often overlooked aspect of overall well-being, especially for children whose early healthcare experiences can shape lifelong habits and health consequences. Disparities in dental care for all children with MaineCare coverage, especially for children in foster care, represent a significant public health concern. While MaineCare provides dental coverage, it does not ensure that each child will be guaranteed equitable access or utilization of services. This capstone investigates whether there is a difference in the access and utilization of oral healthcare services covered by MaineCare between foster and non-foster children.

Methods: This study analyzes the patterns of dental care utilization among non-foster, part-year foster, and full-year foster children, all with continuous MaineCare coverage. The data used in this analysis was from the Maine All-Payer Claims Database, provided by the Catherine Cutler Institute at the University of Southern Maine and the Children's Oral Health Network of Maine. The children ranged from under 3 to 20 years old. The frequencies of several categories including well-child visits, active dental home, whether they received any dental treatments, preventative care, sealants, topical fluoride, oral health screenings, and dental treatments were examined and compared.

Results: Foster children had higher rates of dental care utilization across almost all categories than part-year and non-foster children. However, the overall utilization rates were low. This highlights the systemic barriers that affect access to dental care services for all children with MaineCare coverage. The geographic distribution of dental providers and a lower number of dentists accepting MaineCare also negatively affect access issues, particularly in rural areas.

Conclusion: This study revealed that children covered by MaineCare face many barriers to dental care access, even if being in foster care increases access to dental care through support networks. Although the rates were higher among foster children, they are still disturbingly low compared to children with commercial dental insurance and the federal Early and Periodic Screening, Diagnosis, and Treatment standards. However, the rates for full-year foster children were higher compared to non-foster and part-year foster children with MaineCare coverage. Policy reforms and expanding integrated dental care models, such as including preventive dental care and early interventions within primary care visits, mobile dental clinics, and the existing school-based oral health care programs, could help to improve access. This would ensure that children have access to consistent, preventative, and early dental interventions. Collaboration among healthcare providers, child welfare agencies, and policymakers is needed to improve access to dental care services.

Keywords: Foster care, MaineCare, dental care disparities, oral health, pediatric dentistry, health equity

Introduction

Dental health is an important yet often overlooked aspect of overall well-being, especially for children whose early healthcare experiences can shape lifelong habits and health consequences (Crall and Vujicic, 2020). Healthcare systems have challenges, both nationally and locally, in providing consistent and equitable care to all parts of the population (Fleming et al., 2022; Lawlor, 2024). The Medicaid, or MaineCare, program in Maine offers dental coverage to eligible children throughout the state; however, coverage does not always translate to access or utilization.

Children insured by MaineCare may be vulnerable to reduced dental coverage, and differences between foster and non-foster children are unknown. For foster children, especially those who may be facing significant life challenges, insufficient dental care can have far-reaching consequences for their development, educational performance, and overall quality of life. Additionally, the distribution of dental care providers, as well as their willingness to accept MaineCare, can have a major impact on service availability, exacerbating access issues (Lawlor, 2024). Foster children are an important population to target for dental care interventions due to their increased vulnerability and frequent disruptions in care. These children often face additional barriers to accessing consistent healthcare, including dental services, due to changes in caregivers and living situations.

Equal healthcare access for all children, regardless of foster care status is a crucial public health goal. The examination of inequalities within state-funded programs like MaineCare, specifically focused on dental care, is central to this project.

Literature Review

Impact of Oral Health Issues in Disadvantaged Communities

The most common chronic dental disease that affects children is dental caries. Disadvantaged communities, especially racial and ethnic minority groups, and children are the most affected (Benjamin, 2010). According to a 2022 study by the American Academy of Pediatrics, there are still significant disparities affecting children from racial and ethnic minority groups, those living in rural areas, and those from lower socioeconomic backgrounds when accessing dental care, despite rising rates across all age groups, races, and geographic areas (Krol and Whelan, 2022). Among the numerous challenges that children encounter, the ability to access healthcare, specifically dental care, is a big issue. Families face many barriers when seeking dental care including cost, lack of insurance, poverty, fear, distance, transportation, and language differences (Krol and Whelan, 2022). These types of barriers are often intertwined with geographic, socioeconomic, educational, and policy-related factors that disproportionately affect underserved populations like foster children. Additionally, having dental issues could also impact school attendance, learning, and academic outcomes and reduce the overall quality of life (Guarnizo-Herreño et al., 2019).

Disparities in Dental Care Access

Children enrolled in MaineCare encounter multifaceted barriers to healthcare. While MaineCare provides dental coverage for children, studies have shown that having insurance does not equate to adequate access to or utilization of dental services. The rurality of the state of Maine also affects their ability to have access to dental care services.

DENTAL DISPARITIES IN MAINECARE: FOSTER VS. NON-FOSTER CHILDREN

The distribution of actively practicing dentists within the state is unequal. Many more dentists are practicing in urban areas compared to rural areas (CHWS, 2012). Within this already challenging landscape, foster children face additional complex hurdles. Transient living conditions, transportation issues, and the complexities of the foster care system compound these barriers (Szilagyi et al., 2015). According to the distribution data by volume of Medicaid patients per state, Maine has one of the lowest proportions of dentists, with only 3% seeing more than 100 Medicaid patients annually (Vujicic et al., 2021). This is significant, given that all children in foster care are covered by Medicaid, and indicates potential barriers to accessing dental care for this vulnerable population. In the United States in general, even though there are enough dentists to meet the oral health needs of the US population, the dentists are unequally distributed, and a very small number of dentists participate in the Medicaid program (Manski et al., 2015). The allocation of resources within the state does not necessarily favor urban areas over rural areas, as previously thought. Service deserts exist in both urban and rural areas making it just as challenging to access dentists.

Challenges in Dental Care Access for Foster Children

Foster care is essential for assisting youth in the United States by providing essential resources to those who are temporarily unable to live with their birth family. As defined by the Annie E. Casey Foundation, foster care is “a temporary living situation for kids whose parents cannot take care of them and whose need for care has come to the attention of child welfare agency staff” (The Annie E. Casey Foundation, 2014). The foster care system presents unique challenges that exacerbate the disparities. When a child goes into foster care, it is mandatory that they be seen by medical providers for a well-child check within 10 to 14 days. A well-child visit (WCV) is a routine appointment with a pediatrician or primary care provider, based on a set schedule of ages. Specifically, a WCV includes a comprehensive health exam, physical, and discussion about preventative healthcare, developmental milestones, vaccinations, vision and hearing tests, and screenings (Kaneshiro et al., 2023). WCV occur more frequent during early childhood due to the rapid development that occurs during these years (Kaneshiro et al., 2023). When a child is taken into protective custody, specifically by the Maine Department of Health and Human Services' Office of Child and Family Services, a primary care physician conducts a physical exam within 72 hours to determine the child's immediate health requirements (Ziller et al., 2012).

Foster children experience higher rates of health issues, like dental problems, for a variety of reasons, which are often due to influence from parents, personal behaviors, and trauma. Additional factors like age, race, and caregiver type impact the likelihood of children receiving dental care, highlighting the systemic inequities and disparities (Finlayson et al., 2018). Similarly, foster children often need more intensive services compared to the general pediatric population or other financially disadvantaged children (Melbye et al., 2012). Children in foster care are also classed as special needs children because they have high rates of chronic physical, developmental, emotional, and behavioral conditions that require intensive care coordination (Melbye et al., 2012). Researchers found that cultural and linguistic barriers, the reluctance of dentists to accept Medicaid for children, insufficient resources for caseworkers, and inadequate health-record keeping all impact the ability of foster children to receive dental care (Melbye et al., 2012). Further studies are necessary to fully understand the oral health status and unmet dental needs of children in foster care.

Medicaid Reimbursement and the Effect on Dental Service Accessibility

Dentists who participate in Medicaid or the Children's Health Insurance Program are influenced by many different factors. This includes the demographic characteristics of dentists themselves and the geographic locations of their practices. Studies have shown that dentists who are racial or ethnic minorities, as well as those operating in rural or high-poverty areas, are more likely to treat a higher number of Medicaid patients (Nasseh et al., 2022). Even though children have Medicaid, parents struggle to find dental appointments for their children due to the limited number of Medicaid accepting providers. There are many reasons dentists cite for not accepting Medicaid patients. These include low reimbursement rates, patient noncompliance, burdensome paperwork, and broken appointments (Mofidi et al., 2002). The payment rates to dentists and administrative policies vary at the state level. The Medicaid fee-for-service reimbursement as a percentage of dentist charges for child dental services in 2022 was 47.9% (ADA, 2023).

Study Goal

There is limited information on the oral health care of foster children and children in general with MaineCare coverage. The purpose of this capstone is to investigate whether there is a difference in the access and utilization of oral healthcare services between foster and non-foster children covered by MaineCare. Examining this will help to identify any existing inequalities that could require intervention or policy changes to ensure equitable healthcare is provided to all children under MaineCare, regardless of their foster care status.

The key question being addressed by this capstone is:
How different is dental care coverage in Maine between foster children and non-foster children?

Rationale

This project aligns with the mission of the Children's Oral Health Network of Maine (COHN) and a COHN project focused specifically on oral health in the foster care system. The project is supported by a grant from the CareQuest Institute. This project aims to address challenges that have emerged through anecdotal stories and the experiences of individual children, families, and healthcare providers within the COHN Network. The quantitative information produced by this project will enable the partners to identify patterns that can be addressed through systemic solutions. This approach aims to improve the situation for future children in foster care and all children with MaineCare by shifting from merely reacting to current oral health needs to proactively creating opportunities for prevention and early intervention. The project will benefit many groups including but not limited to healthcare providers, dentists, the Maine Academy of Pediatrics' Foster Care Committee, the Department of Health and Human Services Office of Child and Family Services, COHN, and MCD Global Health. Additionally, Adoptive and Foster Families of Maine, which supports and advocates for adoptive, foster, and kinship caregivers throughout the state, as well as children involved in the child welfare system will benefit from this research.

Methods

Data collection

A secondary data analysis was conducted. The data were sourced from the Maine Health Data Organization (MHDO) All-Payer Claims Database (APCD), which includes comprehensive healthcare claims data for individuals with MaineCare coverage. MHDO's All-Payer Claims Data is a state-wide data system that consolidates health insurance claim information across all types of payers including Medicare, Medicaid, and private or commercial insurance companies. APCD includes a wide range of data, as defined in 90-590 Chapter 243, Uniform Reporting System for Health Care Claims Data Sets. This includes medical, pharmacy, and dental claims, information related to eligibility, provider networks, and healthcare services. This data helps to create a comprehensive understanding of healthcare costs, utilization, and outcomes across Maine. The database provides essential information for policymakers, researchers, and the public. APCD analyses provide healthcare information, inform policy decisions, and support efforts to improve the quality and cost-effectiveness of healthcare within the state.

The data for this analysis was made available under a Memorandum of Understanding between MHDO and the University of Southern Maine to support research and workforce training in health data analytics. The APCD data were approved for use under MHDO's authorized data release #2023062101 and analyzed by research staff in the University of Southern Maine Catherine Cutler Institute Population Health and Health Policy division and COHN.

In the data analysis, children in foster care were identified using recipient aid category (RAC) codes from the Maine Department of Health and Human Services (DHHS), which were cross-referenced with the MHDO APCD. The Office of Child and Family Services (OCFS) provided input on selecting appropriate RAC codes for inclusion (10, 11, 1H, 5P) to identify children in foster care. These codes were used to create a set of children in foster care as of the end of the year under review. Continuous enrollment or eligibility in MaineCare was defined as having MaineCare coverage for 11 or more months.

The data query selected children under 21 continuously enrolled in MaineCare in 2022. These were divided into three groups based on the duration of time in foster care during the year. The three groups of focus, all of whom had continuous MaineCare enrollment, with at least 11 months enrolled in 2022, were:

1. Non-foster children (no months in foster care in 2022), N = 114,533
2. Part-year foster children (between 1 and 10 months in DHHS custody in 2022, either exiting or entering the system), N = 1,430
3. Full-year foster children (continuous DHHS custody for at least 11 months in 2022), N = 2,031.

The ages of children ranged from 0 to 20. These were further broken down into the following age groups: less than 3, greater than or equal to 3 but less than 6 (3-5), greater than or equal to 6 but less than 13 (6-12), and greater than or equal to 13 but less than 21 (13-20).

Dental service utilization was analyzed across these groups using claims data, with dental services categorized under various Current Dental Terminology (CDT) codes. Claims data were further examined using the Centers for Medicare and Medicaid Services Children's Health Insurance Program measure definition for WCVs.

The variables analyzed among the three groups and age groups were whether the children were receiving WCV, whether they have an active dental home, whether they have both a WCV

DENTAL DISPARITIES IN MAINECARE: FOSTER VS. NON-FOSTER CHILDREN

and a dental home, received any dental services, diagnostic and preventative care, preventative care, sealants, topical fluoride, oral health screenings, and dental treatments. For this study, an 'active dental home' was defined based on American Academy of Pediatric Dentistry guidelines, proxied by claims with dental procedure codes for at least one periodic or comprehensive exam and cleaning during 2022 (AAPD, 2022).

Institutional Review Board

The capstone project plan was submitted to the University of Southern Maine Institutional Review Board to determine whether secondary analysis of the All-Payer Claims Data Set managed by the Maine Health Data Organization involved human subject research. The project was determined not to involve human subjects research.

Results

Across all indicators (WCVs, dental home, any dental, preventative, diagnostic and preventative, sealants, topical fluoride, oral health screening, and dental treatments), non-foster children had the lowest total rates across all the indicators, and full-year foster children had the highest rates. The rates for the part-year foster children almost always fell between those of non-foster care and full-year foster children.

The analysis revealed significant disparities in the utilization of various health and dental services between non-foster and foster children. The category with the greatest total difference between the groups was the WCV category with a difference of 17 percentage points between non-foster children (53%) and full-year foster children (70%), followed by diagnostic and preventative dental services (54% for full-year foster children) with a difference of 11 percentage points compared to non-foster children (43%).

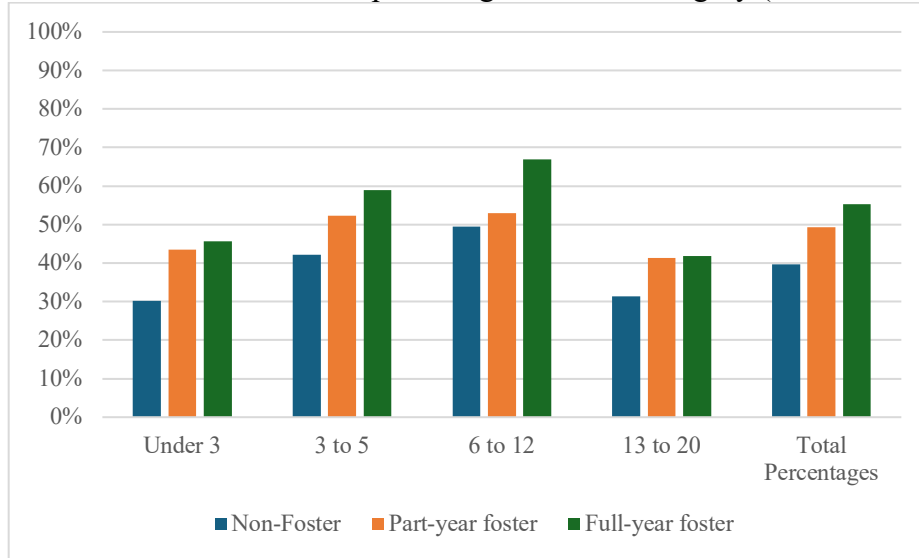
Preventative Dental Services

Significant disparities in preventive dental service utilization were evident among children with continuous MaineCare coverage, particularly when analyzed by foster care status. Preventive service utilization was higher for part-year foster children by 15 points compared to non-foster children. However, the rates were highest among full-year foster children. For non-foster children, the total access to preventative dental services was 40%, whereas for foster children the figures are higher, with 49% for those in part-year care and 55% for those in full-year care, as shown in Figure 1.

Preventative care utilization was higher in two specific age ranges. For children aged 3-5, the utilization rates ranged from 42% for non-foster children to 59% for full-year foster children. For children aged 6-12, the rates were 50% for non-foster children to 67% for full-year foster children. Conversely, for children aged 3 years and younger, rates were lower at 30% for non-foster children and 46% for full-year foster children. Among adolescents aged 13-20 years old, rates were also low: 31% for non-foster children and 42% for full-year foster children (Figure 1).

DENTAL DISPARITIES IN MAINECARE: FOSTER VS. NON-FOSTER CHILDREN

Figure 1: Preventative care for non-foster, part-year children in foster care, and full-year foster children, as well as the total percentages for each category (all with continuous MaineCare).



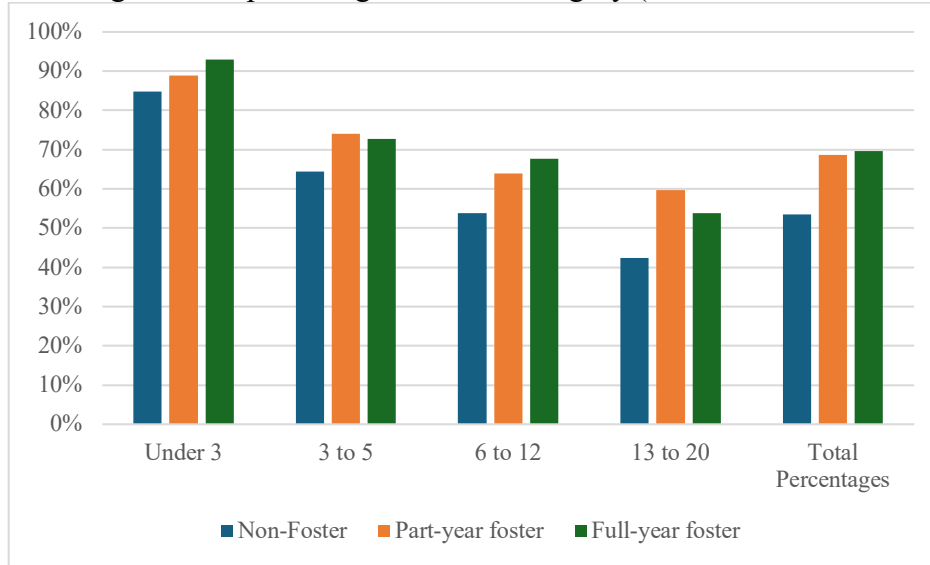
Well-Child Visit Utilization

WCV rates demonstrated age-specific trends across different foster care scenarios (Figure 2). Children aged 3 and younger consistently had the highest WCV rates in all groups, with non-foster children at 85% and full-year foster children at 93%. For children aged 3-5 years old, WCV rates were 64% for non-foster children compared to 73% for full-year foster children (Figure 2). This was the only indicator on which part-year foster children demonstrated higher utilization (74%) than full-year foster children (73%) in the 3-5 age group. This is likely a reflection of the fact that a concerted effort is made to ensure that children entering the system get physical exams quickly upon entering foster care.

For children aged 6-12 years, WCV utilization was only 54% for non-foster children compared to 68% for full-year foster children. Among children aged 13-20 years old, the rates were 42% for non-foster children, 60% for part-year foster children, and 54% for full-year foster children.

DENTAL DISPARITIES IN MAINECARE: FOSTER VS. NON-FOSTER CHILDREN

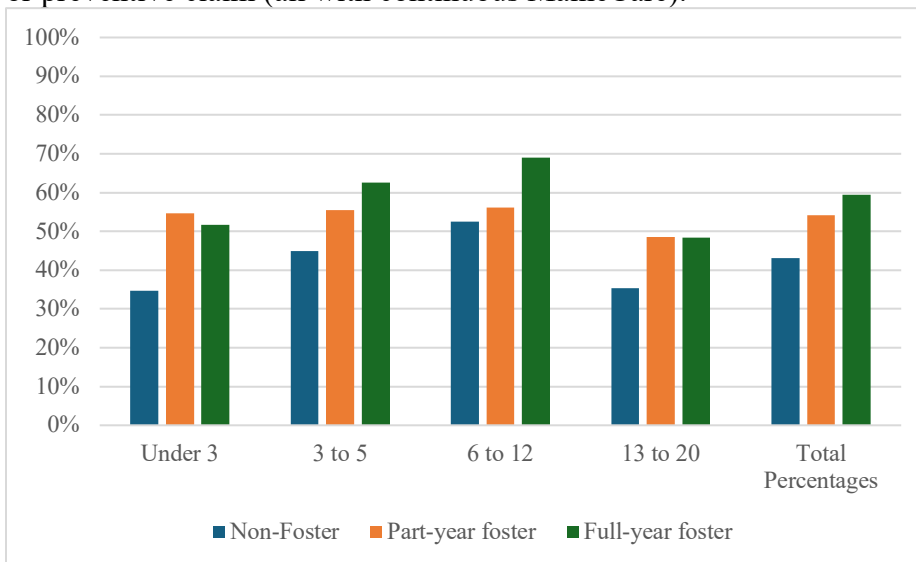
Figure 2: Well child visits for non-foster, part-year foster children, and full-year foster children, including the total percentages for each category (all with continuous MaineCare).



Diagnostic and Preventive Dental Services Utilization

Utilization rates for diagnostic and preventive dental services were reported as follows: non-foster children had a 43% utilization rate of at least one diagnostic or preventive service, and full-year foster children had a 59% utilization rate (Figure 3). Among the four age groups, children aged 6-12 had the strongest utilization with the highest rate among children in full-year foster care. For non-foster children, the percentage was 52%, compared to 69% for full-year foster children within this age group.

Figure 3: Diagnostic and preventative visits for non-foster, part-year foster children, and full-year foster children, including the total percentages for each category with at least one diagnostic or preventive claim (all with continuous MaineCare).

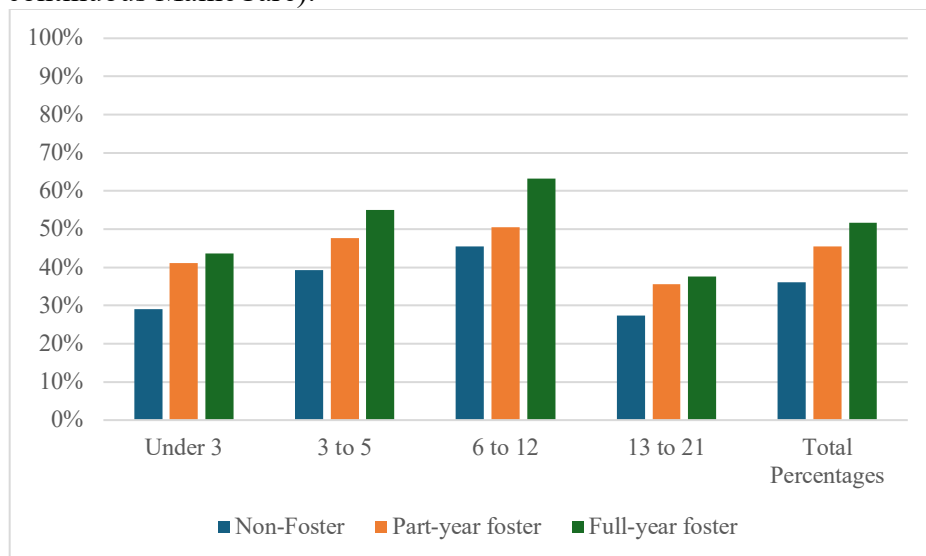


DENTAL DISPARITIES IN MAINECARE: FOSTER VS. NON-FOSTER CHILDREN

Utilization of Fluoride Treatments

The overall rates of topical fluoride treatments were 36% for non-foster children and 52% for full-year foster children. For children aged 3-5, the rates of topical fluoride application were 39% for non-foster children and 55% for full-year foster children. In the age group of children between 6-12 years, topical fluoride application rates were 46% for non-foster children and 63% for full-year foster children (Figure 4).

Figure 4: Utilization of oral health fluoride applications for non-foster, part-year foster children, and full-year foster children, including the total percentages for each category (all with continuous MaineCare).



Sealants Application Utilization:

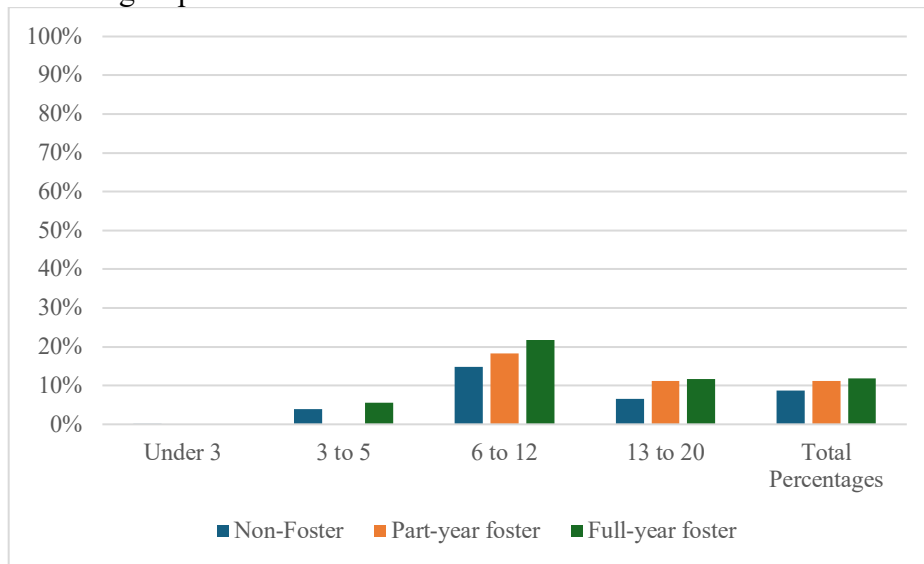
Utilization rates for sealants were at 9% for non-foster children and 12% for full-year foster children. For dental treatments, the rates were 16% for non-foster children and 20% for full-year foster children.

The age group with the highest percentage of children with sealant claims in this analysis were children aged 6-12 years old. The rates for sealant application were 15% for non-foster children and 22% for full-year foster children. The second highest rates were observed in children aged 13-20 years old, with 7% for non-foster children and 12% for full-year foster children (Figure 5).

Sealants are typically not applied to children under the age of 3 due to the absence of developed molars. For non-foster and full-year foster children, 0% of children under 3 received sealant applications. The data were suppressed for children under the age of 3 and for children aged 3-5 within the group of part-year foster children.

DENTAL DISPARITIES IN MAINECARE: FOSTER VS. NON-FOSTER CHILDREN

Figure 5: Sealant applications for non-foster, part-year foster children, and full-year foster children, including the total percentages for each category (all with continuous MaineCare). There were suppressed data for all children under 3 and those aged 3-5 within the part-year foster children group.



Dental Home Utilization:

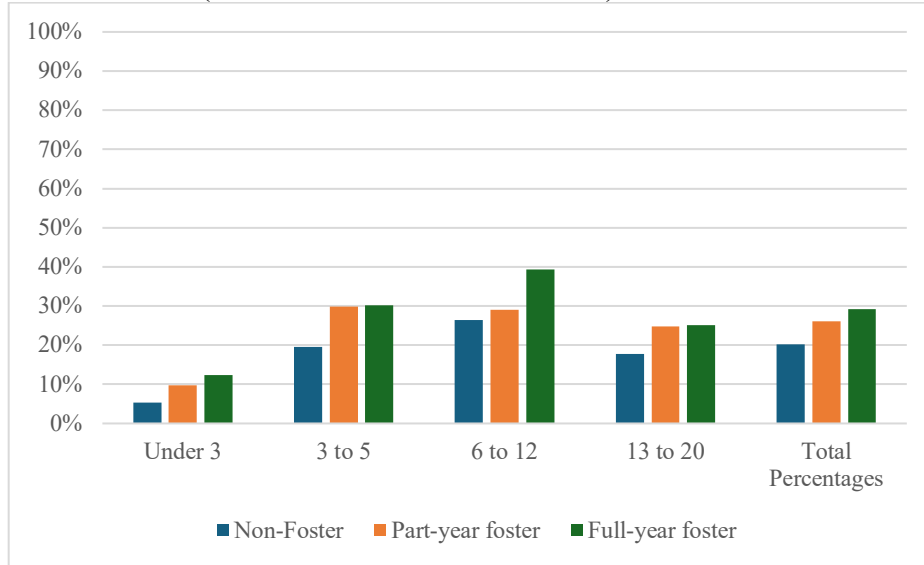
Overall, 20% of non-foster children had an active dental home, based on claims showing they had a periodic or comprehensive exam and at least one cleaning in 2022. Among full-year foster children, 29% had established a dental home (Figure 6).

For every 100 non-foster children with MaineCare coverage, 53 had a WCV, but only 20 had an active dental home. In comparison, for every 100 full-year foster children, 70 had a WCV, while 29 had an active dental home.

The establishment of a dental home varied by age. Children aged 3 years and younger, showed the lowest percentages across all statuses: 5% for non-foster children, 10% for part-year foster children, and 12% for full-year foster children. Children aged 3-5 years and 6-12 years demonstrated the highest percentages of having a dental home, with full-year foster children at 30% and 39%, respectively. For adolescents aged 13-20, only 18% of non-foster children had a dental home, compared to 25% for both part-year and full-year foster children (Figure 6).

DENTAL DISPARITIES IN MAINECARE: FOSTER VS. NON-FOSTER CHILDREN

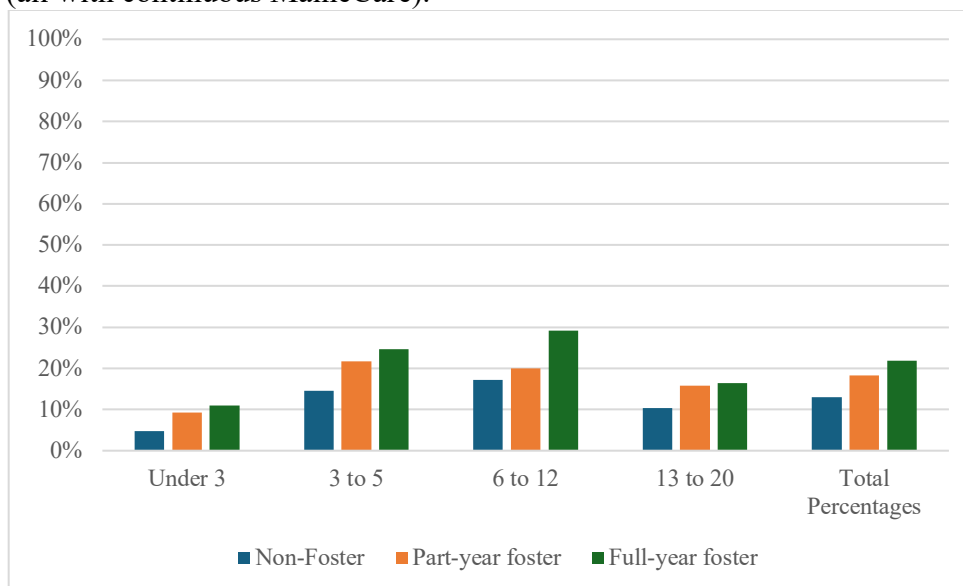
Figure 6: Active dental home utilization for non-foster, part-year foster children, and full-year foster children (all with continuous MaineCare).



Well-Child Visit and Dental Home Co-occurrence:

The percentage of children who had both a WCV and a dental home followed a similar pattern to the individual variables. For children under 3, 5% of non-foster children had a WCV and a dental home, while the rate doubled to 11% for full-year foster children. For children aged 3-5 years, these percentages were 15% for non-foster children and 25% for full-year foster children. For those aged 6-12 years, the rates were 17% for non-foster children and 29% for full-year foster children. For adolescents aged 13-20, 10% of non-foster children and 16% of both part-year and full-year foster children had a WCV and a dental home (Figure 7).

Figure 7: Well-Child Visit (WCV) and Dental Home Co-occurrence for non-foster, part-year foster children, and full-year foster children, including the total percentages for each category (all with continuous MaineCare).

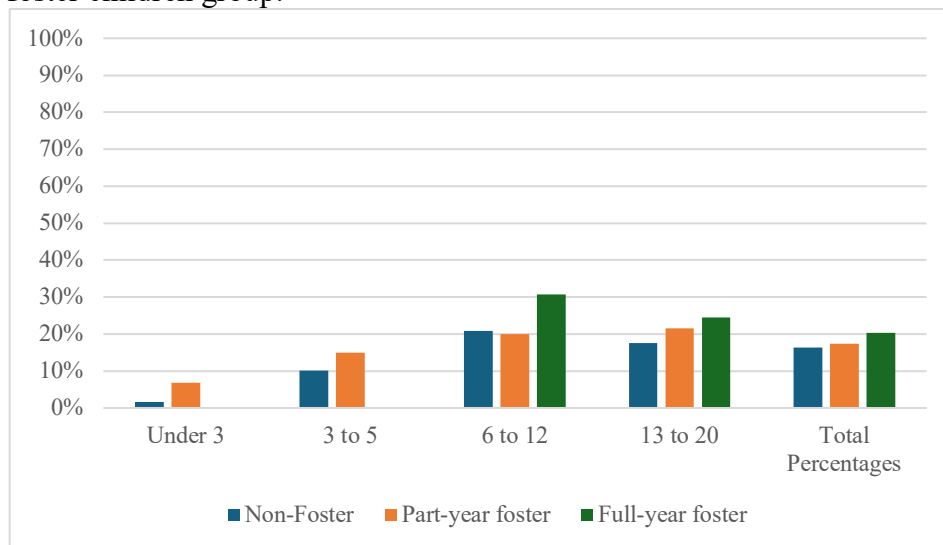


DENTAL DISPARITIES IN MAINECARE: FOSTER VS. NON-FOSTER CHILDREN

Dental Treatments:

Utilization rates for dental treatments were highest among children aged 6-12. For this age group, the rates were 21% for non-foster children, 20% for part-year foster children, and highest at 31% for full-year foster children. For the oldest cohort, those aged 13-20 years, the rates were 17% for non-foster children and 25% for full-year foster children (Figure 8).

Figure 8: Dental treatments for non-foster, part-year foster children, and full-year foster children, including the total percentages for each category (all with continuous MaineCare). There were suppressed values for children less than 3 years old and children aged 3-5 within the full-year foster children group.



County Level Data

There are notable differences among counties in the utilization of dental services among full-year foster children. Kennebec and Somerset Counties had the highest percentages of full-year foster children attending a WCV and having a dental home, at 31% and 36%, respectively. Additionally, 40% of full-year foster children in both of these counties had an active dental home alone. Knox and Piscataquis Counties had high rates of full-year foster children receiving any dental services (75% and 81%), diagnostic and preventative services (74% and 81%), and preventative services (70% and 75%). However, Knox County had 88 full-year foster children, while Piscataquis only had 16.

The percentage of oral health screenings were extremely low among all three categories and in all counties. For non-foster children, it ranged from 1% to 3% for all counties, and for part-year foster children, all counties had suppressed data besides Kennebec County at 7% and York County at 10%. Lastly, for full-year foster children, there were five counties with oral health screening data, which were Androscoggin County at 7%, Cumberland County at 6%, Kennebec County at 7%, Penobscot County at 7%, and York County at 10%.

Discussion

The rate of dental care utilization was highest for children in full-year foster care, intermediate for part-year foster children, and lowest for non-foster children. This pattern was consistent across many dental services and age categories. The only exception was for WCVs, where the utilization rates of part-year foster children were higher than those of full-year foster children. This overall increase in utilization by foster children with more time in foster care suggests that the structured environment provided by foster care, including regular monitoring, mandatory health evaluations, and caseworkers advocating for their healthcare needs, enhances both access to and utilization of dental care services. Increased attention and support provided to children in foster care, as well as the care navigation resources available to assist children in state custody with accessing care, appears to facilitate better compliance with healthcare recommendations, including dental visits.

Children entering foster care may have unmet medical needs, including dental needs, that become addressed once they are in the system. They may receive more services as part of a catch-up approach to their healthcare. Foster care programs also have established networks with healthcare providers who are experienced in dealing with the complexities of care for children in the system. This can include faster appointment scheduling and coordinated care across different health services, which might not be as readily available to non-foster children, especially those from lower socio-economic backgrounds. These programs are supported by many organizations like the Adoptive and Foster Families of Maine, COHN, and DHHS.

Overall, the rates of dental care utilization are disturbingly low for all children with MaineCare, regardless of their foster care status. This raises concerns about the effectiveness of MaineCare coverage in ensuring access to preventative care and treatments for all children. Specifically for foster children, although their rates are better than non-foster children, it is concerning how low the rates are considering the comprehensive support that DHHS provides. For example, even with the additional attention, support, and resources designed to help children in state custody access care, fewer than half of all children in foster care are utilizing dental care services. This suggests that there may be systemic issues and barriers within the MaineCare coverage structure and/or dental care delivery systems that negatively affect the ability of all children with MaineCare to access dental care services. For many of the indicators, the majority of children with MaineCare, with or without the case management support of DHHS, are not accessing dental care. Similarly, even though the rates were higher among foster children in this study, they are still low compared to children with commercial dental insurance and the federal Early and Periodic Screening, Diagnosis and Treatment standards (DHHS, 2018; Gaewsky et al., 2022). While children in the foster care system may continue to need targeted access and utilization support, it is clear that this will not be sufficient to ensure access as long as the systemic barriers remain. We need more comprehensive, inclusive health policies that serve the needs of all children with MaineCare coverage.

Significance of Age in Service Utilization

The results also reveal substantial age disparities in service utilization. Younger children, especially those aged 3 and younger, show the highest rates of WCV across all groups. This could be due to the higher frequency of recommended pediatric appointments for infants and toddlers. The drop-in service utilization rates among adolescents suggest a need to enhance

outreach and engagement strategies for older children, who might have less supervised care or lower perceived necessity for dental health services.

Well Child Visits and Dental Home Establishment

Rates of WCV and the establishment of a dental home were lower among non-foster children. The higher percentage of dental home establishments with longer durations in foster care, reflect the potential impact of continuous and structured care environments and case management support. The difference between non-foster children and full-year foster children suggests that foster care might be associated with better healthcare monitoring.

Additionally, many non-foster children received diagnostic and preventative dental services, but only a small portion had a dental home. This could be due to preventative services being more readily available or accessible in ad hoc ways, as it may be easier for children to obtain preventative services within the state's school-based oral health program or as part of their primary care. These programs often provide convenient access to basic dental care, but without providing a dental home, which plays a crucial role in ensuring access to comprehensive care. Sporadic preventive care services are better than no care, but do not substitute for the comprehensive care a dental home would offer. A dental home provides regular and thorough dental check-ups and treatments as well as access to the entire continuum of dental care that children may need.

The low rates of active utilization of a dental home among non-foster children could also be influenced by several barriers. In many areas, there are no dental practices that take MaineCare and are taking new patients. In some cases, even when there are options for establishing a dental home, families may not understand the importance of maintaining a regular dental home and could have cultural or personal beliefs that do not prioritize continuous dental care. Additionally, resource limitations, like a fear of additional costs for uncovered services, and long wait times at available providers, can deter families from seeking or maintaining regular dental care. Transportation issues, dental fear or anxiety, and other social determinants of health may also play significant roles in preventing these families from establishing a consistent dental home.

Regardless, the low rates of establishment of a dental home highlight a gap in achieving holistic and continuous dental care. Improving integrated health care approaches that not only ensure that children visit clinics, but also establish ongoing care relationships is important.

Preventative Services and Specific Dental Treatments

Similar to other study findings, preventative services, including fluoride treatments and sealants, were all low, especially for non-foster children. For fluoride treatments, it is recommended that children should be receiving applications at least two times per year, especially for those living in poverty as many children covered by MaineCare likely are (AAPD, 2023). This may suggest that while some preventative measures can be accessed through alternative means, children may be less likely to receive them regularly on the schedule that is recommended for maximal effectiveness in preventing disease. The low rates of these preventive and treatment services could stem from numerous factors, like those that create barriers to establishing dental homes, as discussed above.

School-based programs typically provide care for children ranging from preschool through 6th grade. This could explain the higher percentages in this age range seeking

preventative care services (Figure 1). These school-based programs can also attempt to help find dental homes for students, regardless of their ability to pay (Maine CDC, 2021).

Conclusion

Implications for Policy and Practice

The findings suggest that all children with MaineCare are a population that needs more attention and targeted efforts to increase access to and utilization of dental services. Enhancements in health policies could further improve the health outcomes of all children receiving MaineCare. Policies that ensure every child, regardless of their foster care status, is immediately linked to a dental home when enrolling in MaineCare could standardize care and improve both oral health and overall health outcomes. Efforts should focus on increasing provider participation in a coordinated system that can both deliver accessible preventive services and ensure access to comprehensive dental care for all MaineCare-eligible children. By addressing the dental care needs of all children, these policies could help to effectively overcome the systemic challenges that impact access to oral health services and improve overall dental outcomes.

Children in foster care will always need DHHS case management support to access dental care in order to substitute for the care navigation role that is more generally played by families. Nevertheless, study results indicate that the need for special targeted foster-care specific interventions may subside when the systemic barriers overall have been addressed. Once all MaineCare children are able to effectively access care, the data indicates that foster care children with DHHS support will achieve comparable or better rates.

Also, expanding educational programs that inform caregivers and children about the importance of dental health could address the lower rates of treatment and preventive care utilization observed. This could also help empower them to advocate for and maintain the dental health of children in their care but must be undertaken in conjunction with the systemic interventions to increase access. Otherwise, it is frustrating for families to be told that it is important for them to establish a dental home and get regular preventive care in a system in which dental homes and regular care are unavailable to them. In order to ensure that all children with MaineCare receive the oral health care they need, collaboration between children's health and social service organizations, MaineCare, and dental care providers is important to improve access to dental care services.

Future Directions

Further research is necessary to explore the underlying reasons why older children and adolescents show lower service utilization and how these barriers can be effectively addressed. Additionally, qualitative studies exploring the experiences of all children receiving MaineCare and their caregivers regarding dental care could provide deeper insights into the practical challenges and facilitators of dental health service utilization.

Another future question that could be studied is to consider the demographic differences among all children covered by MaineCare. Factors such as the length of residence in Maine, their geographic locations, and socio-economic conditions may significantly influence access to dental care. Understanding these demographic differences could help to reveal specific barriers and needs that are not apparent when focusing on foster care status alone.

DENTAL DISPARITIES IN MAINECARE: FOSTER VS. NON-FOSTER CHILDREN

There is also a need for enhanced public health initiatives and policy adjustments to increase accessibility to dental providers who accept public insurance plans. This could include having mobile dental clinics at schools or primary care settings within the community. This could help to increase accessibility instead of relying on traditional dental office visits, which may not be feasible for all families due to limited availability or taking time off from school or work. Similarly, schools that have oral health care programs could allow time during school hours for check-ups, cleanings, and other basic treatments. This would help to reduce the need to create separate appointments. This has already been done by the state of Maine's School Oral Health Program; increasing these programs throughout schools in the state could help children receive early intervention and preventative care, which are essential for reducing their chances of developing serious dental issues in the future. These efforts should focus on eliminating the systemic barriers that disproportionately affect all children with MaineCare and hinder their access to consistent and effective dental care. By addressing these challenges, healthcare systems can better ensure that all children, regardless of their insurance status, receive the full spectrum of necessary dental services to support their overall health and well-being.

References

- American Academy of Pediatric Dentistry (AAPD). (2023). Fluoride Therapy. *The Reference Manual of Pediatric Dentistry*, 352–358.
https://www.aapd.org/media/Policies_Guidelines/BP_FluorideTherapy.pdf
- American Academy of Pediatric Dentistry (AAPD). (2022). Periodicity of Examination, Preventive Dental Services, Anticipatory Guidance/Counseling, and Oral Treatment for Infants, Children, and Adolescents. *The Reference Manual of Pediatric Dentistry*, 288–300.
https://www.aapd.org/globalassets/media/policies_guidelines/bp_periodicity.pdf
- American Dental Association (ADA). (2023). *Medicaid Reimbursement for Dental Care Services – 2022 Data Update*. American Dental Association- Health Policy Institute.
https://www.ada.org/-/media/project/ada-organization/ada/ada-org/files/resources/research/hppi/medicaid_reimbursement_dental_care_2022.pdf?rev=16c2f572ec974b01a787949294187ac6&hash=5869A65C6E259FED5733ECFEB5181E34
- Benjamin, R. M. (2010). Oral Health: The Silent Epidemic. *Public Health Reports*, 125(2), 158–159. <https://doi.org/10.1177/003335491012500202>
- Center for Health Workforce Studies (CHWS). (2012). *Oral Health in Maine A Background Report*. https://www.chwsny.org/wp-content/uploads/2014/11/MEOralHealthWorkforceBackground2012_Final_reduced-1.pdf
- Crall, J. J., & Vujicic, M. (2020). Children’s Oral Health: Progress, Policy Development, And Priorities for Continued Improvement. *Health Affairs*, 39(10), 1762–1769.
<https://doi.org/10.1377/hlthaff.2020.00799>
- Maine Department of Health and Human Services Office of MaineCare Services (DHHS). (2018). Recommendations for Preventative Pediatric Oral Health Care. In *Maine.gov*.
https://www.maine.gov/dhhs/sites/maine.gov.dhhs/files/inline-files/Pediatric-Oral-Health-Recommended-Standard_0.pdf
- Finlayson, T. L., Chuang, E., Baek, J.-D., & Seidman, R. (2018). Dental Service Utilization Among Children in the Child Welfare System. *Maternal and Child Health Journal*, 22(5), 753–761. <https://doi.org/10.1007/s10995-018-2444-y>
- Fleming, E., Frantsve-Hawley, J., & Minter-Jordan, M. (2022). Health Equity Needs Teeth. *AMA Journal of Ethics*, 24(1), E48-56. <https://doi.org/10.1001/amajethics.2022.48>
- Gaewsky, L., Matusovich, B., Hess, K., & Williams, M. (2024). 2022 Dental Claims Data Update 2016-2022 Trends Dental Services Among Children with MaineCare and Commercial Dental Benefits. In *Children’s Oral Health Network of Maine*.
<https://www.maineconh.org/assets/stock/2022-COHN-Data-Brief.pdf>
- Guarnizo-Herreño, C. C., Lyu, W., & Wehby, G. L. (2019). Children’s Oral Health and Academic Performance: Evidence of a Persisting Relationship Over the Last Decade in the United States. *The Journal of Pediatrics*, 209, 183-189.e2.
<https://doi.org/10.1016/j.jpeds.2019.01.045>
- Kaneshiro, N. K., Dugdale, D. C., & Conaway, B. (2023). *Well-Child Visits: MedlinePlus Medical Encyclopedia*. MedlinePlus National Library of Medicine (US).
<https://medlineplus.gov/ency/article/001928.htm>
- Krol, D. M., & Whelan, K. (2022). Maintaining and Improving the Oral Health of Young Children. *Pediatrics*, 151(1). <https://doi.org/10.1542/peds.2022-060417>
- Lawlor, J. (2024). *Access to Dental Care in Maine Reaching a Crisis Point*. Portland Press Herald. <https://www.pressherald.com/2024/05/02/access-to-dental-care-in-maine-reaching-a-crisis-point/>

DENTAL DISPARITIES IN MAINECARE: FOSTER VS. NON-FOSTER CHILDREN

- Maine Centers For Disease Control and Prevention (Maine CDC). (2021). *Maine's School Oral Health Program Handbook*. Maine.gov. https://www.maine.gov/dhhs/mecdc/population-health/odh/documents/2021SOHP_Handbook.pdf
- Manski, R. J., Hoffmann, D., & Rowthorn, V. (2015). Increasing Access to Dental and Medical Care by Allowing Greater Flexibility in Scope of Practice. *American Journal of Public Health, 105*(9), 1755–1762. <https://doi.org/10.2105/AJPH.2015.302654>
- Melbye, M., Huebner, C. E., Chi, D. L., Hinderberger, H., & Milgrom, P. (2012). A First Look: Determinants of Dental Care for Children in Foster Care. *Special Care in Dentistry, 33*(1), 13–19. <https://doi.org/10.1111/j.1754-4505.2012.00312.x>
- Mofidi, M., Rozier, R. G., & King, R. S. (2002). Problems With Access to Dental Care for Medicaid-Insured Children: What Caregivers Think. *American Journal of Public Health, 92*(1), 53–58. <https://doi.org/10.2105/ajph.92.1.53>
- Nasseh, K., Fosse, C., & Vujicic, M. (2022). Dentists Who Participate in Medicaid: Who They Are, Where They Locate, How They Practice. *Medical Care Research and Review, 80*(2), 107755872211087. <https://doi.org/10.1177/10775587221108751>
- National Institute of Dental and Craniofacial Research National Oral Health Information Center (NIDCR). (2023). *Seal Out Tooth Decay A Fact Sheet for Parents*. <https://www.nidcr.nih.gov/sites/default/files/2024-01/seal-out-tooth-decay-factsheet.pdf>
- Szilagyi, M. A., Rosen, D. S., Rubin, D., & Zlotnik, S. (2015). Health Care Issues for Children and Adolescents in Foster Care and Kinship Care. *PEDIATRICS, 136*(4), e1142–e1166. <https://doi.org/10.1542/peds.2015-2656>
- The Annie E. Casey Foundation. (2014). *Foster Care: What It Is and How It Works*. The Annie E. Casey Foundation. <https://aecf.org/blog/what-is-foster-care>
- The Annie E. Casey Foundation. (2024). *Children in foster care by county of removal, 2016 — 2023 | KIDS COUNT Data Center*. Datacenter.aecf.org. <https://datacenter.aecf.org/data/tables/10548-children-in-foster-care-by-county-of-removal-2016-2023#detailed/2/any/false/2545>
- Vujicic, M., Nasseh, K., & Fosse, C. (2021). *Dentist Participation in Medicaid: How Should It Be Measured? Does It Matter?* https://www.ada.org/-/media/project/ada-organization/ada/ada-org/files/resources/research/hpi/hpibrief_1021_1.pdf
- Ziller, E., Gressani, T., McGuire, C., Fox, K., & Chamberlain, K. (2012). Health Status, Service Use and Cost among MaineCare Children in Foster Care. *Improving Health Outcomes for Children Evaluation*. <https://digitalcommons.usm.maine.edu/healthpolicy/39>

DENTAL DISPARITIES IN MAINECARE: FOSTER VS. NON-FOSTER CHILDREN

Infographic for medical/dental professionals, DHHS, and public health officials:

THE IMPORTANCE OF DENTAL HEALTH AMONG CHILDREN IN FOSTER CARE AND ALL CHILDREN WITH MAINECARE

Data shows that children in foster care are accessing services at higher rates than other children with MaineCare, however, there is still much work to be done!

Comparing dental care utilization in the 2022 Maine All-Payer Claims Dataset across groups of children with MaineCare based on foster care status.

29% of children in foster care, 20% of children with MaineCare not in foster care, and 56% of children with commercial dental insurance had an active dental home, based on claims showing they had a periodic or comprehensive exam and at least one cleaning in 2022.

55% of children in foster care utilized any preventative dental services compared to 40% of children not in foster care, and 56% of children with commercial dental insurance.

Systemic barriers are making access to care challenging for ALL children with MaineCare, not just children in foster care.

Category	Foster Children	Non-Foster Children
Well-Child Visits	70%	53%
Preventative Dental Care	55%	40%
Active Dental Home	29%	20%

How you can advocate to ensure all children can access dental care:

- Strengthen MaineCare policy to make care more accessible for all children
- Expand mobile and school-based dental programs
- Fund rural oral health initiatives
- Integrate oral health into primary care, including physical exams for children entering the foster care system.

Join forces with local health and dental organizations, educational institutions, and the Children's Oral Health Network of Maine at www.maineohn.org/