Assessing Maine Children's Access to a Dental Home:

Dental Insurance Does Not Guarantee Receipt of Dental Care

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Introduction

Despite being largely preventable, dental caries remains the most common chronic disease of children and youth, with young people living in poverty and/or with other barriers, such as disabilities, disproportionately affected.[1] [2] [3] Oral health is essential to overall health and has been linked to other chronic disease.[4] Healthy People 2030 goals include many oral health objectives, including increasing the proportion of children and adolescents who use the oral health care system to connect to dental homes at early ages for prevention, early identification, and treatment of tooth decay and dental disease.[5] Other analyses have revealed that dental coverage among children and youth in Maine has been increasing over time, with more than two-thirds of children under age 21 (69%) having consistent coverage of dental benefits in 2022, up from 66% in 2021 and 58% in 2020. Still, in 2022, nearly one-third of Maine children and youth (or ~95,000 youth) had inconsistent or no dental coverage.[6]

Dental benefit coverage alone does not ensure access to a dental home provider that provides comprehensive preventive dental care as recommended by Medicaid's Early and Periodic Screening, Diagnostic, and Treatment (EPSDT) oral health guidelines or dental professional association guidelines. As reported in a separate analysis, only half of Maine children fully enrolled in dental benefits received at least one preventive dental service, which varied significantly by source of insurance and geography. These estimates reflect any preventive dental service provided in any setting, as evidenced in dental and medical claims data, including dental screenings or fluoride varnish provided by primary care or multispecialty providers. Thus, these estimates do not specifically reflect access to a dental home.

The traditional way for children to access comprehensive oral health care is through a dental home. As defined by the American Academy of Pediatric Dentistry (AAPD), a dental home is a trustworthy and continuous relationship between the patient and dentist, inclusive of all aspects of oral health care delivered in a safe, culturally sensitive, individualized, comprehensive, continuous, accessible, coordinated, compassionate, and patient- and family-centered way to address anticipatory guidance and preventive, acute, and comprehensive oral health care including referral to dental specialists when appropriate. The AAPD recommends that a dental home be established no

later than 12 months of age to help children and their families institute a lifetime of optimal oral health, including preventive measures and routine checkups to safeguard children and adolescents' teeth and gums and detect potential problems early on, preventing them from becoming more significant issues.[7] [8]

Having a dental home is an important doorway into the dental care system, and often, it is the only doorway other than the Emergency Room. It is the traditional mechanism for accessing checkups and cleanings and provides a timely opportunity to identify problems that cause pain/infection and may require restorative care. If care is needed from a specialist (such as an orthodontist, endodontist, periodontist, or oral surgeon) or if sedation or general anesthesia in an operating room setting is needed, these can only be obtained through a referral from a general dental provider who typically would be the dental home for that patient. Given increasing evidence that establishing preventive dental care for young children and a dental home at early ages helps reduce future oral health disease and future dental treatment and costs, particularly for low-income children, it is important to assess the degree to which the system can provide dental homes for all Maine children across childhood and young adulthood.[9] [10] [11] [12]

Currently, there is no data available to track the percentage of children who have a dental home in Maine. The purpose of this white paper is to use All Payer Claims Data (APCD) to identify patterns of dental use that are indicative of having a dental home and to estimate the proportion of Maine children who have an "active dental home" to help estimate the number of dental home providers that are needed to meet the current unmet need for dental homes. Based on AAPD recommendations that all children establish a dental home by 12 months of age and have routine visits every six months, including a checkup and cleaning, we defined having an active dental home in health insurance claims data as when a child had a minimum of both of the following dental services within the year:

- At least one periodic or comprehensive oral exam (i.e., CDT dental procedure codes D0120 or D0150) AND
- At least one cleaning/prophylaxis (i.e., CDT codes D1110 or D1120).

Using this definition, we examine the degree to which children living in Maine with consistent dental insurance coverage had an active dental home from 2018 to 2022. We also assess how dental home access varies by payor, age, and geography to identify unmet needs and inform continuing efforts to expand and improve dental home providers in the State.

Methods

Data Source

Data for this study were obtained from the Maine Health Data Organization (MHDO) All Payer Claim Database (APCD) per the data release requirements defined in 90-590 Chapter 120, *Release of Data to the Public* under MHDO's authorized data release # 2023062101. The MHDO's APCD is a statewide database of health insurance claims information that includes a large representative sample of medical, pharmacy, and dental claims and eligibility data for children in the State, including all MaineCare (Maine's Medicaid/CHIP program) claims, the majority of commercial insurance carriers (~ 73%), and dental benefit administrators per the requirements in 90-590 Chapter 243, *Uniform Reporting System for Health Care Claims Data Sets*.[a] Because the MHDO APCD includes claims for the vast majority of insured children in the State, it is a valuable data source for generating state and county estimates of dental provider access and disparities and can produce more robust estimates of utilization than state-level or national survey data on which many studies of preventive oral health care use rely.[13]

This analysis of MHDO APCD data from 2018 to 2022 is limited to dental claims for children consistently insured for dental benefits through MaineCare or reporting commercial, private insurers submitting dental claims in the MHDO APCD. It does not include dental services provided by medical primary care providers during well-child visits.[b] It also does not include dental services paid directly by families (self-pay), medical insurance, the State of Maine School Oral Health Program, grant-funded programs, or donated care.

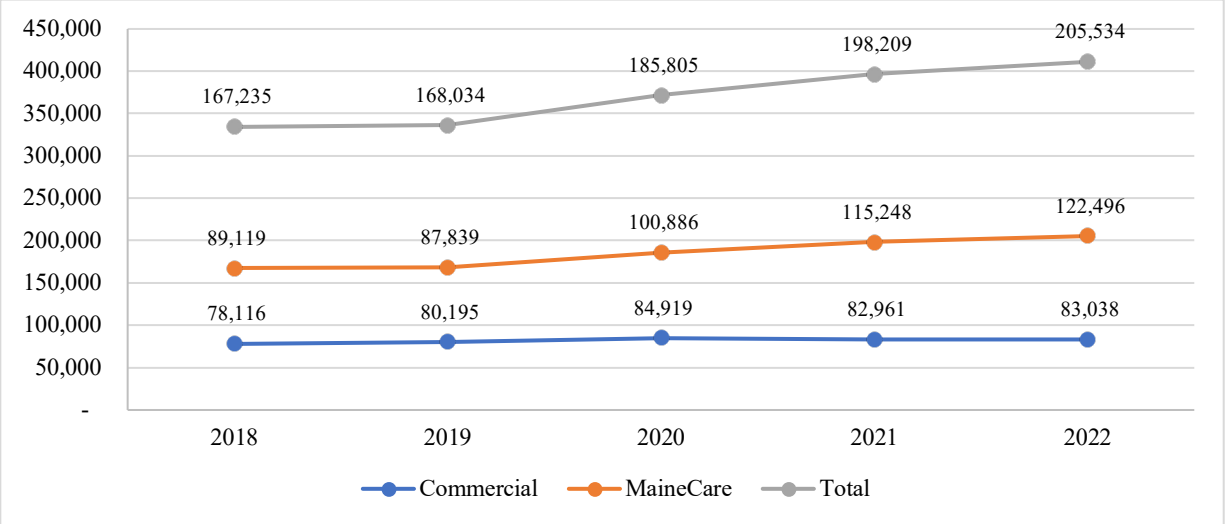
[a] See the MHDO website for more details regarding data restrictions and participating insurers https://mhdo.maine.gov/claims.htm

[b] Dental claims for dental providers working within Federally Qualified Health Centers are included.

Study population

We analyzed dental home access for all enrolled children and youth aged 20 or younger with consistent MaineCare or commercial dental coverage, which is defined as being enrolled for dental benefits for 11 or more months (Figure 1). We limited our analyses to children with consistent dental coverage throughout the year as individuals who have new dental insurance or only have dental benefits for a portion of the year may not have been able to schedule appointments right away once receiving benefits. Since our sample is limited to consistently insured children, the results do not reflect all individuals with dental insurance who received services from 2018 through 2022.

Figure 1. Number of children enrolled in dental benefits with consistent coverage (11 or more months) in MHDO APCD, statewide and by payer (2018-2022)



Source: MHDO APCD Dental Eligibility 2018-2022 run date December 12, 2023.

Analytic measures

Utilization of a dental home was defined as the number and percentage of consistently enrolled children who received both a routine periodic/comprehensive dental examination (D0120 or D0150) and at least one dental cleaning (D1110 or D1120, depending on age) within the calendar year as recommended by dental guidelines. The exam(s) and cleaning(s) might have been delivered in a single visit or at separate visits. We measured dental home utilization for children with dental benefits statewide and by the source of dental insurance/payor (MaineCare and Commercial), by the location of the child's residence (county), and by age group (i.e., under age 3, 3 to 5, 6 to 12, 13 to 18, and 19 to 20).

Key Findings

The need for dental homes is increasing

The number of Maine children with consistent dental benefit coverage needing a dental home is increasing. Reflecting increases in dental benefit coverage and continuous MaineCare coverage during the pandemic, the total number of children with MaineCare or commercial dental coverage enrolled for at least 11 months increased from approximately 167,000 Maine children and youth in 2018 to approximately 205,000 in 2022 or 23% increase in total children with dental benefit coverage in the State (Table 1).

Consistent eligibility for dental benefits increased primarily for children insured by MaineCare. The number of MaineCare children with consistent dental coverage increased by 37% from approximately 89,000 in 2018 to 122,000 in 2022, while the number of commercially insured children with consistent dental benefits increased by 6% from approximately 78,000 children in 2018 to 83,000 in 2022.

Dental home utilization rates remain lower than pre-pandemic levels

Despite more Maine children being enrolled in dental insurance, the majority with dental coverage did not have an active dental home (Table 1 & Figure 2):

- In 2022, approximately one-third (35%) of all children with dental coverage in Maine had an active dental home.
- The rate of Maine children with consistent dental insurance who have a dental home has declined since the COVID-19 pandemic and continued to decline in 2022 (from 46% in 2018 to 35% in 2022).
- Commercially insured children with dental benefits are far more likely to have a dental home (56% in 2022). In 2022, only 1 in 5 MaineCare-enrolled children had a dental home.
- While the number of commercially insured children who had a dental home increased between 2021 and 2022 (from 54% in 2021 to 56% in 2022), the proportion with an active dental home remains lower than pre-pandemic levels (63% in 2018).
- Before the COVID-19 pandemic, children consistently insured by MaineCare were half as likely to have a dental home than commercially insured children (31% in 2018). The pandemic further reduced MaineCare children's dental home access, with only 22%

having a dental home in 2020 and 2021, which continued to decline to 20% in 2022.

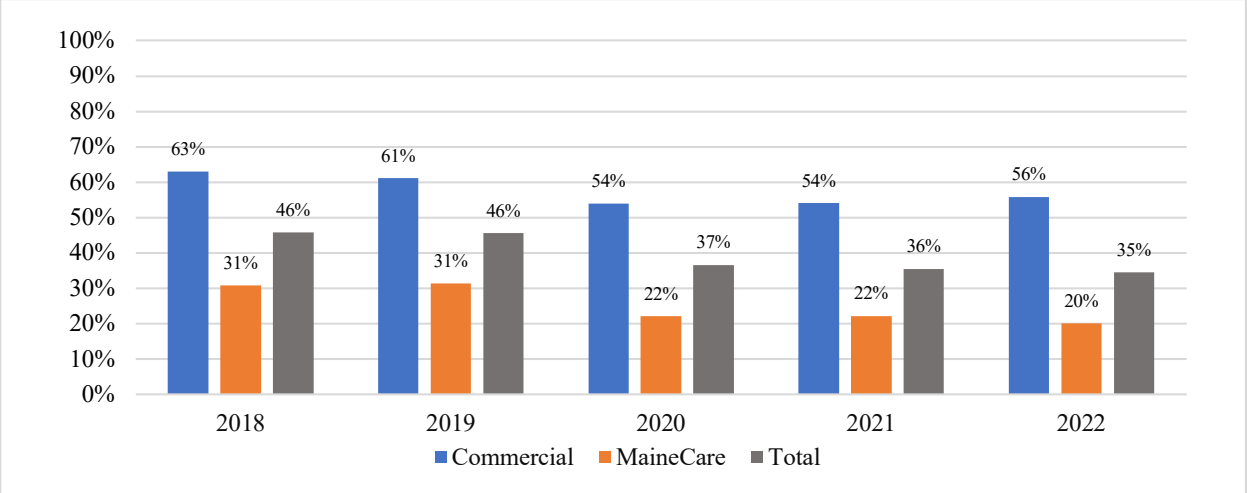
Nationally and in Maine, the COVID-19 pandemic resulted in a substantial reduction in dental service utilization in 2020.[14] [15] The closure of dental offices and people's fear of contracting the virus by visiting healthcare facilities once offices re-opened led to a decrease in the number of individuals seeking preventive care. At the same time, workforce shortages impacted provider capacity as well. Despite the relaxation of shut-down restrictions and the availability of vaccines, this trend continued in 2021 and 2022, indicating a significant impact on children's and youth's access to oral health.

Table 1. Number of consistently insured children with a dental home, statewide and by payer (2018-2022)

	2018	2019	2020	2021	2022
Commercial					
# of children consistently insured	78,116	80,195	84,919	82,961	83,038
# with a dental home	49,244	48,996	45,746	44,867	46,376
% with a dental home	63%	61%	54%	54%	56%
MaineCare					
# of children consistently insured	89,119	87,839	100,886	115,248	122,496
# with a dental home	27,442	27,637	22,364	25,633	24,609
% with a dental home	31%	31%	22%	22%	20%
Total					
# of children consistently insured	167,235	168,034	185,805	198,209	205,534
# with a dental home	76,686	76,633	68,110	70,500	70,985
% with a dental home	46%	46%	37%	36%	35%

Source: MHDO APCD Claims and Eligibility 2018-2022 run date December 12, 2023.

Figure 2. Percent of consistently insured children with a dental home, statewide and by payer (2018-2022)

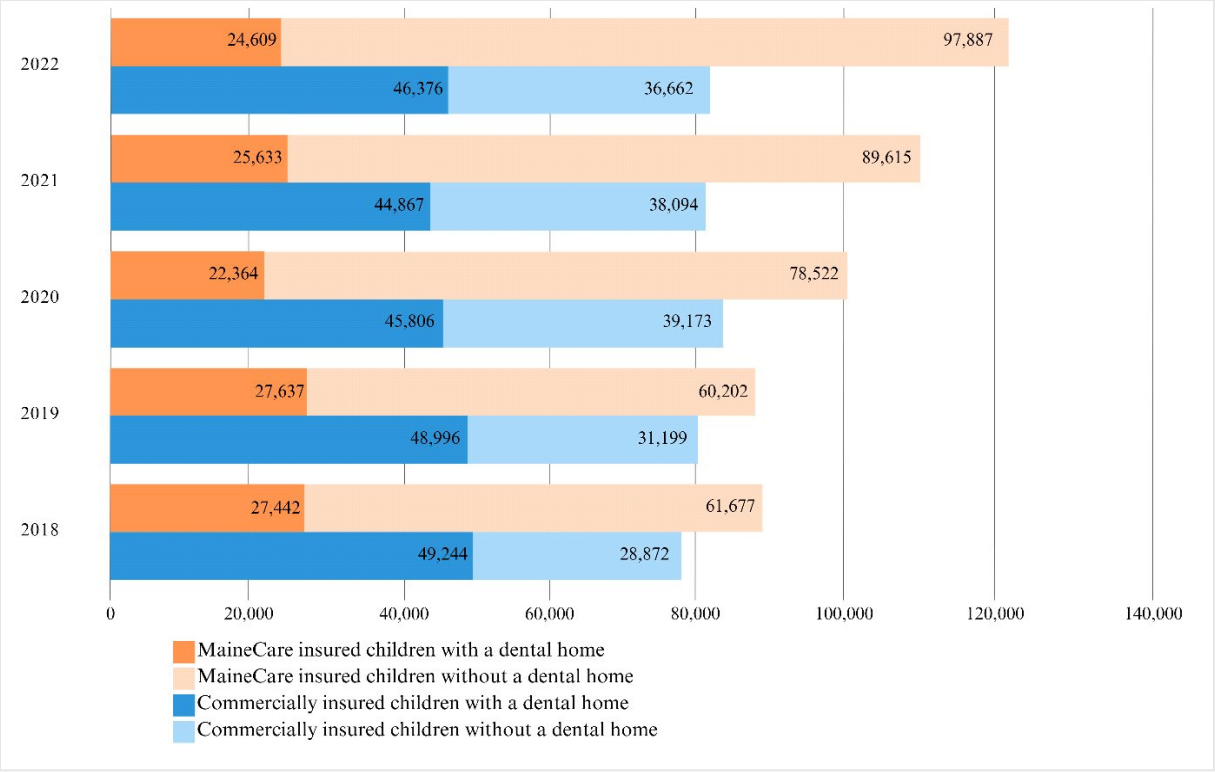


Source: MHDO APCD Claims and Eligibility 2018-2022 run date December 12, 2023.

Examining the number of consistently insured children without an active dental home further highlights the magnitude of the unmet need, particularly for children on MaineCare (Figure 3). In 2022, nearly 98,000 children consistently enrolled with MaineCare did not have an active dental home despite being entitled to preventive dental care under federal Medicaid requirements and MaineCare

policy. This was up from 62,000 (an increase of 58%) before the pandemic. While fewer in number, approximately 37,000 children enrolled in commercial dental benefits did not have an active dental home in 2022, up from 29,000 (an increase of 28%) from before the COVID-19 pandemic. This data highlights the need to improve the access and utilization of preventive dental care for both privately and publicly insured children.

Figure 3. Unmet Need for Dental Homes: Number of consistently insured children with and without a dental home (2018-2022)



Source: MHDO APCD Claims and Eligibility 2018-2022 run date December 12, 2023.
Note: The numbers in this graph include only children with consistent insurance (11 or more months). There are additional children who do not have any dental coverage or who had it for only part of the year.

Further research is needed to understand the reasons for the disparities in dental home utilization between MaineCare and commercially insured children with dental benefits in Maine. Children and young adults with commercial insurance are 2.8 times more likely to have a dental home compared to those covered by MaineCare.

Dental Home Utilization by Age Group

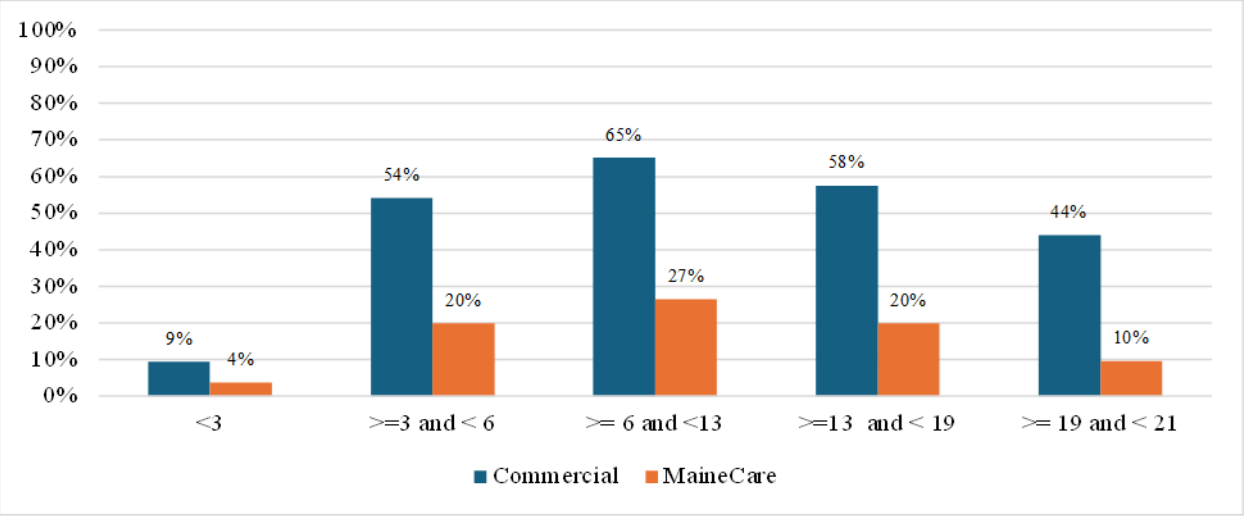
The rates of dental home utilization for children with dental coverage also vary by age group, as shown in Figures 4 and 5. Children aged 6 to 13 are most likely to have an active dental home, while children under age three were the least likely to have one, regardless of payer. Only 9% of

commercially insured and 4% of MaineCare-insured children less than three years of age had a dental home. Limited access to dental home services by children under age 3 is consistent with other studies nationally that have found oral health use and spending are lower during the first four years of life for both commercial and publicly insured children and that medical teams play a more significant role in oral healthcare for these children.[16] [17] [18]

It is not surprising that children under age 3 are less likely to have established a dental home, especially as the recommendation to establish a dental home at age 1 is relatively recent, having been in place only about a decade. Also, for children under age 3, it is less clear whether the specific dental procedure codes used in this claims analysis to identify an active dental home are the best indicator of having an active dental home for this age group. Our definition excluded the oral health evaluation code (D0145) because it is more commonly used by medical providers, but some dentists seeing children under age 3 may also be using it. Additionally, it is not clear whether toddlers are able to sit in a dental chair long enough to complete a full cleaning. Thus, it's possible that while the claims indicators used in this analysis are a good indicator of having an active dental home for older children, for children under three, the absence of these claim codes may understate the number of children who may have a dental home. Future analyses will attempt to clarify this question.

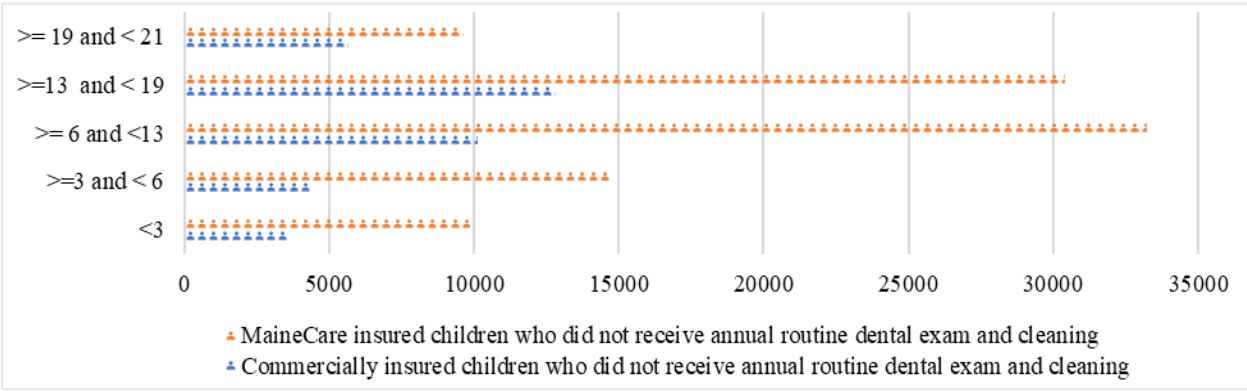
While children aged 6-13 were most likely to have an active dental home compared to children of other ages, access varied by payer. Commercially insured children aged 6-13 were more than twice as likely to have a dental home than MaineCare children (65% commercially insured, 27% MaineCare). Young adults aged 19-21 with MaineCare coverage also had very low rates of dental home utilization (10%), which was more than four times lower than commercially insured young adults (44%).

Figure 4. Percent of consistently insured children who had a dental home by age and payer (2022)



Source: MHDO APCD Claims and Eligibility 2018-2022 run date December 12, 2023.

Figure 5. Unmet Need for Dental Homes: Number of consistently insured children who did not have a dental home, by age and payor (2022)

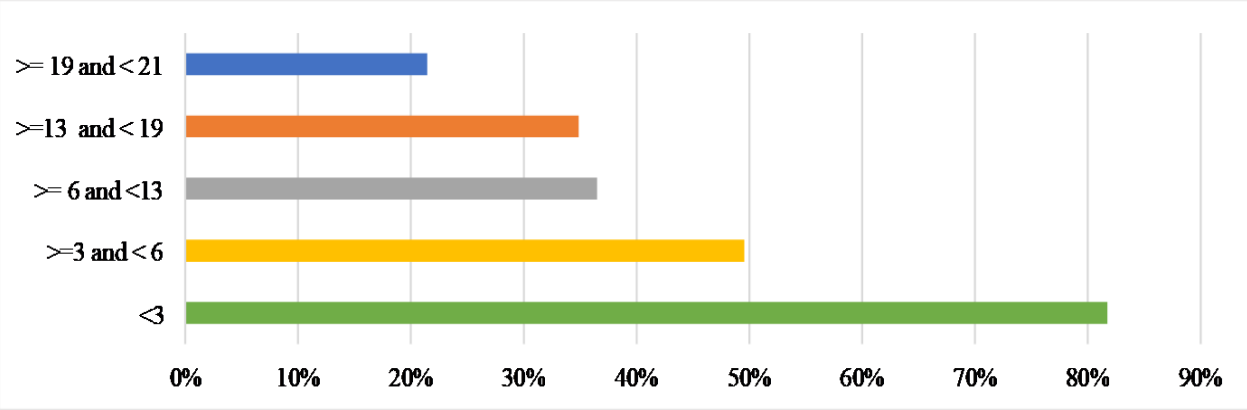


Source: MHDO APCD Claims and Eligibility 2018-2022 run date December 12, 2023.

As shown in Figures 6 and 7, a separate analysis of MaineCare medical and dental claims revealed that younger children with MaineCare are far more likely to have well-child visits but not have a dental home in Maine. Given the small number of pediatric dentists across the State and the ongoing efforts of the From the First Tooth (FTFT) program[c][19], Maine children under age three with MaineCare have better access to oral preventive services (e.g., fluoride varnish) at well-child visits than through a dental home.

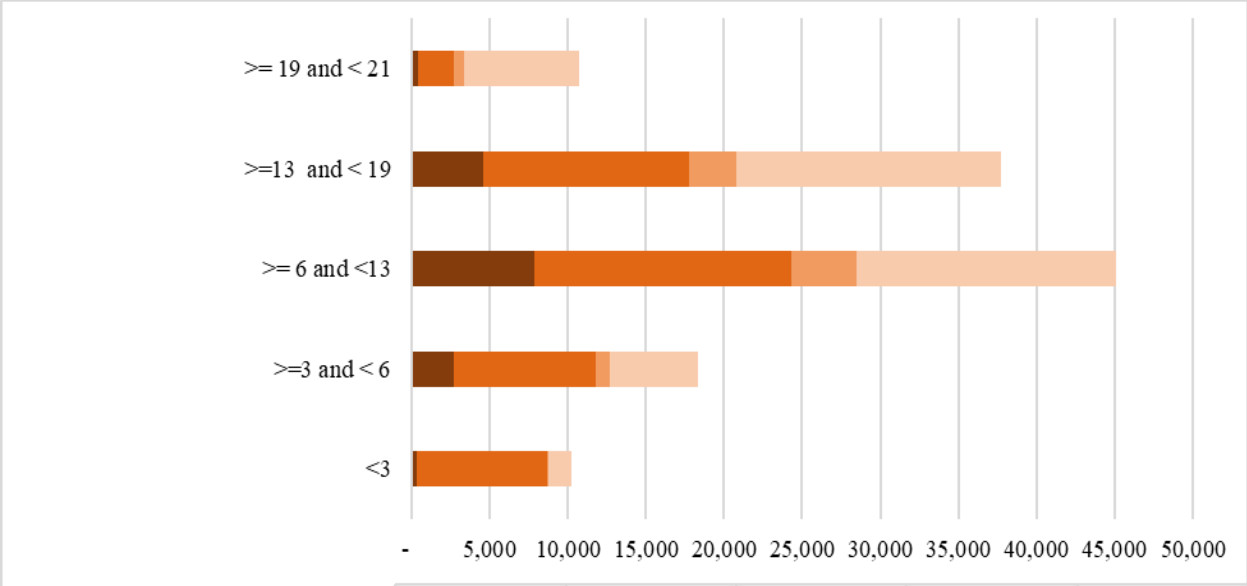
[c] From the First Tooth (FTFT) is a Maine-based statewide children's oral health initiative that aims to promote and support the integration of oral health into primary care from the eruption of a child's first tooth up to age 21 by implementing an evidence-based preventive oral health approach in the medical home.

Figure 6. Percent of MaineCare children with consistent medical and dental benefits with a well-child visit and no dental home by age group (2022)



Source: MHDO APCD Claims and Eligibility 2018-2022 run date March 1, 2024.

Figure 7. Unmet Need for Dental Homes: Well-child visits and dental home patterns, dental and wellness care patterns among MaineCare insured children, by age group (2022)



	<3	>=3 and < 6	>= 6 and <13	>=13 and < 19	>= 19 and < 21
MaineCare insured children with dental-medical insurance & WCV & dental home	338	2,735	7,839	4,567	419
MaineCare insured children who received WCV but DID NOT have a Dental Home	8,369	9,067	16,442	13,166	2,295
MaineCare insured children with a dental home but DID NOT receive WCV	38	917	4,163	3,036	626
MaineCare insured children with no dental home AND no WCV	1,496	5,579	16,611	16,978	7,360

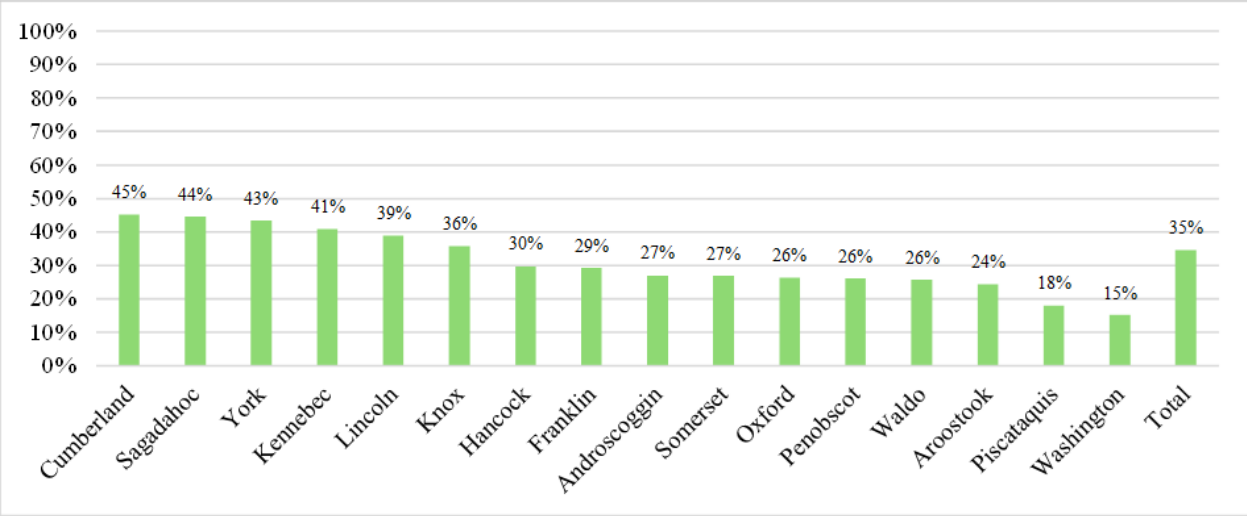
Source: MHDO APCD Claims and Eligibility 2018-2022 run date March 1, 2024.

Dental Home Utilization by County

Disparities in dental home availability have been observed across different counties in Maine, which highlights the need to improve access to dental care providers, particularly in rural areas of the State. As shown in Figure 8, in 2022, only 15% of children with consistent dental benefits in

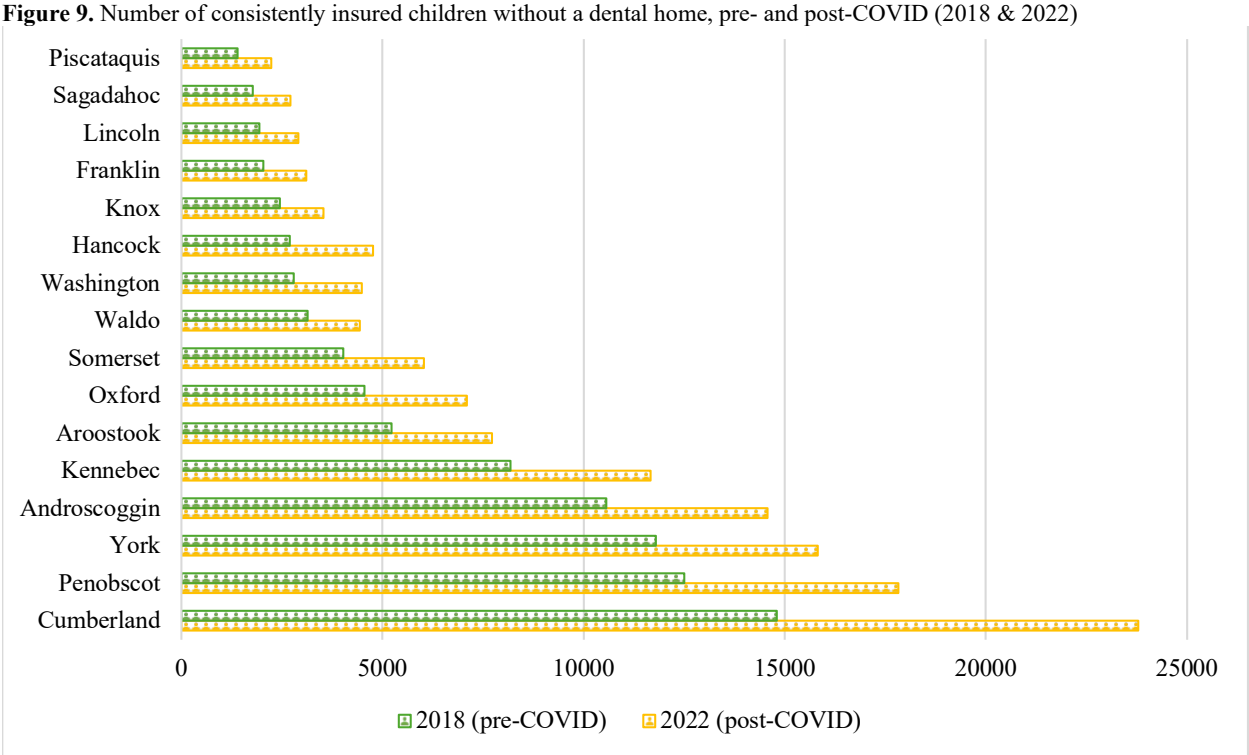
Washington County and 18% in Piscataquis had an active dental home, compared to 45% in Cumberland, 44% in Sagadahoc and 43% in York counties where more health care and dental providers are based. The number of consistently insured Maine children without a dental home has increased in all counties since the pandemic (Figure 8).

Figure 8. Percent of consistently insured children who had a dental home by country, sorted by total rate (2022)



Source: MHDO APCD Claims and Eligibility 2018-2022 run date December 12, 2023.

Figure 9. Number of consistently insured children without a dental home, pre- and post-COVID (2018 & 2022)



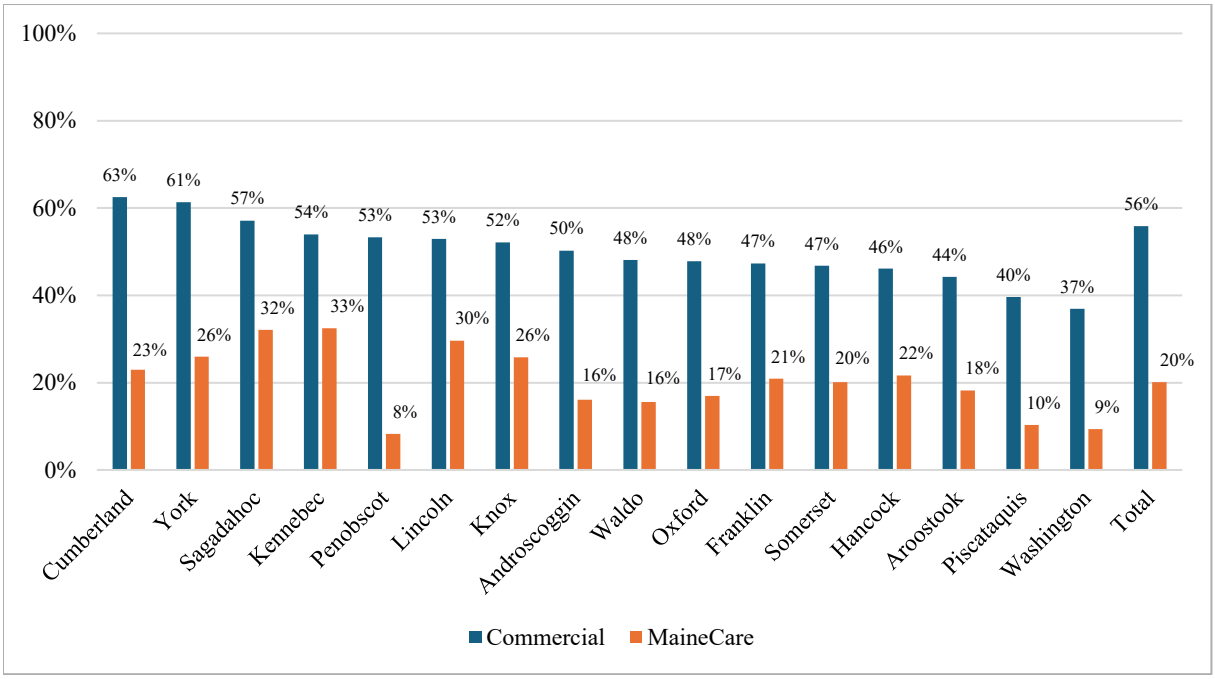
Source: MHDO APCD Claims and Eligibility 2018-2022 run date December 12, 2023.

As was true statewide, there are significant differences in dental home utilization by payer within counties (Figure 9). Counties with the highest rates of dental home utilization for privately

insured children did not have the highest rates of dental home utilization for publicly insured children. While Cumberland (63%) and York (61%) counties had the highest rate of privately insured children with an active dental home, Kennebec (33%) and Sagadahoc (32%) had the highest rates for children with MaineCare.

Disparities in dental home utilization between children who are commercially insured and MaineCare varied, both in rural counties and in more populated counties with more dental providers available. Commercially insured children statewide were 2.8 times more likely to have a dental home than children with MaineCare (56% commercially insured vs. 20% MaineCare). In comparison, they were 6.6 times more likely in Penobscot County (53% commercially insured vs. 8% on MaineCare) and 3.1 times more likely in Androscoggin (50% commercially insured vs. 16% on MaineCare); both of these counties have urban centers with more health system infrastructure. In the more rural counties of Washington and Piscataquis, commercially insured children were four times more likely than MaineCare children to have a dental home.

Figure 10. Percent of consistently insured children who had a dental home, by county and payer, sorted by commercial rate (2022)



Source: MHDO APCD Claims and Eligibility 2018-2022 run date December 12, 2023.

Some of these disparities in children's access to dental care are likely tied to the lack of dental providers and limited participation in MaineCare. Almost every county in Maine has some towns or the entire county classified as a dental Health Professional Shortage Area (HPSA) by the Health

Resource Services Administration. [20] This may contribute to the low rates of children accessing dental home services.[21] Even when there are dentists available, many do not accept MaineCare. A recent analysis of national Medicaid claims data and ADA dental office database files found that only 16% of Maine dentists were enrolled as Medicaid providers, making it the second-lowest Medicaid participation rate in the country after New Hampshire.[22]

Discussion and Policy Implications

Having access to a dental home is fundamental for preserving good oral health and preventing dental disease and future costly treatments. However, based on our analyses of MHDO APCD dental claims and eligibility, the vast majority of children with dental benefits in Maine do not have access to a dental home. Just over one-third (35%) of all children in Maine with consistent dental coverage had an active dental home in 2022.

Lack of dental home access is particularly acute for children enrolled in MaineCare. Only 20% of this group had an active dental home despite their eligibility for comprehensive and preventive oral health services under the EPSDT benefit. The lack of dental home utilization and receipt of recommended dental preventive care was an issue for children prior to 2020, particularly those on MaineCare. Still, the COVID-19 pandemic only served to further reduce access both in Maine and nationally. While oral health utilization has returned to pre-pandemic levels for commercially insured patients, it has continued to decline for MaineCare patients in 2022.[23]

Further research is needed to understand the barriers that prevent consistently insured low-income children from accessing dental care and to inform effective policy strategies that will improve oral health provider availability and accessibility. Despite efforts to expand MaineCare eligibility, benefits, and reimbursement rates, there is a pervasive disparity regarding access to comprehensive dental care for MaineCare-insured children. This disparity in dental care access and quality based on insurance type can have serious implications for the health outcomes of children from low-income families, who are also at higher risk for having dental caries and dental disease. Addressing this issue is crucial to ensure that all children have access to the necessary dental care to maintain optimal oral health.

A 2021 study on oral health care in America by the National Institutes of Health highlighted a significant shortage of dental professionals, particularly in rural and medically underserved areas. This shortage is a critical barrier to improving access to oral health care. It presents some evidence-based solutions to help address them.[24] While efforts to increase Medicaid dental provider reimbursement may help in some states to increase provider participation rates and increase children's preventive visits,[25] the limited number of dental providers practicing in rural states requires a more multi-disciplinary, collaborative, integrated public health model of oral health care. Potential solutions to address this issue include increasing the number and variety of oral health providers participating in Medicaid programs, expanding the scope of practice for dental hygienists, and licensing dental therapists. Additionally, integrating oral healthcare with other medical services and increasing funding to support oral healthcare in both medical and community settings are crucial steps. Examples of community settings that could benefit from these solutions include school-based and early childhood programs, mobile dental and tele-dental services, and employing community health workers, oral health navigators, and community dental health coordinators to provide oral health education and care coordination.[26] In Maine, the Children's Oral Health Network and Maine Oral Health Funders are working with the Maine CDC and other partners to generate collaborative approaches for building oral health provider capacity.[27] [28]

Community-based care could ensure that all children, regardless of their background, can access routine preventive dental care and early intervention services. In addition to providing direct dental services, these additional providers could also work with schools and community organizations to offer education and training on dental issues to help community members understand the importance of good dental hygiene, how to take care of their teeth and gums, and offer resources and support to help community members access dental services and navigate the complex world of dental insurance and financing. Overall, by offering prevention and early intervention services in community, school, and primary care settings, public health dental providers have the potential to significantly improve oral health outcomes for individuals and communities. In future reports, we will investigate Maine's dental provider capacity and gaps in more detail to help inform these and other strategies for improving oral health provider access in the areas with the greatest need.

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