



**Washington State
Apple Health Dental Program
Facts and Figures
FY 2008 – FY 2022**

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Overview and Summary

Introduction

Oral health is a critical part of overall health. Poor oral health can cause pain and impact many aspects of a person's life, including the ability to eat, sleep, learn, and work. Untreated oral disease can exacerbate chronic health conditions, like diabetes, negatively impacting overall health and increasing medical costs.

When people seek and receive oral health care early, disease can be prevented, and small problems can be treated so that they don't lead to serious and costly health problems.

More than 1 in 4 people in Washington state receive their health care coverage from Apple Health (Medicaid), which is administered by the Washington State Health Care Authority (HCA) using a managed care model for medical services and a fee-for-service reimbursement model for dental services. This population includes more than 1 million adults and 1 million children. Therefore, the Apple Health dental program is a key factor in the oral health status of over a quarter of the state's population (29%) who receive dental care through Apple Health.

Note: According to Health Care Authority Apple Health Program Enrollment Reports, the number of Washingtonians enrolled in Apple Health in July 2023 was 2,177,349. Apple Health client eligibility dashboard is available from: [Workbook: Client Dashboard - \(External version\) \(wa.gov\)](#).

Detailed citations are available in the Resources and Appendixes section of the report.

Importance of Dental Care and Oral Health

Untreated dental disease can result in pain, poor nutrition, missed school, lack of employability, and social isolation, which can have a devastating impact on quality of life.

Oral health disparities exist for many racial and ethnic groups, by socioeconomic status, age and geographic location. In Washington, disparities in dental care continued to be evidenced among low-income children, American Indian/Alaska Native children, Hispanic children, and other children of color. Based on the 2015 Smile Survey, these groups had the highest rates of tooth decay—substantially higher than the Washington statewide average of 52% (combined grade decay experience).

The *Oral Health in America* report, issued by the National Institutes of Health in 2021 revealed that although major improvements in oral health have occurred in the U.S. population over the past 20 years, profound disparities by race/ethnicity and income persist. Greater efforts are needed to address both the social and commercial determinants that create these inequities.

Oral Health is a Critical Component of Overall Health and Well-Being

- Untreated dental disease can cause intense pain, affecting a person's ability to eat, sleep, learn, and work.
- In 2022, national data revealed that 36% of adults in Washington state have lost at least 1 tooth because of oral disease. In 2020 14% reported experiencing pain in the mouth very often or occasionally.
- Based on the 2023 American Dental Association (ADA) Oral Health and Well Being Survey in Washington State, About one-third of adults in Washington state reported "poor" or "fair" condition of mouth and teeth. One in 5 reported difficulty chewing, 20% reported mouth pain, and nearly one-third suspect they may have gum disease. Low-income adults have more frequent oral health problem/issues.
- Tooth decay is the most common chronic childhood disease. Children with severe dental problems are more likely to miss school and have difficulty learning.
- Pregnant people are more likely to develop oral health problems due to biological changes in their bodies. Following birth, if they have active oral disease, post-partum people can pass cavity-causing bacteria through their saliva to their babies.
- Gum disease is linked to a number of serious health conditions, including diabetes, heart disease, and stroke. Older adults, in particular, are at risk for poor oral health because many medications cause dry mouth, which leads to tooth decay and gum disease.

Source: Oral Health and Well-being in Washington State, A survey of Washingtonians for DDWA. Health Policy Institute, 2023.

Importance of Dental Care and Oral Health

Oral health affects overall health and well-being across the lifespan of adults and children.

Periodontal disease and cavities are largely preventable. Early intervention can reduce unnecessary, expensive dental treatment and ensure that infection and inflammation do not cause complications from other chronic diseases. Also,

Overview of WA Apple Health Dental Program: Children's Coverage

- Apple Health for Kids is a comprehensive child health program. The program's focus is on prevention, early diagnosis, and treatment by both medical and dental providers.
- In 2007, with the adoption of the Cover All Kids law, Washington state made a commitment to ensure that all children have access to health care coverage. Apple Health for Kids consolidates several programs, offering a single streamlined enrollment process and the same comprehensive benefits, including dental care, to all eligible children.
- In 2009, the state renewed its commitment to cover all kids because of the unprecedented economic crisis by maintaining investments in children's coverage and outreach to families. It raised the eligibility for Apple Health for Kids from children in families with incomes that are 250% of the federal poverty level (FPL) to 312% of the FPL.
- Children through age 20 are now eligible for a complete range of dental services, including preventive and restorative procedures.

Federal law requires states provide dental coverage to children in low-income families through Medicaid.

Overview of WA Apple Health Dental Program: Children's Coverage

- Dental coverage is free for all children in families below 200% of the FPL (\$49,720 for a family of three in 2023). Families between 210% and 312% of the FPL pay a small monthly premium. Families do not pay a copay or deductible, and there is no “annual maximum” limit to the coverage.
- Between FY 2020 and FY 2021, the COVID-19 pandemic had an impact on the dental care delivery system, the dental workforce, and patients' access to care that continued post pandemic. To conserve personal protective equipment (PPE), Gov. Inslee closed dental and medical offices by executive order to non-emergency care for 2 months in spring 2020. When offices re-opened, COVID-19 mitigation measures (including new equipment and infrastructure), increased PPE needs, workforce shortages, patient hesitancy, and patients who experienced increased financial instability due to COVID-19 all contributed to subsequent reduction in utilization rates.

Note: Apple Health for Kids is premium-free for families up to 210% of the FPL, and with sliding scale premiums between 210 and 312% of the FPL.

Sources:

[Children | Washington State Health Care Authority](#)

[Federal Poverty Guidelines / Levels for 2023 & Their Relevance to Medicaid Eligibility \(medicaidplanningassistance.org\)](#)

Federal law requires states provide dental coverage to children in low-income families through Medicaid.

Dental Programs and Services Available to WA Apple Health Children Enrollees

- **Access to Baby and Child Dentistry Program (ABCD):** Connects Apple Health-enrolled children under age 6 in every county to dentists trained to address oral health in young children. Initiated in 1995, the ABCD program has successfully worked to:
 - Identify highest risk children and enroll them by age 1.
 - Educate families/caregivers to prevent cavities.
 - Provide outreach and case management to connect families with dental offices.
 - Train dentists in the best practices for treating young children.
- **Oral health preventive services during well-child checks (MouthMatters):** Given primary care medical providers on average see young children 8 or 9 times by the age of 3, well-child medical visits are an opportunity to reach children early, deliver preventive services, assess risk, and refer those in need of care to a dental provider. Primary care medical providers in Washington state who are trained and certified by Arcora Foundation are reimbursed by Apple Health for delivering oral screenings, providing oral health education, and applying fluoride varnish.

Programs for Young Children Serve as Models

ABCD is nationally recognized for expanding access to care for Apple Health-enrolled young children. The Pew Charitable Trusts praised ABCD for achieving significant results while “delivering a strong return on taxpayers’ investment.”

Dental Programs and Services Available to Children Enrolled in WA Apple Health

- **ABCD Expansion Children Ages 6-12 with Disabilities:** Legislation passed during the 2018 and 2020 sessions expanded the ABCD program for children with certain disabilities, until their 13th birthday. Based on the existing ABCD model, ABCD Expansion includes training and certification for dental providers, outreach and support for families, and an enhanced provider reimbursement rate. ABCD Expansion went into effect on Jan. 1, 2022.
- **Increased Funding to Reduce Inequities and Increase Access for Very Young Children:** Legislation passed in 2020 established increased outreach capacity for local ABCD programs, for the specific purpose of reducing racial and ethnic disparities in access to care and oral health outcomes and increasing the percentage of Medicaid-enrolled children under the age of 2 who access dental care. In subsequent sessions, the legislature allocated funding to continue to support this work.

Programs for Young Children Serve as Models

Children with developmental disabilities often have unmet, complex healthcare issues. They are more likely to have unmet dental needs than what's typical and are at greater risk of developing dental disease. In addition, children with more severe conditions and from families that are low-income are particularly at risk of high dental needs and poor access to care. Therefore, developing programs that are focused on eliminating barriers to access dental care for these children, and other children with disabilities, is essential to close the gap and ensure oral health equity.

Overview of WA Apple Health Dental Program: Adult Coverage

- Prior to 2011, Washington state's Apple Health (Medicaid) **benefits included** adult dental coverage. But budget cuts took effect that limited most adults to emergency services, such as tooth extractions and antibiotics for infection and pain.
- Between 2011 and 2014, comprehensive dental coverage was only available to pregnant people, those in long-term care/nursing homes, and clients eligible under a 1915(c) waiver program (see footnote).
- In January 2014, comprehensive dental coverage was restored to all Apple Health-enrolled adults, including those covered by the Medicaid Expansion component of the federal Affordable Care Act.
- Dental coverage is free through Apple Health for adults under age 65 up to 138% of the FPL. Older adults must have lower incomes to qualify for Apple Health.

Making the Case for Adult Dental Coverage

Oral health is essential for overall health. Providing adult dental coverage through Medicaid improves access to and utilization of dental care among low-income adults and has the power to reduce racial/ethnic disparities, advance health equity, and lower medical care costs.

Overview of WA Apple Health Dental Program: Adult Coverage

- Since adult dental coverage was restored in January 2014, FY 2014 includes 6 months of adult dental benefits (Jan. 1, 2014–June 30, 2014), while FY 2015–2020 includes full years of adult dental benefits.
- In 2019, the legislature extended dental coverage to 2 adult populations excluded from Medicaid coverage: adults enrolled in the Medical Care Services program and adult migrants from Compact of Free Association (COFA) nations.
- In 2021, the legislature provided funding to double fee-for-service provider reimbursement rates for nearly all adult dental services, with the goal of supporting provider participation and increasing access to care. This fee increase went into effect on July 1, 2021.

National Picture

As of August 2023, 26 states (and D.C.) offer comprehensive Medicaid dental benefits to adults, 14 states provide limited benefits, 8 offer only emergency benefits, and 3 states do not provide any dental benefits to adults.

Note: Some states offer different levels of dental benefits to their Medicaid expansion and Medicaid base enrollees. The above figures are for the Medicaid base populations.

Sources:

[Making the Case for Dental Coverage for Adult in All State Medicaid Programs whitepaper_0721.pdf\(ada.org\)](#)
[Medicaid Reimbursement for Dental Care Services – 2022 data | American Dental Association \(ada.org\)](#)

Overview of WA Apple Health Dental Program: Medicaid Expansion

- The federal Affordable Care Act (ACA) includes a provision for states to expand Medicaid eligibility to all adults under the age of 65 up to 138% of the FPL (\$34,307 for a family of 3 in 2023), regardless of health or disability status. During the first years of expansion, the federal government paid 100% of the cost to provide Medicaid coverage to the newly eligible population. The federal contribution decreased to 94% in 2018 and 93% in 2019 and stayed at 90% in 2020 and beyond.
- While a U.S. Supreme Court decision made Medicaid Expansion optional for states, Washington state lawmakers recognized the opportunity to extend health care coverage to lower-income residents and implemented the program.
- Medicaid Expansion coverage, like Medicaid for other eligibility categories, includes comprehensive adult dental benefits in Washington.

National Picture

Many enrollees eligible through Medicaid Expansion are lower-wage workers, including dental assistants and other health care team members, restaurant and retail employees, childcare providers, students and recent college graduates.

Ten states have not adopted Medicaid expansion: Alabama, Florida, Georgia, Kansas, Mississippi, South Carolina, Tennessee, Texas, Wisconsin, and Wyoming.

Source:

<https://www.kff.org/medicaid/issue-brief/status-of-state-medicaid-expansion-decisions-interactive-map/>

Oral Health Connections

- In 2017 the legislature authorized the Oral Health Connections (OHC) pilot. This was originally a 3-year, 3-county pilot (extended due to the COVID-19 pandemic) that applied the ABCD model to increase access to care and improve health outcomes for Apple Health-enrolled pregnant people and people with diabetes.
- Studies have shown a link between the oral health status of pregnant people and people with diabetes and overall health outcomes.
- OHC included provider training and certification, enhanced provider reimbursement rates for certain procedures, patients and providers' outreach/support.
- Pilot services launched in January 2019, and the pilot concluded in 2023.
- Based on the pilot findings, in 2023 the legislature approved funding for an enhanced periodontal benefit for adult Apple Health enrollees with diabetes statewide, which went into effect Jan. 1, 2024.

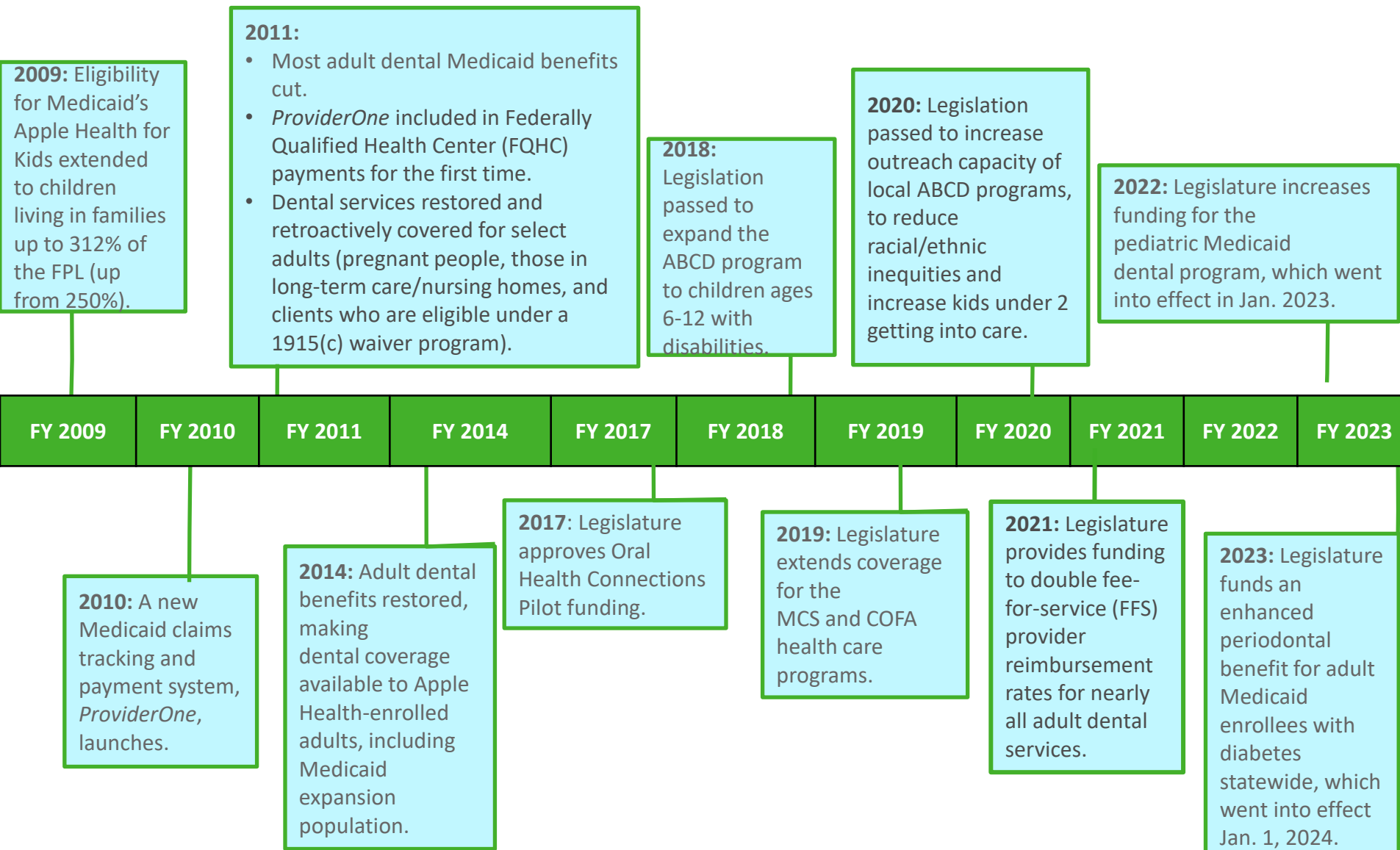
Prevention May Be Key to Lower Care Costs

Studies have shown periodontal treatment reduces medical costs for people with chronic conditions.

United Concordia's landmark oral health study revealed that annual medical cost savings are possible when individuals with diabetes are treated for gum disease. In addition, other studies showed that significantly lower medical costs and hospitalizations occur following periodontal treatment in pregnant and diabetic patients when compared to untreated controls.

Oral Health Connections will examine whether enhanced dental benefits result in the reduction of medical expenditures.

WA Apple Health Dental Services and Claims Timeline



Note: All years are fiscal years. They run from July 1 of the previous year to June 30 of the mentioned year.
 ProviderOne is the Medicaid Management Information System that is the State's Medicaid Payment system managed by HCA.

Report Background and Goals

In 2013, Arcora Foundation commissioned Health Management Associates (HMA) to examine dental services utilization and expenditures for Washington state's Apple Health population. HMA identified the oral health status and analyzed a 5-year trend (2008-2012). Arcora developed subsequent reports with a similar format and analysis methods.

Arcora is the foundation of Delta Dental of Washington—the leading dental benefits company in Washington state—which funds Arcora. As part of work to advance oral health equity, Arcora analyzes oral health data and trends to be a resource for policymakers, health care leaders and community organizations. Since 2008, Arcora has had a data sharing agreement with the Health Care Authority (HCA) and receives Apple Health dental data annually and analyzes Apple Health dental utilization and expenditures.

The goal of this report is to identify the status and trends in utilization, services, and costs of the Apple Health dental program to understand the impact of policy, community-based interventions and plan for the future.

Prior to publication, the HCA reviews and approves all Washington Apple Health dental program Facts and Figures reports.

Report Overview

- The report has 3 main areas: dental expenditures and services by age group (all ages, children, and adults), oral health providers, and policy implications.
- Expenditure analyses exclude data prior to FY 2011 due to a change in Washington State Department of Social and Health Services (DSHS) system payment processing in 2010. In May 2010, DSHS replaced its Apple Health Management Information System with ProviderOne.
- Data on Medicaid dental claims for Federally Qualified Health Centers (FQHCs) prior to ProviderOne were not available. Consequently, total dental expenditures that include FQHC data for FY 2008 through FY 2010 are incomplete and therefore excluded from the expenditure data analysis.
- Specific dental procedures for all FQHC dental claims were not available. Therefore, all FQHC-based dental care services were classified as “other” and not presented on slides 23, 32-35, 49-51, and 75-76.
- Expenditure analyses include dental services paid by both federal and state funds.
- We used this guide for our analysis:
 - Expenditure analysis excluded data for the period FY 2008 through FY 2010.
 - Total expenditure data for FY 2011 through FY 2022 includes FQHC expenditures.
 - Dental utilization for FY 2008 through FY 2022 includes FQHC data.
 - Analysis by procedure group excludes FQHC data for all presented fiscal years.

Notes:

The data analysis conducted for this report is similar to the 2017 and 2019 Apple Health Dental Program Facts and Figures reports but slightly different from the 2013-2015 reports. Prior reports excluded FQHC claims data for all years from the expenditure analysis, while 2017-2022 reports included FQHC claims data in the expenditures from 2011 and after. In this report, we identified dental providers through provider taxonomy codes. In previous reports, we used the provider specialty variable.

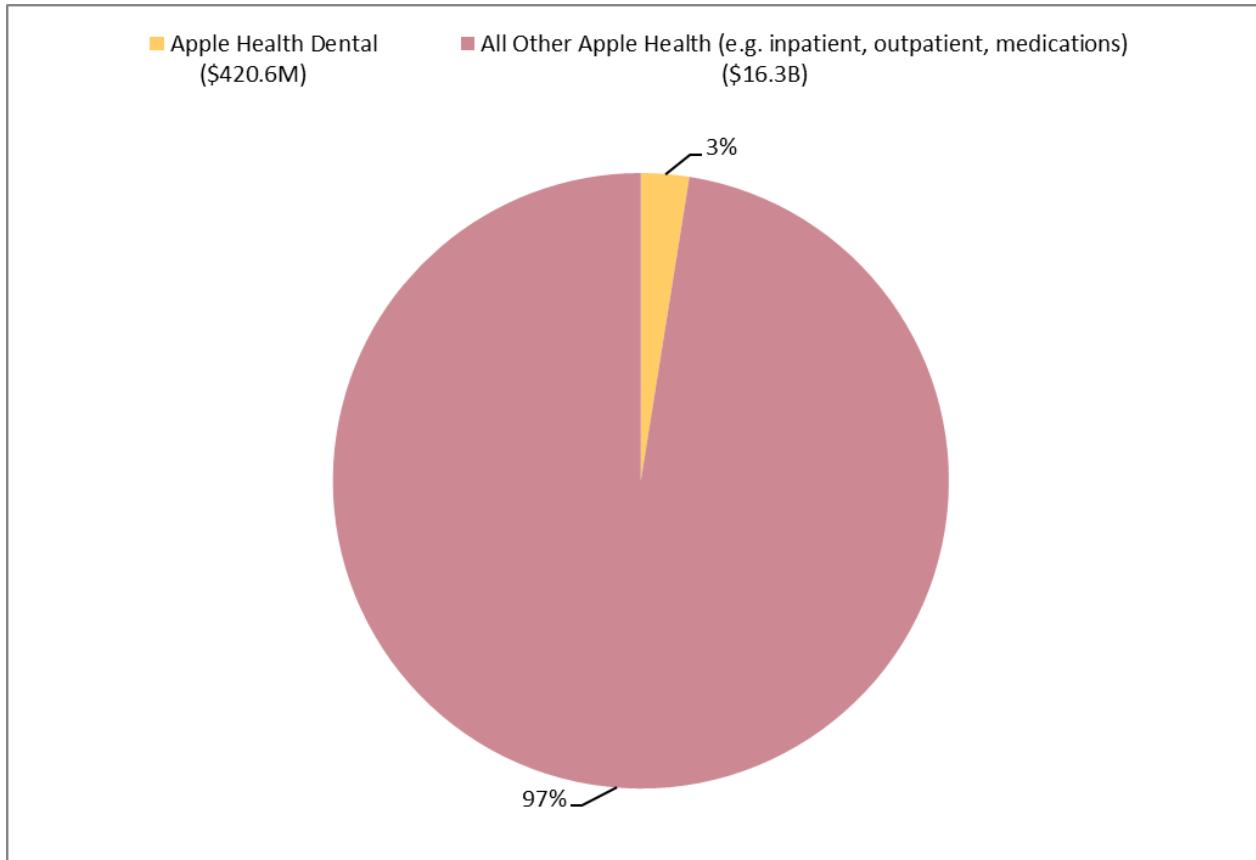
For more details on data analysis procedures, see the Methods section on slide 110.

Key Findings

- The percentage of children accessing dental services increased from 45% in FY 2008 to 51% in FY 2022. Moreover, the percentages of those receiving preventive dental care increased from 40% in FY 2008 to 46% in FY 2022.
- The number of adults accessing dental services increased since the restoration of adult benefits from 146,000 in FY 2014 to nearly 241,000 in FY 2022. However, 986,000 (80%) adults remain unserved.
- Restorative services were among the most common procedures for adults, while preventive services were most common for children.
- Total dental expenditures grew by \$177 million in the last decade (from \$244 million to \$421 million). After adjusting for inflation, this is a 25% increase. Expenditures in the last fiscal year increased by \$42 million, a 6% increase after adjusting for inflation.
- From FY 2015 to FY 2022, after restoration of adult benefits, 58% of spending was on dental services for children; 42% for adults.
- FQHCs served nearly 32% of children and 64% of adults who received care.

Dental Services and Expenditures for All Ages

Washington State Apple Health Dental Expenditures vs. Medical Expenditures, FY 2022



All Ages

Washington state total government spending in FY 2022 was \$63 billion (\$42 billion state funds & \$21 billion federal funds), in which health care (Apple Health) accounted for 26% of total expenditures.

Washington's FY 2022 total Apple Health expenditures were \$16.6 billion, including federal and state funding.

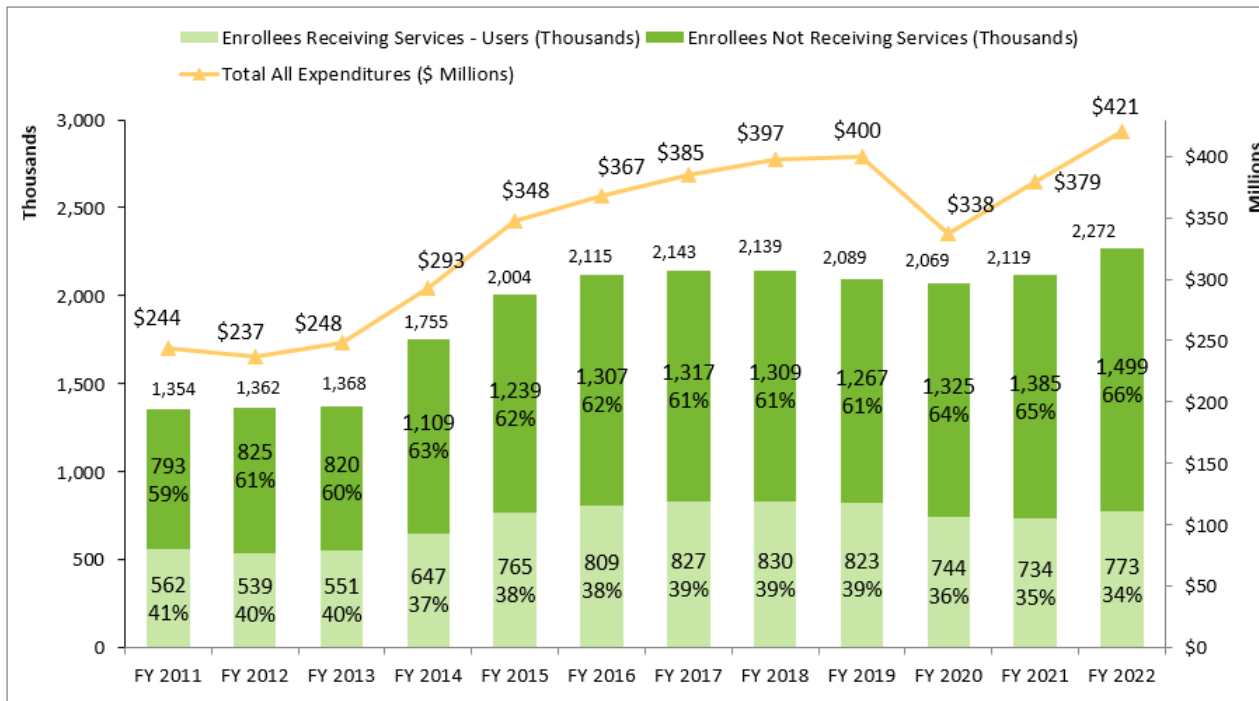
Dental expenditures were just 3% of the total Apple Health budget.

Sources:

National Association of State Budget Officers, "State Expenditure Report: State Expenditure Report, Fiscal Years 2020-2022."
Available from: [2022_State_Expenditure_Report_-_S.pdf \(higherlogicdownload.s3.amazonaws.com\)](https://higherlogicdownload.s3.amazonaws.com)

Apple Health Enrollees Dental Utilization and Expenditures, FY 2011 – FY 2022

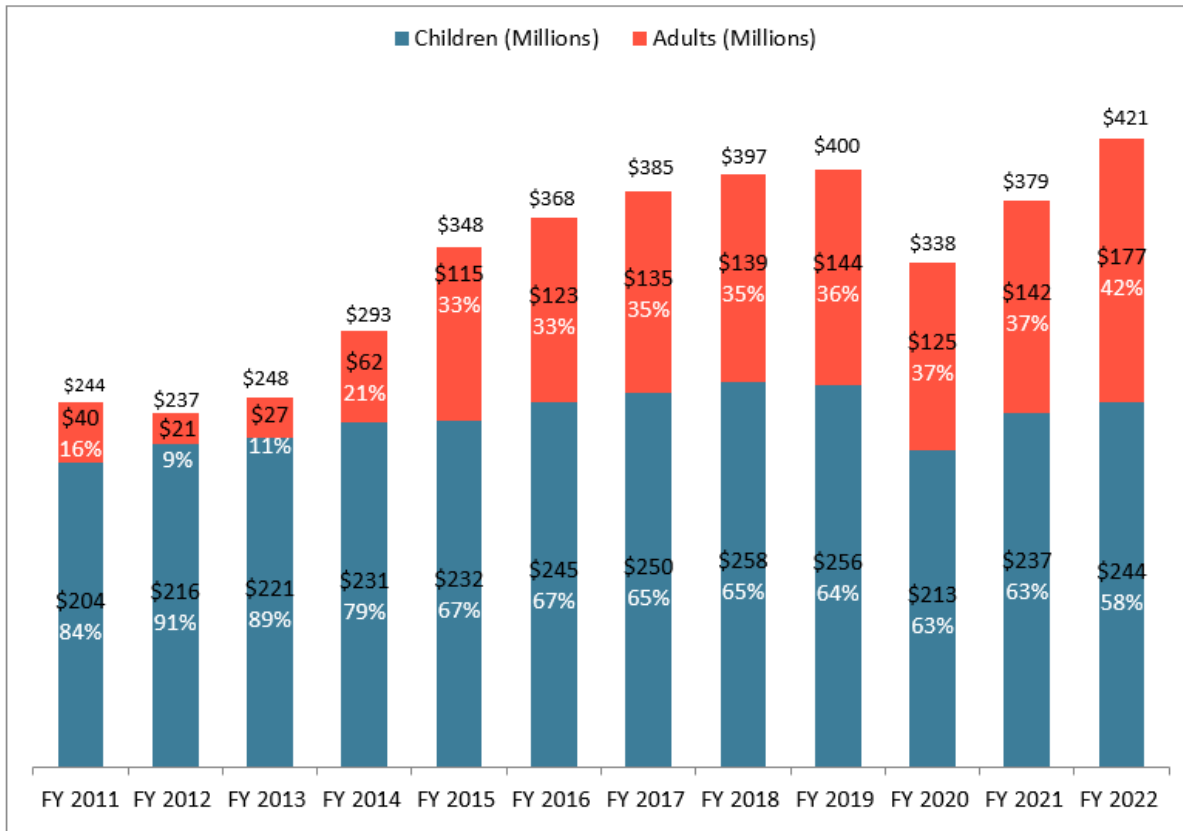
All Ages



The number of Apple Health enrollees has increased by 68% from FY 2011 to FY 2022. The number of dental users increased by 38%, while total expenditures increased by 72% (25% after adjusting for inflation).

In the last fiscal year (2022), dental users increased by 5% with nearly 39,000 additional enrollees accessing dental care. However, dental utilization has not reached pre-COVID-19 pandemic levels yet.

Apple Health Dental Expenditures: Adults and Children, FY 2011 – FY 2022



Note: Children refer to users from birth through age 20, while adults refer to users ages 21 and over. Percentages refer to the proportion of total expenditures by users' age (adult vs. children).

Source: Washington State Health Care Authority: Apple Health Dental Services Enrollment and Utilization Data

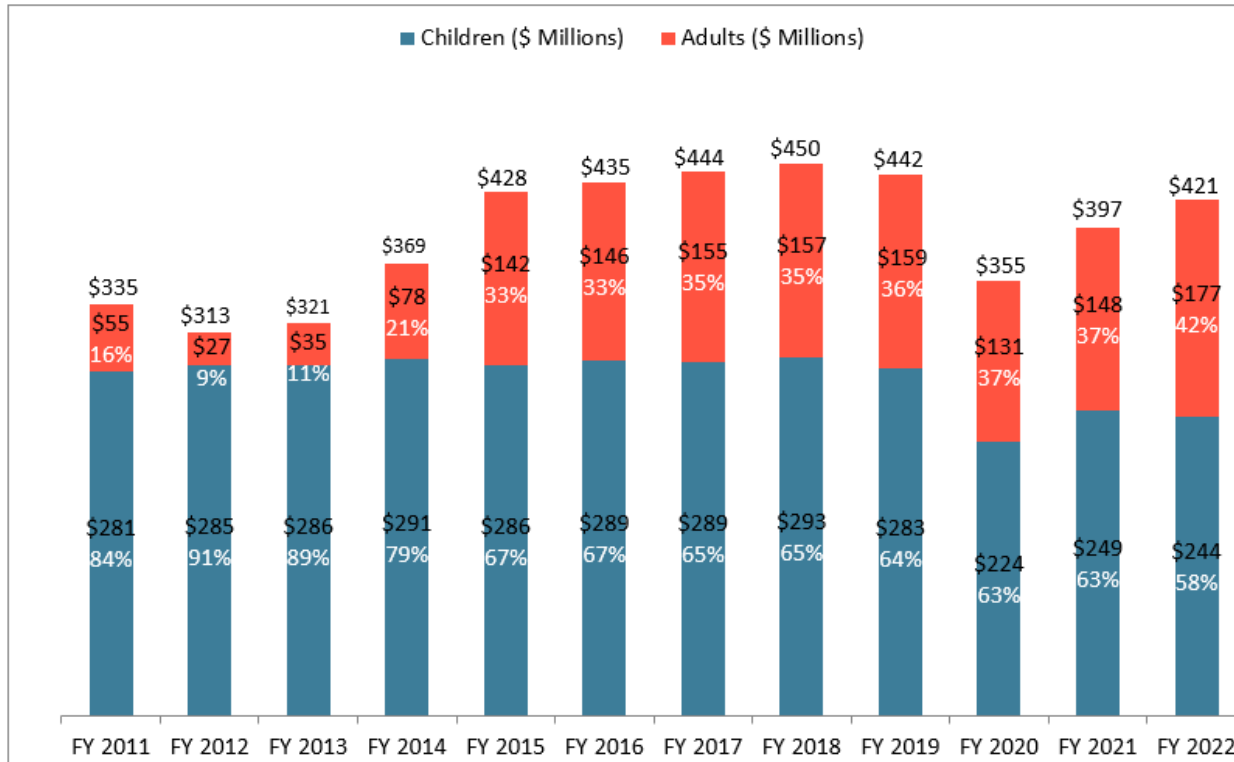
All Ages

Children have historically comprised a much larger proportion of the total dental expenditures than adults—approximately more than three-quarters of expenditures from FY 2011 to FY 2014.

From FY 2014 to FY 2022, after the adult dental restoration, adult expenditures nearly tripled, accounting for 42% of all expenditures.

Apple Health Expenditures Adjusted for Inflation: Adults and Children, FY 2011 – FY 2022

All Ages



While total expenditures have risen 72% between FY 2011 and FY 2022, inflation is the cause of most of the increase. After adjusting for inflation, the increase is 25%.

In the last fiscal year, expenditures increased by 11% (6% after adjusting for inflation).

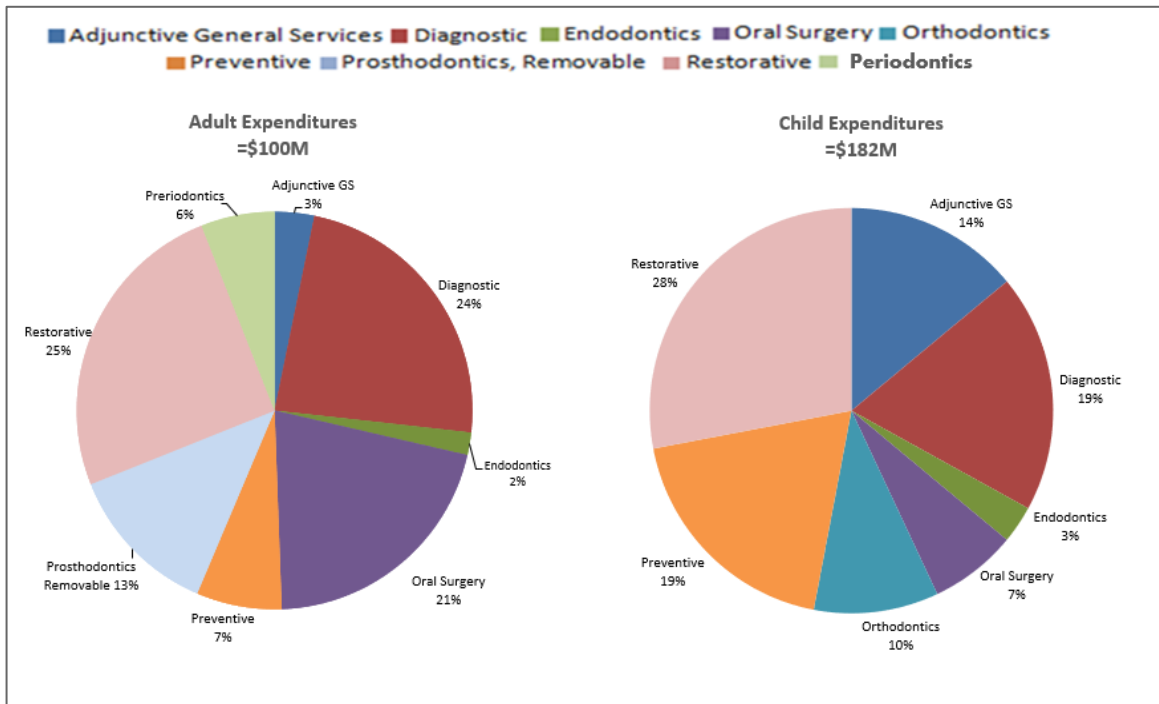
Note: Dollars adjusted using Urban Medical Consumer Price Index to 2022 dollars. We used the Consumer Price Index (CPI) from July of each year (the beginning of the fiscal year).

Total/percent of expenditures may not add up due to rounding.

Source: Washington State Health Care Authority: Apple Health Dental Services Enrollment and Utilization Data

Dental Expenditures by Procedure Group: Adults and Children, FY 2022

Expenditures on this slide **exclude** child and adult claims that occurred in Federally Qualified Health Centers (FQHCs) as not all type of dental procedures received in FQHCs can be identified.



Note: Excludes FQHC claims, claims with missing values for procedure categories, and procedure categories with less than 1% of total expenditures in FY 2022. The following are not depicted in the pie charts: For adult expenditures: orthodontics, implant services, and prosthetic fixed, which combined represented less than 0.1% of total expenditures. For children expenditures: periodontics, prosthetic removable, implant services, and maxillofacial prosthetics, which combined represented less than 0.1% of total expenditures. See Appendix for information on procedure groups.

All Ages

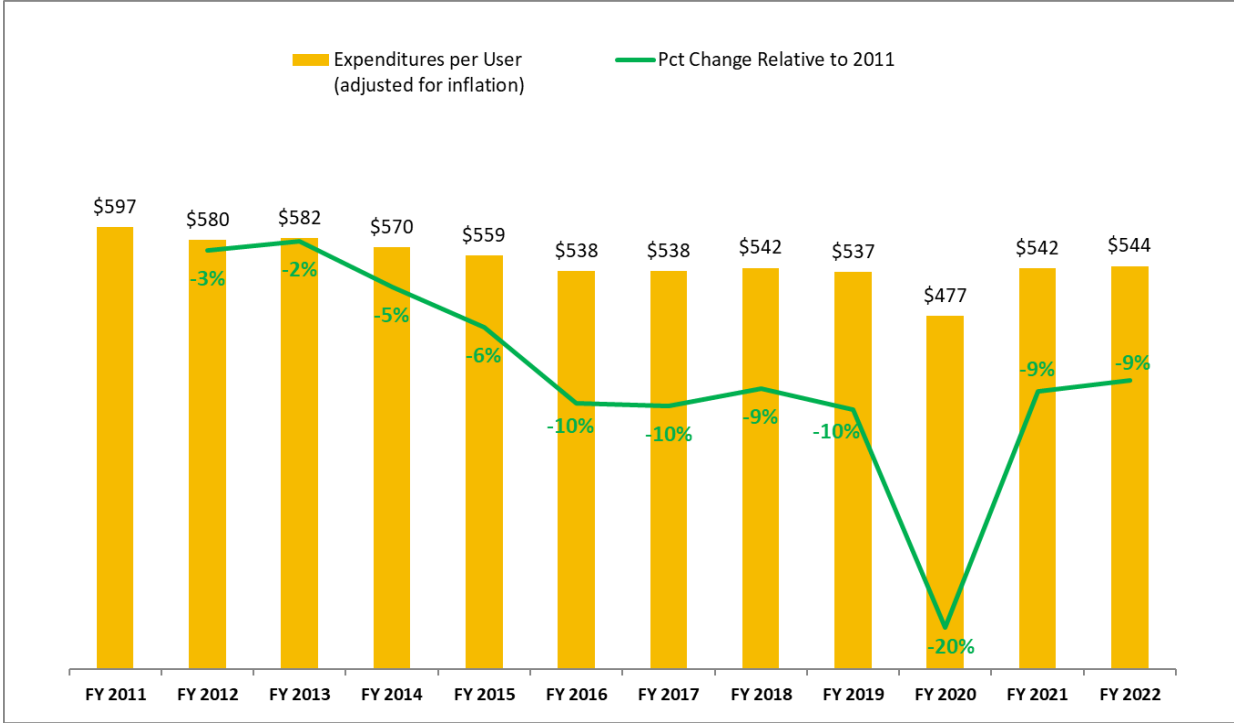
In FY 2022, restorative services accounted for the greatest portion of total expenditures (28% for children and 25% for adults).

Extractions, which fall within the oral surgery group (21%), were among the most frequently billed procedures for all adults. On the contrary, periodic oral exam, cleaning, fluoride varnish, and sealants, which fall within the preventive group (19%), were the most frequently billed procedures for all children in FY 2022.

Average Expenditures per Dental User, FY 2011 – FY 2022

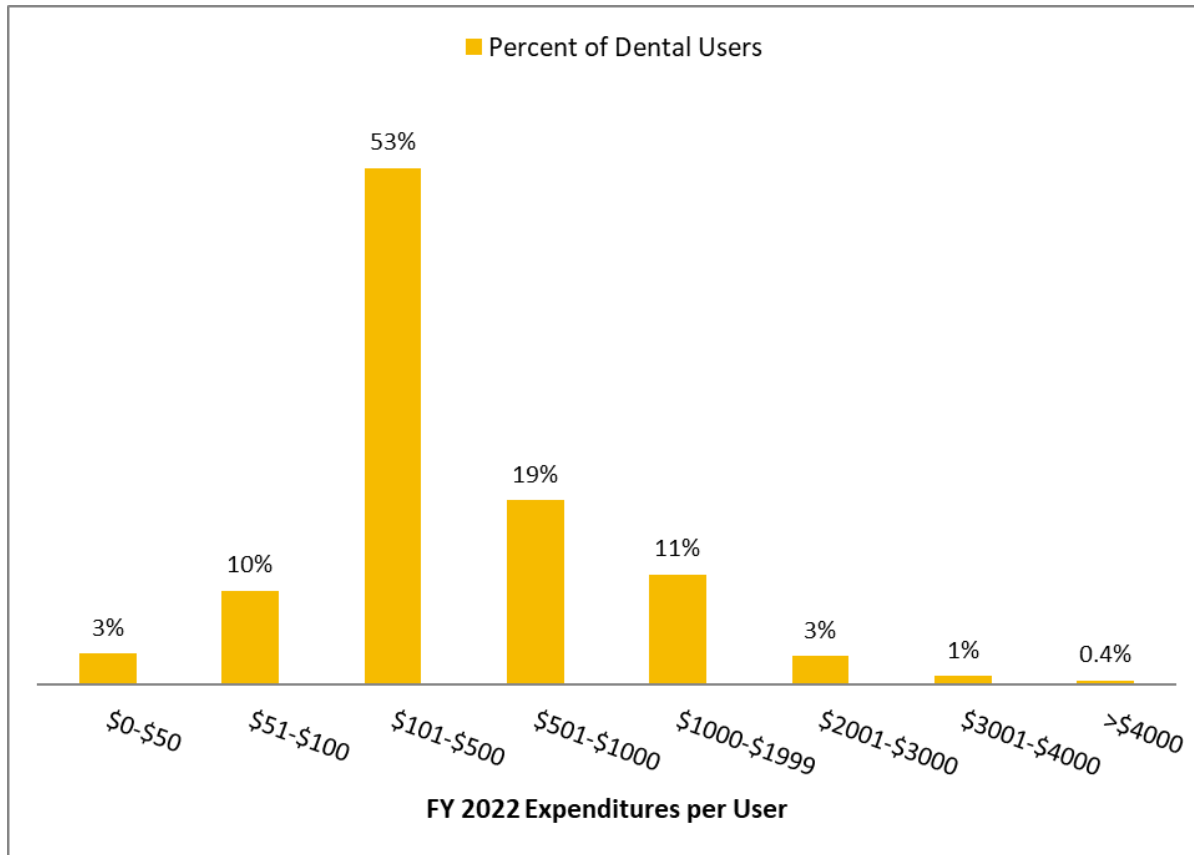
All Ages

After adjusting for inflation, dental expenditures per user decreased by 9% from \$597 in FY 2011 to \$544 in FY 2022.



Source: Washington State Health Care Authority: Apple Health Dental Services Enrollment and Utilization Data

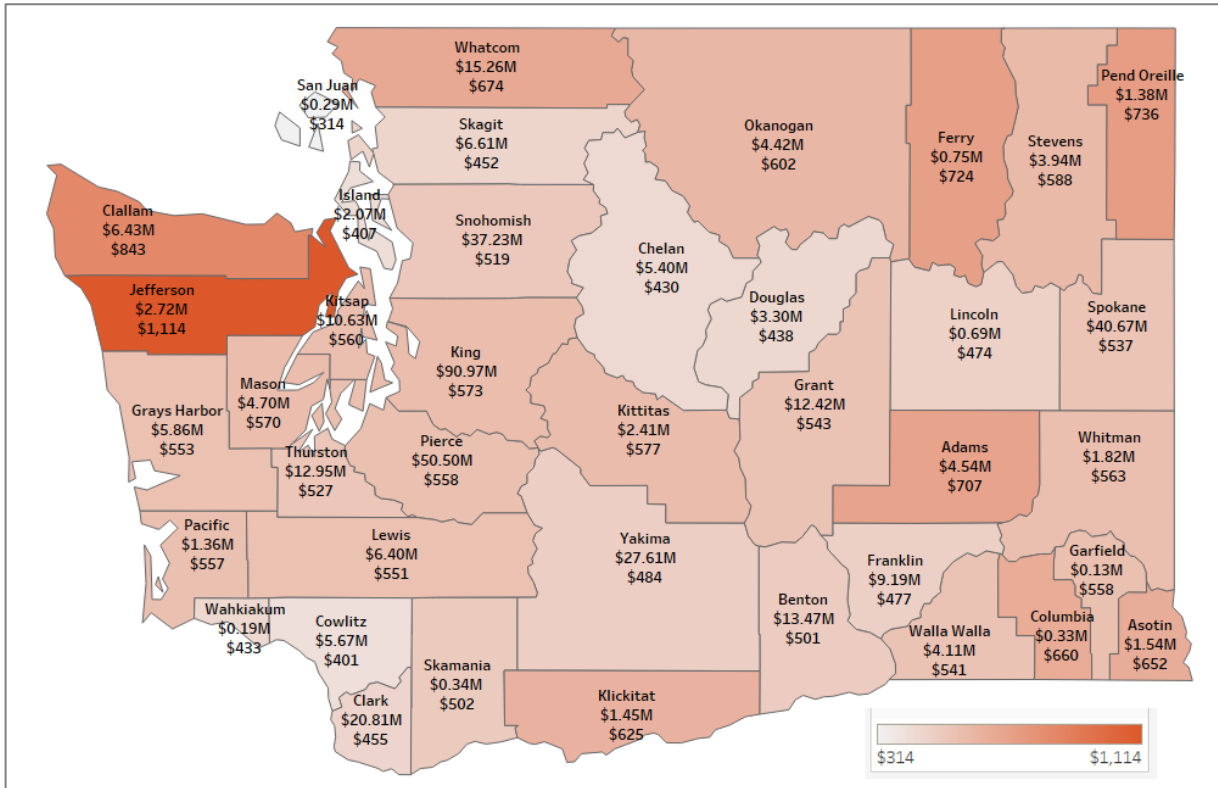
Total Expenditures per Dental User, FY 2022



Expenditures for most users (53%) were between \$101 and \$500 in FY 2022. Just over 4% of users had dental expenditures of more than \$2,000.

Total Dental Expenditures and Average Cost per User by County, FY 2022

All Ages



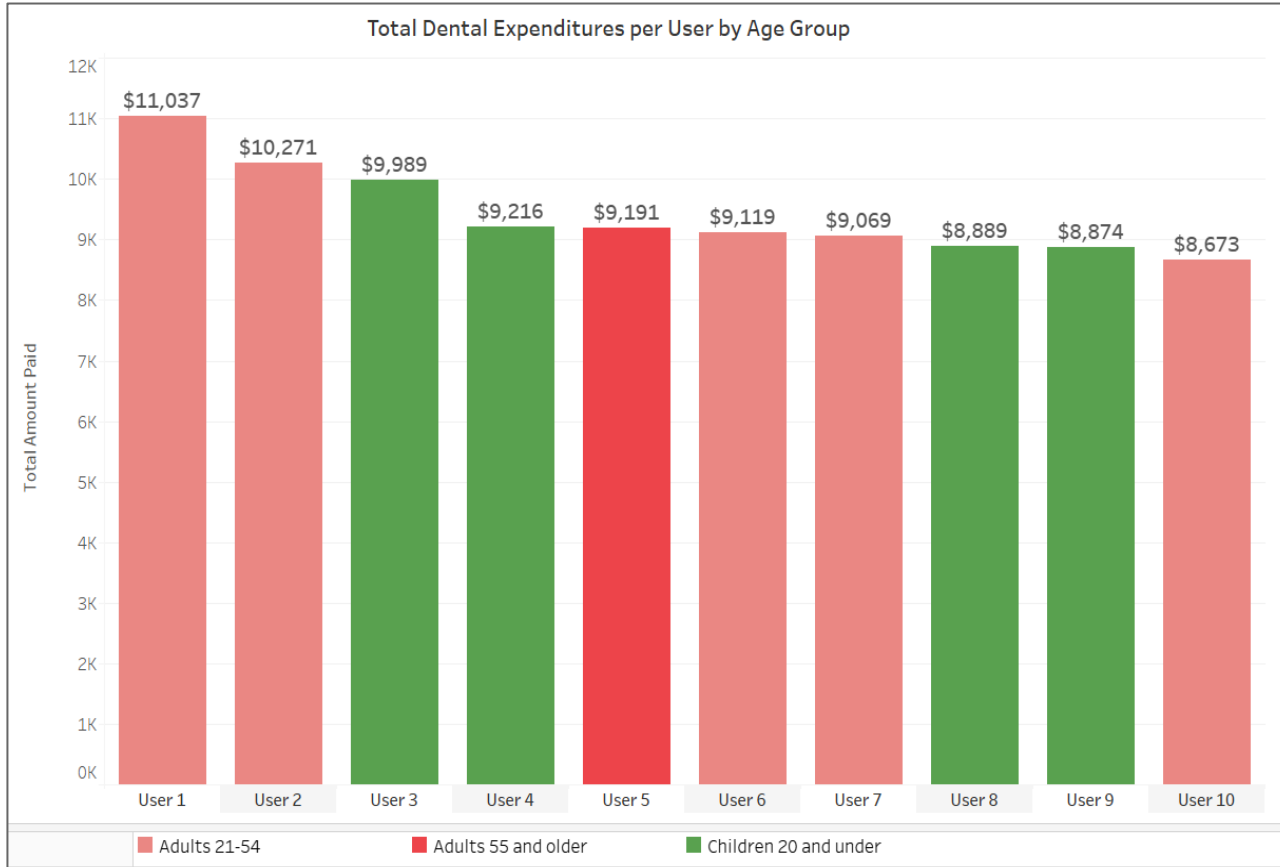
There is considerable variation across counties in total expenditures and per capita spending. While average statewide spending per dental user in FY 2022 was \$544, per county expenditures ranged from \$314 in Columbia County to \$1,114 in Jefferson County.

Statewide per Capita Cost: \$544

Note: Expenditures include FQHC encounter payments

Source: Washington State Health Care Authority: Apple Health Dental Services Enrollment and Utilization Data

Top 10 Most Expensive Users, FY 2022



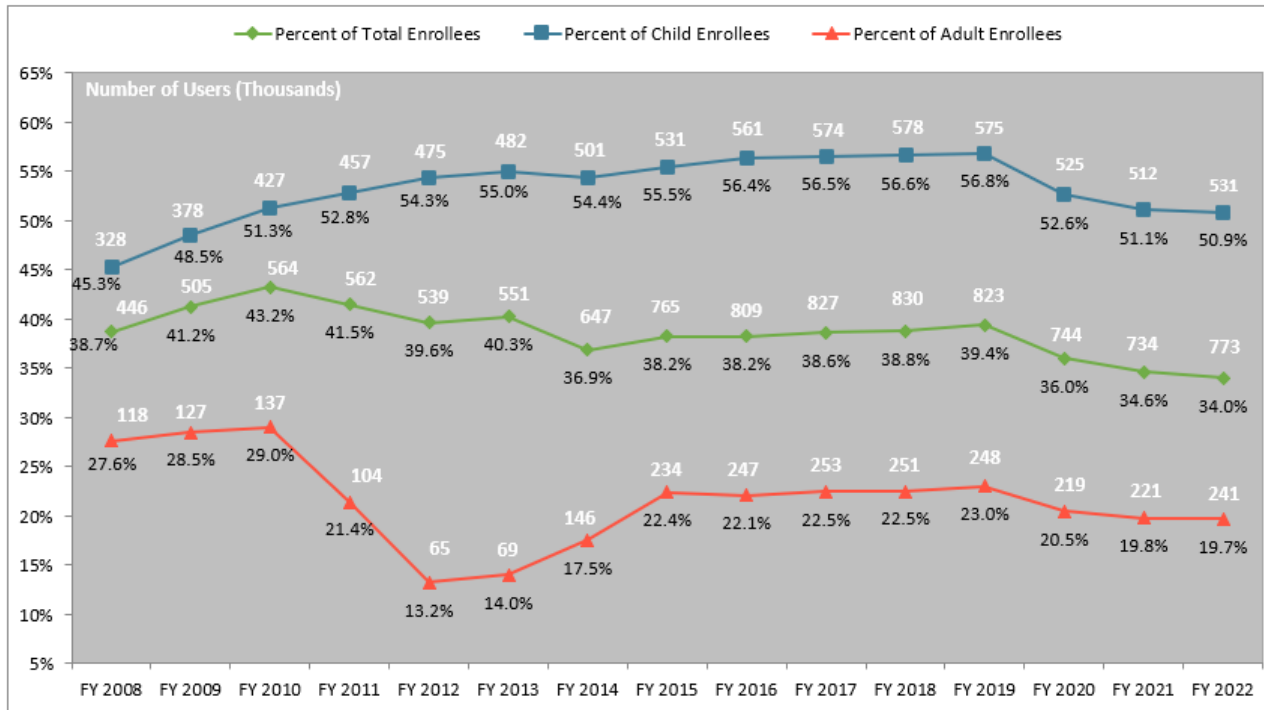
Unlike medical expenditures—which can run hundreds of thousands of dollars for high-cost beneficiaries—the users with the 10 highest dental costs in FY 2022 each had less than \$12,000 in dental expenditures.

Four of the top 10 were children who had restorative services (e.g., crowns), endodontic services (e.g., root canals), adjunctive general services (e.g., general anesthesia) and oral surgery (e.g., extractions).

Note: Users with high dental expenditures may have additional medical costs not captured here that are connected to treatment of a dental problem (e.g., operating room, or ER costs).

Enrollees with at Least 1 Dental Service, FY 2008 – FY 2022

All Ages



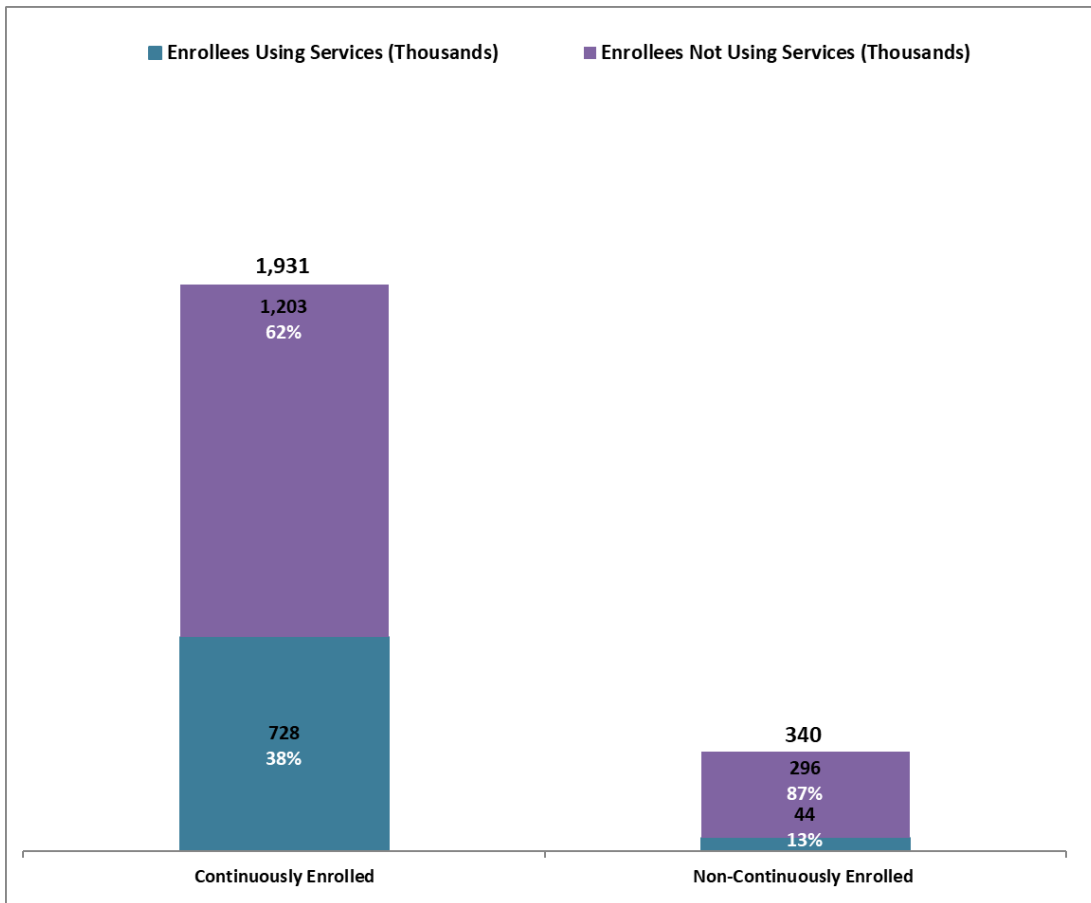
The percentage of children accessing dental services has risen steadily since FY 2008. The utilization rates increased 12%, from 45% in 2008 to 51% in 2022.

With the restoration of the adult dental program, the percent of adult enrollees accessing dental services increased from 13% in FY 2012 to 20% in FY 2022.

Although utilization rates for adults are still lower than years prior to the adult dental program cut, the number of adult users increased by 77% with nearly 105,000 additional adults receiving care since 2010.

In the last fiscal year, access to care slightly recovered after COVID-19's impact on dental clinics. Dental users increased by 4% among children (additional 18,000 children) and by 9% among adults (additional 20,000 adults).

Enrollees (Continuous vs. Non-Continuous) with at Least 1 Dental Service FY 2022

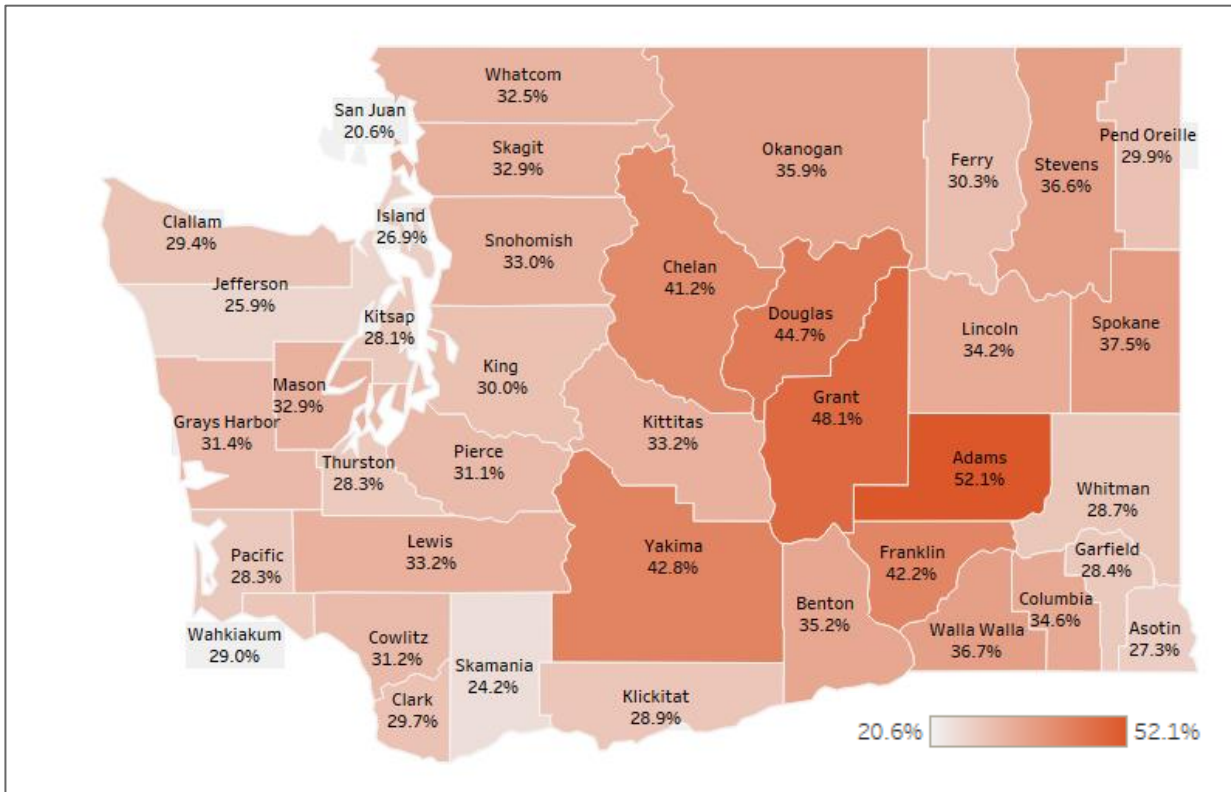


All Ages

Among enrollees with at least 11 months of continuous enrollment, 38% had at least 1 dental service in FY 2022, compared to only 13% of those who were not continuously enrolled.

Enrollees with at Least 1 Dental Service by County, FY 2022

All Ages



Utilization rates vary by county, with a low of 21% in San Juan County (light shading) and a high of 52% in Adams County (dark shading). King County, with the largest population in the state, had a rate of 30%.

Statewide Average Utilization: 34%

Percentage of Enrollees Who Received Any Dental Service by Race, FY 2022

Dental Utilization by Race & Age			
Percentage by Race			
	All Ages	Adults	Children
Alaska Native	22%	18%	50%
American Indian	32%	20%	44%
Asian	32%	21%	50%
Black	33%	21%	46%
Hawaiian	28%	16%	40%
Pacific Islander	28%	16%	41%
White	31%	19%	49%
Other	43%	22%	57%

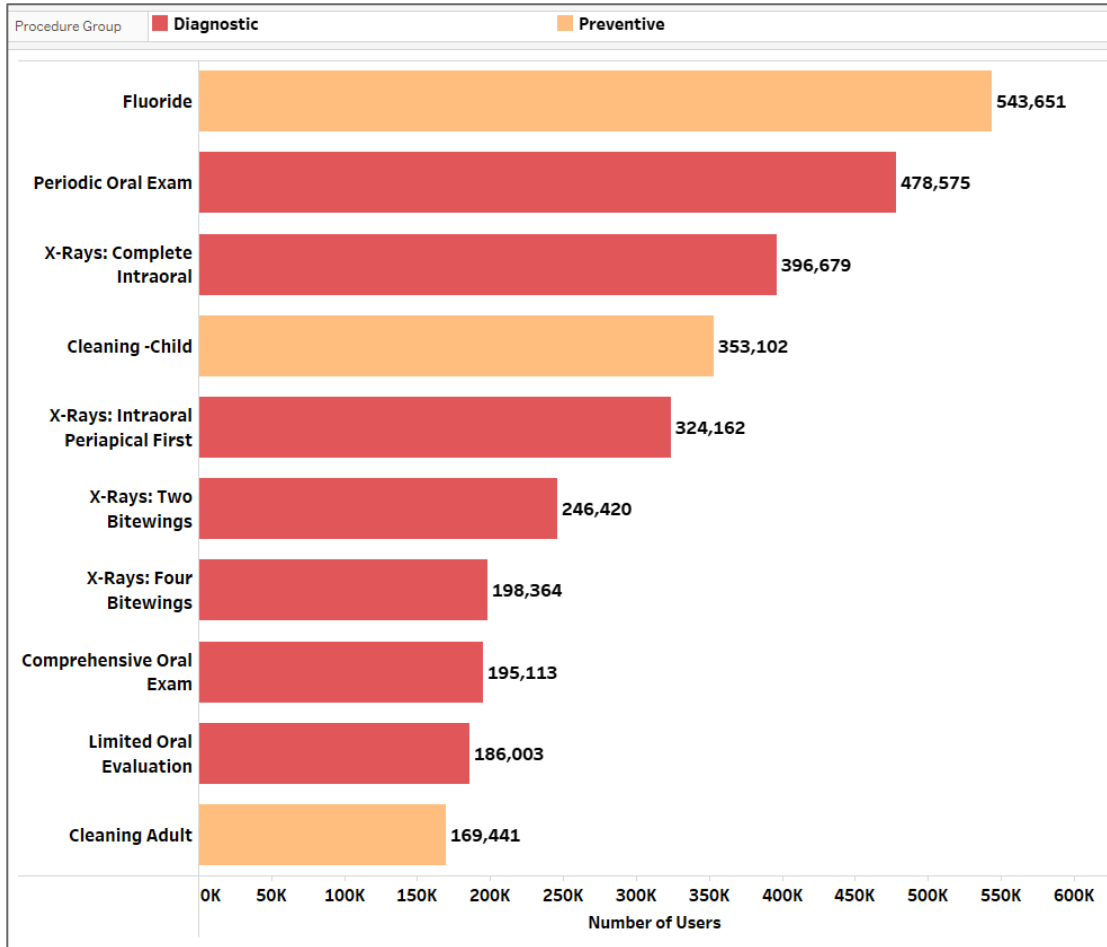
All Ages

The highest dental users among Apple Health enrollees identified their race as “other,” while the lowest users identified their race as Pacific Islander/Hawaiian.

The analysis of this data has limitations due to the high number of missing and not provided information. Nearly 23% of all enrollees and 28% of all users did not report their race. Apple Health eligibility and dental claims data captures information on race on a voluntary basis. Therefore, race data is incomplete and has a high number of missing, other, or not provided information.

Accurate data on race and ethnicity is essential to identify and address the presence and significance of oral health disparities.

Top 10 Procedures by Number of Users, FY 2022



Note: Excludes FQHC claims and claims with missing values for procedure categories. Procedure names are simplified; see methods for details on the procedures.

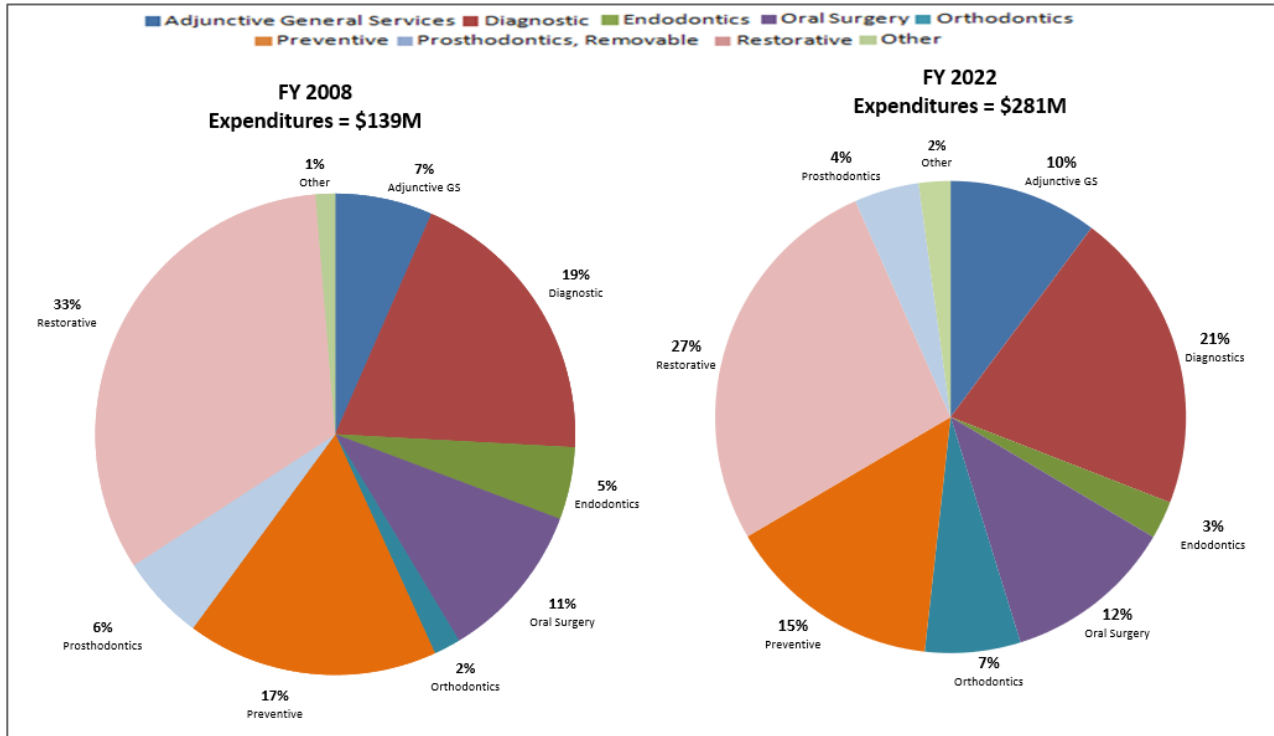
Source: Washington State Health Care Authority: Apple Health Dental Services Enrollment and Utilization Data

All Ages

The most frequently accessed services are preventive and diagnostic, such as oral exams and fluoride applications.

Total Expenditures by Procedure Group, FY 2008 vs. FY 2022

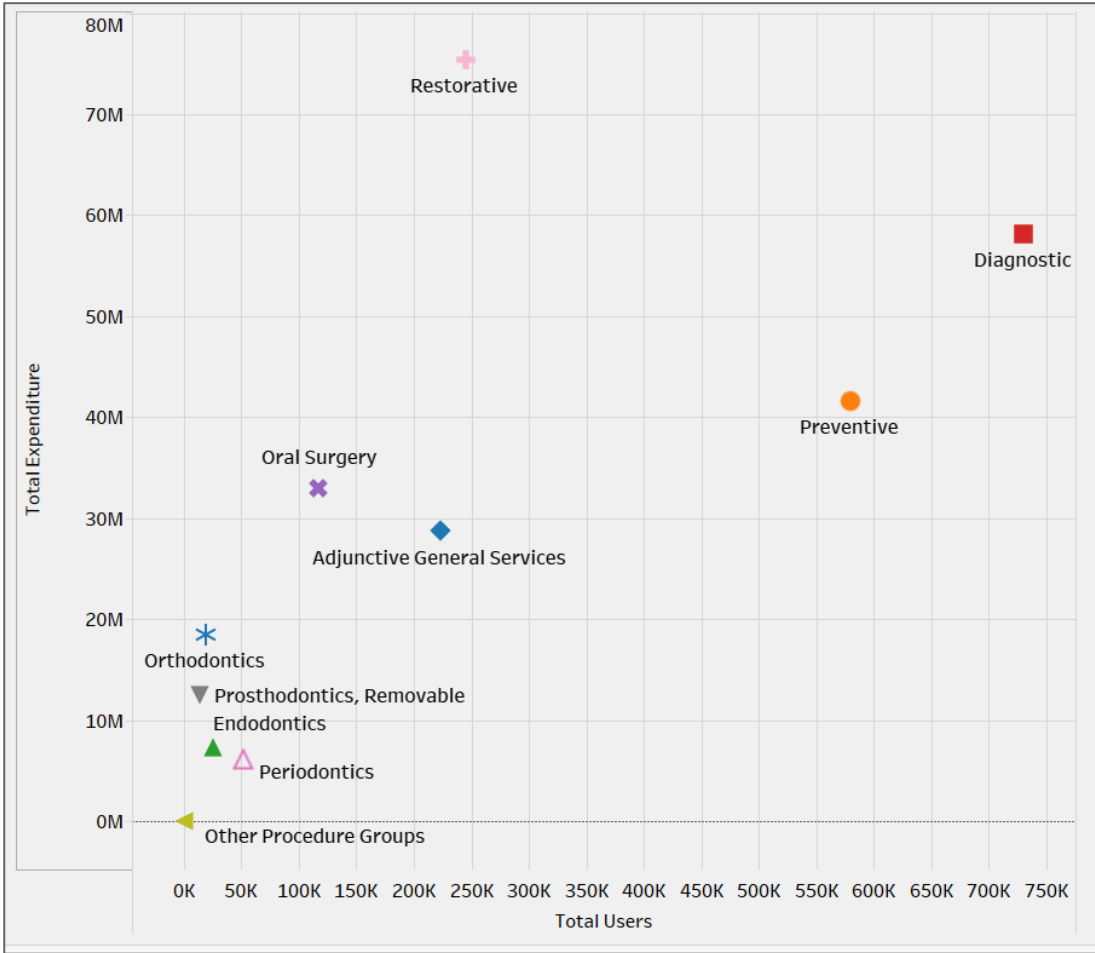
All Ages



Restorative services made up the greatest portion of total expenditures in both FY 2008 and FY 2022. The percentage of costs associated with restorative services declined slightly from 33% in 2008 to 27% in 2022.

Note: Excludes FQHC claims and claims with missing values for procedure categories. "Other" includes Maxillofacial Prosthetics, Fixed Prosthodontics, implant services, and Periodontics. Combined, these categories had 1% of total expenditures for FY 2008 and 2% for FY 2022. See Appendix for information on procedure groups.

Dental Users and Total Expenditures by Procedure Group, FY 2022



All Ages

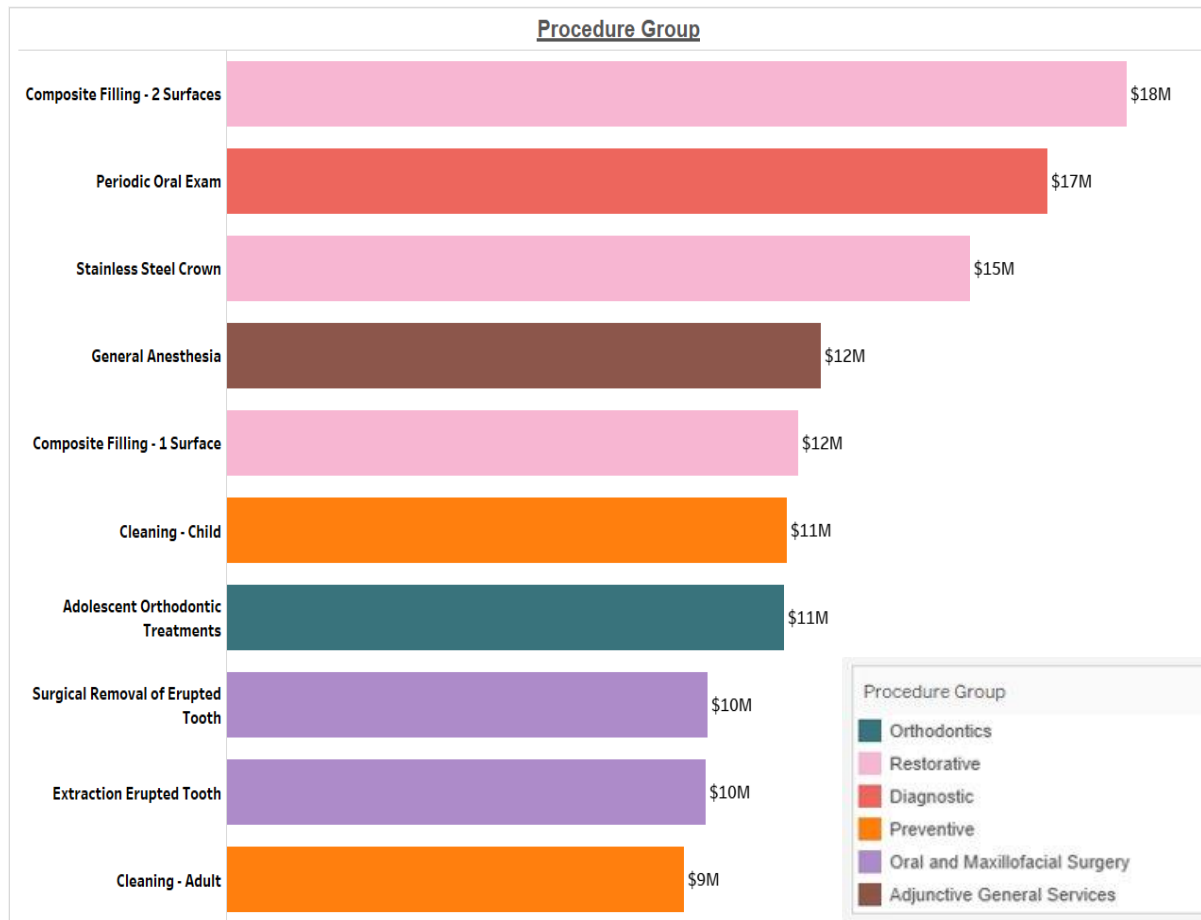
While more people use diagnostic and preventive services, restorative services are much more costly.

Orthodontics procedures were the costliest services provided for the lowest number of users (\$988 cost per user).

Note: Excludes FQHC claims. Excludes claims with missing values for procedure categories. Implant services, prosthodontics fixed, and maxillofacial prosthetics had less than 100 users and \$20,000 in expenditures. They are included in the graph as "other procedure groups."

Source: Washington State Health Care Authority: Apple Health Dental Services Enrollment and Utilization Data

Top 10 Procedures by Expenditures, FY 2022



The top 10 procedures totaled approximately \$126 million, about 49% of total dental expenditures in 2022 (excluding FQHC payments).

Composite filling treatments, a restorative procedure used to restore a carious lesion into the dentin or a deeply eroded area, topped the list at \$18 million.

Note: Excludes FQHC and claims with missing values for procedure categories. Procedure names are simplified; see methods for details on the procedures.

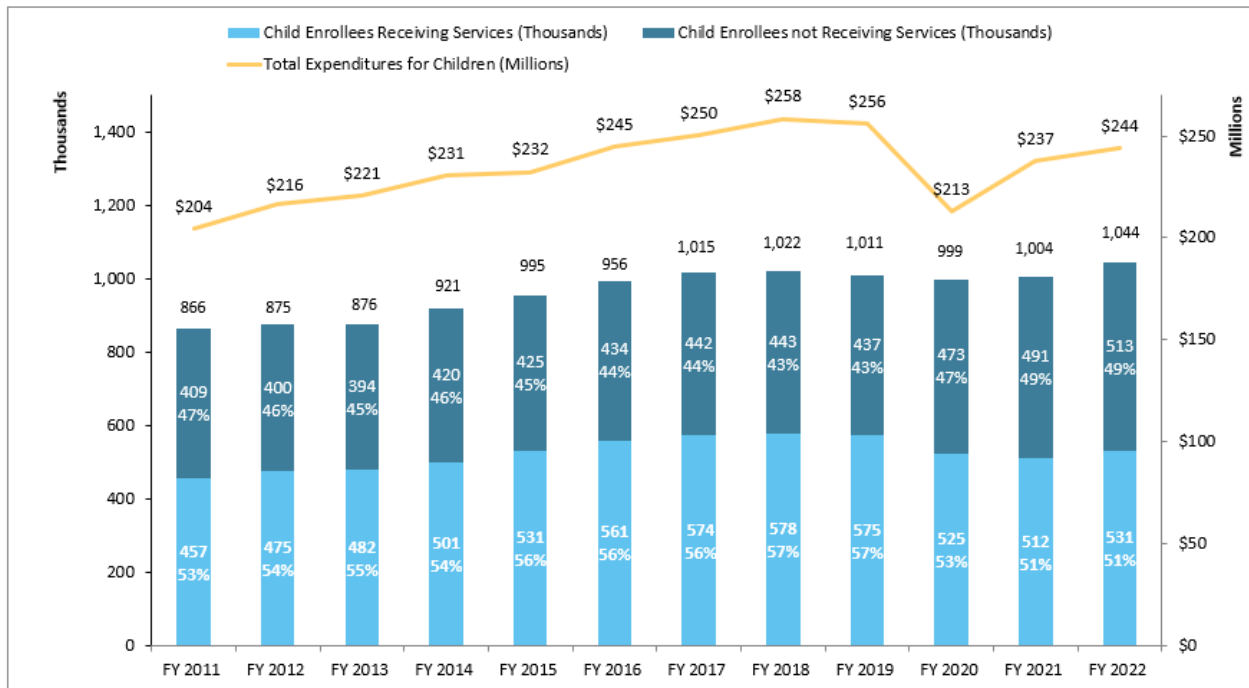
Source: Washington State Health Care Authority: Apple Health Dental Services Enrollment and Utilization Data

Total Expenditures and Services Key Findings (All Ages)

- Total dental expenditures grew by \$177 million in the last decade (from \$244 million to \$421 million). After adjusting for inflation, this is a 25% increase. Expenditures in the last fiscal year increased by \$42 million, a 6% increase after adjusting for inflation.
- In the last fiscal year, dental users increased by 5% with nearly 39,000 additional enrollees accessing dental care. However, dental utilization has not reached pre-COVID-19 pandemic levels yet.
- Diagnostic and preventive services were the services most frequently used, but restorative services contributed to the largest proportion of total expenditures in both FY 2008 and FY 2022.
- Fluoride applications, exams for both adults and children, and x-rays were among the most common procedures in FY 2022.
- Utilization of dental services varied widely by county, ranging from 21% (San Juan County) to 52% (Adam County) in FY 2022.
- Individuals continuously enrolled in Apple Health for 11 months or more were more likely to use dental services—38% compared to 13% for non-continuously enrolled in FY 2020.
- Dental expenditures for most users were under \$500 in FY 2022. Fewer than 5% of users had expenditures of more than \$2,000.

Dental Services and Expenditures Among Children

Utilization and Expenditures among Children, FY 2011 – FY 2022



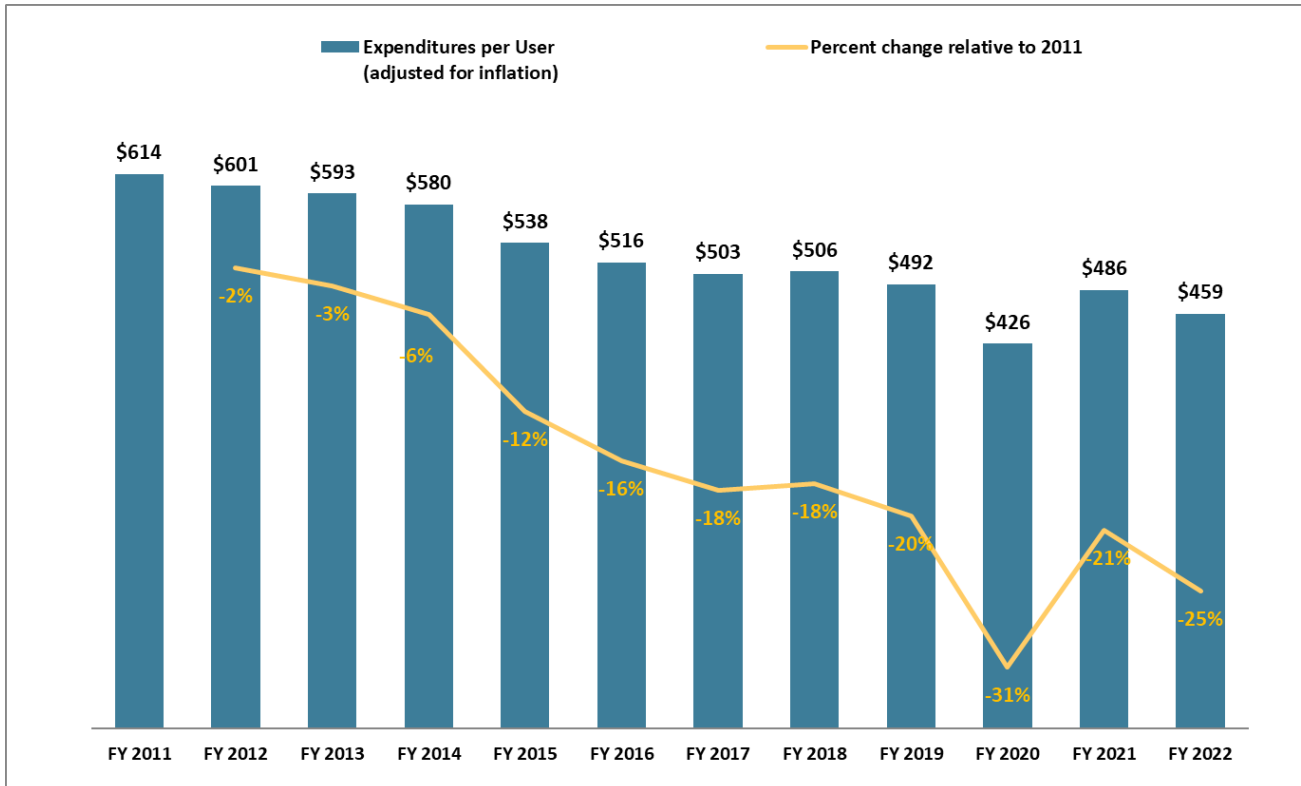
Children

Between FY 2011 and FY 2022, the number of children enrolled in Apple Health increased by 21% and the number of dental users increased by 16%.

Expenditures increased from \$204 million in FY 2011 to \$258 million in FY 2018, a 4% increase when adjusted for inflation. After FY 2019 dental expenditures experienced a decrease due to COVID-19's impact on dental clinics and overall access to care.

In the last fiscal year, dental expenditures increased by 3%, while the number of children accessing care increased by 4%. However, dental utilization has not returned to pre-COVID-19 pandemic levels yet.

Average Child Dental Expenditures per User, FY 2011 - FY 2022



Children

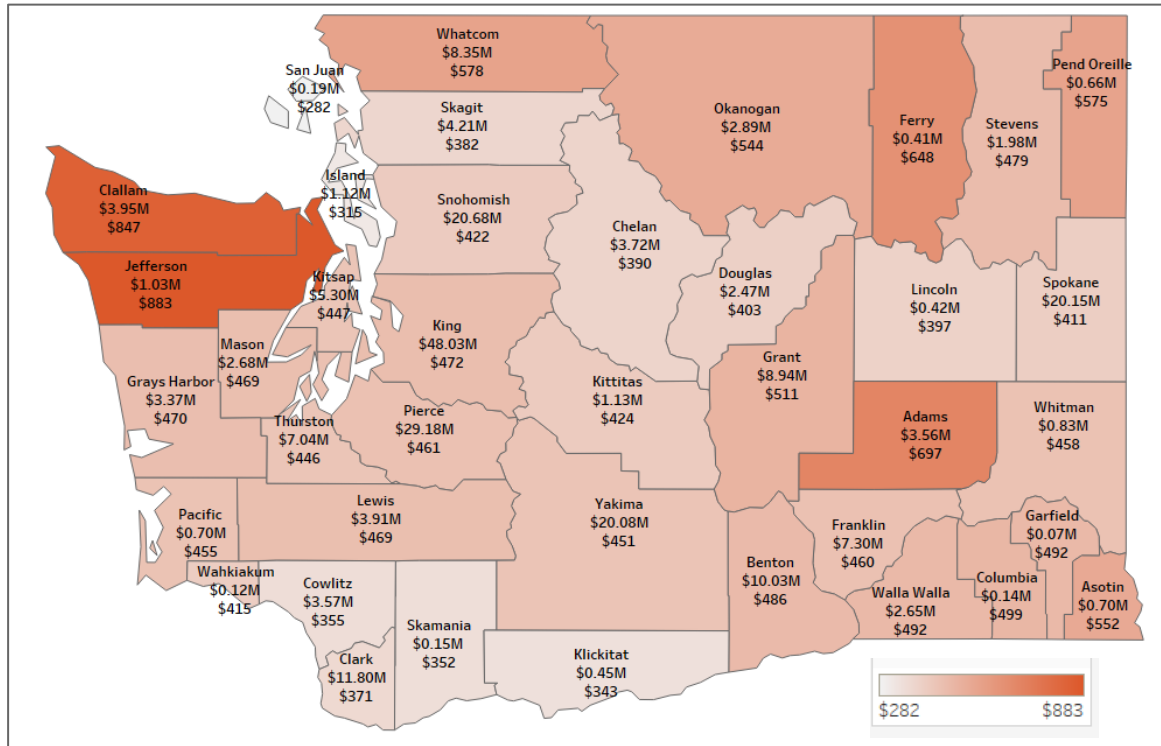
After adjusting for inflation, dental expenditures per child user decreased from \$614 in FY 2011 to \$459 in FY 2022, a 25% decrease. In FY 2020, dental expenditures per child decreased by 31% because of COVID-19's impact on dental clinics.

In FY 2021, dental expenditures per child increased by 14% while in the last fiscal year, it decreased by 5%, after adjusting for inflation.

Children

Child Dental Expenditures and Average Cost per User by County, FY 2022

There is considerable variation across counties in total expenditures and per capita spending in FY 2022. While average statewide spending per dental user was \$459, the per county dental expenditures for children ranged from \$282 in San Juan County to \$883 in Jefferson County.

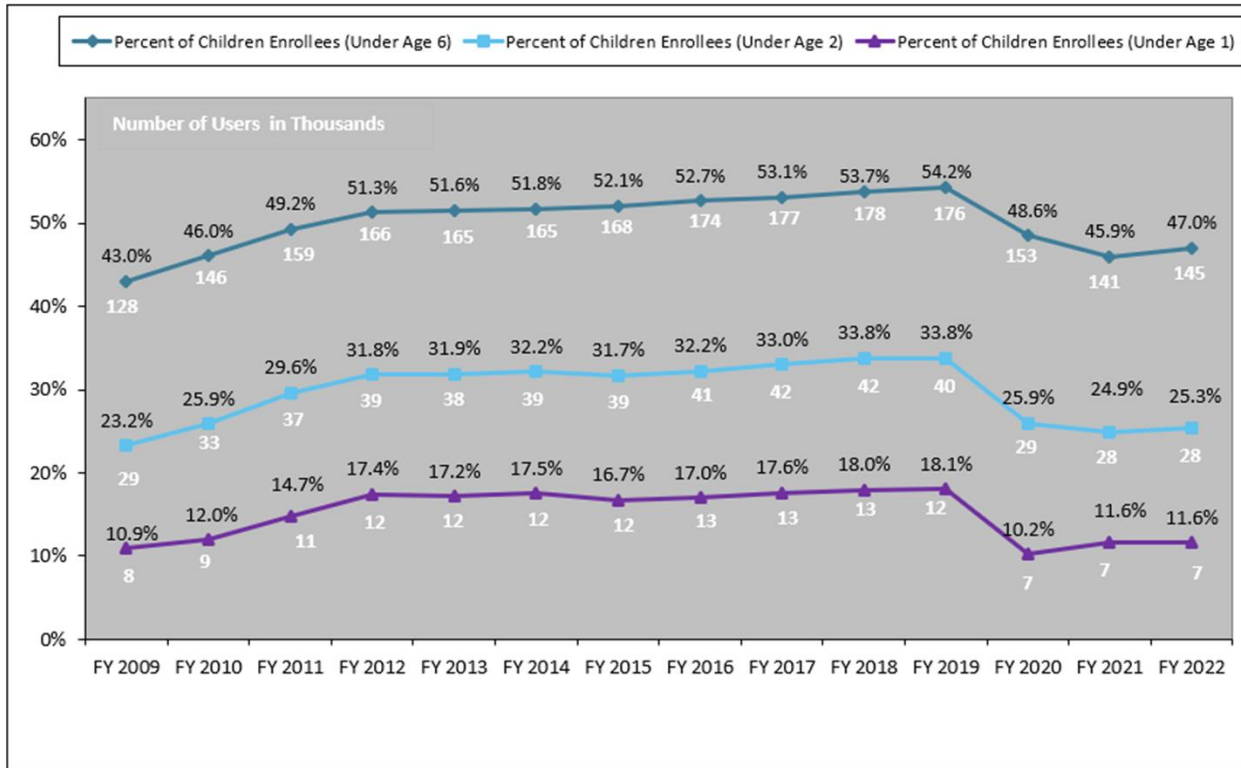


Statewide Child per Capita Dental Cost: \$459

Note: Expenditures include FQHC encounter payments

Source: Washington State Health Care Authority, Apple Health Dental Services Enrollment and Utilization Data

Child Enrollees under 6 with at Least 1 Dental Service, FY 2008 – FY 2022

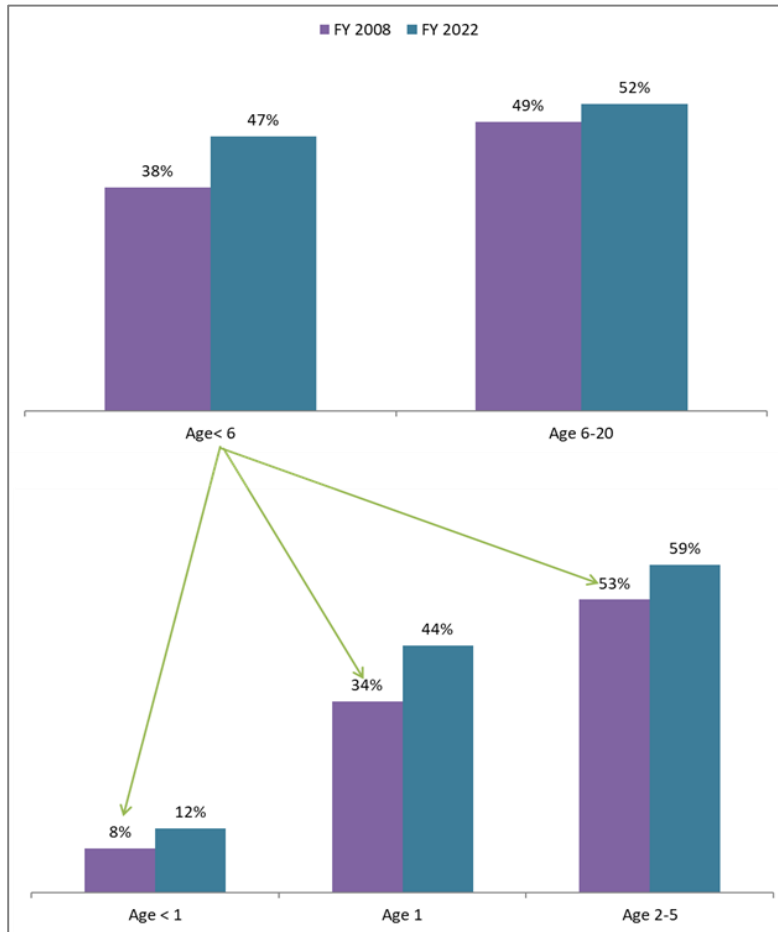


Young Children

The percentage of children under 6 accessing dental services has risen steadily from FY 2008 to FY 2019.

In FY 2020, the dental utilization rates among children under age 6 decreased by 10% to 49%, a result of COVID-19's impact on dental clinics and access to care. However, utilization in the last fiscal year (FY 2022) increased by 2.3%.

Percent of Child Enrollees Accessing at Least 1 Service by Age Group, FY 2008 vs. FY 2022



Note: The percent of children accessing at least 1 service for all age groups in FY 2008 was 45% and in FY 2022 was 51%.

Sources:

Washington State Health Care Authority, Apple Health Dental Services Enrollment and Utilization Data
Washington State Health Care Authority, Washington Apple Health 2023 Comparative and Regional Analysis Report. Comagine Health.
Available from: [2023 EQR Comparative Analysis Report \(wa.gov\)](#)

Children

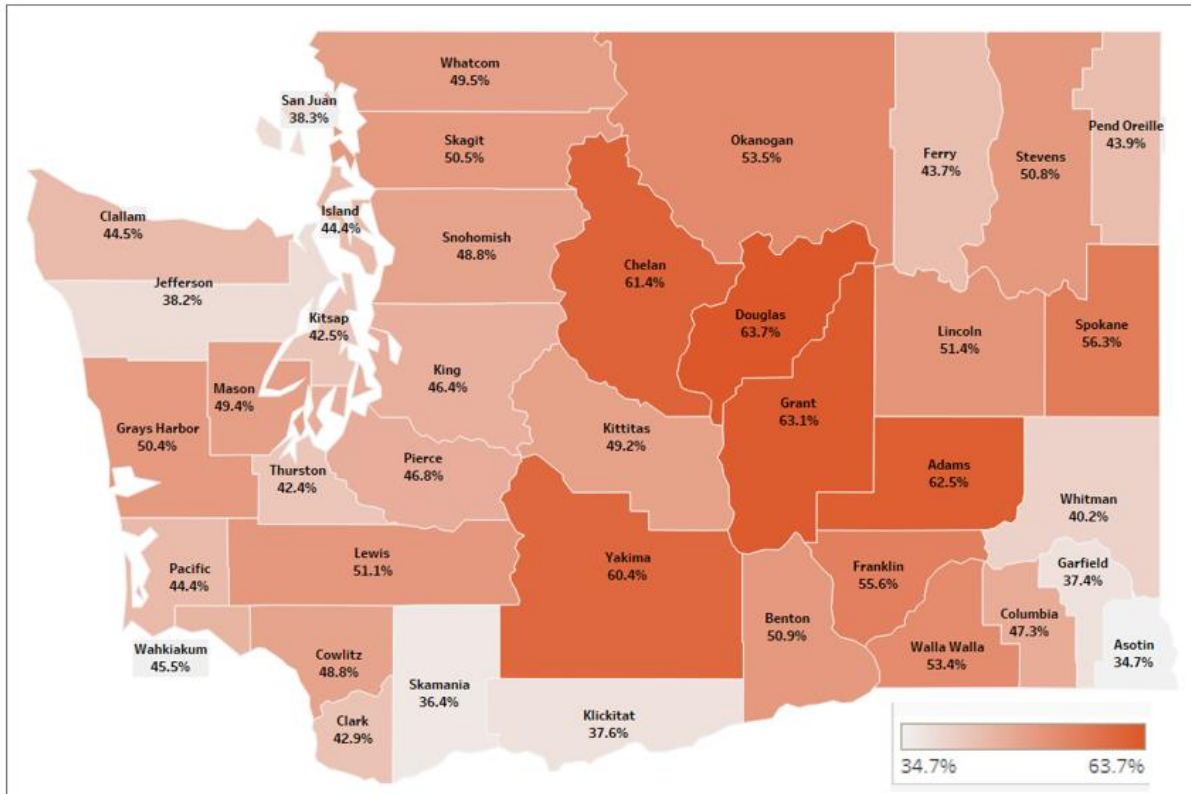
Since FY 2008, the percentage of children of all age groups that have received dental services has had notable increases. However, the percentage of children under 2 years accessing dental care is still significantly lower than the portion of similarly aged children accessing primary medical care (65% in FY 2022).

Child Enrollees Ages 20 and Under with at Least 1 Dental Service by County, FY 2022

Children

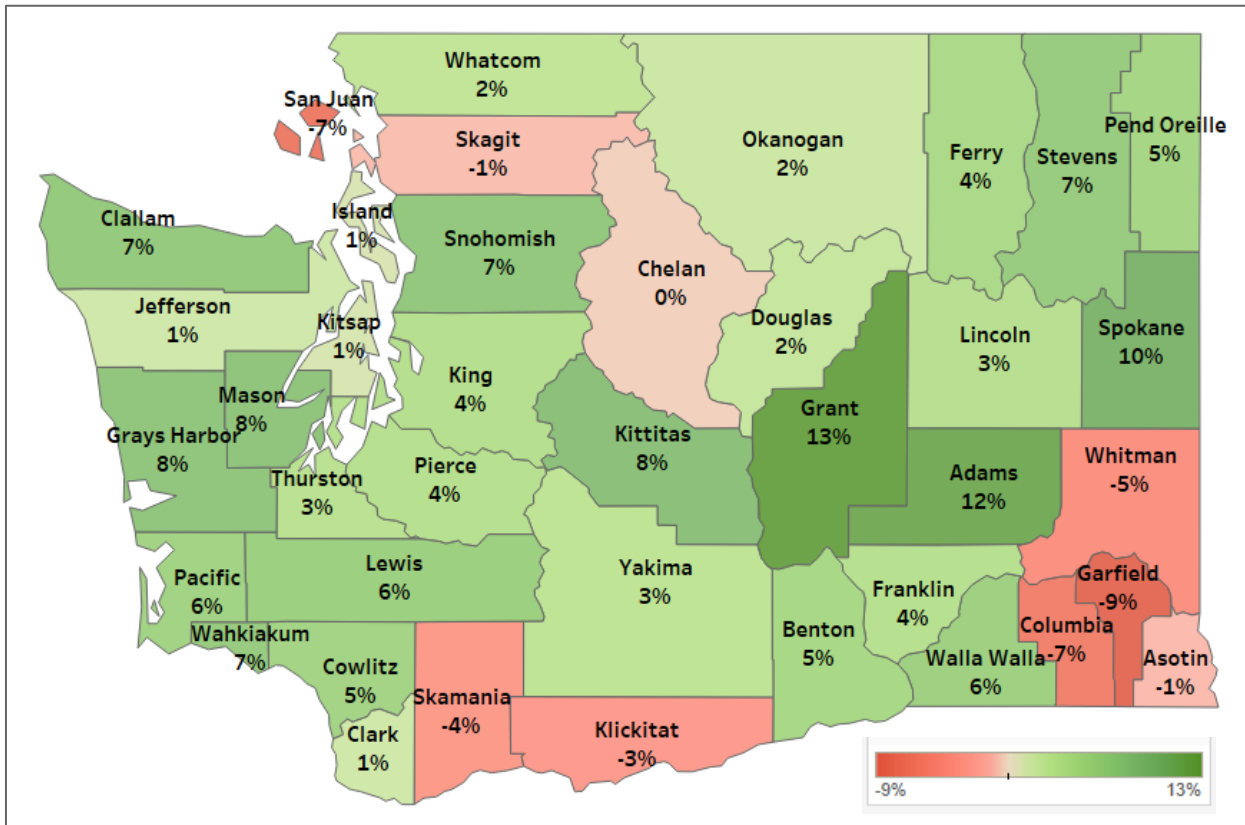
Utilization across the state ranged from 35% to 64%.

Douglas County had the largest percentage of children receiving dental services in FY 2022 (indicated by darker shading), while Asotin County had the lowest (indicated by lighter shading).



Statewide Average Utilization: 51%

Change in Utilization for Children Ages 20 and Under by County, FY 2008 vs. FY 2022



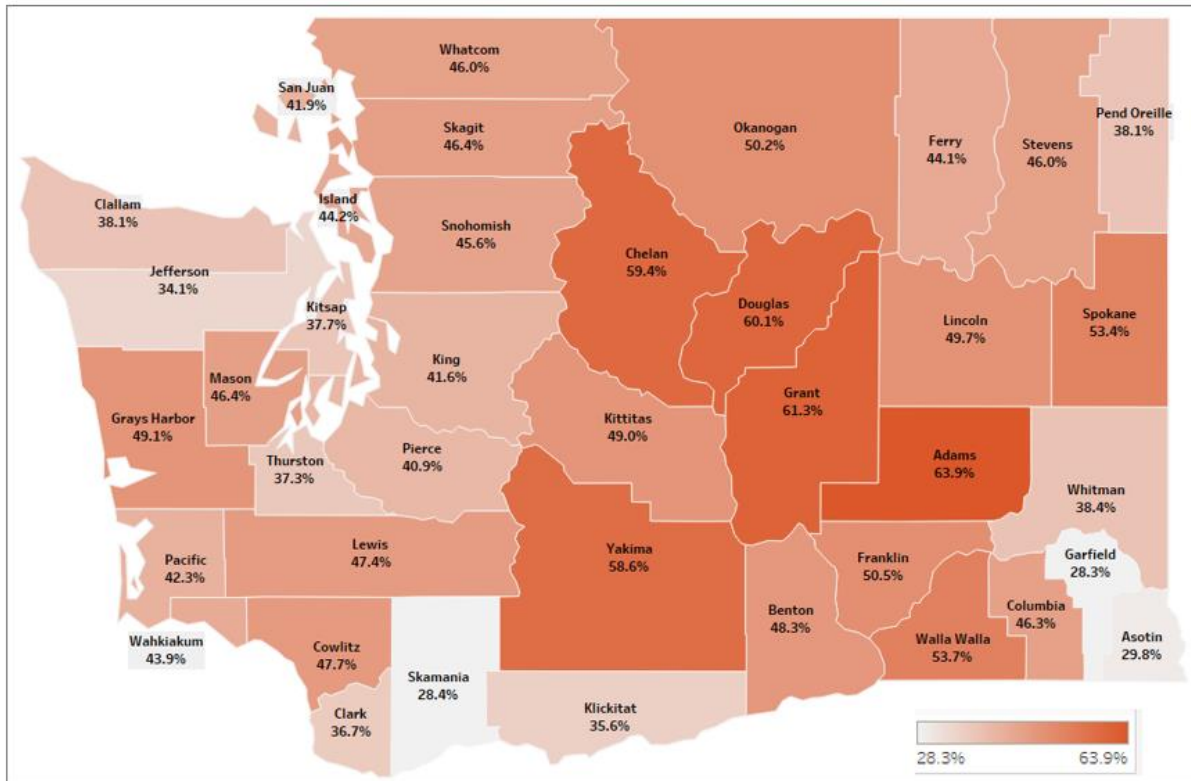
Children

In 30 of Washington’s 39 counties, the percentage of children ages 20 and under enrolled in Apple Health with at least 1 dental visit increased between FY 2008 and FY 2022. Thirty counties had increases of 1% or more.

A decrease in providers who see Apple Health-enrolled children and/or the increase in children enrolled in proportion to those accessing dental care might explain the utilization drop since 2008 in some southeastern counties.

Child Enrollees under Age 6 with at Least 1 Dental Service by County, FY 2022

Children

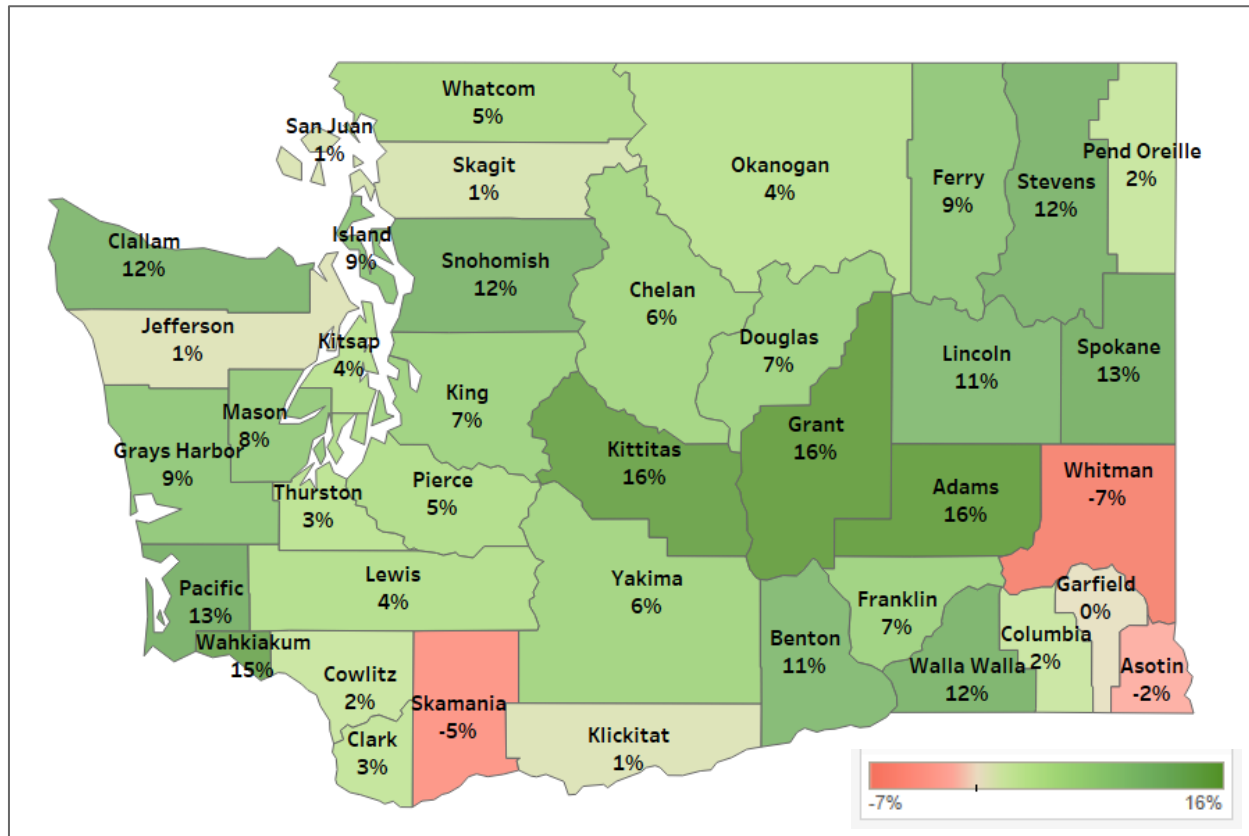


Utilization rates vary by county with a low of 28% in Garfield County (indicated by light shading) and a high of 64% in Adams County (indicated by dark shading). King County, with the largest population in the state, had a rate of 42%.

Statewide Average Utilization: 47%

Children

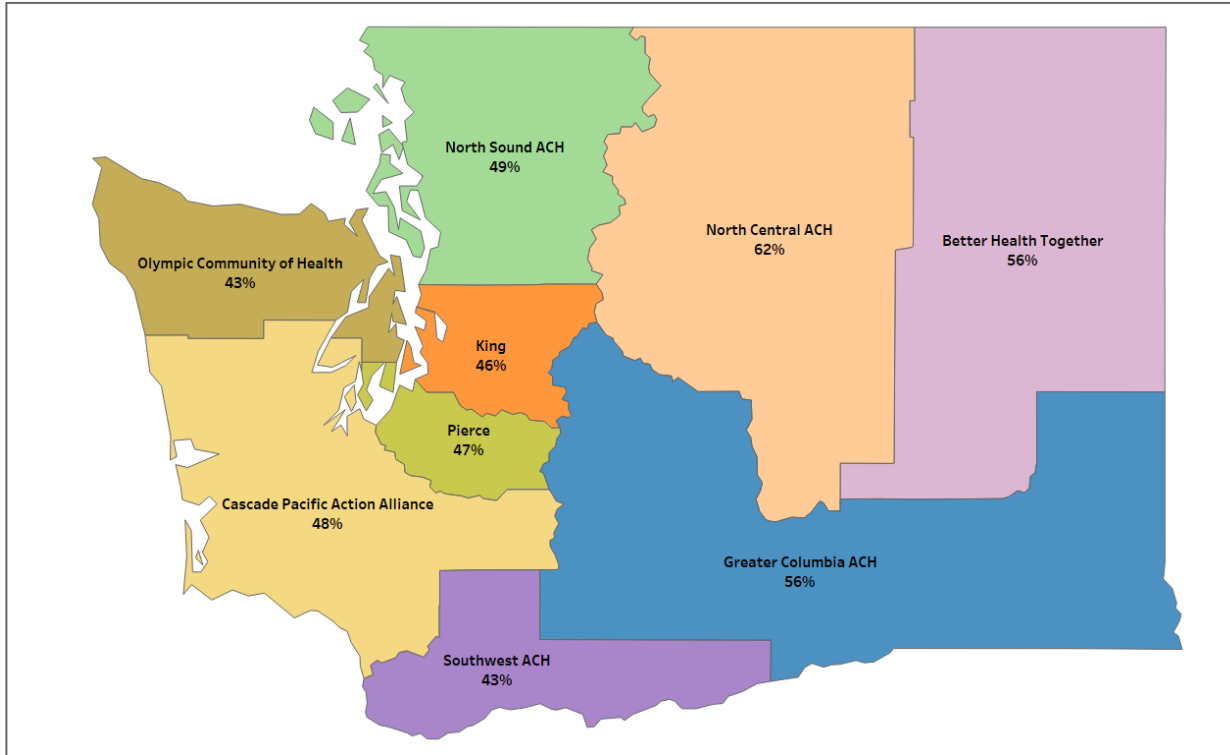
Change in Utilization for Children under Age 6 by County, FY 2008 vs. FY 2022



In 35 of Washington's 39 counties, the percentage of children under age 6 enrolled in Apple Health with at least 1 dental visit increased between FY 2008 and FY. Thirty-five counties had increases of 1% or more.

Child Enrollees Ages 20 and Under with at Least 1 Dental Service by Accountable Community of Health, FY 2022

Children



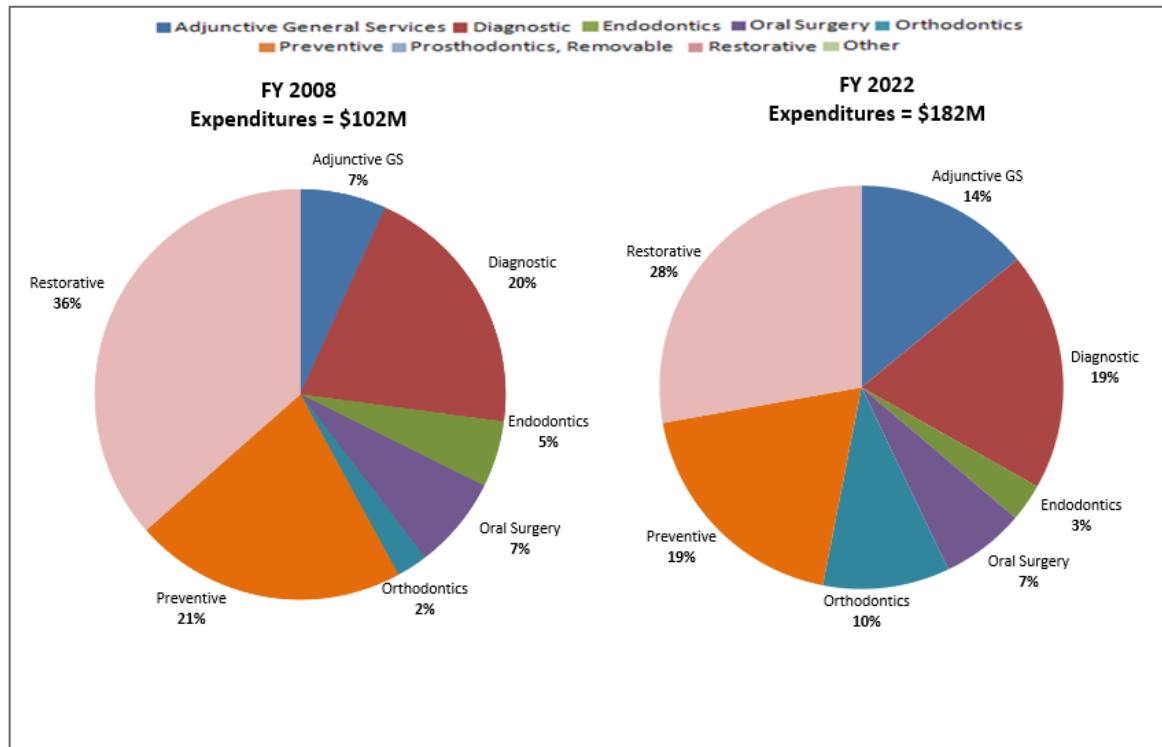
Statewide Average Utilization: 51%

There are some regional variations in the percentage of Apple Health-enrolled children accessing dental services. While children in North Central Accountable Community of Health region has the highest dental utilization rates (62%), children in Southwest and Olympic Community of Health regions have the lowest (43%).

Note: Since 2012, Washington state changed its healthcare delivery to improve health and health equity by aligning resources and bringing leaders from multiple health sectors around the state.

Source: Accountable Community of Health regions from <http://www.hca.wa.gov/about-hca/healthier-washington/accountable-communities-health-ach#how-do-achs-align-with-regional-service-areas>

Total Child Expenditures by Procedure Group, FY 2008 vs. FY 2022



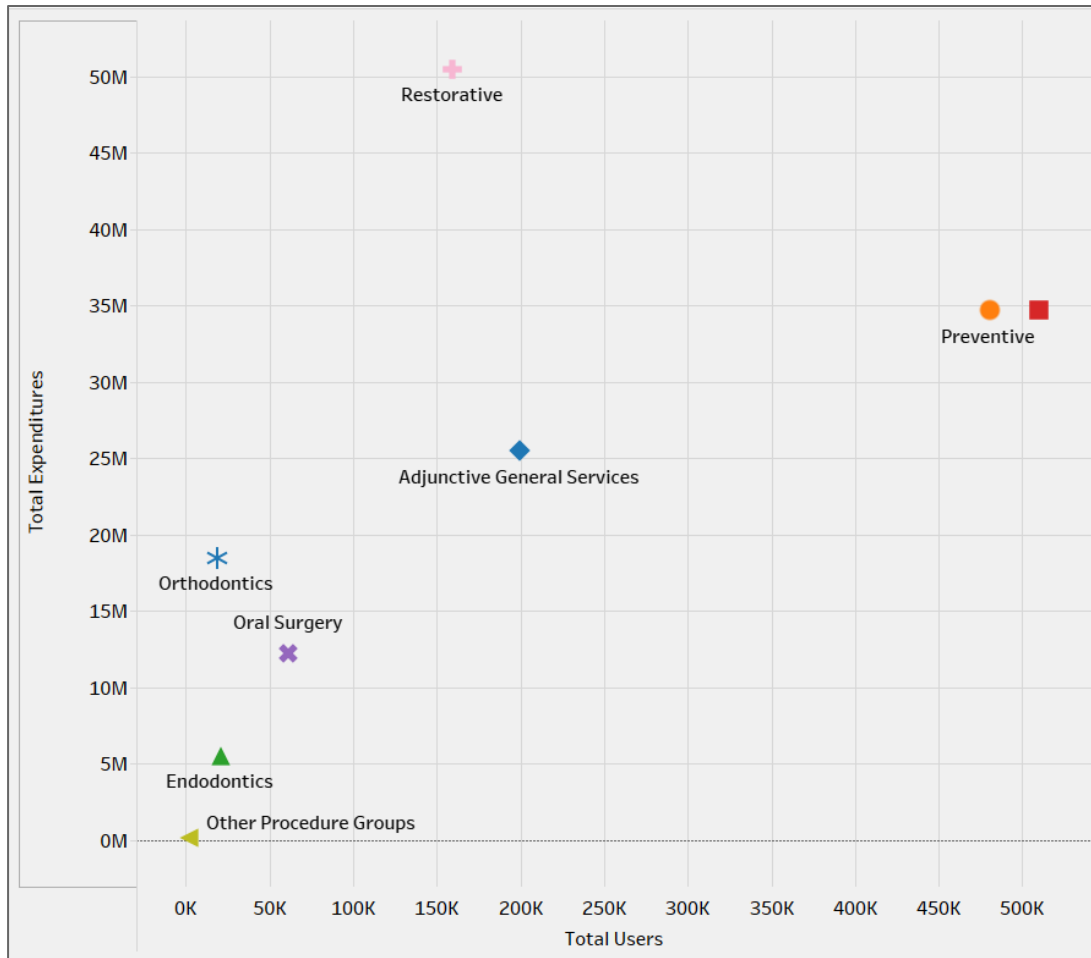
Note: Excludes FQHC claims and claims with missing values for procedure categories. See Appendix for information on procedure groups.

Restorative services made up the greatest portion of total expenditures in both FY 2008 and FY 2022.

The percentage of cost for restorative services for children decreased from 36% in 2008 to 28% in 2022.

Orthodontic services increased dramatically from 2% of total expenditures in 2008 to 10% in 2022. In 2007, orthodontia had a rate increase, which led to an increase in clinics providing orthodontic treatments to Apple Health-enrolled children. Clinics increased from 43 in 2007 to 123 in 2022.

Child Dental Users and Total Expenditures by Procedure Group, FY 2022

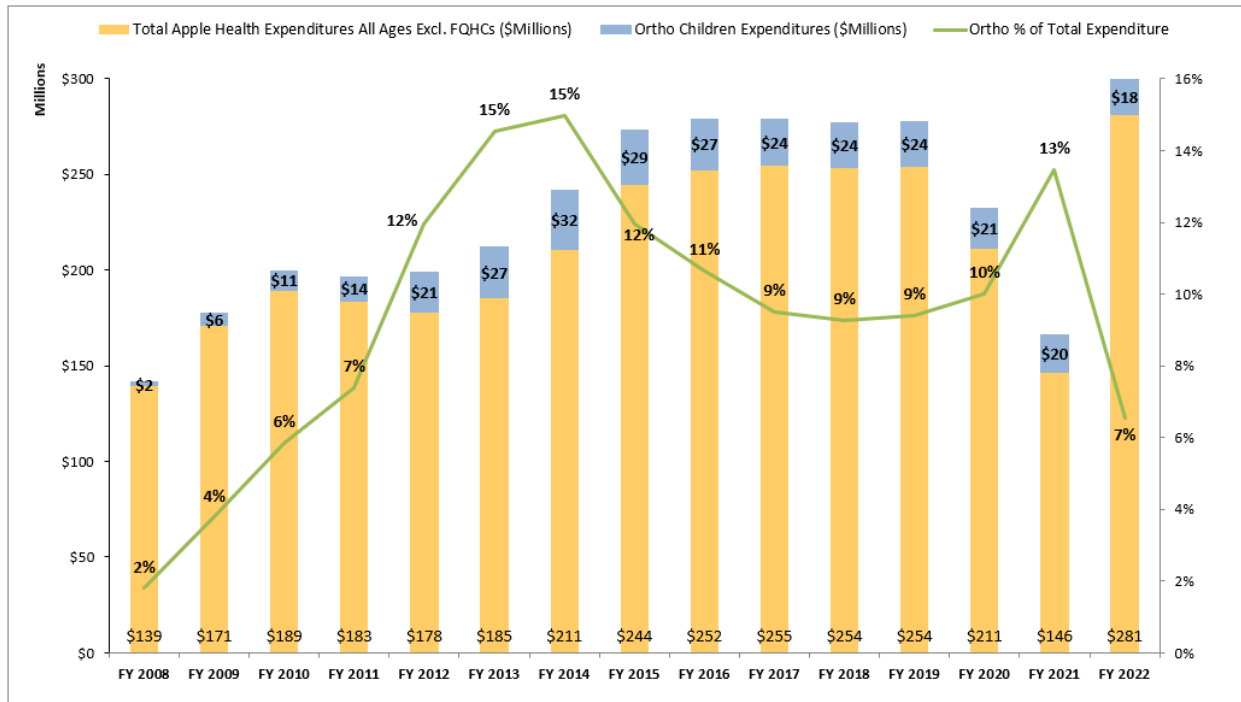


Children access preventive (orange dot) and diagnostic (red square) services more than any other service type, but restorative services (pink plus) were the costliest for the Apple Health program.

Note: Excludes FQHC claims. Prosthodontics (Removable), Periodontics, Maxillofacial Prosthetics, and Implant Services had less than 1,900 users and \$127,000 in expenditures. They are included in the graph as “Other Procedure Groups.”

Source: Washington State Health Care Authority, Apple Health Dental Services Enrollment and Utilization Data

Orthodontics Expenditures FY 2008 – FY 2022



Note: Other craniofacial anomalies include the following medical conditions: Hemifacial macrosomia, craniosynostosis syndromes, cleidocranial dental dysplasia, arthrogyrosis, and marfan syndrome. For a detailed description of Apple Health Orthodontic services, review Apple Health Orthodontics Services Billing Guide [Orthodontic Services Billing Guide \(wa.gov\)](#) Orthodontics accounted for 7% of total Apple Health FY 2022 expenditures (all ages), and 10% of children expenditures (see slide 33 and slide 49).

All Expenditure analysis excludes FQHC encounter payments except for few clinics that billed fee-for-service using the orthodontics procedure code (\$1M in FY 2022).

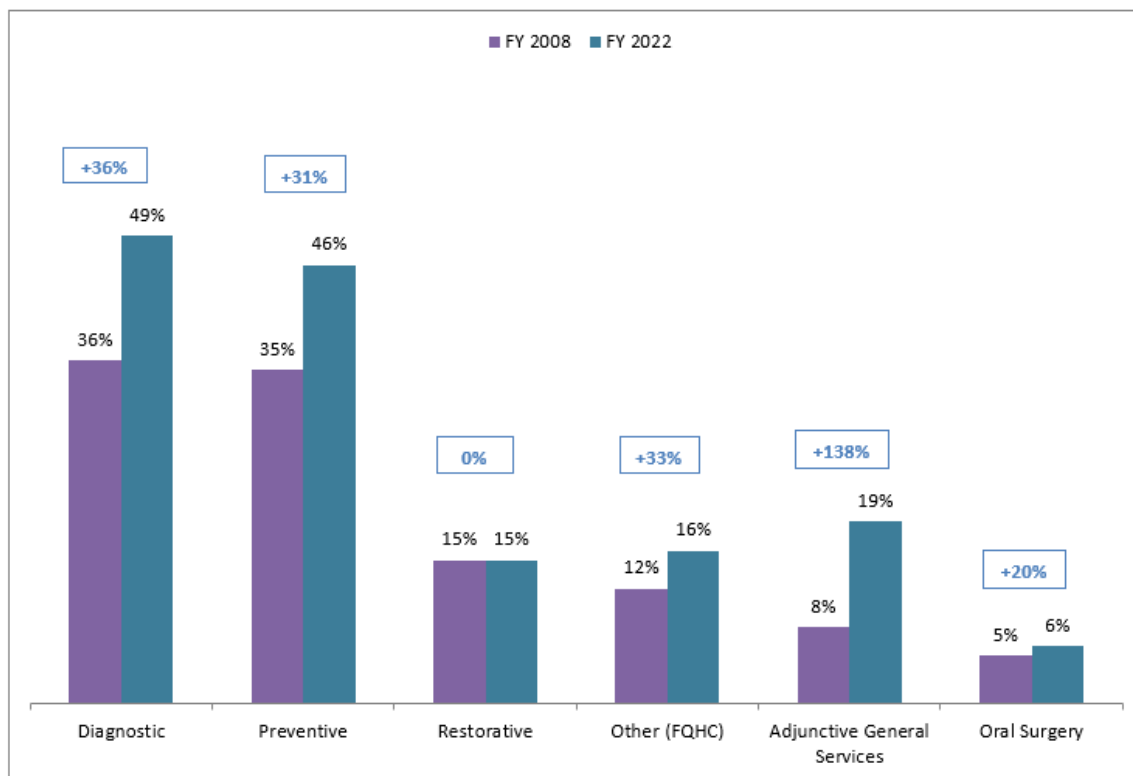
Source: Washington State Health Care Authority, Apple Health Dental Services Enrollment and Utilization Data

Children

Apple Health covers orthodontic treatment and related services, subject to prior authorization requirements for clients ages 21 and younger with cleft lip and palate, and other craniofacial medical conditions.

In FY 2007, there was a rate increase for orthodontia which led to an increase in the number of providers serving Apple Health clients and to the percent increase in ortho utilization between FY 2008 and FY 2014. However, in September of 2014, orthodontic treatment reimbursement rates were reduced by 22%, which led to the steady decrease in orthodontics expenditures in subsequent years.

Percentage of Child Enrollees Accessing Services by Procedure Group, FY 2008 vs. FY 2022



Note: The percent of users with Endodontics, Orthodontics, Periodontics, Prosthodontics (Removable), and Maxillofacial Prosthetics was 5% or less for both years.

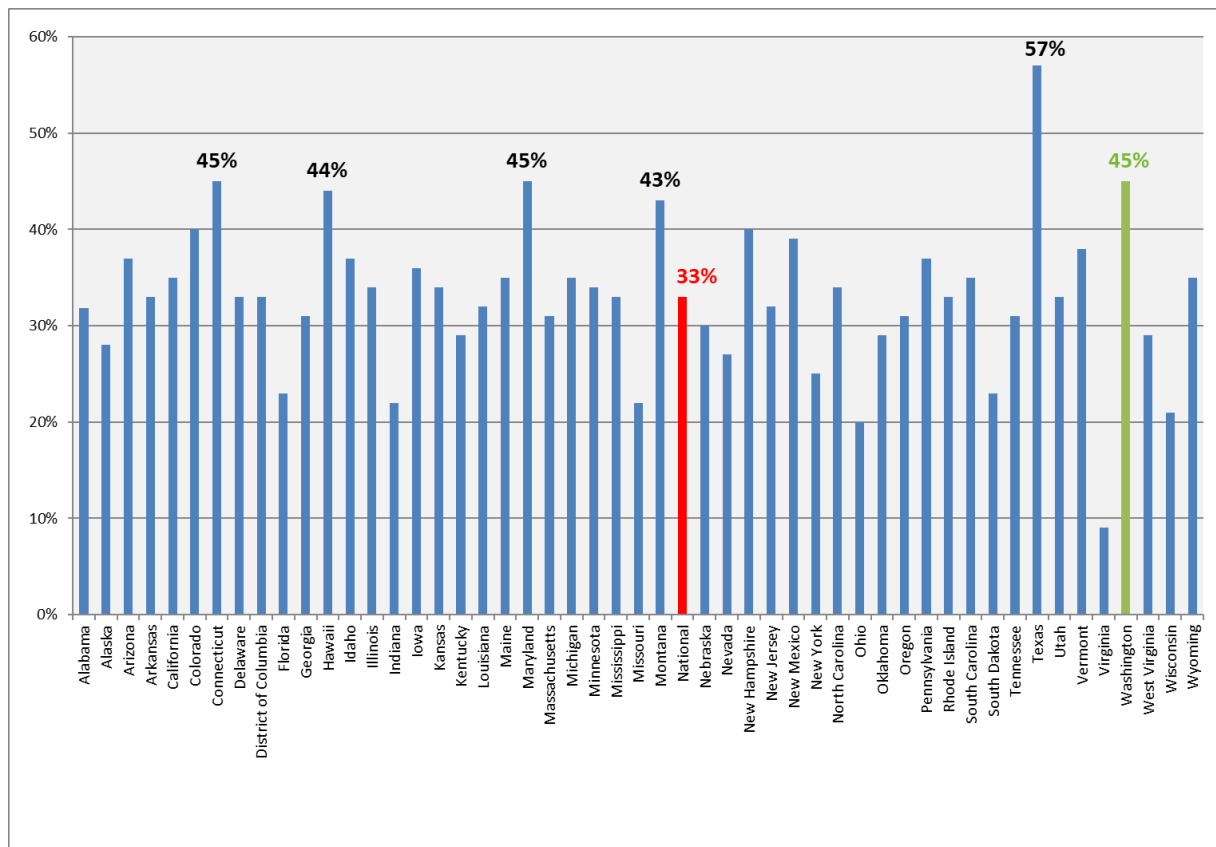
Children

Children who are eligible for care are receiving more preventive and diagnostic services. This is an indication that more children are getting the care needed to prevent disease. On the other hand, there has been a significant increase in adjunctive general services, which are services performed in addition to another procedure such as general anesthesia (GA). Although access to dental GA can be essential, it is the most expensive due to the additional costs and hospital facility fees. Also, in extremely rare cases, GA might be associated with respiratory or cardiac compromise, brain or spinal cord injury, or even death. Therefore, for most children dental GA should be the last possible resort to complete routine restorative and surgical dental treatment. More focused efforts must be made on chronic disease management.

Medicaid Utilization for Young Children Washington vs. Other States

Washington state is a leader nationally in the percentage of Medicaid-enrolled young children receiving preventive dental care.

Percentage of Children Ages 0-5 Enrolled in Medicaid for at Least 90 Continuous Days Receiving Preventive Dental Services by or under the Supervision of a Dentist, 2021



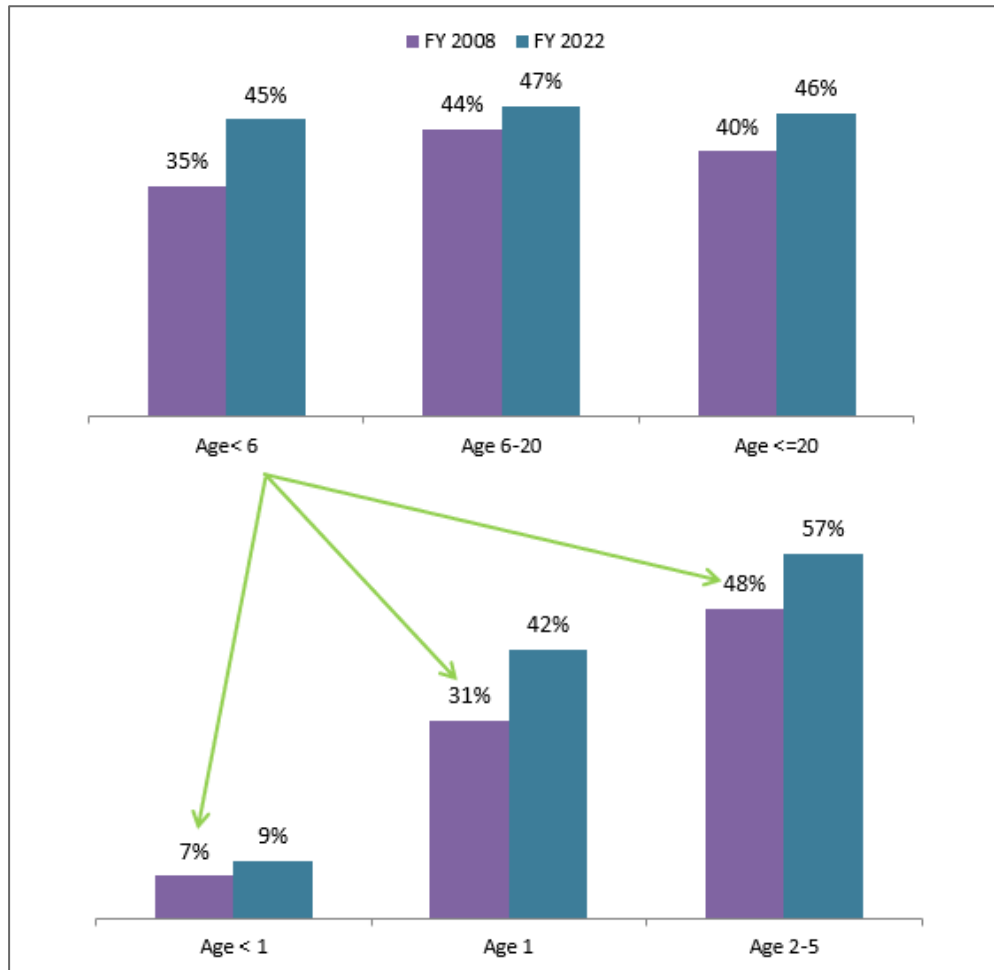
Note: National Medicaid data is from CMS-416 state annual Early and Periodic Screening, Diagnostic and Treatment (EPSDT) reports. EPSDT benefit provides comprehensive and preventive health care services for children under age 21 who are enrolled in Medicaid. It is key to ensuring that children and adolescents receive appropriate preventive, dental, mental health, and developmental, and specialty services. Source: 2021 CMS-416 reports, Line 1b and Line 12b (accessed 01/05/2024).

Children

Washington state is 1 of the states with innovative programs that improve access to dental care for young children.

ABCD: Connects Apple Health-enrolled children under age 6 and children with certain special health care needs to dental care. It also engages primary care medical providers in delivering preventive services.

Percentage of Child Enrollees Accessing Preventive Services by Age Group, FY 2008 vs. FY 2022

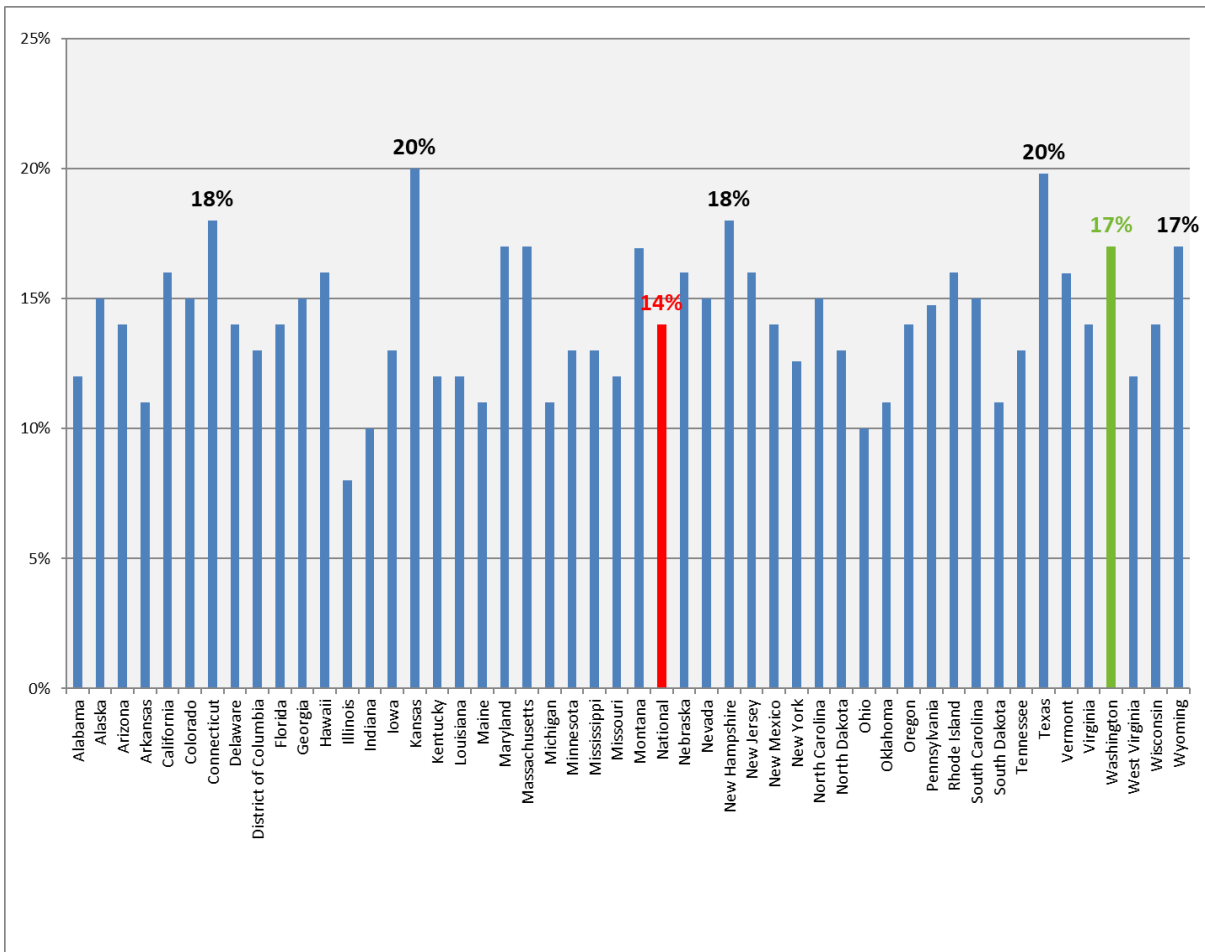


Children

The percentage of children who received preventive dental care increased for most age groups from FY 2008 to FY 2022. By FY 2022, 57% of children between the ages of 2 and 5 received preventive dental care.

The percentage of children accessing preventive services for all children (age 20 and under) in FY 2008 was 40% and in FY 2022 was 46%.

Percentage of Children Who Receive Sealants on First Permanent Molar Washington vs. Other States



Children Ages 6 to 9 years

Sealants are an effective and proven method to prevent caries. They significantly reduce a child's risk of having decay and can even stop decay that has already started.

Washington is among the top 10 states for the percentage of Medicaid-enrolled children receiving sealants on a first permanent molar in 2021.

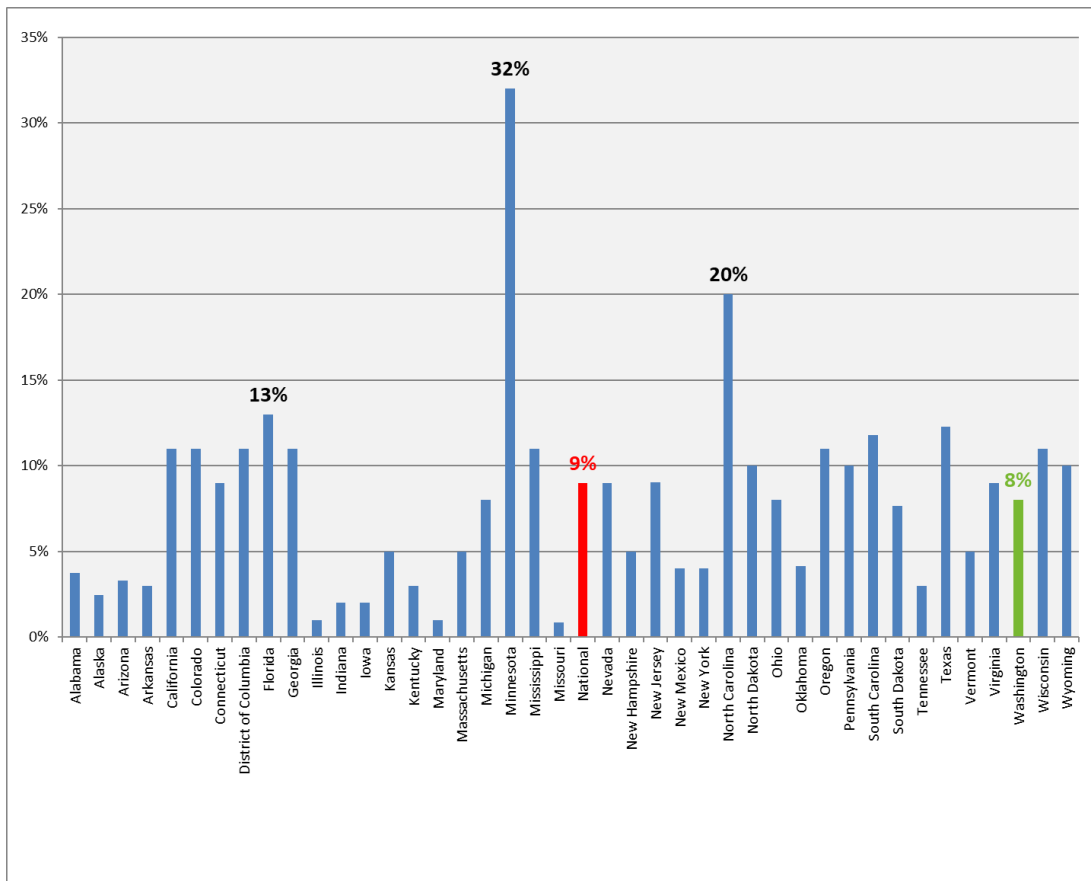
17% of Apple Health-enrolled children ages 6 to 9 years received sealants on their first permanent molar.

Note: Early and Periodic Screening, Diagnostic and Treatment (EPSDT) benefit provides comprehensive and preventive healthcare services for children under age 21 who are enrolled in Medicaid. EPSDT is key to ensuring that children and adolescents receive appropriate preventive, dental, mental health, and developmental, and specialty services.

Source: 2021 CMS-416 reports, Line 1b and Line 12d (accessed 01/05/2024).

Children Receiving Oral Health Preventive Services by a Non-Dentist Provider

Percentage of Children Ages 0-5 Enrolled in Medicaid for at Least 90 Continuous Days Receiving Oral Health Services Provided by a Non-Dentist Provider, 2021



Children

Incorporating Oral Health in the Primary Care Medical Setting

Approximately 8% of Apple Health-enrolled children under age 6 received oral health preventive services from a non-dental provider during early and periodic screening visits in 2021.

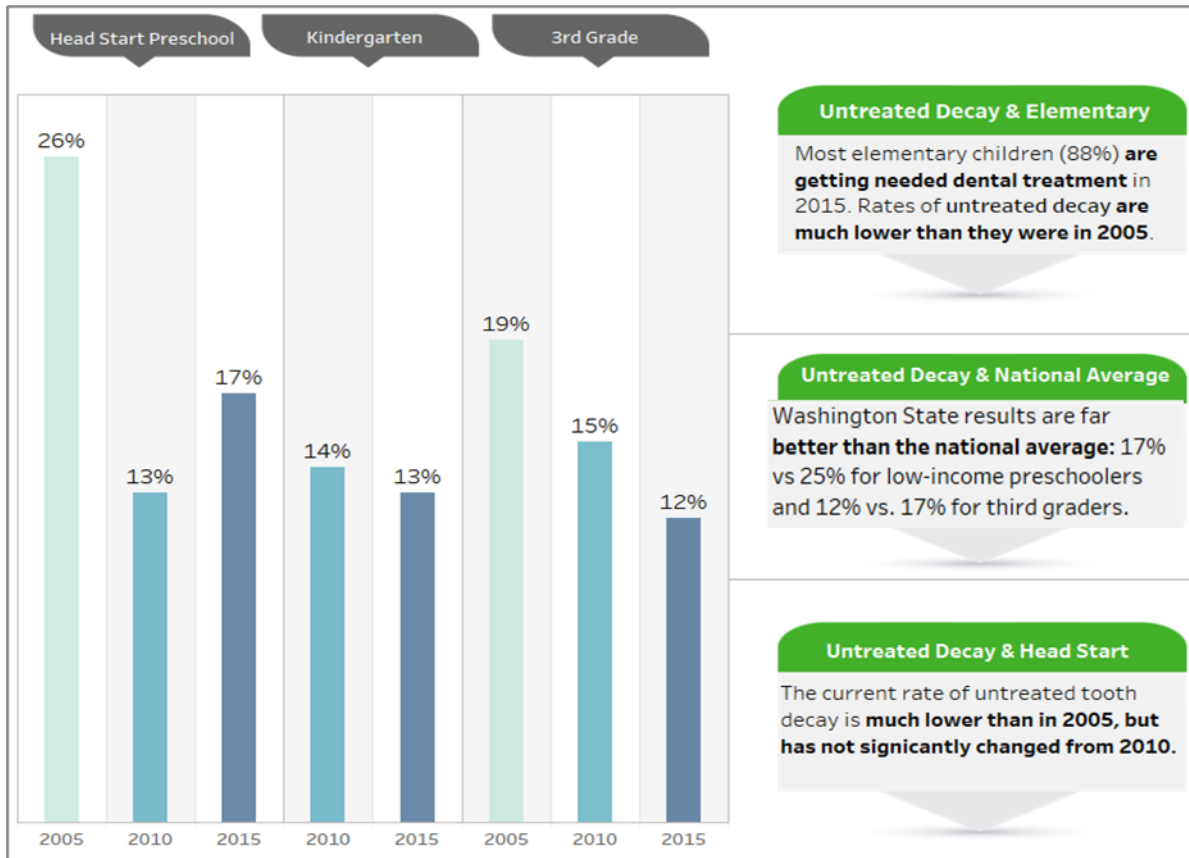
Note: Early and Periodic Screening, Diagnostic and Treatment (EPSDT) benefit provides comprehensive and preventive health care services for children under age 21 who are enrolled in Medicaid.

Non-Dentist Providers include pediatricians, independently practicing dental hygienists, and all other licensed practitioners that are not dentists.

Source: 2021 CMS-416 reports, Line 1b and Line 12f (accessed 01/05/2024).

Washington's Children's Oral Health Status Smile Survey 2015 – 2016

Rates of Untreated Decay by Age Group



Untreated Decay & Elementary
Most elementary children (88%) are **getting needed dental treatment** in 2015. Rates of untreated decay are **much lower than they were in 2005.**

Untreated Decay & National Average
Washington State results are far **better than the national average: 17% vs 25%** for low-income preschoolers and 12% vs. 17% for third graders.

Untreated Decay & Head Start
The current rate of untreated tooth decay is **much lower than in 2005, but has not significantly changed from 2010.**

Children

Washington's oral health policies and programs have made progress in improving the oral health status of children in some areas. Based on Smile Survey 2015-2016 results, untreated decay declined significantly among preschoolers and third-graders from low-income households and among all racial and ethnic groups when compared to 2005 results. In addition, treatment of dental caries and access to preventive dental sealants increased among elementary school children.

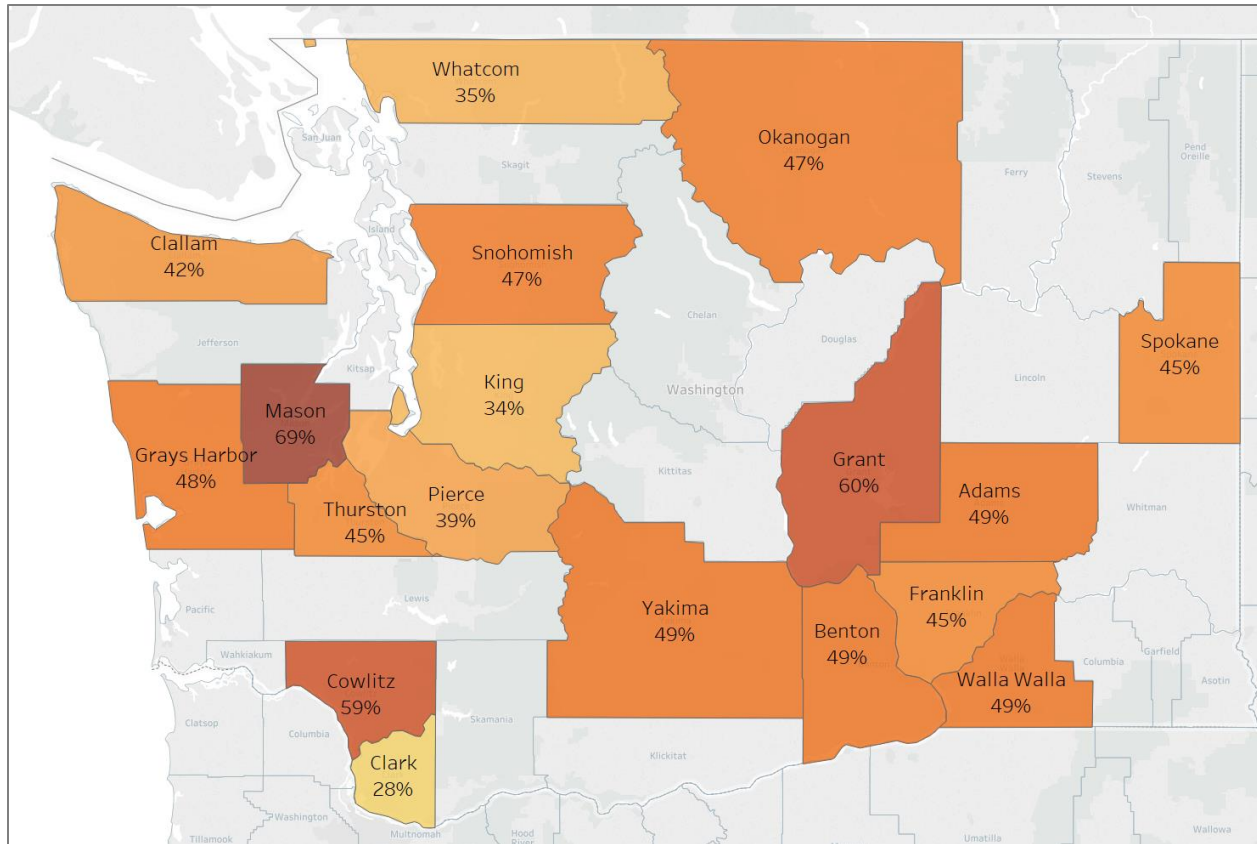
Washington state is among the top 5 states in the country for the lowest rates of decay among third graders. Fewer low-income preschoolers have untreated decay compared to the rest of the nation (17% vs. 25%).

Note: The Smile Survey is a dental screening completed by the WA State Department of Health every 5 to 7 years to assess the oral health of children throughout the state. In 2020, the survey was delayed until 2022-2023 school year due to COVID-19. The 2022-2023 smile Survey results will be available in 2024.

Source: Washington State Department of Health. Smile Survey 2015-2016: The Oral Health of Washington's Children. Olympia, WA, 2017. Available from: <https://www.astdd.org/www/docs/wa-smile-survey-report-2016.pdf>
Smile Survey Dashboard Link: <https://arcorafoundation.org/oral-health-status-dashboard/>

Decay Experience for Preschoolers from Low-income Homes by County, 2015 – 2016

Children



Statewide Average 46%

Similar to Apple Health dental utilization, decay rates among low-income preschoolers vary by county.

Among the counties that completed the Smile Survey in 2015-2016, Mason County had the highest untreated decay rates (69%), while Clark County had the lowest (28%), significantly lower than the statewide average of 46%.

Note: Gray shadings represent counties that did not participate in the 2015 county-level Smile Survey or did not have enough participants to provide a representative sample.

Washington's Children's Oral Health Status Smile Survey 2015 – 2016

Caries Experience - Smile Survey 2015 (combined 2nd and 3rd grade children)

	Pacific Islander	Hispanic	American Indian	Black/African American	Asian	White
Decay Experience	75%	71%	68%	52%	48%	46%
Rampant Decay	33%	29%	37%	14%	15%	15%
Sealants	49%	61%	39%	42%	46%	48%
Untreated	27%	14%	19%	18%	16%	10%

When compared to white children, **Hispanic and American Indian/Alaskan Native children** have about 50% more caries experience and more than twice the rate of rampant decay. **Pacific Islander children** had much higher rates of decay and more than twice the rate of rampant decay. **Black/African American and Asian children** experience disproportionately much higher rates of untreated tooth decay.

HEALTH DISPARITIES ARE WIDESPREAD



50% HIGHER

Hispanic and American Indian/Alaskan Native children have a **50% higher rate of decay.***

*Compared to White children

2X

Third grade children from low-income households suffer from rampant decay at twice the rate of children from higher-income households.

Note: The Smile Survey is a dental screening completed by the Washington State Department of Health every five years to assess the oral health of children throughout the state.

Source: Washington State Department of Health. Smile Survey 2015-2016: The Oral Health of Washington's Children. Olympia, WA, 2017. Available from: <https://www.astdd.org/www/docs/wa-smile-survey-report-2016.pdf>
Smile Survey Dashboard Link: <https://arcorafoundation.org/oral-health-status-dashboard/>

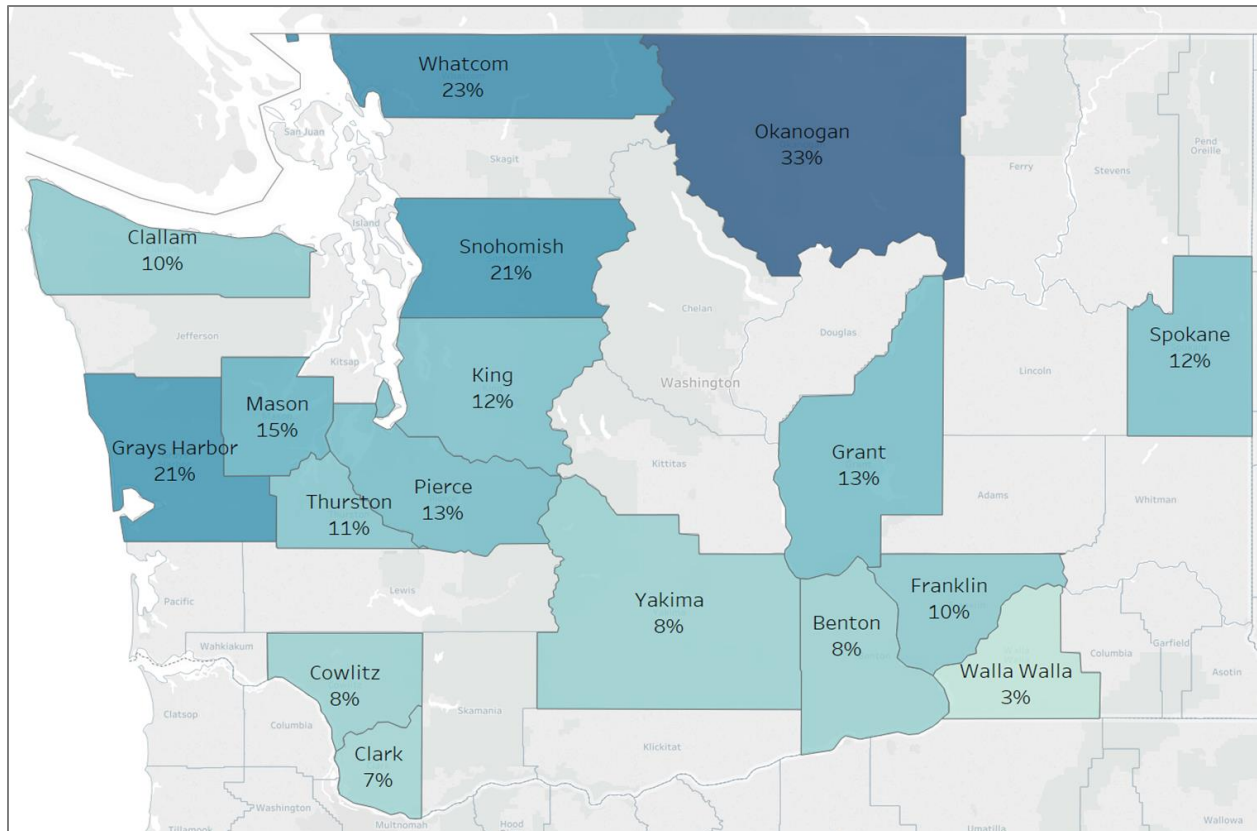
Children

Despite improvements in some measures, tooth decay continues to be a major health concern for children in Washington state.

More than half of 3rd grade children and about 4 in 10 kindergartners and preschoolers from low-income homes experience tooth decay. In addition, significant disparities exist by income, race, ethnicity, and language spoken at home.

Preschoolers from Low-income Homes with Untreated Decay by County, 2015 – 2016

Children



Statewide Average 17%

Among the counties that completed the Smile Survey in 2015-2016, Okanogan County had the highest untreated decay rates (33%), while Walla Walla and Clark counties had the lowest (3%, 7%), significantly lower than the statewide average of 17%.

Note: Gray shadings represent counties that did not participate in the 2015 county-level Smile Survey or did not have enough participants to provide a representative sample

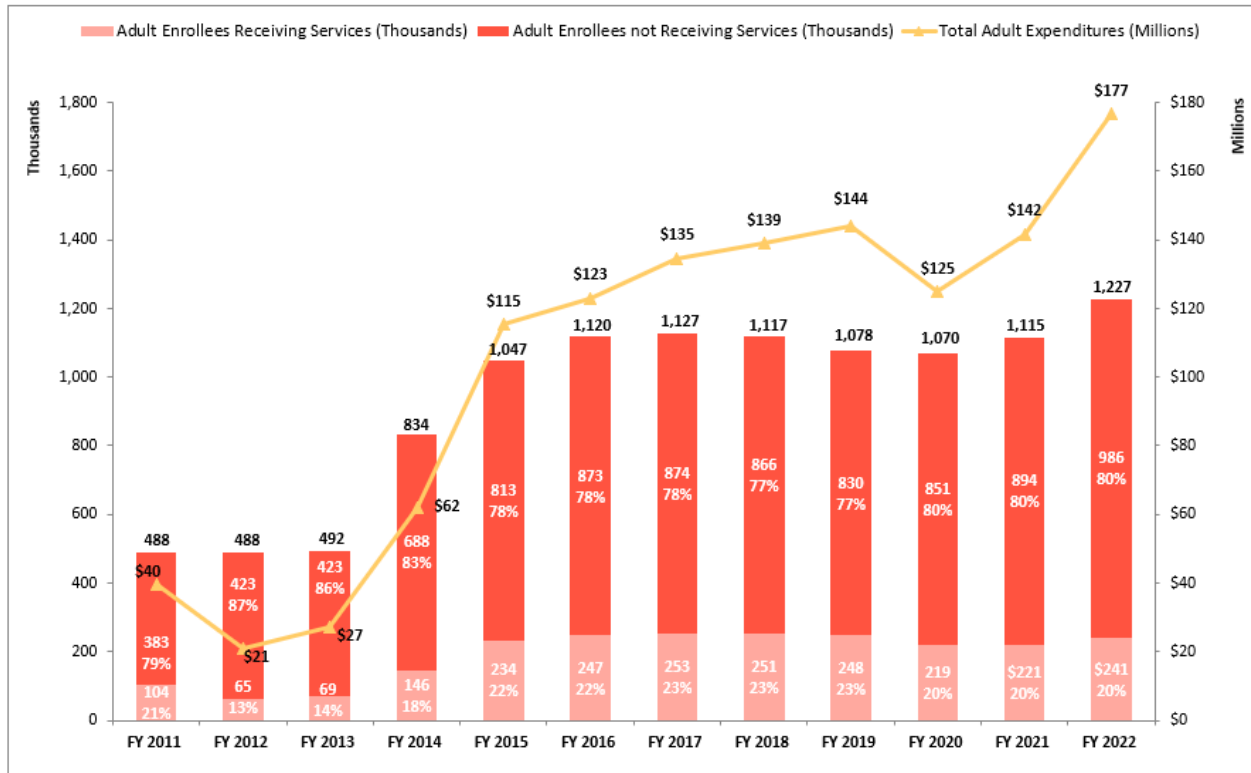
Total Expenditures and Services Key Findings (Children)

- Washington Apple Health spent \$244 million on dental services for children in FY 2022. In the last fiscal year, children's dental expenditures increased by 3% (slightly decreased by 2% after adjusting for inflation).
- The percentage of children accessing dental services was 45% in FY 2008, compared to 51% in FY 2022. Children's dental utilization rates increased across all age groups between FY 2008 and FY 2022. In the last fiscal year, the number of children increased by 4%. However, dental utilization has not yet reached pre-COVID-19 pandemic levels yet.
- The percentage of children under age 6 accessing dental services in Washington increased for 35 counties between FY 2008 and FY 2022. However, geographic disparities remain. Utilization by county ranged from 28% (Garfield County) to 64% (Adams County) in FY 2022.
- The rate of children (age 20 and under) accessing preventive services increased, from 40% in FY 2008 to 46% in FY 2022.
- The percentage of expenditures for restorative services for children decreased from 36% in 2008 to 28% in 2022.

Dental Services and Expenditures Among Adults

Trend in Dental Utilization and Expenditures among Adults 21 and Older, FY 2011 – FY 2022

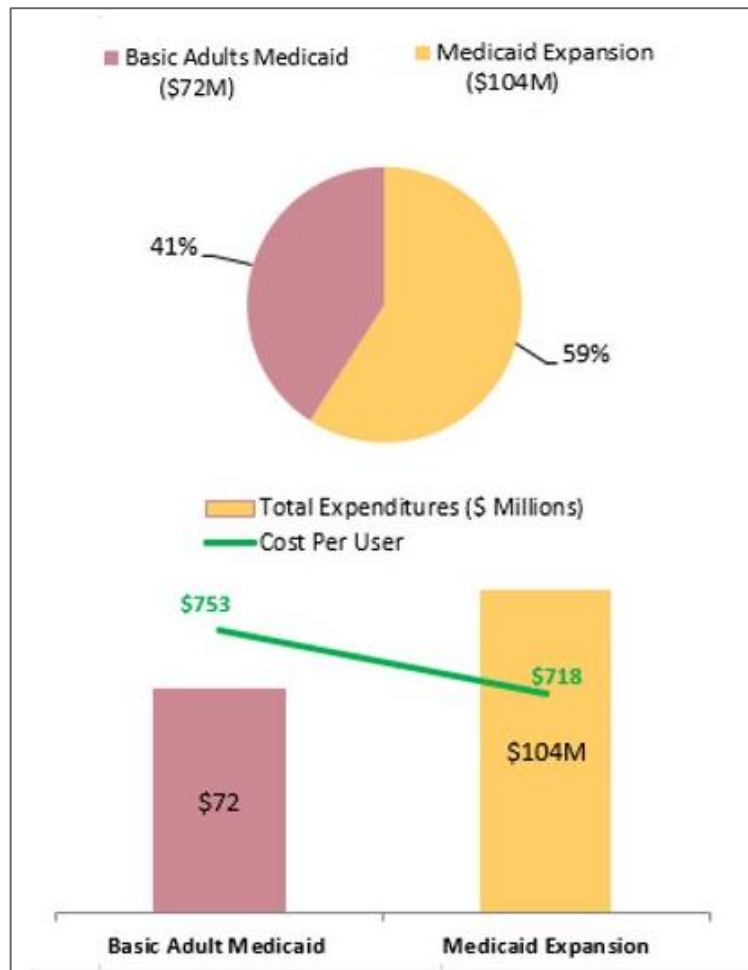
Adults



Total expenditures and utilization fell dramatically after the adult dental cuts took effect in January of 2011. Expenditures fell from \$40 million in FY 2011 to \$21 million in FY 2012. In FY 2015, with the first 12 months of adult dental restoration, expenditures dramatically increased to \$115 million.

Between FY 2015 and FY 2019, adult expenditures and utilization steadily increased. In FY 2020, both experienced a decrease as a result of COVID-19's impact on clinics. Adult dental users decreased by 11%, while expenditures decreased by 17% after adjusting for inflation. In the last fiscal year, users increased by 9%, while expenditures increased by 19% after adjusting for inflation.

Washington Apple Health Dental Expenditures Basic Adults vs. Medicaid Expansion Adults, FY 2022



Adults

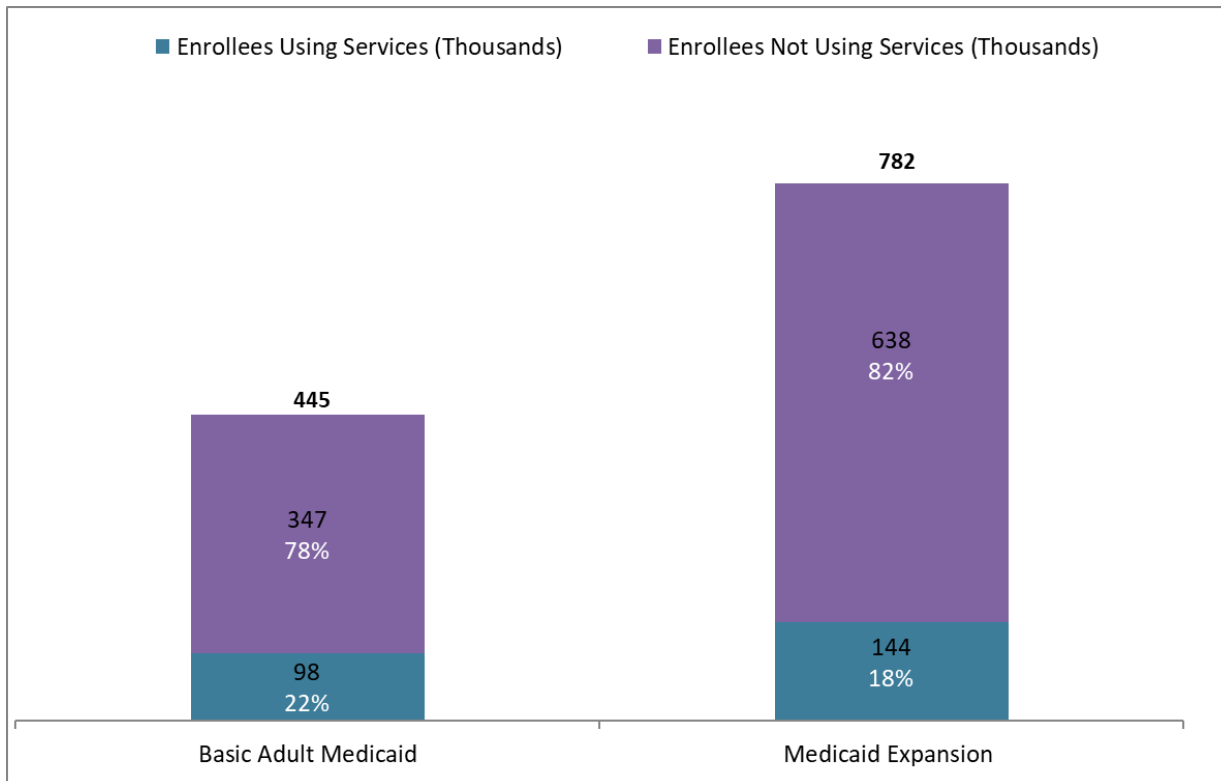
Total Medicaid Expansion dental expenditures were \$104 million, which represents 59% of total Apple Health adult dental expenditures. This drew 90% federal match in 2022 (estimated \$94 million).

Note: Washington's FY 2022 total Apple Health adult expenditures were \$176.6. State expenditures were \$46.5 million, while federal expenditures were \$130.1 million.

Note: Since 2020, the federal match rate was reduced to 90%. For additional information visit: <https://www.macpac.gov/subtopic/state-and-federal-spending-under-the-aca/>

Source: Washington State Health Care Authority, Apple Health Dental Services Utilization and Expenditure Data

Enrollees with at Least 1 Dental Service, Medicaid Expansion Users, FY 2022



Adults

Among Medicaid Expansion enrollees, 18% had at least 1 dental service in FY 2022 compared to 22% of all other Medicaid eligible enrollees (Basic Medicaid).

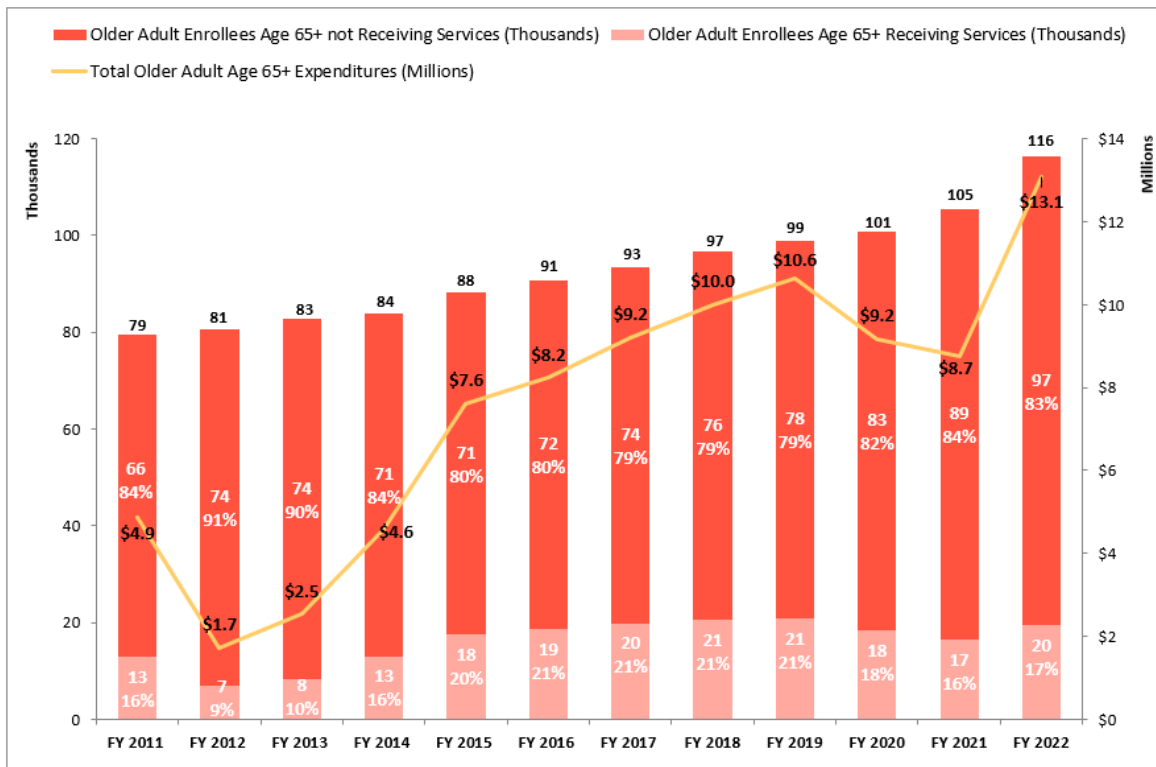
Trend in Dental Utilization and Expenditures among Older Adults, FY 2011 – FY 2022

Adults

Total expenditures and utilization for adults ages 65 and older fell after the adult dental cuts took effect in January of 2011.

Expenditures fell from \$5 million in FY 2011 to \$2 million in FY 2012. After 1 year of adult dental restoration (FY 2015), expenditures increased to \$8 million and maintained a gradual increase. By FY 2019 expenditures more than doubled from FY 2011 (\$11 million).

In FY 2020, both expenditures and utilization experienced a decrease as a result of COVID-19's impact on clinics. However, in the last fiscal year, utilization rates among adults ages 65 and over recovered. The number of dental users increased by 18% while expenditures increased by 50%.

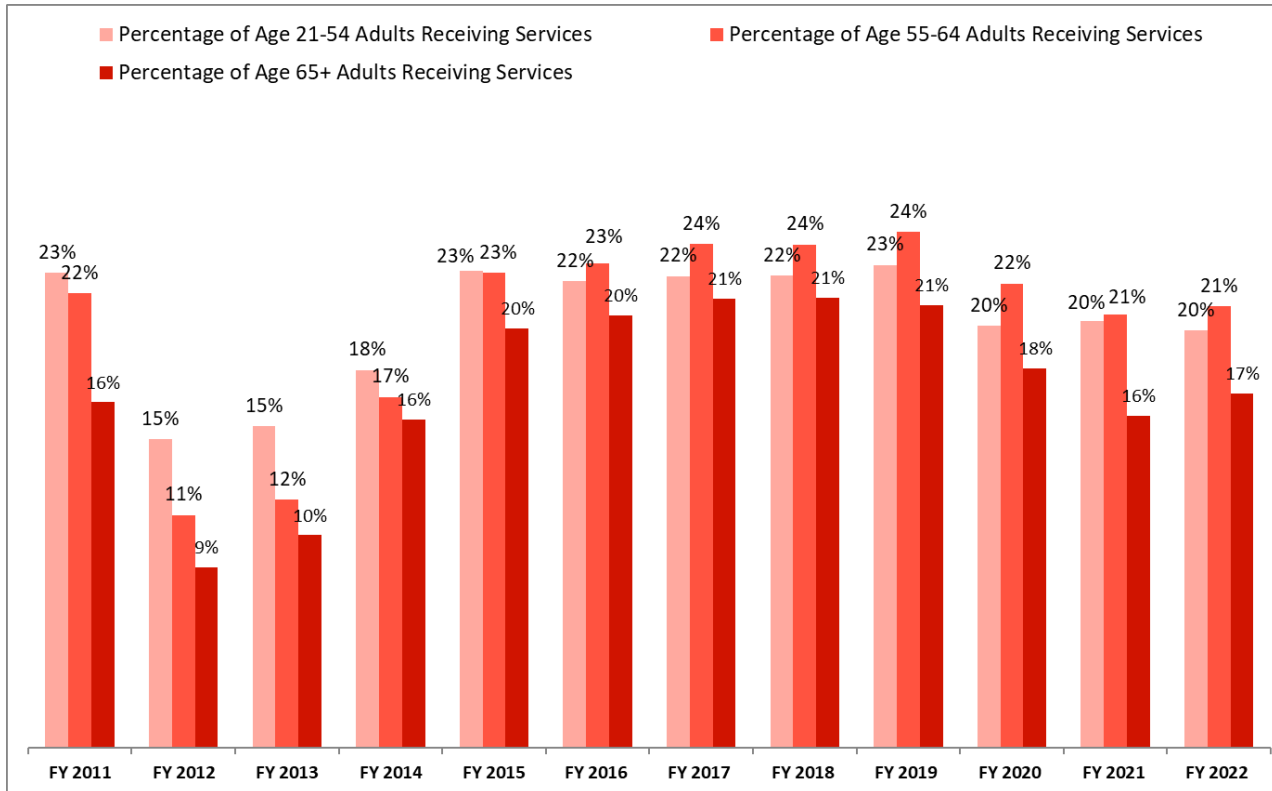


Note: Older adults refer to apple health enrollees aged 65 and older. Apple Health/Medicaid Expansion is only open to adults under the age of 65. Adults aged 65 and over are eligible for Apple Health if they are very low-income or have significant health issues. In FY 2022, only 9% of adults 65 and older in Washington were eligible for Apple Health.

Sources:
Washington State Health Care Authority, Apple Health Dental Services Enrollment and Utilization Data
Population percentage is calculated using 2022 population estimates from [U.S. Census Bureau](https://www.census.gov).

Trend in Dental Utilization among Adults, Ages 21-54, 55-64 and 65+, FY 2011 – FY 2022

Adults

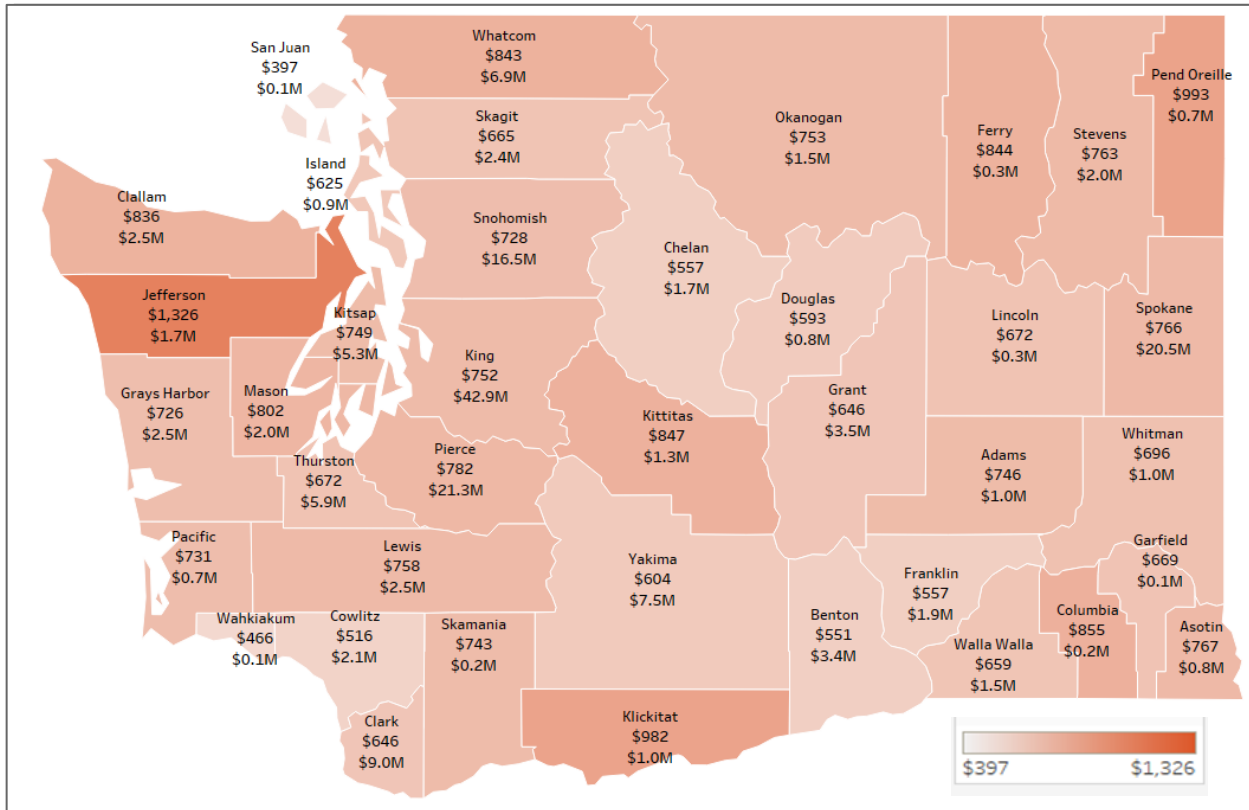


While enrollees ages 65 and older had lower rates of utilization than younger adults, all age groups experienced declines in use of services between FY 2012 and FY 2014. With the restoration of the adult dental program in January 2014, utilization rates for all groups increased slightly.

Between FY 2020 and FY 2022, all age groups experienced a slight decline in utilization rates due to COVID-19's impact on dental clinics and the workforce.

Adults

Adult Dental Expenditures and Average Cost per User by County, FY 2022



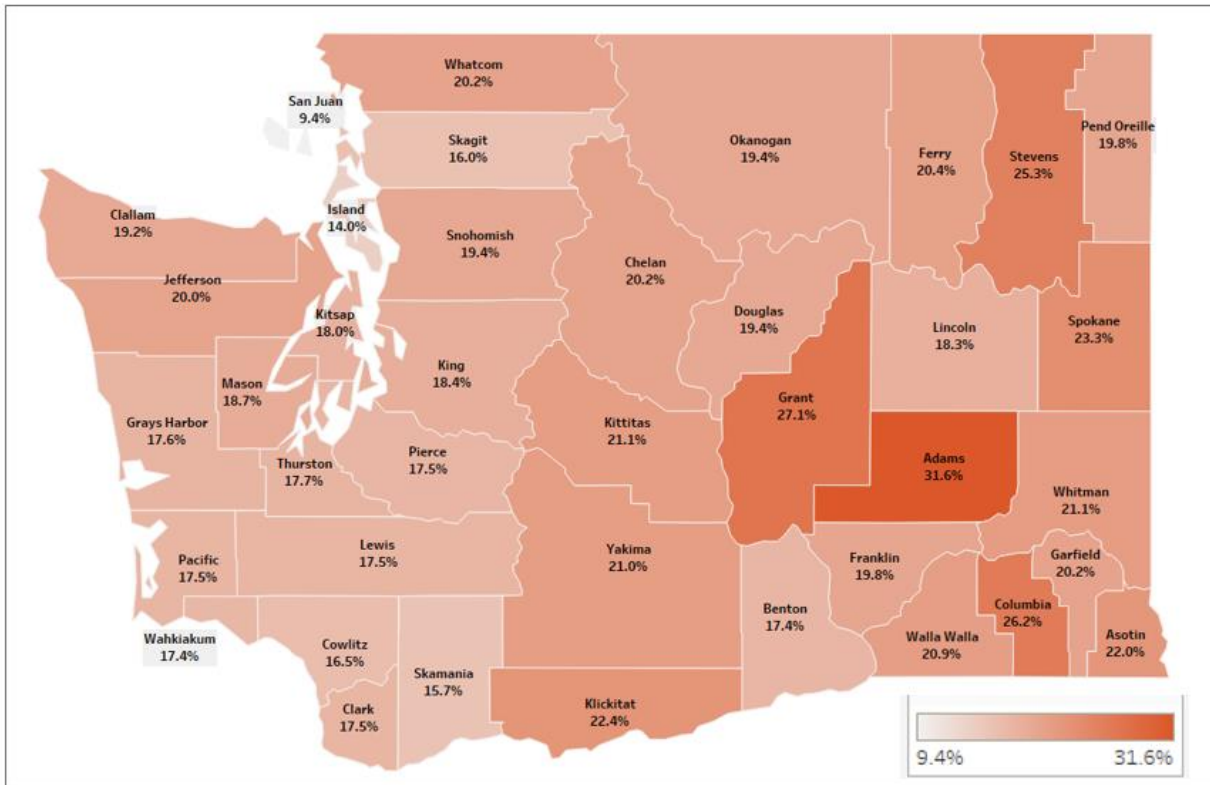
Adult dental expenditures per user vary by county with a low of \$397 in San Juan County and a high of \$1,326 in Jefferson County (indicated by darker shading).

Statewide adult per capita dental cost \$732

Note: Expenditures include FQHC encounter payments

Adult Enrollees with at Least 1 Dental Service by County, FY 2022

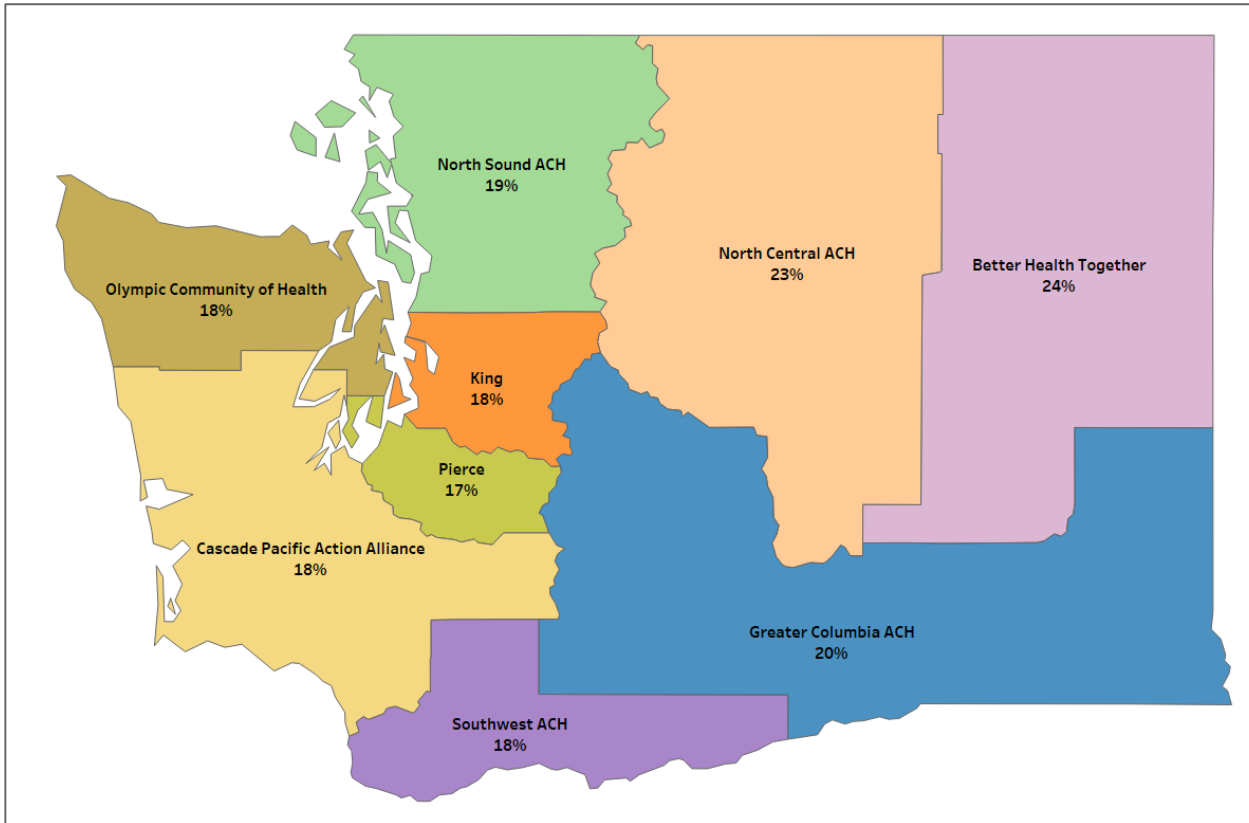
Adults



Statewide Average Utilization Total 20%

Adams County had the largest percentage of Apple Health adult enrollees receiving dental services in FY 2022 at 32% (indicated by darker shading), while San Juan County had the lowest at 9% (indicated by lighter shading).

Adult Enrollees with at Least 1 Dental Service by Accountable Community of Health, FY 2022



Statewide Utilization Total 20%

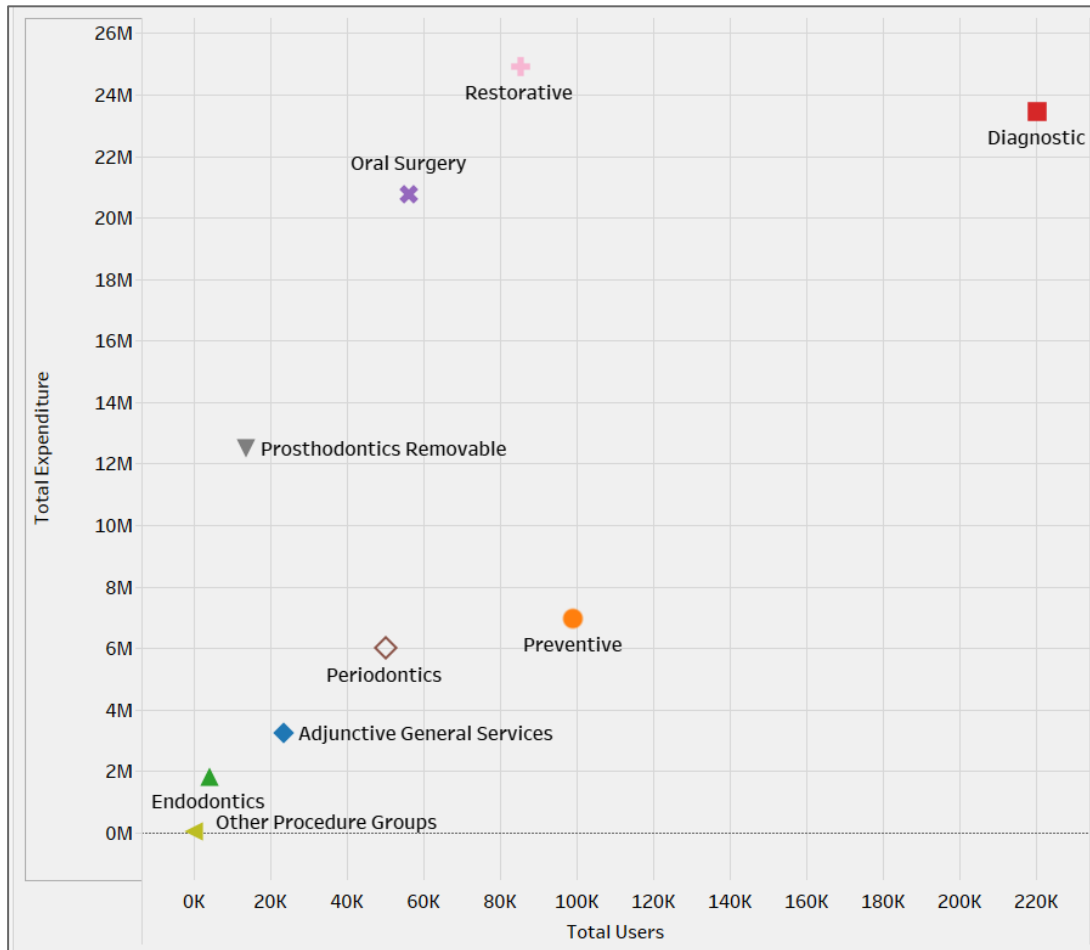
Adults

The Better Health Together Accountable Community of Health Region had the largest percentage of Apple Health adult enrollees receiving dental services in FY 2020 (24%), higher than the state average (20%).

Variability in regional dental utilization has several key drivers. Among them are the number of providers who accept adult Medicaid, the number of patients each provider serves, travel time/transportation to care, cultural barriers, and patients' knowledge/perception regarding the services offered.

Adult Dental Users and Total Expenditures by Procedure Group, FY 2022

Adults



In FY 2022, with the adult dental restoration in effect for 8 full years, preventive services (orange dot) were used by nearly 99,000 adults, which is a 17% increase from the previous fiscal year.

Diagnostic procedures (red square), which had the greatest number of users, were typically done in conjunction with other procedures (e.g., prior to emergency oral surgery).

Oral surgery and restorative services were the costliest procedures. Users accessing restorative care increased by 17% since the last fiscal year but remain lower than pre-Covid pandemic.

Note: Excludes FQHC claims. Prosthetics (Fixed and Maxillofacial Prosthetics) and Orthodontics had less than 100 users and \$28,000 in expenditures. They are included in the graph as "Other Procedure Groups."

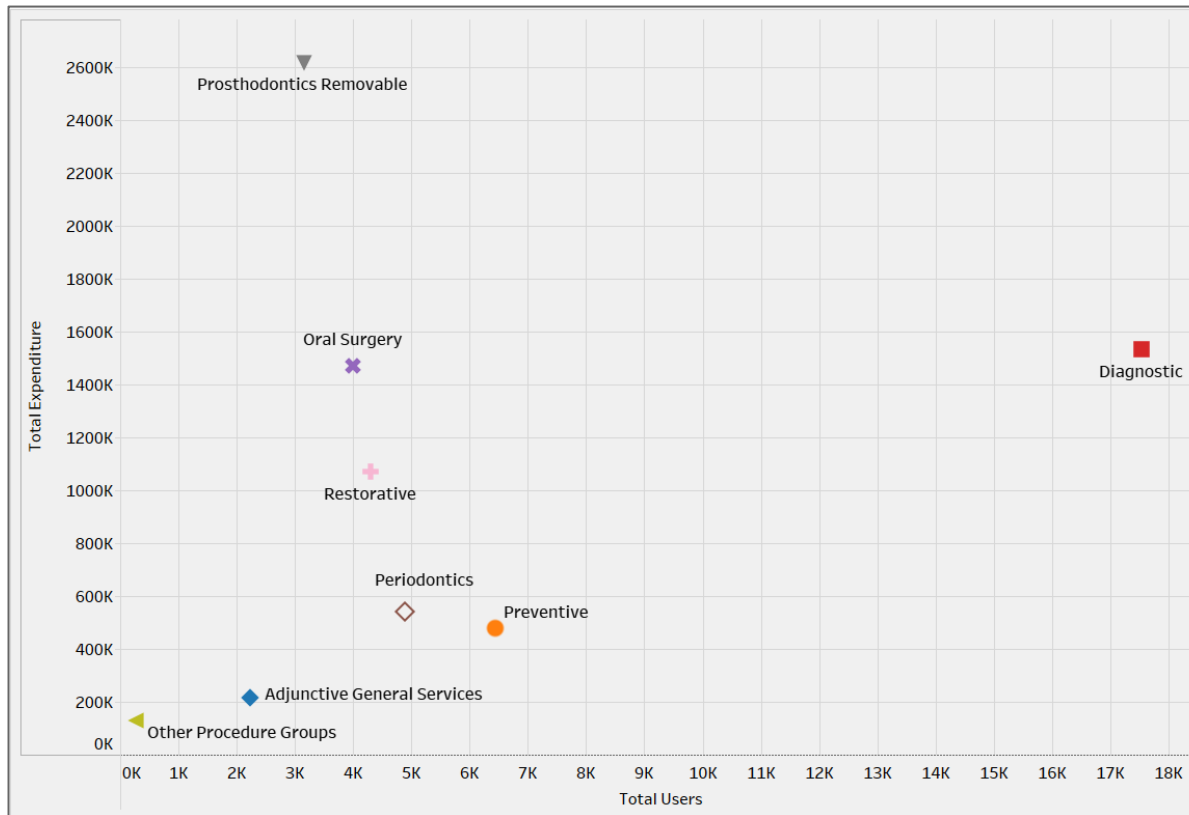
Source: Washington State Health Care Authority, Apple Health Dental Services Enrollment and Utilization Data

Older Adult Dental Users and Total Expenditures by Procedure Group, FY 2022

Section

For older adults ages 65 and over in FY 2022, preventive services (orange dot) were used by 6,445 older adults.

Diagnostic procedures (red square) had the greatest number of users (nearly 18,000), while prosthodontics removable services (grey triangle) were the costliest procedures (\$2.6 million).

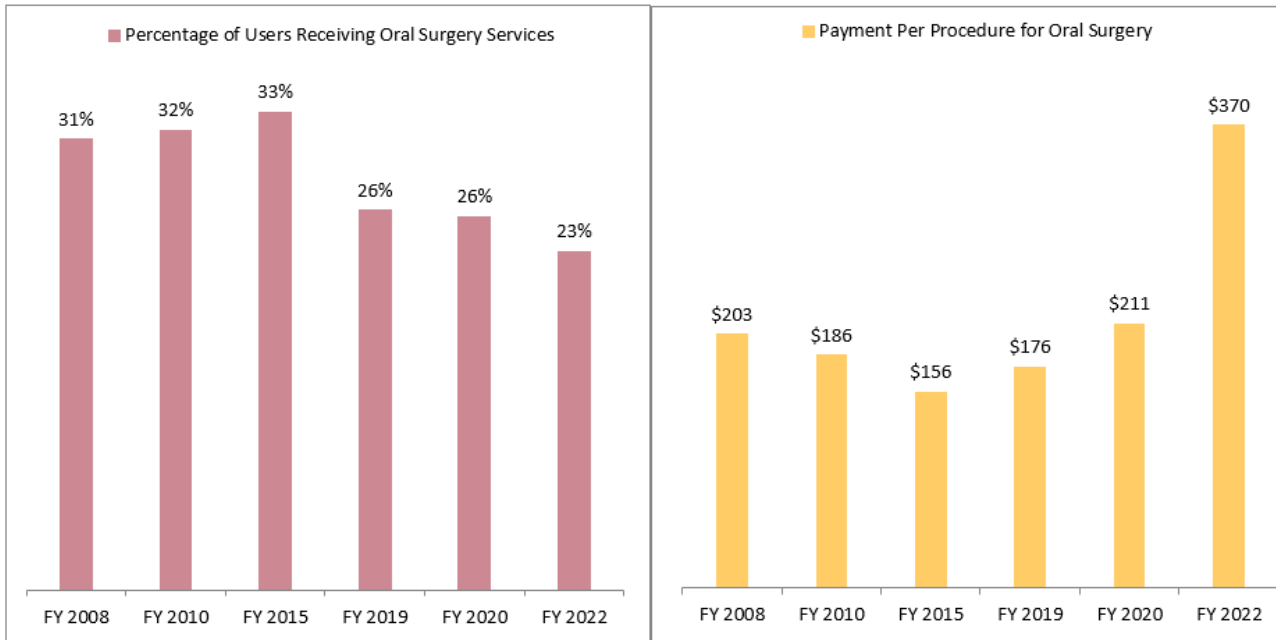


Note: Excludes FQHC claims. Prosthetics Fixed and Endodontics had less than 300 users and \$131,000 in expenditures. They are included in the graph as "Other Procedure Groups."

Source: Washington State Health Care Authority, Apple Health Dental Services Enrollment and Utilization Data

Adult Oral Surgery: Selected Years, Use, and Expenditures among Enrollees

Adults



The percentage of adults accessing dental care who had oral surgery in FY 2022 decreased by 25% since FY 2008 and by 29% since FY 2015.

Expenditures per oral surgery procedure between FY 2008 and FY 2019 decreased by 13% (from \$203 to \$176). However, in FY 2020, the cost per user increased by 20%. In FY 2022, the cost per user increased by 75% (from \$211 to \$370).

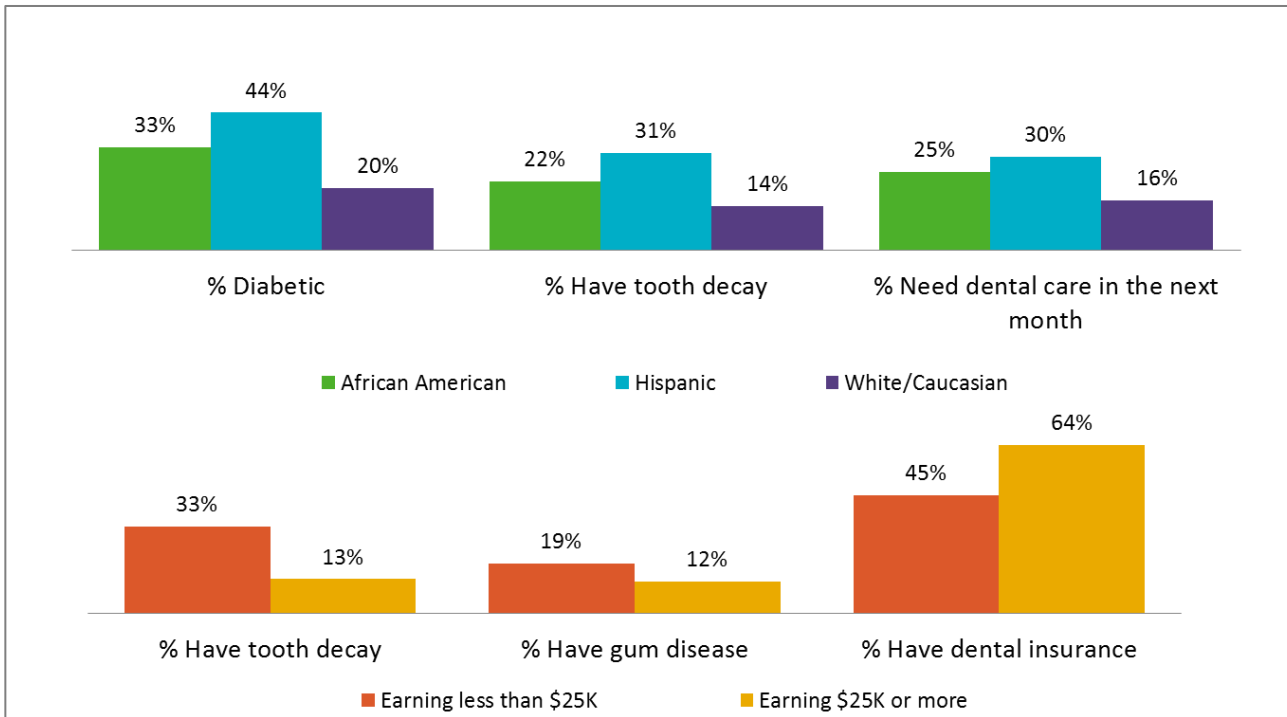
Note: Excludes FQHCs claims as oral surgery procedures received in FQHCs may not always be identified.

Source: Washington State Health Care Authority, Apple Health Dental Services Enrollment and Utilization Data

Oral Health Disparities among Older Adults by Race/Ethnicity and Income in 2017

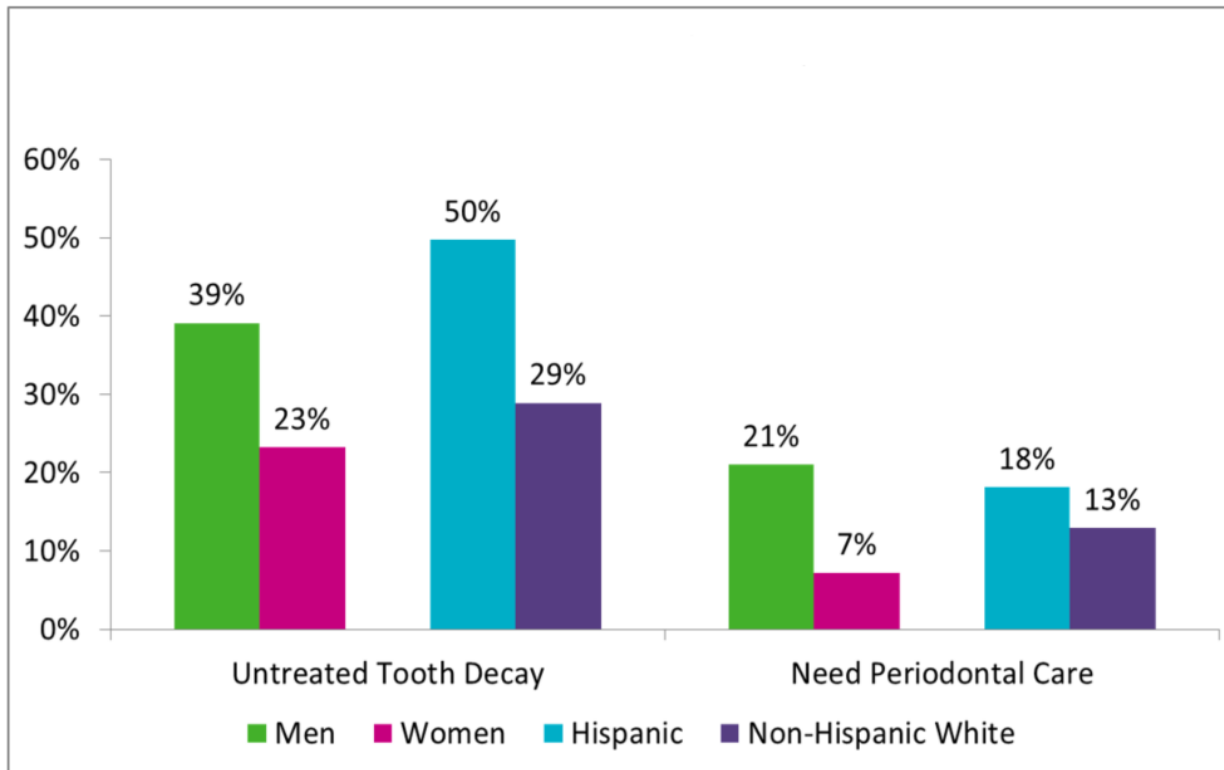
Adults

Although the majority of adults ages 55 and over in Washington state considered their oral health to be important, only about half saw a dentist in the past year. In addition, significant disparities in older adults' oral health exist by income and by race. Those living on \$25,000 per year or less had higher rates of tooth decay and gum disease and were much less likely to have dental insurance than those with higher incomes. African American and Hispanic older adults reported poorer oral health than their white/Caucasian counterparts.



Note: The Senior Telephone Survey is a self-reported survey completed by Arcora Foundation in 2012 and 2017 to assess the oral health status of seniors ages 55 and over throughout the state. To view the full report and methodology, visit <https://www.arcorafoundation.org/resources/articles/senior-oral-health-survey>
 Dashboard Link: <https://arcorafoundation.org/oral-health-status-dashboard/>

Older Adults with Untreated Tooth Decay and in Need of Periodontal Care



Note: Washington Elder Smiles Survey is a basic screening pilot survey conducted in 2017 to identify the oral health status of older adults ages 65 and over in senior centers and congregate meal sites. The survey followed the Association of State and Territorial Dental Directors basic screening guidelines. To view the full report and methodology, visit <https://www.arcorafoundation.org/resources/articles/senior-oral-health-survey>
Dashboard Link: <https://arcorafoundation.org/oral-health-status-dashboard/>

Adults

Older adults participating in meal programs at senior centers suffer significantly more from poor oral health than the general population of older adults in Washington state. They were more likely to have diabetes or pre-diabetes, to have no teeth, and to have problems with their mouth.

Total Expenditures and Services Key Findings (Adults)

- Budget cuts largely eliminated the Apple Health adult dental program between January 2011 and 2014, except for emergency services and services for select populations (i.e., pregnant people, those in long-term care/nursing homes, and clients who are eligible under a 1915 (c) waiver program). Only small numbers of adults who were exempted from the cuts or who received emergency dental care continued to receive services during that period.
- The state legislature restored the adult dental program and comprehensive services resumed in January 2014. The utilization and expenditure results reflect 6 months of data for FY 2014 and 1 full year data for FY 2015 - FY 2022.
- The state spent \$40 million on dental services for adults in FY 2011 (both state and federal spending), compared to \$177 million in FY 2022. After accounting for inflation, adult dental expenditures more than tripled in the last decade (increased by 224%). In the last fiscal year, adult expenditures increased by 19%, after adjusting for inflation.
- More than half (59%) of new adults accessing care in FY 2022 were receiving coverage through Medicaid expansion, which drew 90% federal match (estimated \$94M in 2022). The remainder of adults accessing care had Basic Medicaid coverage.
- Approximately 241,000 of the adult population received services in FY 2022, compared to 104,000 in FY 2011. Adults over age 65 had lower utilization, while adults ages 55-64 had higher dental utilization than other adults.
- More adults received oral surgery procedures than preventive services, a consistent trend in the last decade.

Providers of Oral Health Services

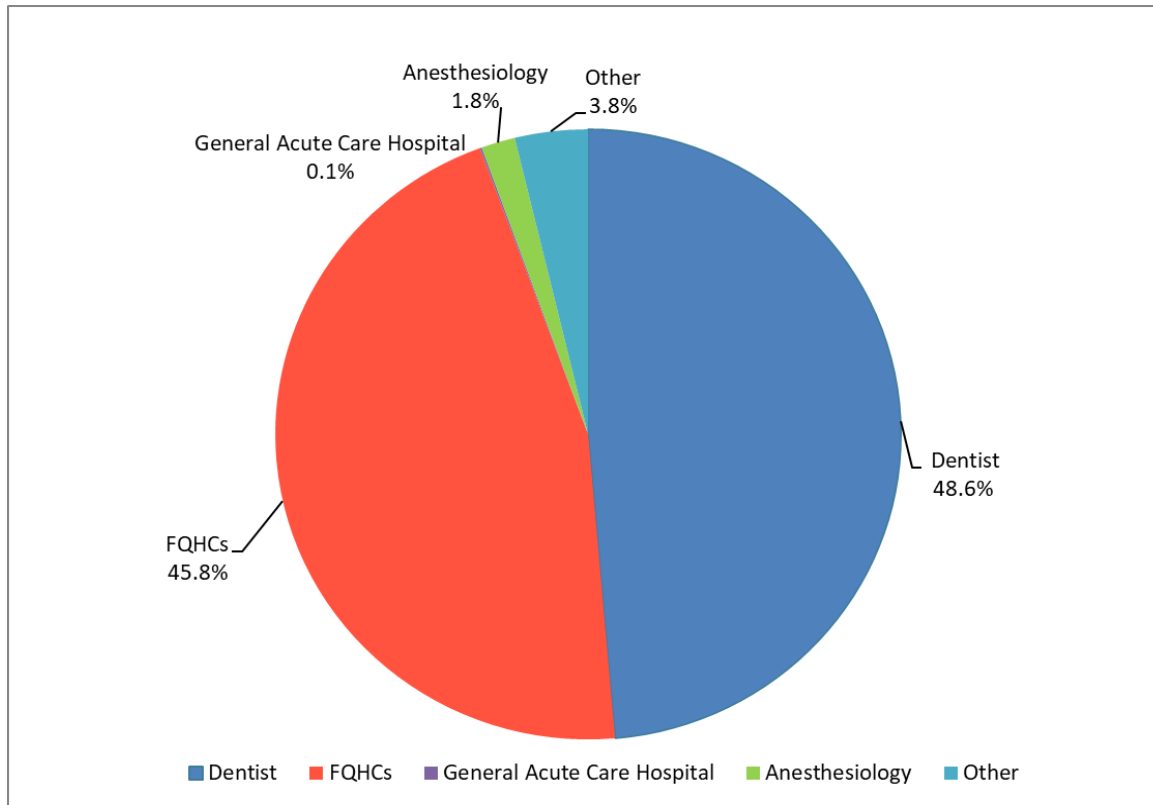
Expenditures by Billing Provider Type Specialty, FY 2022

Providers

In FY 2022, 94 cents of every dollar for Apple Health dental services went to dentists or Federally Qualified Health Centers (FQHCs). The remaining (6%) went to dental hygienists, anesthesiologists, primary care medical providers, and other dental providers.

Approximately 49% of dental expenditures in FY 2022 were provided by private practice providers (including not-for-profit), while 46% was provided by FQHCs.

HCA pays dental claims on a fee-for-service basis for private practitioners and not-for-profit providers that aren't federally qualified. FQHCs are reimbursed a flat fee for most patient visits, regardless of the services performed during that visit, to compensate the FQHCs for their actual cost of care.



Notes: "Other" includes Multi-Specialty, Dental Hygienists, Pediatrics, Denturists, Oral & Maxillofacial Surgery, Nurse Anesthetist (Certified Registered), Single-Specialty, Multi-Specialty, Nurse Practitioner, Nursing Facility, and General Practice. Oral health services provided by primary care providers (PCP) moved to Managed Care organizations' billing system in January 2020.

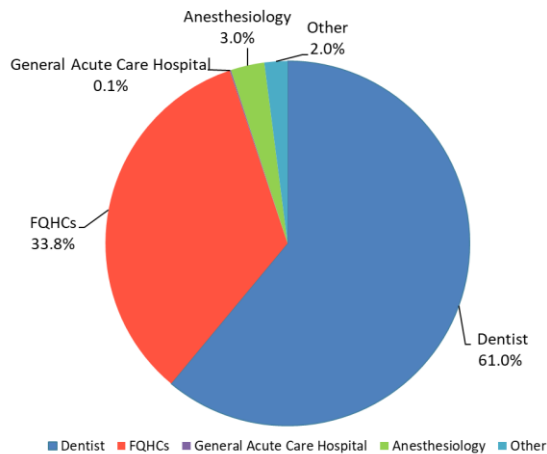
Total/percent of expenditures may not add up due to rounding.

Expenditures by Age and Billing Provider Type Specialty, FY 2022

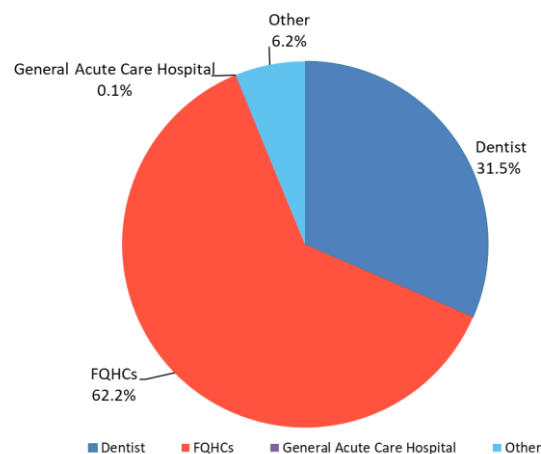
Providers

Approximately 32% of adult dental expenditures in FY 2022 were provided by private practice providers (including not-for-profit), while 62% was provided by FQHCs. On the other hand, approximately 61% of child dental expenditures in FY 2022 were provided by private practice providers (including not-for-profit), while 34% was provided by FQHCs.

Child Dental Expenditures by Billing Provider Type

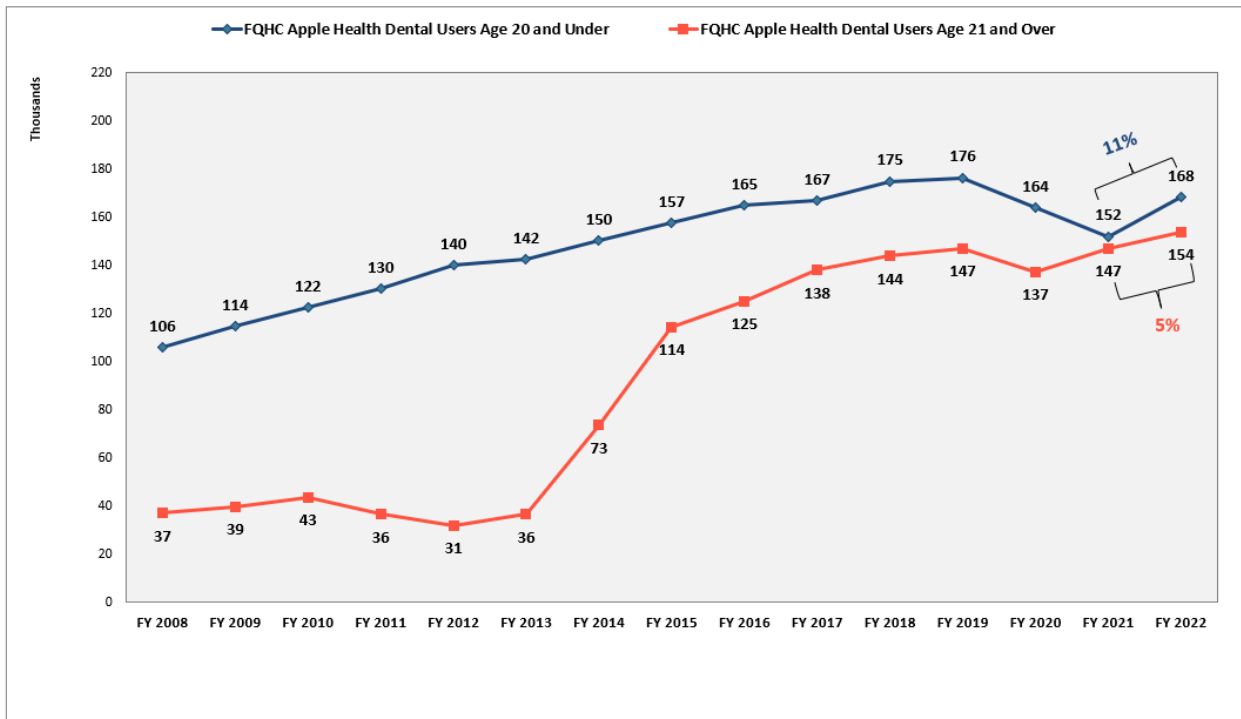


Adult Dental Expenditures by Billing Provider Type



Notes: "Other" includes Multi-Specialty, Dental Hygienists, Pediatrics, Denturists, Oral & Maxillofacial Surgery, Nurse Anesthetist (Certified Registered), Single-Specialty, Multi-Specialty, Nurse Practitioner, Nursing Facility, and General Practice. Oral health services provided by primary care providers (PCP) moved to Managed Care organizations' billing system in January 2020. Total/percent of expenditures may not add up due to rounding.

Apple Health Dental Users Served by Federally Qualified Health Centers, FY 2008 – FY 2022



Providers

More FQHCs serve Apple Health-enrolled children than adults because more children use dental services in general.

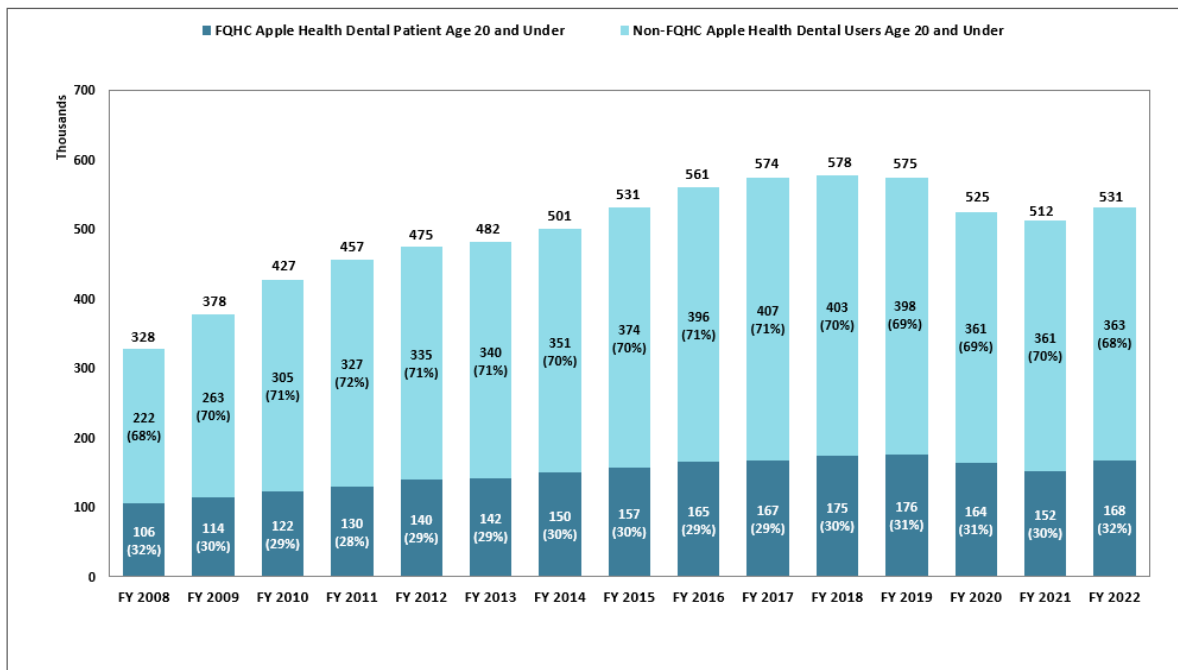
Between 2011 and 2013, the number adults who received care from FQHCs declined when cuts to Apple Health adult dental benefits took effect.

When the adult dental benefit returned, the number of adults who received care from FQHCs initially increased by 55% in FY 2015 then maintained a steady increase until FY 2019. In FY 2020, the number of adults and children who received care from FQHCs decreased by 7% because of COVID-19's impact on dental clinics. In FY 2022, children served increased by 11% and adults by 5%.

Federally Qualified Health Centers That Serve Children as a Portion of Total Child Users, FY 2008 – FY 2022

Providers

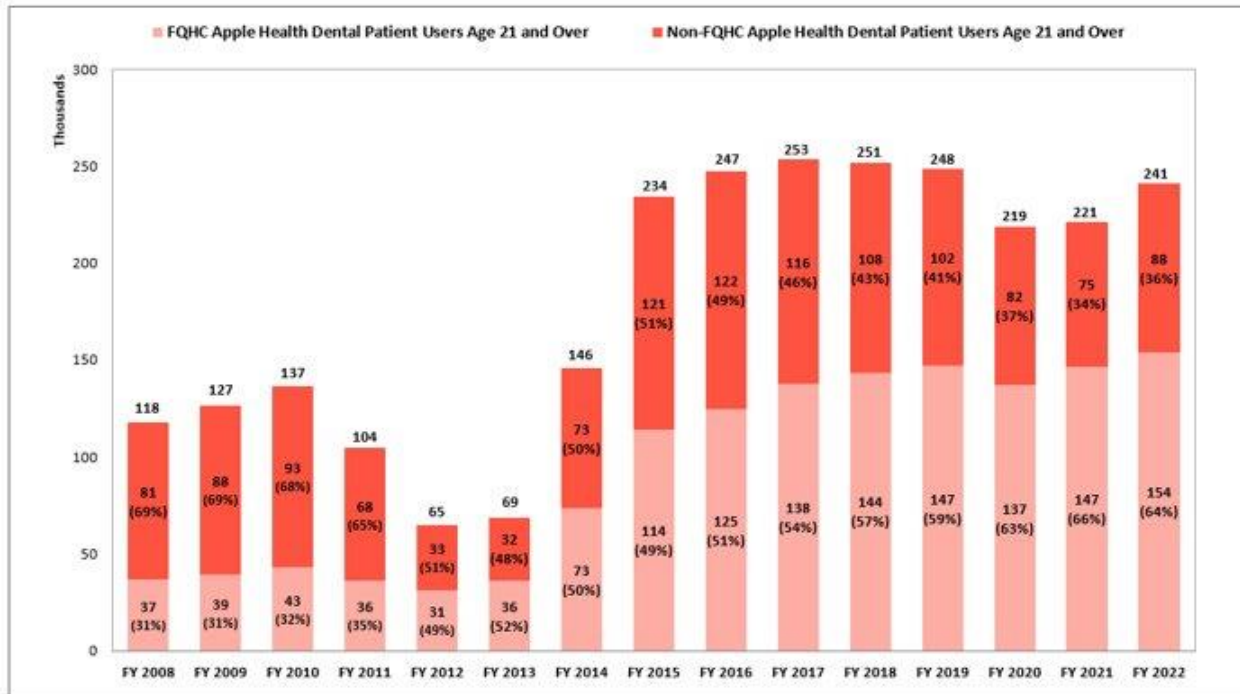
FQHCs that serve a portion of child dental users was consistent from FY 2008 to FY 2022 around 30%.



Note: Non-FQHC providers are private practice dentists and not-for-profit dental clinics that are not federally qualified such as UW School of Dentistry. The number of patients accessing Non-FQHCs is underestimated, as some clients may access both types of providers. This group was excluded from the Non-FQHCs users to avoid duplicate count of clients.

Federally Qualified Health Centers That Serve Adults as a Portion of Total Adult Users, FY 2008 – FY 2022

Providers

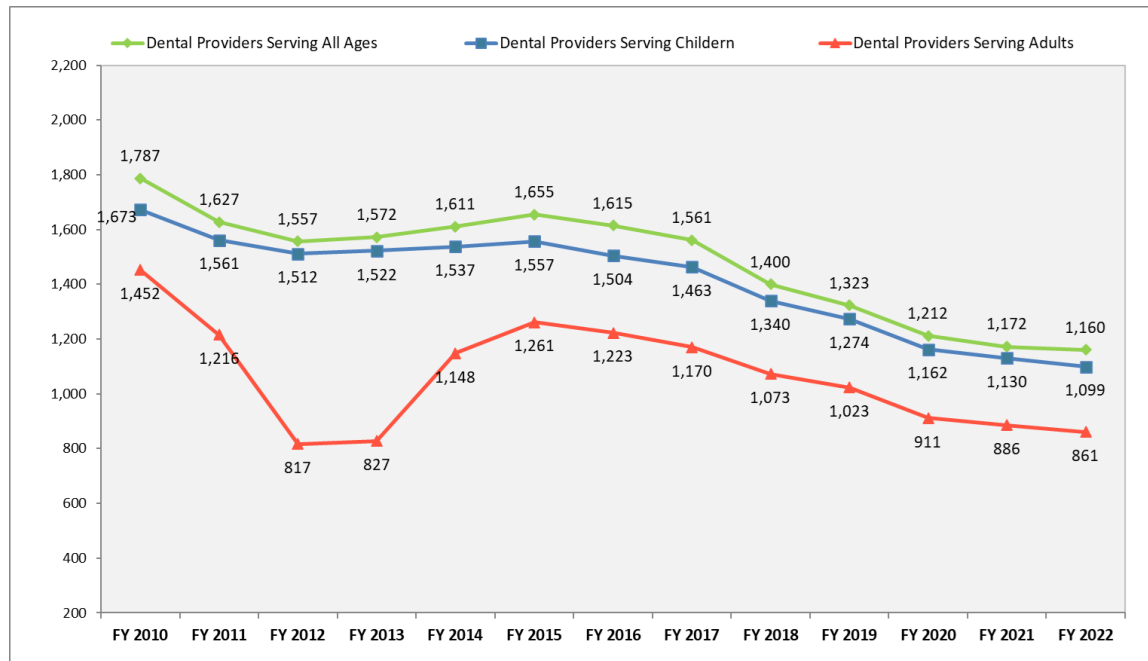


Note: Non-FQHC providers are private practice dentists and not-for-profit dental clinics that are not federally qualified such as UW School of Dentistry. The number of patients accessing Non-FQHCs is underestimated, as some clients may access both types of providers. This group was excluded from the Non-FQHCs users to avoid duplicate count of clients.

FQHCs that serve a portion of adult dental users has been on the rise since FY 2011, peaking at 66% in FY 2021.

Non-Federally Qualified Health Center Providers Serving Apple Health-enrolled Clients, FY 2010 – FY 2022

Providers



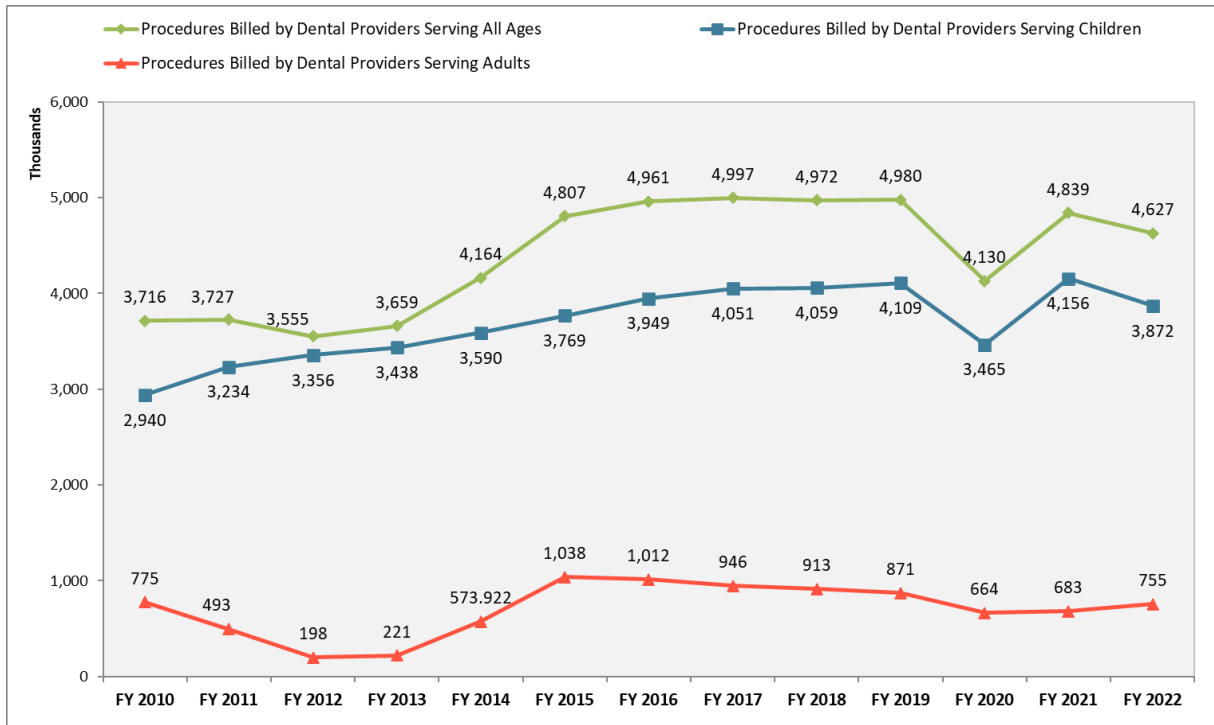
Notes: Adult dental benefits were restored in January 2014. FY 2014 data reflects 6 months of services, while FY 2015-FY 2022 data reflect full years of adult dental services.

Dental providers were identified through service provider taxonomy codes. Non-FQHC providers include unique individual dentists who billed Medicaid for dental services (dentists may all be working at the same clinic). Some providers serve adults and children; therefore, the total number of providers serving children and those serving adults do not add up to the overall number of providers serving all ages.

As a result of the adult dental benefit restoration, the total number of adults who received care from non-FQHC dentists increased by 54% between FY 2012 and FY 2015.

From 2016 to 2022, the total number of Apple Health-enrolled clients who received care from non-FQHC providers gradually decreased. In the last fiscal year, it decreased by 3% among both adults and children.

Total Apple Health Fee-for-Service Dental Procedures, FY 2010 – FY 2022



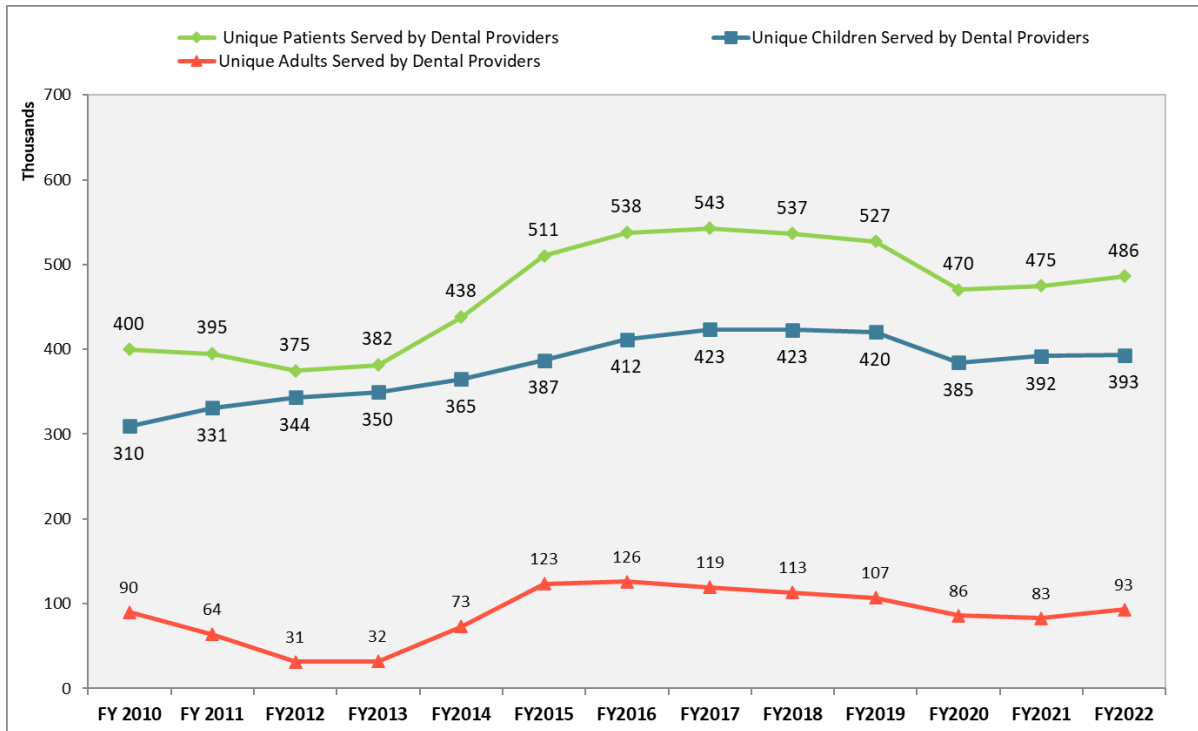
Notes: Adult dental benefits were restored in January 2014. FY 2014 data reflects 6 months of services, while FY 2015 - FY 2022 data reflect full years of adult dental services.

Source: Washington State Health Care Authority, Apple Health Dental Services Enrollment and Utilization Data

Providers

In FY 2015, the number of Apple Health adult fee-for-service dental procedures billed increased by 81% because of the adult dental benefit restoration. However, the number of procedures billed in subsequent years gradually decreased until FY 2020 (17% across all ages). In FY 2021 and FY 2022 post-pandemic, services provided increased by 12%.

Non-Federally Qualified Health Center Providers That Served Apple Health-enrolled Patients , FY 2010 – FY 2022



Notes: Adult dental benefits were restored in January 2014. FY 2014 data reflects 6 months of services, while FY 2015 - FY 2022 data reflect full years of adult dental services.

Non-FQHC providers include unique individual dentists who billed Medicaid for dental services (dentists may all be working at the same clinic).

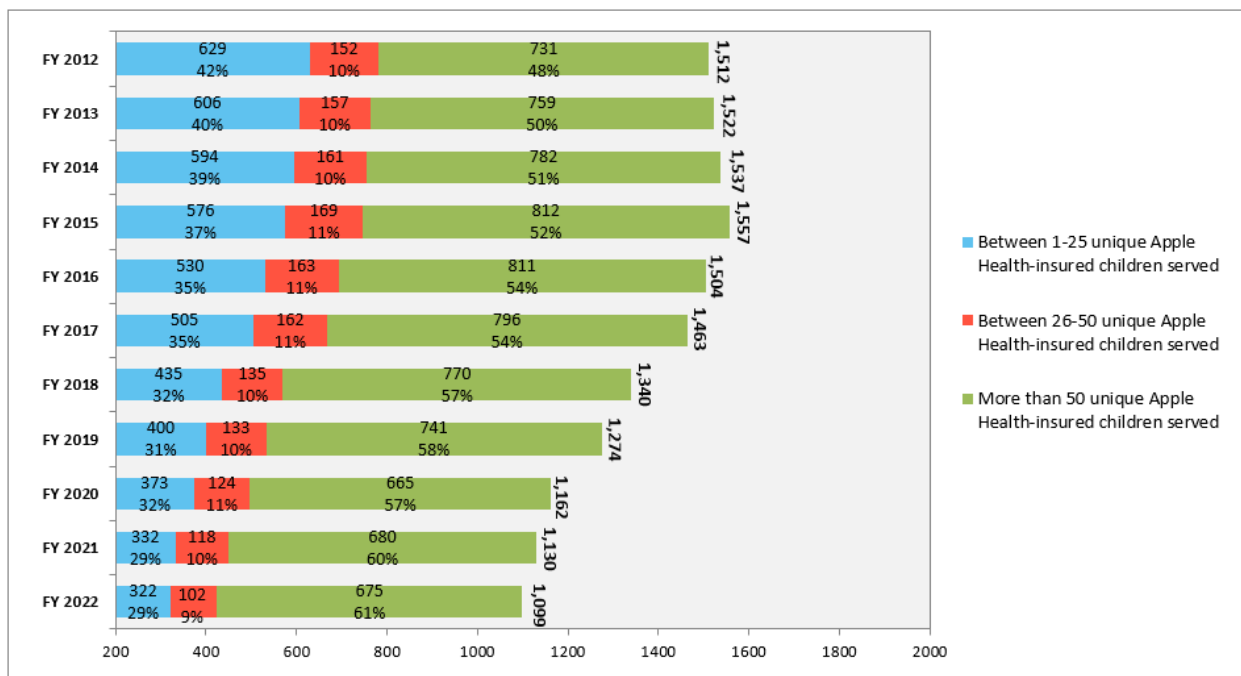
Source: Washington State Health Care Authority, Apple Health Dental Services Enrollment and Utilization Data

Providers

Non-FQHC dentists served more Apple Health-enrolled children than adults because, in general, more children use dental services.

Between FY 2016 and FY 2019, the total number of clients who received care from non-FQHCs remained steady. In FY 2020, the number of clients who received care decreased by 10% (8% among children and 19% among adults) due to the impact of the pandemic on dental care. However, patients access to care slowly recovered in the subsequent 2 years. In FY 2022, patient volumes increased by 2% (12% among adults and 0.3% among children).

Non-Federally Qualified Health Center Providers and Number of Apple Health-enrolled Children Served FY 2012 – FY 2022



Notes:

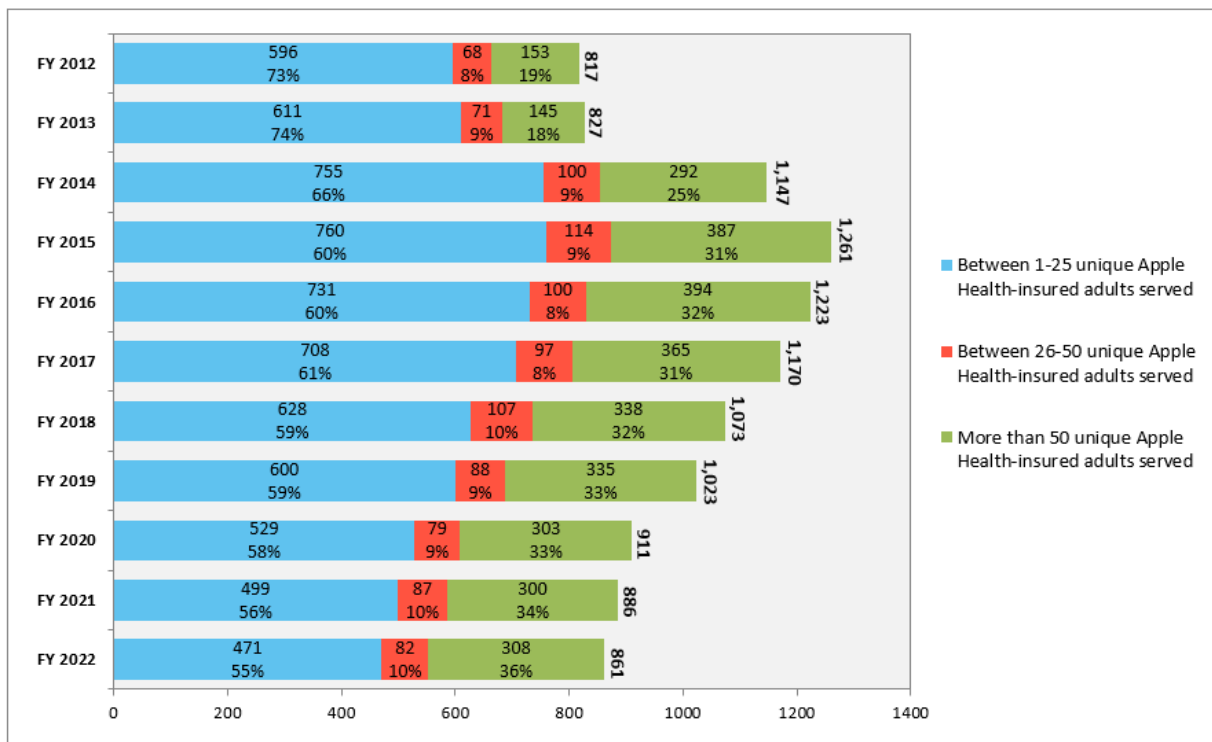
Dental providers were identified through service provider taxonomy codes. Non-FQHC providers include unique individual dentists who billed Medicaid for dental services (dentists may all be working at the same clinic).

Providers

Between FY 2014 and FY 2020, slightly more than half of non-FQHC providers served 50 or more unique Apple Health-enrolled children ages 20 and under, while the remaining providers (39%-49%) served less than 50 unique Apple Health-enrolled children. In FY 2022, 61% of non-FQHC providers served 50 or more unique Apple Health-enrolled children, a 27% increase in the last 10 years).

Non-Federally Qualified Health Center Providers and Number of Apple Health-enrolled Adults Served FY 2012 – FY 2022

Providers



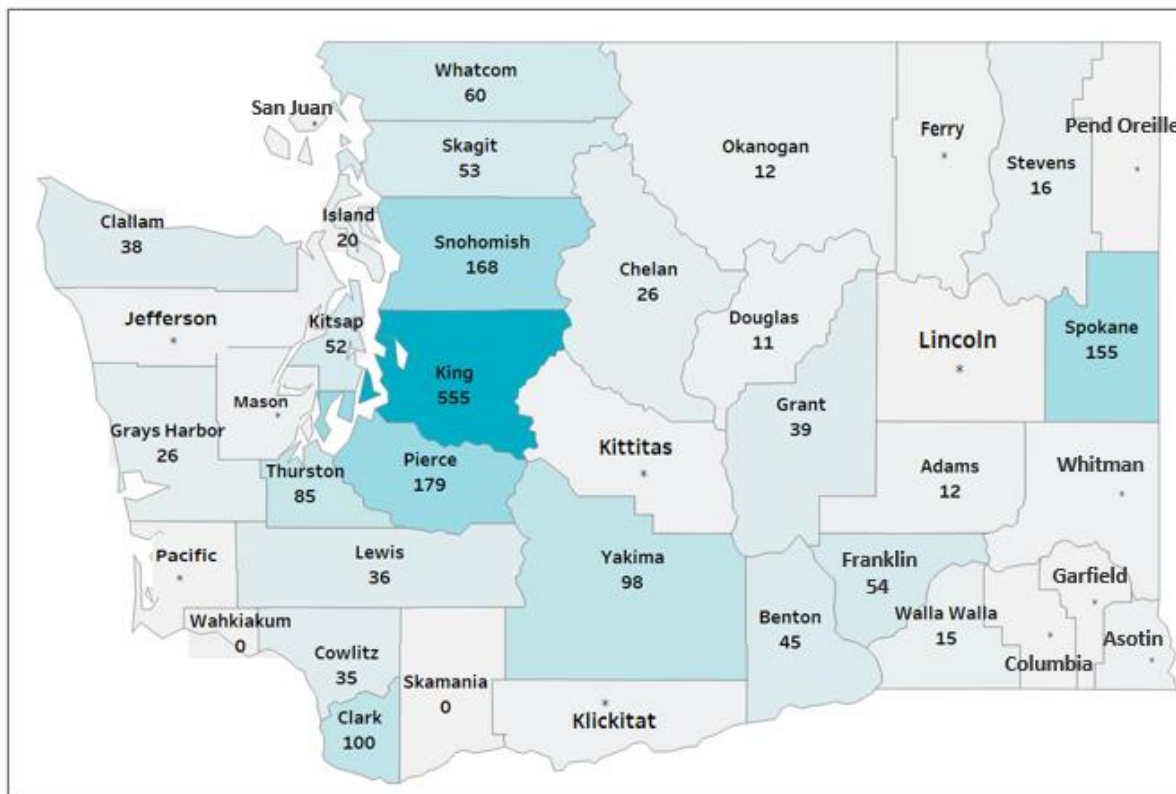
Notes:

Dental providers were identified through service provider taxonomy codes. Non-FQHC providers include unique individual dentists who billed Medicaid for dental services (dentists may all be working at the same clinic).

The majority (82%-64%) of non-FQHC providers served 50 or fewer unique Apple Health-enrolled adults, while the remaining providers (18%-31%) served more than 50 unique Apple Health-enrolled adults.

Overall, the percentage of providers serving more than 50 adults has been gradually increasing. After the adult dental restoration, the percentage of non-FQHC providers who served more than 50 adults increased by 89% (from 19% in FY 2012 to 36% in FY 2022).

Dental Providers Serving Apple Health-enrolled Clients, FY 2022



Statewide Dental Providers Serving Apple Health: 1,629

Notes:

Total providers include all types of unique individual dental providers identified through Provider Taxonomy Codes and aggregated using Service Provider's NPI (providers may all be working at the same clinic). Providers may be practicing in FQHC or private practice setting.

*Measures for locations with 1-10 dentists are not shown to protect confidentiality

Providers

The number of dental providers accepting Apple Health-enrolled clients and billing for dental services in FY 2022 varies by county with fewer than 10 providers in some counties, indicated by light shading, and a high of 555 in King county, indicated by dark shading.

Washington State Dental Workforce, 2022

Providers

Dentists with Washington Licenses: Number and Percent by State

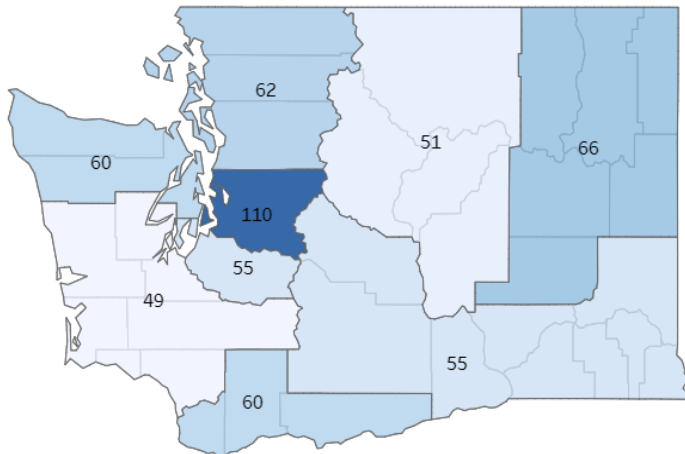
Total Dentists licenses with address in:	2007	2009	2016	2022
Washington	4,654	4,637	5,326	5,756
Oregon	299	306	255	250
Idaho	47	49	55	68
Other	771	688	663	537

Note: Includes dentists through age 75.

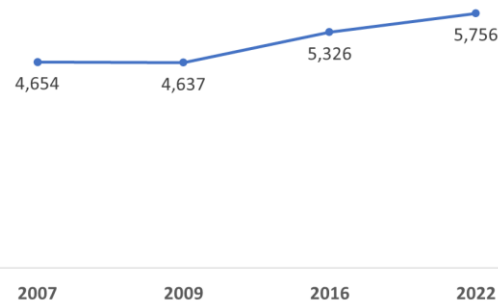
Source: Washington State Department of Health, Health Professional Licensing Data System 2022, 2016, 2009, and a 2007 survey of WA dentists.

Washington state dentists, with a license address in Washington, were unevenly distributed across Washington’s counties and its Accountable Communities of Health (ACH). In King County (Healthier Here), the most populous ACH in Washington, there were 110 licensed dentists per 100,000 population. All other ACHs had a dentist-to-100,000 population ratio of less than 70.

Licensed Dentists per 100,000 population in Washington ACH



Number of Dentists with Washington Licenses



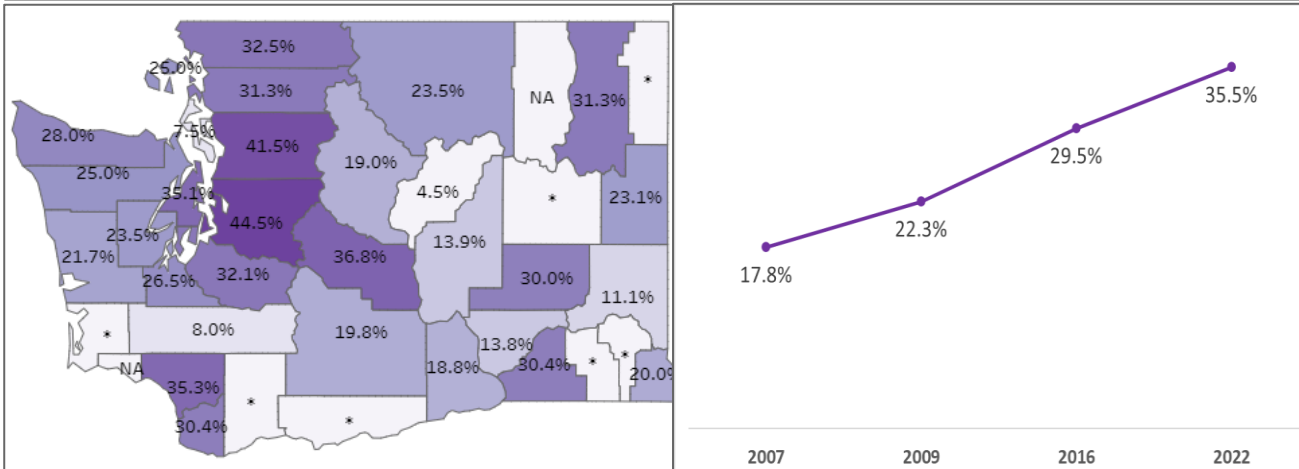
Note: 2022 licensure data from the Washington State Department of Health includes the following dentist licenses: Dentist License (DENT), Dentist Faculty UW License (DEFC), Dentist Resident Community License (DERE), and Dentist Resident Postdoctoral License (DEUW).

Source: University of Washington Center for Health Workforce Studies, 2023. Available from [Washington Oral Health Workforce Tracking Program – UW CHWS](#)

Providers

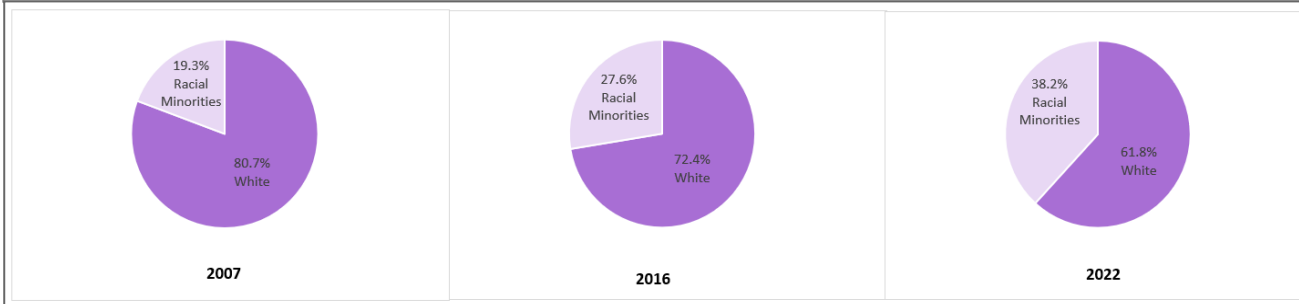
Washington State Dental Workforce, 2022

Percent of Dentists Who are Female in Washington State, 2022



More women are becoming dentists in Washington state, consistent with the national trend. In Washington, the proportion of women dentists increased from 17.8% in 2007 to 35.5% in 2022.

Washington Dentists by Race/Ethnicity, 2007, 2016, 2022



The racial and ethnic diversity of Washington's dental workforce has been increasing since 2007. However, several groups remain underrepresented (i.e., African American, American Indian/Alaska Native, Native Hawaiian/Pacific Islander, and Hispanics).

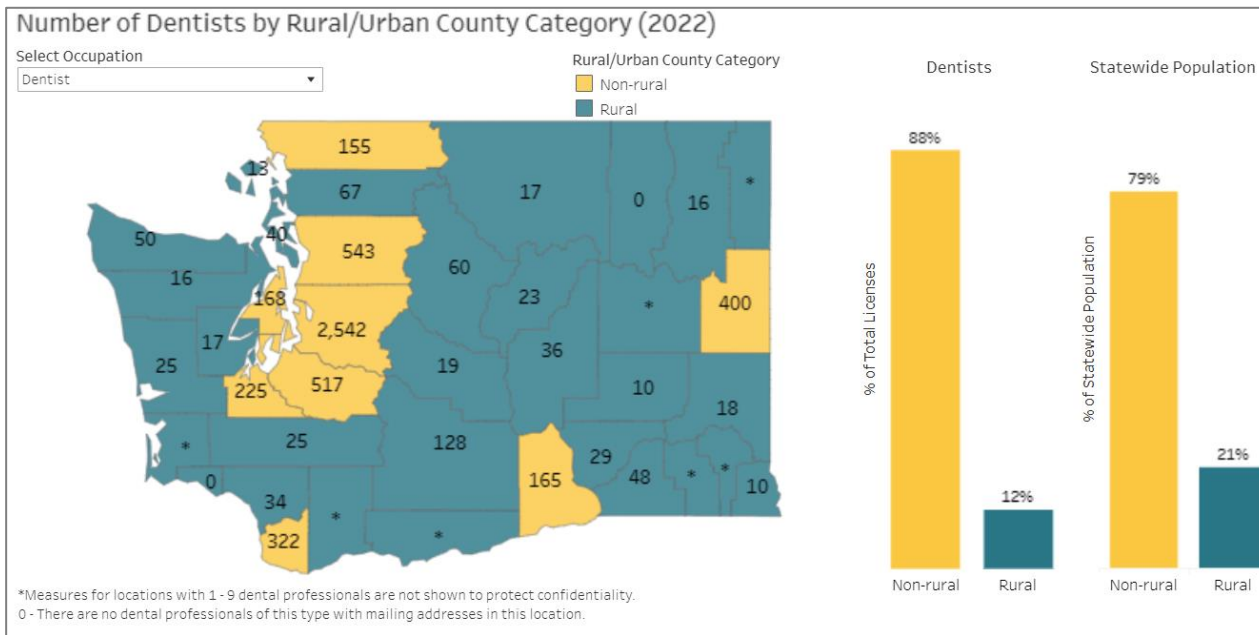
Sources: University of Washington Center for Health Workforce Studies, 2023. Available from [Washington Oral Health Workforce Tracking Program – UW CHWS](#)

Health Policy Institute ADA American Dental Association US Dentist Demographics Dashboard available from: [U.S. Dentist Demographics | American Dental Association \(ada.org\)](#)

Washington State Dental Workforce, 2022

Urban vs. Rural

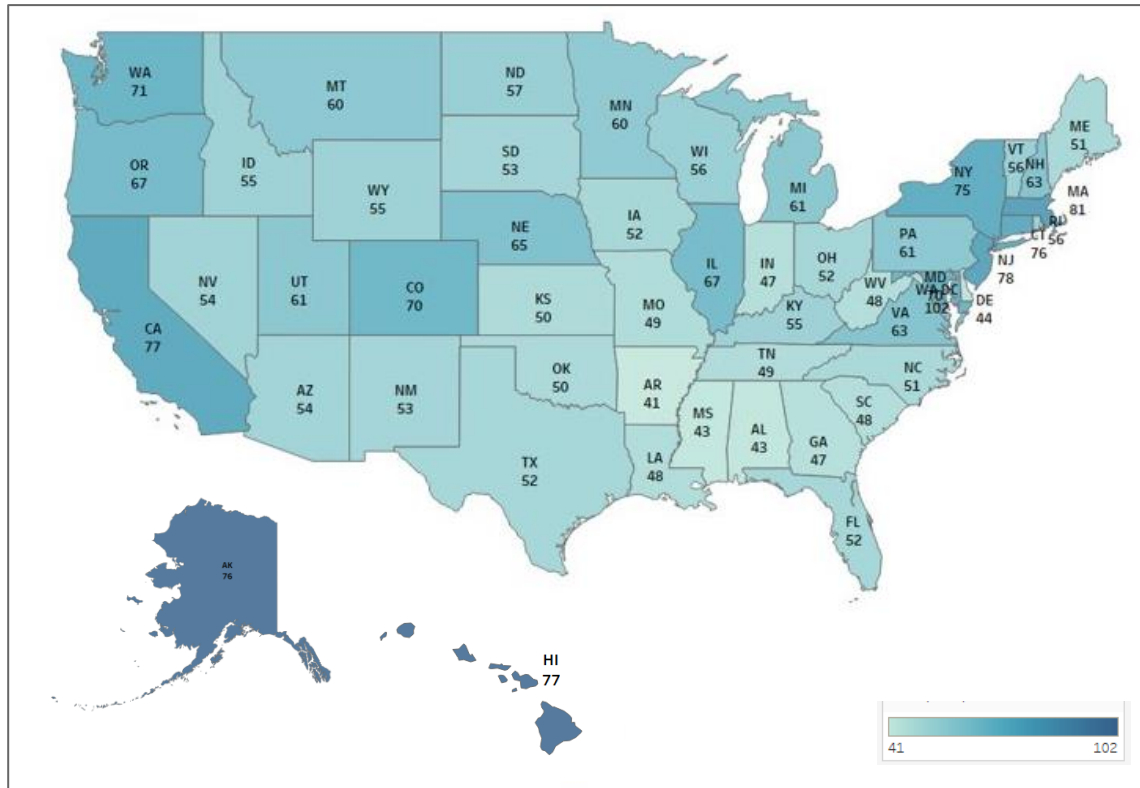
Providers



Rural areas in Washington state had a disproportionately fewer dentists compared to urban areas.

Only 12% of dentists were in rural places in Washington, compared to 21% of the state's population.

Dentist-To-Population Ratios—Washington State vs. Other States, 2022

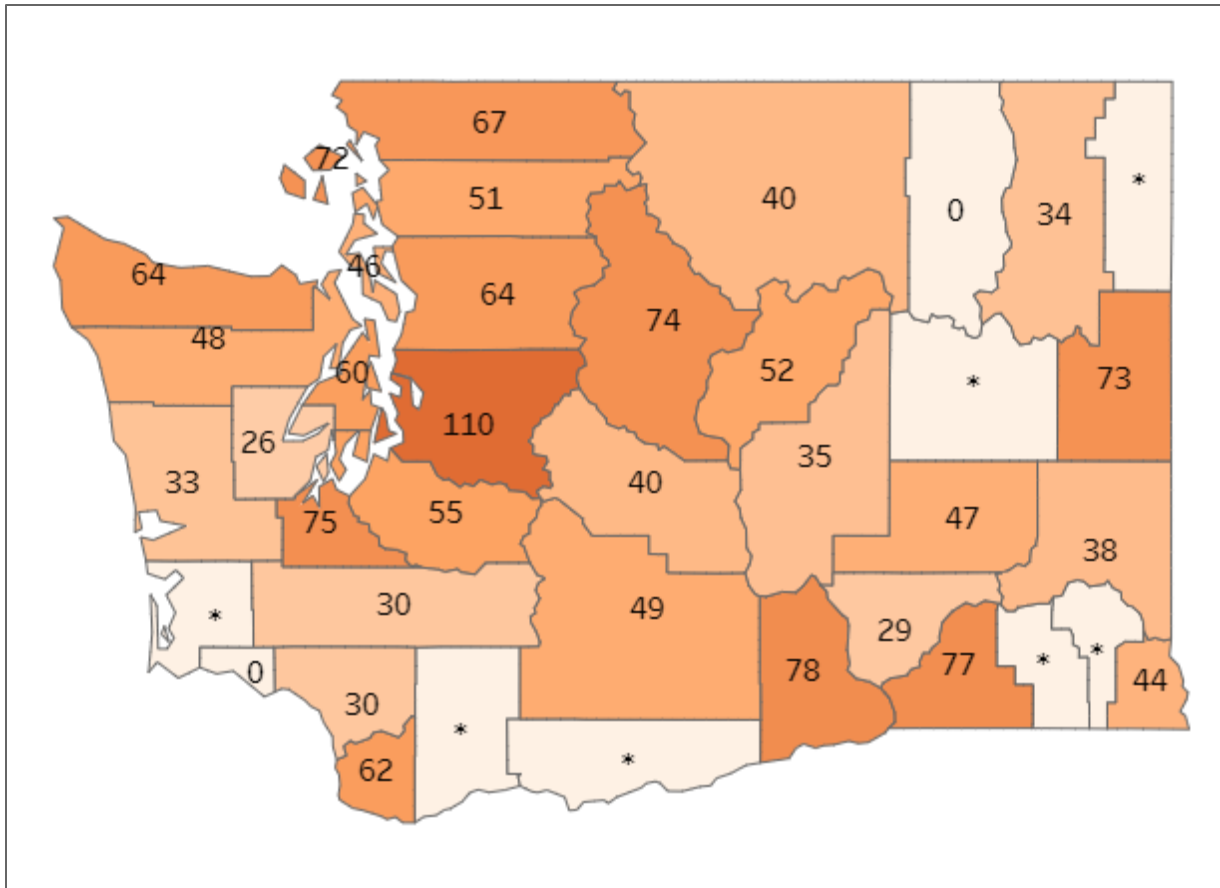


Providers

In 2022, Washington state ranked 9th in the nation for dentists per capita (71 dentists per 100,000).

It had a higher dentist to population ratio than the national average of 61 per 100,000.

Washington Dentist-To-Population Ratios– by County, 2022



Note: *Measures for locations with 1-9 dentists are not shown to protect confidentiality

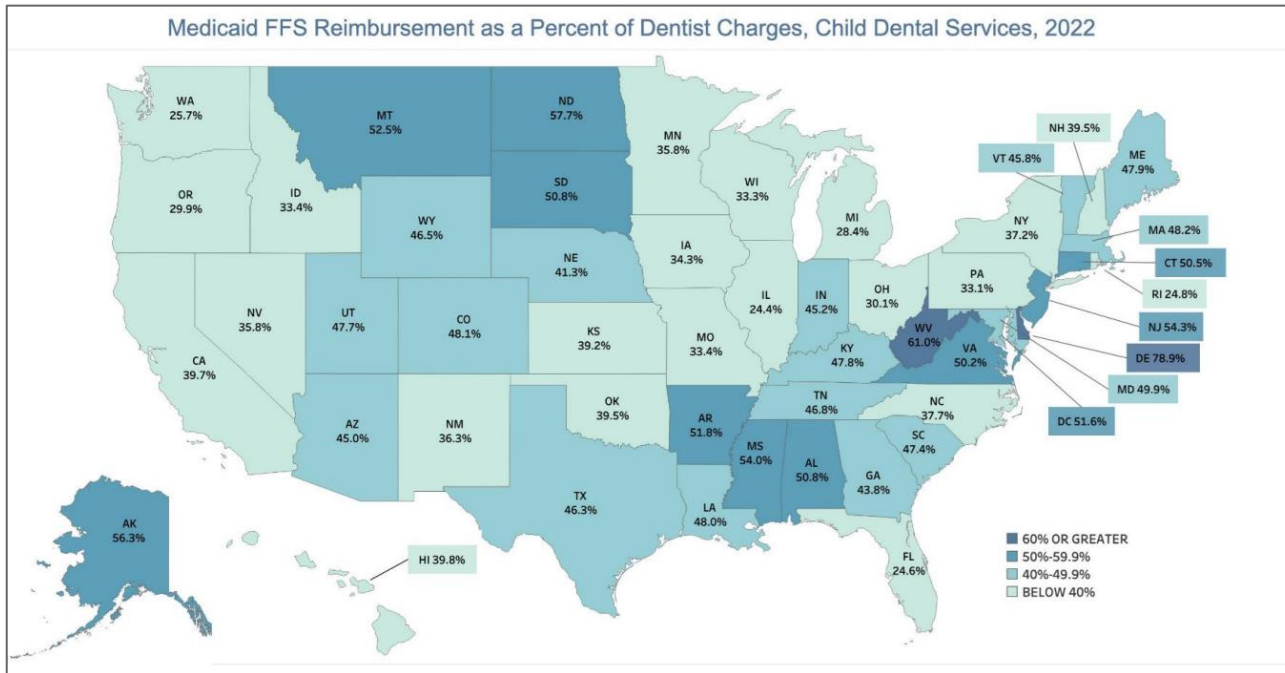
Providers

Although Washington state has a higher dentist to population ratio than the national average and has 1 of the 10 highest ratios in the nation (71 per 100,000 compared to 61 nationally), dentists are not evenly distributed throughout the state.

The dentist-to-population ratio varies widely by county. King County (110 dentists) has the highest dentist ratio per 100,000 people. There are 15 counties with a ratio lower than 50 dentists per 100,000 people.

Children's Medicaid Reimbursement Rates Washington vs. Other States

Providers



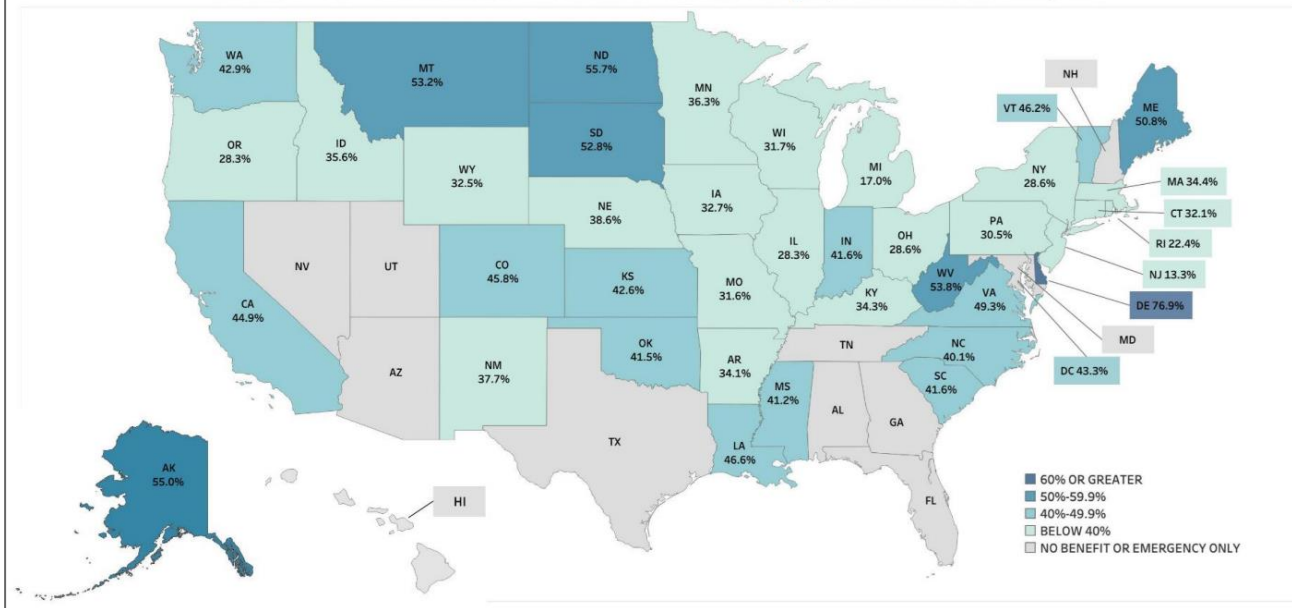
In 2022, Washington state's Medicaid fee-for-service dental reimbursement rate for children compared to private dental insurance reimbursement was the fifth lowest in the nation (25.7%). That's significantly lower than the national average (43.2%).

*This data does not reflect the rate increases that took effect in January 2023 for Washington's children's Medicaid program.

Adult Medicaid Reimbursement Rates Washington vs. Other States

Providers

Medicaid FFS Reimbursement as a Percent of Dentist Charges, Adult Dental Services, 2022

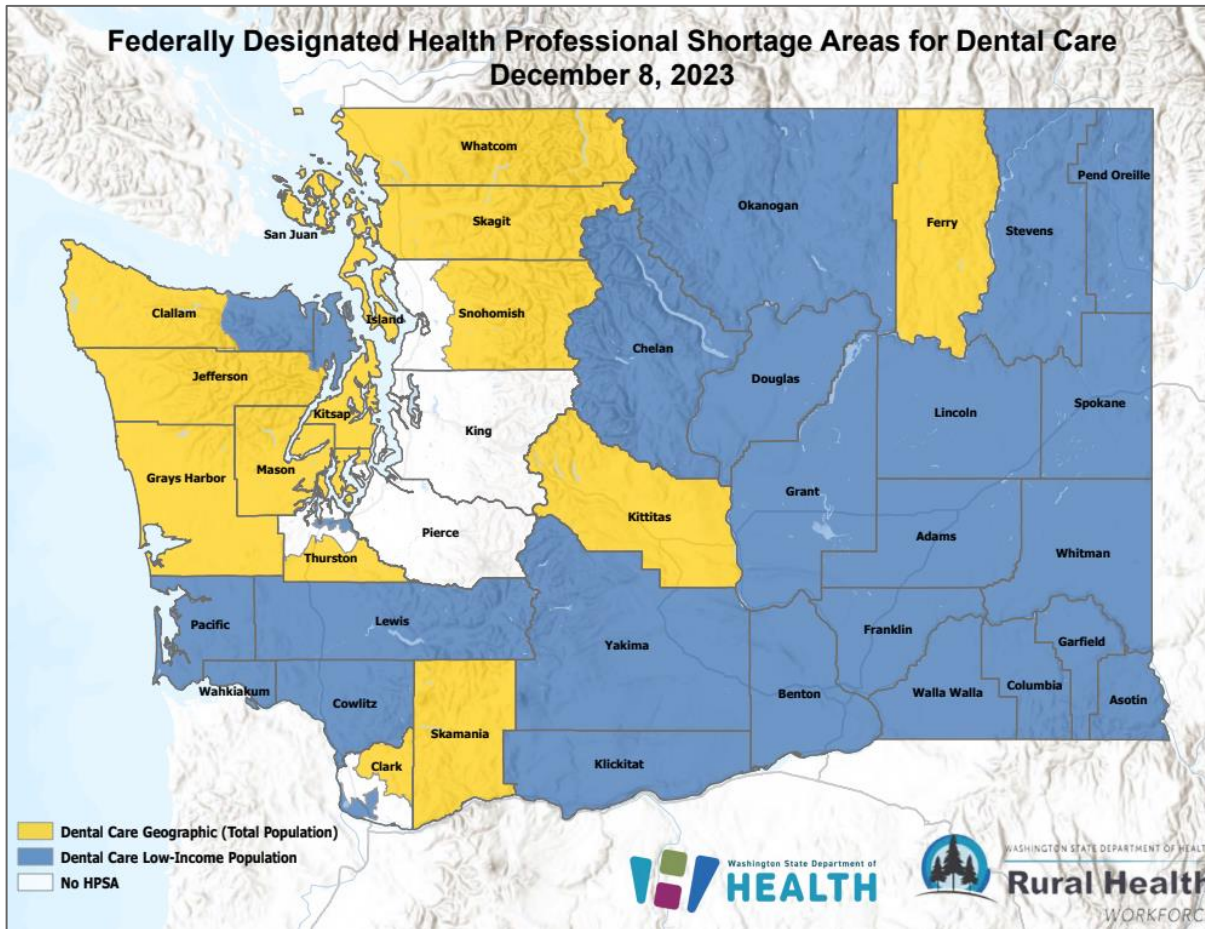


In 2022, Washington state’s Medicaid fee-for-service dental reimbursement rate for adults was 42.9%. That compares to the national average of 39.4%.

*This data includes the Medicaid adult dental rate increases in Washington which took effect in 2021.

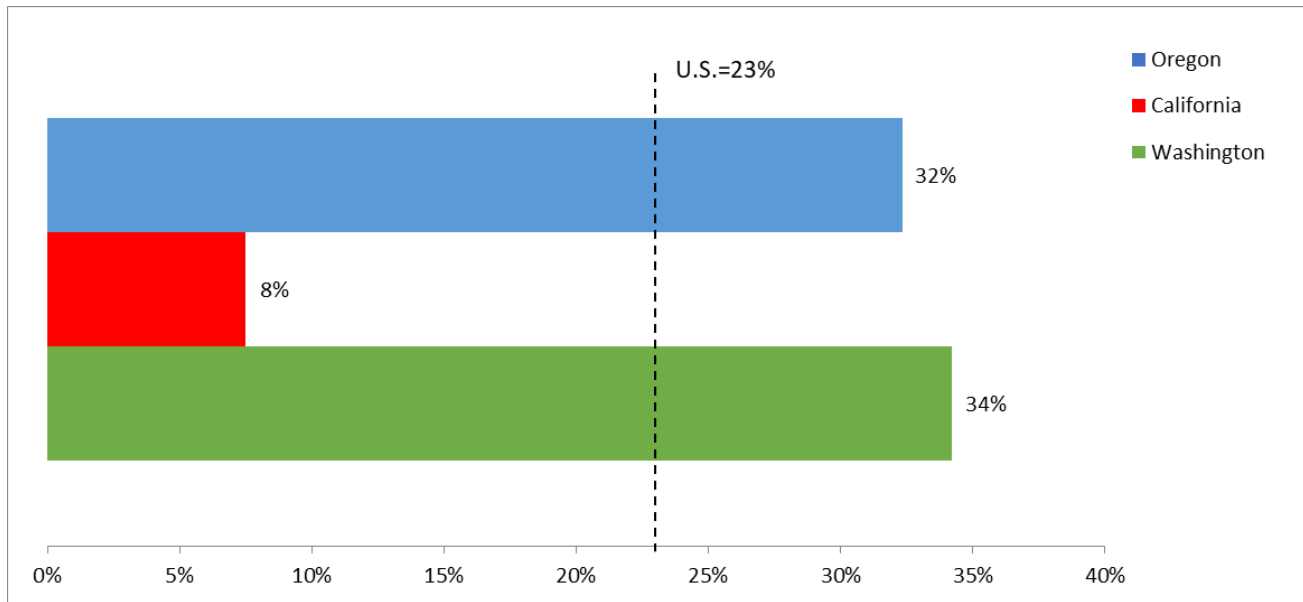
Federally Designated Health Professional Shortage Areas for Dental Care, 2023

Providers



In 2023, 37 of the state's 39 counties were designated as whole- or partial-county dental health professional shortage area (HPSA). The shortage is related to the number of providers relative to the area's population, the capacity of providers in surrounding areas to meet the demand, and/or a shortage of dentists serving people who are low-income.

Percentage of Population Living in a Dental Health Professional Shortage Areas, 2022 U.S. vs. West Coast States



Providers

Nearly 34% of people in Washington state live in a dental health professional shortage area, which is higher than the national average of 23%.

Providers of Oral Health Services Key Findings

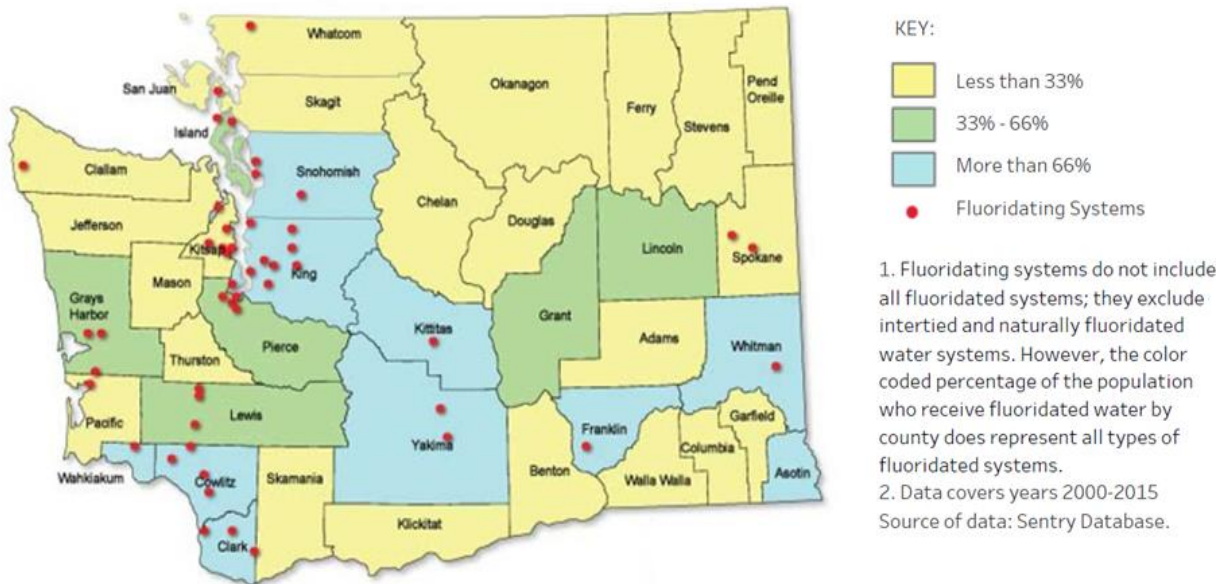
- Washington state has a higher dentist-to-population ratio than the national average. However, dental providers are unevenly distributed across Washington's counties. Rural areas of Washington have a disproportionately low supply of dental providers compared with urban areas.
- In FY 2022, 49 cents of every dollar for Apple Health dental services went to private practice providers, while 46 cents went to Federally Qualified Health Centers (FQHCs).
- The portion of dental users who received care from FQHCs has increased for the last few years. FQHCs served nearly one-third of children and nearly two-thirds of adults who received dental care.
- The total number of private practice providers (including not-for-profit) serving the Apple Health-enrolled population has decreased in the last 7 fiscal years. However, the volume of patients served has increased. The number of non-FQHC providers who served 50 or more unique Apple Health-enrolled children and adults increased by 17%.

Fluoridation

An Upstream Prevention Strategy

Fluoridation: An Upstream Prevention Strategy

People Who Receive Dentally Significant Fluoride (0.6 - 2.0 mg/L) from Public Water Systems



Key Water System Fluoridation Concepts

Fluoridated Water
Water that has dentally significant fluoride levels of 0.6 - 2.0 mg/L

Fluoridating Systems
Water Systems whose staff adjust the water to optimal levels for dental health

Intertiered Fluoridated Systems
Water systems that purchase water from fluoridating systems

Naturally Fluoridated Systems
Water systems that sell water with 0.6 - 2.0 mg/L of fluoride

The Centers for Disease Control and Prevention recommends community water fluoridation (CWF) as an upstream strategy that prevents cavities by about 25% in both children and adults. CWF is proven effective for people of all ages, education levels, and socioeconomic and insurance statuses. For children, it reduces oral health disparities.

Washington state has more than 50 water systems that provide community water fluoridation to all their customers. Despite this, only 56% of residents on public water systems have access to water with enough fluoride to prevent tooth decay.

CWF saves money for communities and health care systems. In cities with populations of 20,000 or more, fluoridation is estimated to save \$38 in dental treatment costs for every \$1 spent. Similarly large cost savings are seen when the calculation includes smaller communities (\$20 to \$1).

Policy Implications and Additional Data Needs

Policy Implications and Opportunities

Washington state has made significant progress to improve our oral health system, especially for children. Yet the data show that much work remains to address disparities and ensure everyone can access the care they need, when and where they need it. That is how we can ensure that members of all our communities are able to reap the benefits of good oral health, including improved school readiness and learning, increased employability, reduced medical expenditures, avoidance of dental pain, better overall health, and the sense of wellbeing that comes from a healthy smile.

Recommended Policy Strategies:

- Invest in More Utilization for Children.
 - Achieve parity between Apple Health medical utilization and Apple Health dental utilization for kids. In 2022, the percentage of children under age 2 accessing dental care was 25%, while the portion of similarly aged children receiving well-child visit was 65%. As a result of Access to Baby and Child Dentistry (ABCD), our state has made great strides in children's access to dental care. However, we must do more to address enduring disparities.
 - Expand successful programs, including ABCD, and build capacity at Federally Qualified Health Centers (FQHCs). Build on recent increases in provider reimbursement rates to better ensure a more sustainable program for providers and patients.
 - Focus resources to invest in strategies that reach children who are not currently connected to care. This includes dental therapists in Tribal clinics—and soon in FQHCs—expansion of teledentistry and other community-based care, and support for community health workers.

Policy Implications and Opportunities

- Invest in More Utilization for Adults.
 - Build on the important investments the legislature made in the adult dental Medicaid program in 2021. Continue to preserve the comprehensive adult dental benefit, set a goal of increasing overall adult Apple Health dental utilization, and increase the share of adult dental visits that are for routine care while reducing the proportion of visits that are for dental emergencies or urgently needed treatment.
 - Expand access points, especially in parts of the state with few providers, through increased dental capacity at FQHCs, dental residency programs, teledentistry, and other oral health workforce initiatives.
- Increase Prevention.
 - Expand community water fluoridation.
 - Support sealant programs and use of silver diamine fluoride (SDF), interim therapeutic restoration, and other minimally invasive and preventive techniques.
 - Expand hygiene care at senior facilities and other community settings.
 - Incentivize true whole-person care, integrating oral, physical, and behavioral health to diagnose and treat disease early.

Policy Implications and Opportunities

Washington state's longstanding commitment to health care access and innovation, including Cover All Kids, Medicaid expansion, embracing public/private partnerships to pilot new ideas, and state funding to support connections to care (e.g., support for DentistLink—a no-cost referral service that connects people in Washington state to dental providers who accept Apple Health (Medicaid) or people without insurance) makes us well-positioned to seize these opportunities. Also, a variety of stakeholders in Washington recognize the importance of oral health for their constituencies and are potential partners in this work.

Additional Data Needs

Due to data limitations, we were not able to report or provide detailed analysis on Apple Health utilization in several domains. Additional information on the following data would be helpful to inform future policy:

- **Utilization of oral health services by pregnant and post-partum people**—Better understanding the proportion of pregnant and post-partum people who access oral health services could inform strategy to ensure a higher number receive care to prevent disease among their babies and toddlers.
- **Utilization of oral health services by adults with chronic health conditions**—Given recent evidence that people with health conditions, such as diabetes, have significantly lower medical costs when they receive oral health care, the opportunity exists to examine progress in Washington to get these populations into dental care.
- **Utilization of oral health services by race and ethnicity**—Having health information systems that capture detailed data on race, ethnicity, language, and other characteristics to monitor oral health equity is of utmost importance to eliminate disparities in oral health and improve quality of care. Apple Health dental enrollment and utilization data stratified by race and ethnicity could provide valuable information about the extent and impact of health care disparities.

Additional Data Needs

- **Emergency department (ED) dental visits**—According to the Washington State Hospital Association, dental visits are a top reason Apple Health-enrolled patients visit the ED. Better quantifying the cost and types of patients (e.g., age, health conditions, etc.) who seek care in the ED could inform strategies to divert these visits.
- **Dental treatment requiring operating room use**—Children, and some adults with disabilities, who need treatment for severe tooth decay often need general anesthesia in an operating room to receive care. Capturing these trends would provide a gauge for progress to reduce these severe cases.

Resources and Appendices

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Slide 6-7: Overview of the WA Apple Health Dental Program: Children’s Coverage

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Slide 43: Percent of Child Enrollees Using at least One Service by Age Group, FY 2008 vs. FY 2022

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Oral Health Dashboards

Washington State Oral Health Status Dashboard:

<https://arcorafoundation.org/oral-health-status-dashboard/>

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About the Sponsor

Arcora Foundation completed this report to better understand the use and expenditures associated with Washington's Apple Health dental service. Arcora advances oral health and equity across Washington state. Their mission is to bend the arc of oral health toward equity. They advance systems changes through partnering with communities and using evidence-based approaches to prevent disease, increase access to dental care, and ensure that oral health is part of whole person care. Arcora is the foundation of Delta Dental of Washington, the state's largest dental benefits company.

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Methods

Dental Claims Data:

The expenditure and utilization analyses for this presentation were based on the Washington Apple Health paid claims data provided by the HCA and completed by Arcora Foundation. Data are included for Fiscal Year 2008 through Fiscal Year 2022.

The dental procedure codes are grouped into sections as follows:

- I. Diagnostic D0100-D0999. Examples of services include exams and x-rays.
- II. Preventive D1000-D1999. Examples of services include application of fluoride and sealants.
- III. Restorative D2000-D2999. Examples of services a crown which may be used to restore an already broken tooth or a tooth that has been severely worn down.
- IV. Endodontics D3000-D3999. An example of a service is a root canal.
- V. Periodontics D4000-D4999. Examples of services include the removal of plaque and tartar from under the gums.
- VI. Prosthodontics, removable D5000-D5899. An example of a service is removable dentures.
- VII. Maxillofacial Prosthetics D5900-D5999. Examples of services include orbital and other facial prosthetics.
- VIII. Implant Services D6000-D6199. Examples of services include the surgical placement of implants.
- IX. Prosthodontics, fixed D6200-D6999. Examples of services include permanent retainers.
- X. Oral and Maxillofacial Surgery D7000-D7999. Examples of services include dental extractions.
- XI. Orthodontics D8000-D8999. Examples of services include dental braces.
- XII. Adjunctive General Services D9000-D9999. Examples of services include anesthesia and other services related to dental treatment.

Data for Federally Qualified Health Center (FQHC) services based on the specific dental procedures in the twelve groups above were not available. Therefore, all FQHC-based dental care was classified as “Other.” In 2010 the Washington State Department of Social and Health Services (DSHS) replaced its Apple Health Management Information System with a new payment processing system named ProviderOne. ProviderOne is now the primary provider payment processing system for DSHS. Prior to that point, not all the dental FQHC expenditures were reported in the dental data. Consequently, total dental expenditures that include FQHC data for FY 2008 through FY 2010 are incomplete and therefore FY 2008 through FY 2010 data are not included in the expenditure analysis for this report.

Methods

Enrollee Demographic Data:

The enrollee demographic data for this presentation were based on the Washington Apple Health paid claims data as provided by Health Care Authority. Demographic data (e.g. age and county) for a single enrollee may vary by claim within a given year. However, in order to track an enrollee's utilization and expenditures over time based on demographic factors it was necessary to have a single indicator for a given year for many of these demographic fields. Subsequently, demographic information was based on the value for which the enrollee had the most months of eligibility, e.g. if the enrollee was in King County for eight of the 12 months, the enrollee's county was designated as King for the year.

Access/Utilization Measures:

There are many definitions of and methods by which to measure access to care and utilization. One of the most basic is a utilization rate, i.e. the proportion of a population that uses a service in a specified time period. The numerator in this equation is typically an unduplicated count of users, i.e. an individual is only counted once regardless of the number of times that person is seen or the number of services received. The denominator, however, can be specified in several different ways, each of which tends to influence how the data are interpreted.

Most of the analyses used an unduplicated count of enrolled members, referred to as "enrollees" over the course of the year. This reflected the aggregate number of people who had the benefit of dental services at any time during the period analyzed. However, it is important to note that in the Washington Apple Health program, like all Medicaid programs, over the course of a year, some individuals may be eligible for a month or two while others may be eligible for the entire year. Thus, it isn't reasonable to assume that people who have been enrolled for a month have had the same opportunity to receive dental care as those who have been enrolled for a year.

Sealants:

CMS' Oral Health Initiative seeks to improve children's access to dental care, with an emphasis on early prevention. One of the initiative goals is to increase the proportion of Apple Health and CHIP children ages six to nine who receive a sealant on a permanent molar.

Providers' Data:

All providers were identified through Provider Taxonomy codes then aggregated using Service Provider NPI numbers. A complete dataset of Provider Taxonomy Codes is available in the link below:

<https://data.cms.gov/Medicare-Enrollment/CROSSWALK-MEDICARE-PROVIDER-SUPPLIER-to-HEALTHCARE/j75i-rw8y/data>

Methods

Top Procedures by Expenditures and Users:

The Top Procedures by Expenditures and the Top 10 Procedures by Users slides contain simplified procedure names. Below are the full procedure names and procedure codes:

- **Adolescent Orthodontic Treatment:** Comprehensive Orthodontic Treatment of the Adolescent Dentition (D8080)
- **Stainless Steel Crown:** Prefabricated Stainless Steel Crown (D2930)
- **Periodic Oral Exam:** Dental - Periodic Oral Examination (D0120)
- **Composite Filling - 2 Surfaces:** Resin-Based Composite - 2 Surfaces Posterior (D2392)
- **Fluoride- Child:** Topical Application of Fluoride (Prophylaxis Not Included) - Child (D1203)
- **Cleaning – Child:** Prophylaxis - Child (D1120)
- **Composite Filling - 1 Surface:** Resin-Based Composite - 1 Surface Posterior (D2391)
- **Sealant:** Sealant - Per Tooth (D1351)
- **Extraction:** Extraction Erupted Tooth/Exposed Root (D7140)
- **Comprehensive Oral Exam:** Comprehensive Oral Evaluation Orthodontics (D0150)
- **X-Rays Two Bitewings:** Bitewings-Tow Films (D0272)
- **X-Rays Complete Intraoral:** Dental- Intraoral-Complete Series (D0220)
- **X-Rays Intraoral Periapical First:** Dental Intraoral Periapical First Film (D0230)

Apple Health Expenditures Adjusted to 2022 Dollars:

Calculating real dollars: Price inflation causes the value of a dollar to fall over time, and so the same dollar amount in two different years will usually represent different amounts of purchasing power. To counteract this problem, analysts typically adjust dollar figures to account for inflation. Figures that have not been adjusted for inflation are said to be in “nominal dollars,” while those that have been adjusted are in “real dollars.” Converting costs to real dollars allows us to compare costs incurred in different years. For our analysis, we used the medical consumer price index to capture changes in price related to medical services.

Definitions

- **Adjunctive General Services:** Services performed in addition to another procedure, such as anesthesia, only when the procedure is directly related to the original procedure.
- **Continuously Eligible:** An enrollee who was enrolled in the dental program for 11 or more consecutive months during a fiscal year.
- **Decay Experience:** Any evidence of past or present tooth decay, an indicator for the disease known as “dental caries,” or “caries”. This measure is reflective of progress with prevention efforts.
- **Diagnostic Services:** Services used to determine the cause of an illness.
- **Endodontics:** A dental specialty concerned with treatment of the root and nerve of the tooth.
- **Fixed Prosthodontics:** Replacement of missing teeth with artificial materials, such as a bridge or denture, in a permanent fashion.
- **Health Professional Shortage Area:** A HPSA is a geographic area wherein the population has an inadequate number of dentists to serve their dental needs. The designation is used primarily for the purposes of loan repayment for dentists and hygienists.
- **Maxillofacial Prosthetics:** Surgery of, pertaining to, or affecting the jaws and the face.
- **Oral Surgery:** Procedures used to correct problems or damage to the mouth, teeth, or jaw by incision or manipulation.
- **Orthodontics:** A dental specialty concerned with straightening or moving misaligned teeth or jaws with braces or surgery.
- **Periodontics:** A dental specialty concerned with the treatment of gums, tissue, and bone that support the teeth.
- **ProviderOne:** The Medicaid Management Information System that is the State's Medicaid Payment system managed by HCA.
- **Other:** Comprised of procedures codes T1015, Clinic Services-FQHC Encounter and T2035, Utility Services Anesthesia, where the former accounts for 97% of the expenditures for these two services categories.
- **Preventive Services:** Services performed to help avoid sickness or other problems in the mouth.
- **Rampant Decay:** The presence of seven or more teeth with any caries experience, also considered generalized tooth decay. This measure is used to designate increased severity of disease
- **Removable Prosthodontics:** Replacement of missing teeth with artificial materials, such as a bridge or denture, in a temporary fashion.
- **Restorative Services:** Procedures used to correct problems or damage to the mouth, teeth, or jaw without surgery.
- **Sealant:** Plastic resin placed on the biting surfaces of teeth to prevent bacteria from attacking the enamel and causing tooth decay.
- **Untreated Decay:** The presence of an obvious breakdown of the enamel surface (cavitated lesions only), as readily observed by the dental screener. This measure is reflective of problems with access (barriers) to receiving dental care.
- **User:** An enrollee who received one or more services.