Washington State
Apple Health Dental Program
Facts and Figures
FY 2008 – FY 2020

ARCORA
The Foundation of Delta Dental of Washington

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Overview and Summary

Introduction

Oral health is a critical component 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 (Washington State 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 (27%) who receive dental care through Apple Health.

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 tackle both the social and commercial determinants that create these inequities.

Note: According to Health Care Authority Apple Health Program Enrollment Reports, the number of Washingtonians enrolled in Apple Health in July 2021 was 2,092,204. 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.

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 2020, national data revealed that 35% of adults in Washington state have lost at least 1 tooth because of oral disease, while 14% reported experiencing pain in the mouth very often or occasionally.
- Based on the 2015 American Dental Association (ADA) Oral Health and Well Being National Survey, 15% of adults in Washington state reported experiencing anxiety and 16% reported difficulty sleeping due to the condition of their teeth. Low-income adults are most likely to report having problems due to the condition of their mouth and teeth.
- Tooth decay is the most common 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 salvia 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.

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.

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 covering all kids in the face of an unprecedented economic crisis by maintaining investments in children's coverage and outreach to families. It raised the eligibility for Apple Health for Kids to children living in families from 250% of Federal Poverty Level (FPL) to 312% FPL.
- Children through age 20 are now eligible for a complete range of dental services, including preventive and restorative procedures.

National Picture

States are required by federal law to 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% FPL ($43,440 for a family of three in 2020). Families between 210% and 312% FPL pay a small monthly premium. Families do not pay a copay or deductible, and there is no "annual maximum" limit to the coverage.
- The COVID-19 pandemic has had and continues to have an impact on the dental care delivery system, the dental workforce, and patients' access to care. In order to conserve PPE supplies, Gov. Inslee issued an executive order closing dental offices (as well as medical offices) to non-emergency care for 2 months in spring 2020. Following office re-openings, 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 reduced utilization rates.

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

Sources:
https://www.hca.wa.gov/free-or-low-cost-health-care/program-administration/health-care-children
https://aspe.hhs.gov/poverty-guidelines

National Picture

States are required by federal law to 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):** Currently in every county, ABCD connects Apple Health-enrolled children under age 6 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 on preventing 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:** 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 WA Apple Health Children Enrollees

- **ABCD Expansion Children Ages 6-12 with Disabilities:** Legislation passed during the 2018 and 2020 sessions expands 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.

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 are typically developing children and are considered to be at greater risk of developing dental disease. In addition, children with more severe conditions and from low-income families are particularly at risk of high dental needs and poor access to care. Therefore, developing programs that are focused on eliminating barriers to accessing dental care for these children, and other children with disabilities, is essential to closing the gap and ensuring oral health equity.

Overview of WA Apple Health Dental Program: Adult Coverage

- Washington state had adult dental coverage through Apple Health prior to 2011 when budget cuts went into effect, limiting most adults to emergency services, such as tooth extractions and antibiotics for 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% FPL. Older adults must have lower incomes to qualify for Apple Health.

Note: The Centers for Medicare and Medicaid Services 1915(c) waiver program covers certain medically needy and disabled clients.

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 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, Fiscal Year (FY) 2014 includes 6 months of adult dental benefits (Jan. 1, 2014 – June 30, 2014), while FY 2015 – 2019 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.
- The 2021-23 biennial operating budget includes 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 July 2021, 21 states (and D.C.) offer comprehensive Medicaid dental benefits to adults, 16 states provide limited benefits, 10 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.

Source: https://www.ada.org/-/media/project/ada-organization/ada/ada-org/files/resources/research/hpi/whitepaper_0721.pdf?rev=cf603f948e6a4dd09fb62386e3ee2083&hash=4986B3ED8A5FD4F99A1D28F61D3C2DA1

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% FPL ($30,305 for a family of 3 in 2021), 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.

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

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.

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

Oral Health Connections

- The 2017-19 state operating budget included a proviso authorizing the Oral Health Connections (OHC) pilot. This is a 3-year, 3-county pilot to apply 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.
- Pilot counties are Spokane, Thurston, and Cowlitz. Implementation is underway.
- OHC includes provider training and certification, enhanced provider reimbursement rates for a set list of services and patient and provider outreach and support.
- Pilot services launched in January 2019, and Arcora Foundation is supporting a robust evaluation (to be completed in 2023).

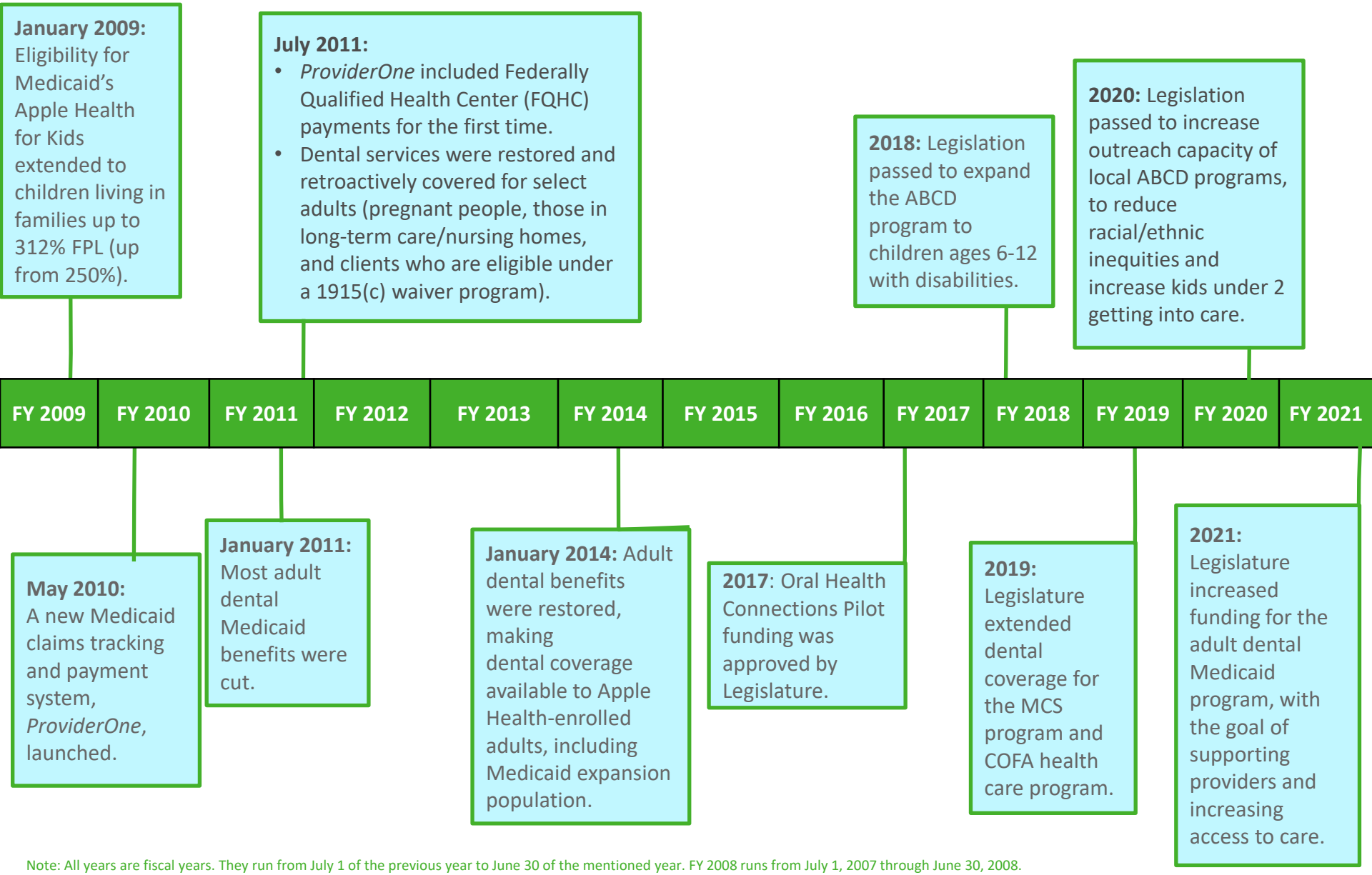
Enhanced Dental Benefits May Reduce Medical Expenditures

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 in the time period following periodontal treatment in pregnant and diabetic patients when compared to untreated controls.

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

Timeline for Changes Affecting WA Apple Health Dental Services and Claims



Note: All years are fiscal years. They run from July 1 of the previous year to June 30 of the mentioned year. FY 2008 runs from July 1, 2007 through June 30, 2008.
ProviderOne is the Medicaid Management Information System that is the State's Medicaid Payment system managed by HCA.

Report Background and Goals

Arcora Foundation commissioned Health Management Associates (HMA) in 2013 to examine dental services utilization and expenditures for Washington's Apple Health population. HMA completed a report in 2013 that identified oral health status and analyzed 5-year trends (2008-2012). Subsequent reports have been developed by Arcora Foundation utilizing a similar format and analysis methods.

Arcora Foundation is a non-profit founded and funded by Delta Dental of Washington, the leading dental benefits company in Washington state. Arcora Foundation analyzes oral health data and trends to be a resource for policymakers and healthcare leaders and to advocate for the importance of oral health. It has a data sharing agreement with the Health Care Authority (HCA) and receives the Apple Health dental data annually. The Foundation has analyzed the Apple Health dental utilization and expenditures since 2008.

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

All Washington Apple Health dental program Facts and Figures reports are reviewed and approved by the Health Care Authority prior to publishing.

Report Overview

- The report is divided into 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 were not presented in the report in the following slides: 23, 32-35, 49-51, and 75-76.
- Expenditure analyses include dental services paid by both federal and state funds.
- The following guide was applied in the analysis completed for this document:
  - Expenditure analysis excluded data for the period FY 2008 through FY 2010.
  - Total expenditure data for FY 2011 through FY 2020 includes FQHC expenditures.
  - Dental utilization for FY 2008 through FY 2020 includes FQHC data.
  - Analysis by procedure group excludes FQHC data for all presented fiscal years.

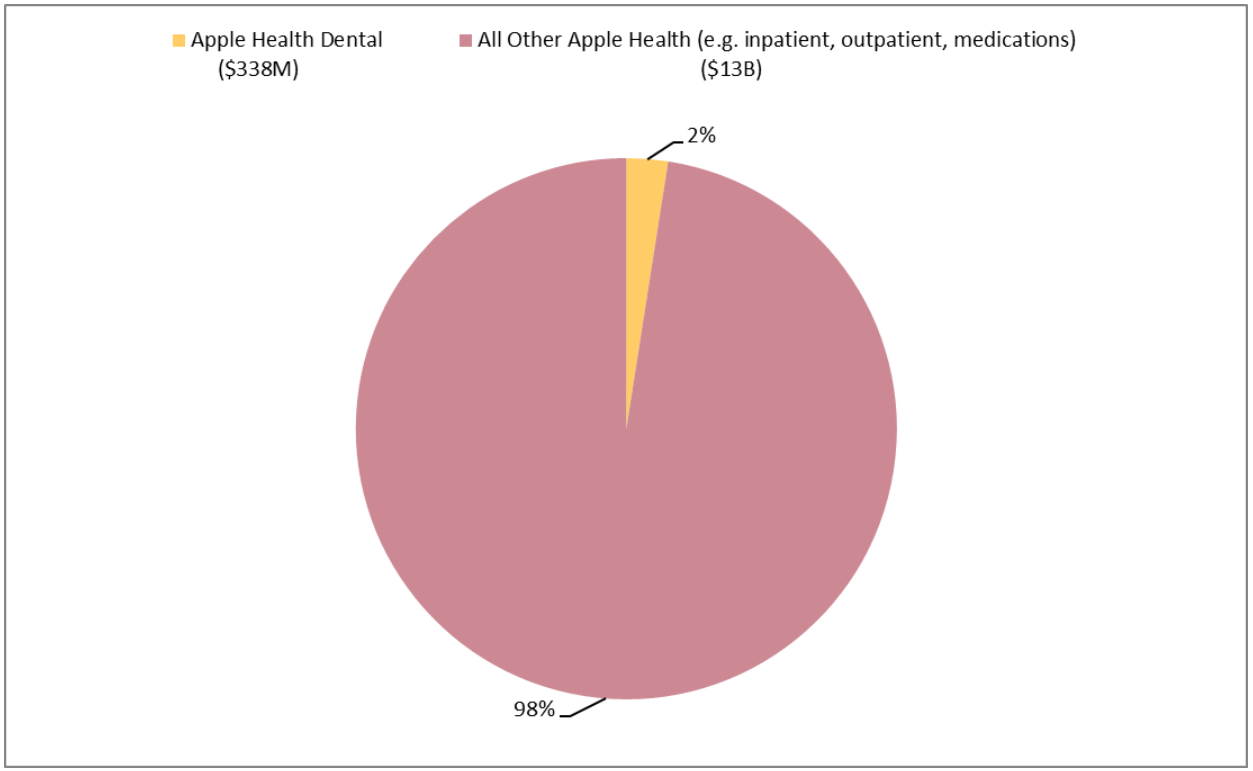
Notes:
The data analysis conducted for this report is similar to the 2017 and 2019 Apple Health Dental Program Facts and Figures report but is slightly different than previously published reports (2013-2015). Prior reports excluded FQHC claims data for all years from the expenditure analysis, while 2017-2020 reports included FQHC claims data in the expenditures from 2011 and after. In addition, dental providers in this report were identified through provider taxonomy codes, while provider specialty variable was used in previous reports.
For more details on data analysis procedures, see Methods section on slide 114 of the report.

Overall Key Findings

- The percentage of children accessing dental services increased from 45% in FY 2008 to 53% in FY 2020. Moreover, the percentages of those receiving preventive dental care increased from 40% in FY 2008 to 48% in FY 2020.
- The number of adults accessing dental services increased since the restoration of adult benefits from 146,000 in FY 2014 to nearly 219,000 in FY 2020. However, 851,000 (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 $94 million in the last ten years (from $244 million to $338 million). After adjusting for inflation, this is a 6% increase. Expenditures in the last fiscal year dropped by $62 million, a 16% decrease due to COVID-19's impact on dental clinics.
- In FY 2015 to FY 2020, after restoration of adult benefits, two-thirds of spending was on dental services provided to children, while one-third provided to adults.
- Nearly 31% of children and 59% of adults receiving care were served by FQHCs.

Expenditures and Services for All Ages

Washington State Apple Health Dental Expenditures vs. Medical Expenditures, FY 2020



Sources:
National Association of State Budget Officers, "State Expenditure Report: 2020 State Expenditure Report, Fiscal Years 2018-2020." Available from https://www.nasbo.org/mainsite/reports-data/state-expenditure-report

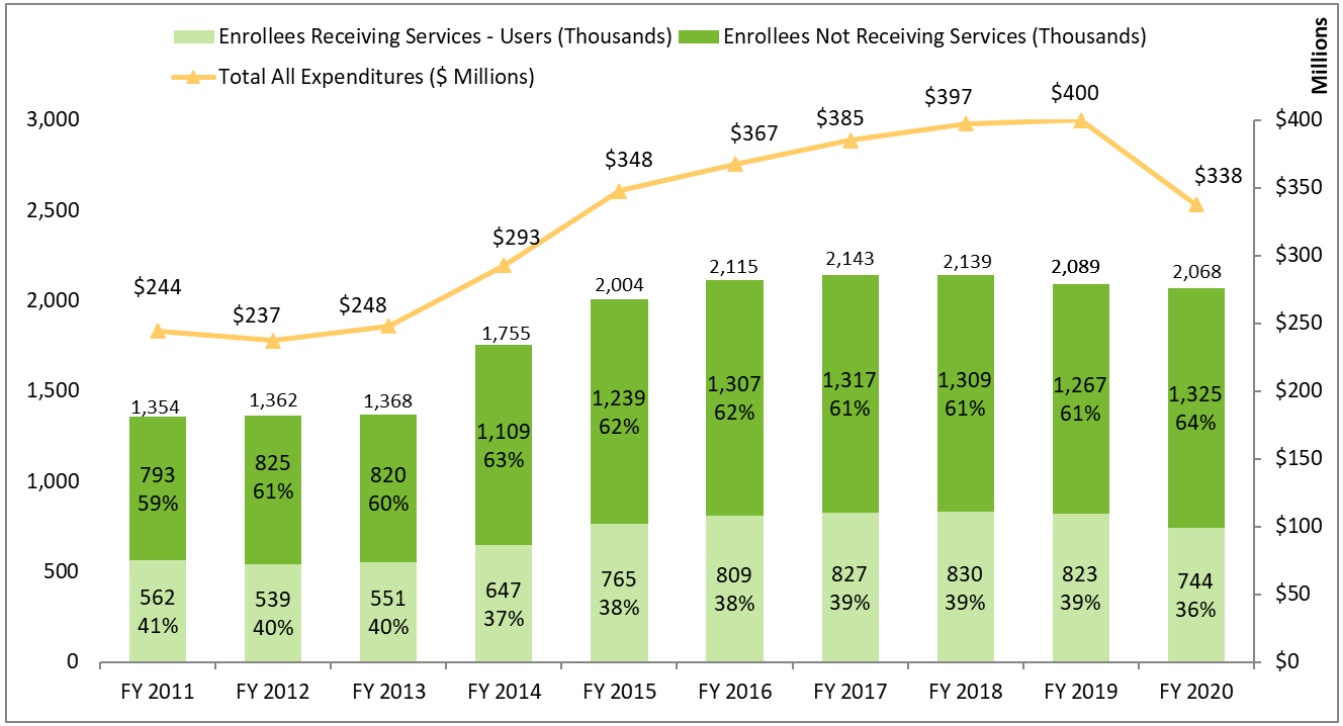
Section: All Ages

Washington state total government spending in FY 2020 was $51 billion ($38 billion state funds & $13 billion federal funds), in which health care (Apple Health) accounted for 27% of total expenditures.

Washington's FY 2020 total Apple Health expenditure was $13 billion, including federal and state funding.

Dental expenditures were just 2% of the total Apple Health budget. The percentage of dental spending in Washington in FY 2020 slightly decreased from 3% in FY 2019.

Apple Health Enrollees, Dental Utilization and Expenditures, FY 2011 – FY 2020



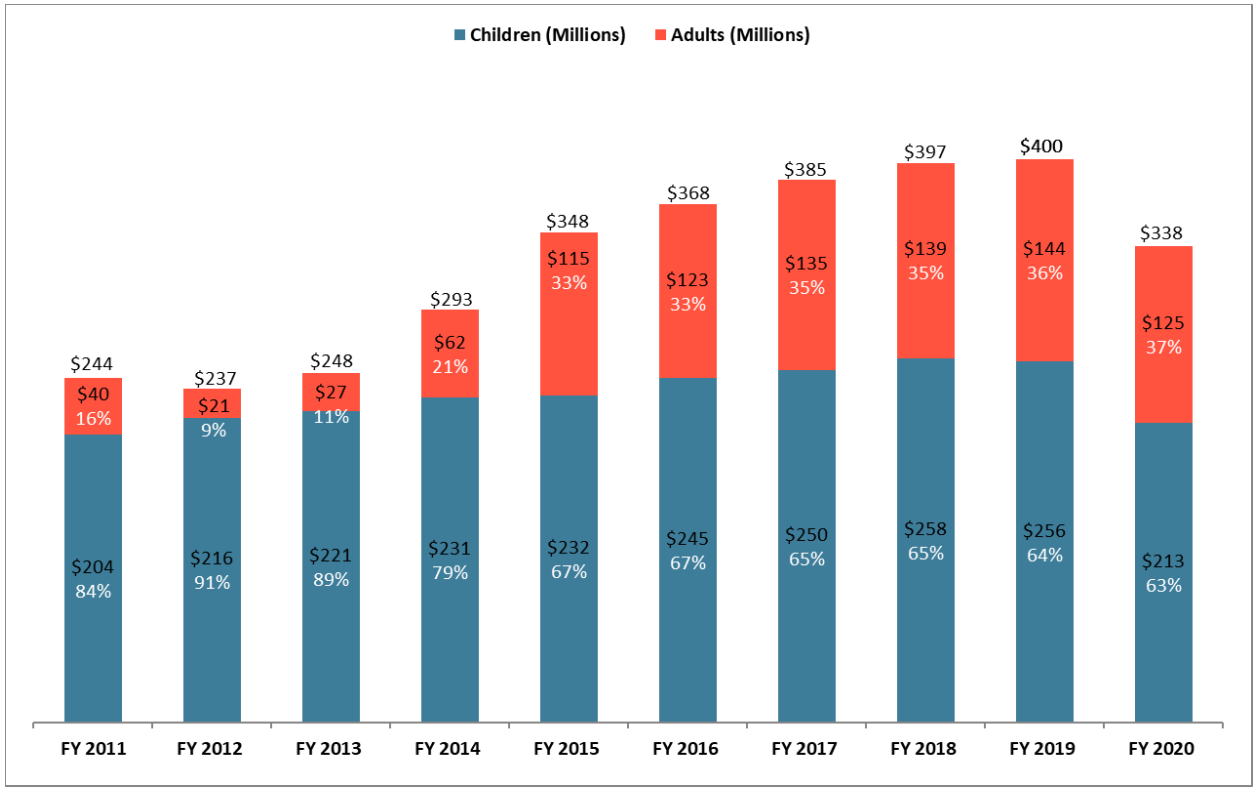
Source: Washington State Health Care Authority, Apple Health Dental Services Enrollment and Utilization Data

Section: All Ages

The number of Apple Health enrollees has increased by 53% from FY 2011 to FY 2020. The number of dental users increased by 33%, while total expenditures increased by 38% (6% after adjusting for inflation).

Dental expenditures in FY 2020 decreased by 16% since FY 2019 as a result of COVID-19's impact on dental clinics, while the number of users decreased by 10%.

Apple Health Dental Expenditures: Adults and Children, FY 2011 – FY 2020



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)

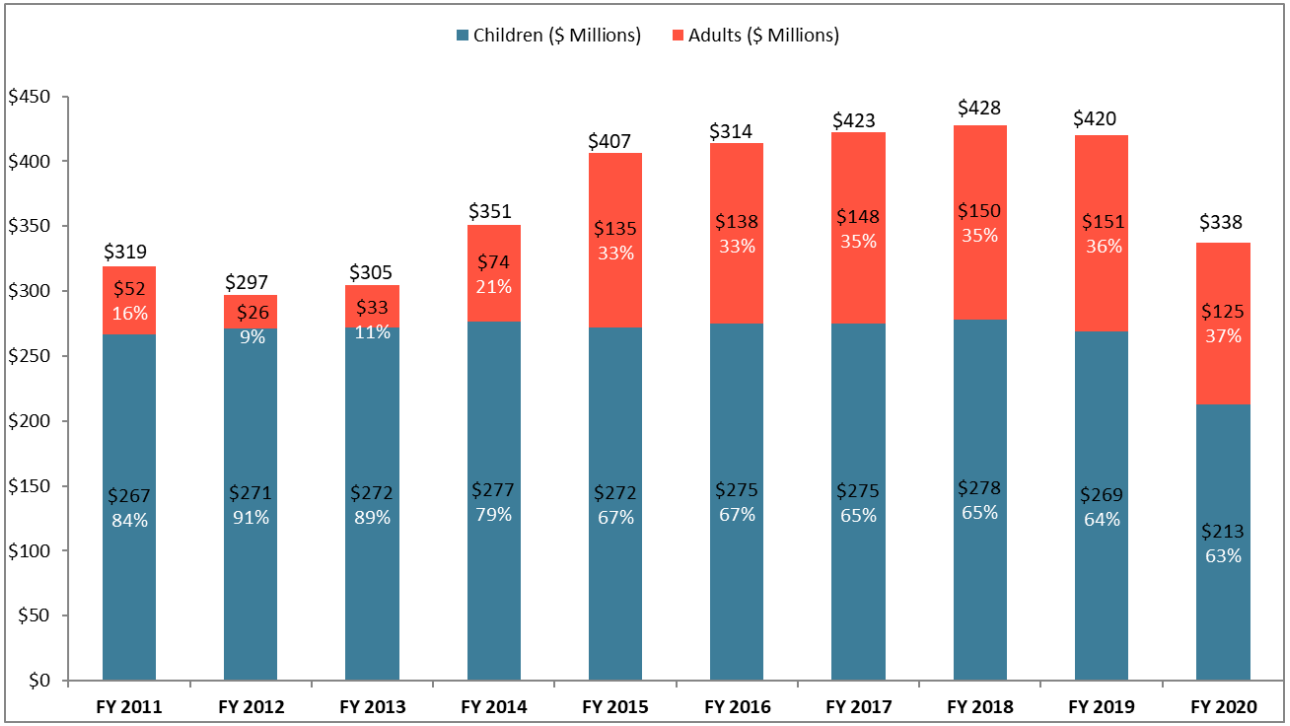
Source: Washington State Health Care Authority, Apple Health Dental Services Enrollment and Utilization Data

Section: 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 2020, after the adult dental restoration, adult expenditures more than doubled, accounting for one-third of all expenditures.

Apple Health Expenditures Adjusted for Inflation: Adults and Children, FY 2011 – FY 2020



Note: Dollars adjusted using Urban Medical Consumer Price Index to 2020 dollars. Consumer Price Index (CPI) from July of each year (the beginning of the fiscal year) was used.

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

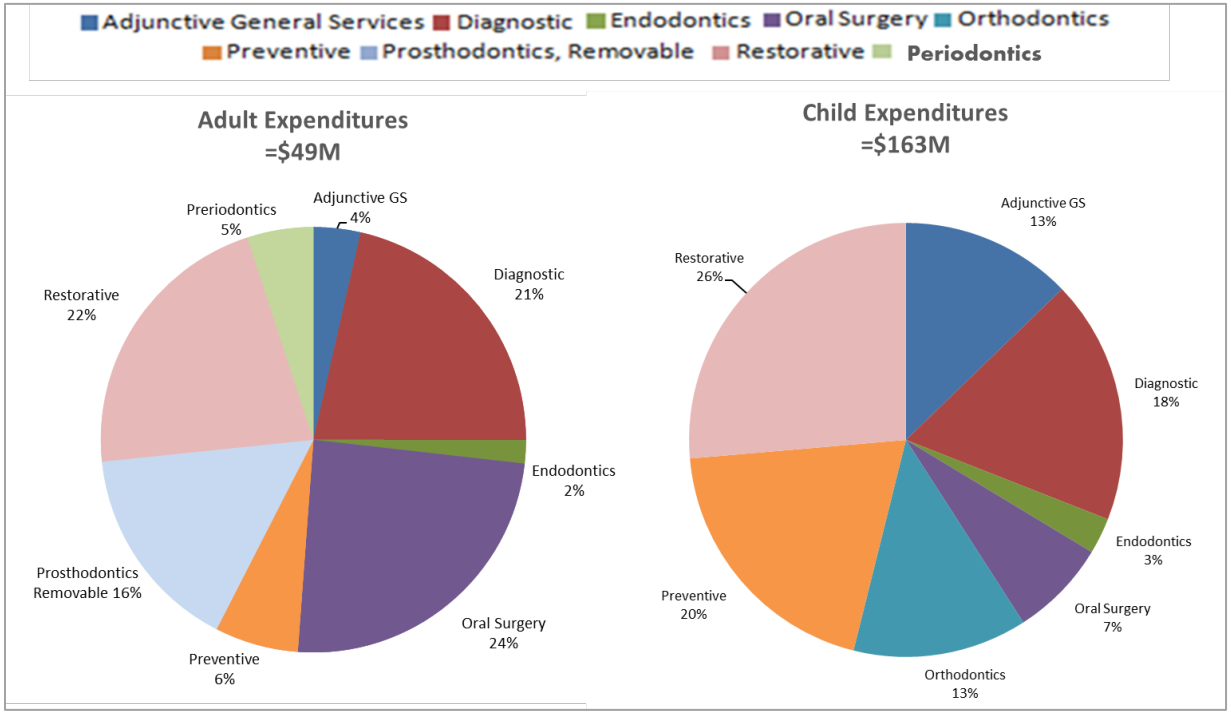
Section: All Ages

While total expenditures have risen 38% between FY 2011 and FY 2020, most of the increase is attributable to inflation. After adjusting for inflation, the increase is 6%.

In the last fiscal year, expenditures decreased by 20% after adjusting for inflation as a result of COVID-19's impact on dental clinics' closure between March and May 2020.

Dental Expenditures by Procedure Group: Adults and Children, FY 2020

Expenditures in this slide **exclude** child and adult claims that occurred in Federally Qualified Health Centers (FQHCs) as the type of dental procedures received in FQHCs cannot 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 2020. The following are not depicted in the pie charts: For adult expenditures: Orthodontics, Implant Services, and Prosthodontics Fixed, which combined represented only 0.1% of total expenditures. For children expenditures: Periodontics, Prosthodontics Removable, Implant Services, and Maxillofacial Prosthetics, which combined represented only 0.1% of total expenditures. See Appendix for information on procedure groups.

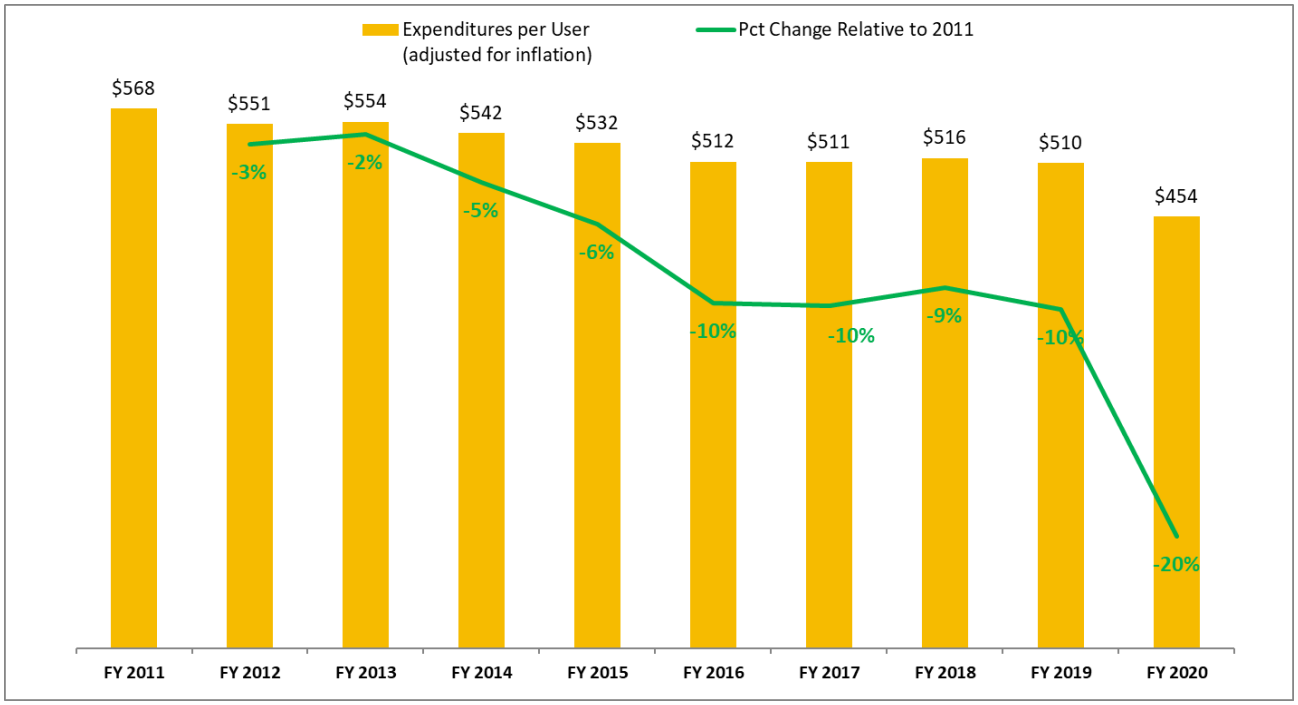
Source: Washington State Health Care Authority, Apple Health Dental Services Enrollment and Utilization Data

Section: All Ages

In FY 2020, restorative services accounted for the greatest portion of total expenditures (26% for children and 22% for adults).

Extractions, which fall within the oral surgery group (24%), 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 (20%,) were the most frequently billed procedures for all children in FY 2020.

Average Expenditures per Dental User, FY 2011 – FY 2020

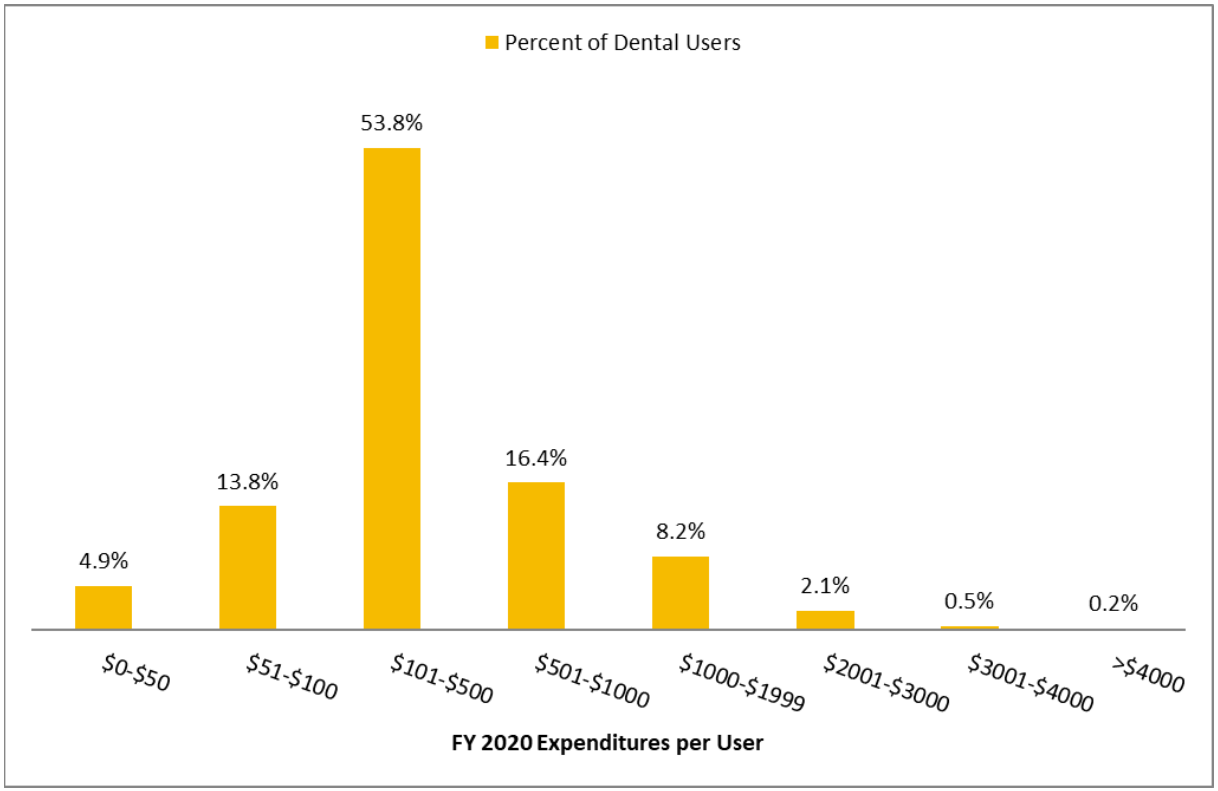


Source: Washington State Health Care Authority, Apple Health Dental Services Enrollment and Utilization Data

Section: All Ages

After adjusting for inflation, dental expenditures per user deceased from $568 in FY 2011 to $454 in FY 2020, a 20% decrease.

Total Expenditures per Dental User, FY 2020

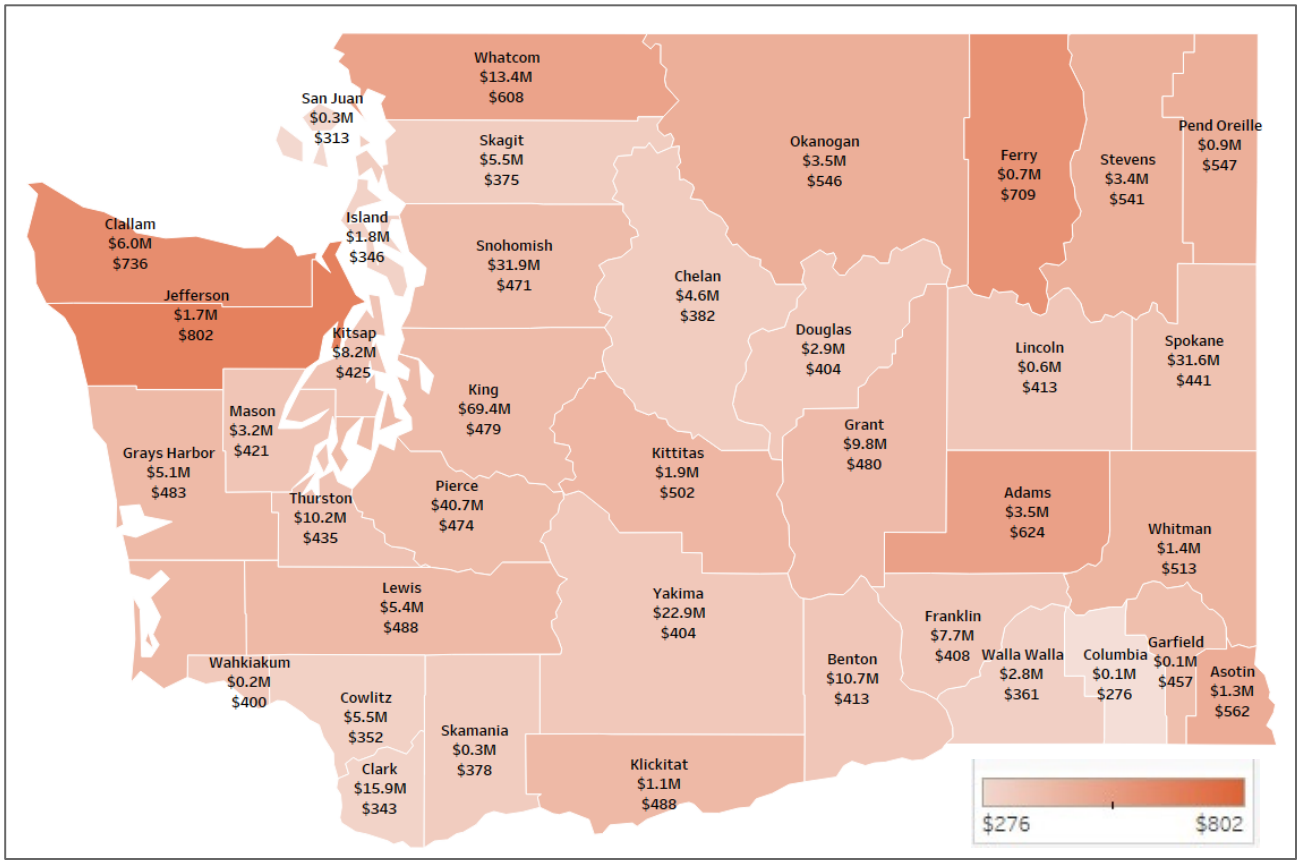


Source: Washington State Health Care Authority, Apple Health Dental Services Enrollment and Utilization Data

Section: All Ages

Expenditures for most users (54%) were between $101 and $500 in FY 2020. Nearly 3% of users had dental expenditures of more than $2,000.

Total Dental Expenditures and Average Cost per User by County, FY 2020



Statewide per Capita Cost $454

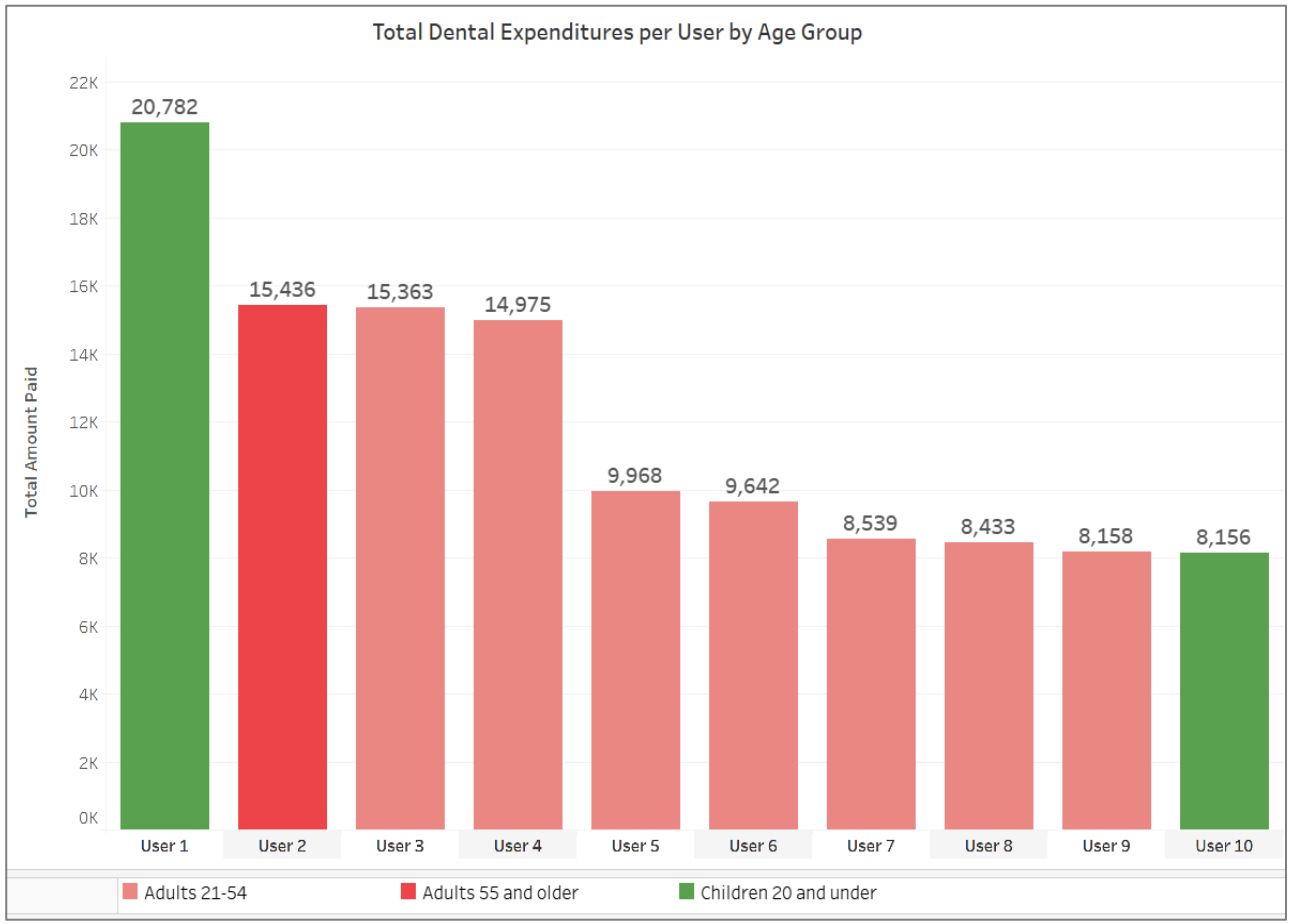
Note: Expenditures include FQHC encounter payments

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

Section: All Ages

There is considerable variation across counties in total expenditures and per capita spending in FY 2020. While average statewide spending per dental user was $454, per county expenditures ranged from $276 in Columbia County to $802 in Jefferson County.

Top 10 Most Expensive Users, FY 2020



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

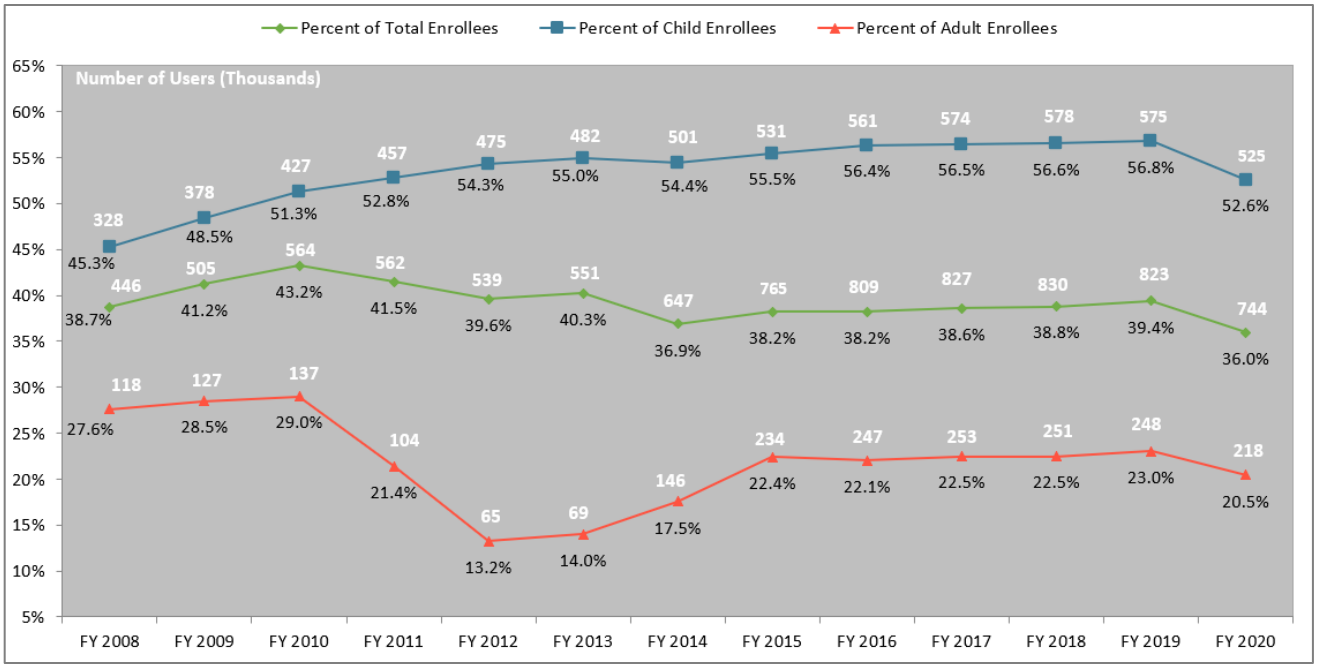
Section: All Ages

Unlike medical expenditures, which can run into hundreds of thousands for high-cost beneficiaries, the users with the 10 highest dental costs in FY 2020 each had less than $21,000 in dental expenditures.

Two 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 2020



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

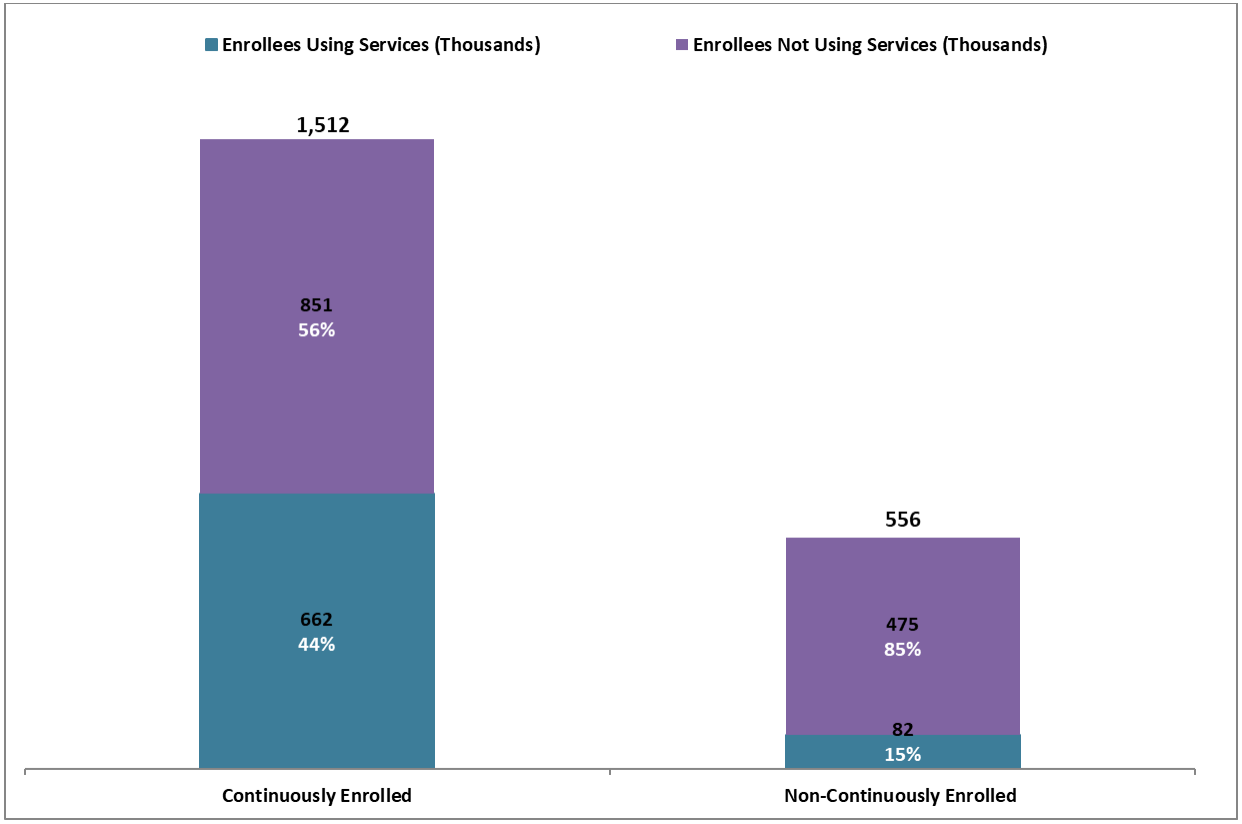
Section: All Ages

The percentage of children using dental services has risen steadily since FY 2008. In FY 2020, the utilization rates increased from 45% to 53%, a 16% increase.

With the restoration of adult dental program, the percent of adult enrollees using dental services increased from 13% in FY 2012 to 21% in FY 2020. Although utilization rates for adults is lower than years prior to the adult dental program cut, the number of adult users increased by 60% with more than 82,000 additional adults receiving care since 2010.

In the last fiscal year, access to care and utilization decreased across all age groups due to COIVID-19's impact on dental clinics. Among children, dental utilization decreased by 7% since FY 2019, while it decreased by 11% among adults.

Enrollees with at Least 1 Dental Service, Continuously vs. Non-Continuously Enrolled, FY 2020



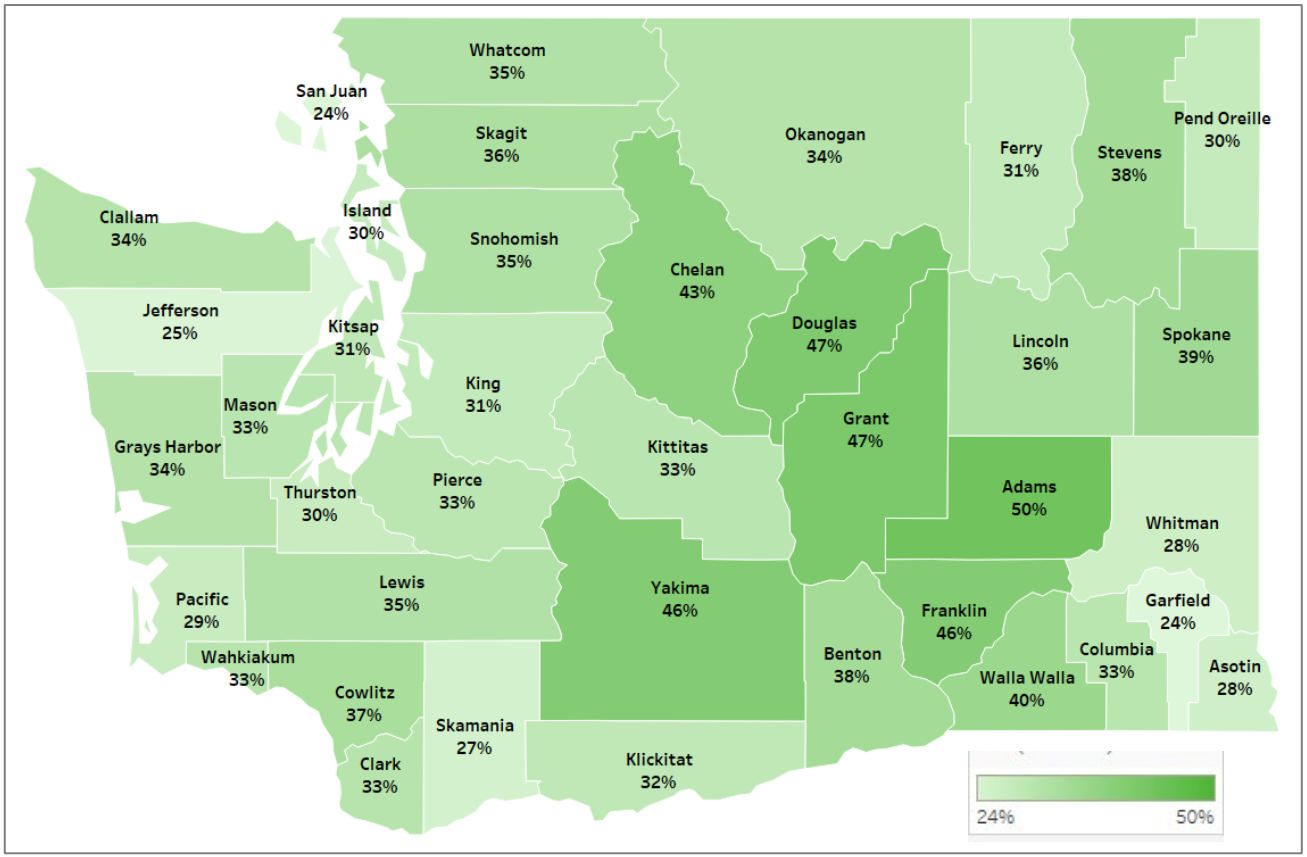
Source: Washington State Health Care Authority, Apple Health Dental Services Enrollment and Utilization Data

Section: All Ages

Among enrollees with at least 11 months of continuous enrollment, 44% had at least 1 dental service in FY 2020, compared to only 15% of those who were not continuously enrolled.

In the last 10 years, the percent of continuously enrolled clients accessing dental services increased from 39% to 44%.

Enrollees with at Least 1 Dental Service by County, FY 2020



Statewide Utilization Total 36%

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

Section: All Ages

Utilization rates vary by county, with a low of 24% in San Juan County (indicated by light shading) and a high of 50% in Adam County (indicated by dark shading). King County, with the largest population in the state, had a rate of 31%.

Percentage of Enrollees Who Received Any Dental Service by Race, FY 2020

Dental Utilization by Race and Age

	All Ages	Adults	Children
Alaskan Native	22%	17%	53%
American Indian	38%	25%	54%
Asian	34%	22%	55%
Black	35%	22%	49%
Hawaiian	35%	19%	49%
Pacific Islander	30%	16%	42%
White	32%	20%	49%

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

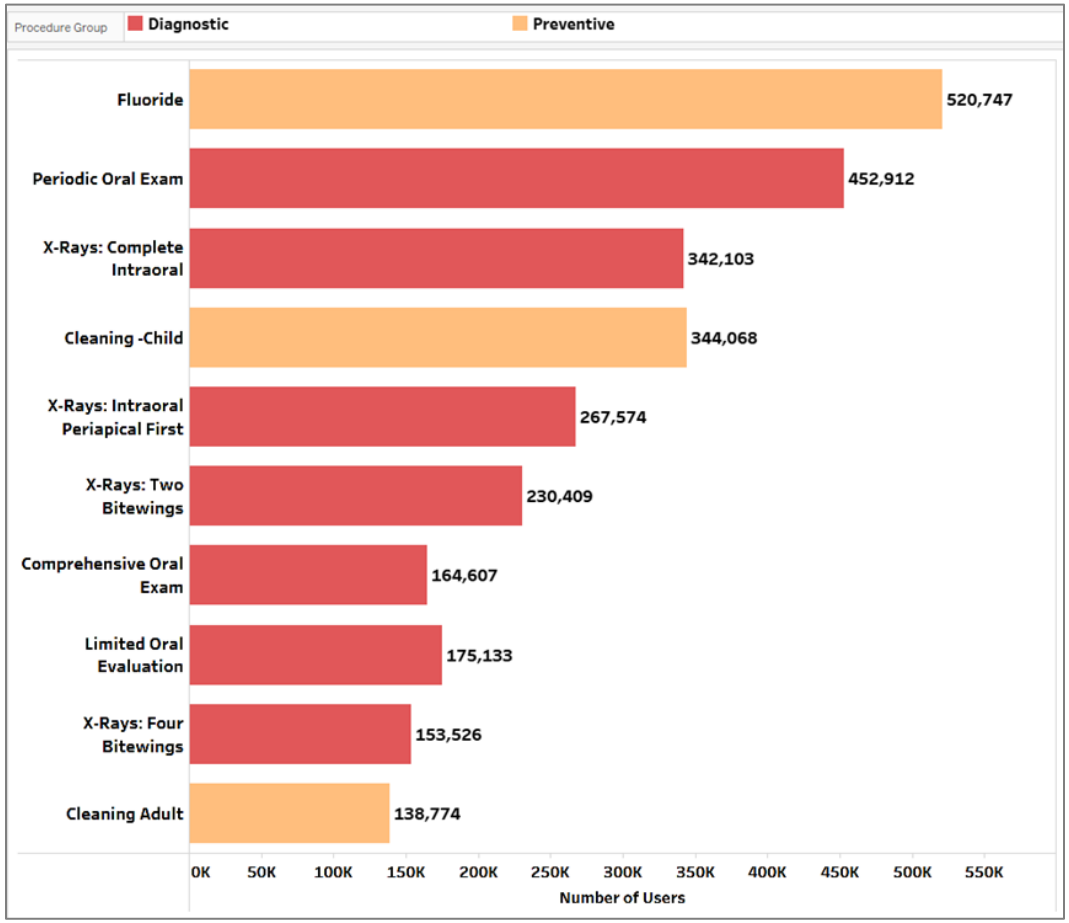
Section: All Ages

The highest dental users among Apple Health enrollees identified their race as "other," while the lowest users identified their race as Pacific Islanders.

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.

In order to address oral health disparities, having accurate data on race and ethnicity is essential to identifying the presence and significance of the problem.

Top 10 Procedures by Number of Users, FY 2020



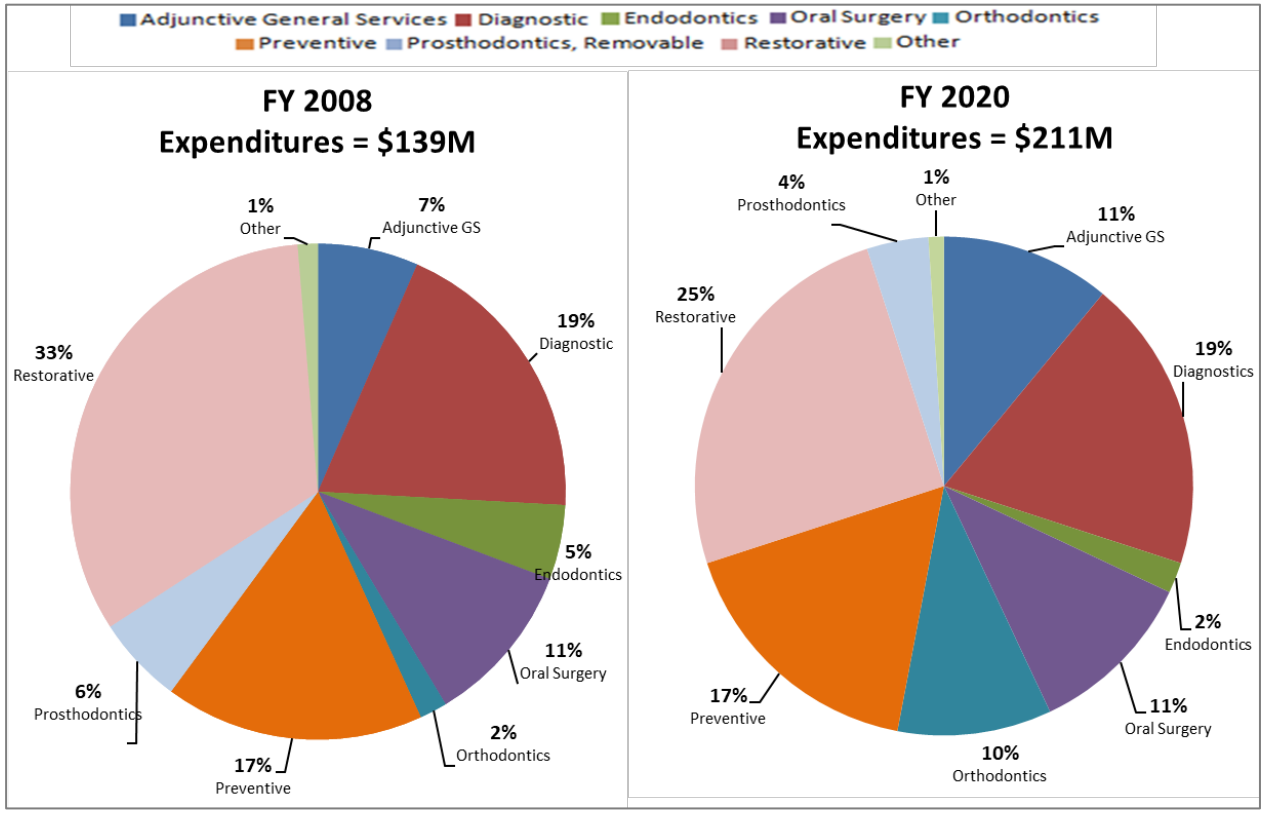
Note: Excludes FQHC claims and claims with missing values for procedure categories. Procedure names are simplified; see methods for details on the procedures.

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

Section: All Ages

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

Total Expenditures by Procedure Group, FY 2008 vs. FY 2020



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 2020 and FY 2008. See Appendix for information on procedure groups.

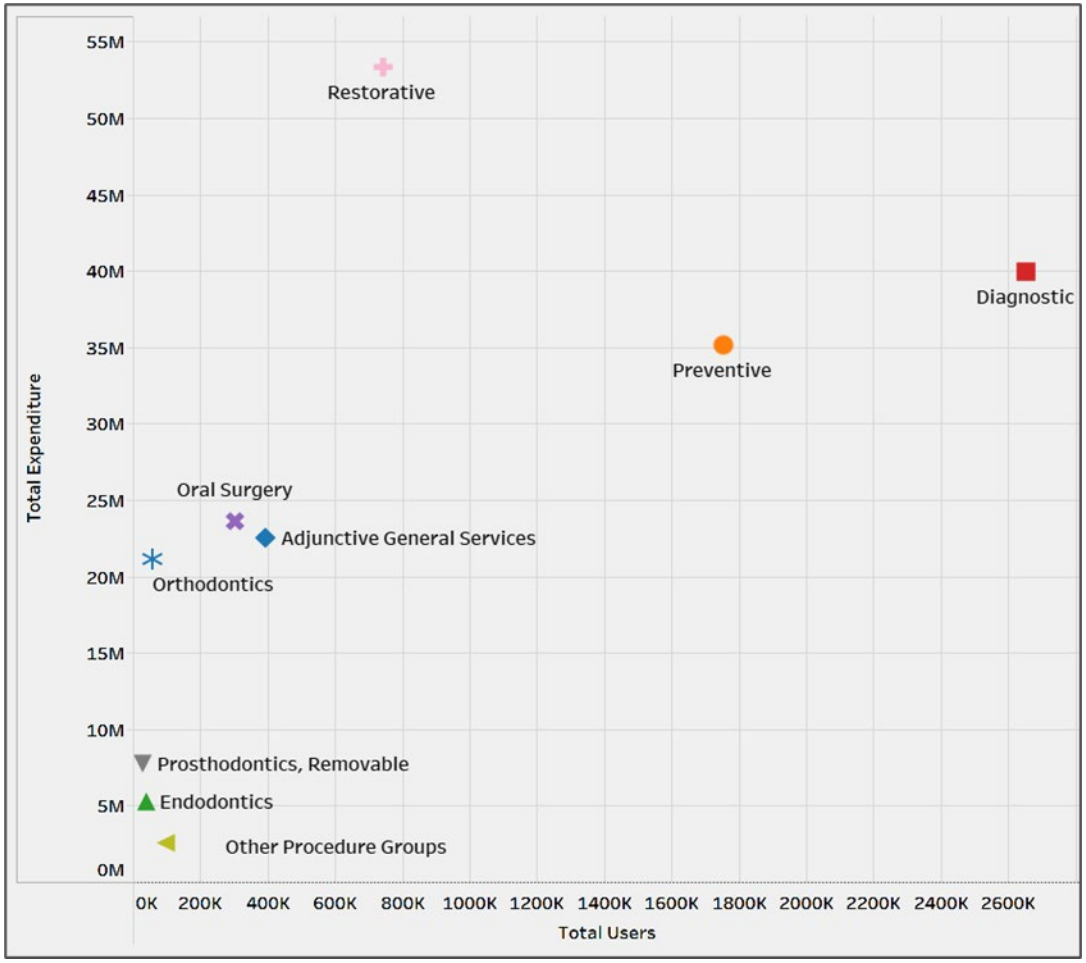
Source: Washington State Health Care Authority, Apple Health Dental Services Enrollment and Utilization Data

Section: All Ages

Restorative services made up the greatest portion of total expenditures in both FY 2008 and FY 2020. There was a slight decline in the percentage of costs associated with restorative services (from 33% in 2008 to 25% in 2020).

Orthodontics, treatment that commonly includes braces, increased from 2% of total expenditures in 2008 to 11% in 2020. There was a rate increase for orthodontia in 2007, which led to an increase in the number of providers serving Apple Health clients. The number of clinics providing orthodontic treatments to Apple Health-enrolled children increased from 43 in 2007 to 140 in 2020.

Dental Users and Total Expenditures by Procedure Group, FY 2020



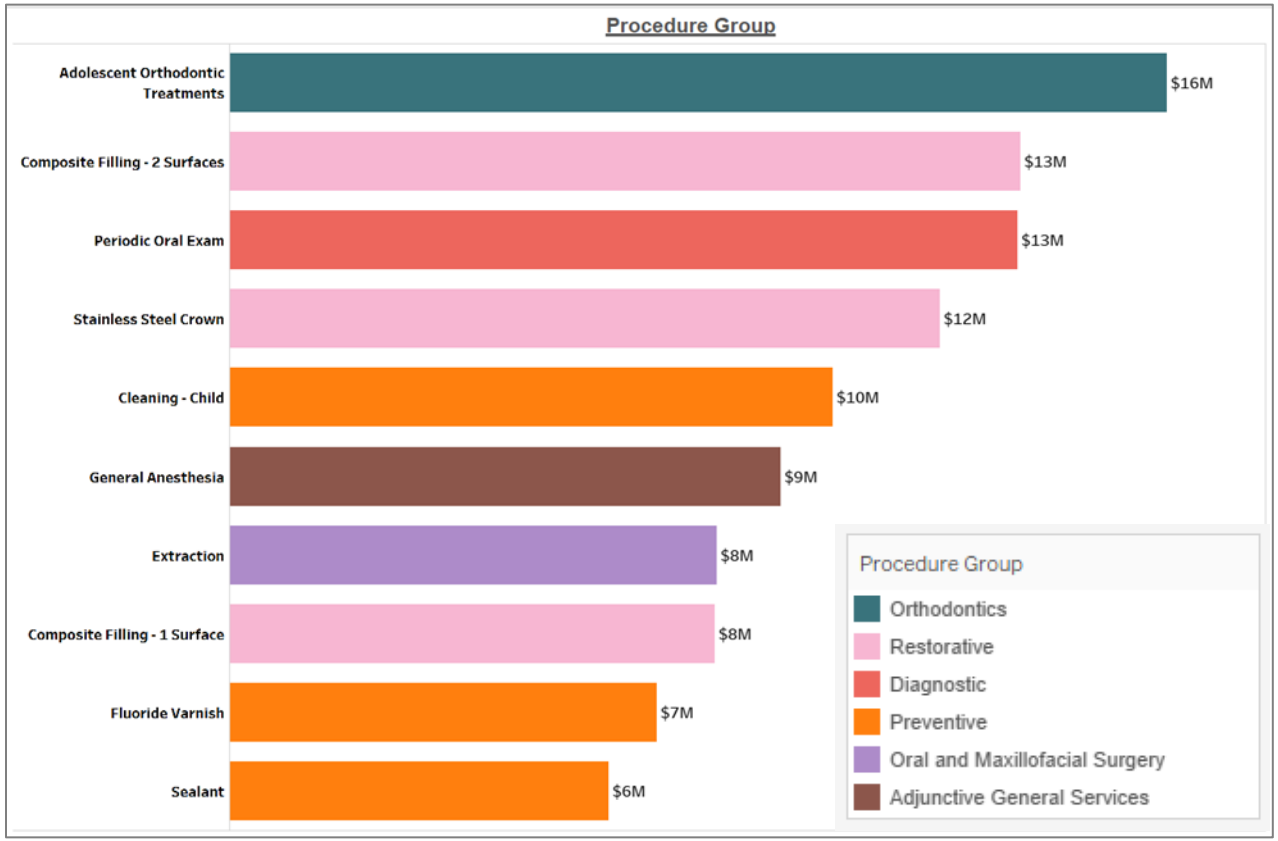
Note: Excludes FQHC claims. Excludes claims with missing values for procedure categories. Implant Services, Prosthodontics Fixed, Maxillofacial Prosthetics, and Periodontics had less than 96,000 users and $2,600,000 in expenditures. They are included in the graph as "Other Procedure Groups."
Source: Washington State Health Care Authority, Apple Health Dental Services Enrollment and Utilization Data

Section: All Ages

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

Orthodontics procedures were the most costly services provided for the lowest number of users.

Top 10 Procedures by Expenditures, FY 2020



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

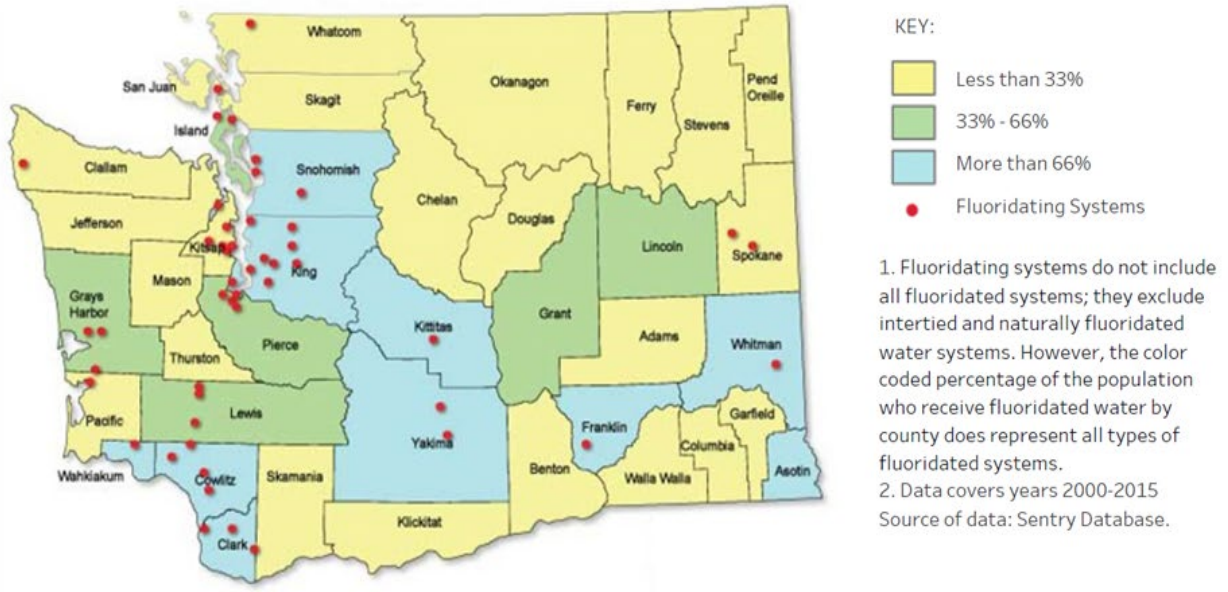
Section: All Ages

The top 10 procedures totaled approximately $103 million, about 49% of total dental expenditures in 2020 (excluding FQHC payments).

Adolescent Orthodontic Treatments, often involving braces for realignment of teeth, topped the list at $16 million.

Fluoridation: An Upstream Prevention Strategy

Public Water System Population Receiving Dentally Significant Fluoride Levels (0.6 - 2.0 mg/L)



1. Fluoridating systems do not include all fluoridated systems; they exclude intertied and naturally fluoridated water systems. However, the color coded percentage of the population who receive fluoridated water by county does represent all types of fluoridated systems.
2. Data covers years 2000-2015

Source of data: Sentry Database.

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

Intertied 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

Sources:
Washington State Department of Health Office of Drinking Water Data (2013).
Washington State Department of Health

Community Water Fluoridation (CWF) is an upstream prevention strategy recommended by the Centers for Disease Control and Prevention to prevent dental cavities by about 25% in both children and adults. CWF is proven effective for people of all ages, education levels, socioeconomic and insurance statuses and has been shown to reduce oral health inequalities among children.

There are 50 water systems in Washington state 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.

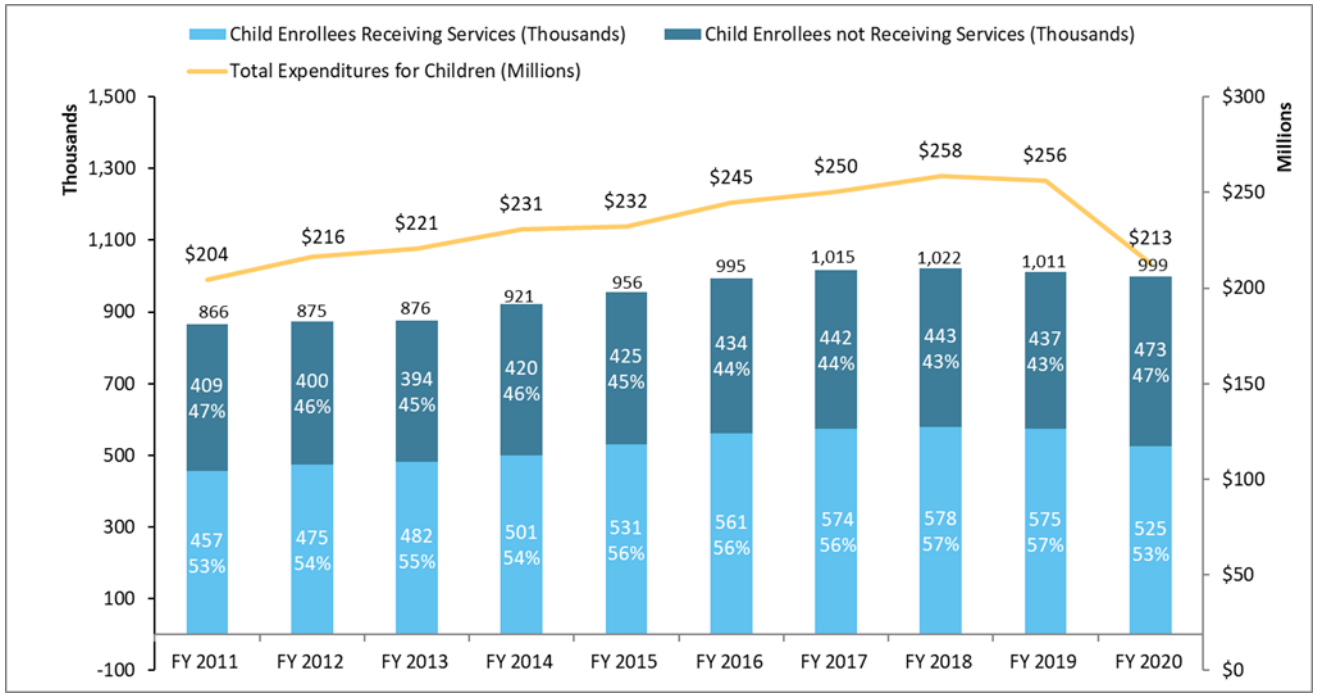
CWF saves money for community members as well as health care systems. In cities with a population of 20,000 or more, fluoridation is estimated to save $38 in dental treatment costs for every $1 spent. Similarly large cost savings are seen when the calculation includes smaller communities ($20 to $1).

Total Expenditures and Services Key Findings (All Ages)

- Total dental expenditures grew by $94 million in the last 10 years (from $244 million to $338 million). After adjusting for inflation, this is a 6% increase. Expenditures in the last fiscal year dropped by $62 million, a 16% decrease due to COVID-19's impact on dental clinics.
- 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 2020.
- Fluoride applications, exams for both adults and children, and x-rays were among the most common procedures in FY 2020.
- Utilization of dental services varied widely by county, ranging from 24% (San Juan County) to 50% (Adam County) in FY 2020.
- Individuals continuously enrolled in Apple Health for 11 months or more were more likely to use dental services – 44% compared to 15% for non-continuously enrolled in FY 2020.
- Dental expenditures for most users were under $500 in FY 2020. Fewer than 3% of users had expenditures of more than $2,000.

Expenditures and Services Among Children

Utilization and Expenditures among Children, FY 2011 – FY 2020



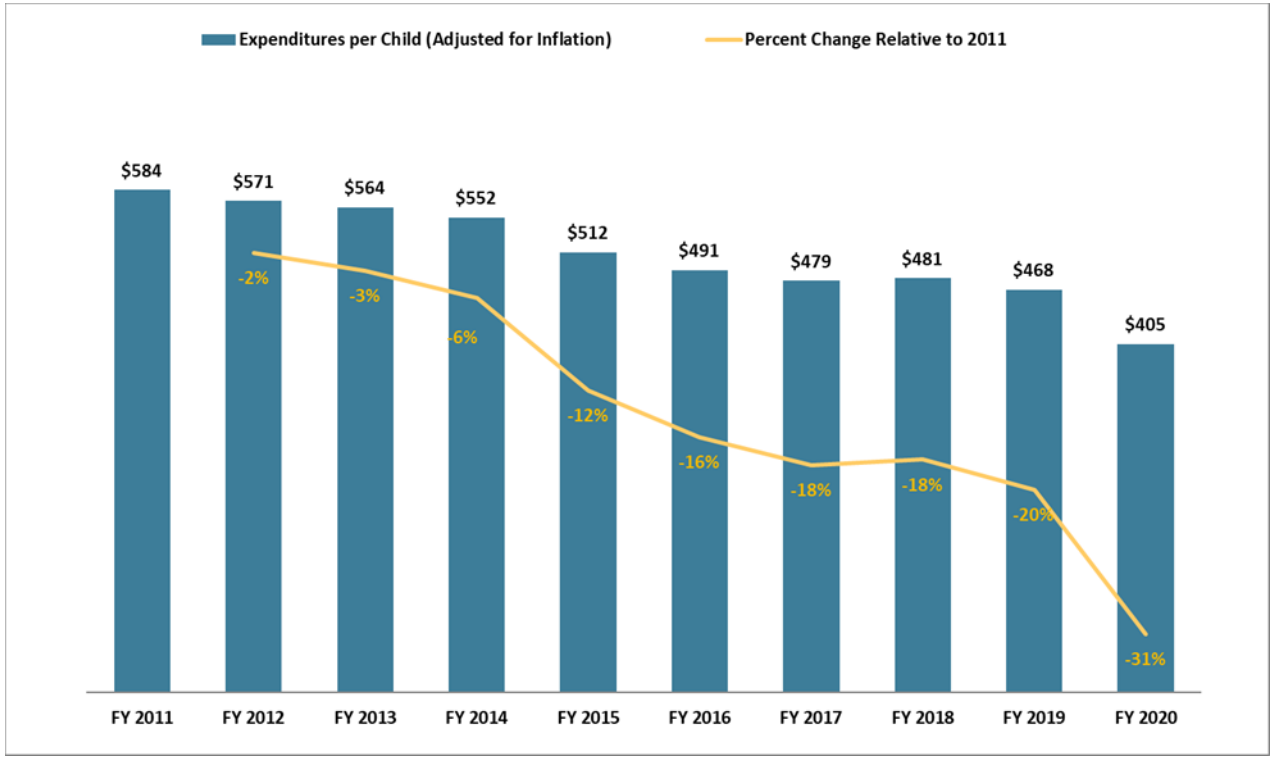
Source: Washington State Health Care Authority, Apple Health Dental Services Enrollment and Utilization Data

Section: Children

Between FY 2011 and FY 2020, there were increases in the number of children enrolled in Apple Health (15% increase), and the associated dental expenditures (4% increase).

In the last fiscal year, dental expenditures decreased by 17% (21% after adjusting for inflation), while number of children accessing care decreased by 9%, as a result of COVID-19's impact on dental clinics and overall access to care.

Average Child Dental Expenditures per User, FY 2011 - FY 2020

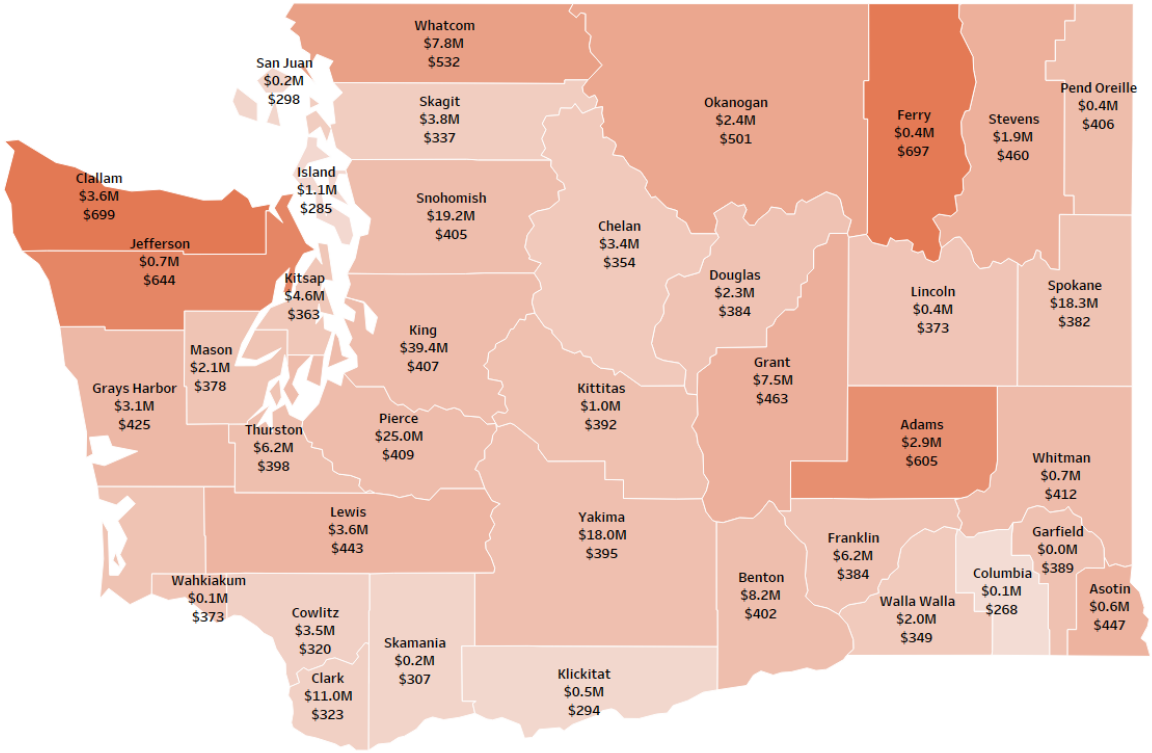


Source: Washington State Health Care Authority, Apple Health Dental Services Enrollment and Utilization Data

Section: Children

After adjusting for inflation, dental expenditures per child user deceased from $584 in FY 2011 to $405 in FY 2020, a 31% decrease. In the last fiscal year, dental expenditures per child decreased by 13% as a result of COVID-19's impact on dental clinics.

Children Dental Expenditures and Average Cost per User by County, FY 2020



Statewide Children per Capita Dental Cost $405

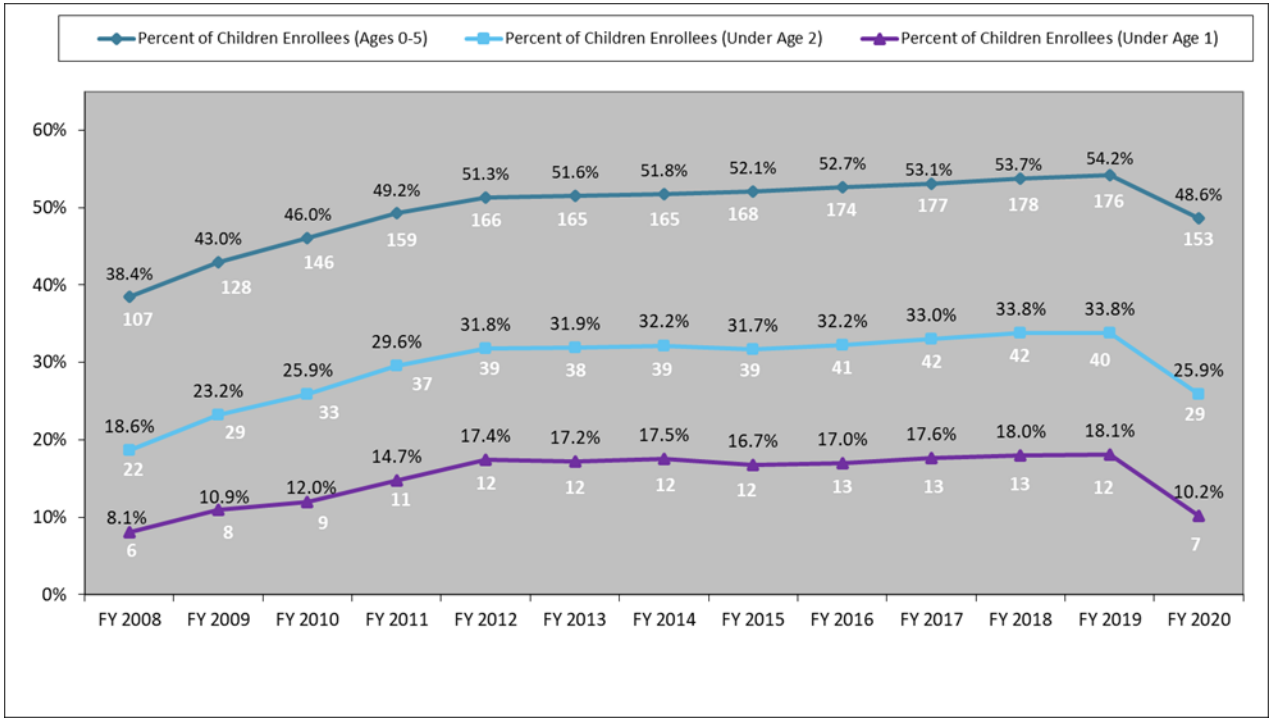
Note: Expenditures include FQHC encounter payments

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

Section: Children

There is considerable variation across counties in total expenditures and per capita spending in FY 2020. While average statewide spending per dental user was $405, children's per county dental expenditures ranged from $268 in Columbia County to $699 in Clallam County.

Children Enrollees under 6 with at Least 1 Dental Service, FY 2008 – FY 2020



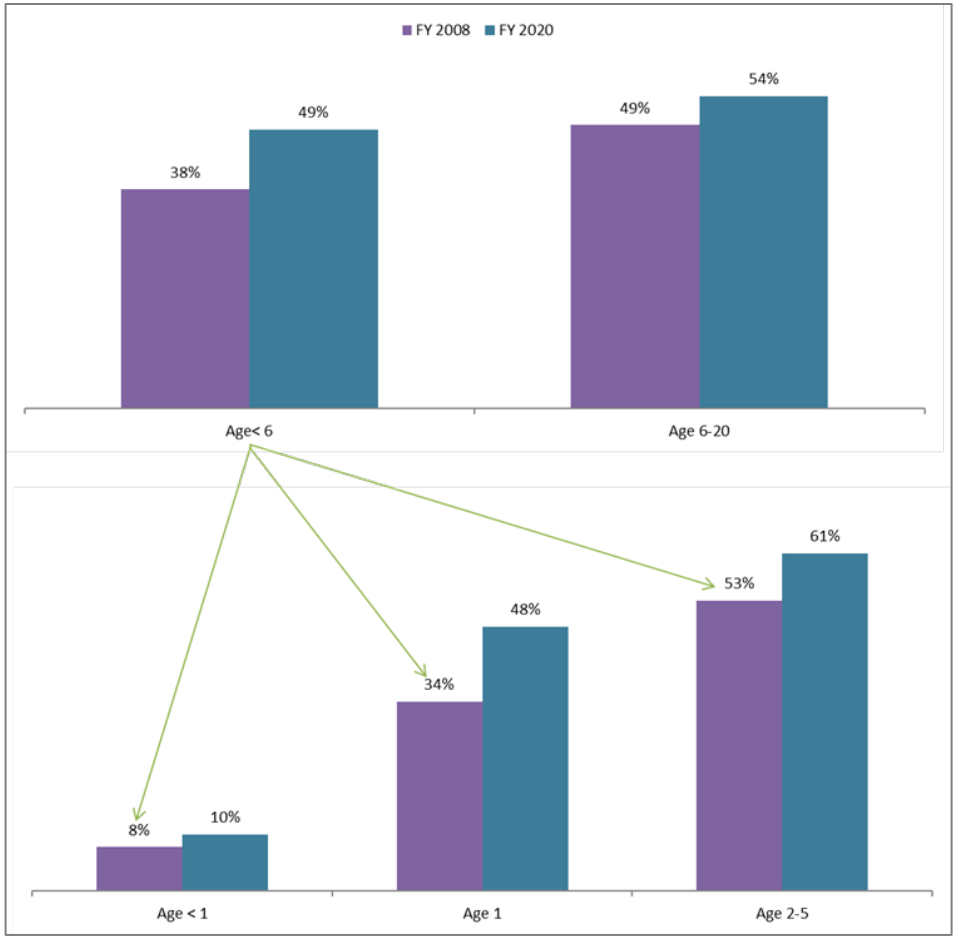
Source: Washington State Health Care Authority, Apple Health Dental Services Enrollment and Utilization Data

Section: Young Children

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

In FY 2020, the dental utilization rates among children under age 6 decreased to 49%, a 10% decrease as a result of COVID-19's impact on dental clinics and access to care.

Percent of Child Enrollees Using at Least 1 Service by Age Group, FY 2008 vs. FY 2020

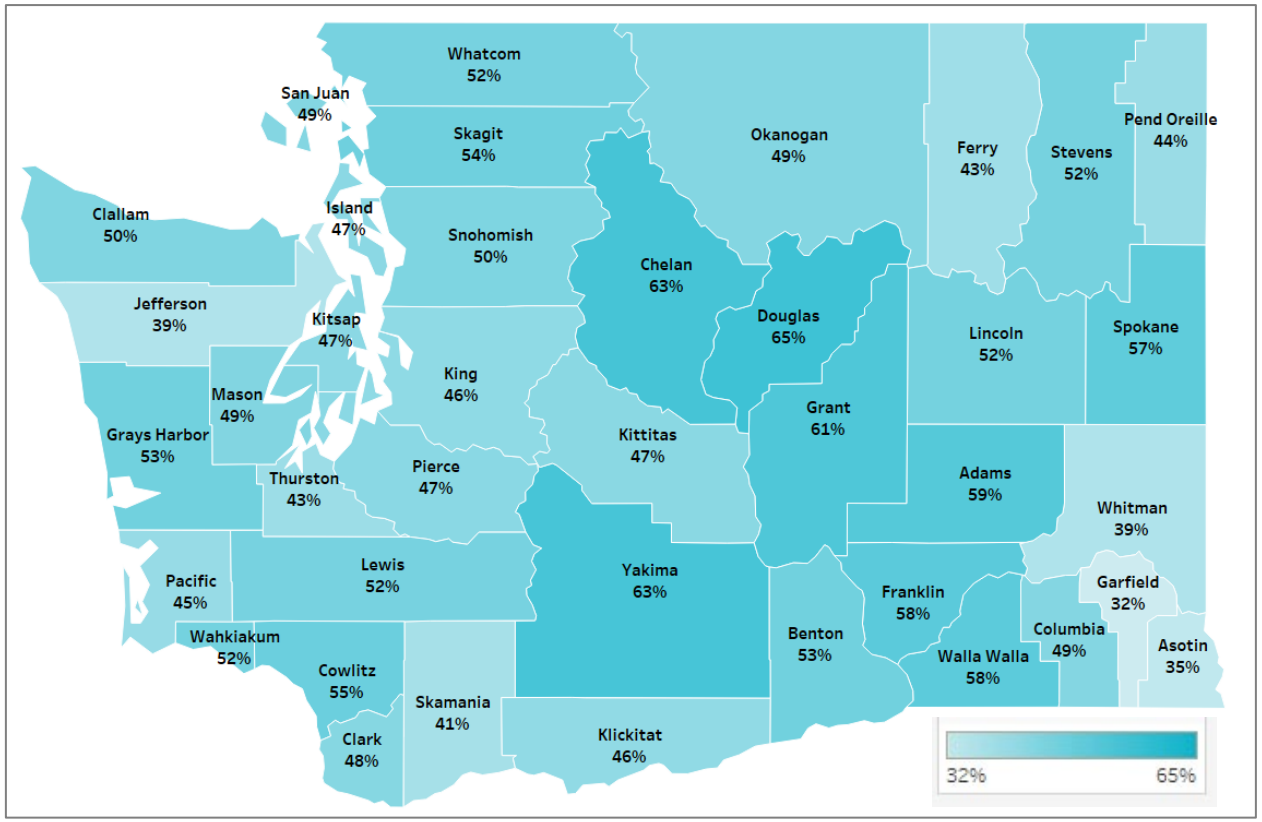


Note: The percent of children using at least 1 service for all age groups in FY 2008 was 45% and in FY 2020 was 53%.

Sources:
Washington State Health Care Authority, Apple Health Dental Services Enrollment and Utilization Data
Washington State Health Care Authority, Washington Apple Health 2020 Comparative and Regional Analysis Report. Comagine Health

There have been notable increases since FY 2008 in the percent of children of all age groups that have received dental services. However, the percentage of children under 6 years accessing dental care is still significantly lower than the portion of similarly aged children accessing primary medical care in 2020 (87%).

Child Enrollees Ages 20 and Under with at Least 1 Dental Service by County, FY 2020



Statewide Utilization Total 53%

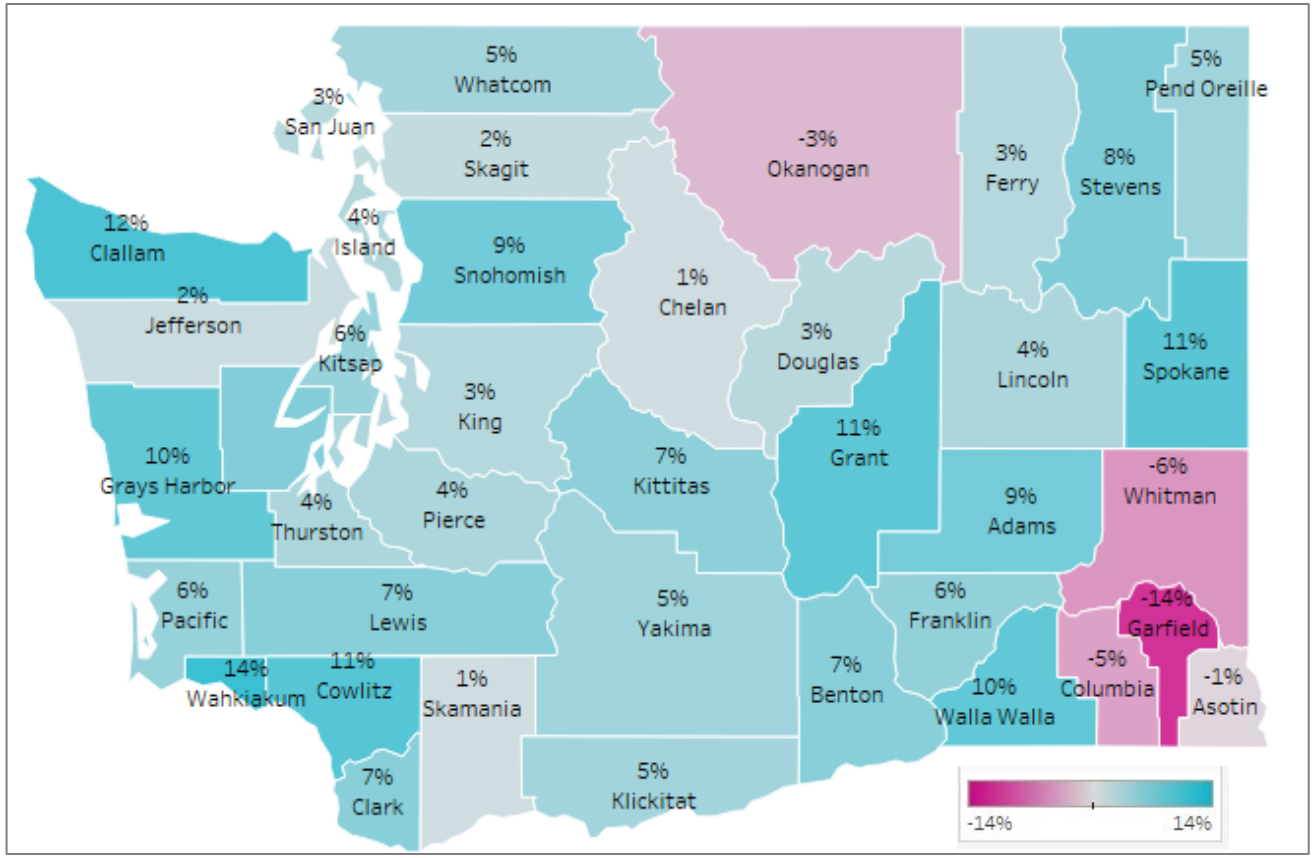
Source: Washington State Health Care Authority, Apple Health Dental Services Enrollment and Utilization Data

Section: Children

Utilization across the state ranged from 32% to 65%.

Douglas County had the largest percentage of children receiving dental services in FY 2020 (indicated by darker shading), while Garfield County had the lowest (indicated by lighter shading).

Change in Utilization for Children Ages 20 and Under by County, FY 2008 vs. FY 2020



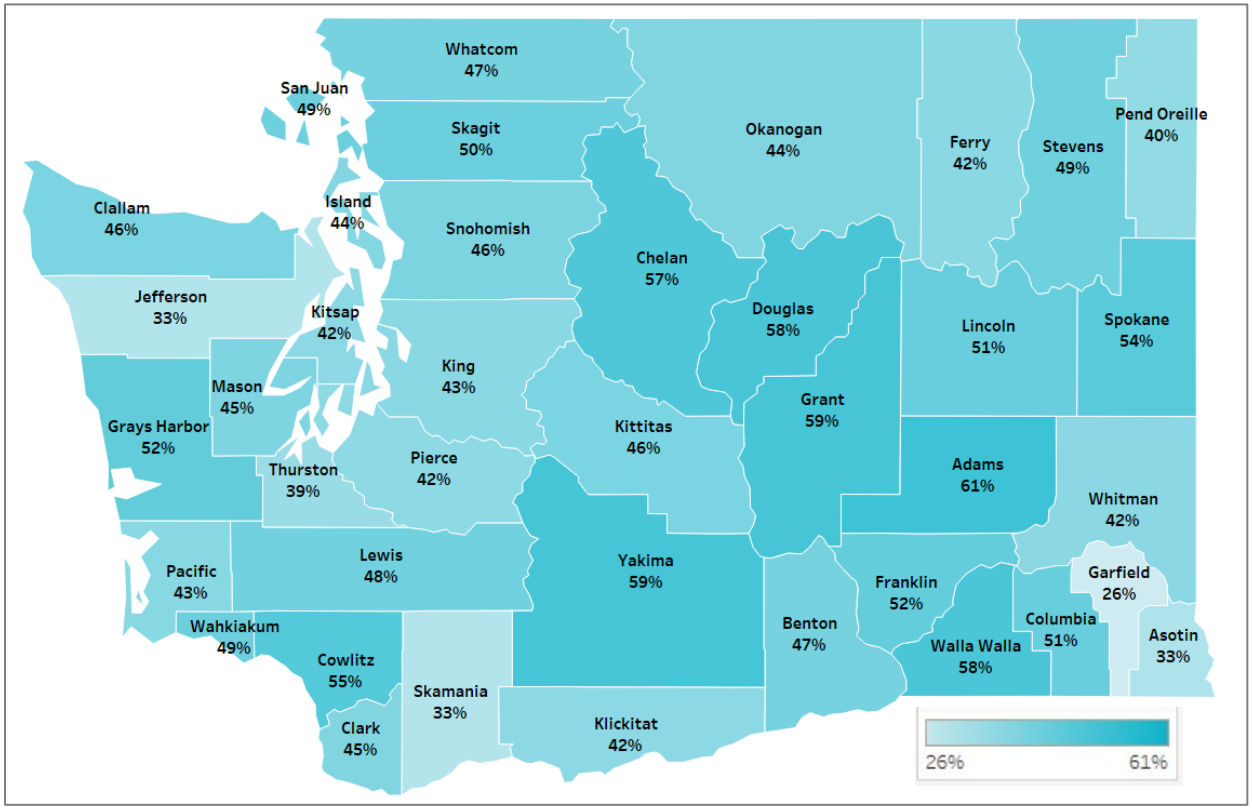
Source: Washington State Health Care Authority, Apple Health Dental Services Enrollment and Utilization Data

Section: Children

The percent of children ages 20 and under enrolled in Apple Health with at least 1 dental visit increased between FY 2008 and FY 2020 for 36 counties. Thirty six of the 39 counties had increases of 1% or more.

The drop in utilization since 2008 in some of the counties in the southeast region could be attributed to a decrease in the number of providers seeing Apple Health-enrolled children in 2020 and/or to the increase in the number of children enrolled in proportion to those accessing dental care.

Child Enrollees under Age 6 with at Least 1 Dental Service by County, FY 2020



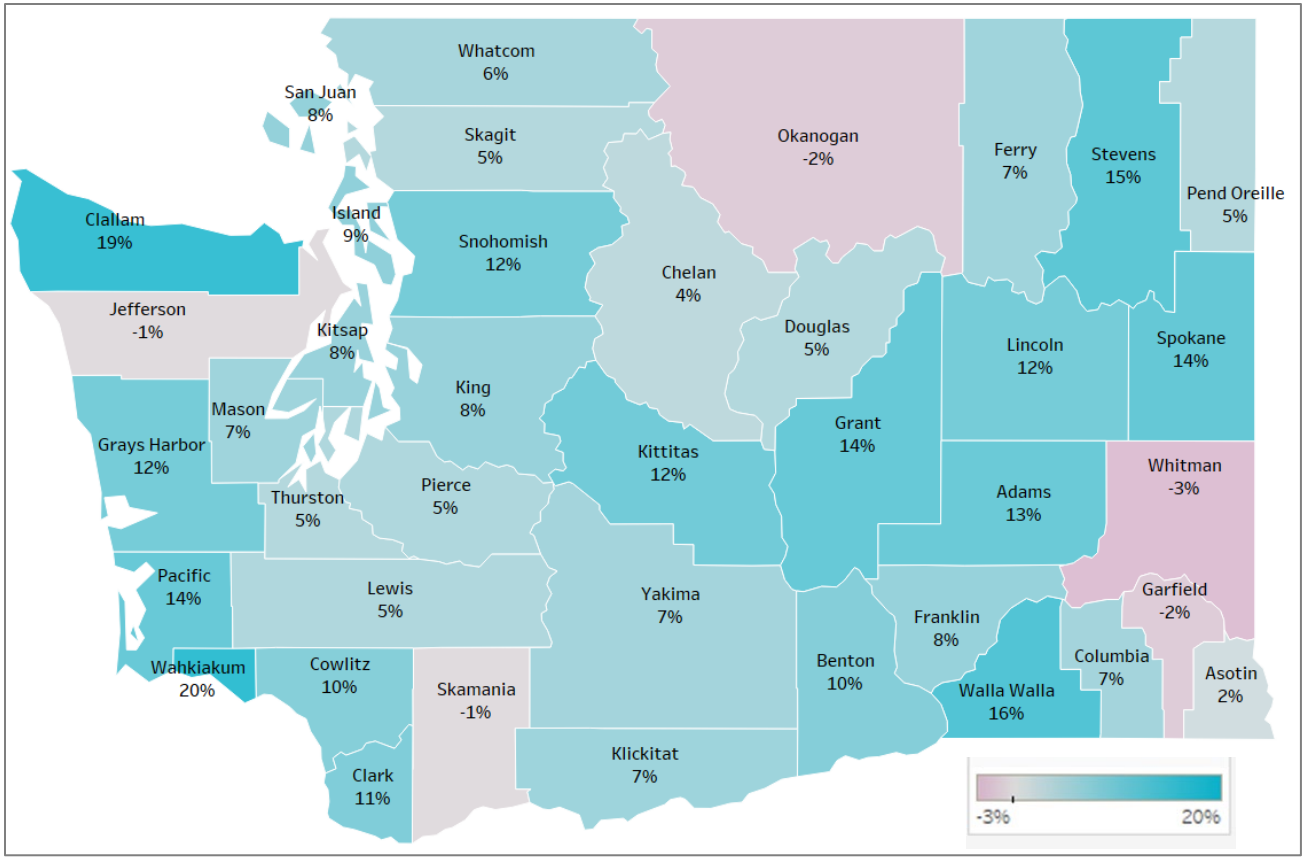
Statewide Utilization Total 49%

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

Section: Children

Utilization rates vary by county with a low of 26% in Garfield County (indicated by light shading) and a high of 61% in Adams County (indicated by dark shading). King County, with the largest population in the state, had a rate of 43%.

Change in Utilization for Children under Age 6 by County, FY 2008 vs. FY 2020

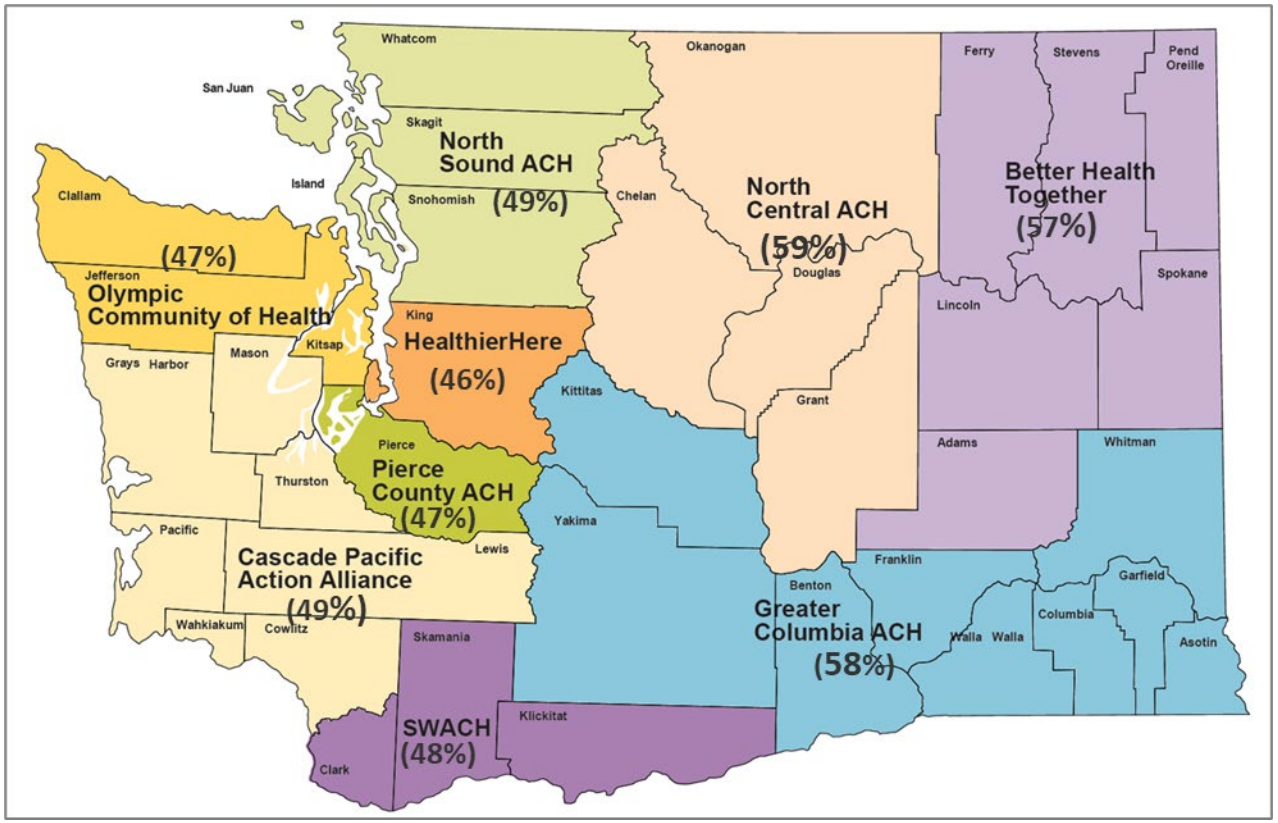


Section: Children

The percent of children under age 6 enrolled in Apple Health with at least 1 dental visit increased between FY 2008 and FY 2020 for 34 counties. Thirty four of the 39 counties had increases of 2% or more.

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

Child Enrollees Ages 20 and Under with at Least 1 Dental Service by Accountable Community of Health, FY 2020



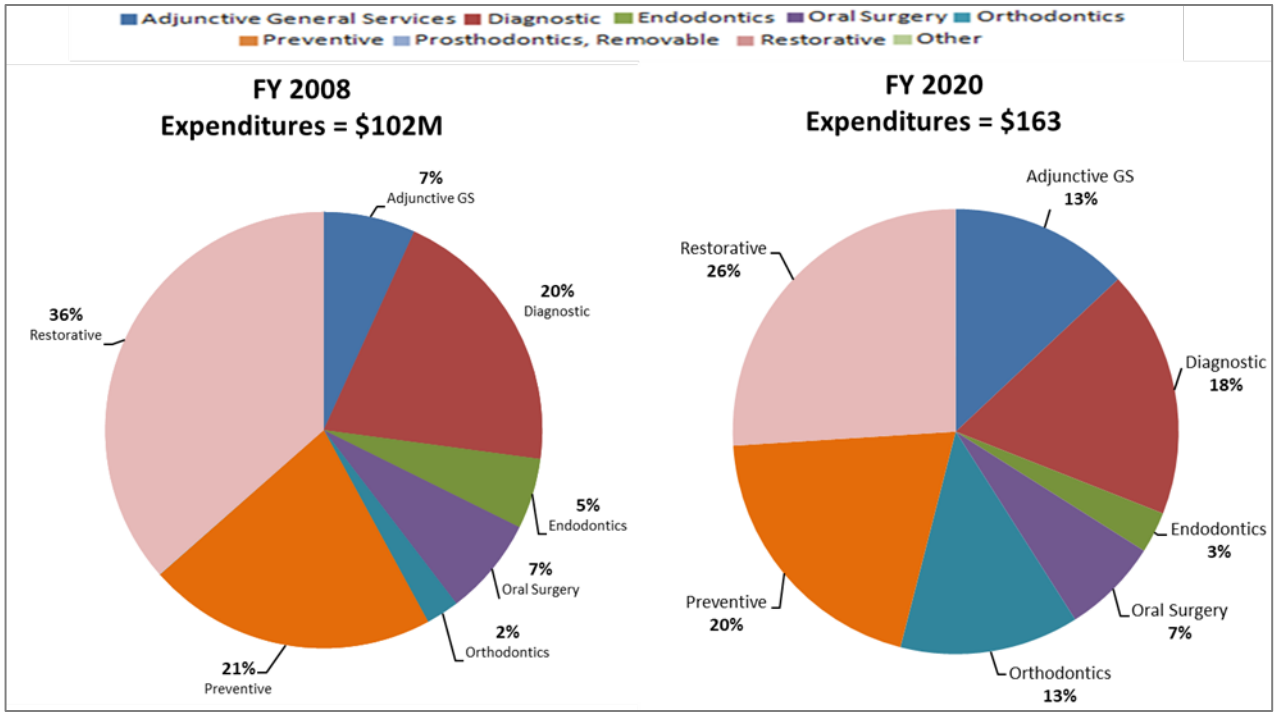
Statewide Utilization Total 53%

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

Section: Children

There are some regional variations in the percentage of Apple Health-enrolled children accessing dental services. While children in North Central (59%) Accountable Communities of Health region has the highest dental utilization rates, children in HealthierHere (King County) Community of Health region have the lowest (46%).

Total Children Expenditures by Procedure Group, FY 2008 vs. FY 2020



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

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

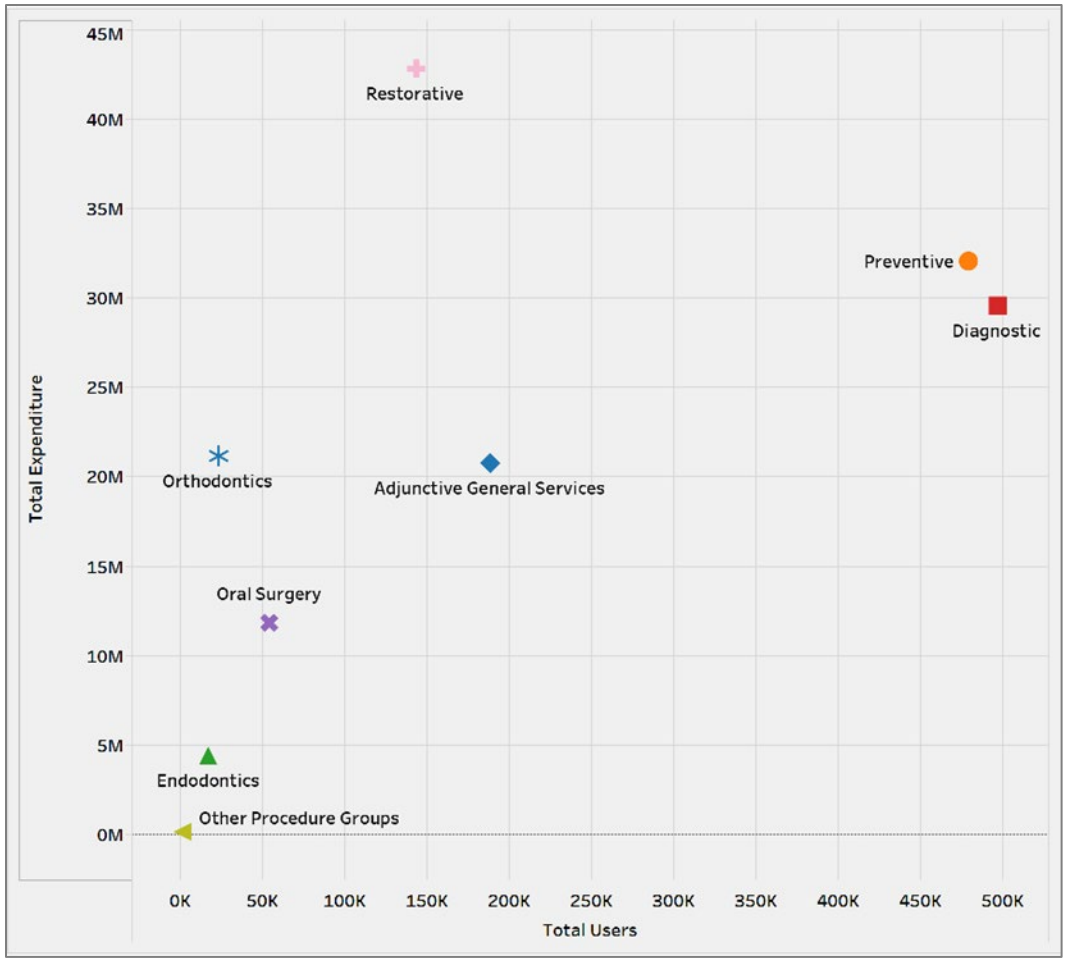
Section: Children

Restorative services made up the greatest portion of total expenditures in both FY 2008 and FY 2020.

The percentage of cost for restorative services for children decreased from 36% in 2008 to 26% in 2020.

Orthodontic services increased dramatically from 2% of total expenditures in 2008 to 13% in 2020.

Child Dental Users and Total Expenditures by Procedure Group, FY 2020

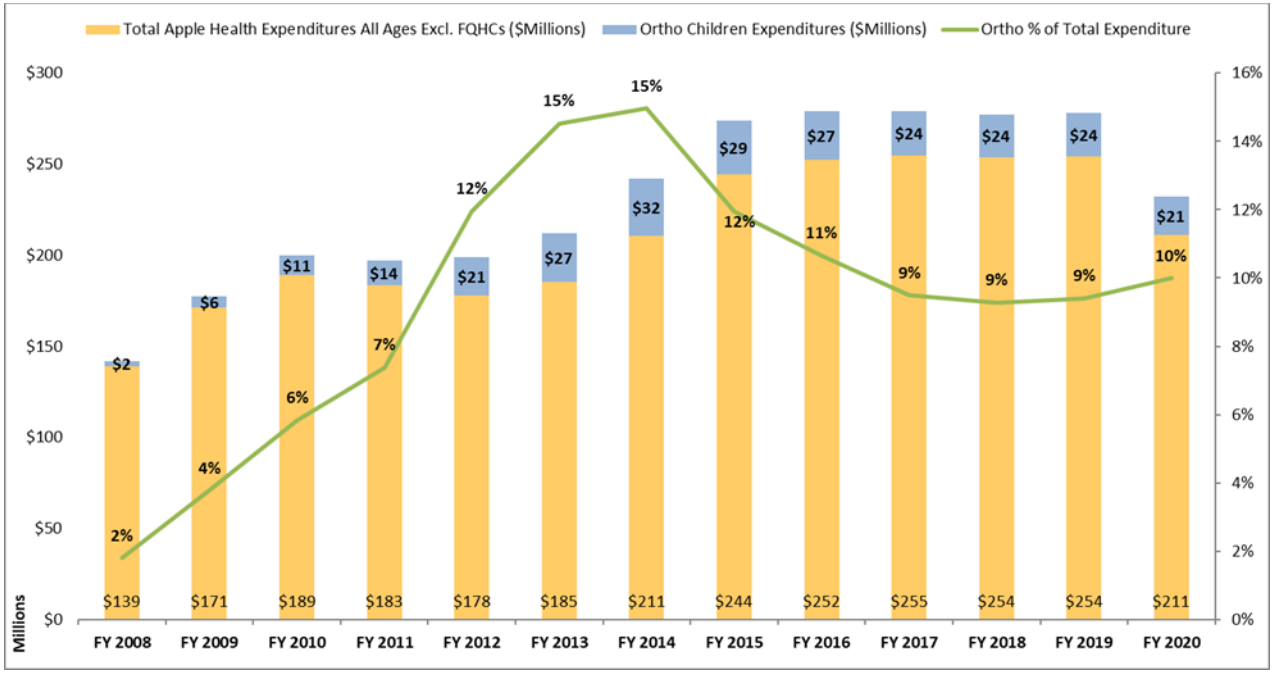


Note: Excludes FQHC claims. Prosthodontics (Removable) and Periodontics had less than 1,200 users and $102,000 in expenditures. They are included in the graph as "Other Procedure Groups."
Source: Washington State Health Care Authority, Apple Health Dental Services Enrollment and Utilization Data

Section: Children

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

Orthodontics Expenditures
FY 2008 – FY 2020



Note: Other craniofacial anomalies include the following medical conditions: Hemifacial macrosomia, craniosynostosis syndromes, cleidocranial dental dysplasia, arthrogryposis, 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 10% of total Apple Health FY 2020 expenditures (all ages), and 13% of children expenditures (see slide 31 and slide 47).
All Expenditure analysis excludes FQHC encounter payments except for few clinics that billed fee-for-service using the orthodontics procedure code ($ 2M in FY 2020).

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

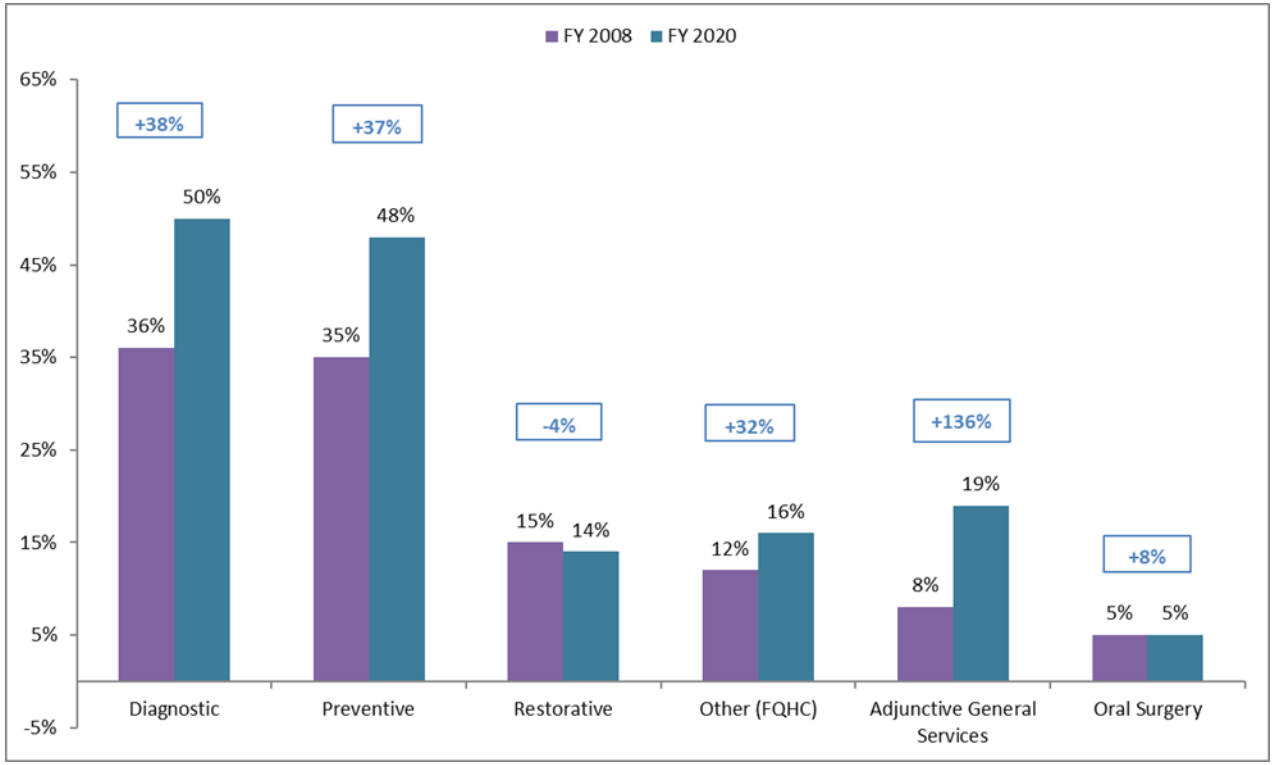
Section: Children

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 2020, orthodontics contributed to a significantly greater percentage of total expenditures than in FY 2008 (10% vs. 2%). There was a rate increase for orthodontia in 2007, which led to an increase in the number of providers serving Apple Health clients.

On Sept. 1, 2014, orthodontic treatment reimbursement rates were reduced by 22%, which lead to the steady decrease in orthodontics expenditures in subsequent years.

Percent of Child Enrollees Using Services by Procedure Group, FY 2008 vs. FY 2020



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

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

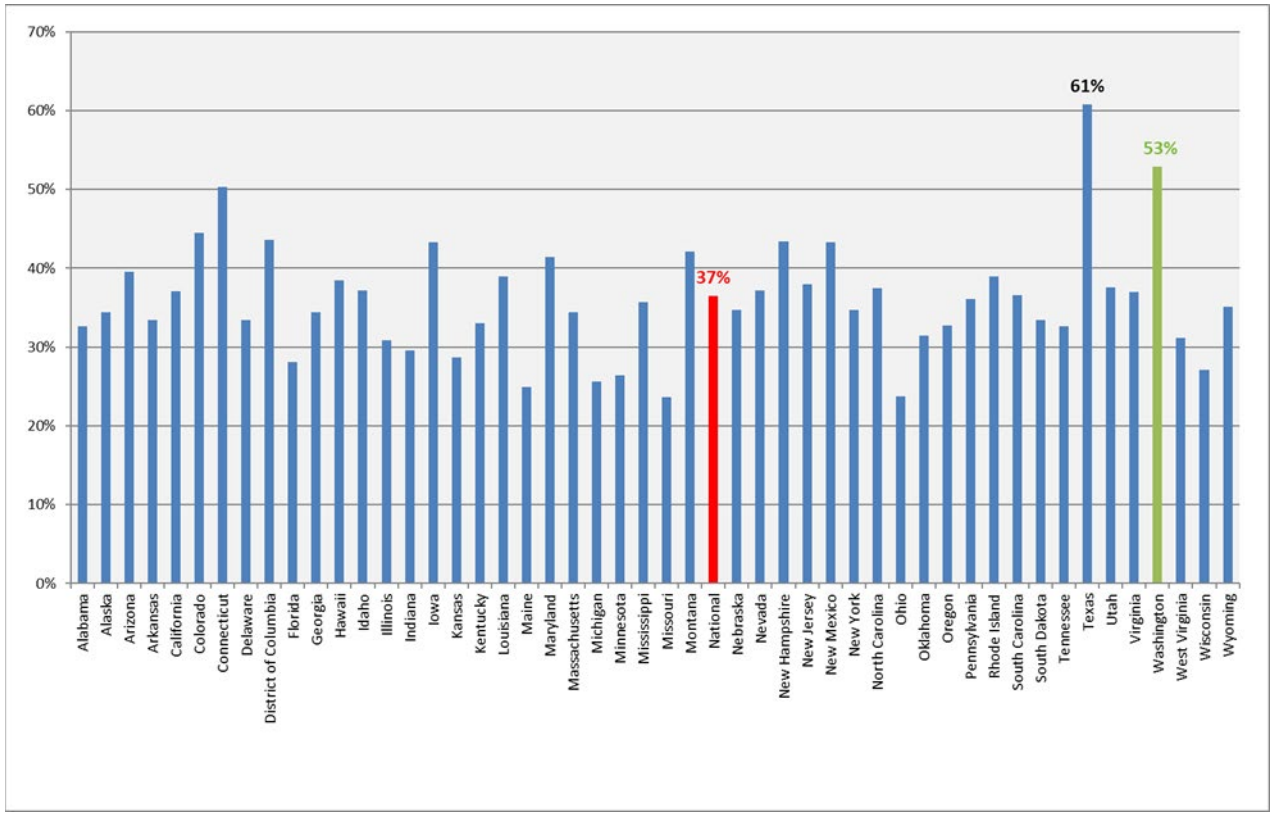
Section: Children

Among children eligible for care, there have been large increases in those that receive preventive and diagnostic services. On the other hand, there has been a slight decrease in the percent of enrollees receiving restorative care. This suggests that more children are getting the care needed to prevent disease, rather than solely treatment.

Utilization for Young Children Washington vs. Other States

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

Percentage of Children Ages 0-5 Enrolled in EPSDT for at Least 90 Continuous Days Receiving **Preventive Dental Services** by or under the Supervision of a Dentist, 2019



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. EPSDT is key to ensuring that children and adolescents receive appropriate preventive, dental, mental health, and developmental, and specialty services.
Source: 2019 CMS-416 reports, Line 1b and Line 12b (accessed 10/05/2021).

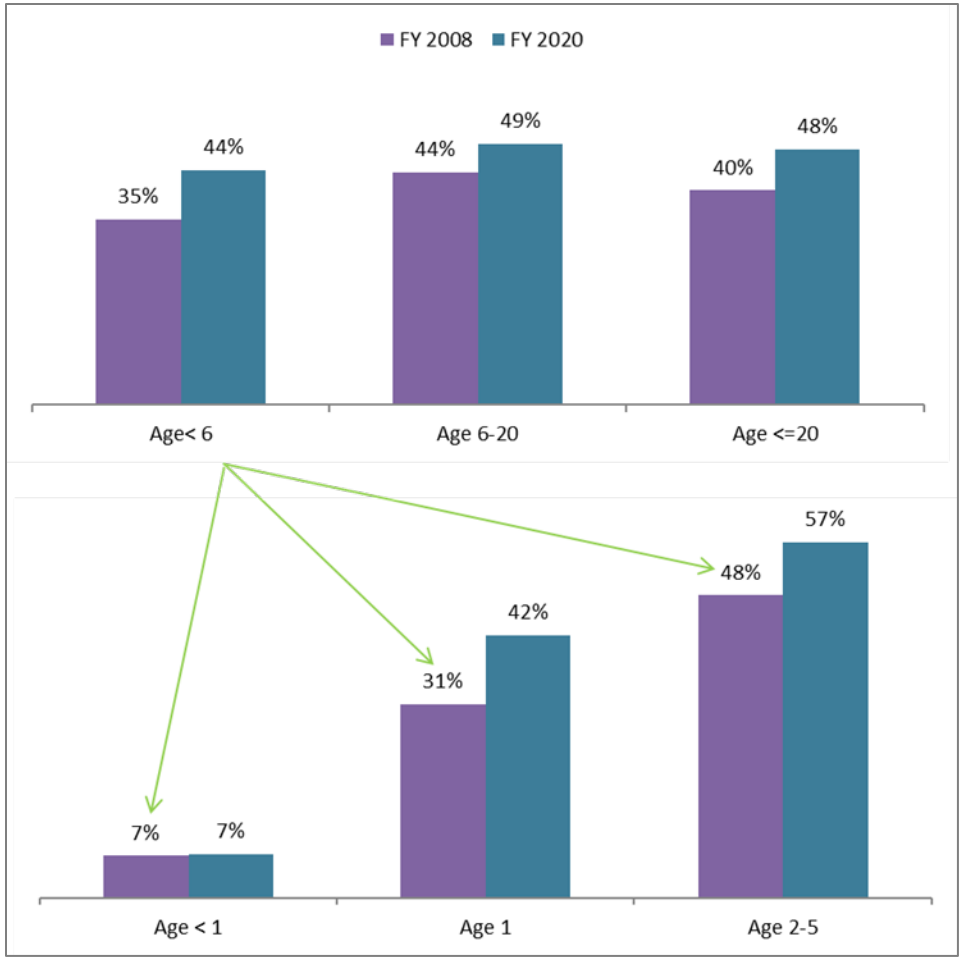
Section: Children

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

ABCD: Connects Apple Health-enrolled children under age 6 to dental care and engages primary care medical providers in delivering preventive services.

Early learning: Head Start and child care providers, as well as home visitors, have been trained to identify children at risk for oral health problems and connect them to community resources.

Percent of Child Enrollees Using Preventive Services by Age Group, FY 2008 vs. FY 2020



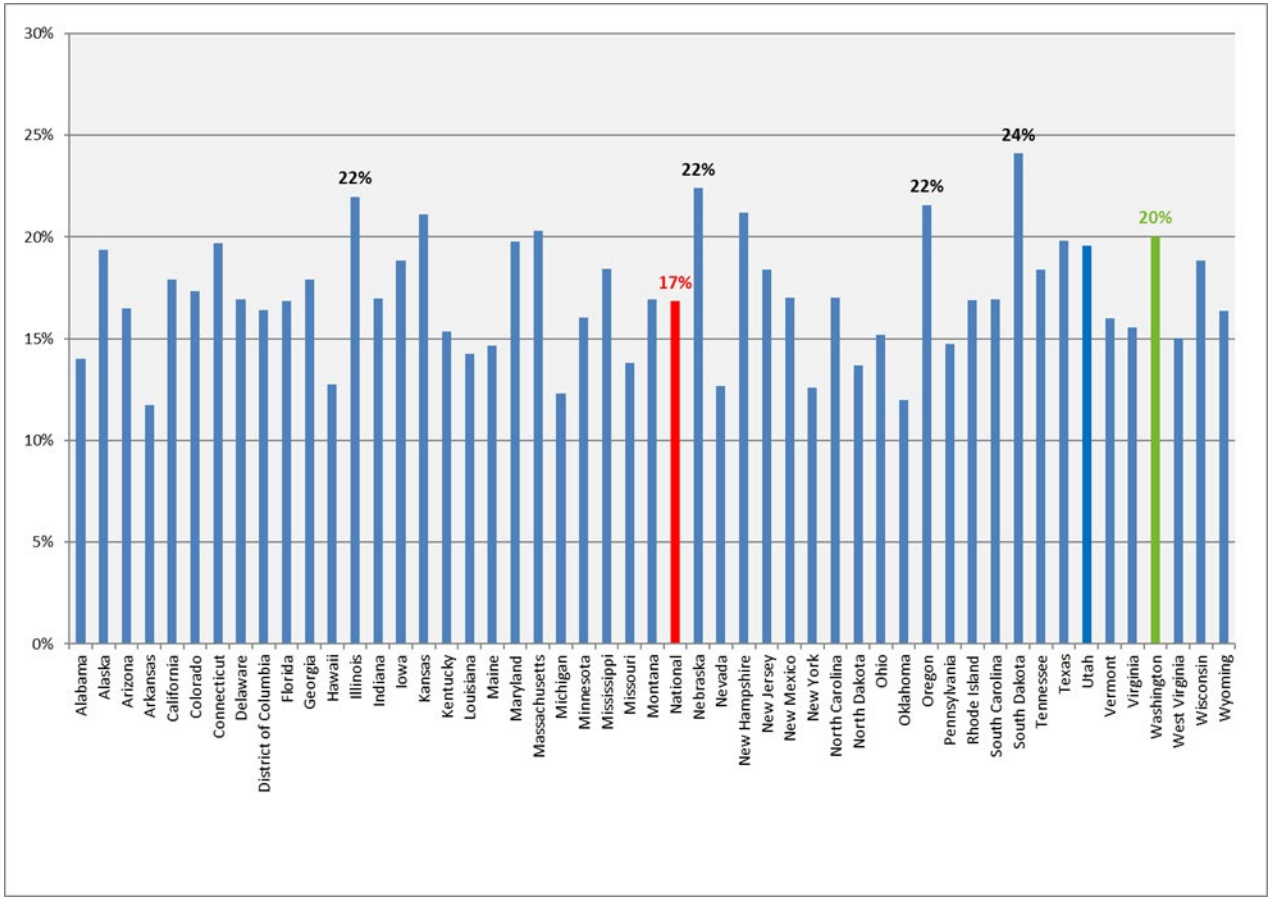
Source: Washington State Health Care Authority, Apple Health Dental Services Enrollment and Utilization Data
Note: Excludes FQHC claims. Preventive services include any preventive dental service (CDT codes: D1000-D1999)

Section: Children

The percentage of children who received preventive dental care increased for most age groups from FY 2008 to FY 2020. By FY 2020, 57% of children between the ages of 2 and 5 received preventive dental care.

The percent of children using preventive services for all children (age 20 and under) in FY 2008 was 40% and in FY 2020 was 48%.

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



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: 2019 CMS-416 reports, Line 1b and Line 12d (accessed 10/05/2021).

Section: Children Age 6 to 9 years

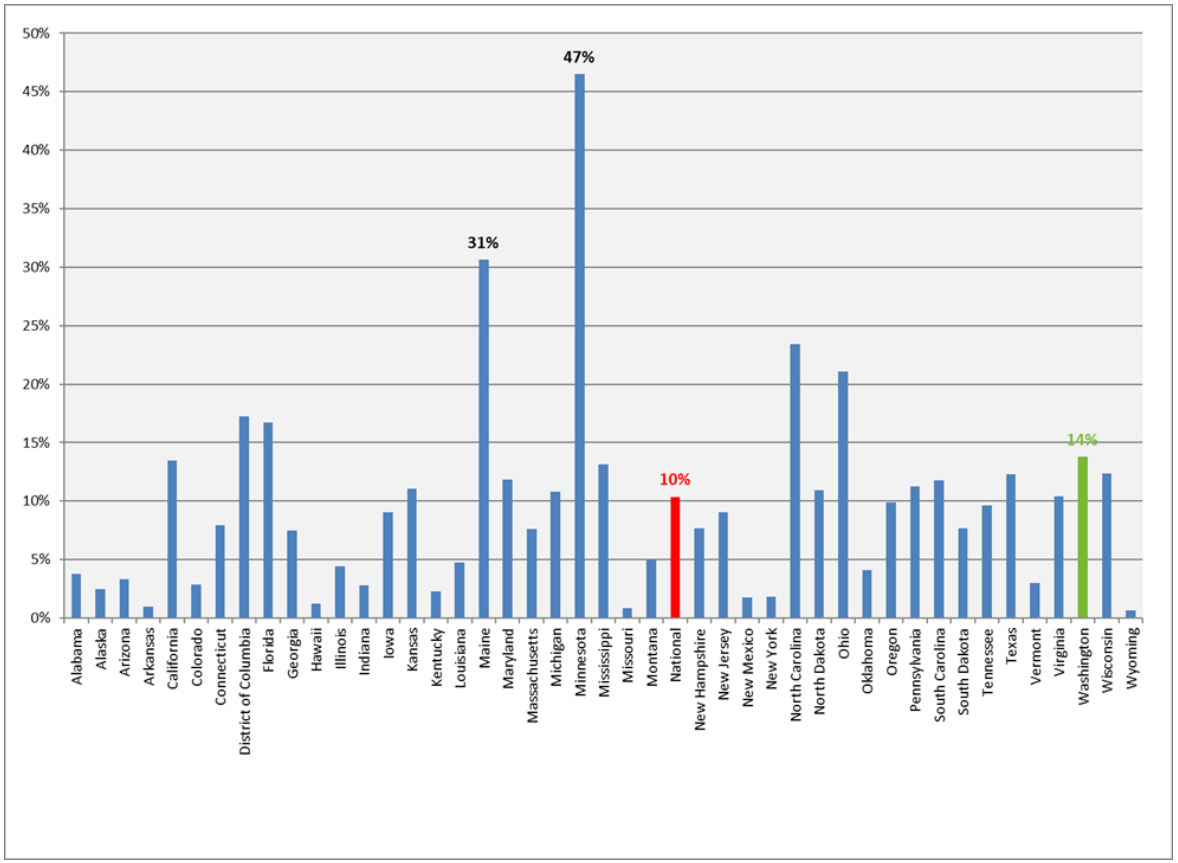
Sealants are effective and proven methods to prevent caries. They significantly reduce a child's risk of having decay and can even stop decay that has already started.

Washington state is 1 of the top 10 leaders in the country in the percentage of Medicaid-enrolled children receiving sealants on a first permanent molar in 2019.

20% of Apple Health-enrolled children ages 6 to 9 years received sealants on their first permanent molar.

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

Percentage of Children Ages 0-5 Enrolled in EPSDT for at Least 90 Continuous Days Receiving Oral Health Services Provided by a Non-Dentist Provider, 2019



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: 2019 CMS-416 reports, Line 1b and Line 12f (accessed 10/05/2021).

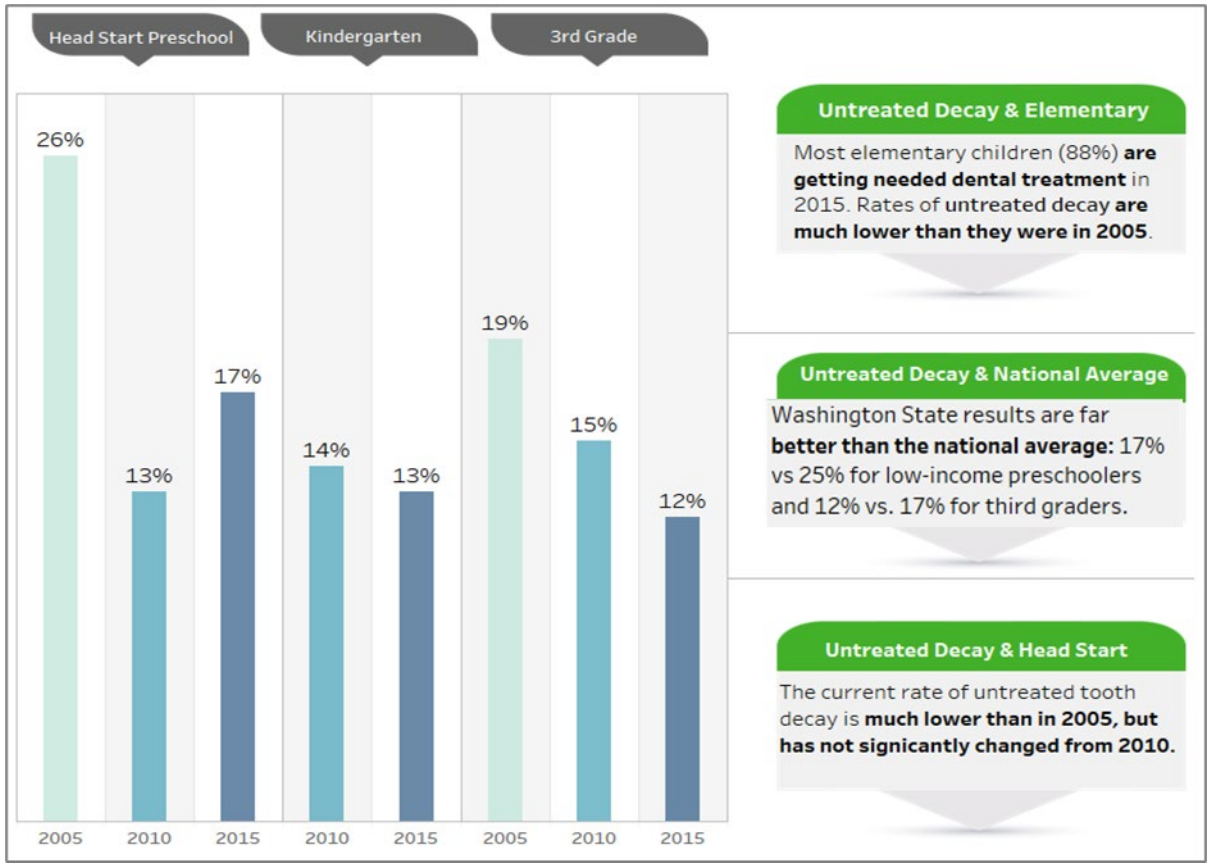
Section: Children

Incorporating Oral Health in the Primary Care Medical Setting

Approximately 14% 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 2019.

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

Rates of Untreated Decay by Age Group



Note: The Smile Survey is a dental screening completed by the WA State Department of Health every 5 years to assess the oral health of children throughout the state. In 2020, the survey was delayed until 2022 due to COVID-19.

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/

Section: Children

Washington's oral health policies and programs have made progress in improving the oral health status of children in some areas. Based on the 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 the 2005 Smile Survey. 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%).

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.

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.

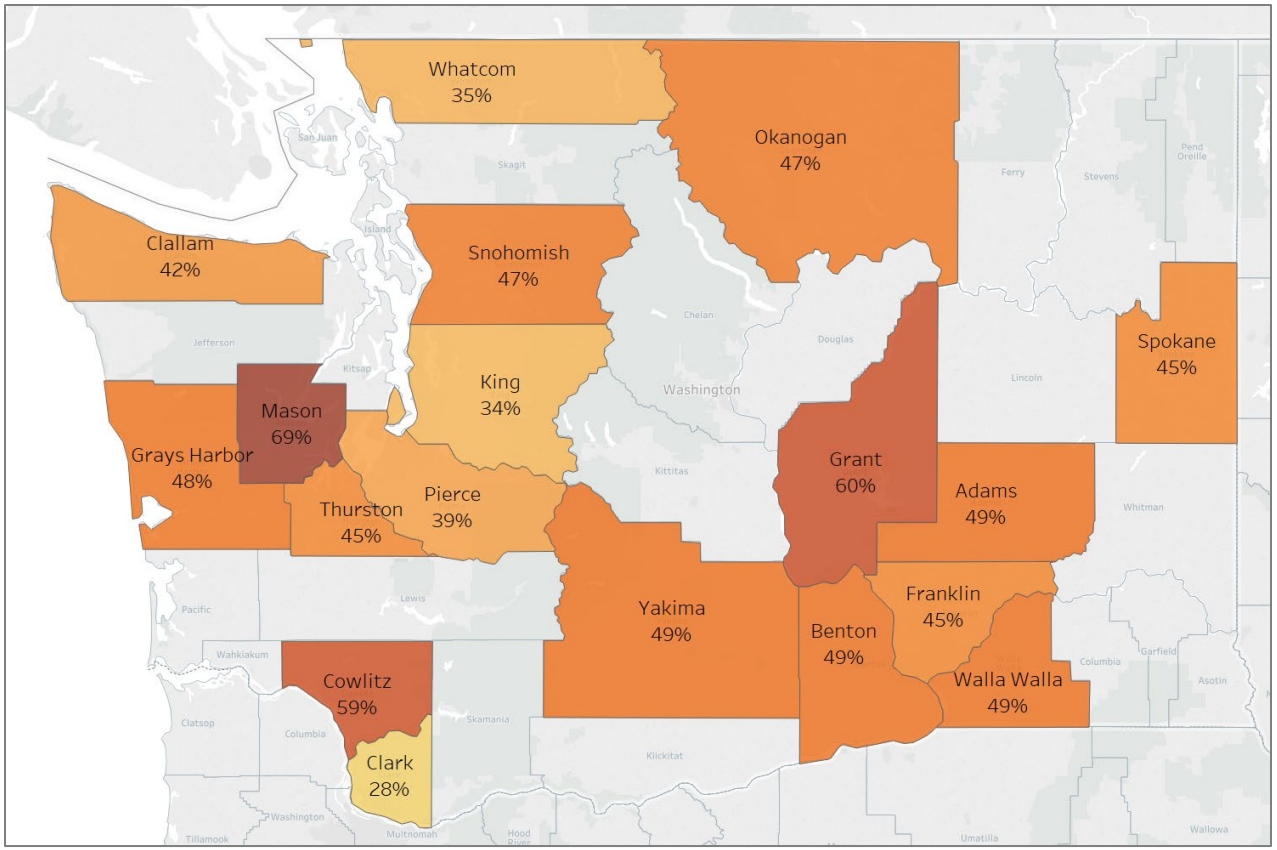
Source: Washington State Department of Health. Smile Survey 2015-2016: The Oral Health of Washington's Children. Olympia, WA, 2017. Available from: https://www.astdd.org/www/docs/wa-smile-survey-report-2016.pdf
Smile Survey Dashboard Link: https://arcorafoundation.org/oral-health-status-dashboard/

Section: Children

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

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

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



Statewide Average 46%

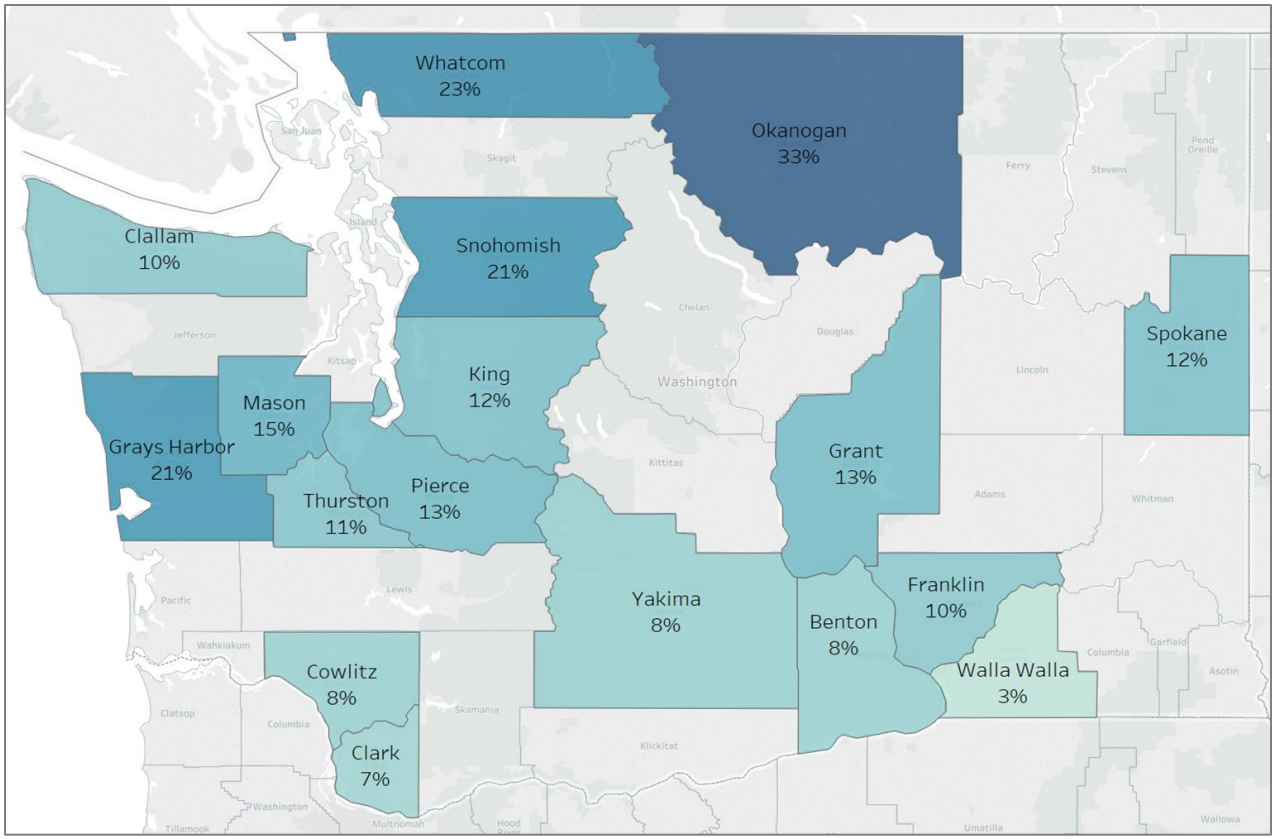
Note: Gray shadings represent counties that did not participate in the 2015 county-level Smile Survey or did not have enough participants to provide a representative sample.

Section: Children

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%.

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



Statewide Average 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 an representative sample

Section: Children

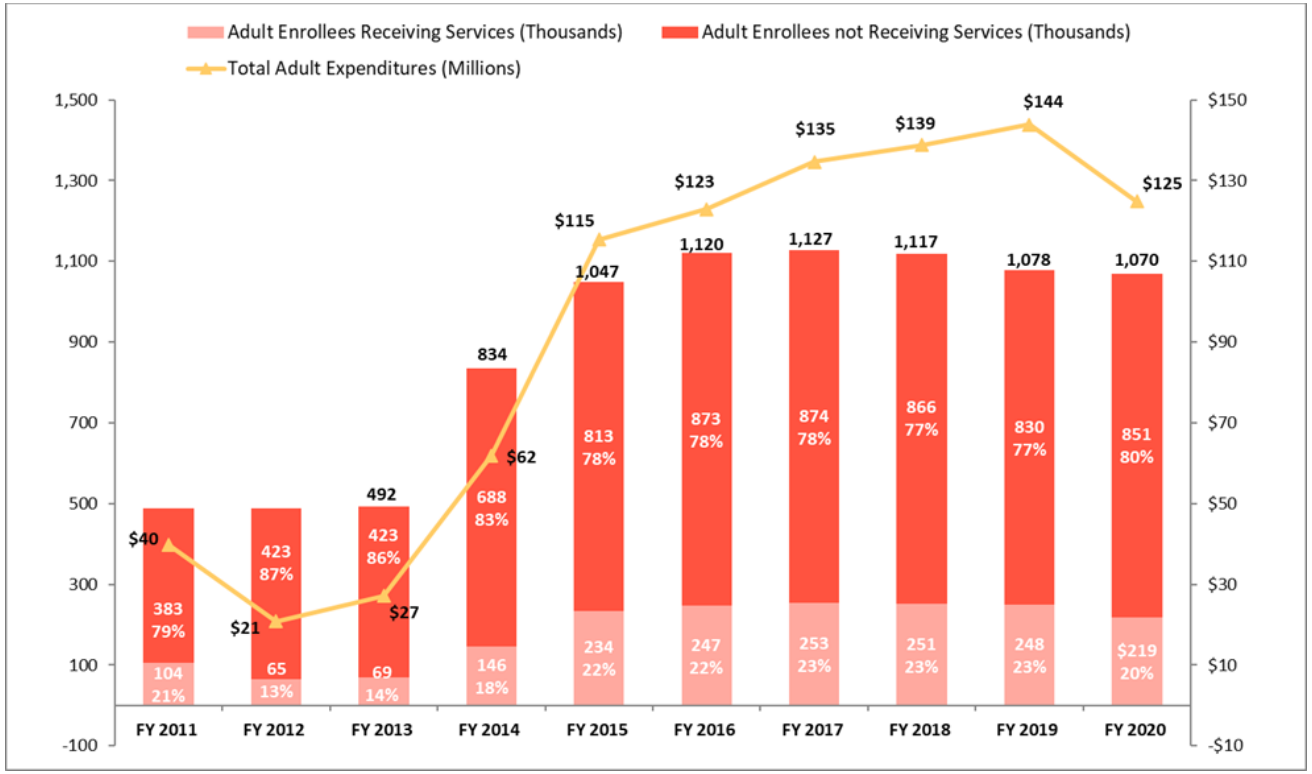
Among the counties that completed the Smile Survey in 2015-2016, Okanogan County had the highest untreated decay rates (33%), while Walla Walla and Clark Counties had the lowest (3%, 7%), significantly lower than the statewide average of 17%.

Total Expenditures and Services Key Findings (Children)

- Washington Apple Health spent $213M on dental services for children in FY 2020. In the last fiscal year, Children dental expenditures decreased by 21% after adjusting for inflation as a result of COVID-19's impact on dental clinics and access to dental care.
- The percentage of children accessing dental services was 45% in FY 2008, compared to 53% in FY 2020. Children dental utilization rates increased across all age groups between FY 2008 and FY 2020. However, dental utilization experienced a slight decrease in the last fiscal year due to COVID-19.
- The percentage of children under age six accessing dental services in Washington increased for 34 counties between FY 2008 and FY 2020. However, geographic disparities remain: Utilization by county ranged from 34% (Garfield County) to 61% (Adams County) in FY 2020.
- The rate of children (age 20 and under) accessing preventive services increased, from 40% in FY 2008 to 84% in FY 2020.
- The percentage of expenditures for restorative services for children decreased from 36% in 2008 to 26% in 2020.

Expenditures and Services Among Adults

Trend in Dental Utilization and Expenditures among Adults 21 and Older, FY 2011 – FY 2020



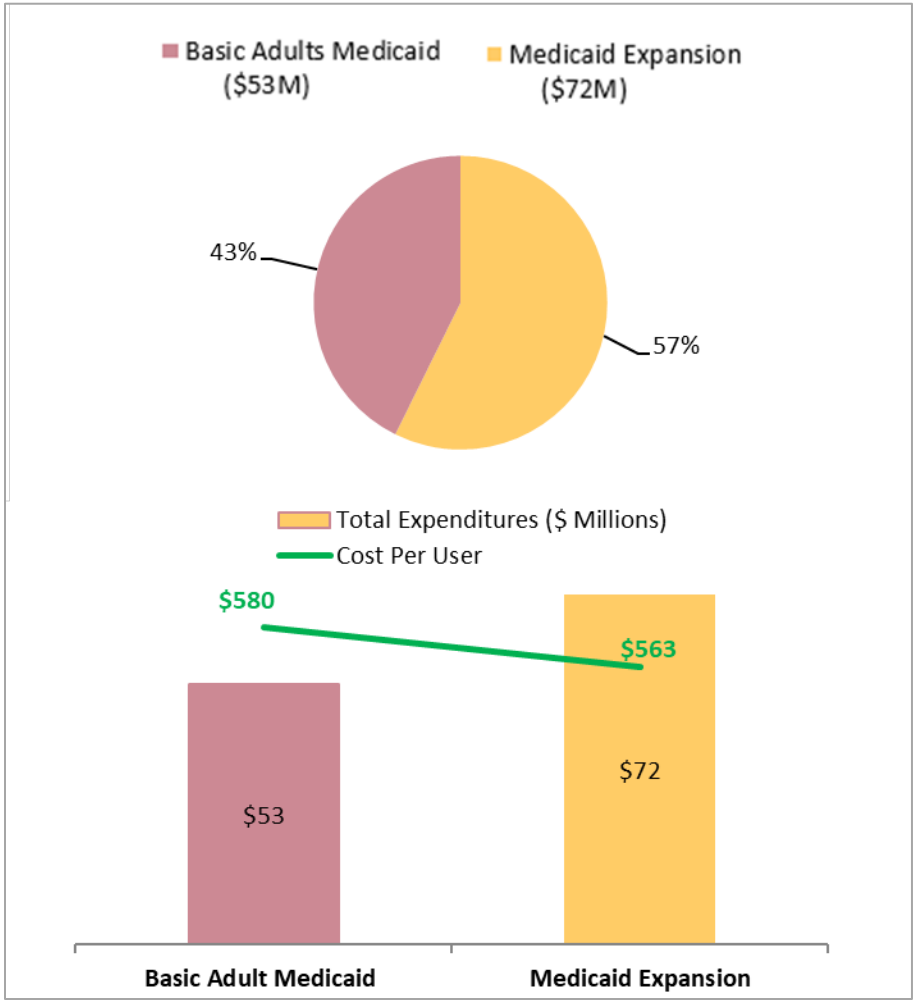
Source: Washington State Health Care Authority, Apple Health Dental Services Enrollment and Utilization Data

Section: Adults

Total expenditures and utilization fell dramatically after the adult dental cuts went in 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 twelve 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. Utilization rates decreased by 11%, while expenditures decreased by 13% (17% after adjusting for inflation).

Washington Apple Health Dental Expenditures
Basic Adults vs. Medicaid Expansion Adults, FY 2020



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

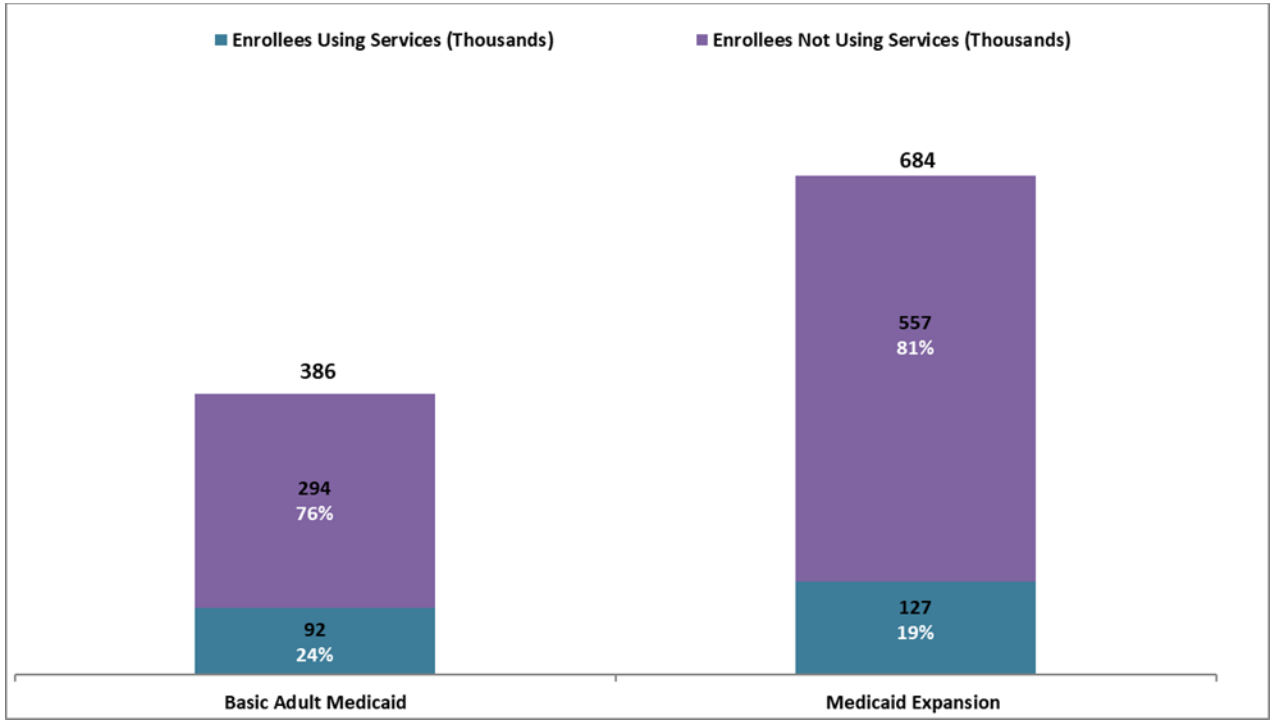
Source: Washington State Health Care Authority, Apple Health Dental Services Utilization and Expenditure Data

Section: Adults

Total Medicaid Expansion dental expenditures were $72 million, which represents 57% of total Apple Health adult dental expenditures. This drew 90% federal match in 2020 (estimated $64.4 million).

Note: Washington's FY 2020 total Apple Health adult state expenditures were $34 million, while the total adult federal expenditures were $91 million.

Enrollees with at Least 1 Dental Service, Medicaid Expansion Users, FY 2020

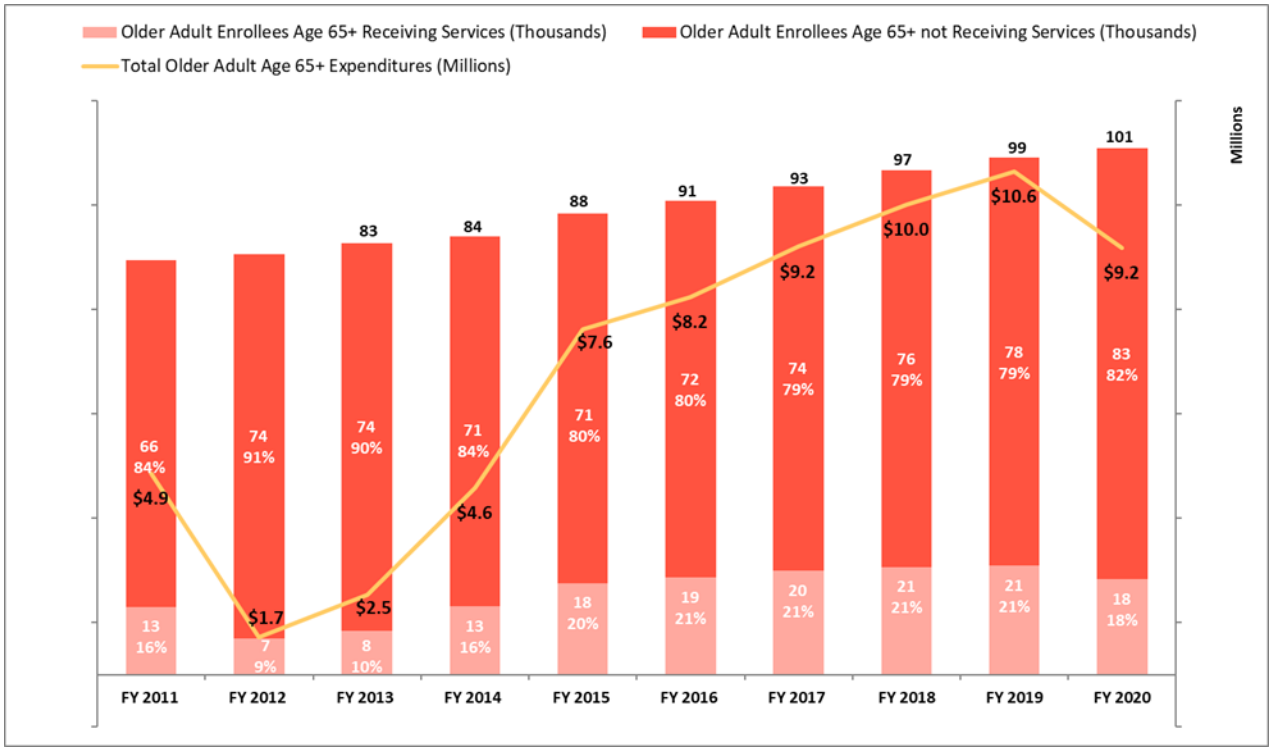


Source: Washington State Health Care Authority, Apple Health Dental Services Enrollment and Utilization Data

Section: Adults

Among Medicaid Expansion enrollees, 19% had at least 1 dental service in FY 2020 compared to 24% of all other Medicaid eligible enrollees (Basic Medicaid).

Trend in Dental Utilization and Expenditures among Older Adults, FY 2011 – FY 2020



Note: 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 2020, only 8% of adults 65 and older in Washington were eligible for Apple Health.

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

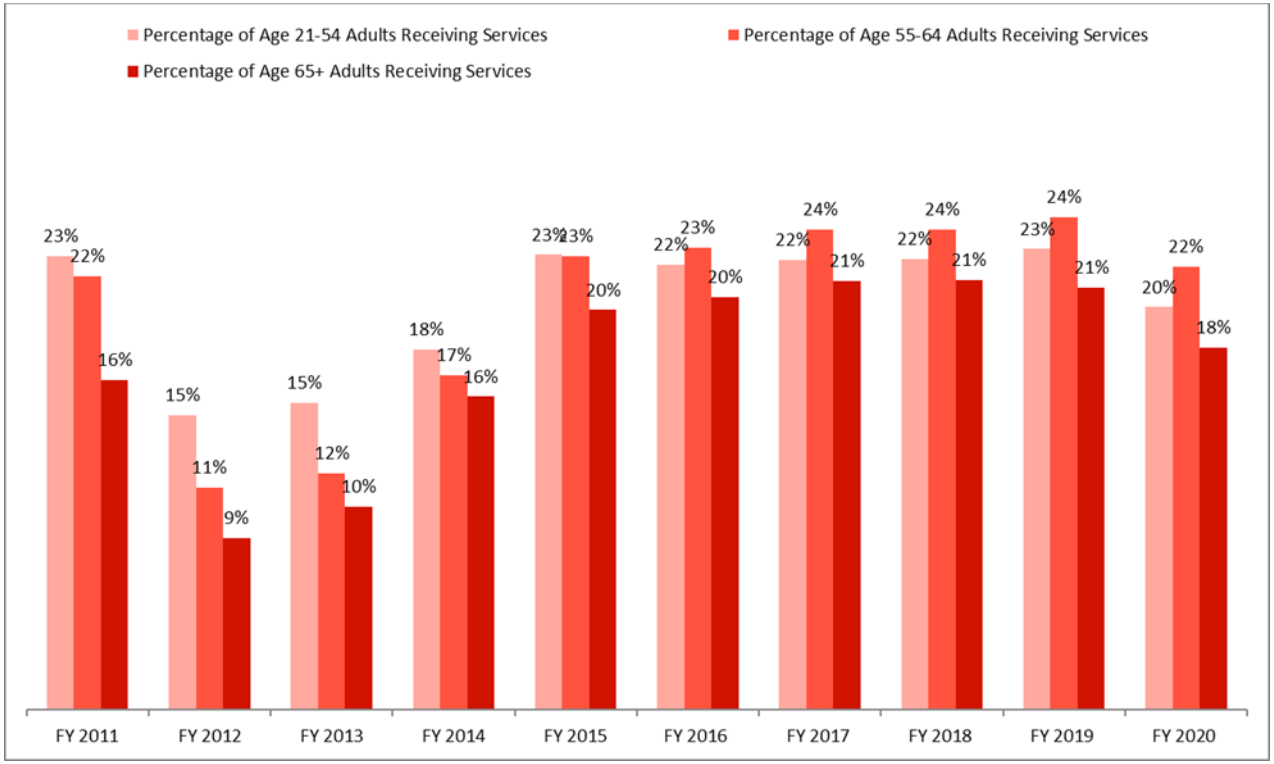
Section: Adults

Total expenditures and utilization for seniors ages 65 and older fell after the adult dental cuts went into 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 since FY 2011 ($11 million).

In FY 2020, both expenditures and utilization experienced a decrease as a result of COVID-19's impact on clinics. Both decreased by 14% since FY 2019.

Trend in Dental Utilization among Adults, Ages 21-54, 55-64 and 65+, FY 2011 – FY 2020



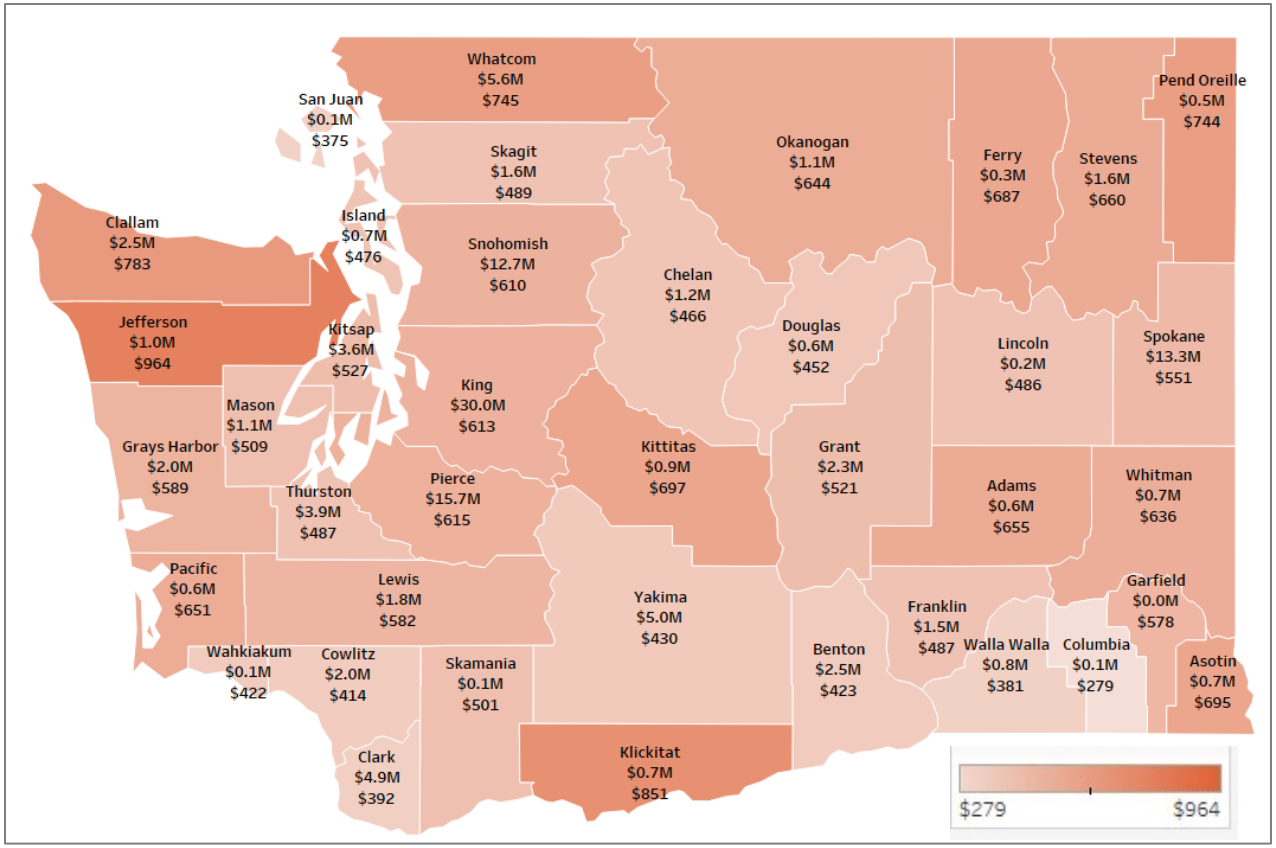
Source: Washington State Health Care Authority, Apple Health Dental Services Enrollment and Utilization Data

Section: 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.

In FY 2020, all age groups experienced a slight decline in utilization as a result of dental clinic closure due to COVID-19.

Adult Dental Expenditures and Average Cost per User by County, FY 2020



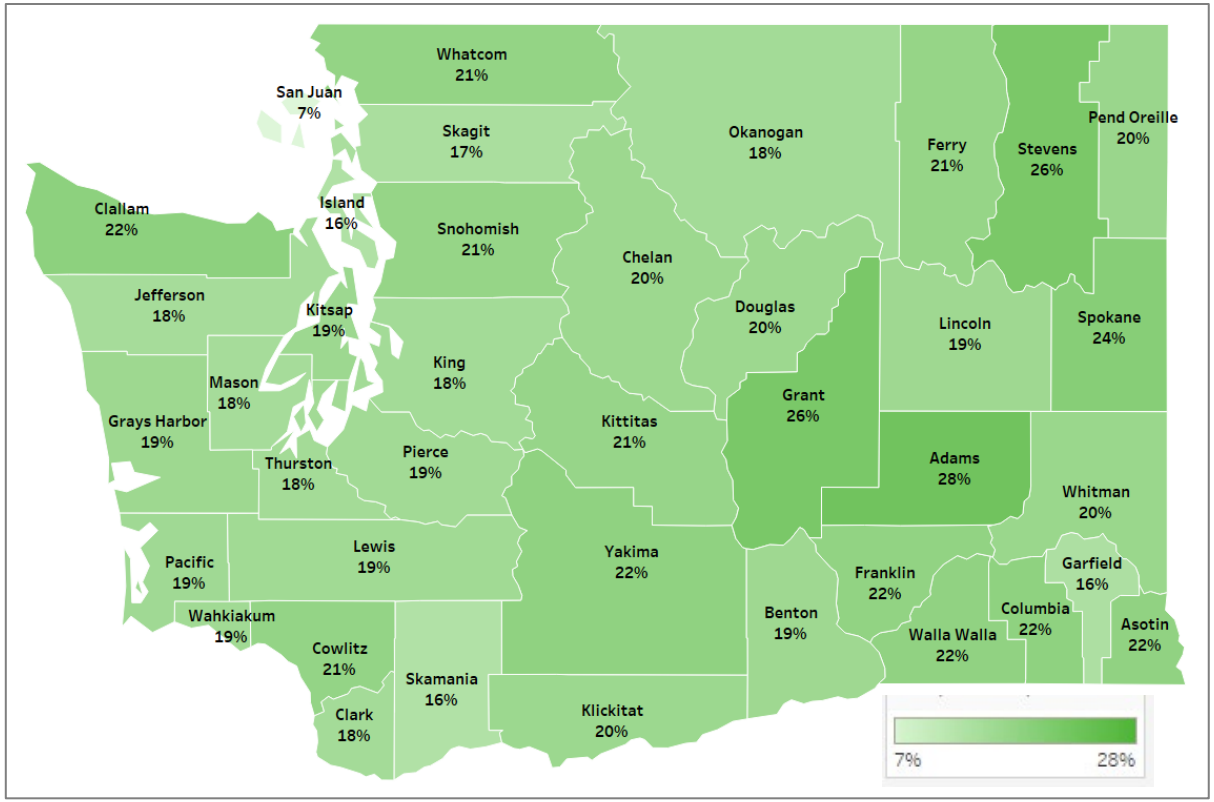
Statewide adult per capita dental cost $570

Note: Expenditures include FQHC encounter payments

Section: Adults

Adult dental expenditures per user vary by county with a low of $279 in Columbia County and a high of $964 in Jefferson County (indicated by darker shading).

Adult Enrollees with at Least 1 Dental Service by County, FY 2020



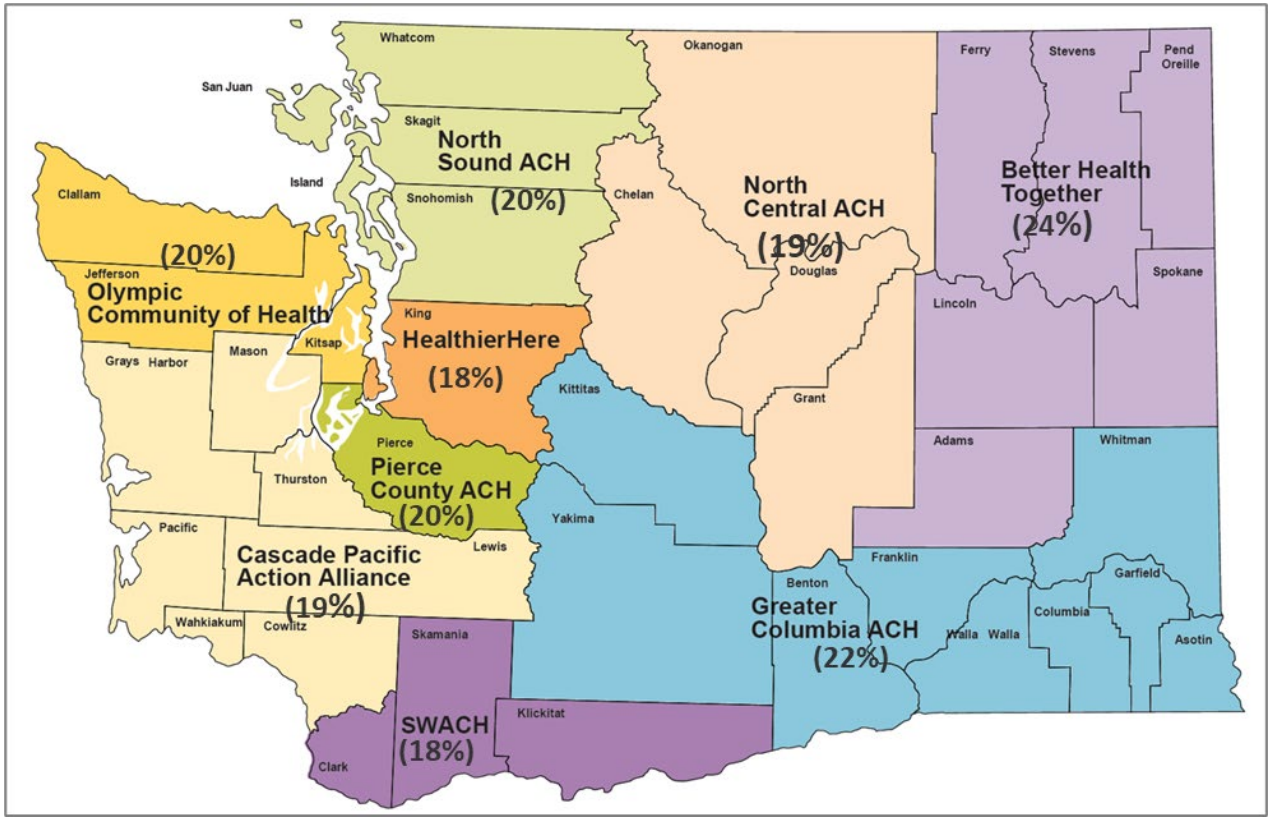
Statewide Utilization Total 20%

Section: Adults

Adams County had the largest percentage of Apple Health adult enrollees receiving dental services in FY 2020 at 28% (indicated by darker shading), while San Juan County had the lowest at 7% (indicated by lighter shading).

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

Adult Enrollees with at Least 1 Dental Service by Accountable Community of Health, FY 2020



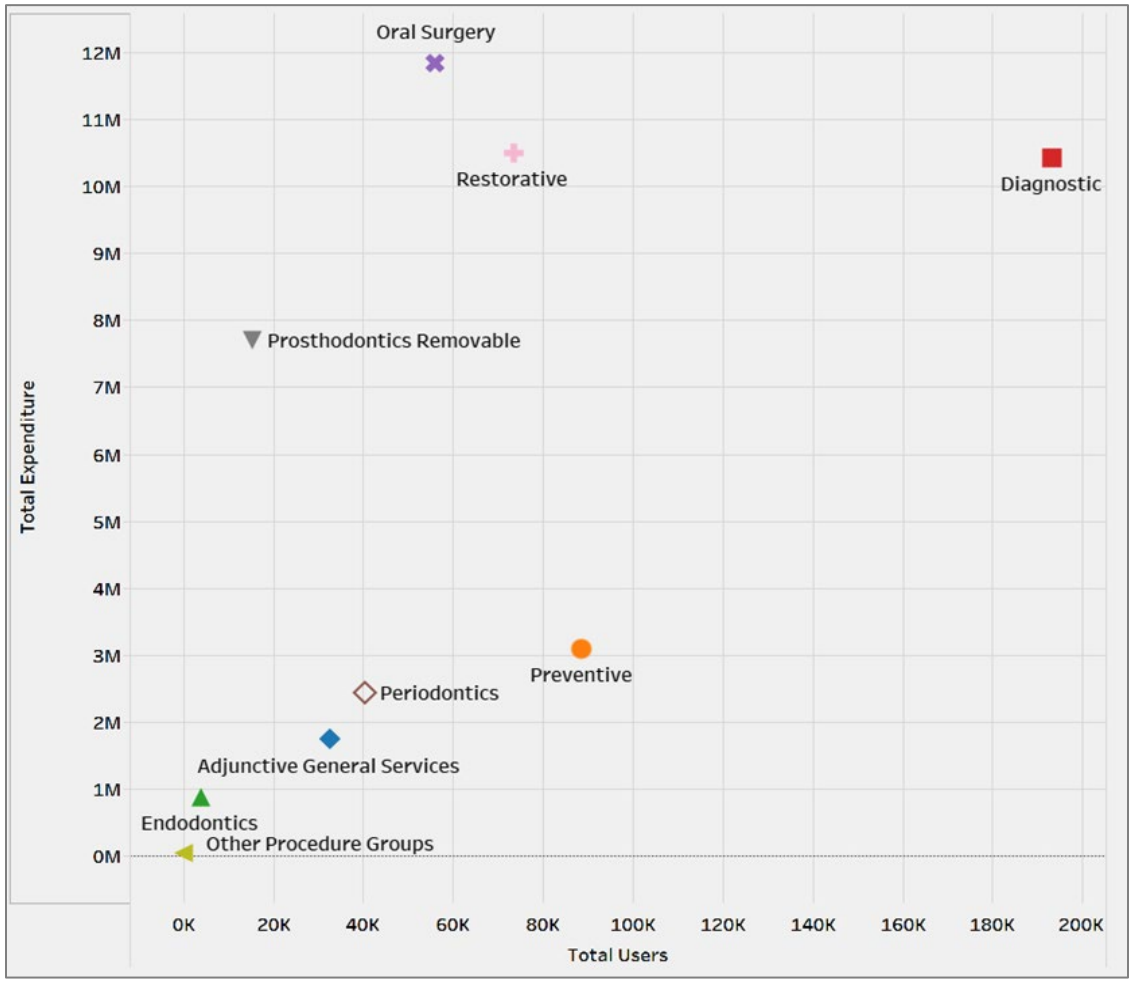
Statewide Utilization Total 20%

Section: Adults

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%).

There are several key drivers behind variability in regional dental utilization. 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 2020



Note: Excludes FQHC claims. Prosthetics (Fixed and Maxillofacial Prosthetics) and Orthodontics had less than 100 users and $33,100 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

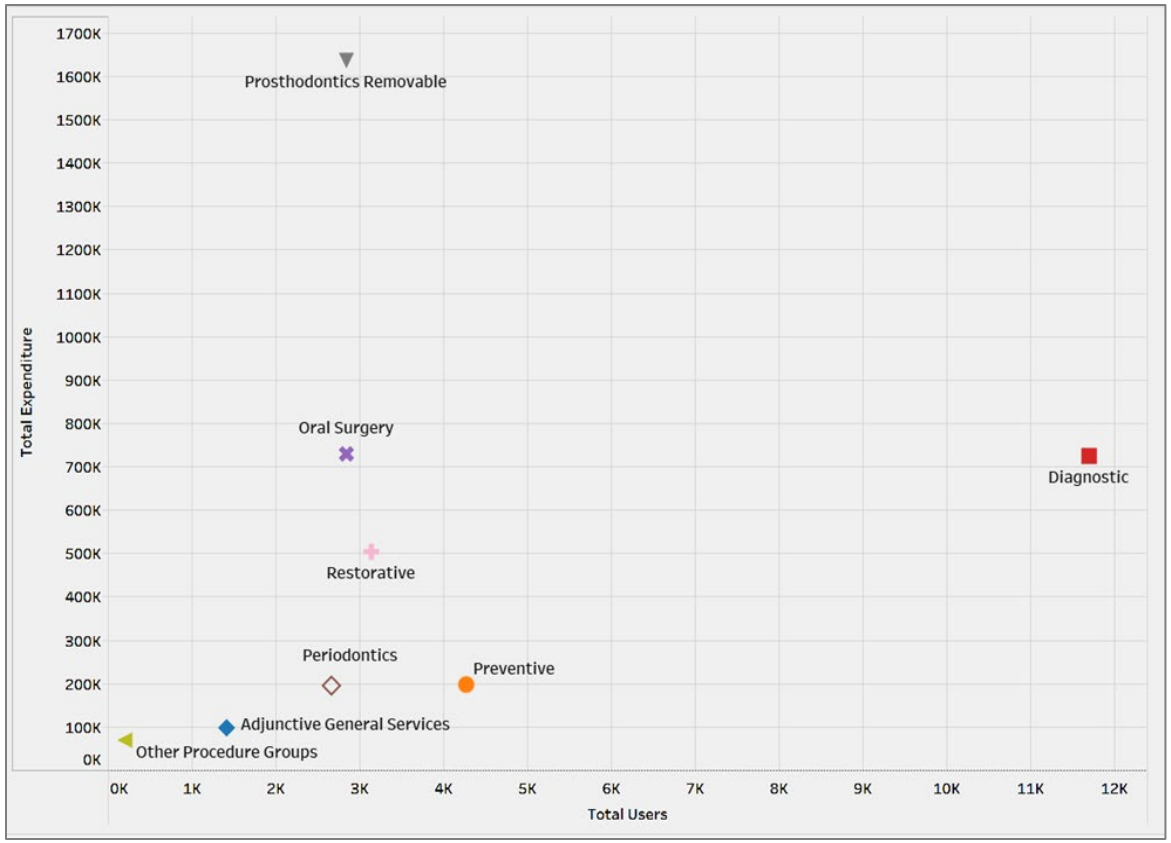
Section: Adults

In FY 2020, with adult dental restoration in effect for six full years, preventive services (orange dot) were used by nearly 89,000 adults, which is an 11% decrease 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 most costly procedures. Restorative services (pink plus) decreased by 21% since last fiscal year.

Older Adults Dental Users and Total Expenditures by Procedure Group, FY 2020



Note: Excludes FQHC claims. Prosthetics Fixed and Endodontics had less than 200 users and $69,000 in expenditures. They are included in the graph as "Other Procedure Groups."

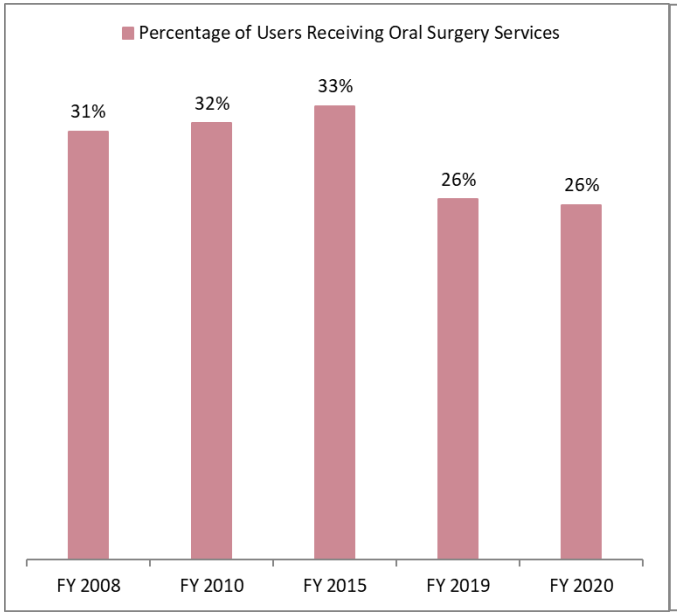
Source: Washington State Health Care Authority, Apple Health Dental Services Enrollment and Utilization Data

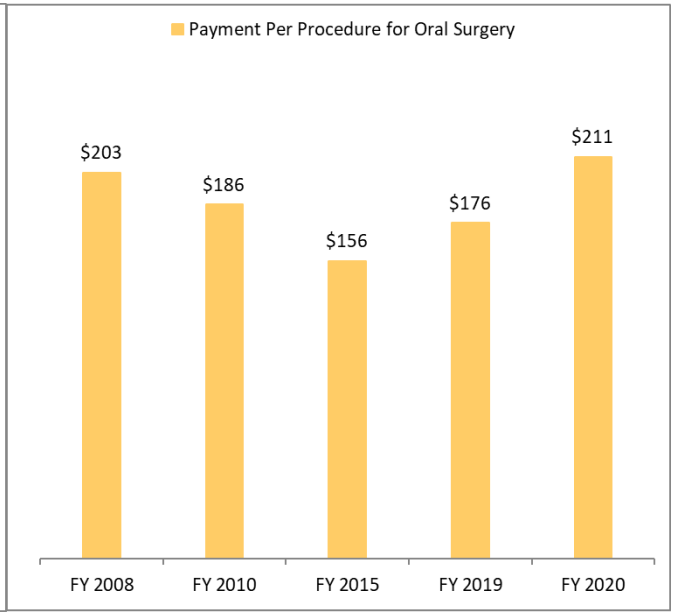
Section: Adults

For older adults ages 65 and over in FY 2020, preventive services (orange dot) were used by 4,300 older adults.

Diagnostic procedures (red square) had the greatest number of users (nearly 12,000), while Prosthodontics Removable services (grey triangle) were the most costly procedures ($1.6 million).

Adult Oral Surgery: Selected Years Use and Expenditures among Enrollees





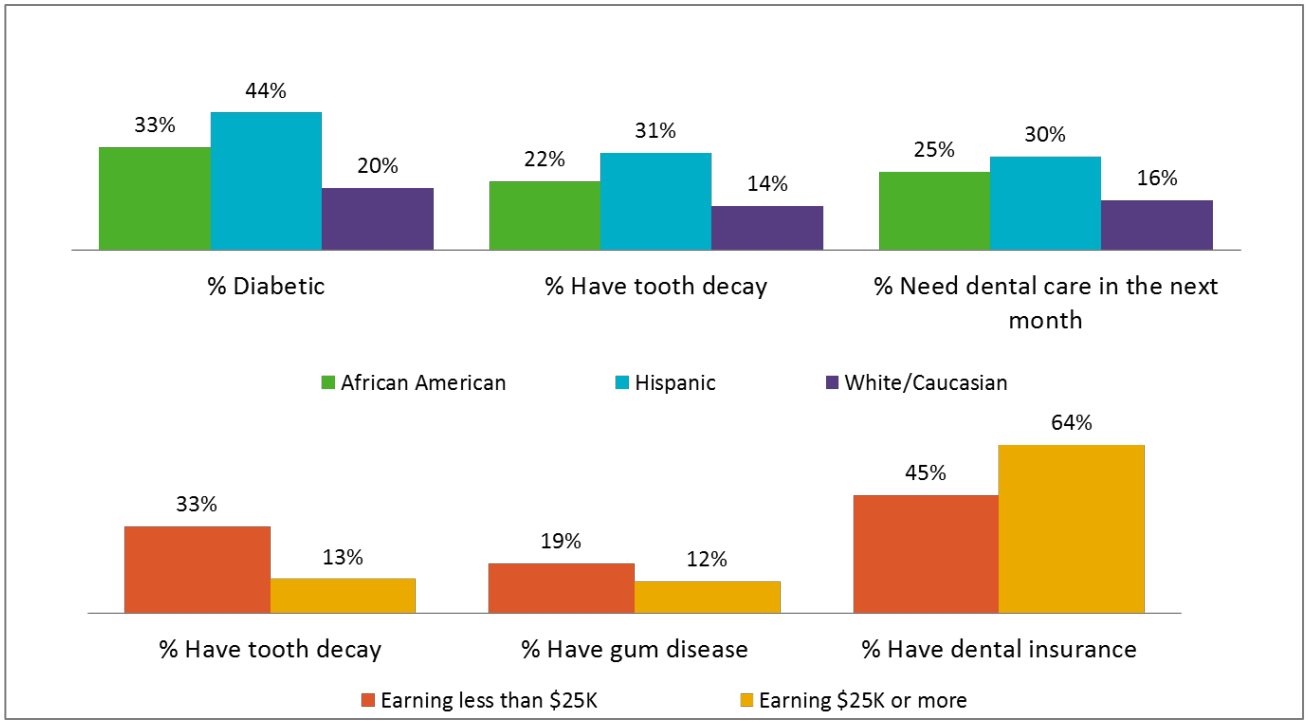
Note: Excludes FQHCs claims as oral surgery procedures received in FQHCs cannot be identified.
Source: Washington State Health Care Authority, Apple Health Dental Services Enrollment and Utilization Data

Section: Adults

The percentage of adults accessing dental care who had oral surgery in FY 2020 decreased by 17% since FY 2008 and by 22% since FY 2015.

Expenditures per oral surgery procedure between FY 2008 and FY 2019 decreased by 13% (from $203 to $176). In the last fiscal year (FY 2020), cost per user increased by 20%.

Oral Health Disparities among Seniors by Race/Ethnicity and Income

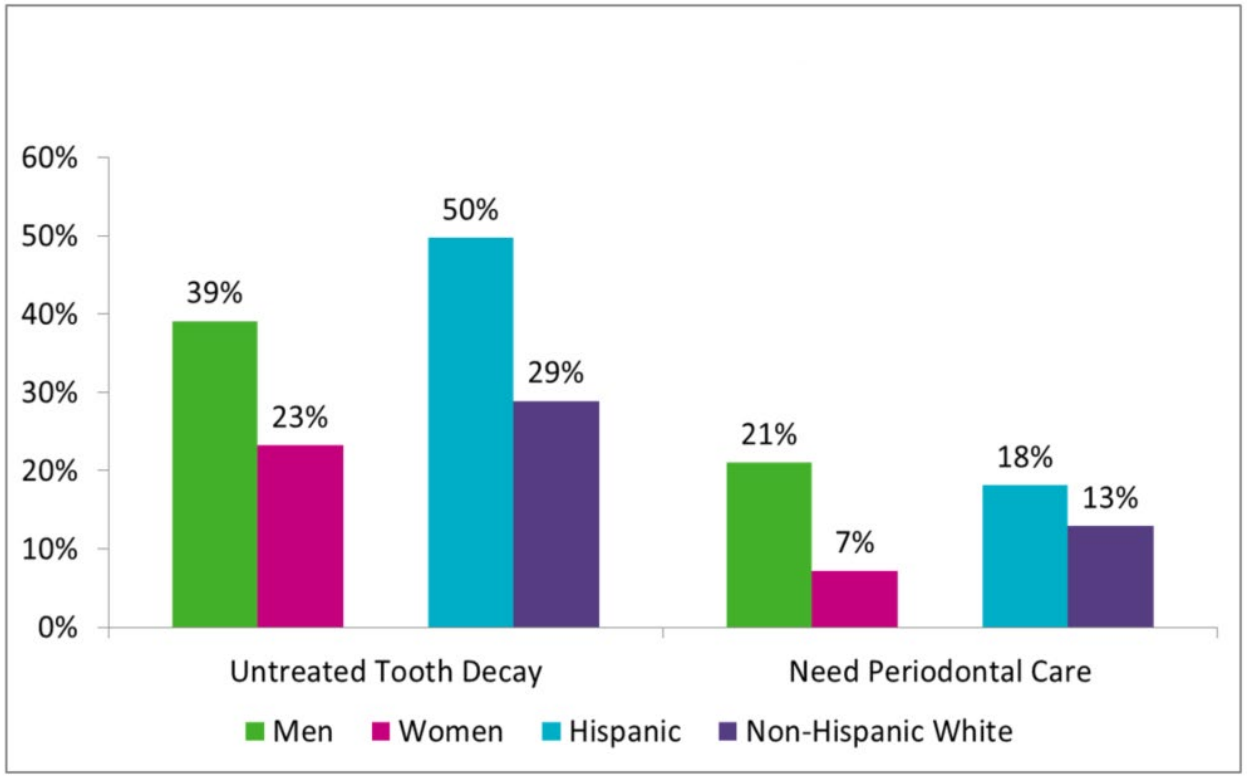


Note: The Senior Telephone Survey is a self-reported survey completed by Arcora Foundation every five years to assess the oral health status of seniors ages 55 and over throughout the state. To view the full report and methodology, visit https://www.arcorafoundation.org/resources/articles/senior-oral-health-survey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

Section: Adults

Although the majority of seniors age 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 seniors' oral health exist by income and by race. Seniors living on $25k 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 seniors reported poorer oral health than their white/Caucasian counterparts.

Seniors with Untreated Tooth Decay and Needing 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/

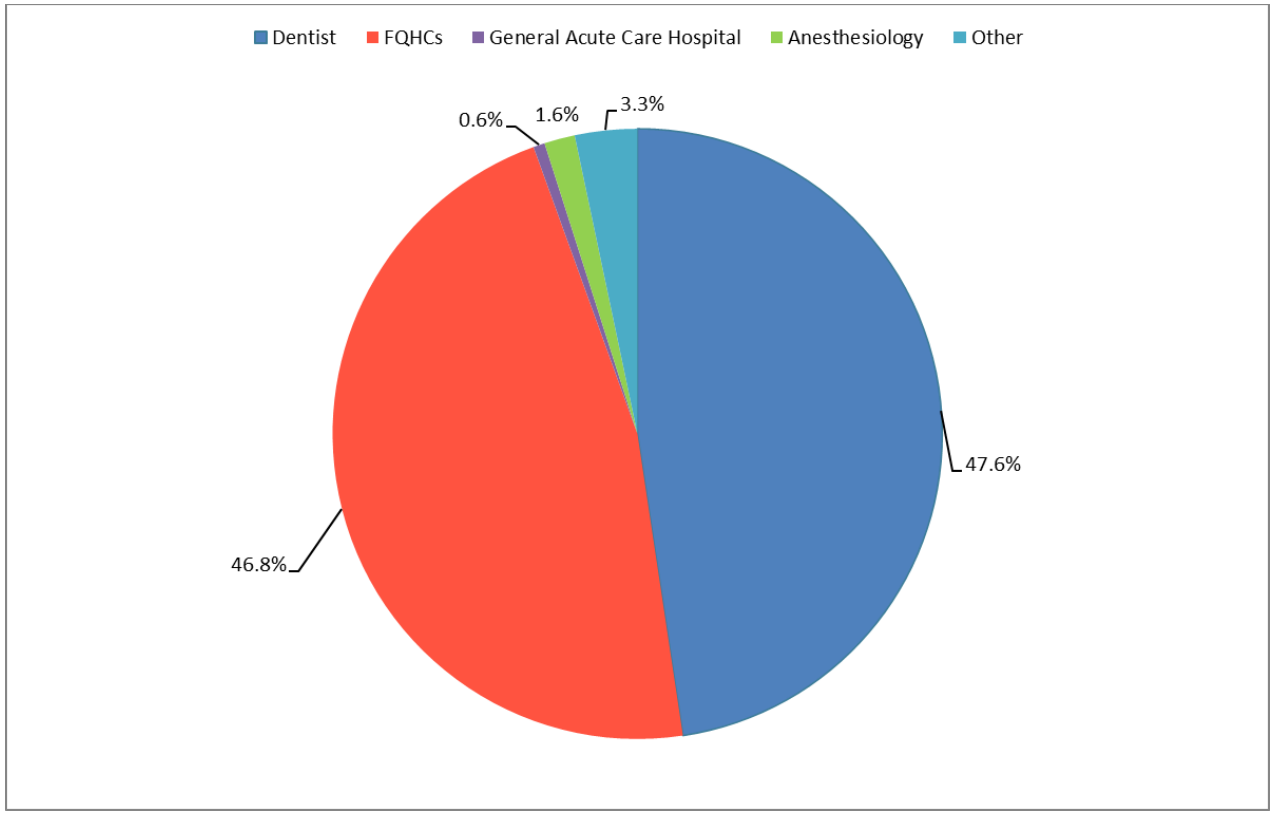
Seniors participating in meal programs at senior centers suffer significantly more from poor oral health than the general population of older adults in Washington state. They were more likely to have diabetes or pre-diabetes, to be edentulous, and to have problems with their mouth.

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 six months' worth of data for FY 2014 and 1 full year data for FY 2015 - FY 2020.
- The state spent $40 million on dental services for adults in FY 2011 (both state and federal spending), compared to $125 million in FY 2020. After accounting for inflation, adult dental expenditures more than doubled in the last ten years (increased by 140%). However, in the last fiscal year, adult expenditures decreased by 17%, after adjusting for inflation due to COVID-19.
- More than half (57%) of new adults accessing care in FY 2020 were receiving coverage through Medicaid expansion, which drew 90% federal match in 2020 (estimated $64.4M). The remainder of new adults accessing care had classic Medicaid coverage.
- Approximately 219,000 of the adult population received services in FY 2020, 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 10 years.

Providers of Oral Health Services

Expenditures by Billing Provider Type Specialty, FY 2020



Notes: "Other" includes Multi-Specialty, Dental Hygienists, Pediatrics, Denturists, Oral & Maxillofacial Surgery, Nurse Anesthetist (Certified Registered), Single Specialty, Public Health, Family Practice, 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. FY 2020 Fee-for-Service dental claims data include oral health services provided by PCP for 6 months only (from 07/01/2019 to 12/31/2019).

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

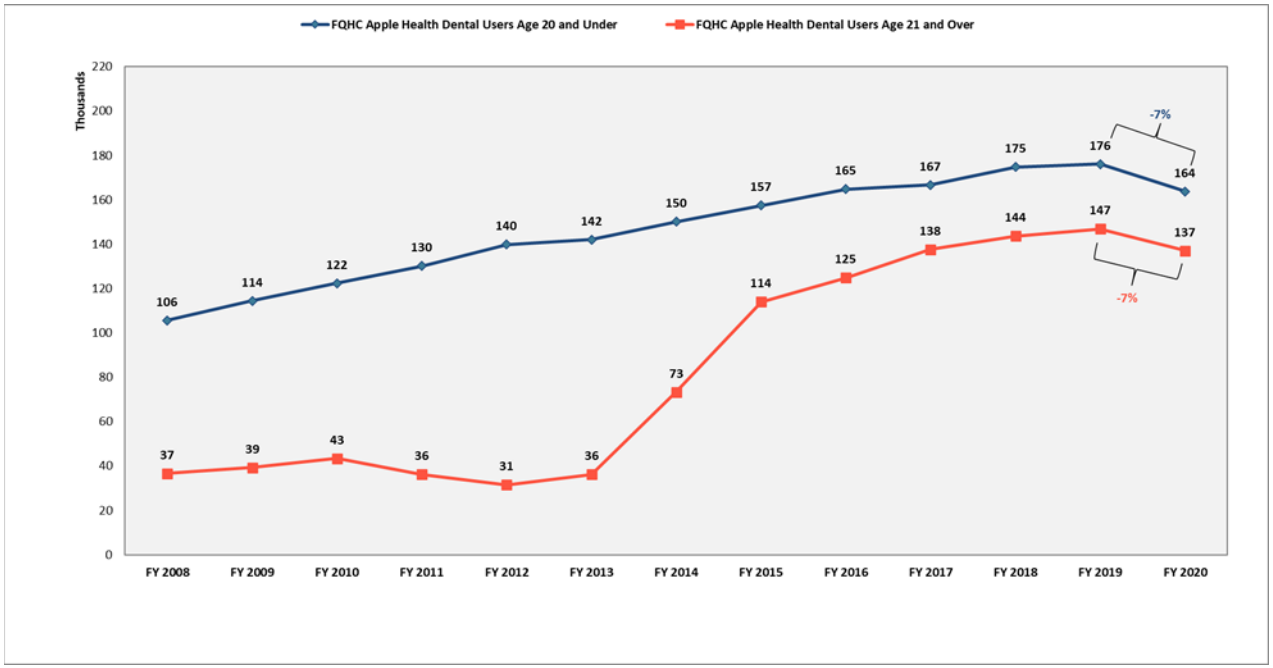
Section: Providers

In FY 2020, ninety-four cents out 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 48% of dental expenditures in FY 2020 were provided by private practice providers (including not-for-profit), while 47% 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, as a way to compensate the FQHCs for their actual cost of care.

Apple Health Dental Users Served by Federally Qualified Health Centers, FY 2008 – FY 2020



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

Section: Providers

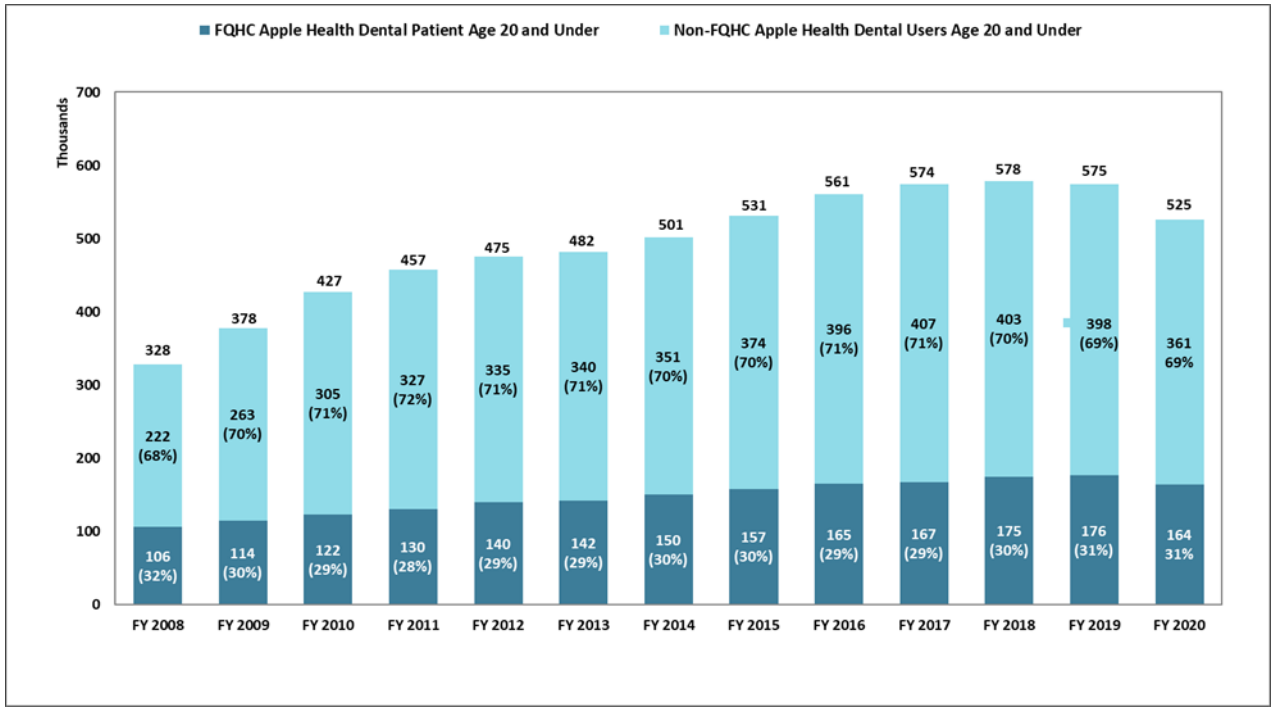
Overall, many more Apple Health-enrolled children are served by FQHCs than adults, as more children use dental services in general.

The number of adults served by FQHCs declined between 2011 and 2013, when the cuts to Apple Health adult dental benefits went into effect.

Upon the adult dental benefit restoration, the number of adults served by FQHCs initially increased by 55% in FY 2015 then maintained a steady increase until FY 2019(2.3% in the last fiscal year).

In FY 2020, the number of both adults and children served by FQHCs decreased by 7% as a result of COVID-19's impact on dental clinics.

Children Served by Federally Qualified Health Centers as a Portion of Total Child Users, FY 2008 – FY 2020



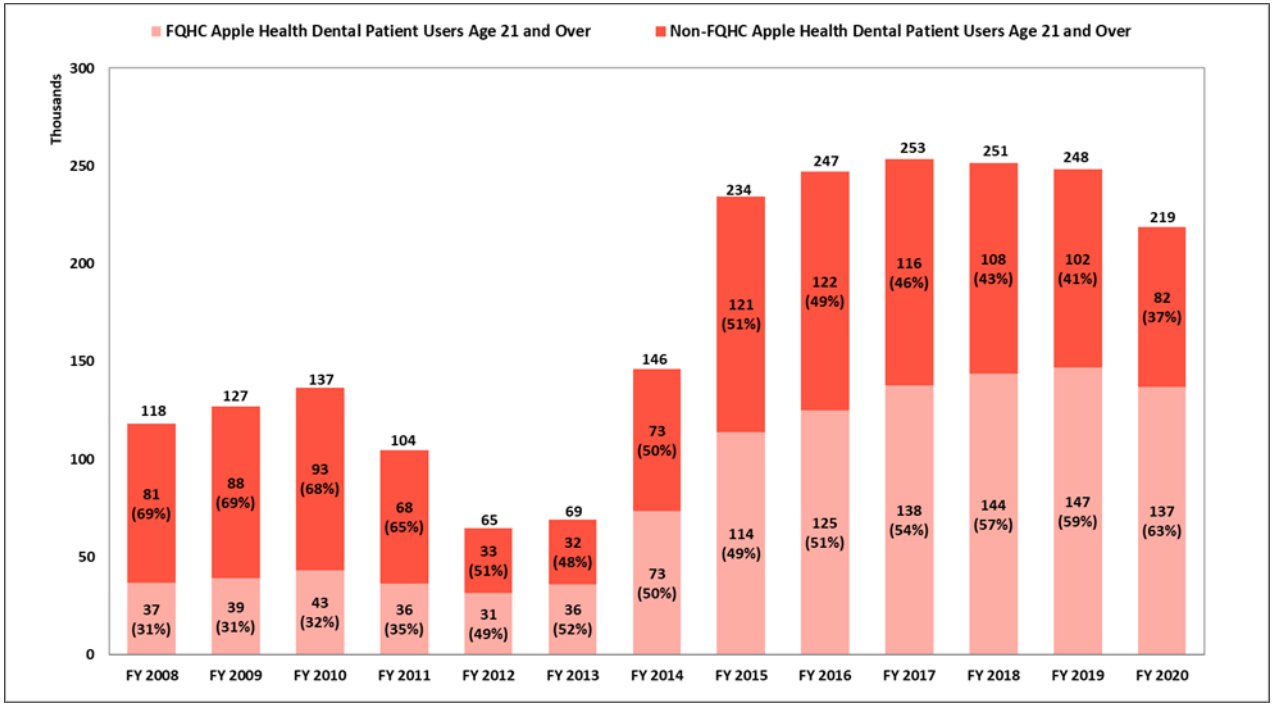
Note: Non-FQHC providers are private practice dentists and not-for-profit dental clinics that are not federally qualified such as UW School of Dentistry. The number of patients accessing Non-FQHCs is underestimated, as some clients may access both types of providers. This group was excluded from the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

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

Section: Providers

The portion of child dental users served by FQHCs was consistent from FY 2008 to FY 2020, around 30%.

Adults Served by Federally Qualified Health Centers as a Portion of Total Adult Users, FY 2008 – FY 2020



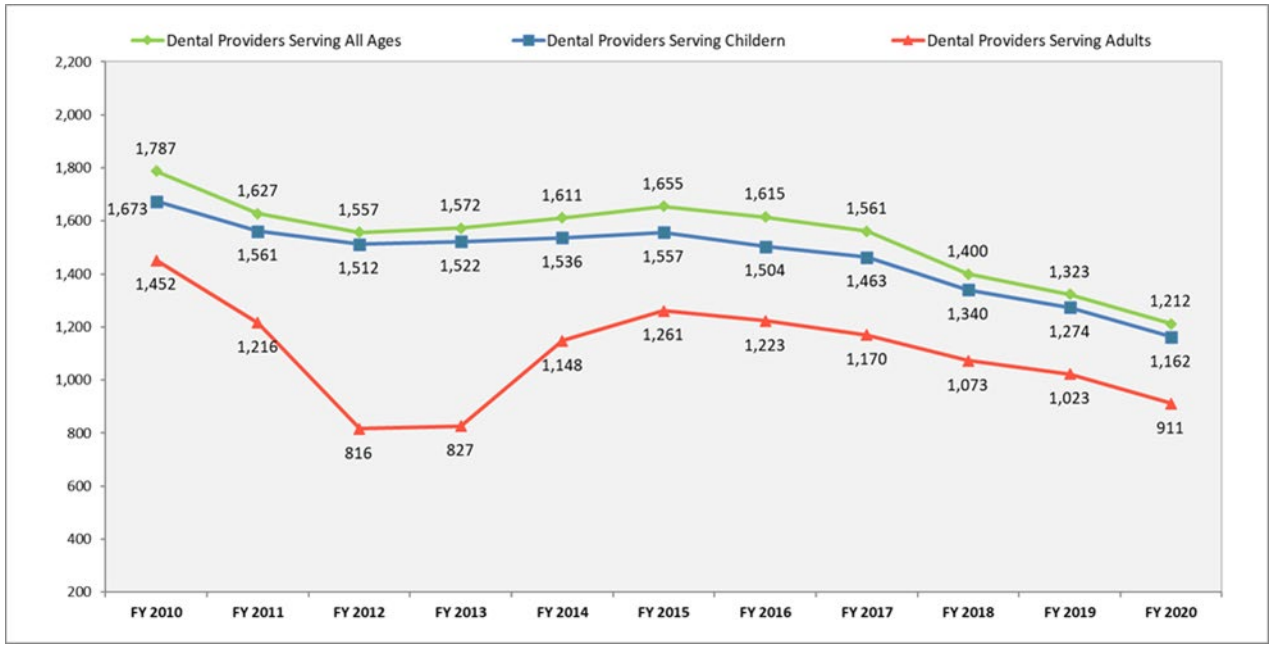
Note: Non-FQHCs that provide services to the remainder of Apple Health-enrolled adults are private practice dentists and not-for-profit dental clinics that are not federally qualified such as UW School of Dentistry. The number of patients accessing Non-FQHCs is underestimated, as some clients may access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

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

Section: Providers

The portion of adult dental users served by FQHCs has been on the rise since FY 2011, peaking at 63% in FY 2020.

Non-Federally Qualified Health Center Providers Serving Apple Health-enrolled Clients, FY 2010 – FY 2020



Notes: Adult dental benefits were restored in January 2014. FY 2014 data reflects 6 months of services, while FY 2015-FY 2020 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). 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.

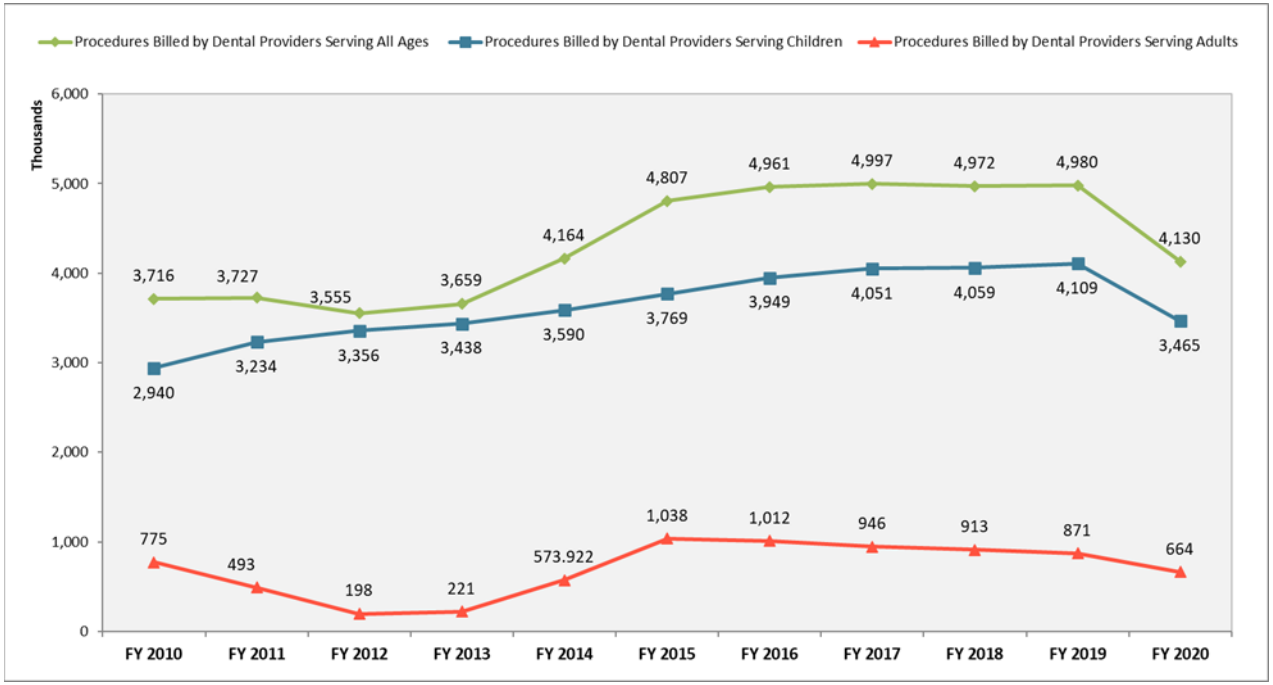
Dental providers were identified through provider taxonomy codes instead of providers' specialty, which was used in previous Facts and Figure reports. This approach is more accurate and previous result should be disregarded.

Section: Providers

As a result of the adult dental benefit restoration, the total number of Non-FQHC dentists serving adults increased by 51% between FY 2012 and FY 2015.

From 2016 to 2020, the total number of Non-FQHC providers serving Apple Health-enrolled clients gradually decreased. In the last fiscal year, it decreased by 8% (11% among adults and 9% among children).

Total Apple Health Fee-for-Service Dental Procedures, FY 2010 – FY 2020



Notes: Adult dental benefits were restored in January 2014. FY 2014 data reflects 6 months of services, while FY 2015 - FY 2020 data reflect full years of adult dental services.

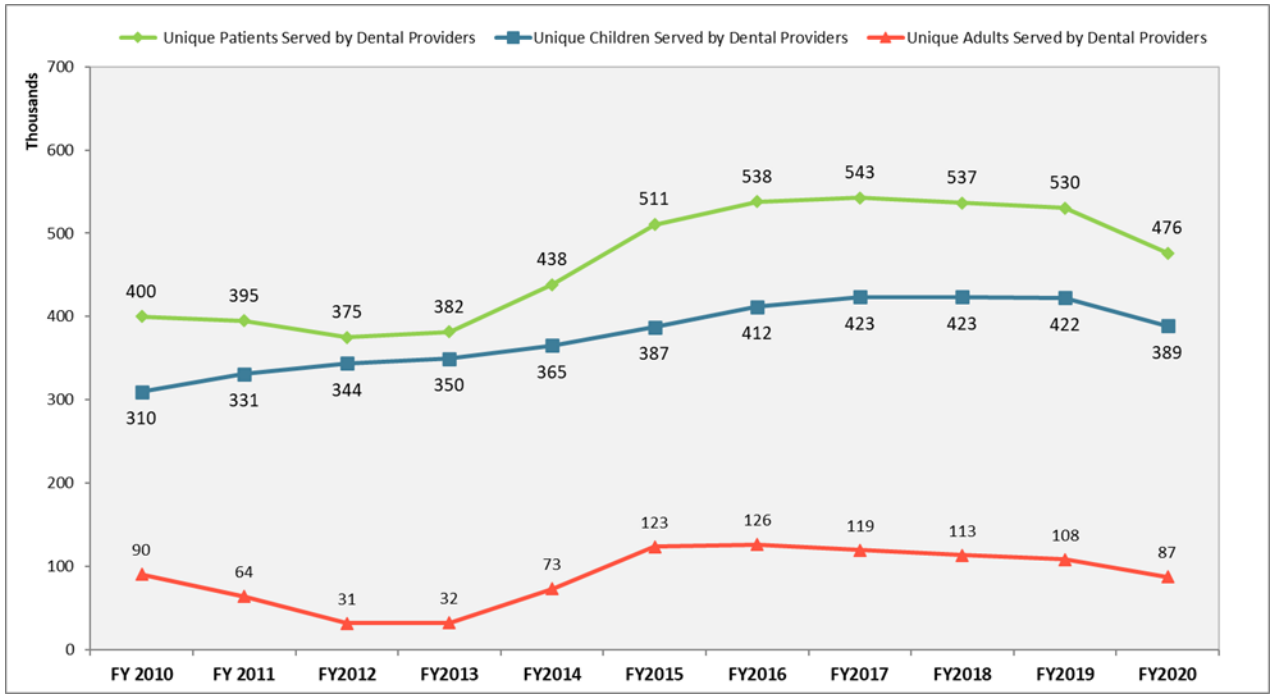
Non-FQHC providers include unique individual dentists who billed Medicaid for dental services (dentists may all be working at the same clinic).

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

Section: Providers

In FY 2015, the number of Apple Health adult fee-for-service dental procedures billed increased by 81% as a result of the adult dental benefit restoration. However, the number of procedures billed in subsequent years gradually decreased (17% in 2020 across all ages).

Apple Health-enrolled Patients Served by Non-Federally Qualified Health Center Providers, FY 2010 – FY 2020



Notes: Adult dental benefits were restored in January 2014. FY 2014 data reflects 6 months of services, while FY 2015 - FY 2020 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).

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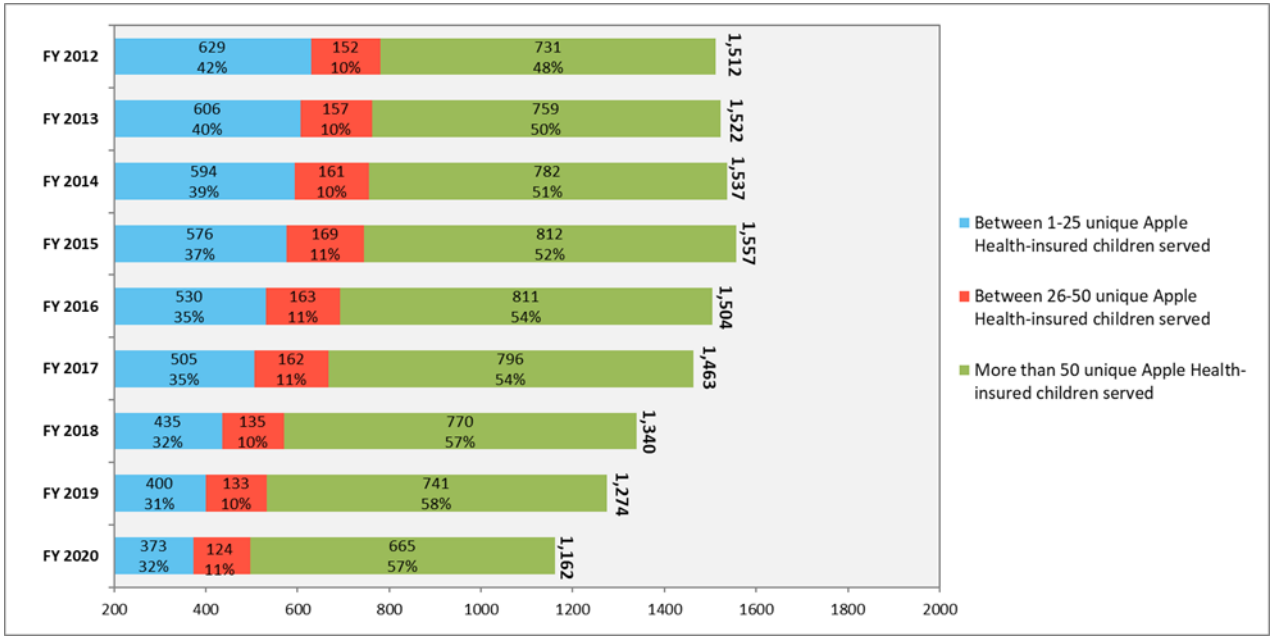
Source: Washington State Health Care Authority, Apple Health Dental Services Enrollment and Utilization Data

Section: Providers

Overall, many more Apple Health-enrolled children were served by non-FQHC dentists than adults, as more children use dental services, in general.

Between FY 2016 and FY 2019, the total number of clients served by non-FQHCs remained steady. In the last fiscal year, the number of clients decreased by 10% (8% among children and 19% among adults).

Non-Federally Qualified Health Center Providers and Number of Apple Health-enrolled Children Served FY 2012 – FY 2020



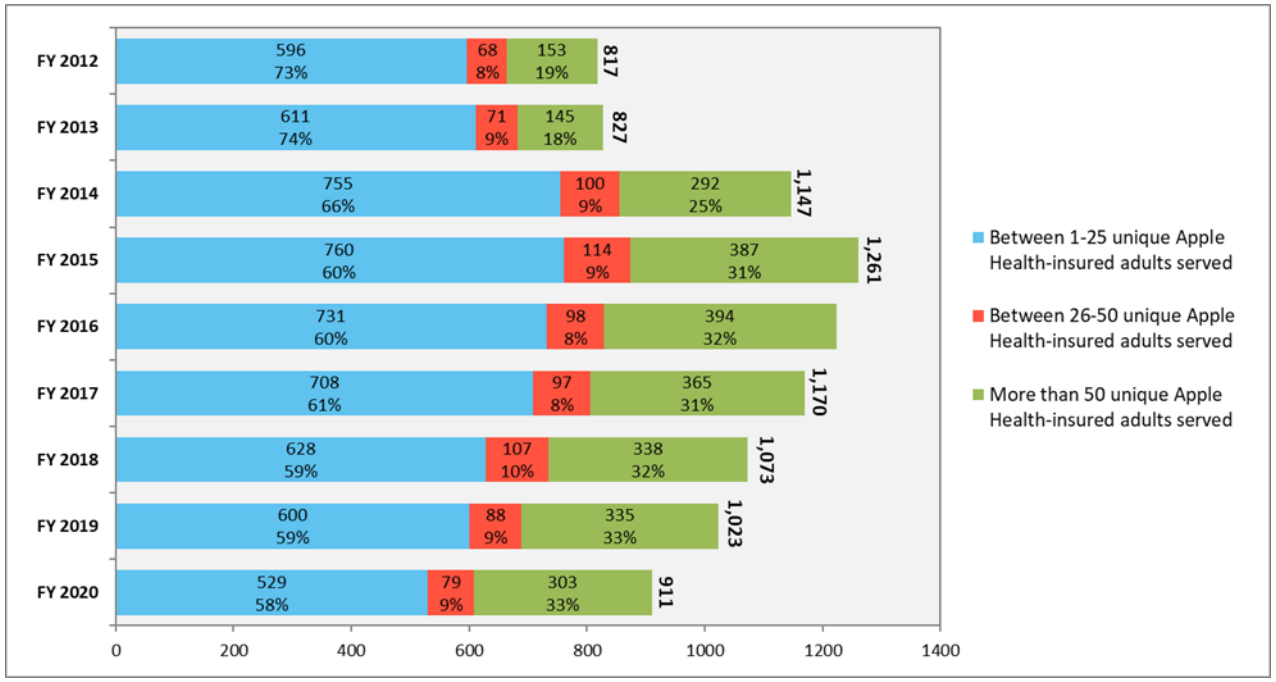
Notes:
Non-FQHC providers include unique individual dentists who billed Medicaid for dental services (dentists may all be working at the same clinic).

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

Section: 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 (43%-49%) served less than 50 unique Apple Health-enrolled children.

Non-Federally Qualified Health Center Providers and Number of Apple Health-enrolled Adults Served FY 2012 – FY 2020



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

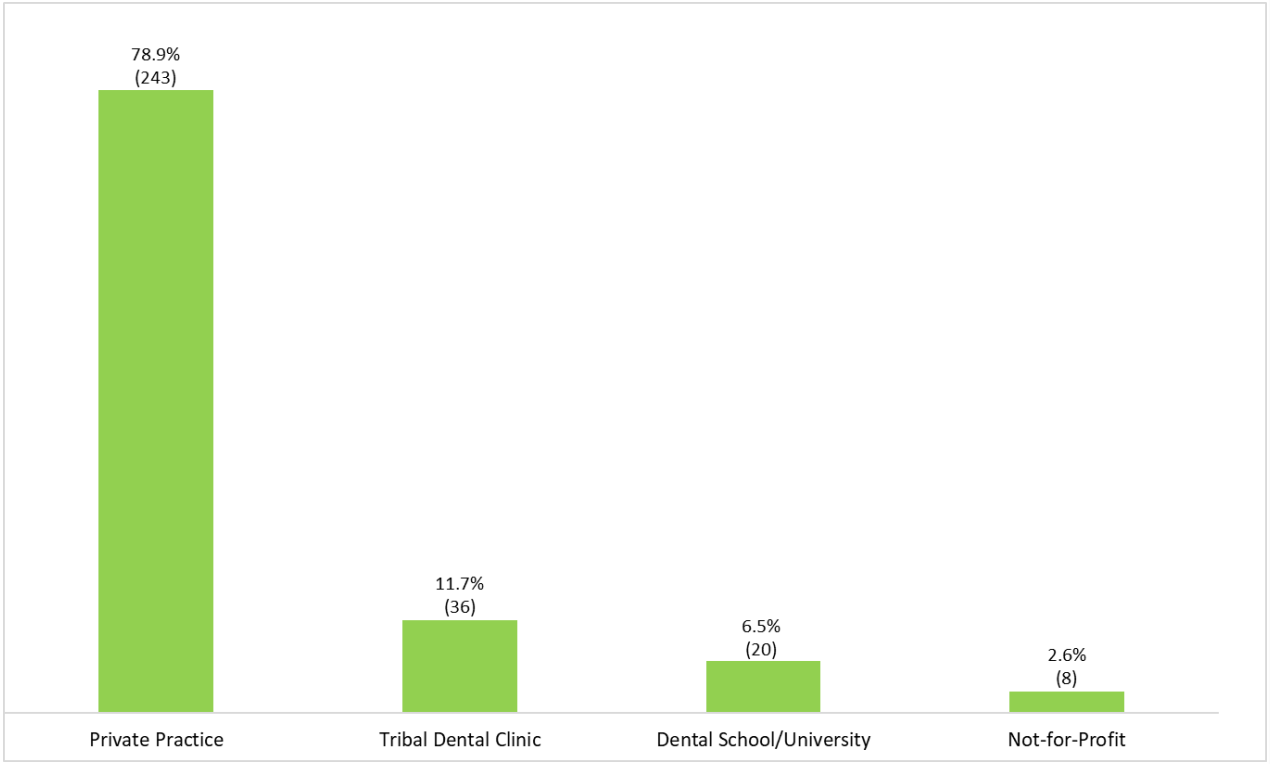
Source: Washington State Health Care Authority, Apple Health Dental Services Enrollment and Utilization Data

Section: Providers

The majority (82%-67%) of non-FQHC providers served 50 or fewer unique Apple Health-enrolled adults, while the remaining providers (18%-33%) served more than 50 unique Apple Health-enrolled adults.

After the adult dental restoration, the percent of non-FQHC providers who served more than 50 adults increased by 78% (from 19% in FY 2012 to 33% in FY 2020).

Non-Federally Qualified Health Center Providers Serving More than 50 Adults, FY 2020



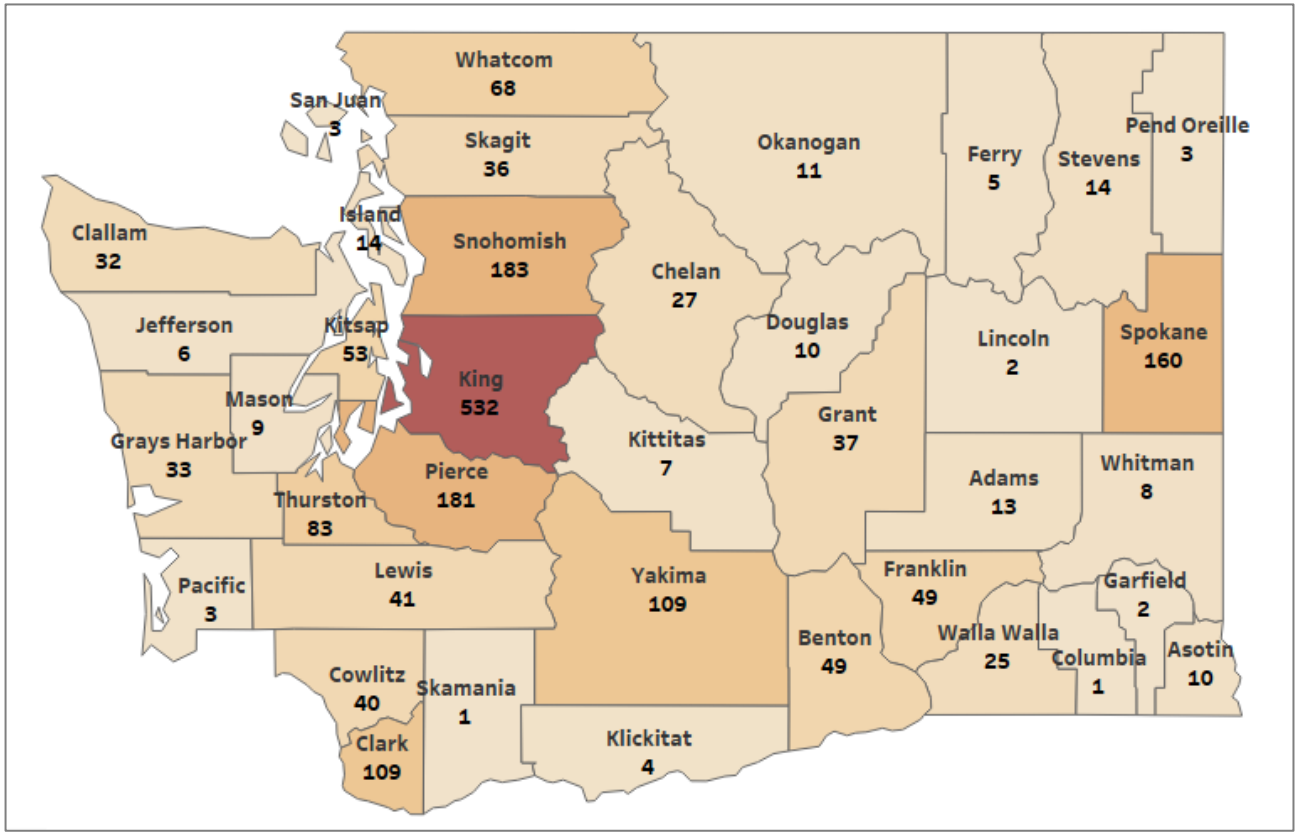
Note: Non-FQHC providers include unique individual dentists who billed Medicaid for dental services (dentists may all be working at the same clinic).

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

Section: Providers

The majority (79%) of non-FQHC providers that served more than 50 adults in FY 2020 were private practice dentists.

Dental Providers Serving Apple Health-enrolled Clients, FY 2020



Statewide Dental Providers Total 1,703 (range 1-532)

Note: 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 maybe practicing in FQHC or private practice setting.

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

Section: Providers

The number of dental providers accepting Apple Health-enrolled clients and billing for dental services in FY 2020 varies by county with as low as 1 provider in some counties, indicated by light shading (Skamania and Columbia counties), and a high of 532 in King county, indicated by dark shading.

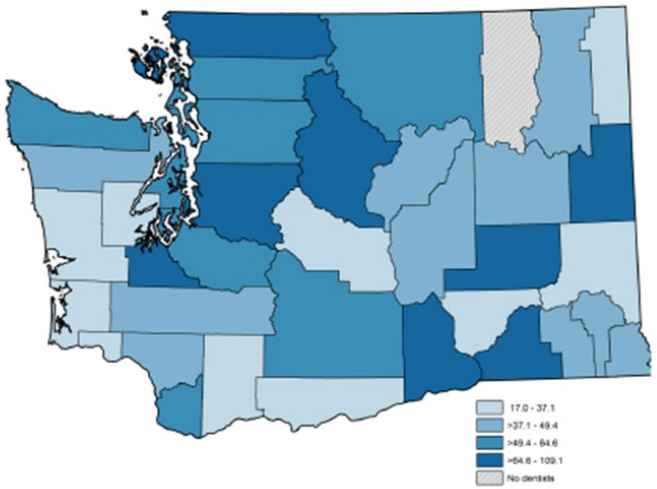
Washington State Dental Workforce, 2016

Dentists with Washington Licenses: Number and Percent by State

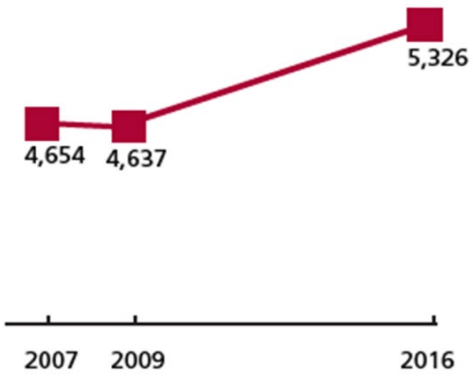
	2007	2009	2016
Total Dentist† licenses* With address in‡:	5,830	5,729	6,325
Washington	4,654 (79.8%)	4,637 (80.9%)	5,326 (84.2%)
Oregon	299 (5.1%)	306 (5.3%)	255 (4.0%)
Idaho	47 (0.8%)	49 (0.9%)	55 (0.9%)
Other	771 (13.2%)	688 (12.0%)	663 (10.4%)
Missing Data	59 (1.0%)	49 (0.9%)	26 (0.4%)

* Accessed from Washington State Department of Health, Health Professions Licensing Data System August 2016, July 2009, and a 2007 survey of Washington dentists.
† Includes dentists through age 75.
‡ Due to rounding, these percentages may not sum to 100.

Licensed Dentists per 100,000 population in Washington Counties, 2016



Number of Dentists with Washington Licenses



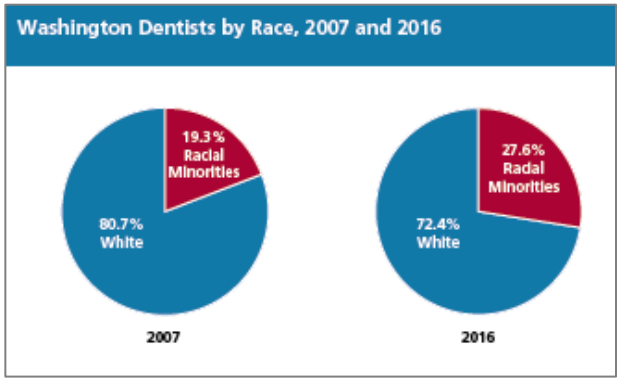
Data Source: Washington State Department of Health, Health Professions Licensing Data System, 2016 (August).

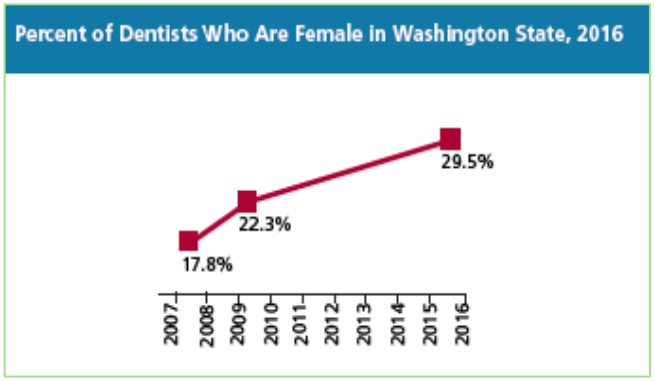
Source: Patterson D, Andrilla H, Schwartz M, Hager L, Skillman S. Assessing the Impact of Washington State's Oral Health Workforce on Patient Access to care. Seattle, WA: University of Washington Center for Health Workforce Studies, Apr 2017. Available from: http://depts.washington.edu/fammed/chws/wp-content/uploads/sites/5/2017/11/Washington_State_Oral_Health_Workforce_FR_Nov_2017_Patterson.pdf

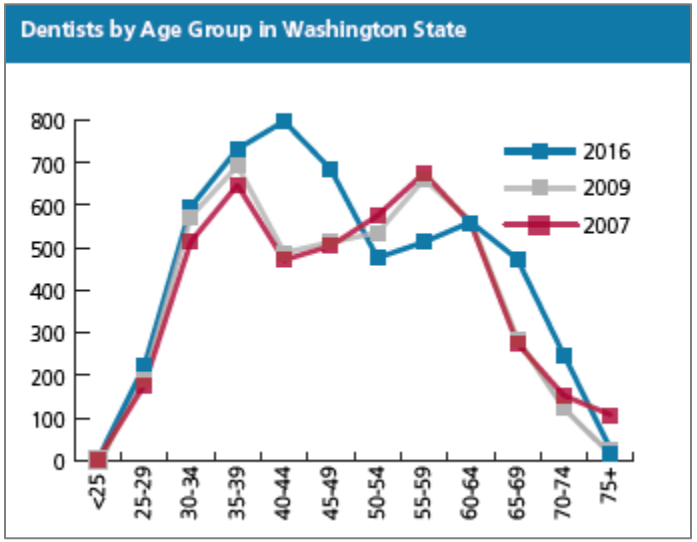
Section: Providers

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, the most populous ACH in Washington, there were 109 licensed dentists per 100,000 population. All other ACHs had a dentist-to-100,000 population ratio of less than 70.

Washington State Dental Workforce, 2016







Source: Patterson D, Andrilla H, Schwartz M, Hager L, Skillman S. Assessing the Impact of Washington State's Oral Health Workforce on Patient Access to care. Seattle, WA: University of Washington Center for Health Workforce Studies, Apr 2017. Available from: http://depts.washington.edu/fammed/chws/wp-content/uploads/sites/5/2017/11/Washington_State_Oral_Health_Workforce_FR_Nov_2017_Patterson.pdf

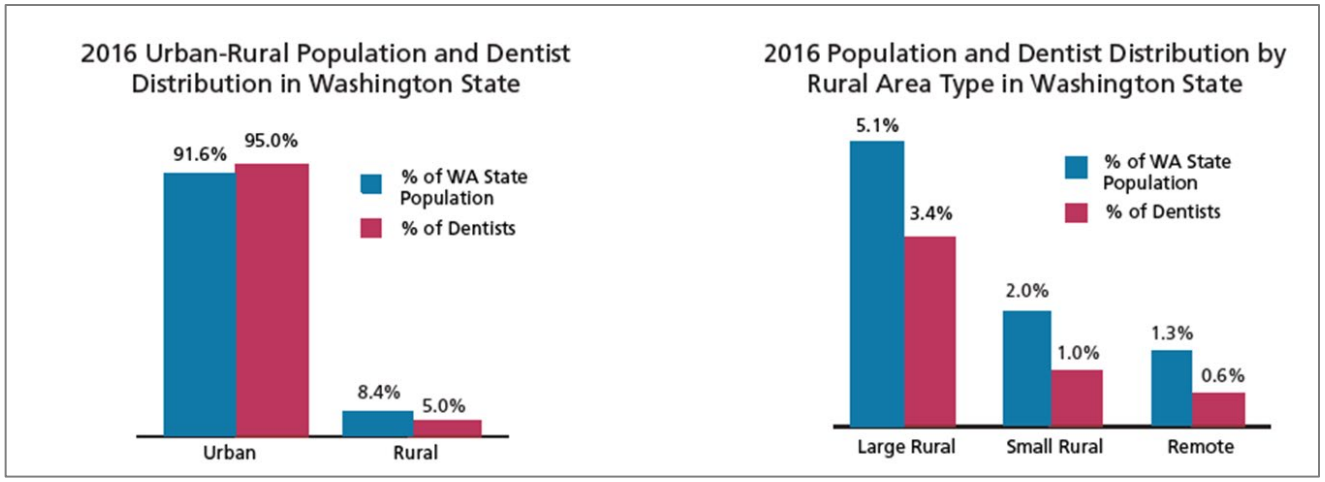
Section: Providers

An increasing number of women are becoming dentists in Washington state, consistent with the national trend.

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).

The age distribution of dentists in Washington state has changed in the last eight years. The number of dentists in their 30's and 40's has increased since 2007, while the number of dentists in their 50's and early 60's has decreased.

Washington State Dental Workforce, 2016
Urban vs. Rural

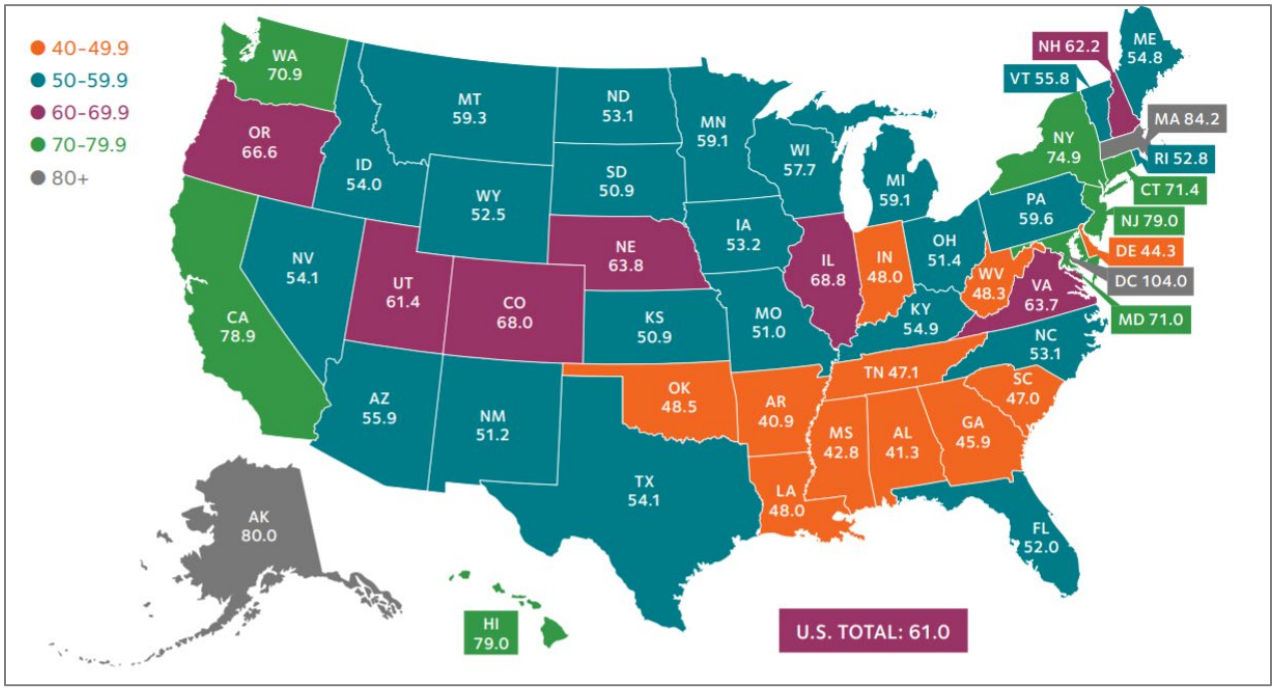


Source: Patterson D, Andrilla H, Schwartz M, Hager L, Skillman S. Assessing the Impact of Washington State's Oral Health Workforce on Patient Access to care. Seattle, WA: University of Washington Center for Health Workforce Studies, Apr 2017. Available from: http://depts.washington.edu/fammed/chws/wp-content/uploads/sites/5/2017/11/Washington_State_Oral_Health_Workforce_FR_Nov_2017_Patterson.pdf

Section: Providers

Rural areas in Washington state had a disproportionately low supply of dentists compared to urban areas in 2016. Only 3.4% of dentists were located in large rural places in Washington, compared to 5.1% of the state's population. Small and remote rural areas, where 2.0% and 1.3% of the population lived, had only 1.0% and 0.6% of Washington's dentists respectively.

Dentist-To-Population Ratios– Washington State Compared Nationally, 2020

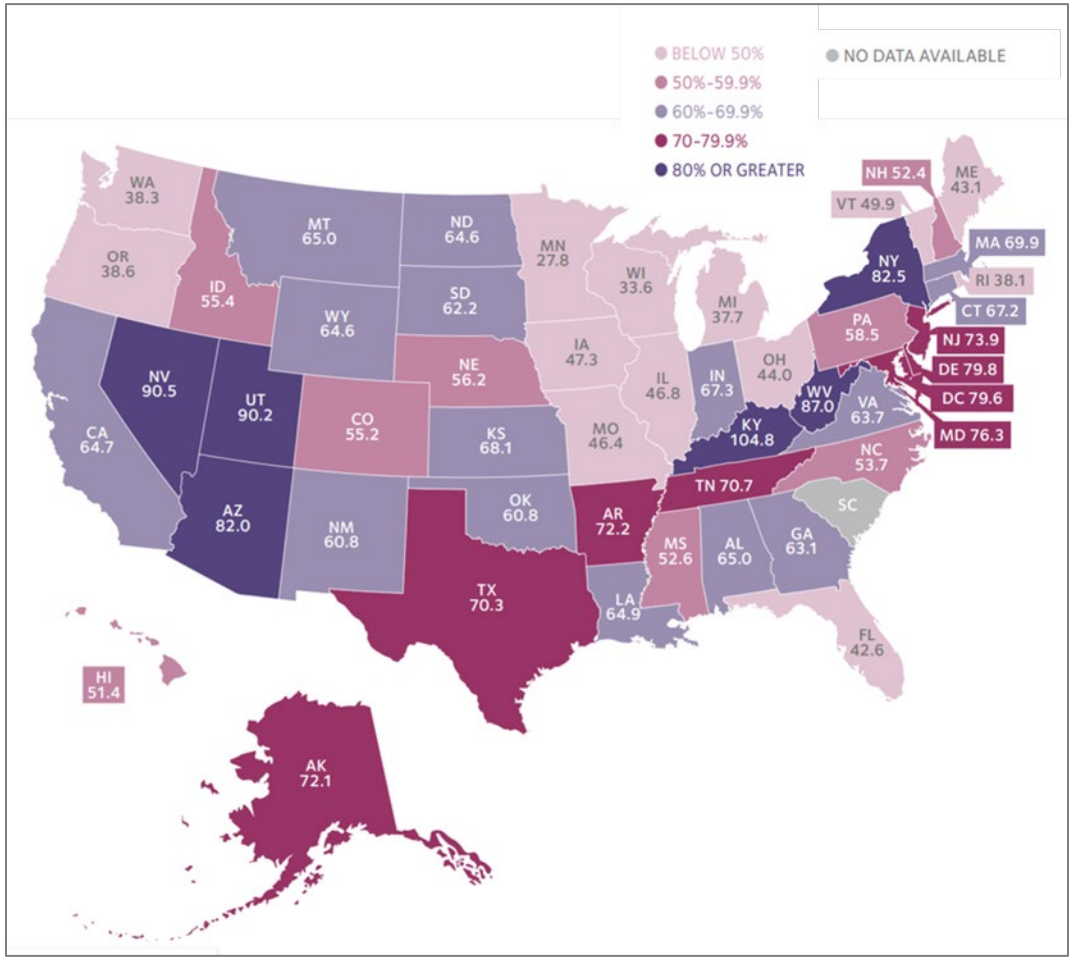


Source: The Dentist Workforce – Key Facts. Available from https://www.ada.org/-/media/project/ada-organization/ada/ada-org/files/resources/research/hpi/hpigraphic_0221_1.pdf?rev=1829a4f788c14974a1ac89ff1e288c0f&hash=A27C6AD199EB6FCAB15DB069BAF0CC85

Section: Providers

In 2020, Washington state ranked 8th 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.

Children's Medicaid Reimbursement Rates Washington vs. Other States



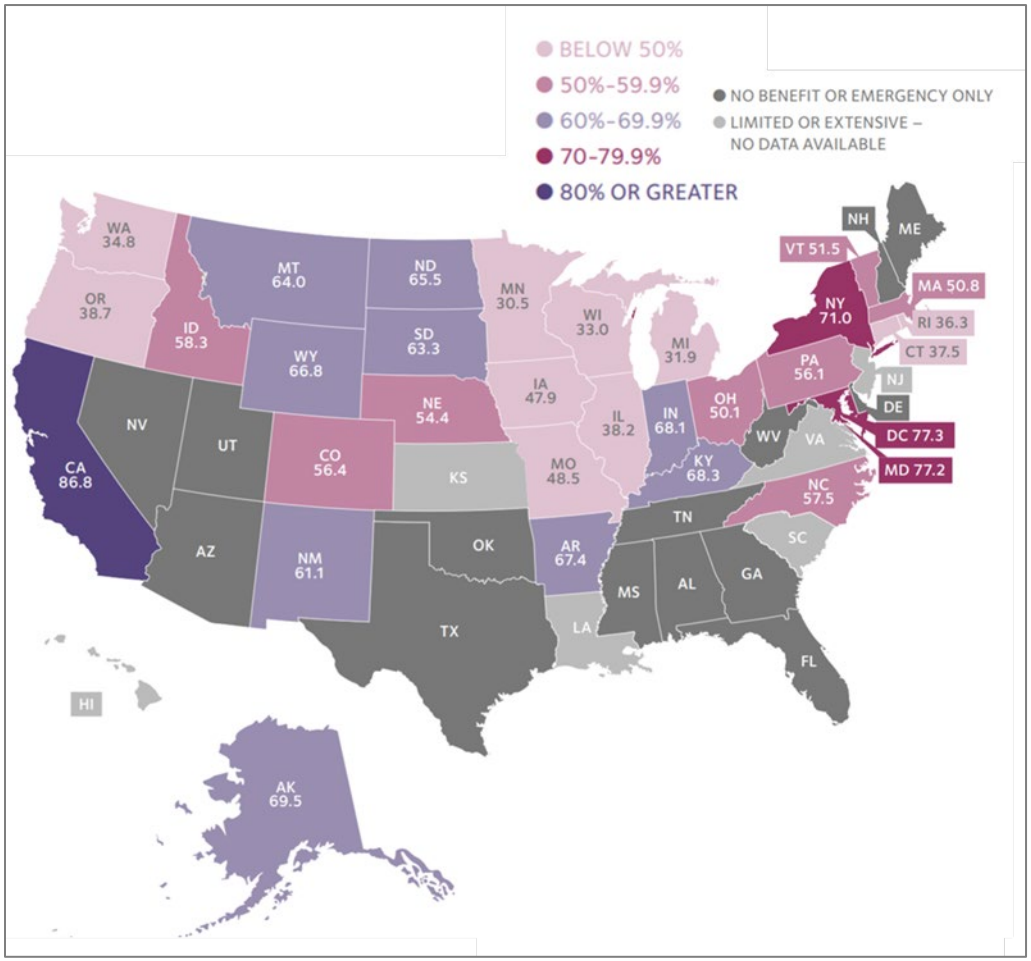
Source: Reimbursement Rates for Child and Adult Dental Services in Medicaid by state. Health Policy Institute Research Brief. American Dental Association. October 2021. Available from: https://www.ada.org/resources/research/health-policy-institute/coverage-access-outcomes

Section: Providers

On average across the US, children's Medicaid fee-for-service (FFS) reimbursement rates relative to private dental insurance reimbursement was 61.4% in 2020, slightly decreased from 69.9% in 2017.

Washington's Medicaid FFS dental reimbursement compared to private dental insurance reimbursement is the fifth lowest in the nation (38.3%) and significantly lower than the national average. It decreased from 40.4% in 2017.

Adult Medicaid Reimbursement Rates
Washington Dental Providers vs. Other States



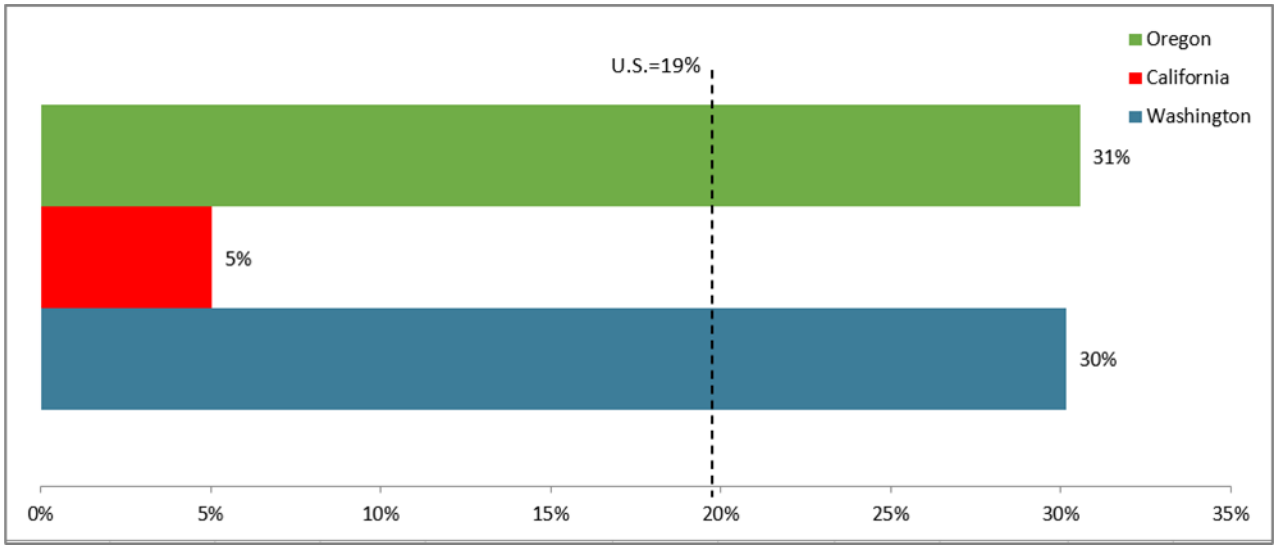
Source: Reimbursement Rates for Child and Adult Dental Services in Medicaid by state. Health Policy Institute Research Brief. American Dental Association. October 2021. Available from: https://www.ada.org/resources/research/health-policy-institute/coverage-access-outcomes
Note: Report is based on 2020 data and does not reflect the increase in adult FFS reimbursement rate that went into effect in July 2021.

Section: Providers

On average, Adult Medicaid fee-for-service (FFS) reimbursement relative to fees reimbursed by private dental insurance was 53.3%, an increase from 49.3% in 2017.

Washington's adult FFS reimbursement rates for dentists serving Apple Health-enrolled adults is the fourth lowest in the nation (34.8%). The rates slightly increased from 34.4% in 2017.

Percentage of Population Living in a Dental Health Professional Shortage Area, 2020 US vs. West Coast States

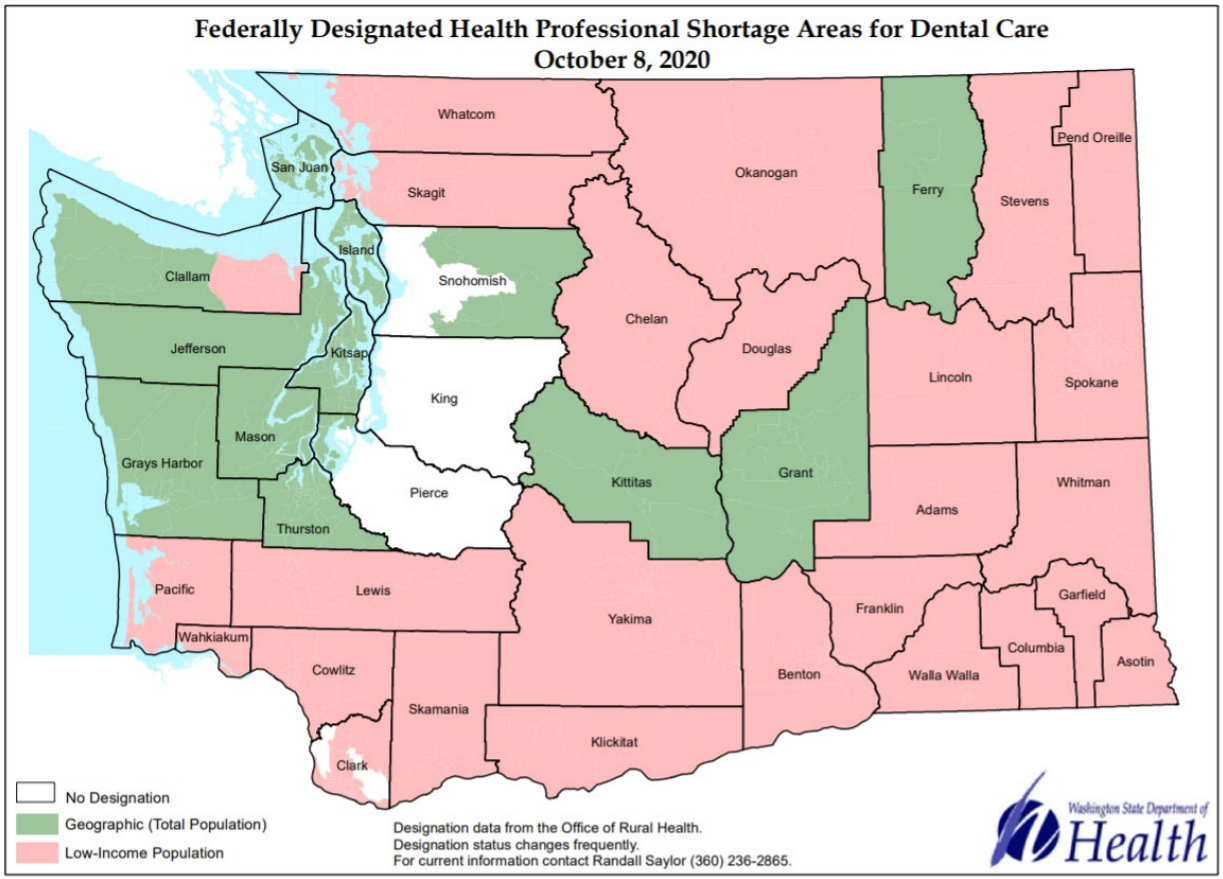


Source: Designated Health Professional Shortage Areas (HPSA) Statistics, Health Resources and Services Administration (HRSA), Accessed November 2021. Percentages calculated using 2019 population estimates from U.S. Census Bureau.

Section: Providers

Nearly 30% of people in Washington state live in a Dental Health Professional Shortage Area, higher than the national average of 19%.

Federally Designated Health Professional Shortage Areas for Dental Care, 2020



Source: Washington State Department of Health. Office of Community Health Systems. Dental Health Care Shortage Areas Map

County Health Rankings & Roadmaps/. Building a culture of Health, County by County. Ratio of population to dentists available from https://www.countyhealthrankings.org/app/washington/2021/measure/factors/88/data

Section: Providers

Although Washington state has a higher dentist to population ratio than the national average and has 1 of the ten highest ratios in the nation (83 per 100,000 compared to 61 nationally), dentists are not evenly distributed throughout the state and there is a shortage of dentists serving the low-income population.

The dentist-to-population ratio varies widely by county. Adams (120 dentists) and King (110 dentists) counties have the highest dentist ratio per 100,000 people (120 & 110 dentists), while Skamania County has the lowest ratio of 8 dentists per 100,000 people. There are 11 counties with a ratio lower than 50 dentists per 100,000 people.

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 2020, forty-eight cents out of every dollar for Apple Health dental services went to private practice providers, while forty-seven went to Federally Qualified Health Centers (FQHCs).
- Washington's Medicaid fee-for-service reimbursement rates for children and adults are some of the lowest in the US.
- The portion of dental users served by FQHCs has been gradually increasing for the last few years. Nearly one-third of children and nearly two-thirds of adults receiving dental care were served by FQHCs.
- The total number of private practice providers (including not-for-profit) serving the Apple Health-enrolled population has been decreasing in the last five fiscal years.

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 is able to 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 confidence in one's smile.

Recommended Policy Strategies:

- Invest in Increasing Utilization for Children.
  - Achieve parity between Apple Health medical utilization and Apple Health dental utilization for kids. As a result of Access to Baby & 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 the programs that are working, including ABCD and build capacity at Federally Qualified Health Centers (FQHCs). Increase 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, including the use of Dental Health Aide Therapists in Tribal clinics, expansion of teledentistry and other community-based care, and support for community health workers.

Policy Implications and Opportunities

- Invest in Increasing Utilization for Adults.
  - Build on the important investments in the adult dental Medicaid program the Legislature made 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 initiatives.
  - Evaluate and expand Oral Health Connections, the pilot testing an enhanced Apple Health dental benefit for pregnant people and people with diabetes.

- Increase Prevention.
  - Expand access to 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 healthcare access and innovation, including Cover All Kids, implementing Medicaid Expansion, embracing public/private partnerships to pilot new ideas, and state funding to support connections to care (e.g. support for DentistLink, a dental referral tool used mainly by patients with Medicaid coverage), makes us well-positioned to seize these opportunities. Furthermore, there is a variety of stakeholders in Washington who 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 that are accessing oral health services could inform strategy to ensure a higher number receive care in order 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 healthcare, the opportunity exists to examine progress in Washington in getting 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 working towards eliminating disparities in oral health and improving 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 healthcare disparities.

Additional Data Needs Continued

- **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.) that 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 necessitate the care be provided under general anesthesia in an operating room. Capturing these trends would provide a gauge for progress in reducing these severe cases.

Resources and Appendices

References

Slide 4: Introduction

"Oral Health in America: Advances and Challenges." December 2021. US Department of Health and Human Services, National Institutes of Health, National Institute of Dental and Craniofacial Research, 2021. Accessed Dec. 2021. [https://www.nidcr.nih.gov/sites/default/files/2021-12/Oral-Health-in-America-Advances-and-Challenges.pdf]

Slide 5: Oral Health is a Critical Component of Overall Health and Well-Being

American Dental Association. Health Policy Institute. Oral Health and Well-Being in the United States. Available from: [http://www.ada.org/en/science-research/health-policy-institute/oral-health-and-well-being]

Washington State Department of Health. Behavioral Risk Factor Surveillance System Survey Data. Olympia, WA, 2016.

Blumenshire, S.L.; Vann, W.F.; Gizlice, Z. and Lee, J.Y. (2008). Children's school performance: Impact of general and oral health. *Journal of Public Health Dentistry*, 68, 82-87.

Douglass, J.M.; Li, Y. and Tinanoff, N. (2008). Association of mutans streptococci between caregivers and their children. *Journal of Pediatric Dentistry*, 30, 375-87.

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

American Dental Association Health Policy Resources Center as reported in *Oral Health for All*, DentaQuest Foundation.

Slide 9: Dental Programs & Services Available to WA Apple Health Children Enrollees

Norwood, K. ; Slayton, R. "Oral Health Care for Children with Developmental Disabilities" Feb. 2018. American Academy of Pediatrics. Available from: [http://pediatrics.aappublications.org/content/early/2013/02/20/peds.2012-3650]

Slide 10-11: Overview of WA Apple Health Dental Program: Adult Coverage

"Access to Dental Care in Medicaid: Spotlight on Nonelderly Adults." March 2016. The Kaiser Commission on Medicaid and the Uninsured. Available from: [https://www.kff.org/medicaid/issue-brief/access-to-dental-care-in-medicaid-spotlight-on-nonelderly-adults/]

Lippman, Daniel. "States Drastically Cut Dental Care for Adults on Medicaid." October 2012. Huffington Post. Available from: [http://www.huffingtonpost.com/2012/10/02/medicaid-dental-cuts_n_1930650.html]

Burroughs, M., Colin, R., Fosse, C., Vujicic M. Making the Case for Dental Coverage for Medicaid Programs. Health Policy Institute Research Brief. American Dental Association. July 2021. Accessed January 2022: [https://www.ada.org/-/media/project/ada-organization/ada/ada-org/files/resources/research/hpi/whitepaper_0721.pdf?rev=cf603f948e6a4dd09fb62386e3ee2083&hash=4986B3ED8A5FD4F99A1D28F61D3C2DA1]

Slide 13: Oral Health Connections

Jeffcoat et al. Impact of Periodontal Therapy on General Health: Evidence from Insurance Data for Five Systemic Conditions. American Journal of Preventive Medicine. 2014;47(2):166–174. Available from: [https://www.ajpmonline.org/article/S0749-3797(14)00153-6/pdf]

Slide 19: Washington State Apple Health Dental Expenditures vs. Medical Expenditures, FY 2020

National Association of State Budget Officers, "Examining fiscal 2018-2020 state spending." 2020. Available from: [https://www.nasbo.org/mainsite/reports-data/state-expenditure-report]

References

Slide 20: Apple Health Expenditures Adjusted for Inflation: Adults and Children, FY 2011 – FY 2020

"Consumer Price Index Detailed Report (CPI)." July 2020. Available at:
[https://beta.bls.gov/dataViewer/view/timeseries/CUUR0000SAM]

Slide 43: Percent of Child Enrollees Using at least One Service by Age Group, FY 2008 vs. FY 2020

"Frequently Asked Questions," American Academy of Pediatric Dentistry. Available at:
[http://www.aapd.org/resources/frequently_asked_questions**/#36**]

Washington State Health Care Authority, Washington Apple Health 2020 Comparative and Regional Analysis Report. Comagine Health. Available at:
[EQRO Comparative and Regional Analysis Report (2020) (wa.gov]

Slide 53: Utilization for Children in Washington vs. Other States

"In Search of Dental Care: Two Types of Dentist Shortages Limit Children's Access to Care." June 2013. The Pew Charitable Trusts. Available at:
[http://www.pewtrusts.org/~/media/legacy/uploadedfiles/pcs_assets/2013/Insearchofdentalcarepdf.pdf]

"Washington's ABCD program: Improving Dental Care for Medicaid Insured Children." June 2010. The Pew Center on the States. Available at:
[http://www.pewtrusts.org/~/media/legacy/uploadedfiles/pcs_assets/2010/ABCDbriefwebpdf.pdf]

Slide 61: Washington's Children's Oral Health Status Smile Survey 2015 - 2016

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]

Slide 93: Washington State Dental Workforce, 2016

Patterson D, Andrilla H, Schwartz M, Hager L, Skillman S. Assessing the Impact of Washington State's Oral Health Workforce on Patient Access to care. Seattle, WA: University of Washington Center for Health Workforce Studies, Apr 2017. Accessed June 1, 2018.
[https://depts.washington.edu/fammed/chws/wp-content/uploads/sites/5/2017/11/Washington_State_Oral_Health_Workforce_FR_Nov_2017_Patterson.pdf].

Slide 96: Dentist-To-Population Ratios – Washington State Compared Nationally, 2020

ADA Health Policy Institute analysis of ADA Masterfile. Distribution of Dentists survey. Feb. 2021.
[ADA.org: HPI Infographics | The Dentist Workforce – Key Facts]

Slide 97: Children's Medicaid Reimbursement Rates Washington vs. Other States

Reimbursement Rates for Child and Adult Dental Services in Medicaid by state. Health Policy Institute Research Brief. American Dental Association. October 2021. Available from:
[https://www.ada.org/resources/research/health-policy-institute/coverage-access-outcomes]

Slide 98: Adult Reimbursement Rates Washington Dental Providers vs. Other States

Reimbursement Rates for Child and Adult Dental Services in Medicaid by state. Health Policy Institute Research Brief. American Dental Association. October 2021. Available from:
[https://www.ada.org/resources/research/health-policy-institute/coverage-access-outcomes]

Slide 99: Percentage of Population Living in a Dental Health Professional Shortage Area, 2020 US vs. West Coast States

Designated Health Professional Shortage Areas (HPSA) Statistics, Health Resources and Services Administration (HRSA), November 2021.
[ftp://ftp.doh.wa.gov/geodata/layers/maps/dental.pdf]

Additional Resources

Critical Factors that Influence Good Oral Health

Dye BA, Tan S, Smith V, et al. "Trends in Oral Health Status: United States, 1988–1994 and 1999–2004." *Vital and Health Statistics, Series 11, Number 284.* April 2007. US Department of Health and Human Services, Centers for Disease Control and Prevention.
[http://www.cdc.gov/nchs/data/series/sr_11/sr11_248.pdf]

"National Call to Action to Promote Oral Health: A Public-Private Partnership" Spring 2013. US Department of Health and Human Services, Office of the Surgeon General.
[http://www.nidcr.nih.gov/datastatistics/surgeongeneral/nationalcalltoaction/nationalcalltoaction.htm]

Dental Care and ACA

"Pediatric Dental Benefits Under the ACA: Issues for State Advocates to Consider." August 2012.
[http://ccf.georgetown.edu/wp-content/uploads/2012/09/Pediatric-Dental-Benefits.pdf]

Dentist Participation in Medicaid

Fosse, C., Kamyar, N., Vujicic M "Dentist Participation in Medicaid: How Should It Be Measures? Does It matter?." Health Policy Institute Research Brief. American Dental Association. October 2021.
[https://www.ada.org/-/media/project/ada-organization/ada/ada-org/files/resources/research/hpi/hpibrief_1021_1.pdf?rev=59e7a5e0b8e34337bb5b0b4066241193&hash=F7E98E87D6A35AB7D970E1A0B81EE7A]

Important Health Risks are Associated with Poor Oral Health

Glied, Sherry & Neidell, Matthew. "The Economic Value of Teeth." March 2008. The National Bureau of Economic Research.
[http://www.nber.org/papers/w13879]

White, Mercedes. "No Teeth Means No Job." December 2012. Desert News.
[http://www.deseretnews.com/article/865569512/No-teeth-means-no-job-How-poor-oral-health-impacts-job-prospects.html?pg=all]

Reimbursement Rates for WA Dental Providers vs. CA and ADA Pacific General Practice

Nasseh K, Vujicic M, Yarbrough C. "A ten-year, state-by-state, analysis of Medicaid fee-for-service reimbursement rates for dental care services.
Health Policy Institute Research Brief. American Dental Association. October 2018.
[http://www.ada.org/~/media/ADA/Science%20and%20Research/HPI/Files/HPIBrief_1014_3.ashx]

National Health Expenditures and Total Health Care Spending

MACPAC analysis of Centers for Medicare and Medicaid Services, National health expenditures by type of service and source of funds: Calendar years 1960 to 2016.
[https://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/NationalHealthExpendData/NationalHealthAccountsHistorical.html]

Dashboards

Washington State Oral Health Status Dashboard:
[https://arcorafoundation.org/oral-health-status-dashboard/]

Access to Dental Care Dashboard:
[https://arcorafoundation.org/access-to-dental-care-dashboard/]

Smile Survey Dashboard Link: https://arcorafoundation.org/oral-health-status-dashboard/

About the Sponsor

Arcora Foundation

Arcora Foundation completed this report for the purpose of better understanding the use and expenditures associated with dental services for Washington's Apple Health population. Arcora Foundation is a non-profit funded by Delta Dental of Washington, committed to lasting approaches to improving the oral health of Washington's residents. The Foundation's mission is to bend the arc of oral health toward health equity by 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.

Note: For additional information visit ArcoraFoundation.org

Acknowledgments

The sponsor and authors wish to acknowledge the support of staff at the Washington State Health Care Authority (HCA), which provided the data for this project.

They wish to acknowledge the support and guidance of Dr. Lisa Maiuro at Health Management Associates in the completion of the initial Facts and Figures report. Dr. Maiuro was the lead author and researcher for the Washington State Medicaid Facts and Figures FY2008-FY 2012, which was published in 2013. She is a former UCLA/Rand Corp. Pew Health Policy Fellow and has more than 25 years of experience in health policy and research and data analysis, including the analysis of oral health data for the purposes of improving access to quality dental care through data driven information. (http://www.healthmanagement.com)

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 2020.

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 Heath 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 2020 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.
- **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.
- **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.
- **User:** An enrollee who received one or more services.