

Oral Health (Tooth Decay)

Tooth decay is caused by the disease known as dental caries, and it is one of the most prevalent chronic diseases in children and adults.¹ Children who experience tooth decay miss more school, have lower academic success, and have an increased risk for lifelong dental problems. Poor oral health can increase systemic inflammation, which over time may limit growth and development, as well as increase the risk of adverse health outcomes including hypertension, cardiovascular disease, and cancer. Routine dental care, community water fluoridation, topical fluoride treatments, and dental sealants can prevent tooth decay.

In 2015, over half (53% ±5%) of Washington State 3rd grade students had any history of dental caries (i.e., caries experience, which means past or present cavities, fillings, or missing teeth from tooth decay). For the purposes of this section, dental caries refers to any history of tooth decay. The proportion of students with dental caries has declined in Washington State, though remains higher than the Healthy People 2020 goal of 49% for children ages 6-9.

The highest proportion of students with dental caries was among American Indian/Alaskan Native (AIAN), Native Hawaiian or Pacific Islander (NHOP), and Hispanic; as well as those receiving school meal assistance through the National School Lunch Program; and those primarily speaking a language other than English at home.

DOH collaborates with partner agencies to promote evidence-based practices including community water fluoridation, school-based dental sealants, and early access to dental care and caries prevention.



1 in 2

Washington
3rd graders
have dental
sealants,
which can
prevent up to
80% of tooth
decay



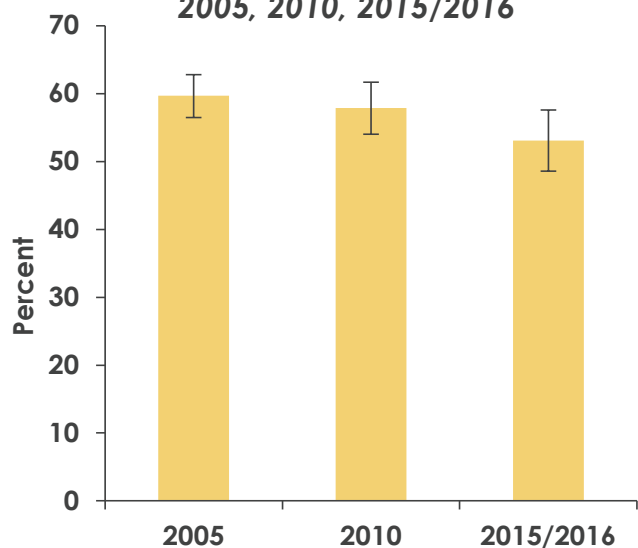
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Time Trends

- In 2015, the dental caries rate among 3rd graders in Washington State residents was 53% ($\pm 5\%$).
- Compared to 2005, the dental caries rate among 3rd graders in Washington was lower in 2015/2016.
- Washington's dental caries rate of 53% ($\pm 5\%$) among 3rd graders does not meet the Healthy People 2020 goal of 49% for children ages 6-9.

**Dental Caries[§] in 3rd Graders
Washington State
Washington Smile Survey
2005, 2010, 2015/2016**

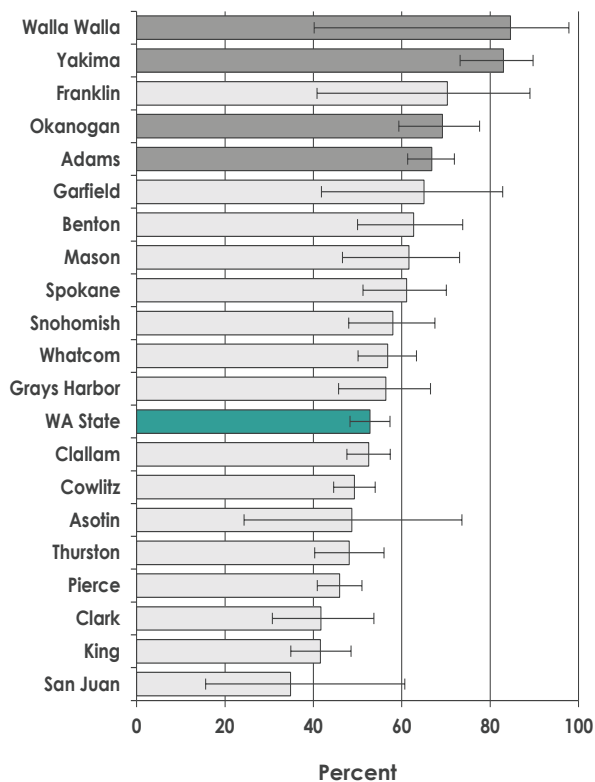


[§]Any history of tooth decay

Geographic Variation

- Adams, Okanogan, Walla Walla and Yakima counties had higher rates of dental caries among 3rd graders compared to the statewide rate.
- Other counties had rates similar to the Washington state rate for the 2015/2016 survey.

**Dental Caries[§] in 3rd Graders
Washington & Individual County**
Smile Survey**

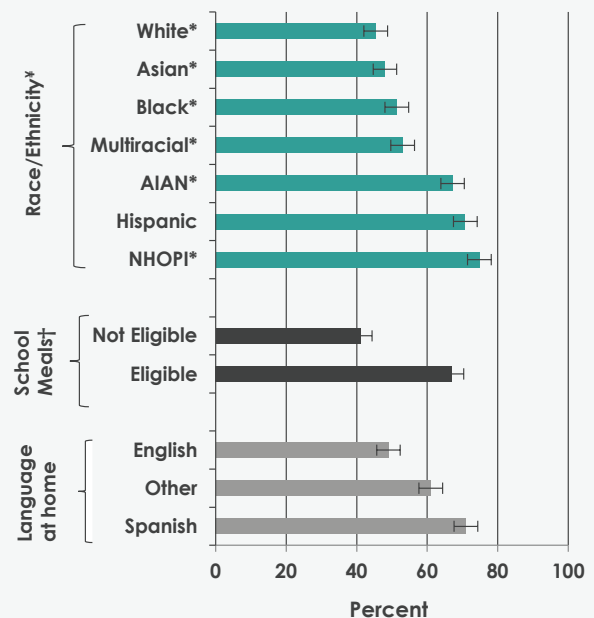


**Counties not displayed either did not conduct a County-level survey or didn't have enough participating schools for a representative sample.

Disparities

- To report findings for race and ethnicity, data for 2nd and 3rd grade were combined. Data for school meals and language spoken at home were for 3rd grade only.
- Race/ethnicity for 2nd and 3rd graders combined in 2015/2016 found NHOPI, Hispanic, and AIAN with higher caries rates than whites.
- Students receiving assistance for school meals under the National School Lunch Program had a higher rate of dental caries than students not receiving assistance.
- Students whose primary language at home was not English had a higher rate of dental caries than students whose primary language was English.

**Dental Caries[§] in 3rd Graders
Washington State
Washington Smile Survey, 2015/2016**



§Any history of tooth decay

†Based on National School Lunch Program eligibility

*Non-Hispanic (all races) | AIAN: American Indian/Alaska Native | NHOPI: Native Hawaiian/Other Pacific Islander

¥Race/ethnicity combined 2nd and 3rd graders

Dental Sealants

Dental sealants can prevent up to 80 percent of tooth decay in children and adolescents.² When provided in school settings, dental sealant programs offer a cost-effective, evidence-based public health approach to preventing disease.³

- In the 2015-2016 Smile Survey, 54% (\pm 6%) of Washington State 3rd grade students surveyed had dental sealants, far more than the *Healthy People 2020* goal of 28% for children ages 6-9.
- Hispanic children were more likely to have dental sealants compared to white children.

Access to Dental Services

Washington is geographically diverse, making access to dental services complicated for many adults and children who live in vast, rural regions of the state. Dentists are in short supply in many of these regions, which can be a barrier to preventive dental care and dental treatment for adults as well as children. Additionally, in many counties, the ratio of Apple Health (i.e., Medicaid) dental providers is small compared with the number of adults and children who need dental care through Apple Health.

- In Washington, 34 of 39 counties are entirely or partly designated as dental Health Professional Shortage Areas (HPSAs).
 - Federal HPSA designations are made for primary care, dental and mental health services. The information gathered in the HPSA designation process can provide key insight about need for providers. Areas designated as a HPSA are able to access additional federal resources, including loan repayment for clinicians and enhanced reimbursement.
 - Dental HPSAs are determined by considering the ratio of population to available dentists, percent of the population below the federal poverty level, water fluoridation status, and travel time to nearest services.
 - The majority of HPSA designations for dental services in Washington are specific to people in low-income households earning 200 percent or less of the federal poverty guidelines.
- **Adults age 21 and over**
Statewide, just over one-fifth (22 percent) of Medicaid-eligible adults age 21 and over accessed dental care in 2016 (i.e., had a Medicaid claim for dental services). Counting just these adults, the average caseload is 154 clients per dental provider accepting Medicaid clients. In 2016, there were 895 dental providers accepting adult Medicaid clients, down from 942 in 2015.
- **Children and teens**
Statewide, approximately 56 percent of Medicaid eligible children ages 20 and under accessed dental care in 2016 (i.e., had a Medicaid claim for dental services). The average client caseload per dental provider accepting Medicaid clients is 388.

How is Washington promoting oral health & addressing tooth decay in children?

Washington State has a strong track record of policymakers, public health officials, community advocates and providers collaborating to implement policies and programs to support the oral health of Washington children. Examples of innovative and effective programs and policies in Washington include:

- **[Access to Baby and Child Dentistry \(ABCD\)](#)**
Young children ages 0-5 who are eligible for Apple Health (Medicaid) are connected with dentists trained to treat young children. The program includes outreach and education for families about the importance of oral health and how to get their young children into care.
- **Preventive oral healthcare delivered in the pediatrician's office**
More than 40% of Washington's physicians serving children are trained to deliver preventive oral health services, including providing oral health education and screenings, and applying fluoride varnish during well-child visits.
- **School-based dental sealant programs**
In Washington, state law allows registered dental hygienists to provide preventive dental services outside of dental offices (e.g., school-based settings).
- **Preventive oral health education in early learning programs**
Head Start and ECEAP programs, child care providers, and home visitors throughout Washington are trained to identify children at risk for oral health problems, connect them to dental resources, and work with families to prevent decay.
- **Community water fluoridation**
Adjusting the level of naturally occurring fluoride in drinking water is a proven, cost-effective way to prevent tooth decay. Currently 56 percent of Washingtonians live in communities with optimized levels of water fluoridation.
- **[Washington State Board of Health: Strategies to Improve the Oral Health of Washington Residents.](#)**
Based on a review of established evidence and best practice models, the Washington State Board of Health approved seven strategic recommendations to be considered by communities, organizations, and agencies seeking to improve the oral health of Washington residents.
- **New provider model**
To help meet the dental needs of American Indian/Alaska Native children and families living in tribal communities, Washington State passed legislation in 2017 that permits tribes to hire mid-level dental providers, called dental health aide therapists.
- **[Regional initiatives in dental education \(RIDE\) program](#)**
The RIDE program developed by the University of Washington School of Dentistry addresses oral health workforce needs in rural and underserved communities. RIDE is a partnership with Eastern Washington University and the UW School of Medicine WWA-MI (Washington, Wyoming, Alaska, Montana and Idaho) program. RIDE was funded by the Washington State Legislature in 2007.

See also [Fluoridated Drinking Water](#)

Evidence-based interventions to promote oral health and reduce tooth decay in children are available in the [CDC Community Guide](#).

Technical Notes

Confidence Intervals: Definition and examples are described in [Appendix C](#)

Dental Health Professional Shortage Area: Under certain circumstances, areas and populations in Washington are designated by the federal government as having a shortage of healthcare providers. Health Professional Shortage Area designations are available for primary medical care, primary dental care, and mental healthcare. For more information, visit the DOH Rural Health webpage [here](#).

Medicaid Eligibility: The various eligibility requirements for the Washington Apple Health program (Medicaid) can be found [here](#).

Race and Ethnicity: Classification described in [Appendix C](#)

Relative Standard Error: Definition and how it was used is described in [Appendix C](#)

Smile Survey: The 2015-2016 Washington State Smile Survey collected information on decay experience, untreated decay, severity of the disease, urgency of need for dental care, and the presence of dental sealants. Specially trained dental practitioners visually screened over 14,000 children in preschool, kindergarten, second and third grades from a statewide representative sample of 76 elementary schools and 47 Head Start/ECEAP programs. For more information, access the full report [here](#).

Endnotes

¹Dental caries (Tooth Decay). National Institute of Dental and Craniofacial Research website. www.nidcr.nih.gov/Data-Statistics/FindDataByTopic/DentalCaries/. Accessed October 26, 2017.

²Oral health topics: dental sealants. American Dental Association website. www.ada.org/en/member-center/oral-health-topics/dental-sealants. Published October 19, 2016. Accessed September 28, 2017.

³Community Preventive Services Task Force. Dental caries (cavities): school-based dental sealant delivery programs. The Guide to Community Preventive Services (The Community Guide) website. www.thecommunityguide.org/findings/dental-caries-cavities-school-based-dental-sealant-delivery-programs. Published 2013. Accessed September 28, 2017.