

Quick Facts

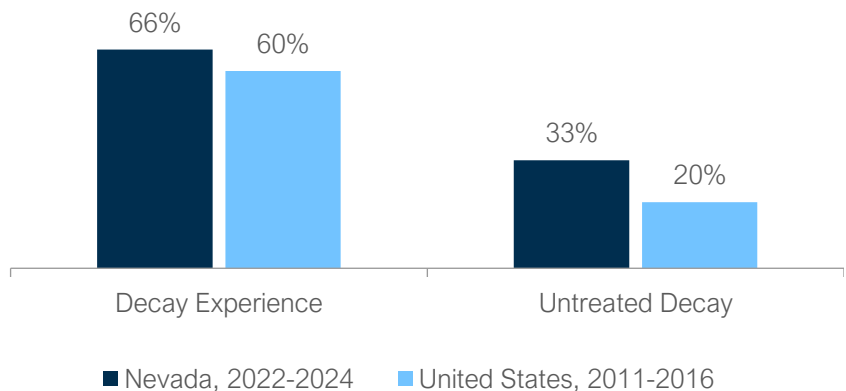
- **Decay Experience**
 - 66% of Nevada’s third grade children have at least one tooth with decay experience, higher than the national average of 60%.
- **Untreated Tooth Decay**
 - 33% of Nevada’s third grade children have untreated tooth decay, higher than the national average of 20%.
- **Protective Dental Sealants**
 - Only 38% of Nevada’s third grade children have protective dental sealants, lower than the national average of 42%.
- **Need for Urgent Dental Care**
 - 7% of Nevada’s third grade children need urgent dental care. This means that on any given day, more than 2,500 third grade children in Nevada are in a classroom experiencing mouth pain or a serious infection.
- **Oral Health Disparities**
 - In Nevada, there are significant oral health disparities. Tooth decay is more common among children attending lower income schools, Hispanic children, children living in rural counties, and children with parents that do not speak English.
 - The population group with the highest prevalence of untreated decay and the lowest prevalence of protective dental sealants is Hispanic children attending lower income schools in rural counties.

The Oral Health of Nevada’s Third Grade Children

Tooth decay is a serious public health problem that can affect a child’s overall health and well-being. It can lead to pain and disfigurement, low self-esteem, nutritional problems, and lost school days. Children with oral health problems are three times more likely to miss school due to dental pain and absences caused by pain are associated with poorer school performance.¹ Even though tooth decay can be prevented, many children in Nevada still get cavities. To assess the current oral health status of Nevada’s elementary school children, the Nevada Department of Health and Human Services coordinated a statewide oral health survey of third grade children attending Nevada’s public schools. A total of 1,187 third grade children received a dental screening at 45 schools during the 2022-2023 and 2023-2024 school years. This data brief presents information on the prevalence of tooth decay in the primary and permanent teeth of Nevada’s third grade children compared to the general U.S. population screened between 2011-2016 as part of the National Health and Nutrition Examination Survey (NHANES). It also describes the prevalence of dental sealants, a plastic-like coating applied to the chewing surfaces of teeth to prevent tooth decay.

Prevalence of decay experience and untreated decay.

Figure 1. Percentage of Nevada’s third grade children with decay experience and untreated tooth decay compared to children in the general U.S. population.



Sources: Nevada Oral Health Survey, 2022-2024
National Health and Nutrition Examination Survey (NHANES), 2011-2016

Decay experience means that a child has had tooth decay in the primary (baby) and/or permanent (adult) teeth in his or her lifetime. Decay experience can be past (fillings, crowns, or teeth that have been extracted because of decay) or present (untreated tooth decay or cavities). More than six-of-ten third grade children (66%) in Nevada have decay experience; higher than the national average of 60% for third grade children (NHANES, 2011-2016). Refer to Figure 1 and Table 1.

Left untreated, tooth decay can have serious consequences, including needless pain and suffering, difficulty chewing (which compromises children’s nutrition and can slow their development), difficulty speaking and lost days in school. One-of-three third grade children (33%) in Nevada have untreated tooth decay; substantially higher than the national average of 20% among third grade children in the general U.S. population (NHANES, 2011-2016). Refer to Figure 1 and Table 1.

Prevalence of dental sealants.

Dental sealants are thin plastic coatings that are applied to the grooves on the chewing surfaces of the back adult teeth to protect them from tooth decay. Most tooth decay in children occurs on these surfaces. Sealants protect the chewing surfaces from tooth decay by keeping germs and food particles out of these grooves. Fewer than four-of-ten third grade children (38%) in Nevada have at least one protective dental sealant; lower than the prevalence of 42% among the general U.S. population in third grade (NHANES, 2011-2016). Refer to Figure 2 and Table 1.

Figure 2. Percentage of Nevada’s third grade children with dental sealants on the permanent molar teeth compared to the general U.S. population in third grade.

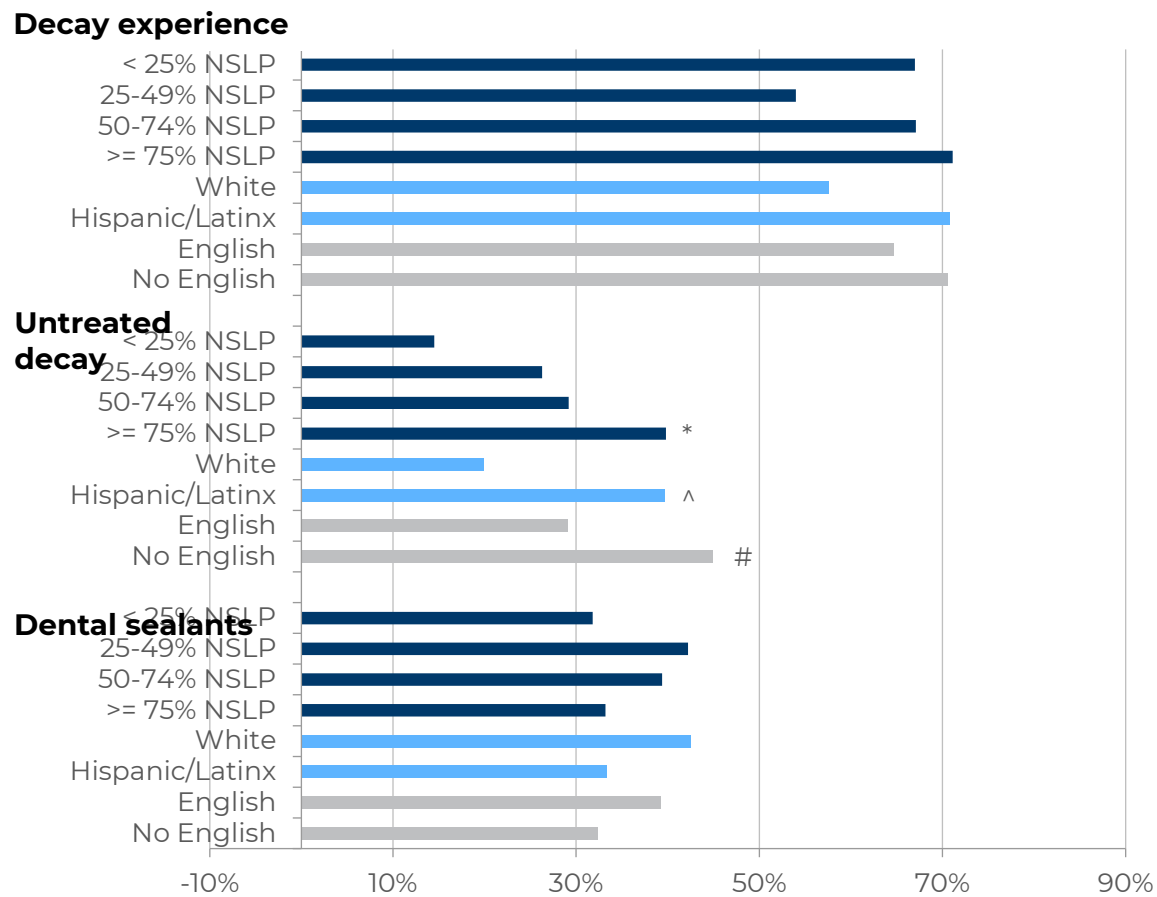


Sources: Nevada Oral Health Survey, 2022-2024
National Health and Nutrition Examination Survey (NHANES), 2011-2016

Oral health disparities.

Influential sociodemographic indicators for oral health disparities in the United States include poverty status and race and ethnicity. In Nevada, children attending the lowest income schools, schools where at least 75% of the students are eligible for the National School Lunch Program (NSLP), have a significantly higher prevalence of untreated tooth decay compared to children attending higher income schools (< 50% of children are eligible for NSLP). To be eligible for NSLP, children must live in a household with an annual income below 185% of the federal poverty level. Compared to non-Hispanic White children, Hispanic/Latinx children have a significantly higher prevalence of untreated decay. Compared to children with English speaking parents, children with parents that do not speak English have a significantly higher prevalence of untreated decay. Refer to Figure 3 and Table 2.

Figure 3. Prevalence of decay experience, untreated tooth decay, and dental sealants among Nevada’s third grade children by income status of the school (percentage eligible NSLP), child’s race/ethnicity, and parent’s ability to speak English, 2022-2024



^ Significantly different from non-Hispanic White children

* Significantly different from the higher income school (< 25% NSLP & 25-49% NSLP)

Significantly different from English speaking parents

Data source and methods.

This data brief is based on data from Nevada's oral health survey which was conducted during the 2022-2023 and 2023-2024 school years. This survey assessed the oral health of children in third grade from a representative sample of Nevada's public schools. The sampling frame consisted of all non-virtual public and public charter schools with 15 or more children in third grade.

To assure representation by geographic region and socioeconomic status, the sampling frame was stratified by county urbanicity (frontier/rural vs. urban) then ordered by the percentage of students in each school eligible for the National School Lunch Program (NSLP). A systematic probability proportional to size sampling scheme was used to select a sample of 45 schools. If a school opted not to participate, a replacement school within the same sampling interval was randomly selected. Only children whose parent/guardian provided positive consent were screened. Of the 4,033 third grade children enrolled in the 45 participating schools, 1187 were screened for an overall response rate of 29%.

The following information was collected for each child: age, race/ethnicity, sex, presence of untreated decay, presence of treated decay, presence of dental sealants on the permanent first molar teeth, and urgency of need for dental care. We used the *Basic Screening Survey* clinical indicator definitions and data collection protocols.²

All statistical analyses were performed using the complex survey procedures within SAS (Version 9.4; SAS Institute Inc., Cary, NC). Sample weights were used to produce population estimates based on selection probabilities. It should be noted that the National Health and Nutrition Examination Survey (NHANES) data for third grade children is from 2011-2016 which, as of April 2024, is the most current data available.

Definitions.

Decay experience: Refers to having untreated decay or a dental filling, crown, or other type of restorative dental material. Also includes teeth that were extracted because of tooth decay.

Dental sealants: Describes plastic-like coatings applied to the chewing surfaces of back teeth. The applied sealant resin bonds into the grooves of teeth to form a protective physical barrier.

Untreated decay: Describes dental cavities or tooth decay that have not received appropriate treatment.

Data tables.

Table 1. Prevalence of decay experience and untreated tooth decay in the primary and permanent teeth among Nevada’s third grade children by selected characteristics, 2022-2024

Characteristic	Decay Experience				Untreated Decay			
	# with Data	Percent Yes	Lower CL	Upper CL	# with Data	Percent Yes	Lower CL	Upper CL
All Third Grade Children	1,183	66.0	60.0	72.0	1,187	32.6	26.5	38.7
Gender								
Female	604	67.1	58.8	75.5	607	31.6	23.0	40.1
Male	547	65.5	59.2	71.8	548	33.8	27.3	40.4
Race/Ethnicity								
Hispanic/Latinx (any race)	465	70.8	64.7	76.9	469	39.7	33.1	46.3
White (non-Hispanic)	432	57.6	49.2	65.9	432	19.9	14.9	25.0
Another race or multi-racial	235	65.9	54.5	77.4	235	32.8	22.3	43.3
Parent’s Primary Language								
English	980	64.7	58.2	71.2	982	29.1	22.7	35.4
Non-English	203	70.6	60.4	80.9	205	44.9	38.1	51.7
School participation in NSLP								
< 25% of children	247	67.0	45.6	88.3	247	14.5	6.2	22.8
25-49% of children	346	54.0	43.4	64.7	346	26.3	14.0	38.6
50-74% of children	222	67.1	51.6	82.6	223	29.2	21.0	37.4
≥ 75% of children	368	71.1	64.3	78.0	371	39.8	31.9	47.7
Geographic Location								
Frontier/Rural County	366	74.0	69.3	78.6	366	39.3	31.2	47.4
Urban County	817	65.3	58.7	71.8	821	32.0	25.3	38.6

NSLP: National school lunch program; Lower CL: Lower 95% confidence limit; Upper CL: Upper 95% confidence limit

Table 2. Prevalence of protective dental sealants on permanent molars among Nevada’s third grade children by selected characteristics, 2022-2024

Characteristic	Dental Sealants			
	# with Data	Percent Yes	Lower CL	Upper CL
All Third Grade Children	1,187	37.7	32.1	43.4
Gender				
Female	607	39.3	32.7	45.9
Male	548	35.9	28.7	43.1
Race/Ethnicity				
Hispanic/Latinx (any race)	469	33.4	27.0	39.8
White (non-Hispanic)	432	42.5	35.5	49.5
Another race or multi-racial	235	41.0	30.0	52.1
Parent’s Primary Language				
English	982	39.2	33.3	45.2
Non-English	205	32.4	22.5	42.4
School participation in NSLP				
< 25% of children	247	48.7	35.9	61.5
25-49% of children	346	42.2	31.9	52.5
50-74% of children	223	39.4	28.3	50.5
≥ 75% of children	371	33.2	24.9	41.5
Geographic Location				
Frontier/Rural County	366	35.9	26.8	45.0
Urban County	821	37.9	31.8	44.0

NSLP: National school lunch program; Lower CL: Lower 95% confidence limit; Upper CL: Upper 95% confidence limit

References.

1. Jackson SL, Vann WF Jr, Kotch JB, Pahel BT, Lee JY. Impact of poor oral health on children's school attendance and performance. *Am J Public Health* 2011;101:1900-6.
2. Association of State and Territorial Dental Directors. Basic screening surveys: an approach to monitoring community oral health. Available at: <http://www.astdd.org/basic-screening-survey-tool>.