Oral Health Among Texas Children

National Survey of Children's Health, 2018-2019

Background

Healthy teeth are a vital component in maintaining general health. Improper oral care can result in infections like tooth decay and gum disease. These infections can cause pain and disability.[1] Poor oral health can also contribute to heart disease, diabetes, and other conditions.[2,3] Additionally, poor oral health and tooth pain can put children at a serious disadvantage in school.[5] Untreated tooth conditions can cause children to miss more school than children with good oral health.[6] Despite improvements in oral health interventions, inequities persist in oral health among children.[7] This report presents oral health indicators by select subpopulations in Texas children aged 1 to 17.

Methods

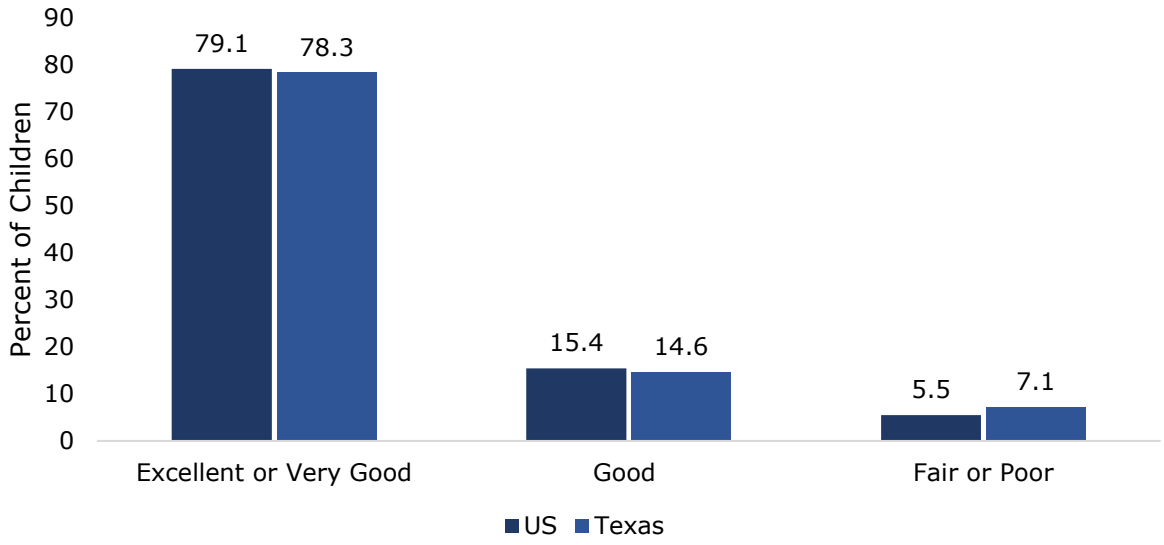
This report uses the National Survey of Children's Health (NSCH) to provide children's oral health data in Texas. The NSCH provides national and state-level estimates on key health indicators and the well-being of children, their families, and communities, as well as information about the prevalence and impact of special health care needs.[7] The Health Resources and Services Administration's (HRSA) Maternal and Child Health Bureau (MCHB) funds and directs the NSCH. Households are randomly sampled and contacted by mail to identify those with one or more children under age 18. Within each household, one child is randomly selected to be the survey's subject. The NSCH dental results are generalizable to children aged 1 to 17 who occupy residential spaces nationally and in each state.[8] All data are self-reported and may be subject to recall bias. This brief uses NSCH 2018 and 2019 combined data. Years are combined when looking at individual states due to small sample sizes. We used SAS (version 9.4) software to determine the prevalence of four oral health indicators (Tooth Condition, Oral Health Problems, Preventive Dental Visits, and Tooth Decay or Cavities) and their relationship between specific demographic variables. State results were compared to national level data for several oral health indicators. The new data is compared to NSCH 2016-2017 combined data analysis to look at trends.

Results

Overall Condition of Teeth

In Texas, 78.3% of children have excellent or very good teeth compared to 79.1% of U.S. children. Figure 1 compares additional tooth condition results between U.S. and Texas children. Excellent/very good and good tooth conditions were consistent with the U.S. data while fair/poor conditions were slightly higher for Texas children compared to U.S. children.

Figure 1: Prevalence of the Condition of Children's Teeth in Texas and U.S. Children, Ages 1 to 17, NSCH 2018-2019

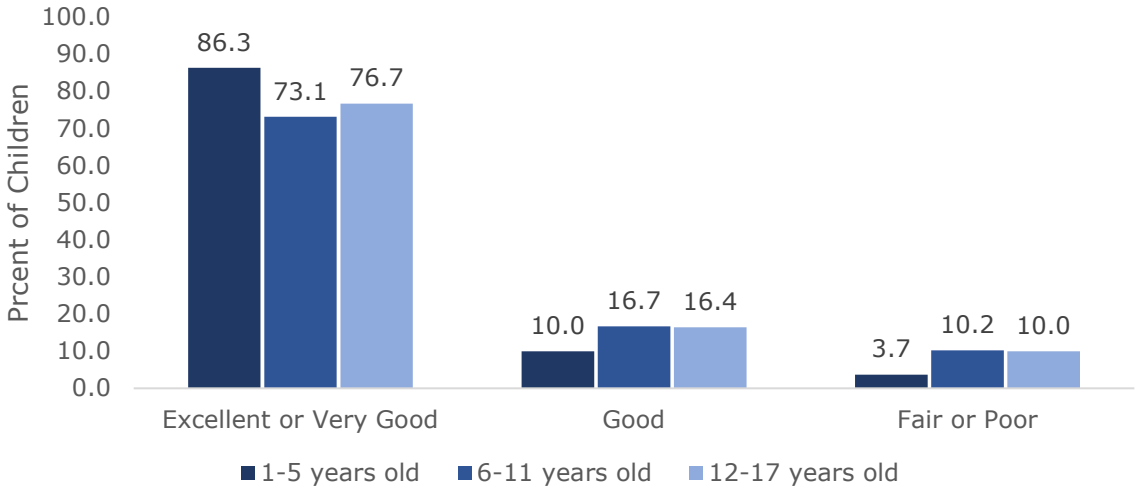


U.S.- United States
Data Source: National Survey of Children's Health, 2018-2019
Prepared by DSHS/MCH Epidemiology Unit, 2022

Teeth Condition by Demographics

Texas children aged 1 to 5 were significantly more likely to have excellent or very good teeth (86.3%) compared to children aged 6-11 (73.1%). Figure 2 shows the prevalence of additional tooth conditions in Texas children by age.

Figure 2: Prevalence of the Condition of Children's Teeth in Texas, Ages 1 to 17, by Age Group, NSCH 2018-2019



Data Source: National Survey of Children's Health, 2018-2019
Prepared by DSHS/MCH Epidemiology Unit, 2022

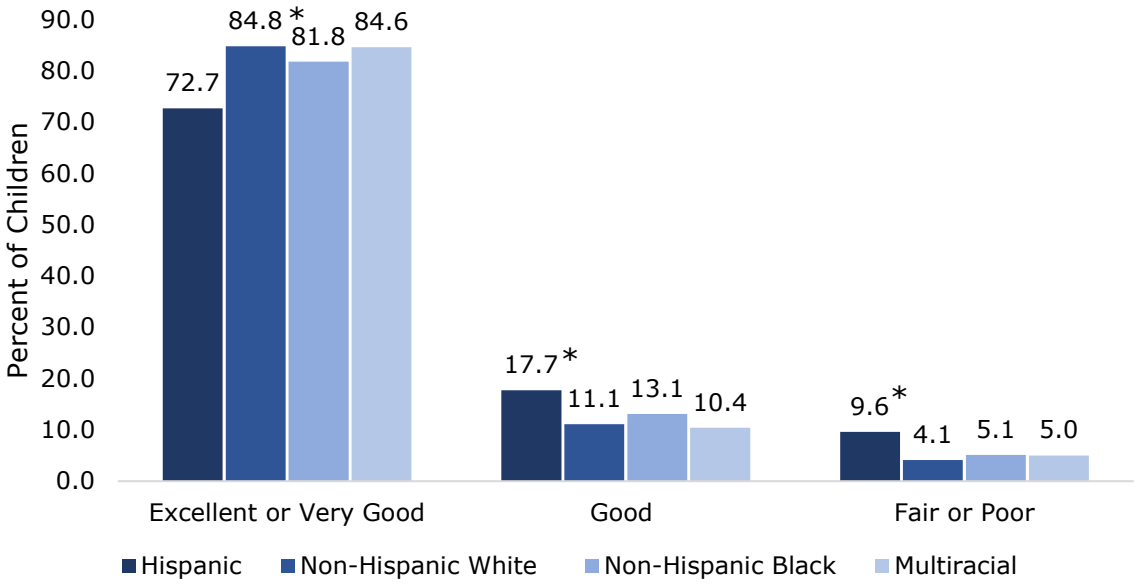
In Texas, Hispanic children were significantly less likely to have excellent or very good teeth (72.7%) when compared to non-Hispanic White (84.6%), Multiracial (84.6%), and non-Hispanic Black children (81.8%). Hispanic children were also significantly more likely to have fair or poor teeth (9.6%) when compared to non-Hispanic White (4.1%), Multiracial (5.0%), and non-Hispanic Black children (5.1%) (See Figure 3).

In Texas, female children were more likely to have excellent or very good teeth (82.4%) compared to (74.7%) of male children. Male children were more likely to have good teeth (17.2%) compared to (11.6%) of female children. Additionally, male children were more likely to have fair or poor teeth (8.1%) compared to (6.0%) of female children.

Texas children were more likely to have excellent or very good teeth if they had adequate or consistent heath care in the past year (81.5%) compared to those with no insurance or gaps in healthcare insurance coverage (73.3%).

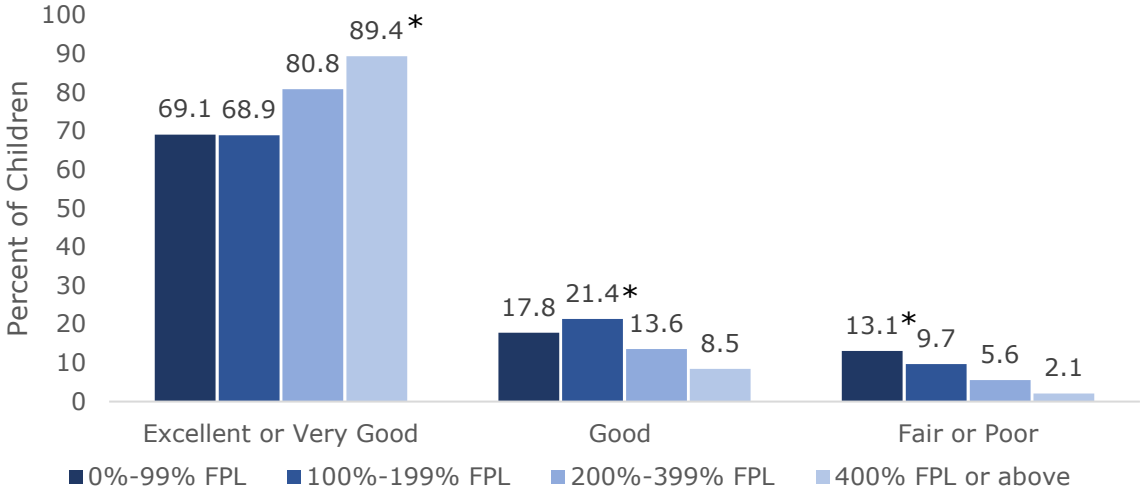
In Texas, children in households with a higher federal poverty income level (FPL) of 200% and above have a significantly higher average prevalence of excellent or very good teeth (85.1%) compared to children in households with a lower FPL of 0%-199% (69.0%) (See Figure 4).

Figure 3: Prevalence of the Condition of Children's Teeth in Texas, Ages 1 to 17, by Race/Ethnicity, NSCH 2018-2019



Data Source: National Survey of Children's Health, 2018-2019
Prepared by DSHS/MCH Epidemiology Unit, 2022
*-Statistically significant

Figure 4: Prevalence of the Condition of Children's Teeth in Texas, Ages 1 to 17, by Federal Poverty Level*, NSCH 2018-2019

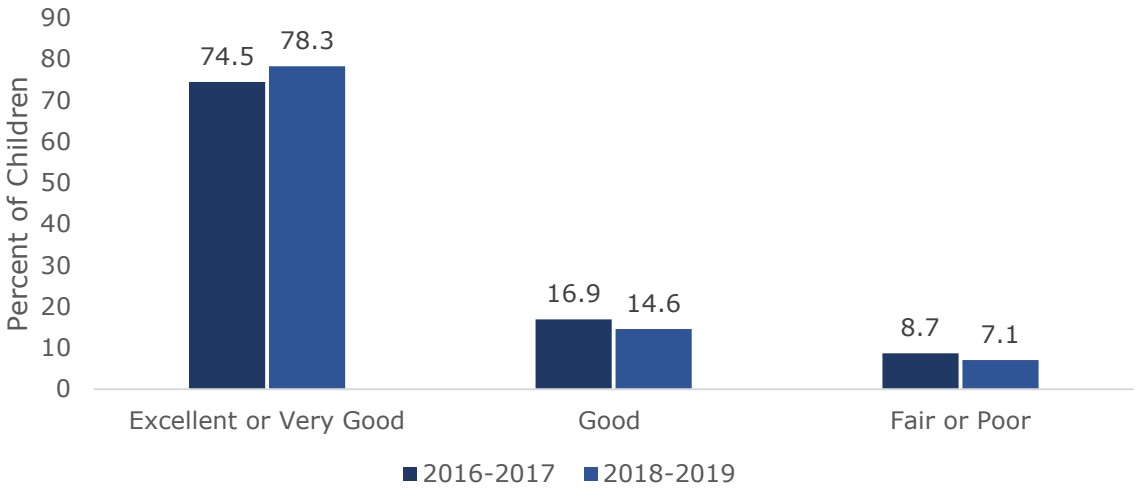


FPL- Federal Poverty Level
Data Source: National Survey of Children's Health, 2018-2019
Prepared by DSHS/MCH Epidemiology Unit, 2022
*-Statistically significant

Teeth Condition Data Trends

Data trend results show a significant increase among Texas children who have excellent or very good teeth from combined years 2016-17 and 2018-2019 (74.5% and 78.3%, respectively).

Figure 5: Prevalence of the Condition of Children's Teeth in Texas, Ages 1 to 17, Data Trends, NSCH 2016-17 to 2018-2019



Data Source: National Survey of Children's Health, 2016-2017 and 2018-2019
Prepared by DSHS/MCH Epidemiology Unit, 2022

Oral Health Problems

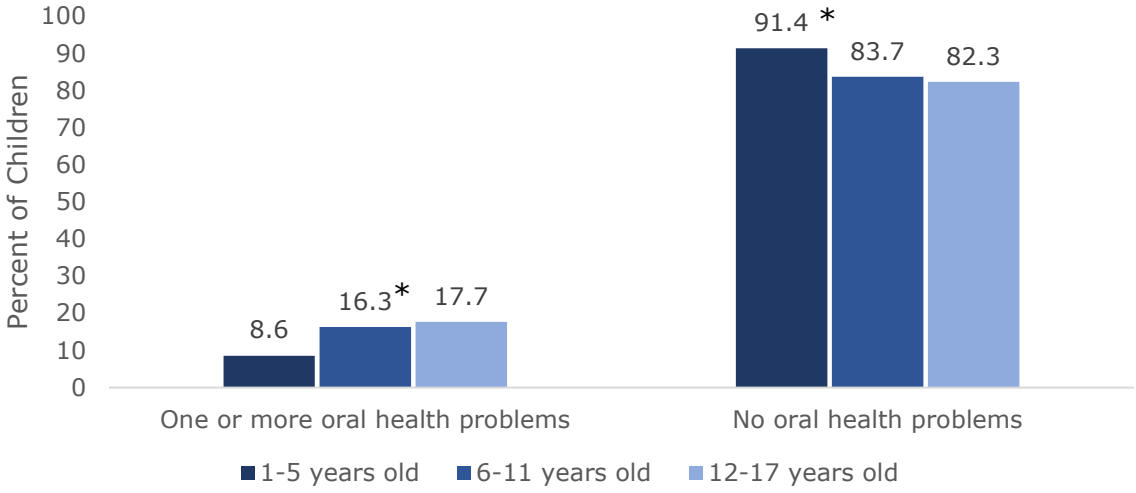
In Texas, 85.5% of children have no oral health problems compared to 86.0% of U.S. children, whereas 14.5% of Texas children have one or more oral health problems when compared to 14.0% of U.S. children. An oral health problem is defined as a toothache, bleeding gum, or decayed tooth or cavity.

Oral Health Problem Demographics

In Texas, children aged 1 to 5 were significantly more likely to have no oral health problems (91.4%) compared to children aged 6-11 (83.7%) and children aged 12-17 (82.3%).

Children aged 12-17 were significantly more likely to have one or more oral health problems (17.7%) compared to children aged 1-5 (8.6%) (See Figure 6).

Figure 6: Prevalence of Texas Children with Oral Health Problems, Ages 1 to 17, by Age Group, NSCH 2018-2019



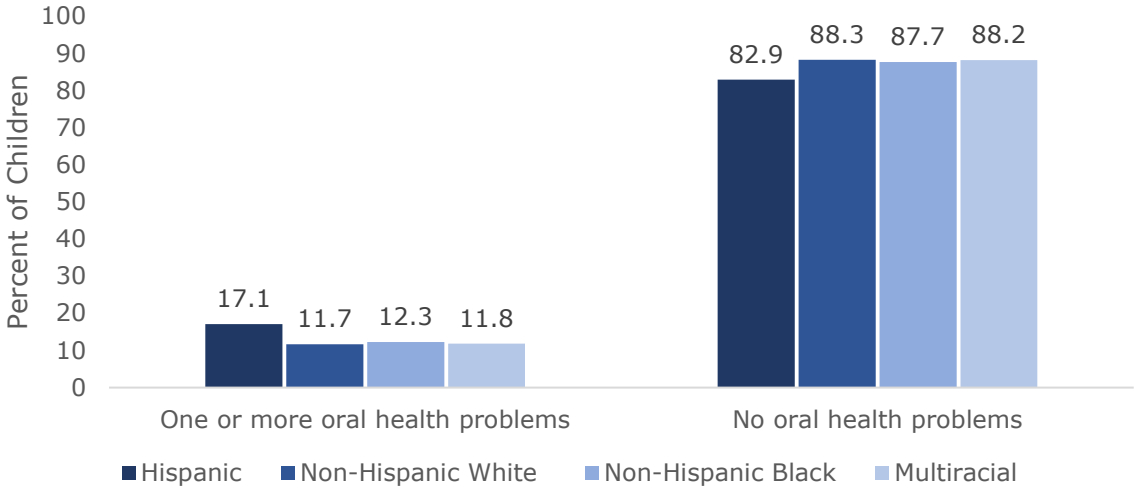
Oral health problem is defined as toothaches, bleeding gums, or decayed teeth or cavities.
Data Source: National Survey of Children's Health, 2018-2019
Prepared by DSHS/MCH Epidemiology Unit, 2022
*-Statistically significant

In Texas, non-Hispanic White (88.3%), Multiracial (88.2%), and non-Hispanic Black children (87.7%) were significantly more likely to have no oral health problems when compared to Hispanic children (82.9%) (See Figure 7).

In Texas, 85.6% of male children have no oral health problems compared to 85.3% of female children, and 14.7% of female children have reported one or more oral health problems compared to 14.4% of male children.

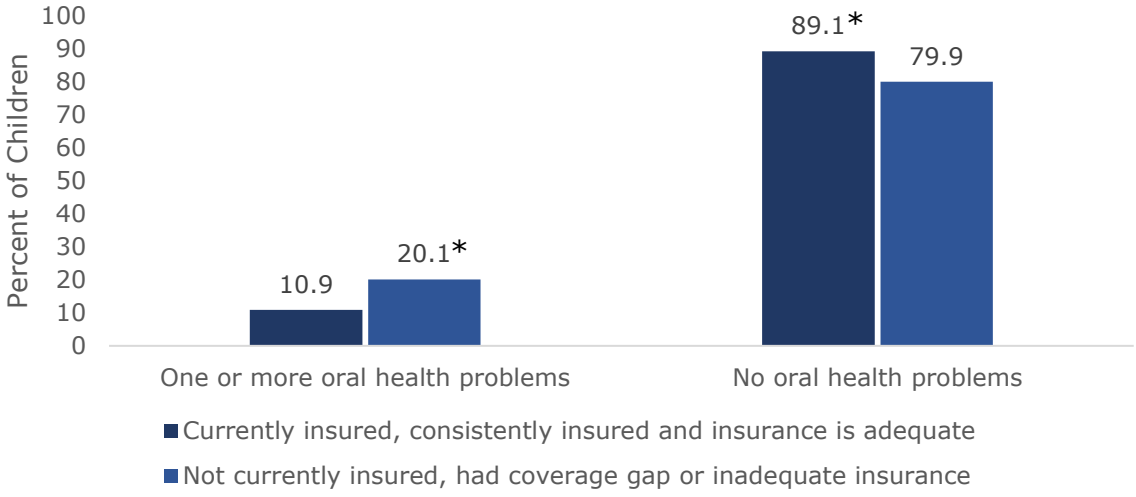
Children in Texas with consistent and adequate health care insurance in the past 12 months have a significantly higher prevalence of having no oral health problems (89.1%) compared to children with no insurance or gaps in health care insurance coverage in the past 12 months (79.9%) (See Figure 8).

Figure 7: Prevalence of Texas Children with Oral Health Problems, Ages 1 to 17, by Race/Ethnicity, NSCH 2018-2019



Data Source: National Survey of Children's Health, 2018-2019
Prepared by DSHS/MCH Epidemiology Unit, 2022

Figure 8: Prevalence of Texas Children with Oral Health Problems, Ages 1 to 17, by Insurance Adequacy, NSCH 2018-2019

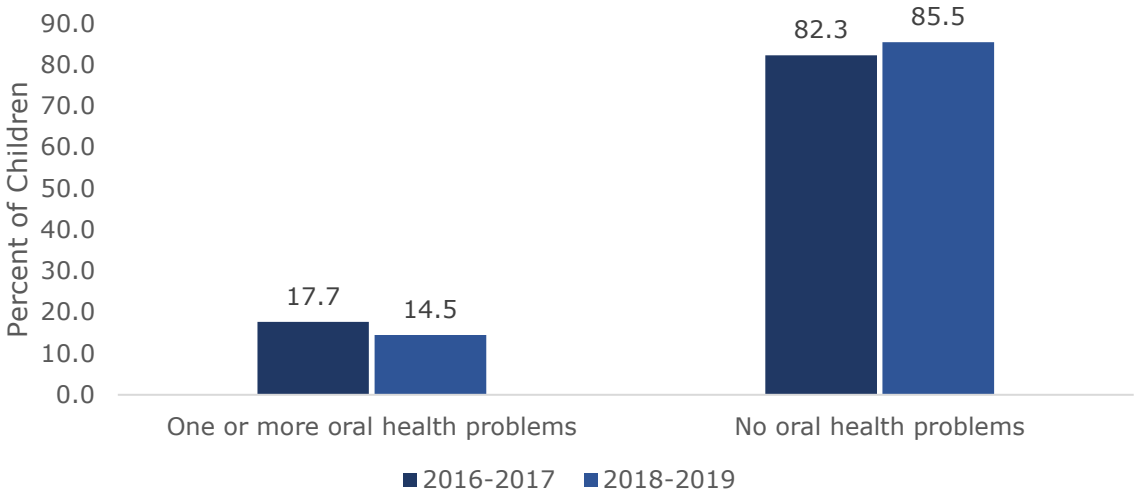


Adequate insurance is defined as having continuous insurance coverage in the past 12 months that met the child's health care needs.
Data Source: National Survey of Children's Health, 2018-2019
Prepared by DSHS/MCH Epidemiology Unit, 2022
*-Statistically significant

Oral Health Problem Data Trends

The prevalence of oral health problems in Texas children ages 1 to 17 has decreased from 17.7% in 2016-2017 to 14.5% in 2018-2019. There has also been an increase in children who have no oral health problems.

Figure 9: Prevalence of Texas Children with Oral Health Problems, Ages 1 to 17, Data Trends, NSCH 2016-17 to 2018-2019



Data Source: National Survey of Children's Health, 2016-2017 and 2018-2019
Prepared by DSHS/MCH Epidemiology Unit, 2022

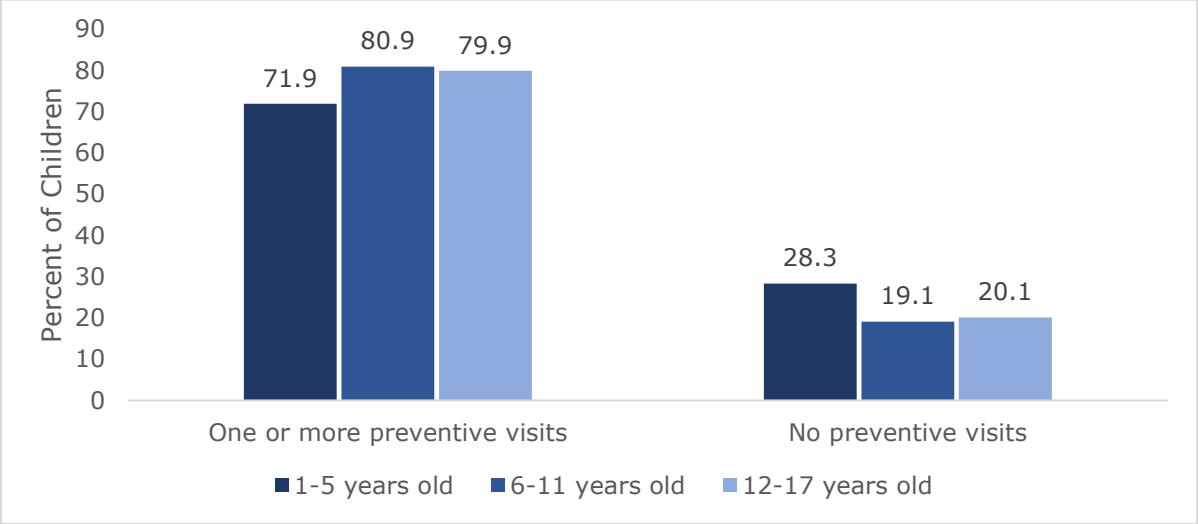
Preventive Dental Care Visits

In Texas, 77.8% of children had one or more preventive dental care visits in the past year compared to 79.6% of U.S. children. Also, 22.2% of Texas children have had no preventive dental care visits in the past year compared to 20.4% of U.S. children. The Centers for Disease Control and Prevention (CDC) defines preventive dental visits as dental checkups or dental cleanings.[9]

Preventive Dental Care Visit Demographics

Texas children aged 6 to 11 were significantly more likely to have one or more preventive dental care visits per year (80.9%) than children aged 1 to 5 (71.9%). (See Figure 10)

Figure 10: Prevalence of Texas Children with Preventive Dental Visits, Ages 1 to 17, by Age Group, NSCH 2018-2019



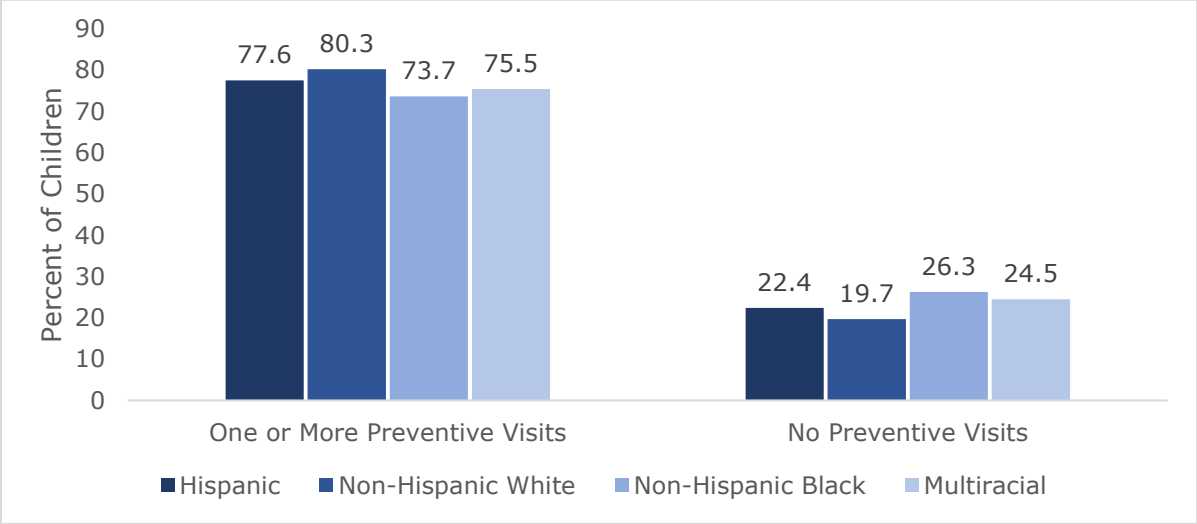
Preventive dental visit is defined as dental checkups or dental cleanings.
Preventive Dental Visits for children ages 1 to 17 is a Title V National Performance Measure
Data Source: National Survey of Children's Health, 2018-2019
Prepared by DSHS/MCH Epidemiology Unit, 2022

In Texas, non-Hispanic Black children were significantly less likely to have one or more preventive dental care visits per year (73.7%) than non-Hispanic White children (80.3%) (See Figure 11).

In Texas, 80.4% of female children have had one or more preventive dental visits in the past 12 months compared to 75.6% of male children, and 24.4% of male children have no preventive dental visits a year compared to 19.6% of female children.

Texas children with consistent and adequate health care insurance in the past 12 months were significantly more likely to have one or more preventive dental visits (80.9%) compared to children with no insurance or gaps in health care insurance coverage in the past 12 months (73.1%).

Figure 11: Prevalence of Texas Children with Preventive Dental Visits, Ages 1 to 17, by Race/Ethnicity, NSCH 2018-2019

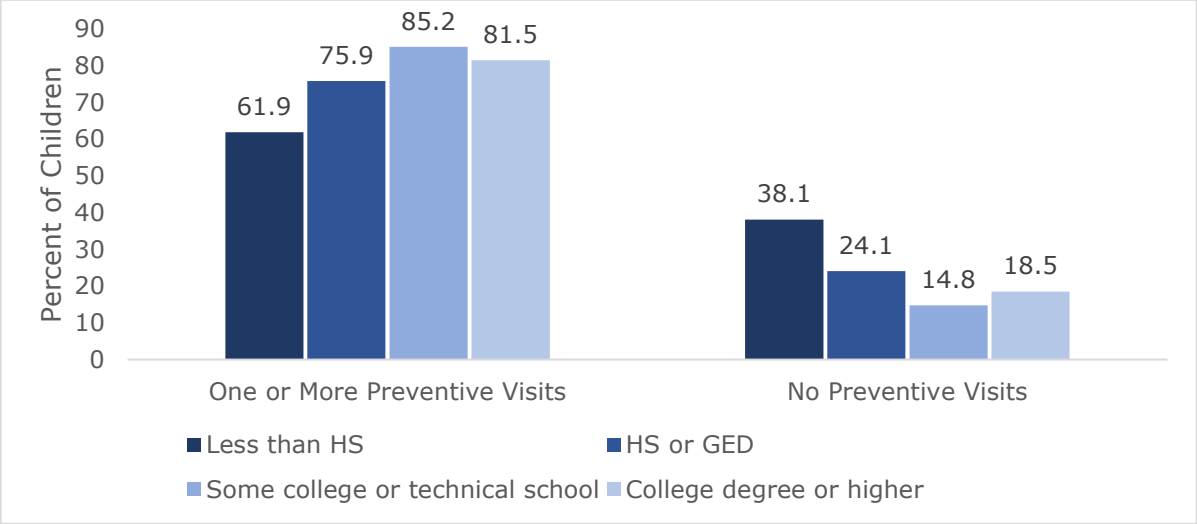


Preventive dental visit is defined as dental checkups or dental cleanings.
Preventive Dental Visits for children ages 1 to 17 is a Title V National Performance Measure
Data Source: National Survey of Children's Health, 2018-2019
Prepared by DSHS/MCH Epidemiology Unit, 2022

In Texas, households with a higher income level (FPL of 400% and above) have a significantly higher prevalence of one or more preventive dental visits (83.4%) when compared to households with a lower income level (FPL of 99% or below) (76.5%).

Texas children with a parent that has a high school education or less were overall less likely to have one or more preventive dental visits (68.9%) when compared to children with a parent that has had some college education or higher (83.3%) (See Figure 12).

Figure 12: Prevalence of Texas Children with Preventive Dental Visits, Ages 1 to 17, by Household Education, NSCH 2018-2019

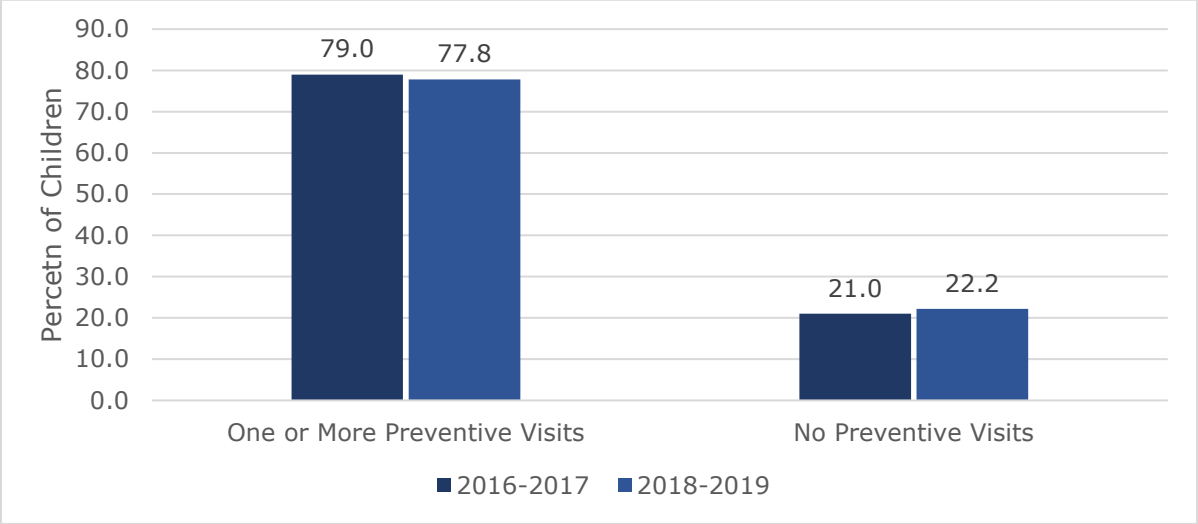


Household Education is defined as the highest education of adult(s) in this child's household.
HS – High School; GED – Graduate Equivalency Degree
Data Source: National Survey of Children's Health, 2018-2019
Prepared by DSHS/MCH Epidemiology Unit, 2022
*-Statistically significant

Preventive Dental Visits Data Trends

Although not significant, there was a 1.2% decrease in the prevalence of Texas children with one or more preventive dental visits from 2016-2017 to 2018-2019 (79% and 77.8%, respectively).

Figure 13: Prevalence of Texas Children with Preventive Dental Visits, Ages 1 to 17, Data Trends, NSCH 2016-17 to 2018-2019



Data Source: National Survey of Children's Health, 2018-2019
Prepared by DSHS/MCH Epidemiology Unit, 2022

Tooth Decay/Cavities

In both Texas and the U.S., 11.6% of children reported having tooth decay or cavities, and 88.4% of children reported no tooth decay or cavities.

Tooth Decay or Cavity Demographics

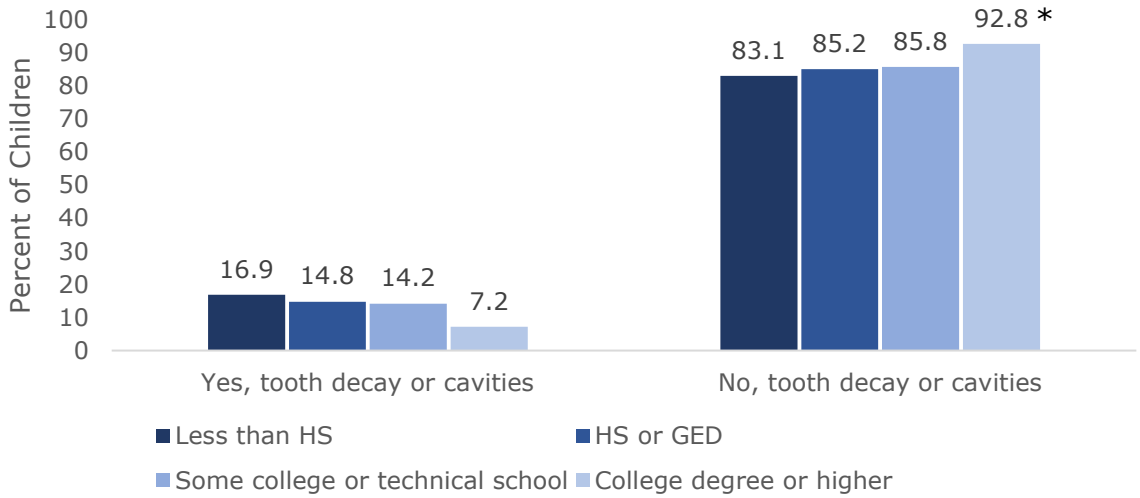
In Texas, non-Hispanic White (9.3%) and non-Hispanic Black (9.4%) children have a significantly lower prevalence of having tooth decay or cavities compared to Hispanic (13.4%) and Multiracial (11.8%) children.

Texas children with consistent and adequate health care insurance in the past 12 months were significantly more likely to have no tooth decay or cavities (91.5%) compared to those with no insurance or gaps in health care insurance coverage in the past 12 months (83.6%).

In Texas, female children were more likely to have no tooth decay or cavities in the past year (90.1%) when compared to male children (86.9%).

Figure 14 shows that Texas children with parents that have a college degree were significantly more likely to report no tooth decay or cavities (92.8%) compared to children with parents who have less than a high school education (83.1%).

Figure 14: Prevalence of Texas Children with Tooth Decay or Cavities, Ages 1 to 17, by Household Education, NSCH 2018-2019

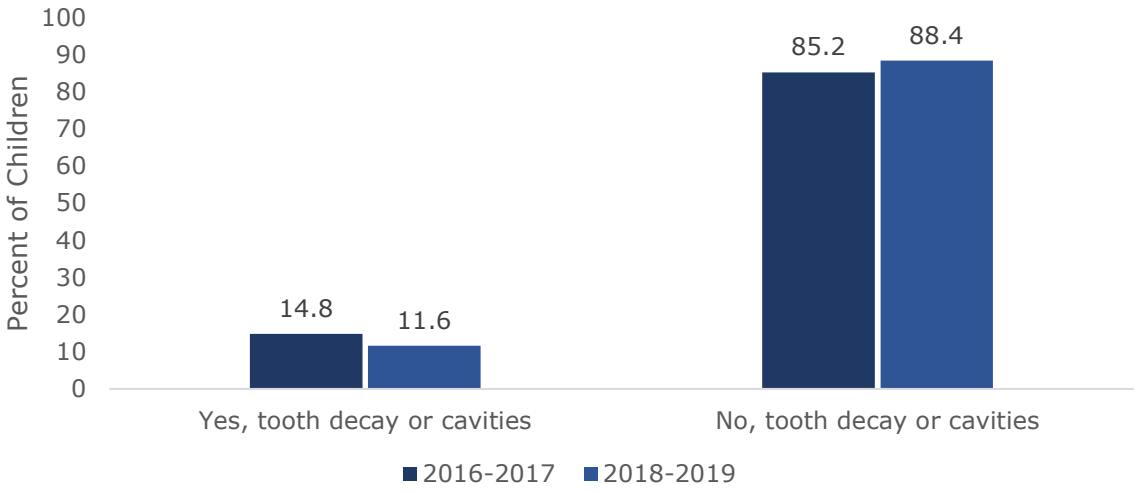


Tooth Decay or Cavities in children ages 1 to 17 is a Title V National Outcome Measure.
Household Education is defined as the highest education of adult(s) in this child's household.
HS – High School; GED – General Equivalency Degree
Data Source: National Survey of Children's Health, 2018-2019
Prepared by DSHS/MCH Epidemiology Unit, 2022
*-Statistically significant

Tooth Decay or Cavities Data Trends

The prevalence of tooth decay or cavities in Texas children ages 1 to 17 has decreased from 14.8% in 2016-2017 to 11.6% in 2018-2019.

Figure 15: Prevalence of Texas Children with Tooth Decay or Cavities, Ages 1 to 17, Data Trends, NSCH 2016-17 to 2018-2019



Data Source: National Survey of Children's Health, 2016-2017 and 2018-2019
Prepared by DSHS/MCH Epidemiology Unit, 2022

What's Next

Tooth condition in Texas children has improved but further progress is needed. Early intervention reduces the risk of early childhood caries and improves oral health outcomes. Increasing the number of children aged 1 to 5 who had a preventive dental visit in the past year can positively impact all the other measures in this survey. It is important to note that income gaps persist. A significant difference was observed between children from families above and below 200% FPL. Most of the children below 200% FPL qualify for Medicaid (138% FPL and below). Increasing Medicaid enrollment and usage in this population can help close this gap. Data identified in this report can be used to increase awareness and resources in your communities.

Citation

Maternal Child Health Epidemiology Unit. Oral Health Among Texas Children: National Survey of Children's Health, 2018-2019. Texas Department of State Health Services. March 2022.

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