



Kindergarten Oral Health Screening Survey

2018-2019

Disparities in Oral Health

Introduction

Disparities exist when notable differences in health status occur among different groups of people. In the U.S., the amount of oral disease is shown to differ based on education level, income, and race and ethnicity.¹ Overall, non-Hispanic blacks, Hispanics, and American Indians and Alaska Natives generally have the poorest oral health of any racial and ethnic groups in the United States.² Additionally, oral health disparities and inequities continue to exist among low-income racial/ethnic minority groups, those living in dentally underserved rural and urban areas, and those with disabilities.³ These facts make it necessary for community leaders, health-care professionals, and policy makers to work together to promote oral health and reduce disparities.

This data brief looks at disparities in the oral health of kindergarten schoolchildren in Texas, related to family income, geographic area of residence, and race/ethnicity.

Methods

The Texas Department of State Health Services conducted an open-mouth oral health screening survey of kindergarten schoolchildren during the 2018-2019 school years. A randomized sample of 139 public elementary schools participated in the survey across the state of Texas. Approximately 4,722 schoolchildren were screened.

With consent from parents, schoolchildren were screened by a trained team of dentists and dental hygienists. Three indicators of oral health were measured: history of tooth decay (cavities, fillings, crowns or teeth missing due to dental disease), untreated tooth decay, and treatment needs.



The consent form asked parents questions about getting dental care for their child, such as how recently their child had been to a dentist and if they had dental insurance.

Other data collected on each child were race, ethnicity, and enrollment in the Free and Reduced Lunch Program (as an estimate of family income). Children were classified by whether they lived in a border/rural, border/urban, non-border/rural, or non-border/urban county. These data were collected so disparities in oral health status and access to dental care among different geographic locations across Texas could be studied. Our goal is to achieve health equity, eliminate disparities, and promote good oral health for all Texans.

For more information, please contact the Texas Oral Health Improvement Program at (512) 776-2008 or visit our website at dshs.texas.gov/dental

Results

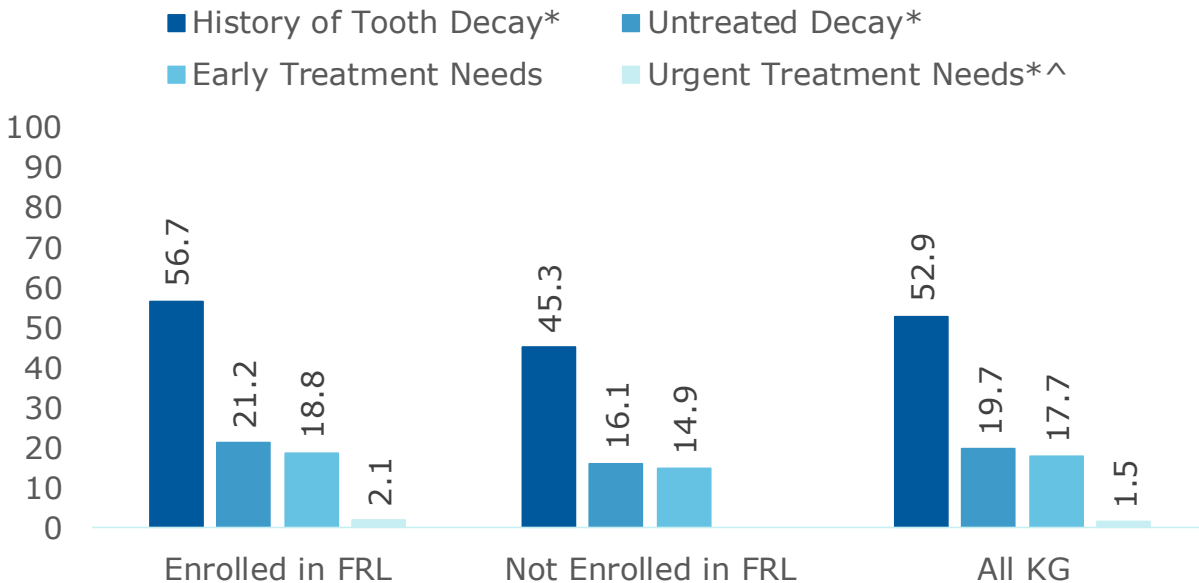
Oral Health Status and Family Income

Family income is estimated by whether a child is enrolled in the Free and Reduced Lunch Program (FRL) at school. Children qualify for this program if their family income falls below 185 percent of the federal poverty level (FPL). For the 2018-2019 school year, a household of four was eligible for reduced-price meals with an income at or below \$44,955 and free meals with an income at or below \$31,590.⁴

As seen in Figure 1, children from families with lower incomes were more likely to have a history of tooth decay, untreated tooth decay, and early treatment needs than children not enrolled in the FRL program. Additionally, the prevalence of urgent treatment needs was higher in kindergarteners enrolled in FRL compared to kindergarteners in general. Urgent treatment needs, identified as children needing dental care within 24-48 hours because of signs or symptoms including pain, infection, or swelling in the mouth, are not shown for children not enrolled in FRL due to a sample size of 5 or less and a relative standard error greater than 30 percent.



Figure 1: Percentage of Kindergarten (KG) Schoolchildren with History of Tooth Decay, Untreated Tooth Decay, and Treatment Needs, by Family Income, 2018-2019



*Statistically significant in history of tooth decay, untreated decay, and urgent treatment needs at p≤0.05 between children enrolled in FRL compared to those not enrolled in FRL.

^Urgent treatment needs, identified as children needing dental care within 24-48 hours because of signs or symptoms including pain, infection, or swelling in the mouth, are not shown for children not enrolled in FRL due to unstable results (sample size ≤5 and relative standard errors ≥30 percent).

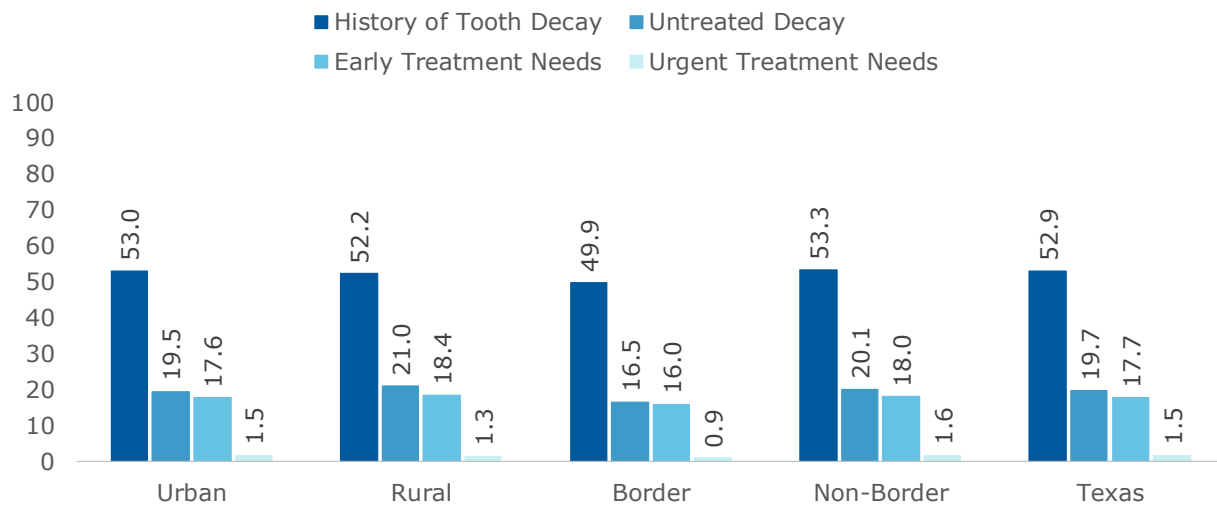
Oral Health Status and Geographic Area of Residence

There are 254 counties in Texas. Each county is designated as urban or rural and border or non-border. Counties in the rural/urban subgroup were designated in 2013 as metropolitan or non-metropolitan (urban or rural) by the U.S. Office of Budget and Management.⁵ Counties in the border/non-border subgroup are designated as border or non-border according to Article 4 of the La Paz Agreement of 1983.⁶ Definitions for each of these appropriate designations can be found in the reference section at the end of this document.

Figure 2 shows insignificant differences in the oral health of kindergarteners across geographic designations. Regardless of the location of the area of residence for a kindergarten child across the state of Texas, the history of tooth decay was approximately 50 percent, whereas around one of five children (nearly 20 percent) presented with untreated decay. Further, there was very little difference in early or urgent treatment needs across these geographic designations.



Figure 2: Percentage of Kindergarten Schoolchildren with History of Tooth Decay, Untreated Tooth Decay, and Early and Urgent Treatment Needs, by Geographic Designation, 2018-2019



Oral Health Status and Race/Ethnicity

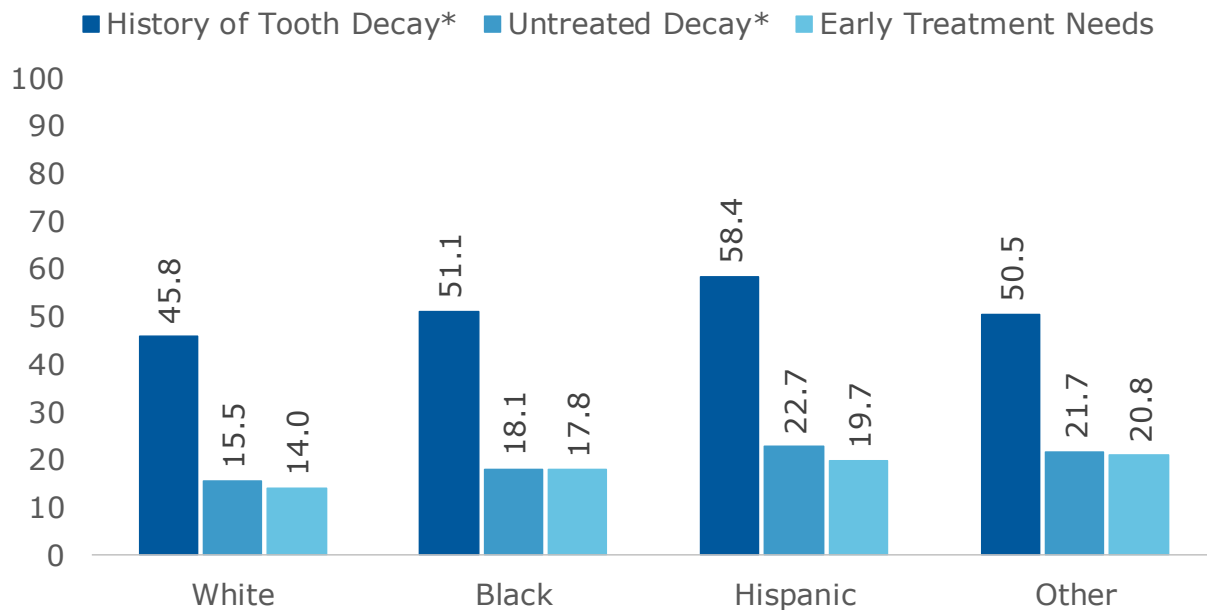
Hispanic children had a higher prevalence of history of tooth decay and untreated decay than children of any other race/ethnic group (Figure 3).

No significant differences were seen in early treatment needs between any of the racial/ethnic groups.

Urgent treatment needs, are not shown for children by race/ethnicity due to unstable results (sample size of 5 or less and/or a relative standard error greater than 30 percent).



Figure 3: Percentage of Kindergarten Schoolchildren with History of Tooth Decay, Untreated Tooth Decay, and Early Treatment Needs, by Race/Ethnicity, 2018-2019



*Statistically significant at p≤0.05.

What's Next

Disparities remain in oral health. Income often plays a role in what preventive or restorative treatment a child can access. Low income may also qualify many children for Medicaid or CHIP dental benefits. Efforts need to be made to ensure children who qualify for these programs are enrolled and that benefits are utilized.

Cavities are preventable. Public health efforts, such as dental sealant programs, strive to provide preventive care for children with limited access to dental care. Oral health and nutrition education in schools can also help reduce the burden of decay in Texas children.

For more information, please contact the Texas Oral Health Improvement Program at (512) 776-2008 or visit our website at dshs.texas.gov/dental.



Reference

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3. Fischer DJ, O'Hayre M, Kusiak JW, Somerman MJ, Hill CV. Oral Health Disparities: A Perspective from the National Institute of Dental and Craniofacial Research. *Am J Public Health*. 2017;107(S1):S36–S38. doi:10.2105/AJPH.2016.303622
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