



RHODE ISLAND DATA BRIEF

Access to Dental Care Among Rhode Island Adults, 2018

October
2021

Introduction

This report presents data on access to dental care, tooth loss severity, and associated risk factors for Rhode Island adults age 18 or older. The data used for this analysis were obtained from the 2018 Rhode Island Behavioral Risk Factor Surveillance System (BRFSS), an annual state-level survey of health, health behaviors, and access to care.

Background and Significance

Oral health is a critical component of overall health and quality of life.¹ The Rhode Island Department of Health's (RIDOH) leading priorities include eliminating health disparities, promoting health equity, and ensuring access to quality health services for Rhode Islanders, including our vulnerable populations.² The BRFSS data provide an opportunity to assess our state's progress toward these goals and to identify opportunities for improvement.

RIDOH recommends annual dental visits to assess patients' treatment needs and provide evidence-based preventive services.³ Populations at higher risk for disease benefit from more frequent visits. These vulnerable populations may include those with challenges performing oral hygiene and those with medical conditions or treatment that can negatively impact oral health. This survey looked at use of dental services by race/ethnicity, disability status, diabetes status, and other factors.

Maintaining a full complement of teeth is important both for function (eating and speaking clearly) and success in work and society. Maintenance of oral health requires a lifetime of access to care and treatment decisions. Understanding which populations are most vulnerable to tooth loss will help guide a health equity approach to programs and solutions.

About the BRFSS

The BRFSS is an ongoing, random sample, telephone health survey of non-institutionalized US adults age 18 or older. The BRFSS monitors the prevalence of health risks that contribute to the leading causes of disease and death among adults. Rhode Island has participated in the BRFSS since 1984. Since 2011, cell phone interviews have been included in the BRFSS.⁴

2018 Rhode Island BRFSS

From January to December 2018, the Rhode Island BRFSS conducted telephone interviews with 5,517 non-institutionalized Rhode Island adults who speak English or Spanish. As outlined by the Rhode Island Oral Health Surveillance System, the following aspects of oral health were assessed:

1. Dental visit in the past 12 months;
2. Tooth loss severity; and
3. Dental insurance status.

A dental visit in the past 12 months is referred to as a recent dental visit. Tooth loss severity refers to the number of missing teeth due to tooth decay or gum disease. Categories used are described in the Methods section.

Reading the statistics: Survey data were weighted to be representative of all Rhode Island residents. Error bars are used in Figures 1-4 to indicate the 95% confidence interval. Bars that do not overlap represent significant difference between the subgroups. Large error bars are seen when subgroups have a small sample size. This indicates greater uncertainty that the sample and result represent the full population.



Recommendations

- Dental insurance should be more affordable for all Rhode Islanders and emphasize regular preventive oral health care.
- Hospital and health center dental program capacities should be increased, and private practice dental providers should expand efforts to respond to unmet community oral health needs.
- Non-dental providers, such as physicians and nurses, should refer patients to dentists by including dental care in their referral system.
- Reimbursement should be enough to cover dental care costs to assure adequate dental provider participation.
- Schools, community programs, the media, and healthcare settings should offer opportunities to expand health promotion efforts on oral disease prevention.
- Public and private partnerships should work to expand the dental workforce and promote racial and ethnic diversity that matches the population of our state.

Methods

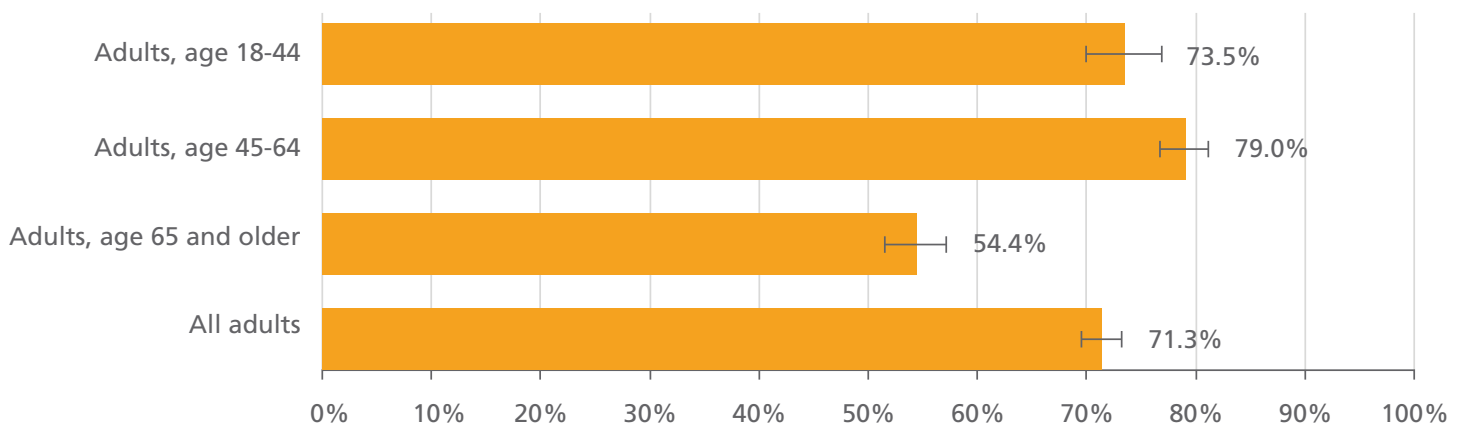
This brief explores oral health-related statistics in Rhode Island by analyzing the weighted percentages of recent dental visit and tooth loss severity across several demographic and health factors—age, race/ethnicity, education, dental insurance coverage, diabetes status, disability status, and smoking status. Timing of the most recent dental clinic or dentist visit was divided into two categories: within the past 12 months (a “recent dental visit”) and more than a year ago. Tooth loss severity was divided into three categories: no tooth loss (no missing teeth), moderate tooth loss (one to five missing teeth), and severe tooth loss (six or more missing teeth). Smokers were defined as those who reported smoking every day or some days. Disability status was defined as responding yes to any of the six questions related to impairment with vision, hearing, cognition, mobility, self-care, or independent living.

Note: Unlike the rest of the report, which only used data from the 2018 Rhode Island BRFSS, data on tooth loss by race/ethnicity will be presented using combined data from 2016 and 2018. With data from both years, the sample size was large enough to stratify by age. This step is important because tooth loss risk increases with age, and a larger representation of White respondents in the older adult cohort could misrepresent the data if taken as a whole.

2018 Highlights for Dental Coverage and Access to Dental Care

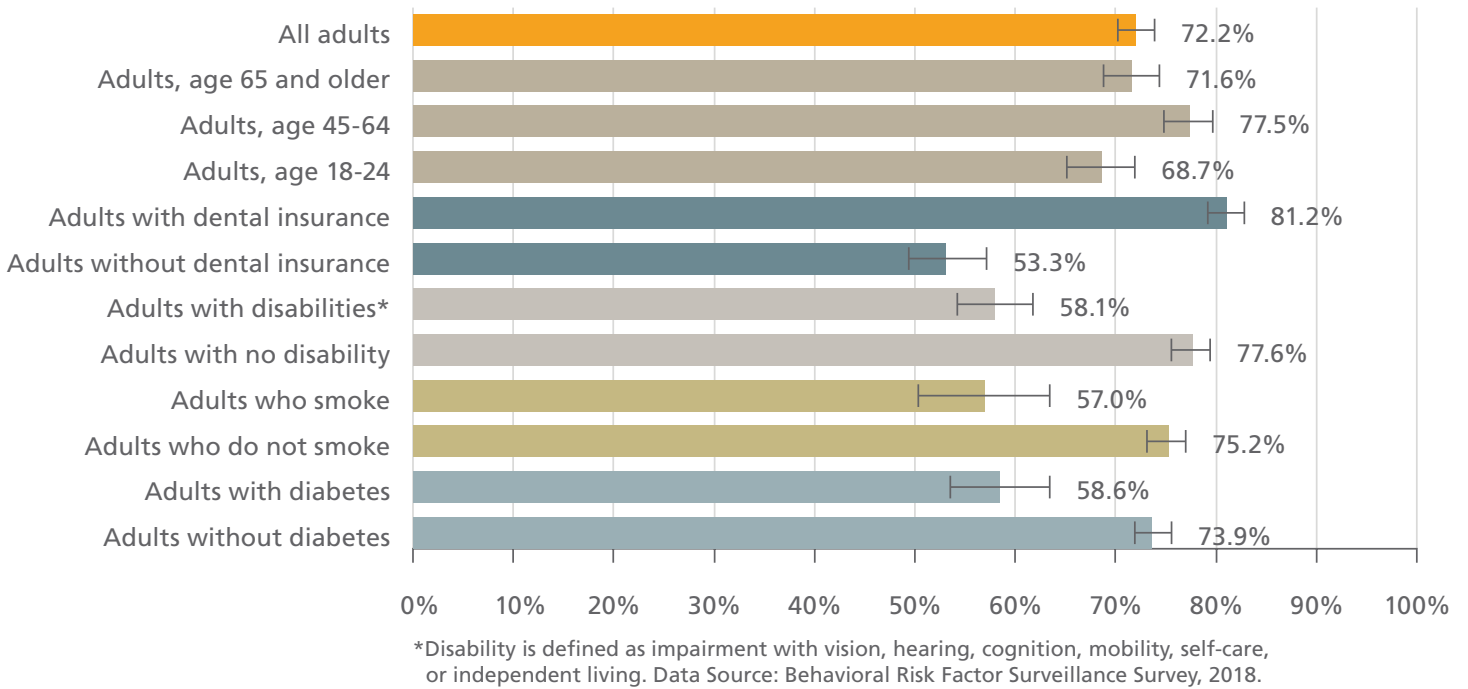
- More than 70% of working-age (age 18 to 64) Rhode Island adults reported having dental insurance coverage, yet just more than half of non-institutionalized, retirement-age adults (age 65 or older) have dental coverage (Figure 1).
- Older adults’ lower rates of dental insurance coverage may reflect the structure of Medicare benefits. Traditional Medicare dental benefits include dental services for hospitalized patients only in specific situations, and do not include routine dental care for non-hospitalized older adults. There are supplemental Medicare plans available that include routine dental care benefits; however, the supplemental plans are only for qualified older adults that are also enrolled in Part C. Older adults who have supplemental plans still incur deductibles, copayments, coinsurance, and out-of-pocket maximum limits.^{5,6}
- The likelihood of visiting a dentist or dental clinic is associated with one’s dental insurance plan, the type of dental insurance provider, and the quality of their plan. Adults who reported having dental insurance coverage were much more likely than those without coverage to have received dental care within the past year (81% versus 53%) (Figure 2).
- Adults with diabetes have a higher prevalence and more severe forms of periodontal (gum) disease, which can result in the destruction of tissues and supporting bone around teeth.⁷ Periodic dental visits, which are recommended for diabetes management and care, provide opportunities for prevention, early detection, and treatment of periodontal disease among adults with diabetes.⁷ Despite the importance of dental visits for people with diabetes, the percent of Rhode Island adults who visited a dental clinic or dentist within the past year was significantly lower among those with diabetes than those without diabetes (59% versus 74%), suggesting a significant level of unmet need among these vulnerable patients (Figure 2).
- People with disabilities need treatment for dental decay and periodontal disease more frequently than the general population.⁸ However, Rhode Island adults with disabilities reported lower utilization of dental services compared to those without disabilities (58% versus 78%) (Figure 2).
- Smoking increases the risk for periodontal disease and other soft tissue lesions in the mouth.⁹ Regular dental cleanings and oral health check-ups are important for smokers to prevent periodontal diseases and detect early signs of disease.⁹ However, Rhode Island adults who reported they smoke every day or some days were less likely to have had a recent dental visit, compared to non-smokers (57% versus 75.2%) (Figure 2).

Figure 1. Percent of Rhode Island Adults Age 18 or Older with Dental Insurance, 2018



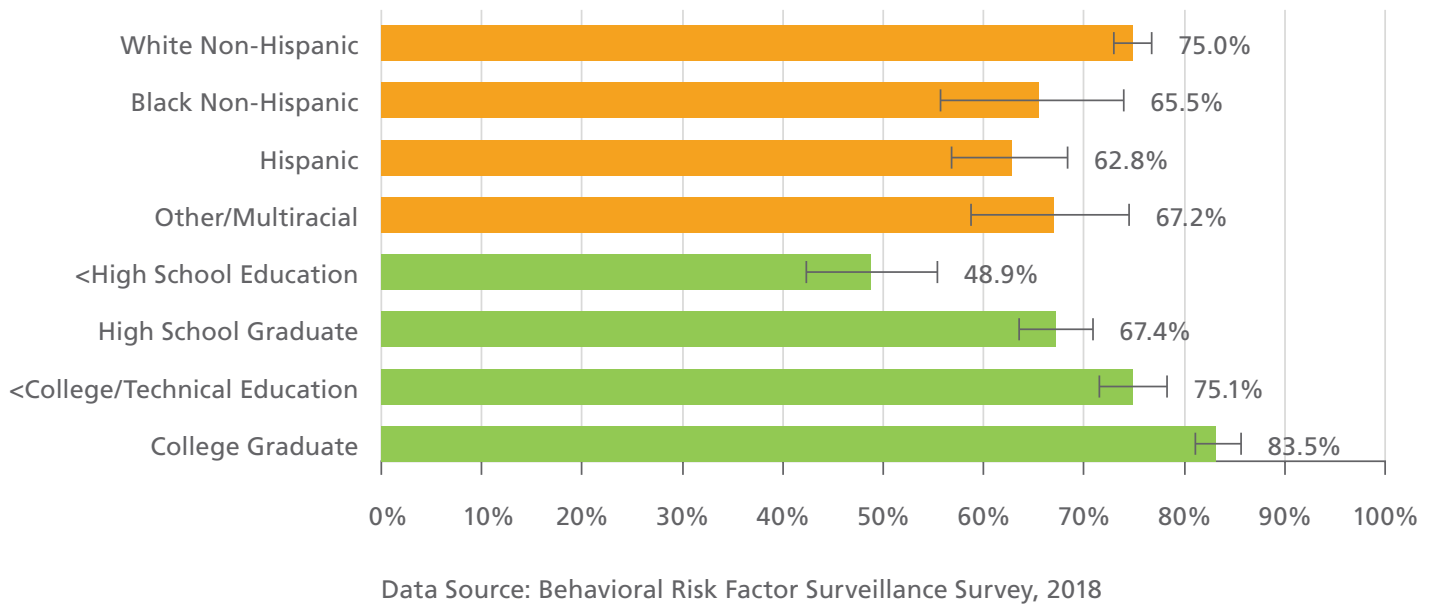
Data Source: Behavioral Risk Factor Surveillance Survey, 2018

Figure 2. Percent of Rhode Island Adults Who Visited a Dental Clinic or Dentist in the Past 12 Months, 2018



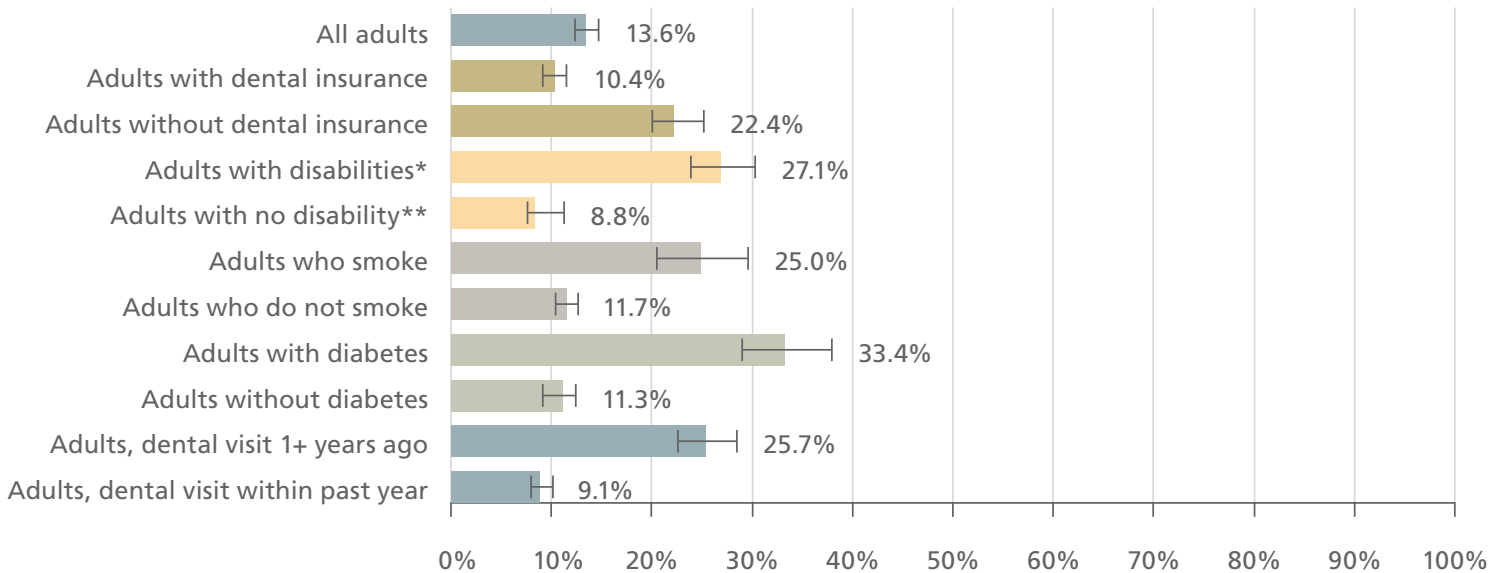
Disparities in use of dental services: Disparities based on race and ethnicity were noted. Hispanic and Black Non-Hispanic Rhode Islanders were less likely than Whites to report having seen a dentist in the past year (63% and 66% versus 75%, respectively). People with disabilities, people without dental insurance, people age 18-44, people with diabetes, and smokers were also significantly less likely to report having a dental visit, compared to the overall state average.

Figure 3. Percent of Rhode Island Adults Who Visited a Dental Clinic in the Past 12 Months, 2018



Disparities associated with tooth loss: Significant disparities are noted with tooth loss, with significantly higher rates of loss among those who smoke, those with disabilities, those without regular dental visits, and those without dental insurance. Prior studies demonstrated that smoking contributes to about half of periodontal (gum) disease prevalence rates², and gum disease elevates one’s risk of tooth loss. Adults who smoke and adults with diabetes (25% and 33.4% with severe tooth loss, respectively) are at higher risk of severe tooth loss (Figure 4).

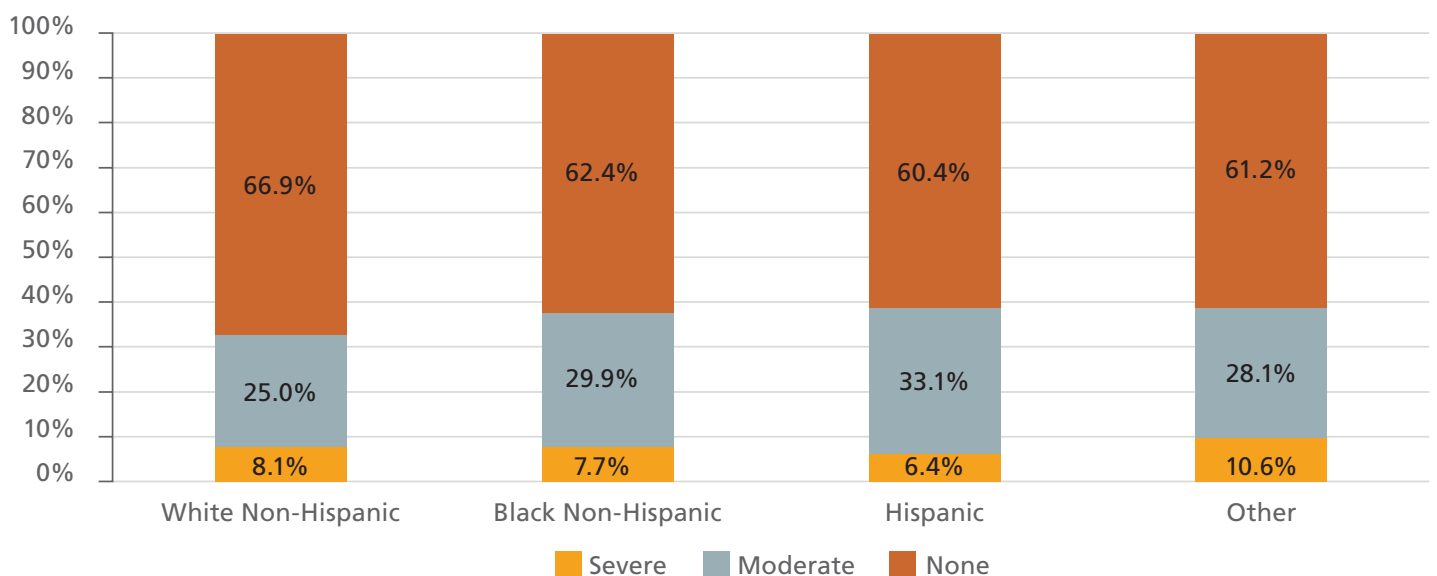
Figure 4. Percent of Rhode Island Adults with Severe Tooth Loss*, 2018



*Severe tooth loss in this report is defined as missing six or more teeth due to tooth decay or gum disease. **Disability is defined as impairment with vision, hearing, cognition, mobility, self-care, or independent living. Data Source: Behavioral Risk Factor Surveillance Survey, 2018.

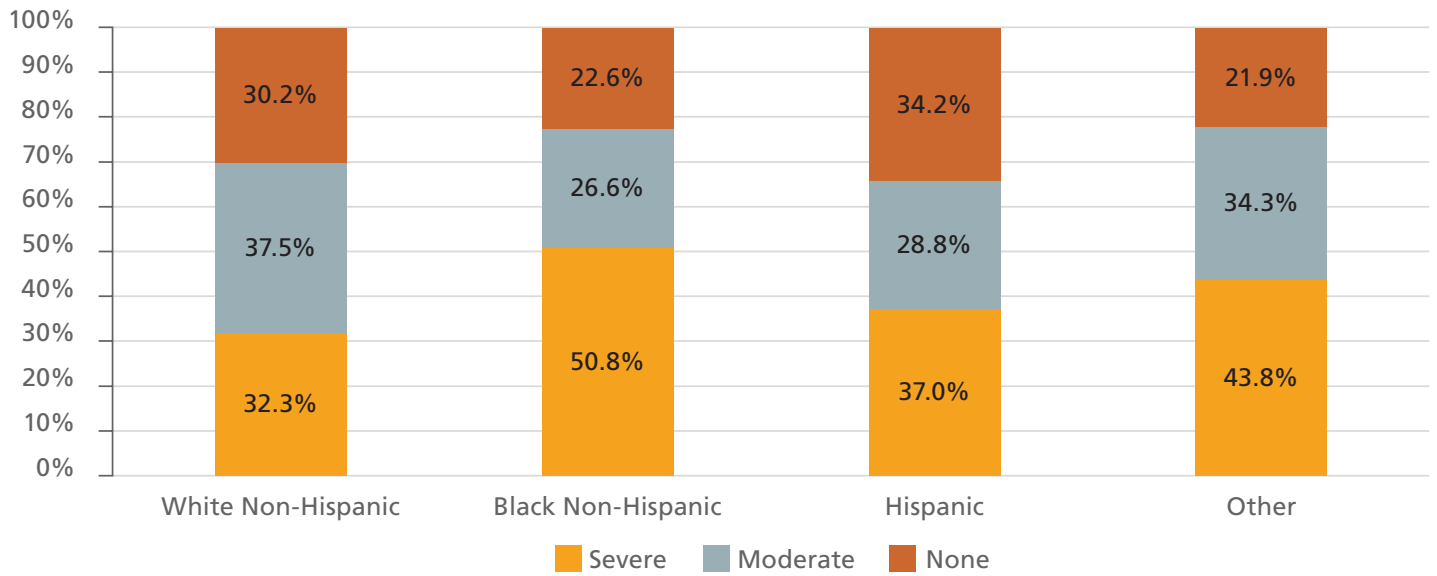
Tooth loss by race/ethnicity: Combined 2016 and 2018 BRFSS data, stratified by age, reveals disparities in rates and degree of tooth loss. Among adults age 18-64, Whites were more likely than Blacks and Hispanics to report no tooth loss (67% versus 62% and 60%, respectively). White, Black, and Hispanic populations reported similar rates of severe tooth loss (8%, 8%, and 6%, respectively), although Blacks, Hispanics, and people of “other” ethnicity had higher rates of moderate tooth loss (Figure 5). Among older adults age 65 or older, more than half of Blacks reported severe tooth loss, compared to just 32% among Whites and 37% among Hispanics (Figure 6).

Figure 5. Percent of Rhode Island Adults with Tooth Loss, by Race/Ethnicity, Age 18-64, 2016 and 2018 Data Combined



Data Source: Behavioral Risk Factor Surveillance Survey, 2016 and 2018 combined.

Figure 6. Percent of Rhode Island Adults with Tooth Loss, by Race/Ethnicity, Age 65 or Older, 2016 and 2018 Data Combined



Data Source: Behavioral Risk Factor Surveillance Survey, 2016 and 2018 combined.



Discussion

It is important to consider both the correlates and consequences of disparities in oral health. The causes are complex and can be connected to social, economic, and environmental factors that influence health. Oral health disparities can also contribute to widening disparities in overall well-being, as tooth decay and tooth loss are linked to how individuals are viewed in society, their overall health outcomes, and the opportunities they have at work and in the community.

Lower rates of dental services use are connected to dental insurance status, but also reflect the accessibility and availability of providers. Hispanic Rhode Islanders were least likely to report a dental visit in the past year. Potential reasons for this could be that there are fewer dentists in predominantly Hispanic neighborhoods or that there are lower numbers, overall, of Hispanic dental professionals. Critical jobs in healthcare, manufacturing, and the service industry, which historically have disproportionately relied on Hispanic Rhode Islanders, may not offer their employees dental insurance at all, or the dental plans they offer may be too costly or not comprehensive. In the meantime, part-time and self-employed workers are also more likely to not have dental insurance. Providing stronger recommendations for employers to offer dental insurance to part-time workers and mandating that dental insurance cannot be separated from medical insurance would improve access to care.

Our report has identified three populations with significantly lower rates of past-year dental visits: smokers, those with diabetes, and those with disabilities. These lower rates of utilization are of great concern because of well-documented higher rates of dental disease in these populations. Those who smoke have a greater risk for oral cancers. In addition to this increased risk, delaying or not visiting the dentist often leads to late detection and an increased risk of death from late-stage oral cancer. Those who smoke and those with diabetes have a greater risk of periodontal disease and severe tooth loss—outcomes which can be mitigated by improved oral hygiene and more frequent cleanings. Those with disabilities may have physical or cognitive limitations that impact their oral hygiene and contribute to greater risk of cavities, periodontal disease, and tooth loss. In general, all three of these vulnerable populations would benefit from more frequent dental visits for preventive services. Aligning dental and medical professionals in a system that promotes access to care for these three populations would likely have a measurable impact on disease outcomes.

Racial and ethnic disparities in tooth loss that exist, especially among those older than 65, tend to mirror inequities observed in other areas of healthcare and in society. Racial and socioeconomic determinants of health (education, income, built environment, housing) impact access to care and the types of care that are available. When a patient experiences a toothache, a patient or provider may decide to extract the tooth instead of undergoing the more optimal treatment of a root canal and crown, because an extraction is much less expensive. Of greater significance is that some patients may not have been able to obtain primary preventive measures, such as dental sealants or fluoride, or secondary preventive measures, such as a filling earlier in life. Access to these preventive measures is important because they help prevent a patient from developing more serious oral health concerns that can lead to a situation where cost is the primary factor in determining the course of treatment.

Where people live impacts health in many ways. Food and beverage choices are impacted by what is easily available. For example, when sugar-sweetened beverages are more accessible and less expensive than healthy fruit and vegetables, oral health and overall health suffer. Initiatives to promote healthy food choices, such as farmers markets and SNAP benefits, contribute to improved oral health.

Tobacco use also impacts oral health. Notably, increased stress may correlate to increased tobacco use, since people may use tobacco to manage stress. Providing resources for tobacco cessation, such as QuitWorks-RI,¹⁰ and suggesting healthier ways to manage stress benefits oral health.

The proportion of dentists in the state who are Black or Hispanic is significantly lower than that of the general population. Prior studies suggest that dental and medical patients alike feel more comfortable, encouraged, and understood when their care provider shares their racial or ethnic background. Having a more diverse community of providers can play a role in addressing disparities of care.^{11,12}

Limitations

Responses are self-reported and are subject to bias, with participants potentially providing more socially acceptable answers, resulting in lower estimates of tooth loss or higher estimates of recent dental visit. This brief can examine the association between recent dental care visit and tooth loss severity but cannot establish a causal relationship between the two. Respondents did not include those who are institutionalized or those unable to respond to phone questions in either English or Spanish.

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