



The Oral Health of Rhode Island's Children

2010-11 School Children's Oral Health Survey Summary

Rhode Island Oral Health Program, February 2012

Survey Overview

During the 2010-2011 school year, the Oral Health Program at the Rhode Island Department of Health conducted a statewide oral health survey of third grade children enrolled in Rhode Island's public elementary schools, collaborating with school district superintendents, principals, school nurses, teachers, and school dentists.

Screenings were completed at 79 randomly-selected elementary schools with 68 percent of enrolled third grade students in participating schools screened. **In total, about a third of Rhode Island's third grade children (3,266 of 10,709 children) were screened.** Data were adjusted to reflect the probability of sampling and response rate. Therefore, the outcome estimates describe the oral health status of the state's third grade children with high statistical power and accuracy.

Examiners measured the prevalence and severity of tooth decay by assessing treated decay, untreated decay, rampant decay (presence of more than six teeth with treated and/or untreated decay), and treatment urgency. They also looked for a dental sealant on at least one permanent molar tooth, an indicator of a child's access to preventive services.

This survey was the second statewide oral health survey of school children in Rhode Island and followed the 2007-08 school year survey. The 2010-11 survey used the same diagnostic criteria, screening indicators, type of consent, and sampling stratification as the previous survey. This allowed the Oral Health Program to evaluate changes in oral health status among school children over the past three years. In addition, the indicators are consistent with the Rhode Island School Health Rules and Regulations, as well as the National Oral Health Surveillance System standards, allowing for comparisons with other states and the nation.

Key Findings

- 1. Dental decay is a significant public health problem for Rhode Island's children.**
 - Half of third grade children have experienced decay (measured by the presence of treated and/or untreated decay).
- 2. Many children in Rhode Island do not get the dental care they need.**
 - One out of four children has untreated tooth decay and needs dental treatment. These children have not received optimal dental treatment in a timely manner.
- 3. Only 40 percent of children in Rhode Island have dental sealants, a well-accepted clinical intervention to prevent tooth decay on molar teeth.**
- 4. There are significant oral health disparities in Rhode Island by race/ethnicity and socioeconomic status.**
 - Minority children (reported as Black/African American, Hispanic, or other race/ethnicity) and children attending schools with more students eligible for the free and reduced price school meals (FRSM) program are more likely to experience dental decay and have untreated tooth decay than their counterparts in more affluent communities (Figures 1 and 2).
- 5. However, there is no noticeable difference in the receipt of dental sealants between children of different racial/ethnic groups or socioeconomic status.** The lack of a disparity in sealant prevalence among minority children or children from schools with higher FRSM eligibility suggests that the programs can reduce gaps in children's receipt of preventive oral health services (Figures 1 and 2).
- 6. Rhode Island did not meet the *Healthy People 2010* objectives for reducing the prevalence of decay experience and untreated tooth decay or increasing the prevalence of dental sealants among third grade school children. The state must make significant progress to meet the national benchmarks.**

7. Third graders surveyed during the 2010-11 school year have a significantly higher rate of treated tooth decay than those surveyed during the 2007-08 school year. The difference between the two survey years is attributed to the increased prevalence of treated decay among subgroups of children, particularly among racial/ethnic minority children. A higher caries experience rate associated with a greater number of children who completed restorative treatment implies an improved access to dental care, particularly among minority children and children living in lower-income communities. However, the uneven burden of dental decay in a subpopulation of children also indicates a missed opportunity for prevention.

Recommendations

- Continue collaborating with statewide early childhood healthcare and educational programs and schools to promote oral health education and disease prevention efforts starting in early childhood. Early prevention is the best strategy to reduce the burden of oral disease for Rhode Island children.
- Continue to promote the annual preventive dental visit and age-appropriate preventive dental services (topical fluoride and dental sealants) particularly among high-risk children, such as RIte Smiles and Medicaid-enrolled children.
- Continue to support school-based/school linked dental programs that provide or facilitate the delivery of dental sealants, with particular focus on high-risk children in underserved communities and schools with higher FRSM eligibility. Both in the 2007-08 and 2010-11 Children’s Oral Health Surveys, dental sealant prevalence rates suggest that the programs can reduce gaps in children’s receipt of preventive dental services.
- Continue collaboration between the Rhode Island Department of Health and the Rhode Island Department of Education to standardize and improve the mandatory annual school dental screening protocol and reporting process to make the data available for oral health surveillance. Rhode Island Rules and Regulations for School Health Programs require that every student receive an annual dental screening by a licensed dentist or dental hygienist through the fifth grade and at least one screening between the sixth and tenth grades.

Figure 1. Oral Health Status of RI Third Grade Children by Children’s Race/Ethnicity, 2010-11

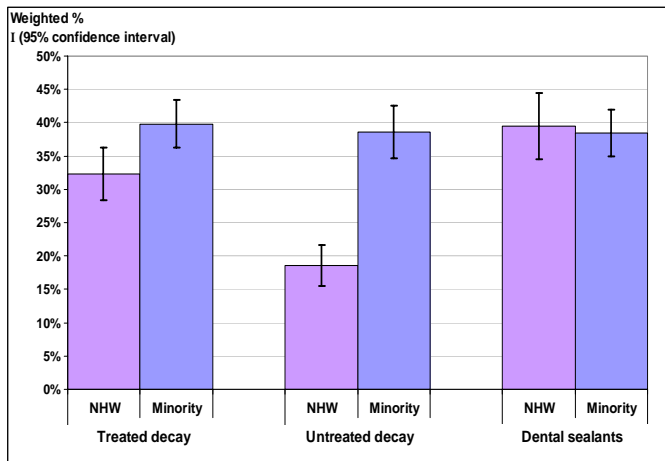


Figure 2. Oral Health Status of RI Third Grade Children by School FRSM %, 2010-11

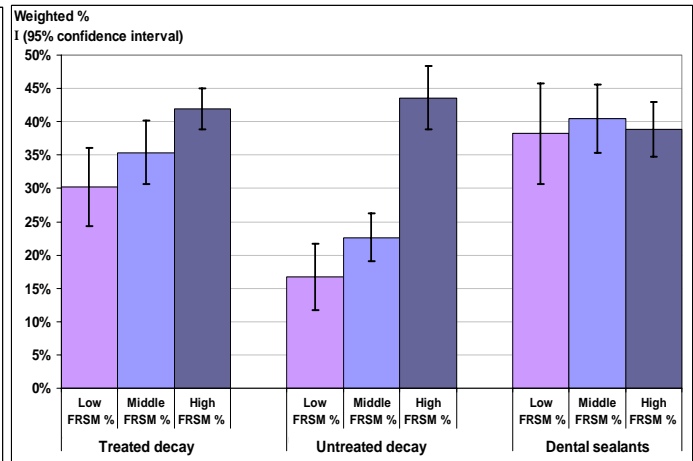


Figure notes: NHW=Non-Hispanic White; FRSM %=Percentage of students eligible for free and reduced price school meals. Schools are grouped based on the FRSM % [“Low FRSM % School” (<33.3%), “Middle FRSM % School” (33.3%-66.6%), and “High FRSM % School” (≥66.7%)].

95% confidence intervals (CI) are marked using the vertical error bars (I). Since percentages from survey data are population estimates, the 95% CI indicates the range of values within which the “true” value lies 95% of the time. When two groups have 95% CI that overlap, it indicates that the “true” values are likely to be similar in both groups. If the 95% CI do not overlap, it indicates that there is a statistically significant difference between the two groups.