The Oral Health of Rhode Island's Children

Rhode Island Oral Health Program

February 2012

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Summary

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. 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. Resulting estimates describe the oral health status of the state's third grade children with high statistical power and accuracy.

Key Findings

- **Dental decay is a significant public health problem for Rhode Island's children.**
    - Half of third grade children have experienced decay (treated and/or untreated).

- **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.

- **Only 40 percent of children in Rhode Island have dental sealants, a well-accepted, evidence-based clinical intervention to prevent tooth decay on permanent molar teeth.**

- 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.

- **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) or children in schools with more students eligible for the free and reduced price school meals (FRSM) program are more than two times more likely than their peers to have untreated tooth decay. These children have not received optimal dental treatment in a timely manner.
    - Minority children and children attending schools in with higher FRSM eligibility are more likely to experience dental decay than their counterparts in more affluent communities. Rampant decay, defined as more than six teeth with decay experience, is at least five to six times more prevalent among this subgroup of Rhode Island children.

- **However, there is no noticeable difference in the receipt of dental sealants between children of different racial/ethnic groups or socioeconomic status.**
    - The Rhode Island Department of Health has supported school-based/school linked dental programs that provide or facilitate the delivery of sealants, with particular focus on serving high-risk children in underserved communities. 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.

Introduction

Tooth decay is an infectious disease process affecting both children and adults. Tooth decay is the most common chronic disease of childhood, five times more common than asthma, and is likely the most widespread known disease.[1] Although preventable, tooth decay affects more than half of all children by the third grade, and by the time children finish high school almost 80% have decay.[2] Many people do not consider tooth decay a serious problem, yet if ignored, the pain and disability it causes may limit children's ability to focus and perform in the classroom. This can lead them to miss school days and fall behind their peers.

While tooth decay's prevalence and severity have declined in recent years among US school-aged children, it remains a significant problem–particularly for certain racial and ethnic groups and low-income children.[1,2] ***The Oral Health of Rhode Island's Children, 2008*** documented disparities in the prevalence of tooth decay among these children.[3] To continue its surveillance efforts, the Rhode Island Oral Health Program conducted a statewide survey of third grade school children once again during the 2010-2011 school year. The Program will use these data to facilitate collaborative efforts of decision makers and stakeholders to improve oral health and reduce disparities among Rhode Island children.

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[1] U.S. Department of Health and Human Services. *Oral Health in America: A Report of the Surgeon General*. Rockville, MD: U.S. Department of Health and Human Services, National Institutes of Health, National Institute of Dental and Craniofacial Research, 2000.

[2] Dye BA, Tan S, Smith V, Lewis BG, Barker LK, Thornton-Evans G, et al. Trends in oral health status: United States, 1988–1994 and 1999–2004. National Center for Health Statistics. Vital Health Stat 11(248). 2007.

[3] Rhode Island Department of Health. The Oral Health of Rhode Island's Children. April 2008.

Methods

School Sampling

A representative sample of schools was selected from all Rhode Island public elementary schools with third grade classrooms. The data file of eligible schools, obtained from the Rhode Island Department of Elementary and Secondary Education, contained the following information for each school and district: enrollment numbers of third graders and all elementary school children, enrollment by gender and race/ethnicity, and percent of children eligible for the free or reduced priced school meal (FRSM) program.

The sampling frame was based on the concept of stratified random sampling of two-stage clusters. Schools were first stratified by urban/non-urban area and then by FRSM eligibility status of enrolled children. Designation of "urban" areas was based on state standard criteria: Central Falls, Newport, Pawtucket, Providence, West Warwick, and Woonsocket are designated as urban core cities where more than 15% of children live in families with incomes below the federal poverty level. The remaining 33 cities and towns are designated as "non-urban". Schools were grouped into three categories based on the percentage of students eligible for the FRSM program: "Low FRSM % School" (<33.3%), "Middle FRSM % School" (33.3%-66.6%), and "High FRSM % School" (≥66.7%).

As summarized in Table 1, urban areas have more children who are racially/ethnically diverse and who are eligible for the FRSM program. To obtain a sufficient number of racial/ethnic minority children and children living in lower-income families, schools were disproportionately oversampled from urban areas. If a school was closed or refused to participate, a replacement school within the same sampling stratum was randomly selected. Closed and refusing schools were taken into account in the calculation of selection probability and sampling weight.

Table 1. Rhode Island Third Grade Children's Race/Ethnicity and Free or Reduced Priced School Meal (FRSM) Program Eligibility by Geographic Area

		Urban*		Non-Urban	
		Number	Percent (%)	Number	Percent (%)
Race/Ethnicity	White	972	26.2	5,881	84.0
	Hispanic	1,801	48.6	561	8.0
	Black	573	15.5	207	3.0
	Other	358	9.7	356	5.1
FRSM Eligibility		2,992	80.8	2,055	29.3
Total Third Grade Children		3,704	34.6	7,005	65.4

Data Source: Rhode Island Department of Education, School and District Statistics 2010-11 School Year (Available at www.ride.ri.gov/applications/statistics.aspx)

* The urban core cities of Central Falls, Newport, Pawtucket, Providence, West Warwick, and Woonsocket as defined by the population statistics of more than 15% of the children living in families with incomes below the federal poverty level.

Data Management and Analysis

Screening data were entered into a customized Microsoft Access database which included edit checks for logic and data entry errors. Analysis was completed using the survey analysis procedures in SAS 9.2. The following sample design information was used for all procedures: strata (urban/non-urban and FRSM program eligibility), primary sampling unit (school), and weight variable. Outcome data presented in this report have been weighted (adjusted) for the sampling probability and response rate.

Outcome prevalence data is presented with 95% confidence intervals (CI). These are marked in figures using 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. In the other words, if the same exact survey was conducted 100 times for the same target population, the 95% CI represents the range of values that 95 of the surveys would produce. The narrower a CI is, the closer estimation one would expect to get to that observed in the population. Generally wider CI are due to small numbers of people in a sample.

Screening Methods

The *2010-2011 Third Grade Oral Health Screening Form* was adapted from the *Basic Screening Survey* developed by the Association of State and Territorial Dental Directors (Appendix C).[4] The primary purpose of the Basic Screening Survey is to provide a framework for obtaining oral health data that is inexpensive and easy to implement, yet always consistent. By collecting data in a consistent manner, communities and states can compare their data over time and with data collected by other organizations. Surveys are cross sectional (looking at a population at a point in time), and descriptive (intended to determine estimates of oral health status for a defined population).

An oral health screening is not a thorough clinical examination and does not involve making a clinical diagnosis resulting in a treatment plan. A screening is intended to identify gross dental or oral lesions and is conducted by dentists, dental hygienists, or other appropriate healthcare workers, in accordance with an applicable state law. A total of 18 school dentists and 1 Oral Health Program public health dentist completed the 2010-2011 school year screenings using gloves, a light source, and disposable mouth mirrors. To ensure consistency, the examiners reviewed the diagnostic criteria outlined in *Basic Screening Surveys: An Approach to Monitoring Community Oral Health* before the screenings.

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[4] Association of State and Territorial Dental Directors Association (ASTDD). Basic Screening Surveys: An Approach to Monitoring Community Oral Health. December 2008

To measure prevalence and severity of tooth decay among children, examiners assessed treated decay (presence of fillings or crowns), untreated (unrestored) 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. These 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 with the nation.

Screenings were conducted anonymously; no identifying information, such as name or date of birth, was obtained. The child provided his or her age while the screener or class rosters determined gender and race/ethnicity (Non-Hispanic White, Hispanic, Black/African American, or other). If the screeners could not easily determine the race/ethnicity of the child, they were asked to code the race/ethnicity of the child as "unknown."

A passive consent process was used; all third grade children in the participating schools were screened unless the parent/guardian returned a form requesting the child not participate.

Results

Screening Participation

SAS Proc SURVEYSELECT generated the sampling pool of 107 public elementary schools with 5,913 enrolled third graders. Only 3 of the 107 contacted schools declined to participate. An additional 16 schools could not participate due to scheduling difficulties and other administrative reasons. Nine schools closed before the beginning of the 2010-2011 school year.

A total of 3,266 third grade children from 79 schools were screened from September 2010 to May 2011. The overall screening rate per participating school was 67.8% (3,266 children out of 4,822 enrolled third graders), varying from 63.2% to 81.3% by stratification (Table 2). Outcome data in this report have been adjusted for these response rates by sampling scheme.

Table 2. Children's Screening Participation by Sampling Stratification

Geographic Area	FRSM %	Number of Third Graders in Participating Schools*	Number of Children Screened (Response Rate)
Non-Urban	**Low FRSM % (<33.3%)**	**1,541**	**974 (63.2%)**
Urban/Non-Urban	**Middle FRSM % (33.3%-66.6%)**	**1,382**	**989 (81.3%)**
Urban	**High FRSM % (≥66.7%)**	**1,899**	**1,303 (68.9%)**
Total		**4,822**	**3,266 (67.8%)**

* Data Source: Rhode Island Department of Education, School and District Statistics 2010–11 School Year (Available at www.ride.ri.gov/applications/statistics.aspx)

Demographic Characteristics of Children

Table 3 compares the distribution of screened children with all Rhode Island third grade children by gender, age, and race/ethnicity. As in the general population, slightly more than one half of screened children were male. The children screened ranged in age from 7–10 years with the majority (97%) aged 8–9 years. The estimated distribution of children by race/ethnicity was close to that of population.

Overall, about a third (30%) of Rhode Island third grade children were screened in the survey. The estimates describe the oral health status of the state's third grade children with high statistical power and accuracy.

Table 3. All Rhode Island Third Grade Children vs. Screened Children by Gender, Age, and Race/Ethnicity

		All RI Third Grade Children		Screened Third Grade Children	
		Number	Percent (%)	Weighted Number	Weighted % (95% CI)
Gender	Male	5,641	52.7	5,396	51.6 (49.4–53.8)
	Female	5,068	47.3	5,060	48.4 (46.2–50.6)
Age (years)	7	N/A		29	0.3 (0.0–0.8)
	8	N/A		5,790	55.4 (51.8–58.9)
	9	N/A		4,364	41.7 (38.5–45.0)
	10	N/A		273	2.6 (1.9–3.3)
Race/Ethnicity	White	6,853	64.0	6,456	61.7 (56.9–66.6)
	Hispanic	2,362	22.1	2,210	21.1 (17.4–24.9)
	Black	780	7.3	890	8.5 (6.4–10.6)
	Other	714	6.7	377	3.6 (2.4–4.9)
	Unknown	–	–	522	5.0 (2.3–7.7)
Total		10,709		10,456	

N/A: data is not available

Oral Health Outcomes

Tooth Decay

Children who have experienced tooth decay may have treated decay, untreated (unrestored) decay, or both. Treated decay is measured by the presence or fillings or crowns in the mouth. Half of screened third grade children had decay experience in their primary and/or permanent teeth, and one child in four (26.3%) had untreated decay. The screening results likely underestimate the percent of children with untreated decay, because examiners did not take radiographs (x-rays) or use dental instruments for tactile assessment.

Among Rhode Island's third grade children, decay is largely limited to the primary teeth. Thirty-five percent of third grade children have experienced decay in their primary teeth only, while 15 percent have had decay in their permanent teeth (Table 4).

Children who have experienced decay on more than six teeth are considered to have rampant decay. Five percent of the third grade children in Rhode Island have rampant decay. About three percent of children need urgent dental treatment because of signs of infection and/or pain associated with decay (Table 4).

Dental Sealants

Thirty-nine percent of third grade children have a dental sealant on at least one permanent molar (Table 4). Dental sealants provide an effective way to prevent decay on the chewing surfaces of molars (back teeth), which are the most vulnerable to decay. It is recommended that children

receive dental sealant treatments as soon as their teeth are fully erupted. This keeps cavity-causing bacteria from reaching difficult-to-clean areas and helps topical fluoride to penetrate and protect the teeth.

Table 4. Oral Health Status of Rhode Island Third Grade Children, 2010-11

	Weighted % (95% CI)
Treated decay	**35.2 (32.3–38.2)**
Untreated decay	**26.3(23.2–29.3)**
Decay experience*	**50.0 (46.4–53.5)**
Primary teeth only	**35.0 (31.8–38.2)**
Permanent teeth only	**3.9 (3.0–4.9)**
Primary and permanent teeth	**11.0 (9.2–12.8)**
Rampant decay†	**5.0 (3.7–6.2)**
Urgent treatment need¶	**2.6 (1.7–3.5)**
Dental sealants	**39.1 (35.5–42.7)**

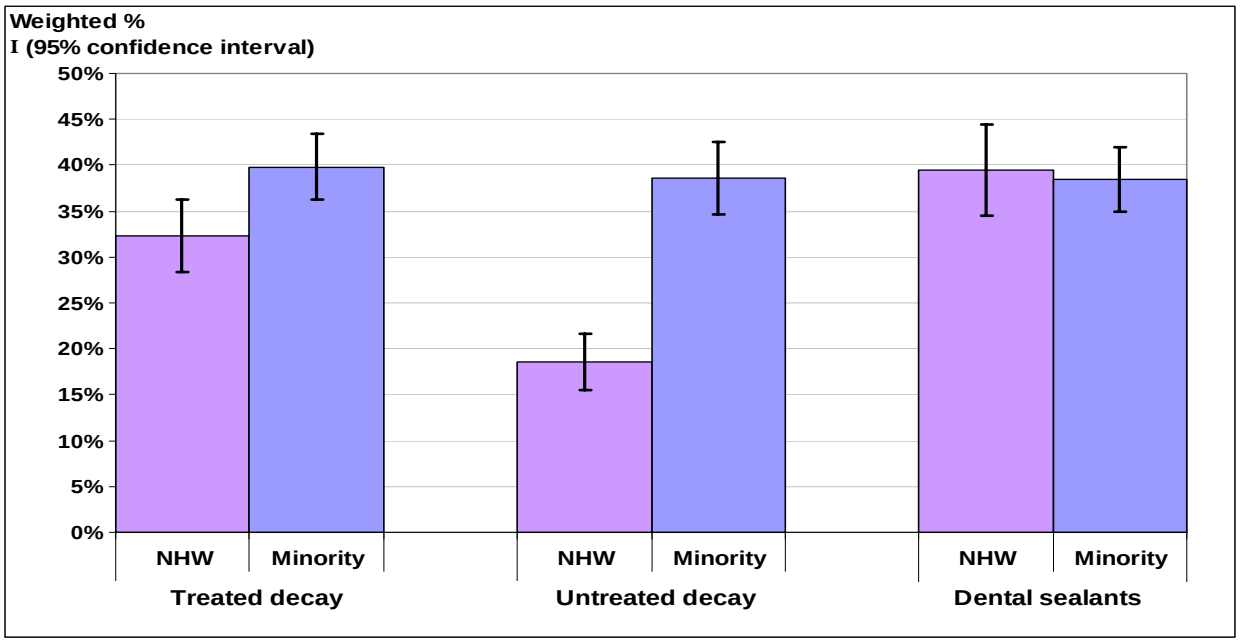
* Measured by treated decay (presence of fillings/crowns) and/or untreated (unrestored) decay
† More than six teeth with decay experience
¶ Urgent or immediate referral recommended due to signs of infection and/or pain associated with decay

Impact of Race and Ethnicity

Figure 1 and Table 5 describe the oral health status of Rhode Island third graders by race and ethnicity. Compared to non-Hispanic White (NHW) children, racial/ethnic minority children (Hispanic, Black/African American, "other" and "unknown" race/ethnicity combined into one category), are more likely to have treated decay, untreated decay, decay experience (defined as treated and/or untreated decay), rampant decay, and urgent dental treatment needs. The prevalence of untreated decay is twice as high among minority children.

There is no statistically significant difference in the percentage of children who have at least one sealant on permanent molar teeth between NHW and other children.

Figure 1. Oral Health Status of Rhode Island Third Grade Children by Race/Ethnicity, 2010-11



NHW=Non-Hispanic White children

Table 5. Oral Health Status of Rhode Island Third Grade Children by Race/Ethnicity, 2010-11

	Non-Hispanic White (NHW)	Racial/Ethnic Minority*
	Weighted % (95% CI)	Weighted % (95% CI)
Treated decay†	**32.3 (28.4–36.3)**	**39.8 (36.2–43.4)**
Untreated decay†	**18.6 (15.6–21.8)**	**38.6 (34.6–42.6)**
Decay experience†	**43.1 (38.1–48.2)**	**61.0 (58.0–64.0)**
Rampant decay†	**2.4 (1.1–3.8)**	**9.1 (7.1–11.1)**
Urgent treatment need†	**1.3 (0.6–2.0)**	**4.6 (2.9–6.3)**
Dental sealants	**39.5 (34.6–44.5)**	**38.4 (34.9–41.9)**

* Black/African American, Hispanic, "other" and "unknown" race/ethnicity combined
† Indicates statistical significance between groups at the p-value = 0.05 level

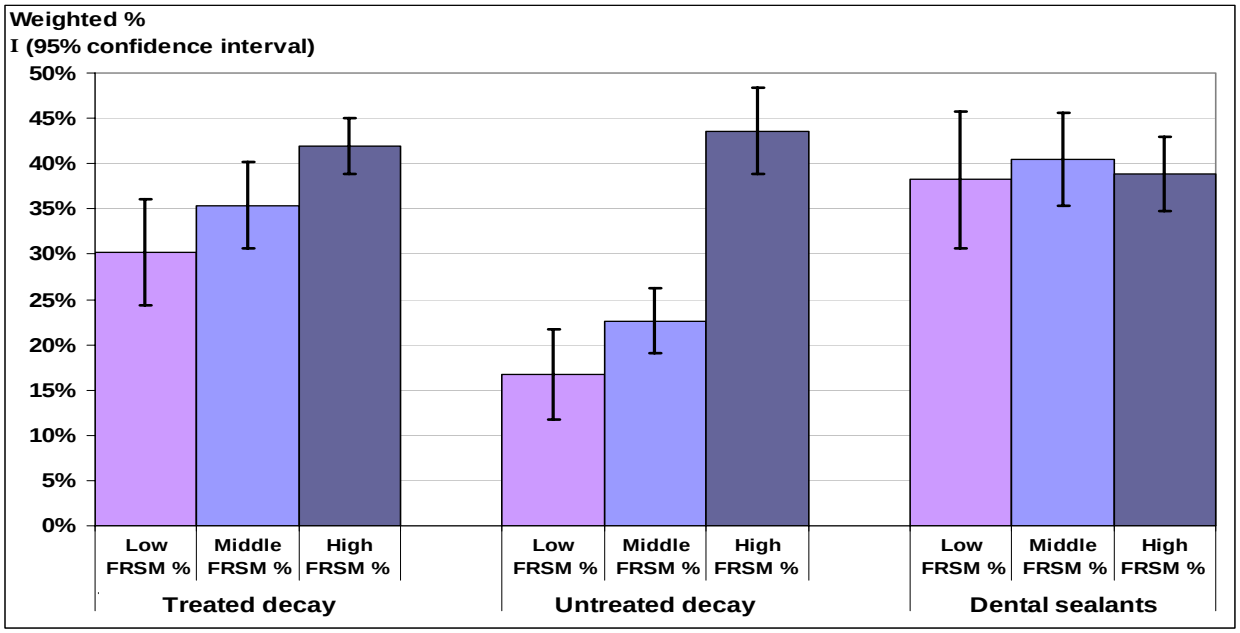
Impact of Socioeconomic Status

Rhode Island uses the percentage of a school's children eligible for free and reduced price school meals (FRSM) as a proxy indicator of a school's concentration of low-income students. The FRSM program eligibility is determined by federal guidelines based on family income and size. Children from families with incomes at or below 130% of the poverty level are eligible for free meals, and children from families with incomes between 130% and 185% of the poverty level are eligible for reduced price meals. About half of all third grade children in Rhode Island public schools are eligible for free or reduced price meals. Child-level data on FRSM participation was not available; however, the Rhode Island Department of Elementary and Secondary Education provided the total number and percent of FRSM-eligible children in each school.

Figure 2 and Table 6 present the oral health of third grade children by school's FRSM program participation. Rhode Island children who attend schools with a higher proportion of FRSM-eligible students have more treated decay, untreated decay, decay experience, rampant decay, and urgent treatment need. There is no statistically significant difference in children's receipt of at least one sealant by a school's FRSM eligibility.

The Rhode Island Department of Health has supported school-based/school linked dental programs that provide or facilitate the delivery of sealants, with particular focus on serving high-risk children in underserved communities and schools with higher FRSM eligibility. The survey sealant outcomes suggest that the Rhode Island school-based/school linked dental programs can reduce gaps in children's receipt of preventive dental services.

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



Schools are grouped into three categories based on the percentage of students eligible for the FRSM program: "Low FRSM % School" (<33.3%), "Middle FRSM % School" (33.3%-66.6%), and "High FRSM % School" (≥66.7%).

Table 6. Oral Health Status of Rhode Island Third Grade Children by School FRSM %, 2010-11

	Low FRSM %	Middle FRSM %	High FRSM %
	Weighted % (95% CI)	Weighted % (95% CI)	Weighted % (95% CI)
Treated decay†	**30.2 (24.3–36.0)**	**35.4 (30.6–40.2)**	**41.9 (38.8–45.1)**
Untreated decay†	**16.7 (11.6–21.7)**	**22.6 (18.9–26.2)**	**43.6 (38.7–48.4)**
Decay experience†	**41.2 (33.9–48.5)**	**47.3 (42.7–52.0)**	**64.9 (61.4–68.4)**
Rampant decay†	**1.3 (0.0–3.1)**	**3.0 (1.6–4.3)**	**12.3 (10.0–14.6)**
Urgent treatment need†	**2.1 (0.6–3.7)**	**1.5 (0.5–2.5)**	**4.5 (2.7–6.2)**
Dental sealants	**38.2 (30.6–45.7)**	**40.5 (35.4–45.5)**	**38.8 (34.7–43.0)**

† Indicates statistical significance between groups at the p-value = 0.05 level

Comparison to *Healthy People 2010* Objectives

Healthy People 2010 outlines several oral health status objectives for young children. For children age six through eight, there are three primary objectives:

1. To decrease the proportion of children with untreated dental decay in permanent or primary teeth to 21 percent.
2. To decrease the proportion of children who have experienced dental decay in permanent or primary teeth to 42 percent.
3. To increase the proportion of eight-year-olds receiving protective sealants on the occlusal surfaces of permanent molar teeth to 50 percent.

Note that the Rhode Island oral health survey was not designed to be representative of children age six through eight; the majority of screened children were eight through nine years of age.

Fifty percent of Rhode Island third graders have experienced dental decay; this is a higher percentage than the *Healthy People 2010* objective of 42 percent. Twenty-six percent of Rhode Island third graders have untreated tooth decay compared to the *Healthy People 2010* objective of 21 percent. While Rhode Island is close to meeting these two objectives, only 39 percent of the state's third graders have dental sealants. The state must make significant progress on this objective to meet national benchmarks.

Comparison to 2007-2008 Survey

Rhode Island conducted its first statewide third grade oral health survey during the 2007-2008 school year. The same diagnostic criteria, screening indicators, and type of consent were used in the current survey. Sampling stratification also was identical, but the 2010-11 survey included disproportionately more children from urban areas as described in the methodology section. The 2007-08 survey design used a proportionate sampling strategy for urban and non-urban areas.

Tooth Decay

Third graders surveyed in the 2010-11 school year had a significantly higher rate of treated tooth decay than those surveyed in the 2007-08 school year (35% versus 28%, respectively, Table 7). 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 (Table 9).[5] In accordance with this finding, a significantly higher proportion of minority children had rampant decay during the 2010-11 school year compared to those surveyed during the 2007-08 school year (Table 9). A higher decay 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 suggests a missed opportunity for prevention.

Urgent dental treatment needs decreased significantly among non-Hispanic White children from 2007-08 (4%) to 2010-11 (1%) (Table 8). Meanwhile, the percentage of racial/ethnic minority children who needed urgent dental care due to signs and symptoms of infection remained unchanged over the past three years (4% in 2007-08, and 5% in 2010-11, Table 9). This suggests a persistent gap both in access to oral health services and in dental disease severity among Rhode Island children.

Dental Sealants

No statistically significant change in dental sealant prevalence occurred among Rhode Island children between the 2007-08 and 2010-11 school years (36% versus 39%, respectively, Table 7). Some increases in receipt of dental sealants among racial/ethnic minority children occurred over the past three years. However, the difference is not statistically significant (Table 9).

[5] Comparison among children by school's FRSM % status was not possible because the sample size for each FRSM % category was not large enough in the 2007-08 survey.

Table 7. Oral Health Status of Rhode Island Third Grade Children, 2007-08 and 2010-11

	2007-08* (n = 1,303) Weighted % (95% CI)	2010-11 (n = 3,266) Weighted % (95% CI)
Treated decay†	**28.4 (24.4–32.4)**	**35.2 (32.3–38.2)**
Untreated decay	**28.2 (22.5–33.9)**	**26.3 (23.2–29.3)**
Decay experience	**47.6 (42.5–52.8)**	**50.0 (46.4–53.5)**
Rampant decay	**3.3 (1.7–4.9)**	**5.0 (3.7–6.2)**
Urgent treatment need	**4.1 (2.3–5.9)**	**2.6 (1.7–3.5)**
Dental sealants	**36.3 (27.7–44.9)**	**39.1 (35.5–42.7)**

* 2007-08 Data Source: The Oral Health of Rhode Island's Children. Rhode Island Department of Health, April 2008.
† Indicates statistical significance between groups at the p-value = 0.05 level

Table 8. Oral Health Status of Rhode Island Third Grade Children, 2007-08 and 2010-11 Non-Hispanic White (NHW) Children ONLY

	2007-08* (n = 746) Weighted % (95% CI)	2010-11 (n = 1,645) Weighted % (95% CI)
Treated decay	**27.6 (23.0–32.2)**	**32.3 (28.4–36.3)**
Untreated decay	**25.6 (19.0–32.1)**	**18.6 (15.4–21.8)**
Decay experience	**45.6 (39.8–51.3)**	**43.1 (38.1–48.2)**
Rampant decay	**2.8 (0.8–4.8)**	**2.4 (1.1–3.8)**
Urgent treatment need†	**4.0 (1.7–6.4)**	**1.3 (0.6–2.0)**
Dental sealants	**39.0 (29.4–48.6)**	**39.5 (34.6–44.5)**

* 2007-08 Data Source: The Oral Health of Rhode Island's Children. Rhode Island Department of Health, April 2008.
† Indicates statistical significance between groups at the p-value = 0.05 level

Table 9. Oral Health Status of Rhode Island Third Grade Children, 2007-08 and 2010-11 Racial/Ethnic Minority Children ONLY

	2007-08* (n = 557) Weighted % (95% CI)	2010-11 (n = 1,621) Weighted % (95% CI)
Treated decay†	**29.8 (23.9–35.7)**	**39.8 (36.2–43.4)**
Untreated decay	**32.6 (24.1–41.1)**	**38.6 (34.6–42.6)**
Decay experience†	**51.1 (43.5–58.6)**	**61.0 (58.0–64.0)**
Rampant decay†	**4.1 (1.8–6.3)**	**9.1 (7.1–11.1)**
Urgent treatment need	**4.2 (2.4–6.0)**	**4.6 (2.9–6.3)**
Dental sealants	**31.8 (20.0–43.5)**	**38.4 (34.9–41.9)**

* 2007-08 Data Source: The Oral Health of Rhode Island's Children. Rhode Island Department of Health, April 2008.
† Indicates statistical significance between groups at the p-value = 0.05 level

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.

Appendices

A. Acknowledgements

We would like to thank our partners: school district superintendents, school principals, classroom teachers, school nurse teachers, school dentists, and parents/guardians for assisting us in completing this survey. We also would like to thank Yongwen Jiang, PhD, for her advice and help in the sampling process.

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B. Resources

The Third Grade Oral Health Screening Form and English and Spanish versions of the dental health screening parent consent form appear on the following pages.

RI Dental Screening (Third Graders) 2010-2011 School Year

(a) SCHOOL (CODE):	(b) CITY/TOWN:	(c) ZIP:
(d) SCREENER:	(e) DATE:	(f) CLASSROOM:

Student Demographics

(g) AGE	(h) GENDER	(i) RACE
— —	☐ Male (1) ☐ Female (2)	☐ Non-Hispanic, White (1) ☐ Non-Hispanic, Black / African American (2) ☐ Hispanic (3) ☐ Other

Screening Findings

1. TREATED CARIES	2. UNTREATED CARIES	3. RAMPANT CARIES (7 or more teeth with treated and/or untreated caries)	4. SEALANT(S) on PERMANENT MOLARS
☐ No (0) ☐ Yes (1) ☐ Primary Teeth (2) ☐ Permanent Teeth (3)	☐ No (0) ☐ Yes (1) ☐ Primary Teeth (2) ☐ Permanent Teeth (3)	☐ No (0) ☐ Yes (1)	☐ No (0) ☐ Yes (1)

5. ABNORMAL SOFT TISSUE	6. TREATMENT URGENCY
☐ No (0) ☐ Yes (1) Gross gingival inflammation or oft tissue lesions (fistulas, abscesses, etc.)	☐ No Apparent Need for Care (0) ☐ Apparent Need for Routine, Non-Urgent Care / Referral Recommended (1) ☐ Apparent Emergency Need / **Immediate** Referral Recommended (2)

7. COMMENTS

For Rhode Island Department of Health **Rev. 9-10**

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RI Dental Screening (Third Graders) 2010-2011 School Year

Student Name:	**Screening Date**:

	Yes	No
Suspected Tooth Decay		
Dental Abscess / Infection		
Swollen Gums / Needs Cleaning		
Needs Better Brushing & Flossing		
Needs Dental Sealant		

Treatment Urgency

- ☐ No Apparent Need for Care
- ☐ Apparent Need for Routine, Non-Urgent Care Referral Recommended
- ☐ Apparent Emergency Need **Immediate** Referral Recommended

For Rhode Island Student Health Record **Rev. 09-10**

Dental Health Screening
Rhode Island Third Grade Students

October 2010

Good oral health is important to your child's ability to learn and do well in school. Dental screenings are scheduled in your child's school every year as required by Rhode Island state law. A licensed dentist will check your child's teeth using a disposable mouth mirror and disposable gloves for each child.

Results of the dental health screening will be sent to the Oral Health Program at the Rhode Island Department of Health (HEALTH). The results will help the oral health program staff provide programs to RI children so that they have healthier teeth and gums. We do not use the children's names in reports and will not send this information to others outside of HEALTH.

All third graders are encouraged to participate in the dental health screening. If your child has been checked by a dentist in the past year and you do not want your child to participate in the dental screening at this time please return this form to your child's teacher. *The form does not need to be returned if your child is getting a free screening.*

A healthy mouth and body make a child happier and ready to learn new things in school. Please call the School Nurse at your child's school if you have any questions. Thank you for your cooperation.

Children who participate will receive a **FREE** toothbrush and other dental health prizes.

***This form will only be required if your child is not being screened.**
Please return this slip to your child's teacher tomorrow.

I ***DO NOT*** want my child to participate in the Dental Health Screening at this time.

Student's Name:_____Room/Teacher:_____

Parent's Signature:_____

For more information please contact Deborah Fuller, DMD, 401-222-7730, email; Deborah.Fuller@health.ri.gov or call the HEALTH Information Line, 401-222-5960 / RI Relay 711

Salud Dental en Rhode Island
para Estudiantes de Tercer Grado

Octubre 2010

La salud dental es importante para que sus niños tengan la habilidad de aprender y tener éxito en la escuela. Las pruebas dentales, están programadas cada año en la escuela de su niño como es requerido por la ley estatal de Rhode Island. Un dentista con licencia, examinará los dientes de su niño y usará guantes y un espejo para la boca desechable con cada niño.

Los resultados de la prueba dental serán enviados al Programa de Salud Oral del Departamento de Salud de Rhode Island. Estos resultados, ayudarán al grupo de salud oral a desarrollar programas para que los niños tengan dientes y encías saludables. Nosotros no usaremos el nombre de su niño en reportes y no enviaremos ésta información a otros lugares fuera del Departamento de Salud.

Todos los niños en tercer grado, están invitados a participar en la prueba de salud dental. Si su niño fue examinado por un Dentista el año pasado y usted no quiere que su niño participe en la prueba dental ahora, por favor devuelva este formulario al maestro de su niño. Este formulario no necesita ser devuelto si su niño va a participar en la prueba dental gratuita.

Una boca y cuerpo saludable hacen a un niño feliz y listo para aprender cosas nuevas en la escuela. Por favor, llame a la enfermera de la escuela de su niño si tiene alguna pregunta. Agradecemos su cooperación.

Los niños que participen recibirán un cepillo de dientes gratis y otros obsequios para la salud oral.

Este formulario sólo será requerido si su niño no va a participar en la prueba de salud oral.
Por favor, devuelva este desprendible al maestro de su niño mañana.

En éste momento **NO QUIERO** que mi niño participe en la prueba dental.

Nombre del Estudiante:_____**Salón de clase/Maestro:**_____
Firma del Madre/Padre:_____

Para obtener más información, por favor comuníquese con la Línea de Información del Departamento de Salud de RI 401-222-5960/ RI Relay 711