

PRE-KINDERGARTEN ORAL HEALTH DATA BRIEF

2018-2019 North Carolina Oral Health Section Pre-Kindergarten Basic Screening Survey

Background

The Centers for Disease Control and Prevention state that tooth decay is the most common chronic condition of childhood. Poor oral health can have a detrimental effect on children's quality of life, their performance at school, and their success later in life.¹ The 2018-2019 Pre-Kindergarten Basic Screening Survey offers oral health data as children begin to close their early childhood stage and as they enter early into the public education system.

Methods

Using the Child Basic Screening Survey (BSS) developed by the Association of State and Territorial Dental Directors (ASTDD), assessments were conducted by calibrated public health dental hygienists. Assessment sites were chosen based on the random sample the OHS uses for its kindergarten assessments. Those schools in which our annual oral health surveillance activities are offered were selected for this project if they offered a pre-kindergarten program. Prior to screening, parental consent for participation was obtained.

Results

A total of 1,565 Pre-K students participated in this BSS for Children. Not surprisingly, results from this pre-school surveillance effort showed that no child had sealants. The statewide average for untreated decay for this age group was 12.8%, where percentages of decay ranged between 7.7% and 19.1%. Regional rates of no decay ranged from 51.9% to 78.5%. Fortunately, 2/3 of those screened (67.0%) had no decay or evidence of previous dental treatment.

Table 1: NC Oral Health Status – Pre-Kindergarten 2018-2019

Oral health data for the state and its ten regions.

Region	# Screened	% UD	% TD	% ND	% UN
1	103	11.2	23.6	66.3	1.1
2	98	16.5	22.6	62.6	7.0
3	101	15.8	32.7	53.5	2.0
4	167	9.7	28.6	61.7	2.6
5	99	8.1	14.9	78.4	2.7
6	54	13.0	35.2	51.9	0.0
7	64	7.7	16.9	78.5	1.5
8	204	11.1	25.1	64.1	1.3
9	270	13.1	9.9	78.0	1.1
10	193	19.1	16.0	68.6	0.0
State Total	1565	12.8	21.4	67.0	1.9

Key: % untreated decay (% UD); % treated decay (% TD); % no decay (% ND); and % needing urgent dental care (% UN).

Discussion

Although a direct comparison cannot be made between national rates with the state, North Carolina's decay rate for pre-kindergarteners at 12.8% is much lower than the national rate of 15.3% for children spanning the ages 6-11 years.² A better comparison (again, not directly) for this age group might be that nationally, almost half of children ages 2-11 years have decay.²

It is suspected that the NC oral health data for both untreated decay and no decay vary widely due to the limited sample size. Kindergarten BSS schools are weighted for balanced representation, but that same pool of public health elementary schools is not balanced similarly in offering pre-kindergarten programs. For future oral surveillance activities in pre-kindergarten students, efforts must include a better representative sample of pre-kindergarten schools in which to conduct the screenings.

When compared to the statewide average of 1.9%, Region 2 has a significantly higher percentage of young children needing urgent dental care (7%). As the number of children in that region screened is very near and similar to the surrounding areas (see Region 1 and 3), results from the future pre-kindergarten assessments in this region should be monitored for improvement. Additionally, the percentage of children with urgent needs in future assessments of this cohort (such as the 2019-20 Kindergarten BSS), can be used to confirm oral health status in what appears to be an outlier group of children.

References

1. Kwan SY, Petersen PE, Pine CM, Borutta A. 2005. Health-promoting schools: An opportunity for oral health promotion. *Bulletin of the World Health Organization* 83 (9): 677-685.
2. Prevalence of total and untreated dental caries in permanent teeth among children and adolescents aged 6-19 years, by age group. *CDC: MMWR* 2018. July 25.

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