

KINDERGARTEN ORAL HEALTH DATA BRIEF

2019-2020 North Carolina Oral Health Section Child 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 Due to the impact of dental disease in early childhood, oral health surveillance in kindergarteners has the highest priority in the NC Oral Health Section's Oral Surveillance Schedule and takes place annually. The 2019-2020 Kindergarten Basic Screening Survey reflects oral health data as children close their early childhood stage and transition into their school-aged stage, entering the public education system.

Methods

Using the Basic Screening Survey (BSS) for Children developed by the Association of State and Territorial Dental Directors (ASTDD), screenings were conducted by calibrated OHS public health dental hygienists in public schools selected to represent both the state overall and each of 10 Regions of the state. ASTDD assisted in site identification using free and reduced lunch participation rates, rural or urban location, and total student enrollment. Prior to screening, parental consent for participation was obtained.

Results

A total of 9,405 kindergarten students participated in this oral health assessment. Results show that the average for *untreated decay* was 15.3%. Fortunately, nearly 2/3 of the group (63.2%) had no decay and no evidence of previous dental treatment. Results in the 10 regions for no decay ranged from 52.2% to 68.9%.

Table 1: NC Oral Health Status – Kindergarten 2019-2020

Oral health data for the state and its ten regions.

Region	# Screened	% UD	% TD	% ND	% PSLs	% UN
1	733	13.0	33.6	54.8	0.7	1.9
2	731	14.9	35.8	53.9	1.4	2.1
3	814	15.0	36.2	52.2	1.8	1.6
4	1589	11.3	24.3	67.9	1.0	2.0
5	1150	16.8	23.4	64.7	2.7	5.0
6	478	24.1	19.5	59.2	0.2	3.6
7	1357	14.8	12.9	73.9	0.4	2.7
8	927	14.1	26.4	61.9	0.6	2.2
9	673	16.8	17.5	68.9	1.9	1.6
10	953	18.8	26.1	60.1	1.3	0.8
State Total	9405	15.3	24.9	63.2	1.4	2.4

Key: % untreated decay (% UD); % treated decay (% TD); % no decay (% ND); % received at least one sealant [permanent or primary molar] (% PSLs); and % needing urgent dental care (% UN).

Discussion

Although a direct comparison cannot be made between national rates and the state, North Carolina's decay rate for 5- to 6-year-old children mirrors the national estimate of childhood dental caries at 15.3% for children ages 6-11 years.²

Regional rates for untreated decay were more widely distributed and ranged from 11.3% to 24.1%. Region 6 appears to be an outlier at 24.1%. While this region did have a much smaller sample size, the overall sample was initially weighted to represent each region more accurately within the state. For future oral surveillance activities for kindergarteners, Region 6's percentage of untreated dental caries should be compared to the prior significant rate of 24.1%. Additionally, dental public health program administrators should reflect on health drivers that might be influencing caries rates in early childhood.

Assessment results for year 2018-2019 showed Region 10 had the highest percentage of untreated decay. This year's data set show the region has a much lower percentage of untreated decay and the highest percentage of treated decay. Also, the Pre-Kindergarten BSS from 2018-19 showed that Region 2 had dramatically high urgent needs at 7%. Although the percentage of children needing urgent care in this data set for Region 2 is higher than regions 1 and 3, it is much more in line with the surrounding areas.

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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