

Executive Summary

Oklahoma Oral Health
Needs Assessment

2003

Third Grade Children

Oklahoma State Department of Health
Dental Health Service

Discussion

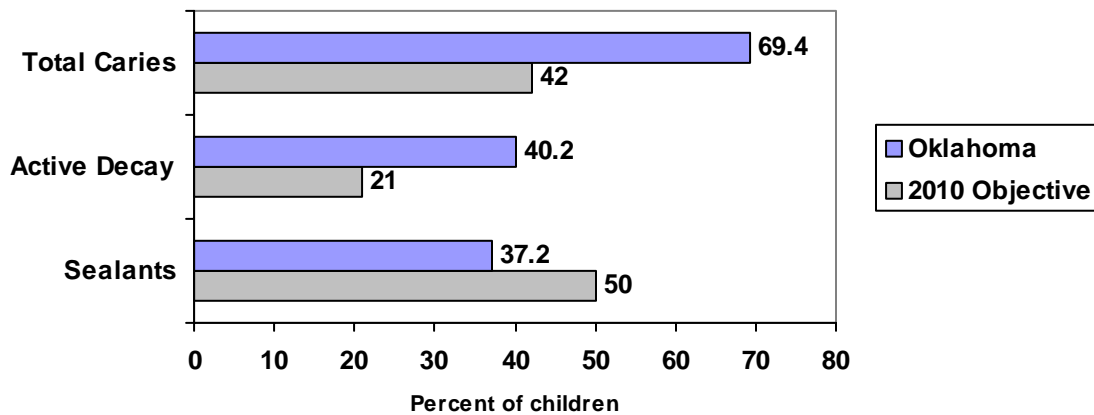
Dental caries is one of the most common chronic childhood diseases. While some progress has been made in improving oral health in the United States, little is known about the dental health needs of children in Oklahoma. To establish a baseline for dental health indicators in third grade children in Oklahoma, this needs assessment was conducted by the University of Oklahoma Colleges of Public Health and Dentistry, with funding from the Oklahoma State Department of Health. This survey provides dental health professionals with the first statewide data to assess the dental health status of third grade children.

The Healthy People 2010 Objectives include several measures related to oral health in children. These include to:

- Reduce the proportion of children with dental caries experience in their primary and permanent teeth to 42%.
- Reduce the proportion of children with untreated dental decay in primary and permanent teeth to 21%.
- Increase the proportion of children receiving dental sealants on their molar teeth to 50%.

Data from this study of Oklahoma children indicate significant improvements are needed before the 2010 Objectives can be met (Figure 1).

Figure 1. Oklahoma dental health measures compared to Healthy People 2010 targets



Other states have conducted similar assessments of children’s oral health, and Oklahoma does not fare well by comparison. New Mexico and Wisconsin both reported total caries experience rates in excess of 60%, 60.1% and 64.6%, respectively. The statewide prevalence for dental caries experience in Oklahoma third graders was 69.4%, higher than any other state reported. The rate of active decay in Oklahoma (40.2%), defined as untreated caries in at least one permanent or primary tooth, was nearly twice the Year 2010 Objective (21%). Similarly, the proportion of children with protective sealants is low in Oklahoma compared to other states. Only 37.2% of Oklahoma third graders have sealants on at least one permanent molar tooth, falling short of the Year 2010 Objective of 50%.

Large differences were observed in the results of the oral health needs assessment by region. The NW region had the highest rates of dental sealants and the lowest rates of any caries experience and active (untreated) decay. Tulsa County also had higher sealant rates and lower rates of caries. By contrast, only 16% of third graders in Oklahoma County were observed to have protective sealants. Children in this county also had higher rates of active and treated caries.

Overall Results

The dental health status of third grade students in Oklahoma is described in Figure 2, using the weighted estimates. Over one-third of third grade students have one or more molar teeth with dental sealants (37.2%). The rate of caries experience is high, 69.4%, undoubtedly due to the relatively low rate of protective sealants. Much of the caries experience is being driven by high rates of decay in primary teeth. Active decay is observed more frequently in primary teeth (32.3%) as compared to permanent teeth (19.8%). Likewise, primary teeth are more likely to have fillings/restorations (40.4%), as compared to permanent teeth (12.6%) of third graders. The prevalence of missing permanent teeth is very low, less than 1%. Not surprisingly, 16.4% of children have one or more missing primary teeth due to decay.

Figure 2. Summary of dental health status of Oklahoma third grade students, weighted estimates

Indicator	Prevalence (95% CI)
Percent of children in Oklahoma who have received protective sealants on at least one permanent molar tooth	37.2% (32.8-41.5)
Percent of children in Oklahoma with dental caries experience [at least one permanent or primary tooth decayed (untreated), missing, or filled (treated/restored)]	69.4% (65.1-73.4)
Percent of children in Oklahoma with untreated decay (active caries) in at least one permanent or primary tooth	40.2% (35.8-44.7)
Percent of children in Oklahoma with untreated decay in at least one permanent tooth (active caries)	19.8% (16.4-23.6)
Percent of children in Oklahoma with untreated decay in at least one primary tooth (active caries)	32.3% (28.0-36.4)
Percent of children in Oklahoma with at least one missing permanent tooth	0.6% (.12-1.8)
Percent of children in Oklahoma with at least one missing primary tooth	16.4% (13.2-19.9)
Percent of children in Oklahoma with at least one filled (treated/restored) permanent tooth	12.6% (9.7-15.8)
Percent of children in Oklahoma with at least one filled (treated/restored) primary tooth	40.4% (36.0-44.9)

Caries Experience and DMFT/dmft Score

Total caries, or any caries experience, was calculated based on having at least one permanent or primary tooth decayed (untreated), missing (prematurely lost to decay), or filled (treated/restored). DMFT refers to decayed, missing or filled permanent teeth; while dmft is decayed, missing or filled primary teeth. The 495 third grade children examined had 1,385 teeth that had been affected by decay. Therefore, this results in a mean DMFT/dmft score of 2.8 teeth. In other words, on an average, each third grade child has approximately 2.8 teeth that are decayed or have been decayed. Also, survey results show that 69.4% of third grade children in the state have caries experience. Regional differences were not as marked as those for sealants. The region with the lowest rate of caries experience was the NW with 43.8%. The NW region also had the highest rate of protective sealants. The region with the highest rate of caries experience was the SE (73.8%).

Figure 3. Percent of children with dental caries experience [at least one permanent or primary tooth decayed (untreated), missing, or filled (treated/restored)], by region

