

Oral Health Screening Survey of Preschool-Age Children, 2016-17

This data brief reports results of the oral health screening survey of preschool-age children in Ohio conducted during the 2016-17 school year.



Overall Findings of Ohio's children age 3-5 years

Even though tooth decay can be prevented, these children had a “history of tooth decay” because they had one or more teeth with cavities that have not yet been treated; they had fillings or crowns to restore (repair) teeth that were decayed; or they had teeth that had been extracted (pulled) due to a cavity.

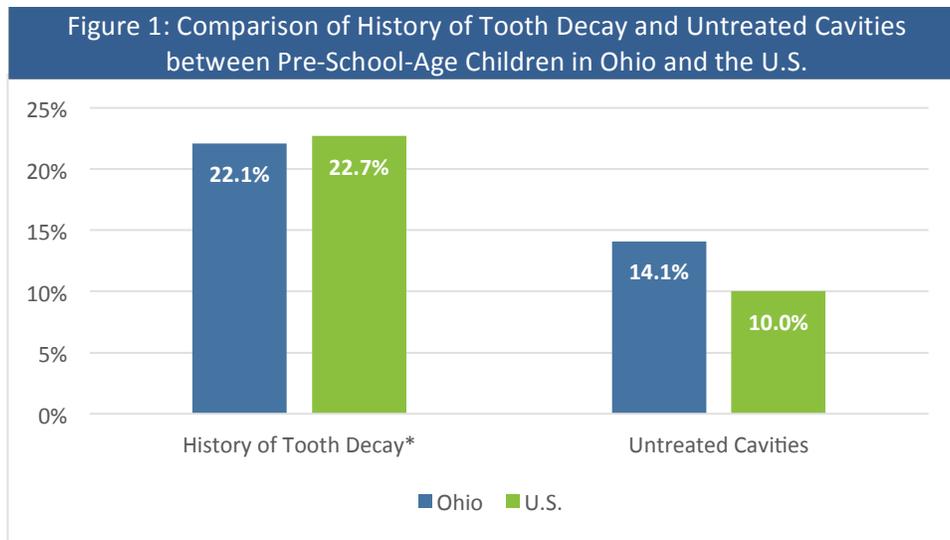
23% Already had one or more cavities in their primary (baby) teeth

14% Had cavities that had not yet been treated

10% Reportedly had a toothache in the past six months

How do the results of this screening survey compare to findings for the U.S.?

Figure 1 shows the comparison between preschool-age children in Ohio and across the U.S. in the percentage with a history of tooth decay and untreated cavities. Ohio's preschool-age children had a similar history of tooth decay to that among children in the U.S., but had a higher percentage of untreated cavities.



*In this comparison, only untreated and treated (restored) cavities were included; extractions due to cavities were not included.

Ohio: 2016-2017, children ages 3-5 years old

U.S.: NHANES, 2011-2012, children 2-5 years old¹

¹ U.S. Department of Health and Human Services. National Center for Health Statistics Data Brief, No. 191, March 2015.

Table 1 compares the results of this survey with the National Healthy People 2020 Objectives.² Data indicate that Ohio has met the three Year 2020 targets for preschool oral health; however, significant levels of dental disease persist.

Table 1: Comparison of 2016-17 Ohio Preschool Survey Results to National Targets for 2020			
	2016-17 Survey	National Targets	Target Met?
Reduce the proportion of children aged 3 to 5 years with dental caries experience* in their primary teeth	22%	30%	Yes
Reduce the proportion of children aged 3 to 5 years with untreated dental decay in their primary teeth	14%	21%	Yes
Increase the proportion of children, adolescents, and adults who used the oral health care system (i.e., had a dental visit) in the past year	74%	49%	Yes

* "dental caries experience" is the same as "history of tooth decay", and includes untreated and treated cavities

Access to Dental Care

Access to dental care means getting the dental care you need when you need it. According to the 2015 Ohio Medicaid Assessment Survey, getting dental care remains the number one unmet health care need among Ohio's children.³



Do preschool-age children visit the dentist?

- **74 percent** of parents reported that their child had seen a dentist **within the past year**, and **7 percent** of children had been to the dentist **within 1-3 years**. Children aged 5 years were significantly more likely to have seen the dentist within the past year than children aged 3 years.
- **18 percent** of parents said their child had **never** been to the dentist.
- Oral health experts recommend that a child should visit a dentist by their first birthday or by the time their first tooth erupts.⁴

² Healthy People 2020 Objectives for the Nation. U.S. Department of Health and Human Services. <https://www.healthypeople.gov/2020/topics-objectives/topic/oral-health>. Accessed 5/3/18.

³ 2015 Ohio Medicaid Assessment Survey. <http://grcapps.osu.edu/dashboards/OMAS/child>. Accessed 5/3/18.

⁴ American Academy of Pediatric Dentistry. Guideline on Periodicity of Examination, Preventive Dental Services, Anticipatory Guidance/Counseling, and Oral Treatment for Infants, Children, and Adolescents. http://www.aapd.org/assets/1/7/G_Periodicity1.PDF. Accessed 5/3/18.

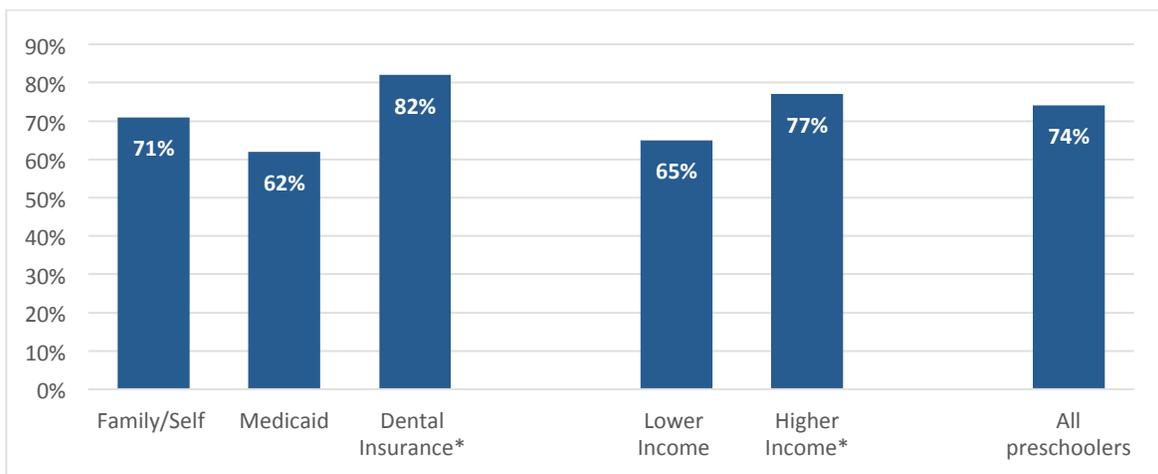
What factors affect whether a child goes to the dentist?

Race, ethnicity, or geography⁵ did not seem to impact whether a child had seen a dentist within the past year. However, income and insurance were significant factors (Figure 1).



- Children from families with **higher incomes**⁶ were **more likely to have seen a dentist** in the past year (77 percent vs. 65 percent).
- Children whose parent said that they had **dental insurance** were more likely to have **visited the dentist in the past year** compared to children who didn't have any form of dental insurance and paid for care out-of-pocket, or those covered by Medicaid.
- 82 percent of children with **private insurance** saw a dentist in the **past year**.

Figure 1: Percentage of Ohio Preschool-Age Children Who Visited the Dentist in the Past Year, by Family Income and Type of Dental Insurance, 2016-17



*Statistically significant

Reasons Parents Give for Why They Can't Get Dental Care for Their Children

- Overall, only 5 percent of parents reported that there had been a time when they needed dental care for their child but couldn't get it. This was more commonly reported by parents of children who were eligible for Medicaid, parents who reported that their child's oral health was fair rather than good or very good, and parents who reported their child had a toothache in the previous six months.
- The most common reason parents gave for why they could not get dental care for their child was that they could not afford it.

⁵ Geography was based on whether the child lived in a metropolitan, suburban, Appalachian or rural/non-Appalachian county.

⁶ Families with higher incomes were those who reported they did not receive financial assistance for their child to attend preschool.

Significance of Findings

That nearly one of every four preschool-age children in Ohio has experienced ECC is a clear call for action. Tooth decay in primary teeth is called early childhood caries (ECC), and is defined as a cavity, filling, or a tooth missing due to a cavity, in a primary (baby) tooth of a child under six years of age. In the past, ECC was referred to as nursing bottle caries or baby bottle tooth decay because it was thought to be linked primarily to poor bottle-feeding practices, such as allowing a baby to sleep through the night or nap with a bottle filled with formula.



ECC is caused by several factors: not cleaning the teeth regularly; a high number of decay-causing bacteria in the mouth; and the frequent metabolism of sugars by bacteria on teeth. The acid produced by the metabolism of sugars can quickly dissolve the enamel, which is particularly at-risk because it is thinner than the enamel of permanent (adult) teeth.



The consequences of ECC can be serious. Healthy primary teeth are needed for chewing nutritious foods, speech development, socialization and to maintain space needed for the permanent teeth. Pain from ECC can impair sleep, growth, and the ability to learn. Severe ECC that involves several teeth (as shown in the photo on the left) can progress rapidly and may lead to visits to the emergency room and hospital admissions. Some children must undergo general anesthesia to have ECC treated, at a significant cost to families and the health care system.

Children who get one cavity in their primary teeth are more likely to get more, and are at higher risk for decay in their permanent teeth. Prevention is key, and involves educating parents on good oral hygiene habits at home, including the use of fluoride toothpaste and reducing the frequency of sugar-sweetened foods and beverages their child consumes.

Even though infants should visit the dentist at least by one year of age, most do not, and are far more likely to have multiple visits to the doctor during early childhood. This offers many opportunities for medical professionals in both the private and public health care systems to engage parents in conversations on ECC prevention. Providing anticipatory guidance to parents, applying fluoride varnish to the teeth of children at risk for ECC, recognizing the signs and symptoms of ECC and referring children for dental treatment are all critical steps that medical professionals can take to reduce the incidence and severity of ECC.

Investing in prevention and education, medical/dental collaboration, and making sure each child has a dental home by age one will go a long way to ensure that our youngest citizens get off to a good oral health start.

Methods

The Ohio Department of Health conducted an open-mouth oral health screening survey of preschool children ages 3-5 years during the 2016-17 school year. A randomized sample of 82 Early Childhood Education Centers and public preschool programs was selected to yield data for Ohio and its four regions. A total of 3,029 children were screened.

With consent from parents, children were screened by a trained team of dental hygienists. Four indicators of oral health were assessed: toothaches (as reported by parents), history of tooth decay (cavities, fillings, crowns or teeth extracted (pulled) due to cavities) and untreated tooth decay.

The consent form asked parents questions about getting dental care for their child, such as how recently their child had been to the dentist, if they had dental insurance and their ability to get needed dental care.

Other data collected on each child were race, ethnicity and whether the family received financial assistance in paying for day care (as an estimate of family income.) Children were classified as to whether they lived in a metropolitan, suburban, Appalachian or rural/non-Appalachian county. These data were collected so disparities in oral health status and access to dental care could be studied.