

# MI HEAD START SMILES 2021-2022



## The Oral Health of Michigan's Head Start Children

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## Executive Summary

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With *MI Head Start Smiles 2021-2022*, the Michigan Department of Health and Human Services (MDHHS) Oral Health Program takes its second in-depth look at the oral health status of a representative sample of Head Start children throughout the state. During the 2021-2022 school year, a total of 1,561 Head Start children ages 3-5 years received a dental screening at 48 Head Start centers. The previous survey was conducted during the 2017-2018 school year. Head Start children were screened because Head Start is the target preschool population for the National Oral Health Surveillance System. To share what was learned, the information collected through *MI Head Start Smiles* was organized into five key findings. These findings will help support development of state policies and programs to reach the goal of ensuring that Michigan's children receive the preventive and restorative oral health services they need.

### Key Findings:

1. The COVID-19 pandemic had a negative impact on the oral health of Michigan's Head Start children. Compared to 2017-2018, a significantly higher percentage of Head Start children had decay experience and untreated tooth decay in 2021-2022.
2. Early childhood tooth decay remains a significant public health problem in Michigan. Almost half of Michigan's Head Start children (45%) have already experienced tooth decay.
3. Almost 1 out of 3 Head Start children (31%) in Michigan have untreated tooth decay, demonstrating that many children are not getting the dental care they need.
4. Only 2% of Michigan's Head Start children have protective dental sealants, a safe, simple, cost-effective clinical intervention to prevent tooth decay in molar teeth.
5. Compared to all U.S. children aged 3-5 years, Michigan's low-income Head Start children have a significantly higher prevalence of decay experience and untreated decay.

### General Recommendations:

1. Work with Head Start programs to restart classroom toothbrushing and other preventive dental programs that were put on hold during the COVID-19 pandemic.
2. Improve access to evidence-based, community-based primary prevention programs for pregnant women, infants, toddlers, and their families.
3. Develop and implement programs to assure that all children have access to dental care including expanding the network of Medicaid participating dentists. Expand community-based screening and referral programs that include a case management component so that children in need have better access to dental care.
4. Increase access to preventive dental sealants by providing education on the importance of primary molars sealants and encouraging the development of community-based sealant programs.
5. Expand integrated community-based prevention programs, screening and referral services, and restorative dental care programs that target low-income populations.

## Key Strategies:

1. Expand efforts to incorporate oral health promotion and preventive services such as caregiver education and fluoride varnish into programs geared to children 0-5 years of age including well-child visits; Women, Infants, Children (WIC) programs; Early Head Start and Head Start; and other early childhood programs.
2. Expand oral health prevention programs at preschools with children at high risk for dental disease to include, at a minimum, daily tooth brushing with a fluoride containing toothpaste, application of topical fluorides including silver diamine fluoride, and oral health education.
3. Conduct ongoing educational campaigns to (1) encourage the first dental visit by age 1, (2) increase oral health literacy and awareness in preschools, (3) promote the importance of oral health as part of general health and well-being, and (4) promote the benefits of water fluoridation and additional topical fluoride applications for the prevention of dental disease.
4. Offer oral health screenings and referral to local dental care settings in early childhood programs that serve children at greatest risk.
5. Develop case management systems that help caregivers navigate the complex dental care delivery and payment systems to assure that children needing dental care obtain it.
6. Increase the number of preschool children ages 3-5 who use the annual dental exam and other dental benefits offered through their insurance coverage.
7. Advocate for the expansion of dental services for high-risk populations.
8. Educate dental providers about the benefits of dental sealants in primary teeth in high-risk children and minimally invasive dentistry including silver diamine fluoride and interim therapeutic restorations.
9. Assess and address issues regarding Medicaid participation among dentists.
10. Expand trainings to safety-net dental providers on appropriate techniques for treating preschool children with behavior management issues.
11. Provide professional development opportunities for medical and dental providers regarding the safety and importance of dental services for pregnant women and young children.
12. Encourage investment in early childhood programs in Michigan including Early Head Start, Head Start and the Great Start Readiness Program
13. Work closely with early childhood programs to engage families in oral health conversations and assist them with oral health goal setting. Recognize opportunities to integrate oral health in curricula and trainings including training of home visitors.
14. Develop systems that encourage healthcare providers to routinely screen for oral disease, apply fluoride varnish, provide anticipatory guidance and, when needed, refer for care.

No one group can address all of these issues, there must be collective action on the part of policy makers, preschool program staff, dental professionals, health advocates, and families to make oral health a priority. Improved access to community-based preventive service and restorative dental care are the first steps in addressing the oral health of Michigan's Head Start population.

## Quick Facts

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**Decay Experience:** Forty-five percent (45%) of Michigan's Head Start children have experienced tooth decay, substantially higher than the prevalence among Michigan's Head Start children in 2017-2018 (35%). When compared to the national average for children aged 3-5 years, Michigan's Head Start children have a substantially higher prevalence of decay experience (28% vs. 45%).

**Untreated Tooth Decay:** Thirty-one percent (31%) of Michigan's Head Start children have untreated tooth decay, substantially higher than the prevalence among Michigan's Head Start children in 2017-2018 (22%). When compared to the national average for children aged 3-5 years, Michigan's Head Start children have a substantially higher prevalence of untreated decay (12% vs. 31%).

**Dental Sealants:** Only 2% of Michigan's Head Start children have protective dental sealants on a primary molar tooth.

**Need for Dental Care:** Twenty-nine percent (29%) of Michigan's Head Start children need dental care including 2% needing urgent dental care because of pain or infection.

## Introduction

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Tooth decay is a disease affecting both children and adults. When exposed to sugars and other carbohydrates, some bacteria in the mouth produce acids that dissolve the minerals in the outer layer of the tooth that can advance to form a cavity.

Tooth decay can occur at any age after teeth appear in the mouth. For most children, teeth begin to appear at about 6 months of age; by 3 years of age, they will have a full set of 20 primary (baby) teeth. Particularly damaging forms of decay can begin in early childhood, when developing primary teeth are especially vulnerable. This type of decay is called early childhood caries (ECC). ECC is the most common chronic early childhood disease in the United States, five times more common than asthma in children younger than age 6.<sup>1</sup> Cavities can develop quickly and, if untreated, can infect the tooth's pulp tissue that can lead to an abscess, destruction of supporting bone, and spread of infection via the bloodstream, resulting in a medical and dental emergency that could require hospitalization.<sup>2</sup> The longer ECC remains untreated, the worse the condition gets, making it more difficult to treat.<sup>3</sup> Advanced ECC requires complicated dental procedures such as extractions and crowns, often performed using general anesthesia. These complicated procedures are more expensive and must be performed by dentists with specialty training in treating children (pediatric dentists).

Oral health and general health are intertwined, so poor oral health can affect a child's overall health and well-being. Dental disease can result in pain, infection, the inability to chew foods well, and distraction from play and learning. Tooth decay in the primary teeth is of special importance because it increases the child's risk for future oral health problems. For example, abscessed primary teeth can potentially damage permanent teeth, and if baby teeth are lost early, the child's permanent teeth are more likely to erupt out of proper position, leaving them more susceptible to decay, gum disease and the need for braces.<sup>3, 4</sup>

Other short- and long-term impacts of advanced tooth decay on the overall health of young children include:

- Increased vulnerability to infections in other parts of the body such as the ears, sinuses, and the brain<sup>5, 6, 7</sup>
- Failure to thrive, impaired speech development, and reduced self-esteem<sup>1</sup>
- Shyness, unhappiness, feelings of worthlessness and reduced friendliness<sup>8</sup>

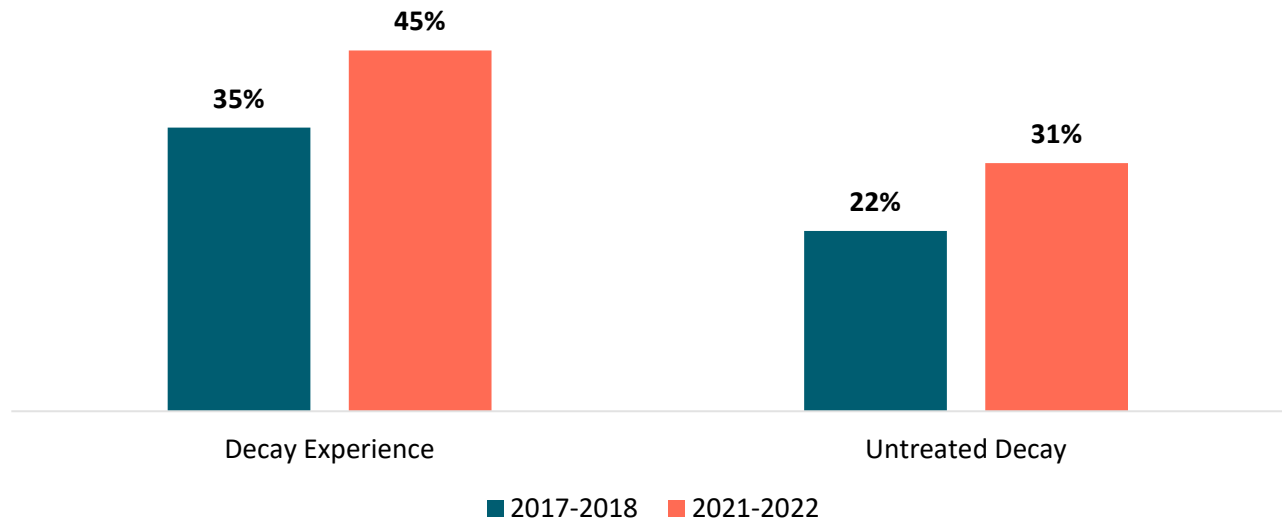
The good news is that most tooth decay is preventable if children have access to evidence-based prevention strategies. To prevent tooth decay, the American Academy of Pediatrics recommends several strategies for enhancing the oral health of young children including parent/family education on oral health (particularly eating nutritious foods and limiting sugars, and brushing teeth with a toothpaste containing fluoride); first preventive visit to a dentist within six months of the first tooth erupting and no later than age 1, with preventive check-ups thereafter; a series of topical fluoride applications to children's teeth; and drinking fluoridated water.<sup>9</sup>

## Key Finding #1

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***The COVID-19 pandemic had a negative impact on the oral health of Michigan's Head Start children. Compared to 2017-2018, a significantly higher percentage of Head Start children had decay experience and untreated tooth decay in 2021-2022.***

Percentage of Michigan's Head Start Children with Decay Experience and Untreated Decay  
2017-2018 and 2021-2022



On March 11, 2020, the World Health Organization declared the global spread of coronavirus disease 2019 (COVID-19) a pandemic. COVID-19 mitigation policies, including closures of schools and dental offices, limited children's access to dental care. In addition, school closures disrupted children's access to school-based meals, and, for some children, at-home meals might be less nutritious with more added sugar, a major risk factor for tooth decay. Throughout 2020 and much of 2021, the COVID-19 pandemic forced Head Start programs across the country to make major changes to center operations and services to keep children, families, and staff members safe. One such change was the cessation of daily toothbrushing programs and other onsite preventive dental care programs among centers that remained open.

Between 2017-2018 and 2021-2022, there was a significant increase in the percentage of Michigan's Head Start children with decay experience suggesting that there was an increase in behaviors or exposures associated with tooth decay such as increased sugar consumption, less frequent toothbrushing, and decreased access to preventive dental care. There was also a significant increase in the percentage of children with untreated decay likely due to a decrease in the percentage of children able to access dental care.

***Recommendation: Work with Head Start programs to restart classroom toothbrushing and other preventive dental programs that were put on hold during the COVID-19 pandemic.***

## Key Finding #2

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*Early childhood tooth decay remains a significant public health problem in Michigan. Almost half of Michigan’s Head Start children (45%) have already experienced tooth decay.*



Decay “experience” means that a child has had tooth decay at some point, either in the past (indicated by fillings, crowns, or teeth that have been extracted) or currently (untreated tooth decay).

With early prevention efforts, tooth decay can be prevented. Medical, dental and public health professionals must focus dental disease prevention efforts on families with children younger than 2 years of age because *two is too late*. The American Dental Association, the American Academy of Pediatric Dentistry, and the American Academy of Pediatrics all recommend preventive dental care and parent education by age 1.

***Recommendation: Michigan must improve access to evidence-based, community-based primary prevention programs for pregnant women, infants, toddlers, and their families.***



## Key Finding #3

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***Almost 1 out of 3 Head Start children (31%) in Michigan have untreated tooth decay demonstrating that many children are not getting the dental care they need.***



Almost  
**1 out of 3**  
children have untreated  
tooth decay

Having untreated decay means that a child has tooth decay or a cavity that has not received appropriate treatment. Tooth decay in children destroys more than just a smile. Untreated decay compromises the child's ability to eat well, sleep well, and function well at home and at school. In addition, the unpleasant appearance of untreated decay can compromise a child's self-esteem and social development. Untreated tooth decay in children can be painful and without appropriate treatment can lead to infection of the teeth and gums. Although rare, infections due to untreated tooth decay can lead to severe illness and even death.

The Michigan *MI Head Start Smiles* survey did not include complete diagnostic dental examinations. Instead, dental screenings were performed. This is a quick look inside the mouth with a dental mirror, without x-rays and the more advanced diagnostic tools. Because of this, some problems were likely missed. It is reasonable to assume that these findings actually underestimate the number of children needing dental care.

Dental care can be costly, and without dental insurance, many families cannot afford comprehensive dental care; but dental insurance coverage alone, especially publicly funded coverage such as Medicaid does not guarantee access to dental care. Many dentists are reluctant to participate in Medicaid because of low reimbursement rates; about one-half of what they would receive from private insurance companies.

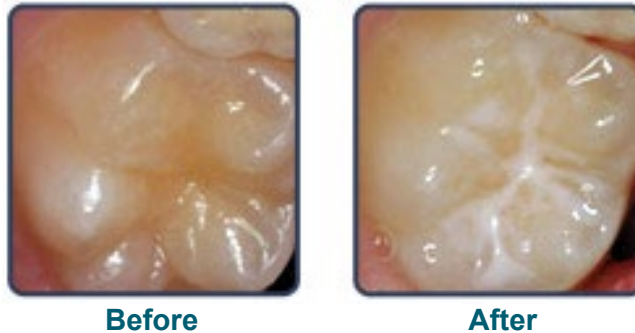
***Recommendation: Michigan must continue to develop and implement programs to assure that all children have access to dental care including expanding the network of Medicaid participating dentists. Michigan must expand community-based screening and referral programs that include a case management component so that children in need have better access to dental care.***

## Key Finding #4

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***Only 2% of Michigan's Head Start children have protective dental sealants, a safe, simple, cost-effective clinical intervention to prevent tooth decay in molar teeth.***

Molar Tooth Before and After Dental Sealants



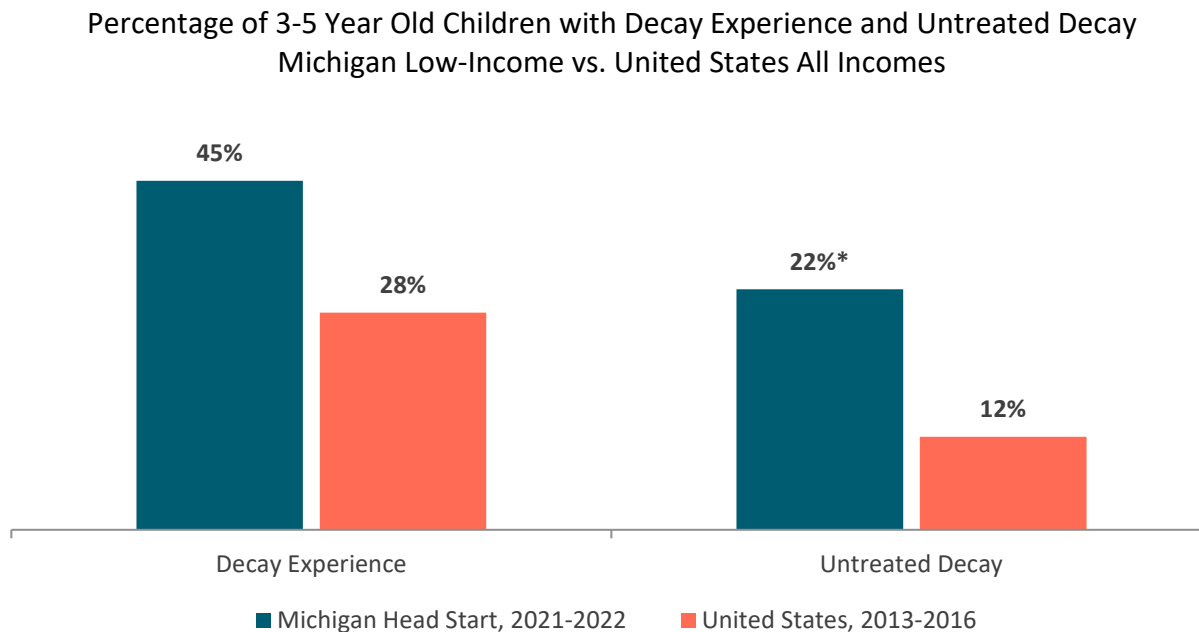
In preschool aged children, dental sealants are thin plastic coatings that are applied to the grooves on the chewing surfaces of the primary molar (back) teeth. The first primary molars usually appear when a child is about 13-19 months while the second primary molars appear between 2-3 years of age. Sealants protect the chewing surfaces from tooth decay by keeping germs and food particles out of these grooves. They are a safe, effective way to prevent tooth decay among children. According to a recent simulation based on Iowa Medicaid claims data, sealing primary molars prevents future restorations and extractions.<sup>10</sup>

Sealants can be applied in a dentist's office or through community-based sealant programs. Community-based sealant programs are especially important for reaching children from low-income families who are less likely to receive private dental care.

***Recommendation: Increase access to preventive dental sealants by providing education on the importance of primary molars sealants and encouraging the development of community-based sealant programs.***

## Key Finding #5

***Compared to all U.S. children aged 3-5 years, Michigan’s low-income Head Start children have a significantly higher prevalence of decay experience and untreated decay.***



The most influential socio-demographic indicator for oral health disparities in the United States is income with lower income children having significantly more decay than higher income children. Given that the family income for most Head Start children is below the federal poverty level it is not surprising that Michigan’s Head Start children have a higher prevalence of untreated decay and a lower prevalence of protective dental sealants than the general U.S. population aged 3-5 years.

Among U.S. children aged 3-5 years that live in households with incomes below the federal poverty level, 38% have decay experience and 19% have untreated decay; lower than the prevalence among Michigan’s Head Start population (45% and 31% respectively).

***Recommendation: Expand integrated community-based prevention programs, screening and referral services, and restorative dental care programs that target low-income populations.***

Oral health of Michigan’s low-income Head Start children compared to national averages <sup>11</sup>			
Oral Health Variable	Michigan Head Start 2021-2022, 3-5 year olds	U.S., All Income Levels 2013-2016, 3-5 year olds	U.S., < 100% FPL 2013-2016, 3-5 year olds
Decay Experience	44.8 (41.5 – 48.1)	29.7 (23.7 – 32.6)	37.5 (31.7 – 43.6)
Untreated Decay	30.8 (28.3 – 33.3)	11.9 (9.6 – 14.6)	18.8 (13.9 – 24.9)

## Key Strategies

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The results of *MI Head Start Smiles* highlight the need for improvements in the oral health of preschool children living in Michigan. Access to culturally and age appropriate evidence-based and community-based prevention programs and dental care must be improved. Several strategies that could improve the oral health of preschool children have been identified. The strategies are grouped into four general categories: *evidence-based and community-based prevention programs, screening and referral services, dental care, and collaborative partnerships*. Because teeth develop before birth and start to appear in the mouth when a child is about 6 months of age, efforts to prevent tooth decay must start during pregnancy and continue throughout childhood. Evidence based strategies for preventing tooth decay in young children include: twice daily brushing with fluoride toothpaste, professionally applied topical fluorides, community water fluoridation, good eating habits, early and regular dental visits, dental sealants on primary molars in high-risk children, and culturally appropriate oral health education.



### Evidence-Based and Community-Based Prevention Programs

- ◆ Expand efforts to incorporate oral health promotion and preventive services such as caregiver education and fluoride varnish into programs geared to children 0-5 years of age such as well-child visits; Women, Infants, Children (WIC) programs; Early Head Start and Head Start; and other early childhood programs.
- ◆ Expand oral health prevention programs at preschools with children at high risk for dental disease to include, at a minimum, daily tooth brushing with a fluoride containing toothpaste, application of topical fluorides including silver diamine fluoride, and oral health education.
- ◆ Conduct ongoing educational campaigns to (1) encourage the first dental visit by age 1, (2) increase oral health literacy and awareness in preschools, (3) promote the importance of oral health as part of general health and well-being, and (4) promote the benefits of water fluoridation and additional topical fluoride applications for the prevention of dental disease.



### Screening and Referral Services

- ◆ Offer oral health screenings and referral to local dental care settings in early childhood programs that serve children at greatest risk.
- ◆ Develop case management systems that help caregivers navigate the complex dental care delivery and payment systems to assure that children needing dental care obtain it.



### Dental Care

- ◆ Increase the number of preschool children ages 3-5 who use the annual dental exam and other dental benefits offered through their insurance coverage.
- ◆ Advocate for the expansion of dental services for high-risk populations.

- ◆ Educate dental providers about the benefits of dental sealants in primary teeth in high-risk children and minimally invasive dentistry including silver diamine fluoride and interim therapeutic restorations.
- ◆ Assess and address issues regarding Medicaid participation among dentists.
- ◆ Expand trainings to safety-net dental providers on appropriate techniques for treating preschool children with behavior management issues.
- ◆ Provide professional development opportunities for medical and dental providers regarding the safety and importance of dental services for pregnant women and young children.



### **Collaborative Partnerships**

- ◆ Encourage investment in early childhood programs in Michigan including Early Head Start, Head Start and the Great Start Readiness Program
- ◆ Work closely with early childhood programs to engage families in oral health conversations and assist them with oral health goal setting. Recognize opportunities to integrate oral health in curricula and trainings including training of home visitors.
- ◆ Develop systems that encourage healthcare providers to routinely screen for oral disease, apply fluoride varnish, provide anticipatory guidance and, when needed, refer for care.

No one group can address all of these issues, there must be collective action on the part of policy makers, preschool program staff, dental professionals, health advocates, and families to make oral health a priority. Improved access to community-based preventive service and restorative dental care are the first steps in addressing the oral health of Michigan's Head Start population.

## Methods

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Michigan's *MI Head Start Smiles* sampled children enrolled in Head Start, the target preschool population for the National Oral Health Surveillance System. All Head Start centers in Michigan with a funded enrollment of 10 or more children were included in the sampling frame. The sampling frame was stratified by geographic region and a systematic probability proportional to size cluster sampling scheme was used to select 48 Head Start centers. Eight of the Head Start centers declined to participate and were replaced with centers randomly selected from the same sampling interval as the declining center. Data are available for all 48 sampling intervals.

Screenings were completed during the 2021-2022 school year. The MDHHS Oral Health Program received Institutional Review Board (IRB) approval to use passive parental consent for the survey. Because of concerns regarding COVID, several of the Head Start centers used positive rather than passive consent. Of the 2457 children enrolled at the participating sites, 1561 were screened for a response rate of 64%.

Trained dental hygienists completed the screenings using gloves, penlights, and disposable mouth mirrors. The diagnostic criteria outlined in the Association of State and Territorial Dental Directors' publication, *Basic Screening Surveys: An Approach to Monitoring Community Oral Health*, were used.<sup>12</sup> Parent reported race, ethnicity and primary language spoken at home was obtained from the Head Start center staff.

Data were collected using scan forms. All statistical analyses were performed using the SAS software complex survey procedures (Version 9.4; SAS Institute Inc., Cary, NC). Sample weights were used to produce population estimates based on selection probabilities and indicating the number of children in the sampling interval each screened child represented.

## Data Tables

Table 1: Age, sex, race/ethnicity, primary language, and geographic location for the Head Start children that participated in the Michigan Count Your Smiles survey, 2021-2022

Demographic Characteristic	Number of Children	Weighted Percent	Lower 95% CL	Upper 95% CL
<b>Age</b>				
3 years	397	24.3	18.5	30.0
4 years	866	55.8	52.1	59.5
5 years	294	19.7	15.3	24.2
Unknown/Missing	4	0.2	0.0	0.5
<b>Sex</b>				
Female	786	49.1	46.1	52.1
Male	772	50.8	47.8	53.8
Unknown/Missing	3	0.2	0.0	0.3
<b>Race</b>				
American Indian/Alaska Native	11	0.6	0.1	1.1
Asian	17	0.9	0.1	1.7
Black	599	33.8	21.1	46.5
Native Hawaiian/Pacific Islander	4	0.2	0.0	0.6
White	704	51.4	38.9	64.0
Another race or multi-racial	149	8.8	5.8	11.9
Unknown/Missing	77	4.1	1.3	6.9
<b>Ethnicity</b>				
Not Hispanic/Latinx	1089	71.3	55.9	86.7
Hispanic/Latinx	122	9.4	3.0	15.9
Unknown/Missing	350	19.2	4.0	34.4
<b>Race/Ethnicity</b>				
Black (Not Hispanic)	593	33.4	20.8	46.1
Hispanic (any race)	122	9.4	3.0	15.9
White (Not Hispanic)	650	45.9	32.8	59.0
Another race or multi-racial (Not Hispanic)	167	9.7	6.9	12.5
Unknown/Missing	29	1.5	0.2	2.8
<b>Primary Language Spoken at Home</b>				
East Asian Languages	6	0.3	0.0	0.8
English	1,409	90.9	86.1	95.8
Middle Eastern/South Asian Languages	19	1.0	0.0	2.5
Spanish	42	3.3	0.2	6.3
Unknown/Missing	85	4.5	0.7	8.3
<b>Geographic Region</b>				
Upper peninsula & upper lower peninsula	94	18.0	8.9	27.1
Lower lower peninsula	922	54.4	40.7	68.1
Wayne, Oakland, Macomb	545	27.6	17.1	38.1

CL=Confidence limit

Table 2: Percentage of Head Start children with *decay experience* (treated, untreated and/or arrested decay) by selected characteristics, 2021-2022

Demographic Characteristic	Number with Data	Percentage with Decay Experience	Lower 95% CL	Upper 95% CL
<b>All Children</b>	<b>1,558</b>	<b>44.8</b>	<b>41.5</b>	<b>48.1</b>
<b>Age</b>				
3 years	397	36.4	29.1	43.7
4 years	865	46.5	43.1	50.0
5 years	293	50.2	45.6	54.8
<b>Sex</b>				
Female	785	42.3	38.4	46.2
Male	770	47.4	43.0	51.8
<b>Race/Ethnicity</b>				
Black	592	45.1	40.1	50.2
Hispanic	122	45.9	33.6	58.2
White	649	44.1	40.6	47.6
Another race or multi-racial	166	45.0	37.0	53.1
<b>Primary Language Spoken at Home</b>				
English	1,406	44.3	41.2	47.4
Another language	67	49.3	35.9	62.8
<b>Geographic Region</b>				
Upper peninsula & upper lower peninsula	93	49.5	43.2	55.7
Lower lower peninsula	921	45.2	39.9	50.4
Wayne, Oakland, Macomb	544	41.2	37.2	45.2

CL=Confidence limit

## Decay Experience

Refers to having active untreated decay, arrested decay or a dental filling, crown, or other type of restorative dental material. Includes teeth that were extracted because of tooth decay.

### Related Healthy People 2020 Objective

OH-1.2: Reduce the proportion of children aged 3-5 years who have dental caries experience

- Baseline: 33.3% of children aged 3 to 5 years had dental caries experience in 1999-2004
- Target: 30.0%

### Current National Estimate (NHANES, 2013-2016)<sup>1</sup>

- 27.9% of children aged 3-5 years had decay experience in 2013-2016
  - 37.5% of children aged 3-5 years **below 100% of federal poverty level** (FPL) had decay experience in 2013-2016

<sup>1</sup> NHANES 2013-2016, [healthypeople.gov/2020/data-search/](https://healthypeople.gov/2020/data-search/)



Table 3: Percentage of Head Start children with *untreated and/or arrested decay* by selected characteristics, 2021-2022

Demographic Characteristic	Number with Data	Percentage with Untreated Decay	Lower 95% CL	Upper 95% CL
<b>All Children</b>	<b>1,558</b>	<b>30.8</b>	<b>28.3</b>	<b>33.3</b>
<b>Age</b>				
3 years	397	29.6	23.1	36.2
4 years	864	30.3	27.3	33.3
5 years	294	33.4	29.2	37.6
<b>Sex</b>				
Female	785	29.1	25.7	32.6
Male	770	32.5	28.7	36.2
<b>Race/Ethnicity</b>				
Black	592	32.4	28.2	36.6
Hispanic	121	27.3	17.8	36.7
White	650	30.4	26.7	34.0
Another race or multi-racial	166	29.3	21.7	36.9
<b>Primary Language Spoken at Home</b>				
English	1,406	31.0	28.2	33.8
Another language	67	26.8	13.9	39.8
<b>Geographic Region</b>				
Upper peninsula & upper lower peninsula	93	31.2	27.2	35.2
Lower lower peninsula	921	30.4	26.4	34.4
Wayne, Oakland, Macomb	544	31.3	27.8	34.7

CL=Confidence limit

## Untreated and/or Arrested Decay

Refers to having dental cavities or tooth decay that has not received definitive restorative treatment. Includes teeth treated with silver diamine fluoride (SDF).

### Related Healthy People 2020 Objective

OH-2.2: Reduce the proportion of children aged 3-5 years with untreated/arrested dental decay

- Baseline: 23.8% of children aged 3 to 5 years had untreated/arrested dental decay in 1999-2004
- Target: 21.4%

### Current National Estimates (NHANES, 2013-2016)<sup>2</sup>

- 11.9% of children **aged 3-5 years** had untreated/arrested decay in **2013-2016**
  - 18.8% of children aged 3-5 years **below 100% of federal poverty level** (FPL) had decay experience in 2013-2016

<sup>2</sup> NHANES 2013-2016, [healthypeople.gov/2020/data-search/](https://healthypeople.gov/2020/data-search/)

Table 4: Percentage of Head Start children with *arrested decay (silver diamine fluoride treatment)* by selected characteristics, 2021-2022

Demographic Characteristic	Number with Data	Percentage with Arrested Decay	Lower 95% CL	Upper 95% CL
<b>All Children</b>	<b>1,555</b>	<b>1.2</b>	<b>0.4</b>	<b>2.0</b>
<b>Age</b>				
3 years	396	0.9	0.0	1.7
4 years	864	1.5	0.2	2.8
5 years	292	0.8	-0.1	1.8
<b>Sex</b>				
Female	783	1.4	0.3	2.4
Male	769	1.0	0.0	2.1
<b>Race/Ethnicity</b>				
Black	591	1.0	0.1	1.8
Hispanic	121	1.8	-1.1	4.7
White	649	1.5	0.3	2.8
Another race or multi-racial	165	0.0	0.0	0.0
<b>Primary Language Spoken at Home</b>				
English	1,403	1.1	0.3	1.8
Another language	67	5.0	-1.0	11.0
<b>Geographic Region</b>				
Upper peninsula & upper lower peninsula	93	1.1	-0.8	2.9
Lower lower peninsula	921	1.2	-0.1	2.5
Wayne, Oakland, Macomb	541	1.3	0.3	2.3

CL=Confidence limit

### Arrested Decay

Refers to dental cavities or tooth decay that have stopped progressing, generally associated with treatment using silver diamine fluoride.

#### Related Healthy People 2020 Objective

- None

#### Current National Estimates

- None

Table 5: Percentage of Head Start children with *protective dental sealants* by selected characteristics, 2021-2022

Demographic Characteristic	Number with Data	Percentage with Dental Sealants	Lower 95% CL	Upper 95% CL
<b>All Children</b>	<b>1,553</b>	<b>2.3</b>	<b>0.6</b>	<b>4.0</b>
<b>Age</b>				
3 years	396	1.5	0.0	3.0
4 years	863	3.0	0.4	5.6
5 years	291	0.9	-0.3	2.1
<b>Sex</b>				
Female	781	2.8	0.7	4.9
Male	769	1.8	0.2	3.3
<b>Race/Ethnicity</b>				
Black	590	2.7	0.1	5.3
Hispanic	121	5.2	0.6	9.8
White	648	1.5	0.4	2.7
Another race or multi-racial	165	1.9	-0.3	4.0
<b>Primary Language Spoken at Home</b>				
English	1,401	2.0	0.5	3.5
Another language	67	7.9	1.1	14.6
<b>Geographic Region</b>				
Upper peninsula & upper lower peninsula	93	3.2	-0.7	7.2
Lower lower peninsula	919	2.9	0.3	5.5
Wayne, Oakland, Macomb	541	0.4	-0.1	0.8

CL=Confidence limit

## Dental Sealants

Refers to plastic-like coatings that are applied to the chewing surfaces of back teeth. The applied sealant resin bonds into the grooves of teeth to form a protective physical barrier that prevents tooth decay.

### Related Healthy People 2020 Objective

**OH-2.2:** Increase the proportion of children aged 3-5 years with dental sealants

- Baseline: 1.4% of children aged 3 to 5 years had dental sealants in 1999-2004
- Target: 1.5%

### Current National Estimates (NHANES, 2011-2012)<sup>3</sup>

- 4.3% of children **aged 3-5 years** had a dental sealant in **2011-2012**
  - 2.9% of children aged 3-5 years **below 100% of federal poverty level** had sealants in 2011-2012
  - NOTE: NHANES estimates for 2013-2016 are not available because data did not meet the criteria for statistical reliability, data quality, or confidentiality.

<sup>3</sup> NHANES 2011-2012, [healthypeople.gov/2020/data-search/](https://healthypeople.gov/2020/data-search/)

Table 6: Percentage of Head Start children needing *early or urgent dental care* by selected characteristics, 2021-2022

Demographic Characteristic	Number with Data	Percentage Needing Dental Care	Lower 95% CL	Upper 95% CL
<b>All Children</b>	<b>1,546</b>	<b>29.3</b>	<b>26.9</b>	<b>31.6</b>
<b>Age</b>				
3 years	392	28.8	22.0	35.7
4 years	858	28.0	25.6	30.5
5 years	292	33.3	29.2	37.5
<b>Sex</b>				
Female	783	27.7	24.4	31.0
Male	760	30.9	27.4	34.4
<b>Race/Ethnicity</b>				
Black	593	31.2	27.1	35.4
Hispanic	120	26.9	17.4	36.4
White	640	28.1	24.4	31.7
Another race or multi-racial	164	28.4	21.1	35.7
<b>Primary Language Spoken at Home</b>				
English	1,394	29.5	26.9	32.1
Another language	67	24.4	12.6	36.3
<b>Geographic Region</b>				
Upper peninsula & upper lower peninsula	92	29.3	25.2	33.5
Lower lower peninsula	911	28.8	25.0	32.6
Wayne, Oakland, Macomb	543	30.2	27.1	33.4

CL=Confidence limit

## Early or Urgent Dental Care

Child needs to see a dentist within the next few weeks for restorative dental care.

### Related Healthy People 2020 Objective

- None

### Current National Estimates

- Not available

Table 7: Percentage of Head Start children needing *urgent dental care* by selected characteristics, 2021-2022

Demographic Characteristic	Number with Data	Percentage Needing Urgent Dental Care	Lower 95% CL	Upper 95% CL
<b>All Children</b>	<b>1,546</b>	<b>2.3</b>	<b>1.0</b>	<b>3.6</b>
<b>Age</b>				
3 years	392	2.3	-0.7	5.3
4 years	858	1.7	0.6	2.8
5 years	292	3.9	1.2	6.7
<b>Sex</b>				
Female	783	2.6	0.6	4.5
Male	760	2.0	1.0	3.1
<b>Race/Ethnicity</b>				
Black	593	2.3	0.5	4.1
Hispanic	120	2.7	-2.2	7.6
White	640	2.4	0.6	4.3
Another race or multi-racial	164	1.3	-0.3	2.9
<b>Primary Language Spoken at Home</b>				
English	1,394	2.3	1.0	3.7
Another language	67	1.3	-1.2	3.8
<b>Geographic Region</b>				
Upper peninsula & upper lower peninsula	92	4.3	-1.6	10.3
Lower lower peninsula	911	2.4	1.3	3.6
Wayne, Oakland, Macomb	543	0.7	0.0	1.4

CL=Confidence limit

## Urgent Dental Care

Child had pain or infection at the time of the screening and should receive dental care within the next 24-48 hours.

### Related Healthy People 2020 Objective

- None

### Current National Estimates

- Not available

Table 8: Percentage of Head Start children with *treated decay* by selected characteristics, 2021-2022

Demographic Characteristic	Number with Data	Percentage Needing Urgent Dental Care	Lower 95% CL	Upper 95% CL
<b>All Children</b>	<b>1,555</b>	<b>19.3</b>	<b>16.9</b>	<b>21.8</b>
<b>Age</b>				
3 years	396	11.0	7.0	15.1
4 years	865	21.8	18.7	24.9
5 years	291	22.5	16.7	28.3
<b>Sex</b>				
Female	783	18.9	15.9	21.8
Male	769	19.9	16.5	23.2
<b>Race/Ethnicity</b>				
Black	591	17.9	15.3	20.4
Hispanic	122	22.5	14.7	30.3
White	648	19.6	16.3	22.9
Another race or multi-racial	165	20.7	12.3	29.0
<b>Primary Language Spoken at Home</b>				
English	1,403	18.5	16.0	20.9
Another language	67	29.8	16.7	43.0
<b>Geographic Region</b>				
Upper peninsula & upper lower peninsula	93	20.4	13.6	27.3
Lower lower peninsula	921	20.6	17.3	24.0
Wayne, Oakland, Macomb	541	16.1	12.4	19.8

CL=Confidence limit

## Treated Decay

Child has had a dental filling, crown or a tooth extracted because of decay.

### Related Healthy People 2020 Objective

- None

### Current National Estimates

- Not available

Table 9: Percent of Michigan Head Start children with and without *treated and/or untreated decay*, 2017-2018 (n=2,006)

Has Untreated Decay	Has Treated Decay		Total
	No	Yes	
No	55.3	14.0	69.3
Yes	25.4	5.3	30.7
<b>Total</b>	<b>80.7</b>	<b>19.3</b>	<b>100.0</b>

Interpretation of Table 9:

- 55.3% of Michigan’s Head Start children are caries free (no treated or untreated decay)
- 25.4% of Michigan’s Head Start children have untreated decay and have never had dental treatment
- 5.3% of Michigan’s Head Start children have received dental treatment but still have untreated decay

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- <sup>12</sup> Association of State and Territorial Dental Directors (2015). Basic screening surveys: an approach to monitoring community oral health. <http://www.astdd.org/basic-screening-survey-tool/>.