



The Oral Health of Montana's Head Start Children, 2016

Montana Head Start children aged three to five vs.

Healthy People (HP) 2020 targets

OH-1.2 Proportion of children aged 3-5 years who have dental decay

MT Head Start 35.0%;

HP 2020 Target 30.0%

OH-2.2 Proportion of children aged 3-5 years with untreated dental decay

MT Head Start 14.2%

HP 2020 Target 21.4%

OH-12.1 Proportion of children aged 3-5 years who have received dental sealants on one or more primary molars.

MT Head Start 8.4%

HP 2020 Target 1.5%

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Good oral health is important to a child's social, physical and mental development. Although tooth decay can be prevented, most children in Montana still get cavities. To assess the current oral health status of Montana's Head Start children, the Oral Health Program at Montana Department of Public Health and Human Services coordinated a statewide oral health survey of children age three to five years attending Head Start. A total of 582 children received a dental screening at 18 Montana Region VIII Head Start centers.¹

This data brief presents information on the prevalence of tooth decay in the primary teeth of Montana children aged three to five years enrolled in Head Start compared to Healthy People 2020 targets and the general U.S. aged three to five year population screened as part of the National Health and Nutrition Examination Survey (NHANES). It also describes the prevalence of dental sealants, a plastic-like coating applied to the chewing surfaces of children's teeth to prevent tooth decay.

Data source and methods

Data for the Montana Oral Health Survey was collected during the 2015-2016 school year. The Montana survey screened children from a representative sample of Head Start centers. The sampling frame consisted of 46 Region VIII Head Start centers with enrollment of 15 or more children. A systematic probability proportional to size sampling scheme was used to select 20 Head Start centers. Two of the Head Start centers were large enough that they were selected twice, which resulted in a sample of 18 unique Head Start centers.¹ All of the centers agreed to participate. A combination of passive and positive consents were used. Head Start grantees located in American Indian Head Start centers in Region XI were not included in sampling.

Dental professionals performed the dental screenings, and the following information was collected for each child: age, sex, race/ethnicity, presence of treated decay, presence of untreated decay, urgency of need for dental care and presence of dental sealants. Basic Screening Survey clinical indicator definitions and data collection protocols were used in the data collection.²

Screeners collected data using paper forms and data were entered using Microsoft Access. All statistical analyses were performed using the complex survey procedures within SAS.³ Sample weights were used to produce population estimates based on selection probabilities. It should be noted that

NHANES data for children aged three to five years is from 2011-2012 and current disease levels may be different; unfortunately more current NHANES data is not available.

Head Start eligibility

Children from birth to age five years who are either: 1) from families with incomes below poverty guidelines, 2) homeless, 3) receive public assistance, or 4) foster children are eligible for Head Start enrollment. The Health and Human Services Poverty Guideline for 2015 enrollment was \$24,250 for a family of four.⁴

Decay experience

One in three (35.0%, 95% Confidence Interval, 29.5-40.4) children aged three to five years in the sample had decay experience. The proportion was similar to the U.S. estimate of 27.9% (22.5-34.0) of all children aged three to five years and lower than estimates for children aged three to five years living below 100% poverty guidelines, 49.3% (42.8-55.8). The Healthy People 2020 target for this health indicator is 30.0% (Figure).⁵ There were no statistically significant differences in decay experience based on county urban rural classification (Table).

Untreated decay

Nearly one in six (14.2%, CI 8.0-20.4) children screened had untreated decay. This proportion was similar to U.S. estimates for children aged three to five years, 11.7% (8.4-16.1) of all children and 23.7% (17.5-31.3) of those living in households below 100% poverty guidelines. The Healthy People 2020 target for children aged three to five years is 21.4%.⁵ Children residing in non-core counties were more likely to have untreated decay than those residing in micropolitan counties (Table). Among children with untreated decay, 1.1% (0.1-2.1) had an urgent dental need.

Dental sealants on primary molars

The prevalence of dental sealants on at least one primary molar was 8.4% (3.5-13.3) among children screened and was not statistically higher than the current NHANES U.S. estimate of 4.3% (2.8-6.6). Both Montana and U.S. estimates exceed the HP 2020 target of 1.5%, although children living in non-core communities were less likely to have dental sealants on primary molars (Table).⁵

Definitions

Decay experience: Refers to having untreated decay or a dental filling, crown, or other type of restorative dental material. Also includes teeth that were extracted because of tooth decay.

Untreated decay: Describes dental cavities or tooth decay that have not received appropriate treatment.

Dental sealants: Describes plastic-like coatings applied to the chewing surfaces of back teeth. The applied sealant bonds into the grooves of teeth to form a protective physical barrier.

Metropolitan: Counties with a population estimates over 50,000 residents or meet commuting criteria to a metropolitan statistical area.

Micropolitan: Counties with population estimates between 10,000 and 49,000 residents.

Non-core: Non-metropolitan counties that do not qualify as micropolitan.⁶

Conclusions

Low-income children aged three to five in Montana enrolled in Head Start experience a lower prevalence of dental decay than U.S. estimates for low-income children in the same age range. The proportion of children screened with untreated decay was not significantly lower than U.S. low-income estimates.

Data also indicate children in non-core areas of Montana have less preventive dental sealants than those living in metropolitan and micropolitan areas (Table). Findings may indicate that low-income, preschool-age children in less populated areas of Montana have decreased access to dental services.

Recommendations

Preventing dental disease during early childhood requires programs which increase access to care for high-risk populations such as:

- Preventive interventions during pregnancy among high-risk families, to reduce the transmission of decay-causing bacteria from mother to child.
- Integration of dental assessments during early childhood, with anticipatory guidance to support adequate fluoride and reduction of nutritional risks.
- Continue to increase oral health literacy in Montana communities to support early prevention, such as fluoridation and dental sealants.

¹ Montana DPHHS Oral Health Program, Oral Health Survey, 2016.

² Association of State and Territorial Dental Directors. Basic screening surveys: an approach to monitoring community oral health. [web document]. <https://www.astdd.org/docs/bss-childrens-manual-july-2017.pdf>

³ SAS Version 9.3; SAS Institute Inc., Cary NC

⁴ U.S. Department of Health & Human Services. (2015). Office of the Assistant Secretary for planning and evaluation. [webpage] <https://aspe.hhs.gov/2015-poverty-guidelines>

⁵ U.S. Department of Health & Human Services. (2016). Healthy People 2020: Oral health objectives. [webpage] <https://www.healthypeople.gov/2020/topics-objectives/topic/oral-health/objectives> Accessed November 25, 2016.

⁶ Montana Department of Public Health and Human Services. (2016). Urban rural classification data orientation. <https://dphhs.mt.gov/assets/publichealth/BRFSS/BRFSSUrbanRural2016.pdf>

Table. Percent of Montana's Region VIII three to five year old Head Start children with decay experience, untreated decay and dental sealants on primary molar teeth by selected characteristics, 2015-2016.

Demographic Characteristic	Percent with decay experience (CI)* n=551	Percent with untreated decay (CI)* n=572	Percent with dental sealant on at least one primary molar (CI)* n=376
All children	35.0 (29.5-40.4)	14.2 (8.0-20.5)	8.4 (3.5-13.3)
Gender			
Male	33.5 (26.0-40.9)	13.9 (7.7-20.2)	9.0 (1.8-16.3)
Female	36.4 (28.4-44.4)	14.2 (7.0-21.4)	8.1 (2.5-13.7)
Race/Ethnicity			
White	37.2 (31.4-42.9)	13.4 (7.1-19.7)	5.6 (1.4-9.8)
Other	30.5 (17.0-43.9)	9.5 (1.5-17.6)	Data not reportable
Urban-Rural Classification			
Metropolitan	32.7 (26.9-38.5)	8.7 (1.3-16.2)	8.3 (1.8-14.9)
Micropolitan	34.3 (24.7-43.9)	6.3 (0.0-13.6)	13.6 (6.2-21.1)
Non-core	37.3 (26.7-47.9)	23.8 (14.9-32.7)	0.4 (0.0-1.2)

* represents 95% confidence intervals