MONTANA PUBLIC HEALTH
June 2015
Vol. 10, Issue 6
www.dphhs.mt.gov
PREVENTION OPPORTUNITIES UNDER THE BIG SKY

Don't Forget to Brush and Floss — Dental Decay Among Montana's 3rd Grade Children

Dental decay (dental caries) remains the most common chronic infection among U.S. children. The presence of bacteria on teeth causes breakdown of tooth enamel and leads to dental decay. Dental decay is associated with poor nutrition, other chronic diseases, and financial burden throughout the lifespan. Children from lower income families and those classified as American Indian/Alaskan Native (AI/AN) and Hispanic are at higher risk of dental decay.[1] Prevention of cavities can occur through drinking fluoridated water and application to children's teeth of fluoride varnish and dental sealants (plastic coatings applied to chewing surfaces of back teeth).

During the previous decade public health strategies were implemented to reduce the burden of dental decay among high-risk children. In 2009, the Medicaid Program began allowing physician application of fluoride varnish in primary care settings.[2] Dental providers were offered incentives for preventive dental services for children aged 0–5 years per the Access to Baby and Child Dentistry program.[3] In this issue of *Montana Public Health*, we use surveillance data to compare oral health indicators from 2006 and 2014 for Montana's 3rd grade children.

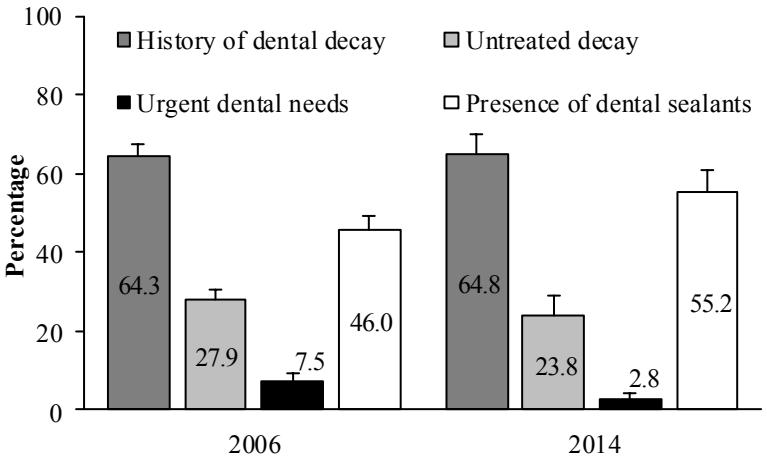
Methods

Surveillance data were obtained from dental screenings conducted among 3rd grade children in selected Montana public and Bureau of Indian Education schools during 2006 and 2014. School selection was randomized and stratified by population density of county and participation in the national school lunch program (NSLP). The percentage of children eligible for the NSLP was used to determine the income status for school populations. Trained dental providers completed dental screenings using the Basic Screening Survey.[4] Data collected included race/ethnicity, history of dental decay, untreated dental decay, urgency of dental need, and presence of dental sealants. Data were weighted to represent the 3rd grade population within each sampling interval.

Results

During 2006 and 2014, 30 and 40 schools participated in the surveillance program, respectively (**Table**). Approximately two-thirds of surveyed Montana 3rd graders in 2006 and 2014 had a history of dental decay (**Figure 1**). For both 2006 and 2014 the rate of untreated decay remained higher than the Healthy People 2010 target of 21%. Among children identified with dental needs, less than 3% had urgent needs in 2014 compared with over 7% in 2006. The percentage of children with the presence of preventive dental sealants increased nearly 10% since 2006 and is above the Healthy People 2010 objective for the percentage of children with dental sealants of 50%. In 2014, over 92% of AI/AN children had a history of dental decay and over 56% had untreated decay, compared with 58% and 18% of white children classified, respectively (**Figure 2**).

Figure 1. Percentage* of 3rd grade children with dental decay, untreated dental decay, urgent dental needs, and presence of dental sealants, Montana, 2006 and 2014.



*Error bars represent 95% confidence intervals

Percentage of 3rd grade children with **Dental Decay** remained unchanged from 2006 to 2014

~2 out of **3** of Montana 3rd grade children have a history of dental decay compared with 1 of 2 of U.S. 3rd grade children

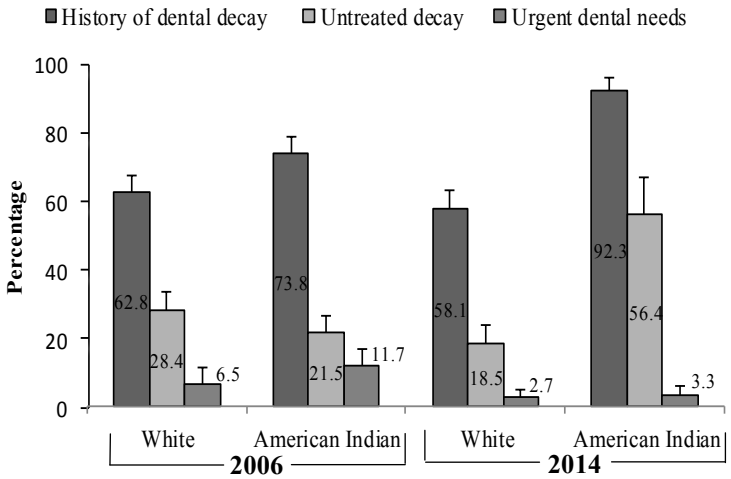
From 2006 to 2014, the percentage of MT 3rd graders with:

- **Untreated** dental decay decreased
- **Urgent** dental needs decreased
- Preventive **Dental Sealants** increased

Table. Characteristics of schools and students participating in screening of 3rd grade children for dental decay, Montana, 2006 and 2014.

Characteristic	2006 n (%)	2014 n (%)
Participating schools	30	40
County density		
Urban	4 (13)	4 (10)
Rural	10 (33)	24 (60)
Frontier	16 (54)	12 (30)
Students	957	1,862
Enrolled in National School Lunch Program participating schools	518 (54)	Data not available
Race		
White	856 (89)	1191(64)
American Indian/Alaskan Native	41 (4)	255 (14)

Figure 2. Percentage* of 3rd grade children with history of dental decay, untreated decay, and urgent dental needs by race/ethnicity, Montana, 2006 and 2014.



*Error bars represent 95% confidence intervals

Recommendations for Healthcare Providers

- All healthcare providers should consider that early dental health prevention can result in improved health and reduce dental care costs throughout the patient's lifespan
- Primary care providers should conduct dental decay risk assessments during well-child visits and refer to dental providers by age 1 year. A risk assessment tool is available at http://dphhs.mt.gov/publichealth/oralhealth/OHMedicalProviders.aspx
- Dental providers should provide early preventive care for children enrolled in Montana Medicaid per the Access to Baby and Child Dentistry program, www.brightsmilesmontana.com
- Encourage evidence-based strategies in preventing dental decay such as optimal fluoridation of public water supplies, other topical fluorides (toothpaste and professional applications), and dental sealants

For more information, contact Tonette Hollingsworth in the DPHHS Oral Health Program at 406-444-2660.

References:

[1]National Institute of Dental and Craniofacial Research. Dental Caries (Tooth Decay) [Webpage]. http://www.nidcr.nih.gov/datastatistics/finddatabytopic/dentalcaries/ Accessed May 14, 2015

[2]Montana DPHHS, Montana Healthcare Program Notice, July 7, 2009. retrieved from http://dphhs.mt.gov/publichealth/oralhealth/OHMedicalProviders.aspx

[3]Bright Smiles Montana [Webpage]. http://www.brightsmilesmontana.com/dental_professionals/ Accessed May 14, 2015

[4] Association of State and Territorial Dental Directors. Basic screening surveys: an approach to monitoring community oral health. http://www.astdd.org/basic-screening-survey-tool

1,980 copies of this public document were published at an estimated cost of $0.663 per copy, for a total cost of $1,312.74 which includes $401.94 for printing and $910.80 for distribution.

Richard Opper, Director, DPHHS
Todd Harwell MPH, Administrator, PHSD