

TOOTH DECAY – A MAJOR PROBLEM FOR NATIVE PRESCHOOL CHILDREN

Tooth decay in children is one of the major health problems in the United States – especially among low-income and minority populations. If left untreated, tooth decay can affect a child’s growth, result in significant pain and potentially life-threatening infection, and diminish a child’s overall quality of life. When tooth decay occurs in children 5 years of age or younger it is referred to as early childhood caries (ECC). Due to their young age, treatment of preschool children with ECC is often provided in a hospital-based operating room under general anesthesia. Because of this, the cost of treatment can be enormous and the risk to the child can be substantial. The good news is that tooth decay is largely preventable through early risk assessment and comprehensive prevention strategies at the individual, community and dental practice level.

THE ORAL HEALTH SURVEY

To describe the oral health of Native American preschool children, at both the national and Area level the Indian Health Service (IHS), Division of Oral Health worked with tribal and IHS dental programs to coordinate a national oral health survey. Native children received a dental screening at medical and well-child clinics, WIC clinics, Early Head Start, Head Start, tribal preschools, kindergartens, and community events. Nationally, almost 8,500 Native children 1-5 years of age were screened at 63 different tribal and IHS sites. In the Portland Area, 594 Native children were screened at 7 different sites; approximately 7% of the Portland Area IHS user population between 1-5 years of age.



KEY FINDINGS

These findings highlight the current oral health of Native American preschool children in the Portland Area.

- Tooth decay is a significant health problem for Native American preschool children.
- Early prevention, before the age of two, is essential to reduce the prevalence of tooth decay in Native American preschool children.
- Many Native American preschool children are not getting the dental care they need.
- Native American preschool children continue to have more dental disease than other minority populations in the United States.
- Some IHS Areas are doing better than Portland while children in other IHS Areas have poorer oral health.

Participating Clinics/Sites

- Northern Idaho
- Northwest Washington (Lummi)
- Puyallup
- Umatilla
- Wellpinit
- Western Oregon (Grand Ronde)
- Yakama

Oral Health Status of 1-5 Year Old Native American Children in the Portland Area

- 54% of children have tooth decay experience
- 36% have untreated decay and need dental care
- 5% of children have an urgent need for dental care which means that they had pain or an infection
- Children in the Portland Area have, on average, more than 3 teeth with decay experience

Oral Health Status of 1-5 Year Old Native American Children by Clinic/Site

Clinic/Site	Number Screened	% with Decay Experience	% with Untreated Decay	Mean Number of Teeth with Decay Experience
Northern Idaho	77	55.3	29.8	2.55
Northwest Washington (Lummi)	121	65.5	51.0	5.03
Puyallup	16	NA	NA	NA
Umatilla	67	37.0	24.0	1.71
Wellpinit	37	75.4	53.0	5.12
Western Oregon (Grand Ronde)	39	33.2	21.5	1.44
Yakama	237	51.0	35.0	3.01
Portland Area Total	594	56.7	35.7	3.69
Indian Health Service	8,461	54.1	38.5	3.50

The Impact of Poor Oral Health

Jason is a true example of how poor oral health can affect a child. Four year old Jason had many issues when he arrived at Head Start. He was frail and never ate well at meal times. He had speech and language problems, as well as behavioral issues such as being withdrawn, keeping his eyes downward, lack of desire to play with others and abruptly striking out at other children. Developmental screenings tests were administered but it wasn't until someone looked in his mouth that the problem was found. Jason had significant tooth decay and multiple abscesses. When asked if his mouth hurt, his answer was always "no". He considered pain to be normal. After getting his teeth fixed, Jason transformed. He plays well with others, speaks well and demonstrates good cognitive skills. Most of all, he is positive, interacts with his classmates and there are smiles on his face every day.

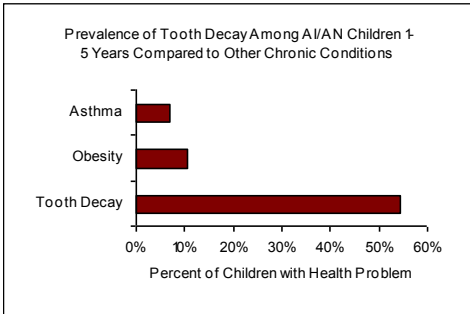
KEY FINDING #1: TOOTH DECAY IS A SIGNIFICANT HEALTH PROBLEM FOR NATIVE AMERICAN PRESCHOOL CHILDREN IN THE PORTLAND AREA.

Tooth decay is an infectious disease process affecting both children and adults. Among Native American children, tooth decay is the single most common chronic disease, six times more common than asthma. Of the 1-5 year old children in the Portland Area, 54% have experienced tooth decay.

The public perception is that tooth decay is a natural and minor occurrence that deserves little attention or dollars. If left untreated, however, it can cause needless pain, suffering, and infection.



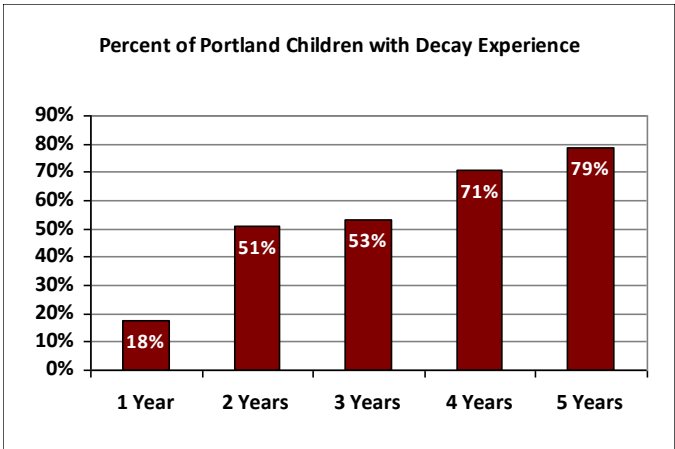
But the manifestations of tooth decay in young children go beyond pain and infection. If left untreated, tooth decay may affect a child's ability to eat, communicate, and learn. In extreme cases, tooth decay in early childhood and its treatment can lead to serious disability and even death. In addition, preschool children with advanced decay weigh significantly less than their counterparts and are more likely to weigh less than 80% of their ideal weight – a diagnostic criterion for failure to thrive.



KEY FINDING #2: EARLY PREVENTION, BEFORE THE AGE OF TWO, IS ESSENTIAL TO REDUCE THE PREVALENCE OF TOOTH DECAY IN NATIVE AMERICAN PRESCHOOL CHILDREN.

If we want to eradicate dental disease in Native American children, we have to get them started right with early prevention efforts. Look at the graph: 18% of 1-year old Native children in the Portland Area already have decayed teeth - and the percentage with a history of decay rises significantly with age. To prevent this infectious disease from occurring and spreading, we have to start before the age at which children already have the disease.

This means that the medical and dental professions must focus dental disease prevention efforts on children less 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 early preventive dental care and parent education. Good oral hygiene and dietary habits should start at birth and children should have regular dental visits starting at 1 year of age.



KEY FINDING #3: MANY NATIVE AMERICAN PRESCHOOL CHILDREN ARE NOT GETTING THE DENTAL CARE THEY NEED.

About 35% of the 1-5 year old children screened in the Portland Area had a need for dental care - with about 5% needing urgent dental care because of pain or infection. Due to their young age, treatment of preschool children with decay is often provided in a hospital-based operating room under general anesthesia. Because of this, the cost of treatment can be enormous and the risk to the child can be substantial. On average, the total cost of treating a child's dental disease in the hospital under general anesthesia in 1994 was \$2,000. Anecdotal information suggests that the current cost of treating a child's dental disease in a hospital setting ranges from \$6,000-\$12,000 per child. National Medicaid cost estimates for the hospital treatment of early childhood tooth decay in 2000 were estimated to be \$100 to \$200 million annually.

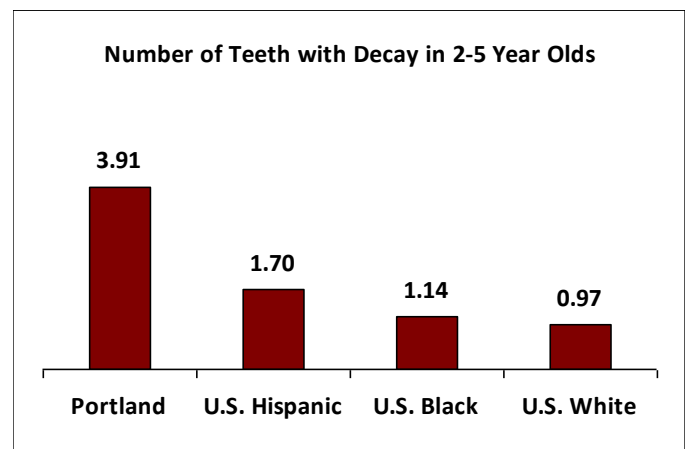


For this oral health survey we did not do complete diagnostic dental examinations. We did dental screenings - "Say 'Ah,'" a look inside with a dental mirror, no x-rays and none of the more advanced diagnostic tools. Because of this we probably missed some problems. It is reasonable to assume that these numbers actually underestimate the proportion of children needing dental care.

KEY FINDING #4: NATIVE AMERICAN PRESCHOOL CHILDREN CONTINUE TO HAVE MORE DENTAL DISEASE THAN OTHER MINORITY POPULATIONS IN THE UNITED STATES.

Over the years, oral health has improved for most Americans, thanks in part to an increased focus on prevention. However, not all Americans have benefitted equally. For many racial and ethnic minorities in the United States, good oral health is elusive, since appropriate preventive and restorative dental care is often associated with an individual's economic status. While Americans as a group are healthier, the nation's health status will never be as good as it can be as long as there are segments of the population with poor health.

As depicted in the graph, Native American preschool children in the Portland Area have the highest tooth decay rate of any population group in the United States – almost 4 times higher than white non-Hispanic children. This disparity exists in spite of the implementation of dental decay prevention programs by IHS and tribes, including fluoridation of community water systems, the use of topical fluorides and dental sealants, and oral health educational programs for children and parents.



KEY FINDING #5: SOME IHS AREAS ARE DOING BETTER THAN PORTLAND WHILE CHILDREN IN OTHER IHS AREAS HAVE POORER ORAL HEALTH.

The Surgeon General's Report on Oral Health points out the disparities in oral health that continue to exist in the United States, particularly between the population as a whole and minority groups within it. Not only are there disparities between Native American children and the U.S. population as a whole, but there are disparities between Native subpopulations. Even today, previously described tribal and regional variations in the prevalence of oral disease persist.

By 2 years of age, most children have 20 teeth. This graph shows the average number of teeth that have had cavities in the 2-5 year old children screened. For example, the 2-5 year old children in the Portland Area have, on average, almost 4 teeth with cavities. Children in the Oklahoma Area had the lowest level of decay while children in the Navajo Area had the highest decay rate.

