

Appendix A – The Burden of Oral Disease in Nevada - 2005

In 1948, the World Health Organization defined health as “a complete state of physical, mental, and social well-being, and not just the absence of infirmity.” As new research continues to discover associations between chronic oral disease with heart and lung diseases, low birth-weight, and diabetes, it is becoming clear that a person cannot attain a complete state of good health without good *oral* health.

According to *Oral Health in America: A Report of the Surgeon General*, a silent epidemic of oral disease exists in our nation. The fact that most oral disease is unseen and/or unacknowledged, does not lessen the pain, suffering, and economic impact that result from its presence.

The Burden of Oral Disease in Nevada - 2005 summarizes data collected from numerous sources. Oral health data is organized by age group: preschoolers from Head Start, children (estimated by 3rd grade students), adolescents, adults, and seniors. Incidence and mortality rates of Nevadans due to oral cancer, which includes disease of the lips, pharynx, and oral cavity, are also reported.

HEAD START PRESCHOOLERS

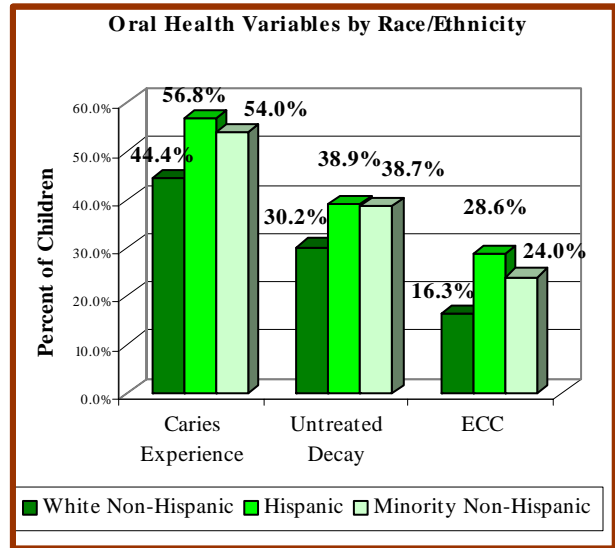
Oral diseases are cumulative and become more complex over time. They progressively affect a person’s ability to eat, communicate, and function in society. According to *Oral Health in America: A Report of the Surgeon General*, tooth decay is the single most common chronic childhood disease, with poor children experiencing twice as much decay as non-poor children.

In 2004, a screening survey of Head Start children in Nevada supported the Surgeon General’s findings. The results showed that:

- 54% of Head Start children had caries experience
- 38% of Head Start children had untreated decay
- 25% of Head Start children had Early Childhood Caries (ECC)
- 37% of Head Start children were in need of either restorative or urgent dental care
- 22% of parents had trouble accessing dental care during the last year

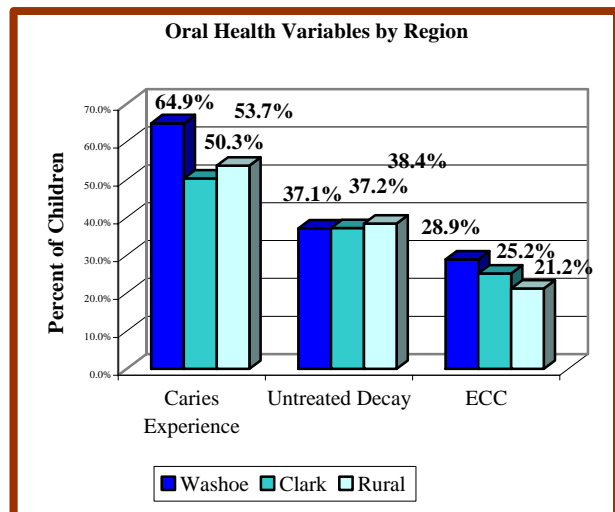
It was evident from the survey results that racial/ethnic disparities existed in all three oral health indicators.

Figure 1.



Regional differences were also found. Unexpectedly, a higher proportion of children in Washoe County had caries experience than Clark County and rural areas. A higher proportion of children in Washoe County had ECC than Clark County and rural areas. These results suggest that the positive effects of fluoridation in Clark County, implemented in 2000, may now be surfacing.

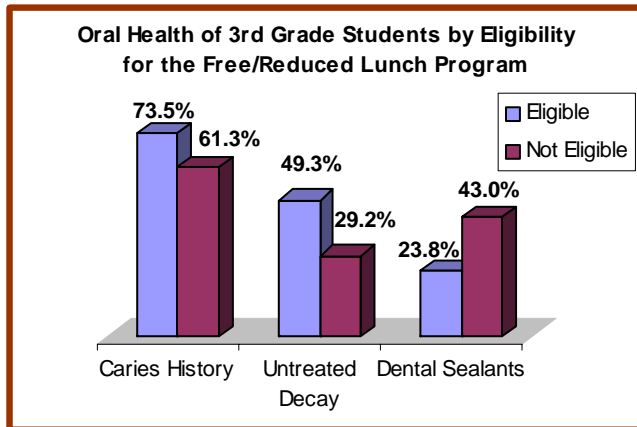
Figure 2.



THIRD GRADE CHILDREN

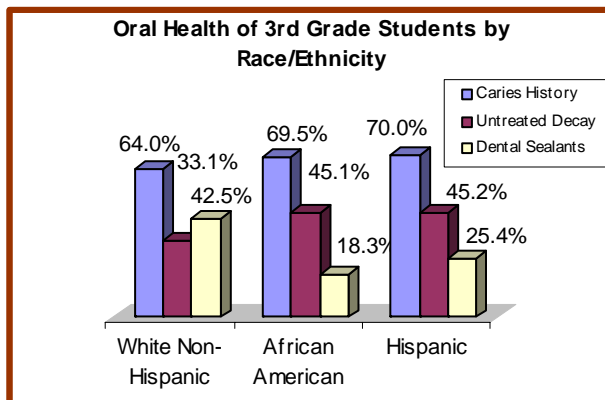
All Head Start children are from families at or below the federal poverty guidelines. However, for children of other age groups, the Oral Health Program must use participation in the Free/Reduced Lunch Program as an indicator of socioeconomic status. A study of third grade children in Nevada (2003) showed that a significantly higher proportion of children eligible for the meal program, compared to those not eligible, had a history of caries (74% vs. 61%), had untreated decay (49% vs. 29%), and had a need for urgent dental care because of pain or infection (11% vs. 3%).

Figure 3.



When controlled for socioeconomic status, minority children have more untreated decay than their counterparts. There is also a distinction between the oral health of children having dental insurance and those who do not. Compared to children with dental insurance, children without insurance were more likely to have untreated decay (35% vs. 47%) and less likely to have dental sealants (39% vs. 21%).

Figure 4.



Other key findings of the study showed:

- 67% of children had cavities/fillings
- 33% of children had dental sealants
- Only 58% of parents reported that their child had seen a dentist within the last 12 months
- 11% of parents reported that their child had never been to a dentist
- 20% reported that they had trouble accessing dental care during the last year; the primary reasons being cost and no insurance
- 65% reported that their child had some type of dental insurance coverage

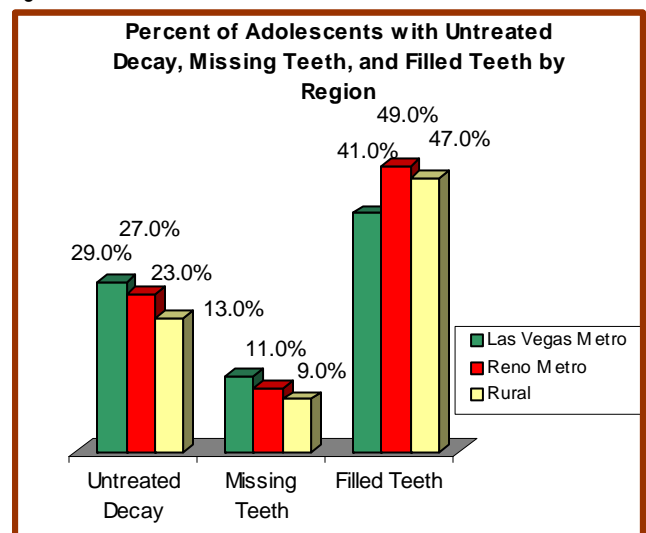
ADOLESCENTS

New risk factors are introduced in the teen cohort, such as eating disorders, alcohol consumption and tobacco use. Data provided by the Crackdown on Cancer program shows that these risk factors may have an effect on oral health. It is estimated that 16 percent of adolescents are tobacco users. Forty-two percent of oral lesions were found among those tobacco users.

The program was able to record the actual number of teeth affected by dental caries in each student. It was found that the DMFT (sum of decayed, missing and filled teeth per student) was 2.74, and 60 percent of the students had caries experience.

The percentage of adolescents with decayed, missing, and filled teeth is shown below by region.

Figure 5.

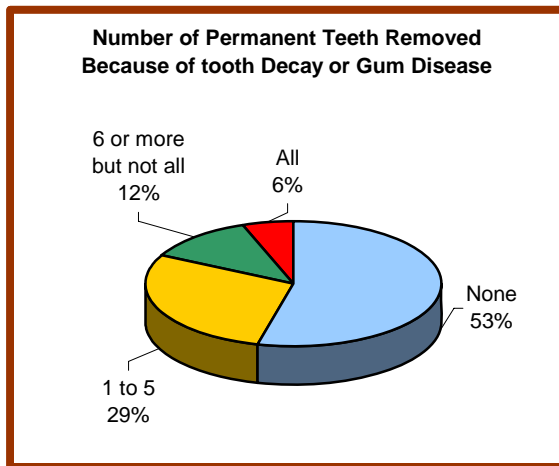


For the 2004-2005 academic year, 85 percent of students age 14-18 had 8 or fewer sealants. Fifty-four percent of the students screened had no sealants. More students from Northern Nevada (67%) and rural areas (69%) had sealants than those from the Las Vegas area (27%).

ADULTS AND SENIORS

According to the 2004 Behavioral Risk Factor Surveillance Survey (BRFSS), although 64.5 percent of adults have visited a dentist or dental clinic within the past year, there is much room for improvement. About 22.9 percent have not received dental services for 2 or more years. About the same percentage (22.1) have not had their teeth cleaned by a dentist or hygienist for 2 or more years. A large percentage of adults and seniors have also lost one or more teeth due to tooth decay or gum disease.

Figure 6.



The most recent BRFSS data estimate that 17 percent of seniors 65 and over have lost all of their natural teeth due to decay or gum disease. Approximately 65 percent of seniors claimed to have visited a dentist, hygienist, or dental clinic within the past year, even though 58 percent had no insurance coverage for dental care. In 2005, a screening of seniors in assisted living facilities in Nevada found the following:

- 76% of seniors had cavities/fillings
- 24% of seniors had untreated decay
- 23% had lost all of their natural teeth
- 2% were in need of urgent dental care

Nearly 20 percent more seniors in Washoe County (35%) and the rest of the state (36%) had untreated decay than seniors in Clark County (17%). There were no differences in the need for urgent care in Washoe County

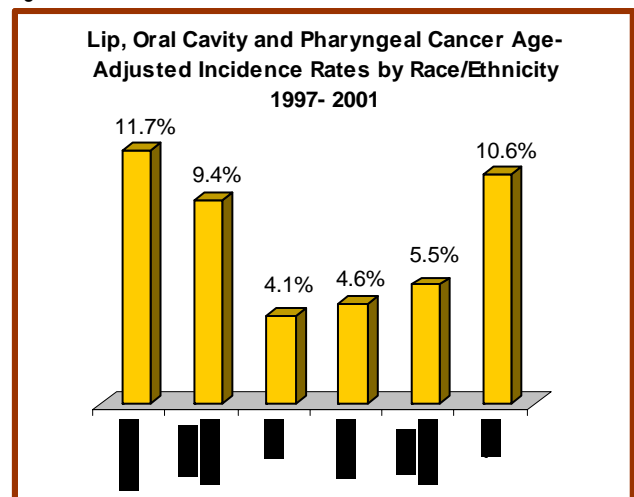
and Clark County (1% in each region). However, both regions differed from the rest of the state, where seven percent of seniors needed urgent care.

ORAL CANCER

From 1998-2002, the incidence rate for lip, oral cavity, and pharyngeal cancers was more than twice as high for men as for women (16.8 cases per 100,000 compared to 6.7, respectively). Nevada's total incidence rate (10.8) was nearly equal to the national rate (10.7). Whites experienced the highest incidence rate of any other racial/ethnic group at 11.6 cases per 100,000 population. However, the mortality rate of African Americans (3.1) was higher than that of Whites (2.7).

Similarly, the mortality rate for men (3.2) from lip, oral cavity and pharynx cancer was higher than that for women (1.8). Between 1998 and 2002, Nevada had 225 deaths from oral cancer, equaling a mortality rate of 2.5 per 100,000 population.

Figure 7.



The median age at diagnosis of Lip, Oral Cavity and Pharynx Cancer for Nevada residents between 1997 and 2001 was 62 years; the mean survival time from diagnosis was 3.82 years. Nevadans were diagnosed at one of five possible stages: in situ, localized, regional, distant, and unstaged (unknown). A decline in survival rates is suggested as the extent of disease increases in severity. The five-year survival rate (1997-2001) for Nevadans with oral cancer at the localized stage was 64.7 percent. The survival rate for those diagnosed at the regional stage was 49.2 percent. Between 1998 and 2002, the five-year survival rate for women (55.7%) was nearly equal to that for men (54.7%).

PROGRESS

Healthy People 2010 is a comprehensive plan for nationwide health promotion and disease prevention. Although it focuses on improving the health of the entire nation, it does provide a guideline for Nevada's efforts. Nevada has met only three of the Healthy People 2010 objectives for oral health described below (indicated by ✓).

- Reduce the proportion of children and adolescents with dental caries experience

	Nevada Now	HP2010 Target
Preschoolers	54%	11%
Children	67%	42%
Adolescents	60%	51%

- Reduce the proportion of children and adolescents with untreated dental decay

	Nevada Now	HP2010 Target
Preschoolers	38%	9.0%
Children	39%	21%
Adolescents	27%	15%

- ✓ Reduce the proportion of older adults who have had all their natural teeth extracted

	Nevada Now	HP2010 Target
Seniors*	17%	20%

- ✓ Increase the proportion of adults who have never had a permanent tooth extracted because of dental caries or periodontal disease

	Nevada Now	HP2010 Target
Adults*	53%	42%

- ✓ Increase the proportion of oral cancers diagnosed in Stage I (localized)

	Nevada Now	HP2010 Target
Stage I Diag.	39%	21%

- Increase the proportion of the population served by community water systems with optimally fluoridated water

	Nevada Now	HP2010 Target
Fluoridated	71%	75%

- Increase the proportion of children and adolescents with dental sealants

	Nevada Now	HP2010 Target
Children	33%	50%
Adolescents	46%	50%

- Increase the proportion of low-income children and adolescents who received any preventive dental services in the past year

	Nevada Now	HP2010 Target
Ages 0-18	11%	57%

SUMMARY

Pain and suffering due to oral diseases can lead to problems in eating, speaking, and attending to everyday tasks for people of all ages, rendering Nevadans unproductive and unhappy. More than 51 million school hours and 164 million work hours are lost each year due to dental related illness. Nevada must focus on prevention of oral diseases to combat these negative effects.

Considerable improvement is needed in order to bring Nevada's oral health status up to the Healthy People 2010 standards. Some proportions must be improved by as much as 46 percent. These disparities imply that the quality of life of Nevadans can, and must, be improved. Safe and effective evidence based methods exist for preventing disease, improving oral health and reducing disparities. Implementing these strategies will require public health infrastructure, a strong surveillance system, public education and media campaigns, and the establishment of public and private partnerships. Only a strong and ongoing effort will reduce the burden of oral disease in Nevada. It is essential to address the "silent epidemic" as oral health is an essential component of health throughout life.