

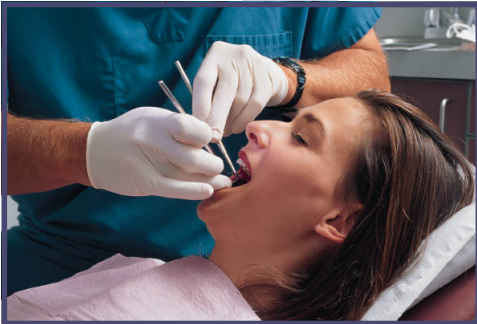
## Chapter 11

# Oral Health

Variations in oral health status typically exist among population subgroups. Higher levels of tooth decay generally are found among minorities, poor and low-income families, and children whose parents have less than a high school education. These high rates may be related to limited access to oral health services, poor hygiene, and diet.

Highlights of this chapter include:

- ◆ In 2001, about 75% of Sonoma County residents age 2 and older had been to the dentist in the past year.
- ◆ Fluoridation levels of drinking water in Sonoma County fall short of the Healthy People 2010 goal of 75% of community water systems with optimally fluoridated water.



### In this chapter:

Oral Cancer .....	104
Oral Health Needs .....	105
Oral Health Services .....	105
Seniors and Oral Health .....	106
Prevention Measures .....	106
Chapter References .....	107

Dental decay, periodontal disease, and tooth loss rank among the most preventable health problems in the nation. Oral disease can significantly impact an individual's general health and well-being. Bacteria found in periodontal diseases have been associated with heart attacks in adults and slow physical growth in young children, and can lead to premature birth and/or low birth weight, which in turn cause an increase in poor birth outcomes and neonatal mortality.<sup>1</sup>

Consequences of untreated oral disease include difficulty in eating and speaking, poor nutritional status, diminished self-esteem, severe pain and suffering, disfigurement, and sometimes death.<sup>2</sup>

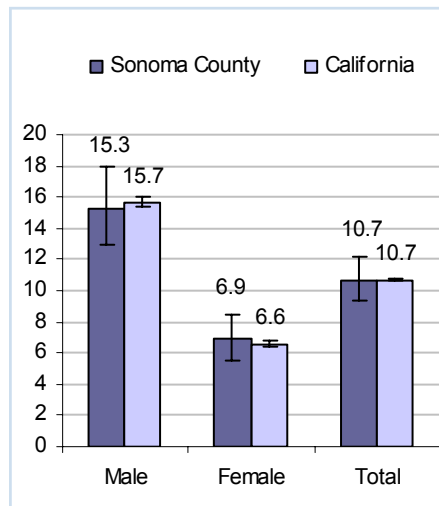
## Oral Cancer

Each year more than 30,000 new cases of cancer of the oral cavity and pharynx are diagnosed nationally, and over 8,000 deaths due to oral cancer occur. Most of these diagnoses are in the elderly. Methods used to treat oral cancers (surgery, radiation, and chemotherapy) are disfiguring and costly.<sup>3</sup>

Approximately 50% of individuals with oral or pharynx cancers will live for more than five years after diagnosis and treatment. If the cancer is detected early, before it has spread to other tissues, the five-year survival rate is nearly 75%.<sup>4</sup>

Mortality from oral cancer is nearly

**Figure 11.1**  
Oral and Pharyngeal Cancer Rates\*,  
Sonoma County and California 1997-  
2001



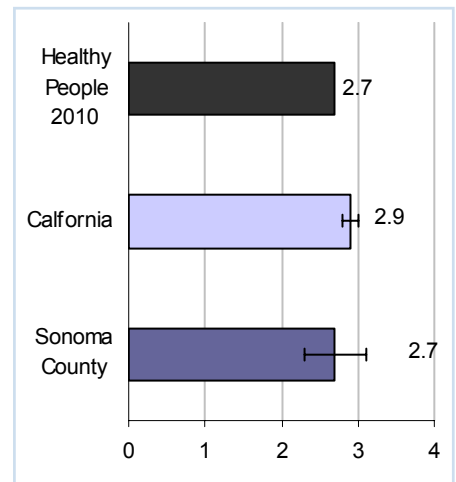
\*Rates are age-adjusted and per 100,000 population.  
Source: National Cancer Institute, State Cancer Profiles, incidence rates Sonoma County and California 1997-2001.

twice as high in some minorities (especially African American males) as it is in Whites.<sup>5</sup>

Smoking and other tobacco use are associated with 70-80% of oral cancer cases.<sup>6</sup> Preventing high risk behaviors, including cigarette, cigar or pipe smoking, use of smokeless tobacco, and excessive use of alcohol, is critical in preventing oral cancers. Early detection is key to increasing the survival rate for these cancers.<sup>7</sup>

From 1997 to 2001, the age-adjusted oral/pharyngeal cancer incidence rate for Sonoma County was similar to the California rate (Figure 11.1).<sup>8</sup>

**Figure 11.2**  
Oral and Pharyngeal Cancer Death  
Rates\*, Sonoma County and California  
1997-2001



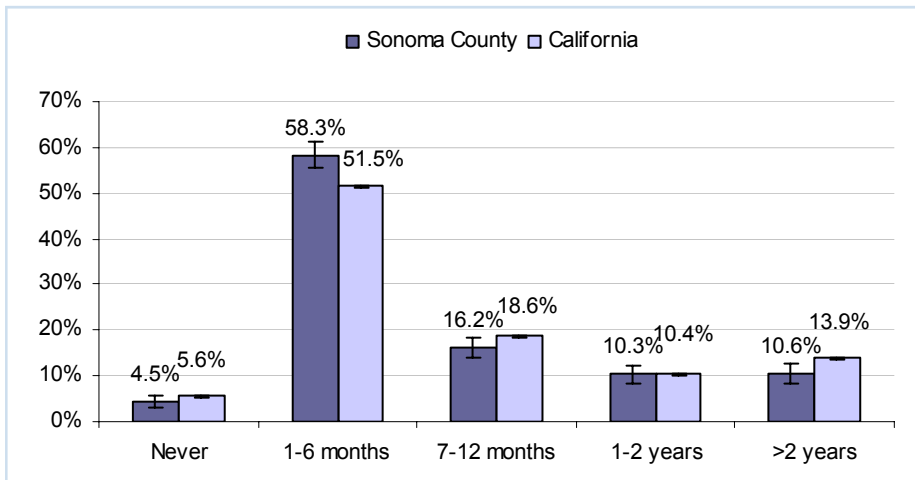
\*Rates are age-adjusted and per 100,000 population.  
Source: California Department of Health Services, vital statistics death records 1999-2002, and California Department of Health Services report "Cancer in California 1988-1999" December 2001.

Males in Sonoma County had a significantly higher incidence rate of oral/pharyngeal cancer than females. Both males and females in the county had incidence rates similar to California males and females.

Sonoma County has met the Healthy People 2010 goal for oral cancer deaths (Figure 11.2). The Sonoma County oral and pharyngeal cancer death rate is similar to the California rate. Although this rate has not changed significantly since 1997, there has been a decreasing trend in the county over the past 25 years.



**Figure 11.3**  
Time Since Last Dental Visit, age 2+, Sonoma County and California 2001 and 2003



Source: California Health Interview Survey, Sonoma County and California 2001 and 2003.

## Oral Health Needs

Promotion of oral health requires self-care and professional care, as well as population-based initiatives. Several national surveys show that the proportion of the U.S. population that made at least one annual dental visit, and the average number of visits made, vary significantly by age, race, dental status, level of education, and family income.<sup>9</sup>

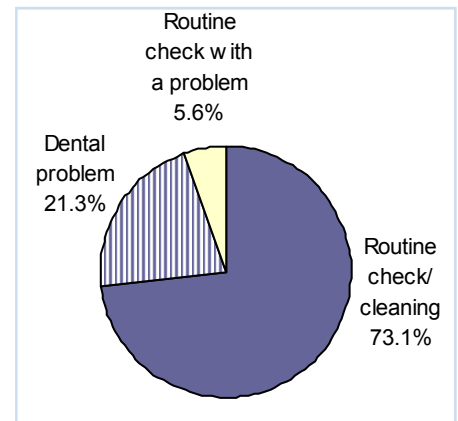
According to the California Health Interview Survey, approximately 30% of Sonoma County children age 2-11 did not have dental insurance in 2001.<sup>10</sup> Even families who have private dental insurance often face barriers to receiving care, such as long waits for preventive care appointments, expensive co-pays, limited coverage, and difficulty

finding approved dental providers. Families who have medical insurance but no dental insurance are not eligible for dental-only coverage through Healthy Families, even though they meet the income criteria.<sup>11</sup>

A significantly higher proportion of residents age 2+ from Sonoma County reported they had been to the dentist in the past year compared to California (Figure 11.3). However, more than 20% of Sonoma County low-income (200% Federal Poverty Level or FPL) residents age 2+ reported not having been to the dentist in over two years. This rate is even higher for those <99% FPL (30.1%).<sup>12</sup>

Of those Sonoma County residents who had visited an oral health professional, the primary reason for their last visit was a routine check-

**Figure 11.4**  
Reason for Last Visit to Dentist, Hygienist, or Orthodontist, age 2+, Sonoma County 2001



Source: California Health Interview Survey, Sonoma County 2001.

up and cleaning. However, over 20% reported needing oral health care for a dental problem (Figure 11.4).<sup>13</sup>

## Oral Health Services

According to a dental health survey performed by Family Action of Sonoma County, thousands of children in Sonoma County suffer from tooth decay, pain, and infection that can cause eating and speech problems.<sup>14</sup>

Preventable dental conditions such as tooth decay were the most common group of health conditions identified by Child Health and Disability Prevention (CHDP) program exams in 2003. More than 3,700 dental conditions, or 41% of all health problems, were identified in this group. Dental conditions as a

proportion of all health problems identified in CHDP health screenings is increasing (1998-1999 dental conditions represented 37% of all health problems).<sup>15</sup> As of 2003, a limited number of resources were available to serve the approximately 32,000 low-income children in Sonoma County, including 4 clinics with approximately 10 dental chairs, and a few private dentists. Due to the high volume of patients, children in some parts of the county must wait longer than three months for an appointment, or travel out of the area.<sup>16</sup>

## Seniors and Oral Health

While Americans paid out of pocket for approximately one-half of all dental care expenses in 2000, people age 65+ paid more than three-quarters (an average of \$400) of their dental expenses out-of-pocket, according to trend data on dental services from the Agency for Healthcare Research and Quality's Medical Expenditure Panel Survey (MEPS). Only 10.5% of the elderly had all their dental expenses covered.<sup>17</sup>

Most tooth loss is the result of dental caries and periodontal diseases. The level of tooth loss reflects not only the prevalence of caries and periodontal disease, but also availability and use of appropriate professional services and community preventive services. Even when missing teeth are replaced with well-constructed dentures, there

may be limitations in speech, chewing ability, taste perception, and quality of life.

Older Americans with the poorest oral health are those who are economically disadvantaged, lack insurance and are members of racial and ethnic minorities.<sup>18</sup> Many older Americans do not have dental insurance. Often these benefits are lost at retirement. The situation may be worse for older women, who generally have lower incomes and may never have had dental insurance.<sup>19</sup>

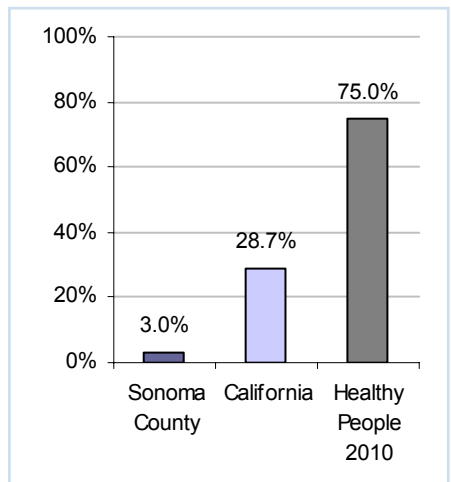
In 2001, almost 19% of Californians age 65+ had lost all natural permanent teeth. This trend varies significantly by income level, with more than twice as many seniors (31.7%) with incomes less than \$15,000 a year having no natural teeth, compared to seniors who made more than \$15,000 per year (14.4%).<sup>20</sup>

## Prevention Measures

Sealants, a plastic compound applied to molars to act as a barrier to prevent tooth decay, are a widely used prevention method to improve oral health in both children and adults. In 2003, 3% of Sonoma County children under age 21 enrolled in Medi-Cal had sealants applied to their first permanent molars. An additional 1% of this group had sealants applied to their second permanent molars.<sup>21</sup>

Community water fluoridation is

**Figure 11.5**  
Percent of the Population with Fluoridated Drinking Water, Sonoma County and California 2001



Source: California Health Interview Survey, Sonoma County and California 2001.


believed to be the most cost-effective way to prevent tooth decay and improve oral health for both children and adults, regardless of race or income. In April 1999, the Centers for Disease Control and Prevention identified community water fluoridation as one the ten great public health achievements of the 20th century.<sup>22</sup> Currently, Healdsburg is the only community in Sonoma County that has fluoridated drinking water. Efforts to expand water fluoridation in the county have not moved forward due to cost, logistical barriers and public resistance to the effort.<sup>23</sup>

A survey among Sonoma County children age 3-11 found that less than half (45.5%) used some type of oral fluoride supplement (excluding toothpaste).<sup>24</sup>



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