

Dental Health Fact Sheet, 2009

Santa Clara County Public Health Department

This fact sheet was prepared to assess the dental health of Santa Clara County residents. Data was compiled from the Behavioral Risk Factor Survey, the California Healthy Kids Survey, Give Kids a Smile program, and The Health Trust.

What is Tooth Decay?

- Tooth decay (also known as dental caries or dental cavity) is an infectious disease in which bacteria dissolve the enamel surface of a tooth. Untreated, the bacteria may penetrate the underlying tooth structure and progress into the soft pulp tissue.
- Tooth decay can cause excruciating pain, and lead to tooth extraction and loss of dental function.
- Pain from untreated dental disease can lead to eating, sleeping, speaking and learning problems in children which affect social interaction, school performance and health related quality of life.
- The major causative factor for this disease is specific bacteria in dental plaque, mainly *Streptococcus mutans* and lactobacilli, on susceptible tooth surfaces and the presence of fermentable carbohydrates (sugars).
- According to the Centers for Disease Control and Prevention (CDC), in the United States tooth decay is the most common chronic disease in children – 5 times more common than asthma.

Survey Data

- In 2001 The Health Trust conducted an oral health needs assessment among 478 elementary school children enrolled in kindergarten and third grade in Santa Clara County. Oral health status was determined through direct examination conducted by dentists, with personal information provided by parents.
- The SCC Behavioral Risk Factor Survey (BRFS) was administered by telephone to over 4,200 county residents 18 years of age and older in late 2005 and early 2006.

Key points:

- Tooth decay is a widespread disease among children and adults in Santa Clara County.
- Racial disparities are apparent in adult tooth loss and child tooth decay rates.
- Oral health of individuals with less income and of minority groups is particularly affected.
- Improving the oral health of SCC residents will aid in improving their overall health.
- The CDC has recognized fluoridation of drinking water as one of the ten great public health achievements of the 20th century.
- Fluoridation is a safe, effective, and economical way to improve dental health for the entire community.
- Fluoridation is a public health preventative action similar to immunization.
- Fluoridation strengthens tooth enamel in children and prevents root caries in adults.
- According to the American Dental Association, San Jose is the largest city in the US to not have implemented a fluoridation system.

- Give Kids a Smile (GKAS) was a program conducted in February 2008 in 44 Santa Clara County schools (11 school districts) selected by school nurses who recommended areas of perceived need. 8863 children in grades K-6 were screened by dentists.
- The SCC California Healthy Kids Survey (CHKS) is an anonymous, confidential student and school staff report of attitudes, health risk behaviors, and protective factors of students in grades five, seven, nine, and eleven.

Public Health Department

Santa Clara Valley Health & Hospital System



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Tooth Decay Rates among Santa Clara County (SCC) Children

- According to The Health Trust survey, about 1 in 3 kindergarteners (31%) and third graders (30%) had untreated tooth decay.
- Racial disparities were seen, with about 3 in 5 Asian (59%) and Hispanic (64%) kindergarteners having tooth decay experience, compared to 1 in 5 (21%) of their White counterparts (The Health Trust, 2001). [Fig. 1]
- Disparities by socio-economic status were observed where about 74% of kindergarteners eligible for the Free or Reduced-Price Meal Program had tooth decay experience compared to the 37% among those not eligible (The Health Trust, 2001). [Fig. 1]
- Santa Clara County has not achieved the Healthy People 2010 objectives of reducing the proportion of children with untreated dental decay or tooth decay experience.

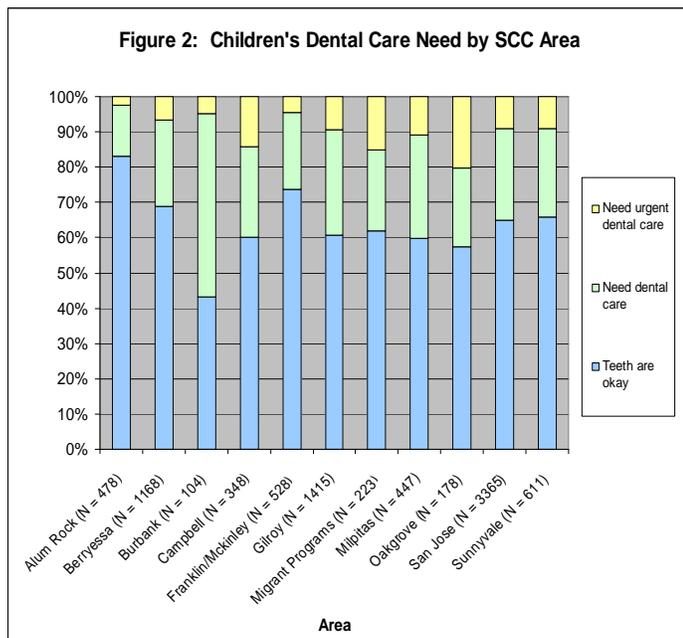
Figure 1: Children's Dental Caries and Untreated Dental Decay Experience in SCC Compared to Healthy People 2010 Objectives

Kindergarteners	Tooth Decay Experience	Healthy People 2010 Objectives in Children Ages 2-4	Untreated Dental Decay	Healthy People 2010 Objectives in Children Ages 2-4
Overall		11%	31%	9%
White	21%		14%	
Asian	59%		35%	
Hispanic	64%		42%	
Free/Reduced Price Meal Program - Eligible	74%		52%	
Free/Reduced Price Meal Program - Not Eligible	37%		20%	
Third Graders	Tooth Decay Experience	Healthy People 2010 Objectives in Children Ages 6-8	Untreated Dental Decay	Healthy People 2010 Objectives in Children Ages 6-8
Overall		42%	30%	21%
White	51%		15%	
Asian	75%		26%	
Hispanic	84%		43%	
Free/Reduced Price Meal Program - Eligible	85%		42%	
Free/Reduced Price Meal Program - Not Eligible	59%		20%	

Source: The Health Trust, 2001

Access to Dental Care among Children in SCC

- According to The Health Trust, 16% of kindergarten age children had no dental insurance coverage in 2001.
- About 1 in 2 kindergarteners (51%) and 3 in 5 third graders (61%) could not get dental care due to lack of dental insurance (The Health Trust, 2001).
- According to GKAS, 35% of children needed dental care (9% needed urgent care; 26% needed less serious care).
- Although the number of children surveyed varied by area, the areas of greatest need for dental care were Burbank (52%), Gilroy (30%), and Milpitas (30%). [Fig. 2]
- The areas of greatest need for urgent dental care were Oakgrove (20%), Migrant Programs (15%), and Campbell (14%). [Fig. 2]



Source: Give Kids a Smile, 2008

- 1 in 5 (21%) middle and high school students had not visited a dentist in the past 12 months for an examination, teeth cleaning, or dental work (CHKS 2005-2006).

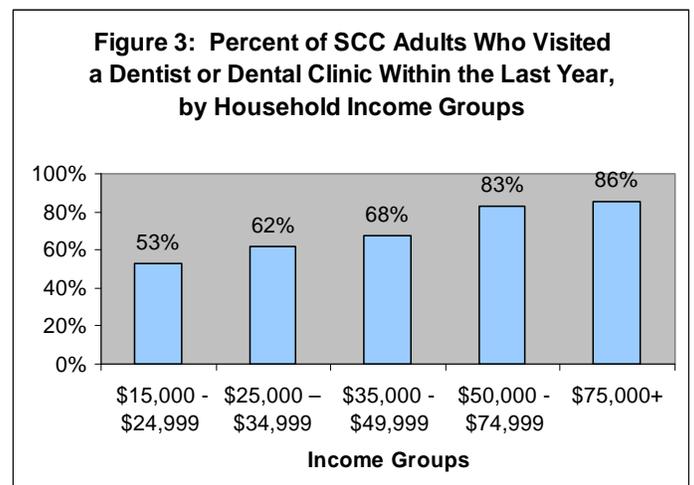
- African-American (30%), Hispanic (29%), Native-American (27%), and Asian students (18%) had a significantly greater percentage as compared to White students (12%) of not having visited a dentist in the previous 12 months (CHKS 2005-2006).

Tooth Loss among SCC Adults

- Dental caries and its sequelae and gum/periodontal disease are the main causes for tooth loss among adults.
- About 1 in 3 adults (35%) have had at least one of their permanent teeth removed because of tooth decay or gum disease (BRFS 2005-2006).
- Racial differences were evident in tooth loss, with 42% of Blacks, 39% of Hispanics, 37% of Asians, and 32% of Whites having experienced tooth loss (BRFS 2005-2006).

Access to Dental Care among Adults in SCC

- About 1 in 5 adults (23%) had not visited a dentist or a dental clinic in past year (BRFS 2005-2006).
- 35% of Hispanics, 21% of Asians and 18% of Whites had not visited a dentist or a dental clinic in the past year (BRFS 2005-2006).
- A smaller proportion of adults with lower household income had visited a dentist or a dental clinic in the last year compared to their higher income counterparts (BRFS 2005-2006). (Fig. 3)



Source: BRFS, 2005-2006

Dental Health Fact Sheet (cont'd)

- Adults in lower educational levels were also less likely to have visited a dentist or a dental clinic within the past year (BRFS 2005-2006).
- 7 in 10 adults (69%) had some form of dental insurance covering some or all routine care. However, among adults aged 65 years and older only 45% had insurance coverage for dental care and only half of Hispanics (51%) compared to 73% of Whites had dental coverage (BRFS 2005-2006).
- Santa Clara County has not achieved the Healthy People 2010 objective of increasing the proportion of children and adults who use the oral health care system each year to 56%.

Public Health Recommendations for Fluoridation

- Fluoride is a naturally occurring mineral. When present in drinking water at optimal levels, fluoride has been shown to prevent tooth decay by strengthening tooth enamel in children so teeth become more resistant to decay. Fluoride has also been shown to reverse newly formed cavities as well as to prevent root caries in adults.
- The most significant risk for tooth loss in older adults is dental caries, and particularly root caries. Root caries most commonly affect the molar teeth.
- Water fluoridation is the addition of small amounts of fluoride to a water supply. While all drinking water contains some fluoride, water fluoridation adjusts this naturally occurring fluoride level to the optimum level for preventing tooth decay. Fluoride does not change the taste, smell, or appearance of your water.
- The CDC has recognized fluoridation of drinking water as one of the ten great public health achievements of the 20th century. A Healthy People 2010 objective is to increase the proportion of the U.S. population served by community water systems with optimally fluoridated water to 75%. Santa Clara County is not fluoridated, although certain areas of the

county receive fluoridated water. Within San Jose, only Evergreen and Alviso are fluoridated.

- The American Dental Association has listed San Jose as the largest city in the US to not have implemented a system of fluoridation.
- According to the CDC, the annual cost of fluoridation would be approximately \$0.50 a year per person in communities with a population of 20,000 or greater. In Santa Clara County, the average cost of one filling (\$146) would provide fluoridation for a family of four for 73 years.
- Community water fluoridation is a safe, effective, and economical way to improve dental health for the entire community.

References:

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- CDC, Morbidity and Mortality Weekly Report, April 1999.
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- Sacramento District Dental Society.
- Santa Clara County Behavioral Risk Factor Survey, 2005-2006, September 2007.
- The Health Trust 2001 Needs Assessment, December 2001.
- US Department of Health and Human Services, Oral Health, September 2007.

Contact Information:

Santa Clara County Public Health Department
976 Lenzen Avenue, 2nd Floor
San Jose, CA 95126
Phone: 408-792-5040; Fax: 408-792-5041
www.sccphd.org/statistics2