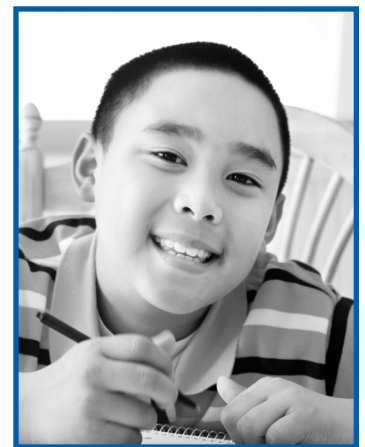
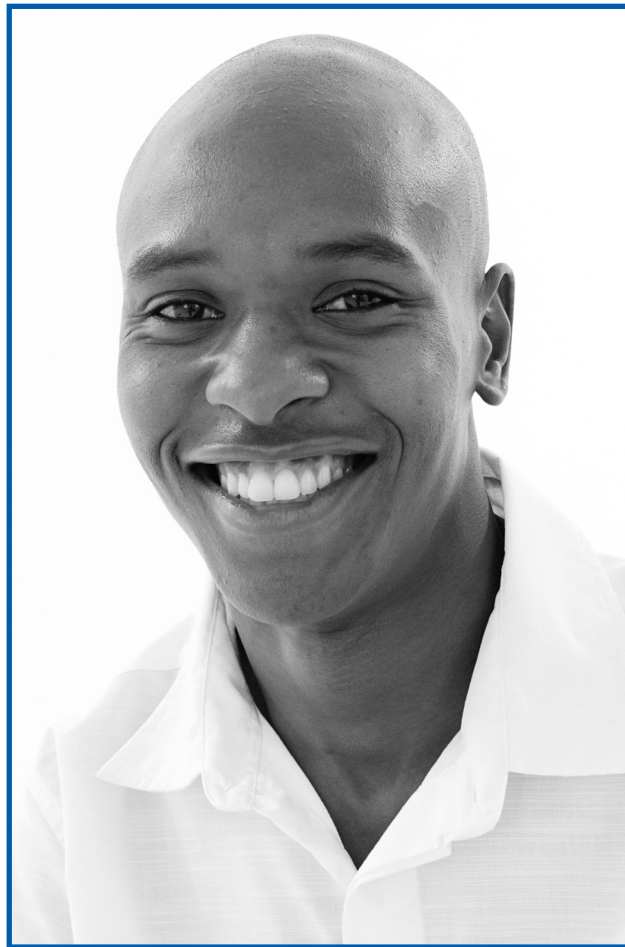




AT A GLANCE

Oral Health

Preventing Cavities, Gum Disease, and Tooth Loss 2008



“Oral health is essential to general health and well-being at every stage of life.”

*A National Call to Action to Promote Oral Health
Office of the U.S. Surgeon General*

September 2008

**U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
CENTERS FOR DISEASE CONTROL AND PREVENTION
COORDINATING CENTER FOR HEALTH PROMOTION**

Oral Health Problems: Painful, Costly, and Preventable

Mouth and throat diseases, which range from cavities to cancer, cause pain and disability for millions of Americans each year. This fact is disturbing because almost all oral diseases are largely preventable.

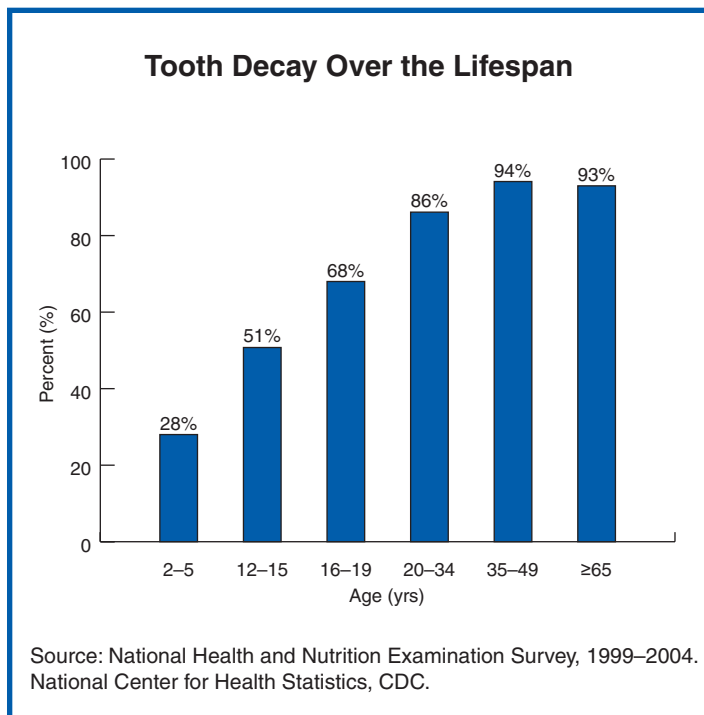
For children, cavities are a common problem that begins at an early age. Tooth decay affects more than one-fourth of U.S. children aged 2–5 and half of those aged 12–15. Low-income

children are hardest hit: about two-thirds of those aged 12–19 have had decay. Untreated cavities can cause pain, dysfunction, absence from school, and poor appearance—problems that can greatly affect a child’s quality of life.

Tooth decay is also a problem for U.S. adults, especially for the increasing number of older adults who have retained most of their teeth. Despite this increase in tooth retention, tooth loss remains a problem among older adults. One-fourth of adults over age 65 have lost all of their teeth—primarily because of tooth decay, which affects more than 90% of adults over age 40, and advanced gum disease, which affects 5%–11% of adults. Tooth loss can affect self-esteem, and it may contribute to nutrition problems by limiting the types of food that a person can eat.

In addition, oral cancers pose a threat to the health of U.S. adults. In 2007, an estimated 34,000 people will learn that they have mouth or throat cancer, and more than 7,550 will die of these diseases.

In 2007, Americans made about 500 million visits to dentists, and an estimated \$98.6 billion was spent on dental services. Yet many children and adults still go without measures that have been proven effective in preventing oral diseases and reducing dental care costs. For example, over 100 million Americans still do not have access to water that contains enough fluoride to protect their teeth, even though the per capita cost of water fluoridation over a person’s lifetime is less than the cost of one dental filling.



CDC’s National Leadership to Improve Oral Health

CDC is committed to ensuring that all people, especially those at greater risk for health disparities, will achieve their optimal lifespan with the best possible quality of health in every stage of life. With agency-wide health protection goals that support healthy people in healthy places across all life stages, CDC is setting the agenda to enable people to enjoy a healthy life by delaying death and the onset of illness and disability by accelerating improvements in public health.

In addition, CDC is the lead federal agency responsible for promoting oral health through public health interventions. With fiscal year 2008 funding of \$12.4 million, CDC

- Helps states strengthen their oral health programs, reach people hardest hit by oral diseases, and expand the use of measures proven effective in preventing oral diseases.
- Promotes oral health in communities, schools, and health care settings nationwide.

- Supports research to strengthen prevention efforts at the community level.
- Evaluates the cost-effectiveness of prevention strategies.

Building Capacity in States

CDC provides 16 states with funds, technical assistance, and training to build strong oral health programs. With CDC support, states can better promote oral health, monitor oral health behaviors and problems, and conduct and evaluate prevention programs. This funding also allows states to enhance coordination and management of community water fluoridation programs and school-based dental sealant programs. CDC also works with the Association of State and Territorial Dental Directors to guide states on oral health issues, improve state oral health program standards, and help states develop the expertise to assess oral health needs and conduct effective prevention programs.

Encouraging Effective Use of Fluoride

CDC provides national leadership in assessing the appropriate use of various forms of fluoride. CDC also works with state and national partners to improve the quality of water fluoridation and to implement water fluoridation in new communities. Over the past 60 years, the damage caused by tooth decay has been drastically reduced, primarily through the use of fluoride. The most cost-effective way to deliver the benefits of fluoride to all residents of a community is through water fluoridation—that is, adjusting the fluoride in the public water supply to the right level for decay prevention.

A peer-reviewed CDC study found that, in communities with more than 20,000 residents, every \$1 that is invested in community water fluoridation yields about \$38 in savings each year from fewer cavities treated. The Task Force on Community Preventive Services, which strongly recommends community water fluoridation, concluded that tooth decay in American children has decreased by 30%–50% because of fluoridation. CDC activities for promoting fluoride include the following:

- Issuing *Recommendations for Using Fluoride to Prevent and Control Dental Caries in the United States*.
- Providing fluoridation training to state drinking water system engineers, dental directors, and other public health staff members.
- Managing a Web-based system that helps states monitor the quality of fluoridated water systems.

- Educating people throughout the country on the appropriate use of fluoride products.

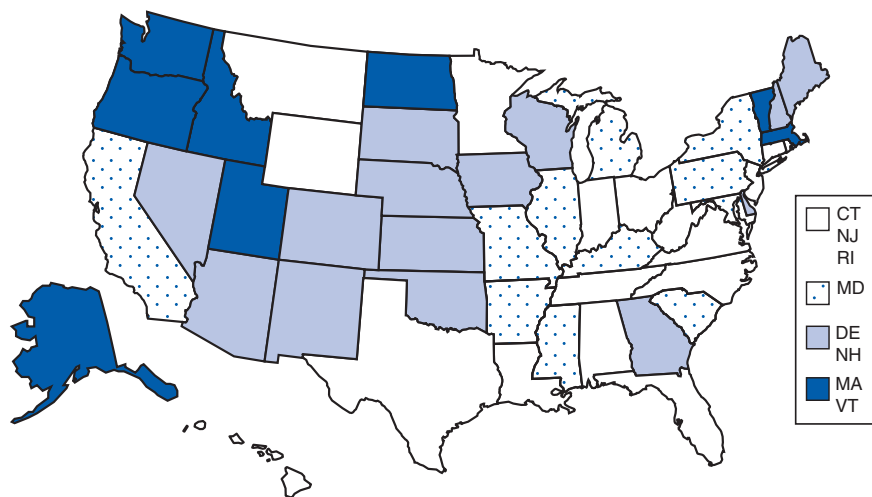
Promoting Use of Dental Sealants

Dental sealants—a plastic coating applied to the chewing surfaces of the back teeth—are a safe, effective way to prevent cavities among schoolchildren. In some cases, sealants can even stop tooth decay that has already started. Sealants significantly reduce a child’s risk for having cavities.

Although progress has been made toward the national *Healthy People 2010* objective, which calls for half of all U.S. children to have dental sealants, only about one-third of children aged 6–19 do. Children in some racial and ethnic groups and who live in low-income households are less likely to have sealants. For example, fewer than 1 in 4 African American and Mexican American children have sealants.

The Task Force on Community Preventive Services strongly recommends school-based or school-linked sealant programs as an effective way to prevent and control cavities. CDC researchers also have evaluated several strategies and found that delivering sealants to all children attending low-income schools was a cost-effective strategy for reducing disparities in sealant use. By offering school-based or school-linked programs, some communities have already reached the *Healthy People 2010* objective for dental sealants. CDC currently is working with experts to revise the guidelines for school-based dental sealant programs.

Percentage of Third-Grade Students with Dental Sealants



□ No data □ 10%–29.9% □ 30%–49.9% □ ≥50%

Note: The *Healthy People 2010* objective is for 50% of all children aged 8 to have dental sealants.

Source: CDC and the Association of State and Territorial Dental Directors. National Oral Health Surveillance System, 2006. Data from states vary by year of reporting. Available at <http://www.cdc.gov/nohss>.

Helping States Improve Oral Health

Focusing on Adult Oral Health

CDC continues to expand activities that support a range of community approaches to promote adult oral health and reduce oral disease. These approaches include monitoring oral health status, expanding partnerships, supporting prevention research, and increasing public and professional awareness of common oral conditions, risk factors, and healthy behaviors.

CDC has provided several State-based Examples of Network, Innovation, Opportunity, and Replication (SENIOR) grants to help states identify unmet oral health needs among older adult populations at high risk for oral diseases, as well as to devise community strategies to address these needs. Lessons learned from grant-funded projects are being shared with stakeholders involved in aging, public health, and dental public health activities.

Guiding Infection Control in Dentistry

Infection control in dental offices is essential to ensuring the public's safety and retaining its confidence. To help minimize the risk of transmitting infectious diseases in dental environments, CDC published an updated *Guidelines for Infection Control in Dental Health-Care Settings—2003* (MMWR 2003;52[RR-17]; available at <http://www.cdc.gov/mmwr>).

CDC recommendations guide infection control practices in dental offices nationally and globally and provide direction for the public, policy makers, and dental practitioners. These recommendations also affect technology development in the dental industry. In addition, CDC investigates disease transmission in dental offices and identifies emerging problems.

Supporting Prevention Research

CDC supports research to enhance the effectiveness of interventions to prevent oral diseases. Research activities include reviewing scientific evidence to see which interventions have been successful and conducting studies to assess the cost-effectiveness of successful interventions, identify the most efficient ways of delivering them, and evaluate their ability to prevent and control oral disease.

CDC staff also have developed computer software that allows state and local programs to assess the impact of providing sealants, including the estimated reduction in the cost of treating oral diseases.

Monitoring Oral Health in America

Routine surveys provide a wealth of information about the oral health of Americans—for instance, what are the most serious oral health problems, how many people are receiving preventive services, which oral diseases are on the rise, and which groups of people are most at risk. Currently, CDC is leading a panel of experts in developing self-reported measures of gum (periodontal) health status.

CDC also supports Web-based systems that bring together oral health data from many sources and make this information widely available to public health professionals and consumers. For example, the National Oral Health Surveillance System (available at <http://www.cdc.gov/nohss>) links oral health data from various state-based systems, including state oral health surveys and the Behavioral Risk Factor Surveillance System.

In addition, the annual State Dental Program Synopses (available at <http://apps.nccd.cdc.gov/synopses/index.asp>) present state population demographics and information about the activities and funding levels of state dental programs.

CDC also manages the Data Resource Center, a joint project with the National Institute of Dental and Craniofacial Research, which assembles oral health data and other information needed to support research, policy development, and program evaluation (<http://drc.hhs.gov>).

In addition, CDC helps health departments collect, interpret, and share oral health data specific to their areas. States and communities use the data to monitor their progress in meeting *Healthy People 2010* goals for oral health, target limited resources to people with the greatest needs, and compare their oral health problems with those of other states and the nation as a whole.

Future Directions

CDC will continue to help states strengthen their oral health programs and develop effective interventions. CDC also will continue to seek opportunities to work with partners in oral health research, surveillance, education, and evaluation in order to develop and extend prevention interventions to additional communities.

**For more information, please contact the Centers for Disease Control and Prevention
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