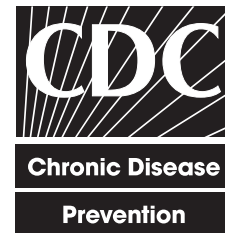


Preventing Chronic Diseases: Investing Wisely in Health

Preventing Dental Caries with Community Programs



U.S. DEPARTMENT OF HEALTH
AND HUMAN SERVICES

The Reality

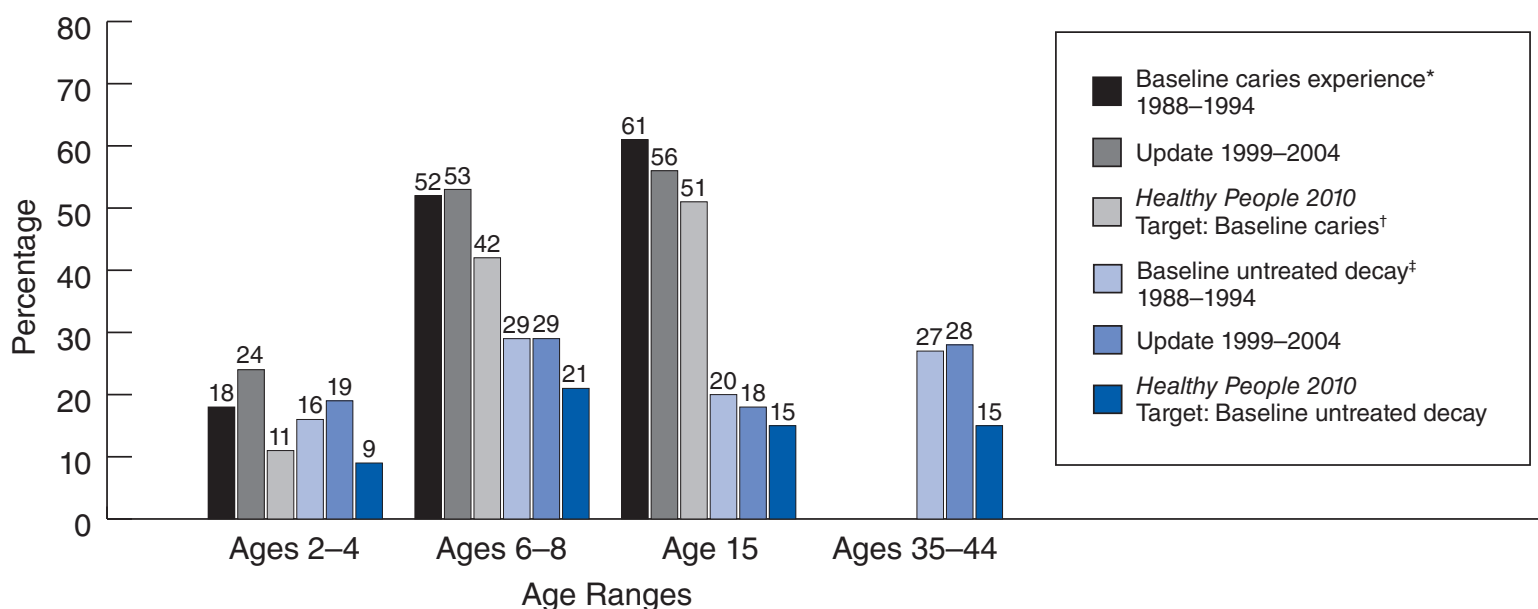
- Although dental caries (tooth decay) is largely preventable, it remains the most common chronic disease of children aged 6 to 11 years (25%) and adolescents aged 12 to 19 years (59%). Tooth decay is four times more common than asthma among adolescents aged 14 to 17 years (59% compared with 15%).
- Once established, the disease requires treatment. A cavity only grows larger and more expensive to repair the longer it remains untreated.
- Fewer than 1 in 3 children enrolled in Medicaid received at least one preventive dental service in the past year. Many states provide only emergency dental services to Medicaid-eligible adults.
- Many adults also have untreated tooth decay—28% of those aged 35 to 44 years and 18% of those aged 65 years and older.

Community-Based Strategies Prevent Tooth Decay

Community Water Fluoridation

- Community water fluoridation has been ranked as 1 of the 10 great public health achievements in the 20th century.
- Although community water fluoridation prevents tooth decay, people also get fluoride from other sources, such as toothpaste, rinses, and other topical applications at the dental office.
- At present, 69% of individuals on public water systems—more than 184 million people—are receiving the benefits of community water fluoridation.

Meeting Healthy People 2010 Objectives



* One or more teeth with untreated or filled carious lesions (dental decay).

† There is no *Healthy People 2010* objective for adult caries; 95% of adults (aged 20 to 64 years) who have one or more natural teeth have experienced tooth decay.

‡ One or more teeth with untreated carious lesions (dental decay).

Source: *Healthy People 2010*.

School-Based Sealant Programs

- Children receiving dental sealants in school-based programs have 60% fewer new decayed pit and fissure surfaces in back teeth for 2 to 5 years after a single application. Among children, 90% of decay is in pits and fissures.
- School-based sealant programs provide sealants to children from low-income families who otherwise might not receive them. Children of racial and ethnic minority groups have twice as much untreated decay in their permanent teeth, but only receive about half as many dental sealants as non-Hispanic white children.
- Thirty-six states reported dental sealant programs serving 258,000 children. This number, however, represents only about 8% of children from low-income families who could receive sealants.

Community-Based Strategies to Prevent Tooth Decay Save Money

- Depending on the size of the community, every dollar spent for community water fluoridation saves from \$8 to \$49 in treatment costs. Savings are greatest in large communities.
- Fluoridated water saves more than \$4.6 billion annually in dental costs in the United States.
- School-based dental sealant programs are cost saving when delivered to populations at high risk for tooth decay, such as children in low-income households.

Effective Strategies

- Community and school partnerships raise awareness about the value of school sealant programs. *Healthy Smiles for Wisconsin*, a CDC-supported statewide effort to improve the oral health of Wisconsin children through school and community partnerships, began in October 2000. This program helped to establish new community-based sealant programs, and in 2007–2008, these programs provided sealants to 9,202 children in 19 counties.
- Community coalitions are essential for gaining approval for community water fluoridation. During the past decade, broad-based citizen coalitions in several large U.S. cities have educated residents about the benefits of water fluoridation. Water fluoridation was approved in many of these jurisdictions, including Los Angeles and Sacramento, CA; Manchester, NH; Las Vegas, NV; San Antonio, TX; and Salt Lake City, UT.

Hope for the Future

Compared with their parents, many Americans now enjoy markedly better oral health. However, certain segments of the population (e.g., those who have low incomes, are members of racial or ethnic minority groups, or are older) have severe dental decay, much of which remains untreated. *Healthy People 2010* objectives seek to eliminate these disparities, so that all Americans receive

the benefits of good oral health. Community-based programs, such as community water fluoridation and school-based dental sealant programs, are cost-effective ways to achieve this goal. For example, if half of the children at high risk for tooth decay participated in school sealant programs, half of the caries that these children otherwise would develop would be prevented.

State Program in Action: Ohio

School-based sealant programs in Ohio began in 1984, with a single demonstration program in one city. By 2000, 34 of Ohio's 88 counties had programs. These programs target children who are at high risk for tooth decay and least likely to receive dental care.



As the program has expanded, the statewide percentage of 8-year-olds who have dental sealants has increased steadily, from 11% in 1987–1988, to 30% in 1998–1999, and most recently to 43% in 2007. Although this percentage still falls short of the *Healthy People 2010* objective of 50% of the state's 8-year-olds having sealants, children from all demographic groups in schools with sealant programs have achieved or exceeded the objective.

The Ohio program has shown that school-based programs could potentially reduce or eliminate racial and economic disparities by reaching children at high risk for tooth decay.



For more information and references supporting these facts, please visit www.cdc.gov/nccdphp.