



Disparities in Children's Oral Health and Access to Care

LESA PAIGE BENTLEY, MHA, MBA, MBIT

ABSTRACT The oral health of Americans has improved in recent years, yet considerable gaps in the provision of dental care remain according to the *U.S. Surgeon General's Report* in 2000. This paper provides an overview of oral health disparities experienced by racial and ethnic minority children based upon the socioeconomic status. Many Americans, particularly children, continue to suffer disproportionately from oral pain and disease, including minority, low-income, and/or special care populations.

AUTHOR

Lesia Paige Bentley, MHA, MBA, MBIT, is a dental compliance manager for Aetna, Inc., managing the western dental territory for all regulatory matters.

The oral health of Americans has improved in recent years, yet considerable gaps in the provision of dental care remain, according to the *U.S. Surgeon General's Report* in 2000.¹ The report states that oral health is essential to the general health and well-being of all Americans. There is a silent epidemic of oral diseases affecting our most vulnerable citizens: poor children, the elderly, and many members of racial and ethnic minority groups. The report served as a wake-up call against this silence and a call to action for health professionals, policymakers, community leaders, insurance companies, the public and private business.

During the 2004-2005 school year, the Dental Health Foundation surveyed more than 21,000 California children in kindergarten or third grade in nearly 200 randomly selected schools located across the state.² They found that by the third grade, more than 70 percent of the children had a history of tooth decay; at any given moment, more than a quar-

ter of the children had untreated tooth decay; and some 4 percent of the kids were sitting in the classroom in pain or suffering from an abscess. The problem is worse for the poor, Hispanics, other ethnic minorities, and for the uninsured. Barriers to dental care, including parental financial difficulties or a lack of dental insurance, can have a profound impact on their children's dental health. About one-third of low-income children have untreated decay compared to about one-fifth of higher income children.

Oral diseases are cumulative and progressive over time and can affect lives in many ways. Oral diseases can limit the foods one eats, affects one's appearance, and cause significant pain and discomfort. Oral health is also an integral part of overall health and may lead to systemic diseases. One such disease, periodontal disease, is caused by bacterial growth that forms dental plaque. When plaque is not completely removed on a daily basis, calculus forms and causes the symptoms associated with periodontal disease.

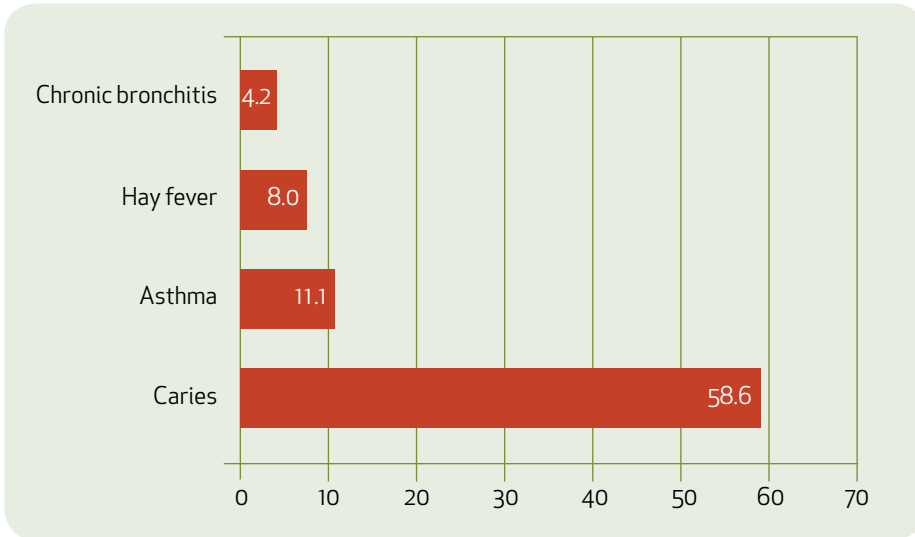


FIGURE 1. Dental caries 5- to 17-years-old.
 Note: Data from the National Center for Health Statistics, 1996.

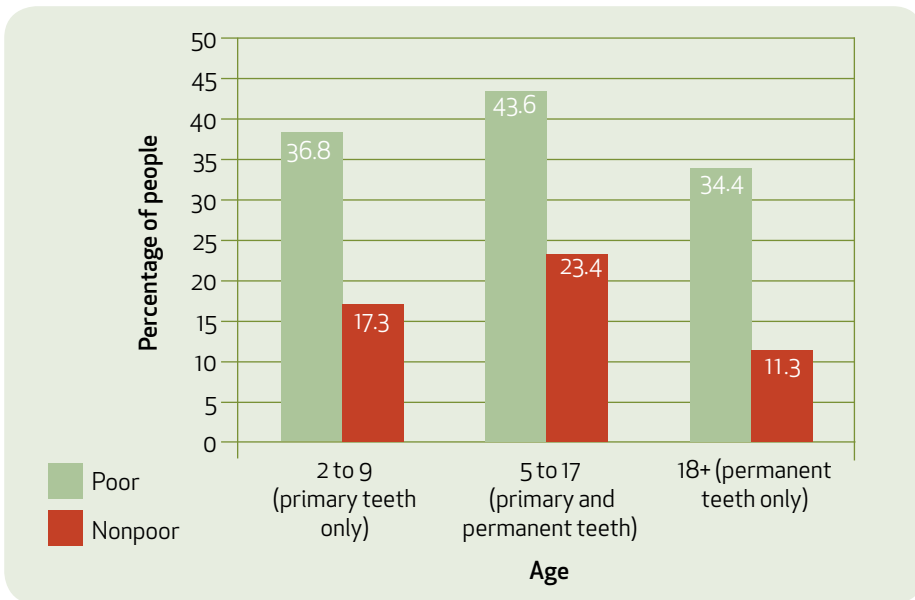


FIGURE 2. Higher percentage of poor people untreated decayed tooth.
 Note: Data from the National Center for Health Statistics, 1996.

Periodontal bacteria may enter the bloodstream to affect major organs and to stimulate new infections. Recent studies have shown a relationship between periodontal disease and low birth weight babies.

Vulnerabilities to oral health may be due to a variety of reasons including poor nutritional habits, inadequate oral hygiene, or difficulties with accessing dental care. Oral disease is not only

common among adults, but children are also at high risk for oral health problems. Dental caries by far is the most common chronic childhood disease – five times more common than asthma and seven times more common than hay fever in children 5- to 17-years-old (FIGURE 1). Children suffering from oral health complications may be dealing with persistent pain and/or abscesses,

embarrassment of the appearance of flawed teeth, difficulty chewing or eating comfortably, and may be hindered from participating fully in typical childhood activities. Prevalence increases with age. The majority (51.6 percent) of children age 5 to 9 had at least one carious lesion or filling in a primary or a permanent tooth.³

Despite progress in reducing dental caries, individuals in families living below the poverty level experience more dental decay than those who are better off economically. Furthermore, the caries seen in these individuals is more likely to be untreated than caries in those living above the poverty level (FIGURE 2); more than one-third (36.8 percent) of poor children age 2 to 9 have one or more untreated decayed primary teeth compared to 17.3 percent of nonpoor children.

In addition to poverty levels, the proportion of teeth affected by dental caries also varies by age and race or ethnicity. Poor Mexican-American children age 2 to 9 have the highest number of primary teeth affected by dental caries (a mean of 2.4 decayed or filled teeth) compared to poor non-Hispanic blacks (mean 1.5) and non-Hispanic whites (mean 1.9). Among the nonpoor, Mexican-American 2- to 9-year-olds have the highest number of affected teeth (mean 1.8), followed by non-Hispanic blacks (mean 1.3) and non-Hispanic whites (mean 1.0).

There are also differences by race/ethnicity and poverty level in the proportion of untreated decayed teeth for all age groups. Poor Mexican-American children age 2 to 9 have the highest proportion of untreated decayed teeth (70.5 percent), followed by poor non-Hispanic black children (67.4 percent) (FIGURE 3). Nonpoor children have lower proportions of untreated decayed teeth, although the group with the lowest proportion (non-Hispanic whites) still has an average of 37.3 percent of decayed teeth untreated.

As it becomes more common knowledge that oral health is an inseparable part of general health, increasing emphasis is being placed on addressing the issues contributing to the poor oral health status of the nation.⁴ According to the 2001-2002 *Report Card* released by the collaborative effort of Oral Health America, the United States received a national grade of C for its status of oral health overall (TABLE 1). The report shows that policymakers need to place more emphasis on basic oral health across the nation. Similarly, California received an overall grade of C.

In addition, California was scored for availability of dentists, prevention programs, dental restorations, and presence of a dental director. The availability of dentists, for which California received a C, showed a very high ratio of 1:1,501-2000. This grade for the availability of dentists is based on the ratio of professionally active, licensed dentists to the state's population. Prevention, for which California received an F, is based on the percentage of population in each state on public water supplies receiving fluoridated water. The presence of a dental director, for which California received an F, is due to a lack of an individual in this position and of an oral health coalition in the state.

In an effort to improve the health of all Americans, in 1979, a national initiative was established that emphasized coordinated and comprehensive activities in health prevention. The foundation of this effort was the *Oral Health in America: A Report of the Surgeon General* in 2000, *Healthy People and Healthy People 2000: National Health Promotion and Disease Prevention Objectives*, which resulted from the collaboration of government, voluntary, and professional organizations, businesses, and individuals. This report established a set of overall health objectives for the nation. Three major goals were established for the 1990s:

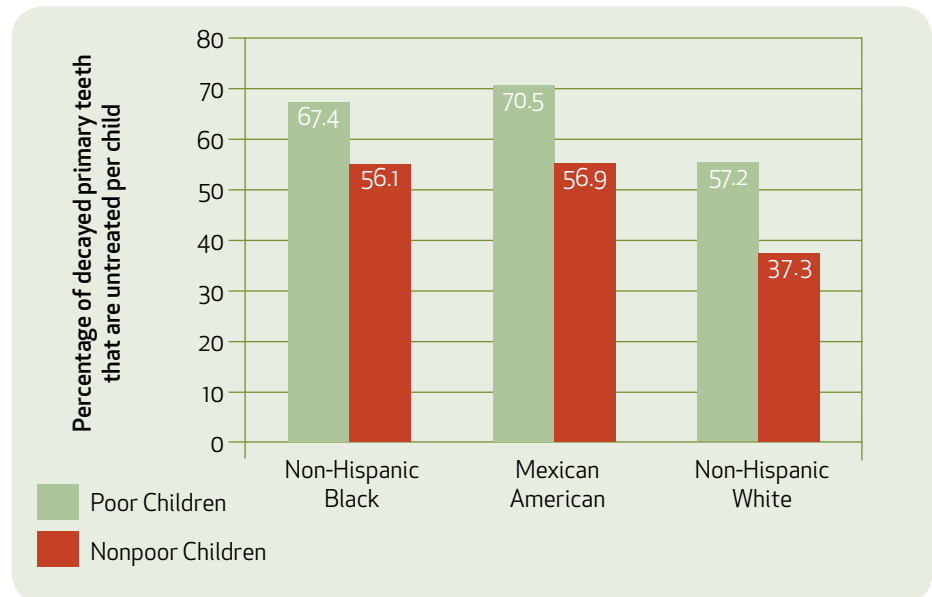


FIGURE 3. Poor children untreated decayed primary teeth.
Note: Data from the National Center for Health Statistics, 1996.

- To increase the quantity of healthy living,
- To reduce health disparities among Americans, and
- To ensure access to preventive services for the whole population.

In a broad sense, the term health disparities refer to differences that exist among population subgroups and their ability to access and receive quality health care. The National Institutes of Health has defined health disparities as differences in the incidence, prevalence, mortality, and burden of diseases and other adverse health conditions that exist among specific populations groups in the United States. Disparities are commonly observed among ethnic groups. Minorities and persons living in rural communities suffer from higher mortality rates from cancer, heart disease, and diabetes than whites, and are less likely to receive diagnostic tests and treatments.

Two decades after the *Healthy People and Healthy People 2000* report was announced, the surgeon general issued a call to action specifically to address oral health care needs and disparities within the U.S. population. Concurrently, the U.S. Department of Health and Human Services,

Healthy People 2010 initiative, established goals for the current decade. The primary goals of Healthy People 2010 are to increase quality and years of healthy life, and eliminate health disparities.

Recommendations

Accordingly, the Dental Health Foundation recommends that a means to improve the socioeconomic status of children in oral health and access to care in California would be to develop a comprehensive oral health surveillance system, eliminate barriers to care, prevent disease, and establish an integrated public health infrastructure.

DEVELOP A COMPREHENSIVE ORAL HEALTH SURVEILLANCE SYSTEM. At this time, California lacks any mechanism to regularly and systematically collect data on the oral health status of individuals or the availability of oral health services. Decision-makers must have current and reliable information to establish relevant policies and programs and evaluate their success. California needs a system to regularly assess oral health status and services. Such a system would require local county assessments of the oral health status, needs, and available resources for care for chil-

TABLE 1

State Final Grades 2001-2002

	PREVENTION			ACCESS TO CARE										ORAL HEALTH LEADERSHIP			ORAL HEALTH STATUS			STATE GRADE			
	Fluoridation	Sealants		Availability of dentists	Children's medical dental program	Visits to dentists <19K	Visits to dentists >19K	Overall visits	Dental insurance adults	Dental insurance elderly	Dental director	Oral health coalition	Oral health of children	Use of spit tobacco	Edentulous elderly - income <19K	Edentulous elderly - income >19K	Edentulous elderly overall	Oral cancer male	Oral cancer female				
ALABAMA	B	B	B	D+	D	C	F	B	C	C	F	A	A	A	C	A	D	D	B	C	C	B	C
ALASKA	D	D	D	C+	B	C	F	B	B	A	C	B	C	A	C	C	D	C	B	B	B	C	C
ARIZONA	F	D	F	C-	F	C	D	B	C	B	D	A	A	A	B	A	B	B	B	B	B	B	C+
ARKANSAS	D	D	D	D	F	C	F	C	C	D	F	A	A	A	C	A	C	F	B	C	C	B	C-
CALIFORNIA	F	F	D	C	C	C	D	B	B	B	C	D-	F	D	B-	C	B	C	A	B	B	B	C
COLORADO	C	C	C	C-	C	C	D	B	B	I	F	A	A	A	C+	A	D	D	B	B	B	B	C+
CONNECTICUT	C+	B	C	C+	B	C	C	A	B	I	F	B	C	A	B	A	B	B	B	B	B	B	B-
DELAWARE	C	B	D	C-	D	D	D	B	B	I	I	B+	A	B	C+	C	B	C	B	B	C	B	C+
DISTRICT OF COLUMBIA	C	A	F	C+	A	D	C	B	B	I	I	F	F	DNR	C-	DNR	B	D	B	B	F	D	C
FLORIDA	C	D	B	C-	D	C	D	B	B	I	F	A	A	A	C+	C	B	C	A	B	C	C	C+
GEORGIA	C	A	F	D+	F	D	F	B	C	A	F	A	A	A	C	B	D	D	B	C	C	B	C
HAWAII	D	F	D	B-	B	C	C	B	B	A	B	A	A	A	B	A	B	C	A	B	C	B	B-
IDAHO	C	F	A	D+	D	I	D	B	C	C	F	A	A	A	C+	A	D	D	B	B	B	B	C
ILLINOIS	B	A	C	C	C	C	D	B	B	B	F	A	A	A	C+	B	C	C	B	B	C	B	C+
INDIANA	B	A	C	C-	D	C	D	B	B	B	F	A	A	A	C+	A	C	D	C	C	B	B	C+
IOWA	B+	A	B	C-	C	C	D	B	B	C	F	A	A	A	B-	A	C	C	B	B	B	B	B-
KANSAS	C	D	B	D+	D	I	D	B	B	I	F	C	F	A	C	F	C	C	B	B	B	B	C
KENTUCKY	C	A	F	C-	C	B	F	B	C	I	F	A	A	A	C	A	D	D	C	D	C	B	C
LOUISIANA	D+	D	C	D+	D	C	F	B	C	I	F	C	F	A	C	A	C	D	B	C	C	C	C-
MAINE	C+	C	B	D+	D	I	D	B	B	D	F	B	C	A	C+	A	B	F	C	C	B	B	C
MARYLAND	C+	A	D	C-	C	D	D	B	B	I	D	A	A	A	C+	A	B	D	B	B	C	C	C+
MASSACHUSETTS	D	D	D	C	B	B	C	B	B	C	F	D+	C	D	C+	F	B	C	B	B	B	B	C
MICHIGAN	B	A	C	C	C	C	D	A	B	I	D	C+	A	D	C+	C	C	D	B	B	B	B	C+
MINNESOTA	C	A	F	C	C	C	D	B	B	I	I	A	A	A	C+	C	C	D	B	B	B	B	C+
MISSISSIPPI	F	F	F	D	F	C	F	C	C	I	F	B	C	A	C+	A	C	C	C	C	C	B	C-
MISSOURI	D+	B	F	D	D	D	F	C	C	I	F	A	A	A	C+	A	C	F	B	C	B	B	C
MONTANA	D+	F	B	D+	C	C	D	C	C	D	F	A	A	A	C-	C	F	D	B	C	B	C	C-
NEBRASKA	D	C	F	C	C	B	C	B	B	I	F	A	A	A	C	D	D	F	B	C	B	A	C
NEVADA	C+	C	B	D+	F	C	D	C	C	I	D	B	C	A	B-	A	C	D	A	B	B	B	C
NEW HAMPSHIRE	F	F	D	C	C	I	C	B	B	I	F	A	A	A	C+	A	B	D	B	B	C	C	C
NEW JERSEY	F	F	D	C-	B	D	D	B	B	I	F	B	C	A	C+	F	C	C	A	B	B	B	C
NEW MEXICO	C+	C	B	D+	F	C	D	B	C	I	F	A	A	A	C+	A	C	D	B	C	B	B	C
NEW YORK	C	C	C	C	B	I	D	B	B	B	F	A	C	A	B-	B	B	D	B	B	B	B	C+
NORTH CAROLINA	C+	B	C	C-	F	C	D	B	B	I	I	A	A	A	C+	A	C	D	B	B	C	B	C+
NORTH DAKOTA	B+	A	B	D	D	D	D	B	C	D	F	B	C	A	C	A	D	F	C	D	B	B	C
OHIO	B	B	B	C-	C	C	D	B	B	C	F	B	A	C	B-	A	C	D	B	B	B	B	C+
OKLAHOMA	D+	C	D	D	D	D	F	C	C	I	F	A	A	A	C	A	D	F	C	C	B	B	C-
OREGON	D	F	C	C	C	C	D	B	B	B	F	A	A	A	B-	A	C	C	B	B	B	C	C+
PENNSYLVANIA	D+	D	C	C-	C	C	D	B	B	I	F	A	A	A	C	A	D	D	C	C	B	B	C
RHODE ISLAND	B	B	B	C	C	C	C	B	B	B	F	A	A	A	C+	C	B	D	B	B	B	B	C+
SOUTH CAROLINA	A	A	A	C-	F	C	D	B	B	I	I	A	A	A	C-	C	C	D	B	C	D	C	C+
SOUTH DAKOTA	B	B	B	D+	D	I	D	B	C	I	F	F	F	F	C+	A	D	D	B	C	B	B	C-
TENNESSEE	C	A	F	C-	D	C	D	B	B	I	F	A	A	DNR	C	DNR	D	F	B	B	C	B	C
TEXAS	D+	C	D	D	D	I	F	C	C	C	F	A	A	A	B	A	C	B	A	B	C	B	C
UTAH	C	F	A	C	C	D	C	B	B	B	F	A	A	A	B	A	B	C	B	B	A	A	B-
VERMONT	C	D	B	C	C	B	C	B	B	C	F	A	A	A	C+	B	C	D	B	B	B	B	C+
VIRGINIA	B+	A	B	C	C	C	D	B	B	B	F	A	A	A	C+	A	I	F	B	C	C	B	C+
WASHINGTON	C	D	B	C	C	I	D	B	B	B	F	B	C	A	B-	A	C	D	B	B	B	B	C+
WEST VIRGINIA	B	B	B	D	D	C	F	C	C	I	F	B	C	A	C	A	D	F	C	D	B	B	C-
WISCONSIN	C+	B	C	C	C	C	D	B	B	B	F	A	A	A	C+	B	D	C	B	B	B	B	C+
WYOMING	C	F	A	D+	D	C	D	C	C	C	F	B	C	A	C+	A	D	F	B	B	A	B	C
UNITED STATES	C			C-								B+			C+								C

Data from the Oral Health America, 2001.

dren in preschool through high school to be conducted every five years. In addition, statewide assessment of oral health status of preschool and school-aged children needs to be conducted every five years.

ELIMINATE BARRIERS TO CARE. People fail to receive good oral health care for a number of reasons including: a lack of resources (insurance or money) available for care; limited appreciation for the importance of oral health; and little information about publicly funded programs. In addition, reimbursement rates for providers through California's public dental insurance programs are significantly lower than most states and insufficient to attract any significant participation by most private providers. Expand programs to inform Medi-Cal, Healthy Families and Children's Health Initiative enrollees about their dental benefits and the importance of early and periodic dental visits to prevent oral disease. Provide financial incentives to medical and dental professionals to provide early preventive care, including counseling, risk assessment, and preventive dental procedures. Increase payments for preventive services to providers who receive training on early childhood oral health.

PREVENT DISEASE. Dental decay is largely preventable if appropriate preventive measures are taken at an early age. These measures include early care by a dentist. Proven preventive dental services such as dental sealants, fluoride varnishes, and the fluoridation of community water supplies are effective but are underutilized. Funding for research aimed at preventing or eliminating the disease is limited. Every child should have a dental examination and necessary treatment by kindergarten. Require all dental insurance and managed care plans to provide coverage for dental sealants and other scientifically proven preventive

measures. Increase, to at least 25 percent, the number of preschool children served by existing programs that receive fluoride varnish applications and other preventive services. Increase funding for state prevention programs to add more schools, more grades, special education programs, and to provide more resources for local preventive programs and expansion of preschool preventive activities. Fund dental sealant programs and other preventive services in existing school-based/school-linked programs, and develop new preventive programs at community clinics and migrant health centers. Conduct a seal promotion campaign directed at both the public and dental professionals. Increase financial support for capital, operations, and maintenance costs of community water fluoridation. Build the science base by encouraging more research aimed at prevention and elimination of the disease.

ESTABLISH AN INTEGRATED PUBLIC HEALTH INFRASTRUCTURE. California lacks a sufficient public health infrastructure to meet the oral health needs of its residents, including an adequate dental workforce focused on serving the public. This requires California to create and maintain a state dental director position. Provide adequate authority and resources to enable the director to advance policies and programs that improve oral health status while integrating oral health to overall health. Grow the public dental health.

Conclusion

Despite progress, large gaps remain. However, many Americans, particularly children, continue to suffer disproportionately from oral pain and disease, including minority, low-income, and/or special care populations. A growing number of children are also facing difficulties in accessing care, as states cut Medicaid dental benefits. Community health

centers and public health facilities alone are able to provide a sufficient safety net as a majority of dentists do not participate in Medicaid. Children who come from low-income families are the ones who are suffering from poor oral health and inadequate access to care as a result of their socioeconomic status. The public, policymakers, and medical providers consider oral health to be less important than other health needs. Barriers continue to exist for children, dental disease is still prevalent in the United States, and we have fewer dentists graduating from dental school to provide essential preventive and restorative services. In order to reverse these trends, we need to mobilize resources, including public and private oral health care providers. ■■■■

REFERENCES

1. U.S. Department of Health and Human Services, Oral health in America: A report of the surgeon general — full report. Rockville, Md.: U.S. Department of Health and Human Services, National Institute of Dental and Craniofacial Research, National Institutes of Health, April 2000. <http://www.nidcr.nih.gov/AboutNIDCR/SurgeonGeneral/ExecutiveSummary.htm>. (Accessed July 12, 2007.)
2. Dental Health Foundation, Mommy, it hurts to chew: The California smile survey an oral health assessment of California's kindergarten and third-grade children, Oakland: California Department of Health Services, Office of Oral Health, Oral Health Access Council, 2006.
3. U.S. Department of Health and Human Services. Summary of surveys and data systems. Hyattsville, Md.: Center for Disease Control and Prevention, 1996. http://www.cdc.gov/nchs/data/NCHS_Survey_Matrix.pdf. (Accessed July 12, 2007.)
4. Oral Health America, filling the gaps. Rockville, Md.: U.S. Department of Health and Human Services, National Institute of Dental and Craniofacial Research, National Institutes of Health, 2001. <http://oralhealthamerica.org/pdf/2001-2002ReportCard.pdf>. (Accessed July 12, 2007.)

TO REQUEST A PRINTED COPY OF THIS ARTICLE, PLEASE CONTACT Lesa Paige Bentley, MHA, MBA, MBIT, P.O. Box 11365, Glendale, Calif, 91226.