

Water Fluoridation Impact on African Americans and other Minorities

Purpose: Water fluoridation stands out as one of the most effective public health interventions that the United States has ever undertaken. Fluoride counteracts tooth decay and, strengthens the teeth. It occurs naturally in water, but the level varies within states and across the country. The CDC identified community water fluoridation as 1 of 10 great public health achievements of the 20th Century and a major contributor to the decline in tooth decay over the last 5 decades.¹

State Involvement: In 2005, almost 60% of Arkansas' third-graders had experienced tooth decay and almost 30% of Arkansans over age 65 had lost all of their permanent teeth.² To date, only 65% of the population in Arkansas on public water systems receive fluoridated water.

Benefits:

- People who receive fluoridated water have 15% to 40% fewer cavities than people living in communities that don't add fluoride to their water supplies.³
- The per capita lifetime cost of fluoridation is less than the cost of one dental filling.⁴
- In communities with at least 20,000 residents, every \$1 invested in community water fluoridation yields about \$38 in savings from fewer cavities treated.

Racial, Geographic, and Socioeconomic Inequities in Oral Health:

- African-Americans and Hispanics are more likely than whites to have untreated tooth decay, and African-Americans are disproportionately affected by oral cancer.
- People in rural areas are less likely to receive regular dental care and more apt to lose all their teeth than those in other regions. Poor oral health was found in one study to be the greatest obstacle in going from welfare to work in rural areas.⁵
- Low-income children lose 12 times more school days due to dental illness than children from higher income families.⁶
- Nearly two-thirds of African-Americans 65 and older have lost at least six teeth because of tooth decay, compared to 44% of whites and 47% of Hispanics.⁷
- Compared to whites, the incidence of oral cancer is almost one-third higher among African-Americans and the mortality rate is almost twice as high.⁸
- Adults ages 18 to 64 are nearly twice as likely to lose their natural teeth if they reside in rural communities and are more likely to have untreated tooth decay.⁹
- Rural residents are less likely to have dental insurance or to have visited a dentist during the previous 12 months.¹⁰
- Several states in the South and Southwest have a disproportionately high percentage of people who have lost all their natural teeth.¹¹
- Most low-income children nationwide do not receive basic dental care that can prevent the need for higher-cost treatment later.
- Kids ages 2 to 11 whose families live below the federal poverty level are twice as likely to have untreated decay as their more affluent peers.¹²
- Nationally, just 38% of Medicaid-enrolled children between ages 1 and 18 received any dental care in 2007 compared to an estimated 58% of children with private insurance who receive care each year.¹³
- Dental disease is pervasive among low-income children in America in large part because they do not have access to basic care. A "simple cavity" can snowball into a lifetime of challenges.

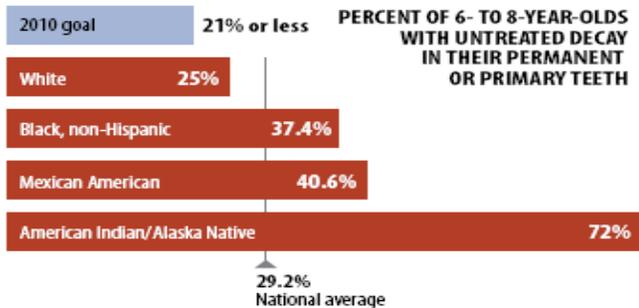
Successes

- Studies consistently show a marked decrease in tooth decay in fluoridated versus fluoride-deficient communities. These studies show decay reduction of 40-49% for primary (baby) teeth and 50-59% for permanent teeth.
- In 2002, kindergarten students in Perry County (non-fluoridated area) and Morrilton (fluoridated area) received dental screenings. Perry County showed twice the decay rate for non-fluoridated Perry County children. These studies led community leaders in Perryville and Bigelow in Perry County to institute fluoridation for their residents.
- In the U.S. alone, community water fluoridation has been preventing tooth decay since 1945. Today, more than 170 million Americans, and 1.7 million Arkansans, already enjoy the benefits of fluoridation every day

Exhibit 3

UNTREATED TOOTH DECAY BY ETHNICITY

Dental health varies drastically by ethnicity; American Indian and Alaska Native children fare the worst.



SOURCES: Pew Center on the States, 2010; Data from National Health and Nutrition Examination Survey, 1999-2004; Indian Health Service, 1999.

Accessed from www.cdc.gov/fluoridation/fact_sheets/cost.htm on November 5, 2007.

5. The 2004 Report to the Secretary: Rural Health and Human Service Issues, National Advisory Committee on Rural Health and Human Services, April 2004.
6. Department of Health and Human Services. Oral Health in America: A Report of the Surgeon General – Executive Summary. (2000).
7. Centers for Disease Control and Prevention. “Adults aged 65+ who have lost six or more teeth due to tooth decay or gum disease.” Accessed at <http://apps.nccd.cdc.gov/nohss/DisplayV.asp?DataSet=2&nkey=7989> on May 14, 2007.
8. The American Dental Association “Oral Health Topics A-Z” Accessed at http://www.ada.org/public/topics/cancer_oral.asp on December 17, 2007.
9. National Rural Health Association, Policy Brief: Oral Health in Rural America, 2001. <http://www.newenglandruralhealth.org>.
10. Eberhardt MS, Ingram DD, Makuc DM, et al. Urban and Rural Health Chartbook. Health, United States, 2001. Hyattsville, Maryland: National Center for Health Statistics. 2001. Accessed from <http://www.cdc.gov/nchs/data/hus/hus01cht.pdf> on December 13, 2007.
11. Centers for Disease Control and Prevention. MMWR. “Public Health and Aging: Retention of Natural Teeth Among Older Adults--- United States, 2002” 52:50 (December 19, 2003). Accessed from <http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5250a3.htm>
12. Eberhardt MS, Ingram DD, Makuc DM, et al. Urban and Rural Health Chartbook. Health, United States, 2001. Hyattsville, Maryland:
13. National Center for Health Statistics. 2001. Accessed from <http://www.cdc.gov/nchs/data/hus/hus01cht.pdf> on December 13, 2007.

1. U.S. Department of Health and Human Services, Indian Health Service, “An Oral Health Survey of American Indian and Alaska Native Dental Patients: Findings, Regional Differences, and National Comparisons” (Rockville, MD: Department of Health and Human Services, 1999),
2. U.S. Department of Health and Human Services, Centers for Disease Control and Prevention. *Preventing Dental Caries*. Atlanta, GA, 2002: http://www.cdc.gov/OralHealth/factsheet/dental_caries.htm
3. U.S. Department of Health and Human Services. Review of fluoride benefits and risks report of the Ad Hoc Subcommittee on Fluoride of the Committee to Coordinate Environmental Health and Related Programs. Washington:
4. U.S. Department of Health and Human Services, Public Health Service, 1991. Centers for Disease Control and Prevention. Cost Savings of Community Water Fluoridation.