Look Ma, No Cavities!
Fact or Fiction?

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The findings and conclusions in this presentation have not been formally disseminated by the Centers for Disease Control and Prevention and should not be construed to represent any agency determination or policy.
Look Ma, No Cavities

- 1958 Ad Campaign
  - Crest toothpaste
- Mad Magazine
  - December 1958
Caries Decline


*Defined as having one or more decayed, missing, or filled surfaces in permanent teeth (DMFS>0) among those with at least one permanent tooth. All estimates are adjusted by age (single years) and sex to the U.S. 2000 standard population, except sex, which is adjusted only by age.
†Percentage of the Federal Poverty Level (FPL), which varies by income and number of persons living in the household.
U.S. dental health improves
Fluoride credited for less decay than seen a decade ago, especially in children, study says.

By Ely Portillo
Knight Ridder Newspapers

WASHINGTON -- Americans have healthier teeth than they had a decade ago.

The number of cavities in the average mouth is down, and people are keeping their teeth longer, according to a federal study released Thursday.

The tooth decay decline was greatest among kids but holds "across every group," said Dr. William Maas, director of the federal Centers for Disease Control and Prevention's Division of Oral Health. The unit's study compared U.S. dental health in two periods: between 1988-94 and 1999-2002.

Although all racial, economic and age groups showed improvement, the study found

Tooth Decay In Kids On Decline
August 26, 2005 10:38 p.m. EST

Danielle George - All Headline News Staff Reporter

Atlanta, Georgia (AHN) - According to the federal government fluoride and toothpaste are the major factors in the decline of tooth decay among children in the United States.

A study by the Centers for Disease Control and Prevention found 42 percent of kids aged 6 to 19 had had a cavity or filling in their permanent teeth when examined between 1999 and 2002, a 15-percent decrease from the 1988-1994 period.

Tooth decay among adults fell between 4 and 6 percent, with 20 percent fewer over the age of 60 reporting they had lost all their teeth, the Atlanta-based CDC said.

"This reduced decay in all ages is really a reflection of the widespread availability of fluoride," said Dr. William Maas, director of the CDC's division of oral health. "It works for all ages."
Question of the Day
Posed by State Health Director

Everything I read says that decay rates are declining; so why is the prevalence of tooth decay so high in my state?
National Compared to State Data
National & State Oral Health Data

- **National data**
  - NHANES
  - Selection of individuals
  - Voluntary participation
  - 8-9 year olds
    - 741 children

- **State data**
  - BSS
  - Selection of schools
  - Combination of positive and passive consent
  - 3rd Grade
    - 31 states
    - 93,471 children
Percent of 3rd Graders with Caries Experience

Source: NHANES IV, National Oral Health Surveillance System
Caries experience in primary & permanent teeth
Percent of 3rd Graders with Untreated Decay

Source: NHANES IV, National Oral Health Surveillance System
Untreated decay in primary & permanent teeth
Percent of 3rd Graders with Dental Sealants

Source: NHANES IV, National Oral Health Surveillance System
Dental sealants on permanent molars
Look Ma, No Cavities!

- Large variation in decay experience from state to state
- Why does this variation exist?
FRL & Untreated Decay

Source: USDA, National Oral Health Surveillance System
FRL & Caries Experience

Free/Reduced Lunch Percent vs. Caries Experience

$R^2 = 0.3326$
FRL & Dental Sealants

Dental Sealants vs. Free/Reduced Lunch Percent

R² = 0.233
Look Ma, I’ve Got Cavities!

- Is the decline in caries prevalence noted in national data occurring nationwide?
- *Is it possible that caries prevalence is on the rise in some states?*
One State’s Experience

2nd Grade Children

Percent with Decay Experience

- All Teeth
- Permanent Teeth
- Minority
Permanent Dentition Only

Nhances IV

2nd Grade Children
Why is Prevalence Increasing?

- Differences in sampling/survey design
- Actual increase in caries ...
  - Changing dietary patterns
    - Increasing sugar consumption
    - Decreasing water (fluoride) consumption
- Treatment effect ...
  - Dentists may be treating small lesions not previously treated
Treatment Effect
… documented that well over 94% of the stains in pits and grooves of nonsmokers have undetected carious lesions.

As dentists working in 2001, we need to use the science at our disposal. The amount of routine, "run-of-the-mill" dentistry that goes undiagnosed is probably enough to keep dentists as busy as they want to be.

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