Maternal and Child Health
Issue Brief

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Children's Oral Health in Colorado

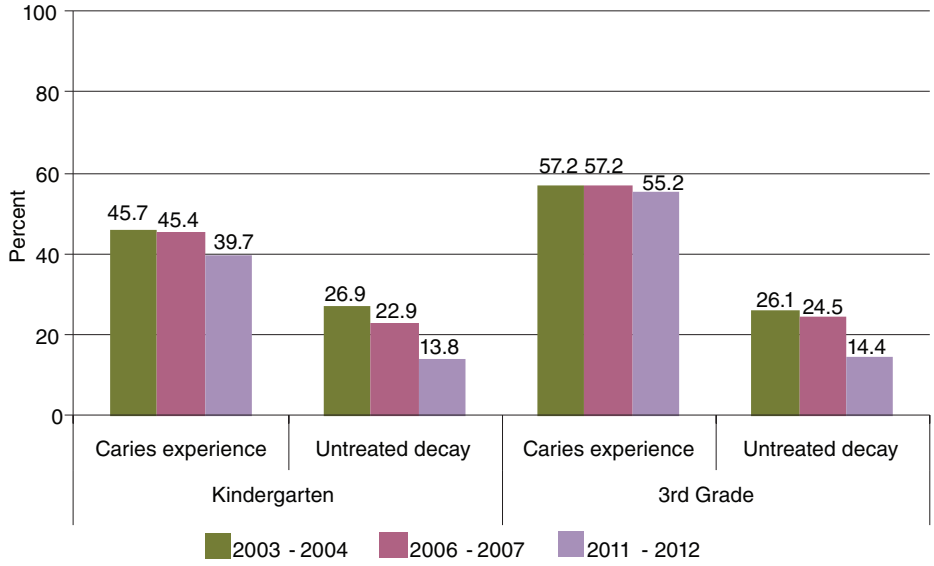
Dental caries is the most common chronic disease of childhood.

Why is children's oral health an issue?

Dental caries is the most common chronic disease of childhood in the United States.[1] Children with cavities can experience painful infections and have problems with eating, speaking and learning. Cavities are almost 100 percent preventable and improving oral health in children is one of the state health department's Winnable Battles and a priority for the Colorado Maternal and Child Health Program.

In 2011-2012, Colorado met the Healthy People 2020 goals for reducing untreated decay among children in kindergarten and 3rd grade. The state is also making some progress in meeting the Healthy People 2020 goals for reducing caries experience in the same age groups.

Figure 1. Caries experience and untreated decay in kindergarten and 3rd grade children by year, Colorado.[3]



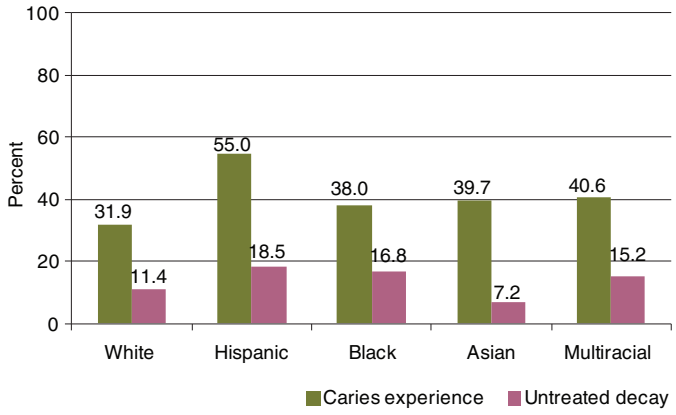
For young children, the overall prevalence of caries experience has not changed significantly since 2003–2004, but the prevalence of untreated decay has decreased significantly. Among children in kindergarten, the prevalence of untreated decay decreased from 26.9 percent in 2003–2004 to 13.8 percent in 2011–2012. Among children in 3rd grade, the prevalence of untreated decay decreased from 26.1 percent to 14.4 percent in the same time period.[3]

Healthy People 2020 Goals[2]

Reduce the proportion of children aged 3 to 5 years with caries experience to 30.0 percent and untreated decay to 21.4 percent.
Reduce the proportion of children aged 6 to 9 years with caries experience to 49.0 percent and untreated decay to 25.9 percent.

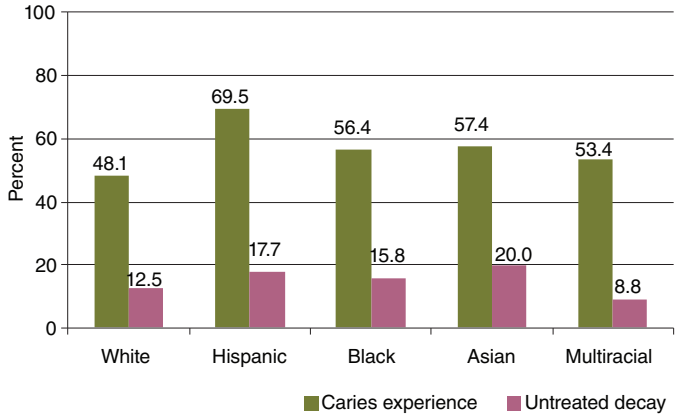
Social and economic health disparities

Figure 2. Caries experience and untreated decay in kindergarten children by race/ethnicity.[3]



Hispanic children in kindergarten have a significantly different prevalence of caries experience compared to White, Black, and Multiracial children. Hispanic children also have a significantly different prevalence of untreated decay compared to White and Asian children.[3]

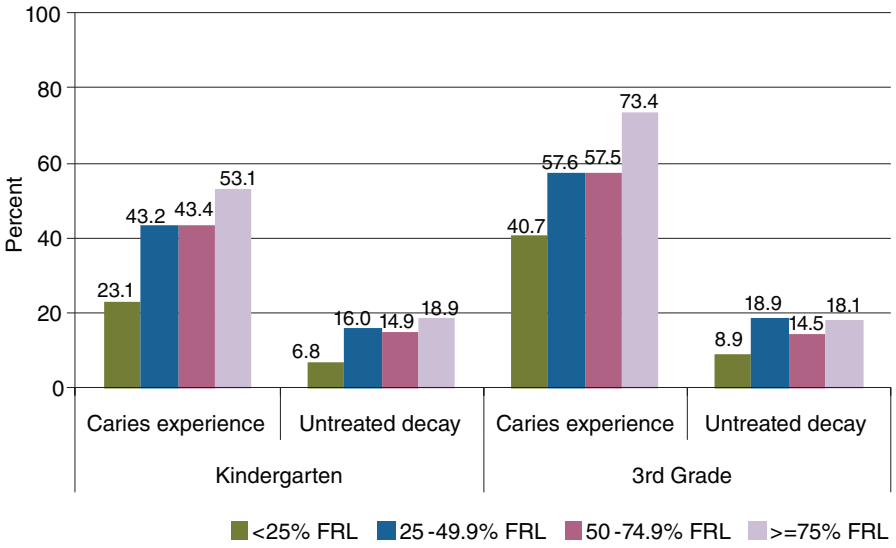
Figure 3. Caries experience and untreated decay in 3rd grade children by race/ethnicity.[3]



Hispanic children in 3rd grade have a significantly different prevalence of caries experience compared to White and Black children. There are no significant differences by race/ethnicity for untreated decay among children in 3rd grade.[3]

The prevalence of caries experience and untreated decay is highest in schools with the most students eligible for free and reduced lunch.

Figure 4. Caries experience and untreated decay in kindergarten and 3rd grade children by percent of students eligible for free and reduced lunch (FRL).[3]



For children in kindergarten and 3rd grade, the prevalence of caries experience and untreated decay is significantly different among children in schools with less than 25 percent of students eligible for free and reduced lunch compared to schools with a higher percentage of students eligible for free and reduced lunch.[3] This figure demonstrates that socioeconomic status can greatly impact children's oral health.

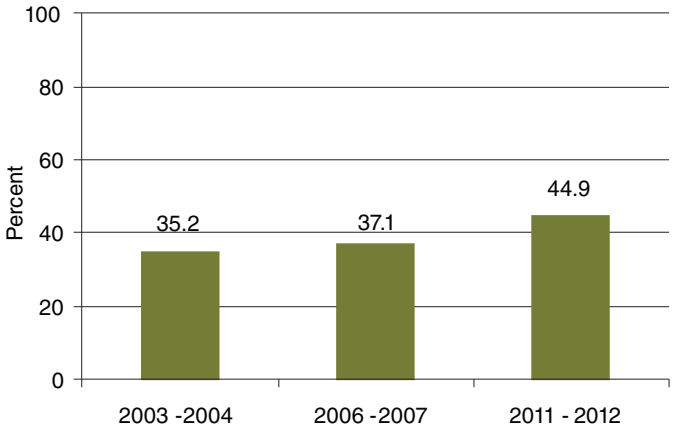
What behaviors support good oral health in children?

In addition to good oral habits such as avoiding sugary beverages, brushing twice a day with fluoridated toothpaste and daily flossing, regular visits to the dentist are important to maintain good oral health. For most children, at least one dental check-up annually is recommended.[4] The majority of children in Colorado, 91.2 percent, have a regular source of dental care.[5] Additionally, 81.2 percent of children went to the dentist for a preventive visit at least once in the past 12 months.[5] Among children eligible for Early Periodic, Screening, Diagnosis and Treatment, 45.0 percent received preventive dental services in the past year,[6] well below the percentage for all children, demonstrating that children from families with low incomes are less likely to receive preventive care.

Cavity prevention can also be achieved through application of fluoride treatments and dental sealants. Children at moderate or high cavities risk should receive professional fluoride treatment at least every six months, sometimes more often.[4] A Cochrane review showed a 37 percent and a 43 percent reduction in decayed, missing and filled tooth surfaces of primary and permanent teeth treated with fluoride varnish, respectively.[7] Sealants may be recommended for primary and permanent teeth with pits and fissures, but are especially important for children's six- and twelve-year molars.[4] In 2011-2012, 44.9 percent of children in 3rd grade had a dental sealant on at least one permanent molar, a significant increase from 2003-2004.[3]

Parents who visited a dentist in the last two years were almost twice as likely to take their child to the dentist by age 3 compared with parents who visited a dentist less frequently.

Figure 5. Dental sealants in 3rd grade children by year, Colorado.[3]



What environments and systems support good oral health in children?

A number of environmental and systems supports promoting oral health in children are present in Colorado. Fluoride in the community water supply is the most cost-effective preventive intervention, and 72.4 percent of the population served by community water systems receive optimally fluoridated water.[8] Dental insurance and availability of dental providers increase access to dental care and 79.0 percent of children under age 18 in the state had dental insurance.[9] However, access to a dentist can be a barrier even with dental insurance. Eight Colorado counties do not have a dentist offering care. Another nine counties do not have a private practice dentist who accepts Medicaid or a Federally Qualified Health Center that provides dental care.[10]

Systems outside the traditional dental environment also support children's oral health, and the health care system is one such leverage point. In 2011, 27.7 percent of children were ever referred to a dentist by a non-dental health care provider.[5] Parental behavior also greatly affects children's dental health. Parents who visited a dentist in the last two years were almost twice as likely to take their child to the dentist by age 3 years compared with parents who visited a dentist less frequently.[11]

Spotlight on dental visits by one year of age

Establishing a dental home is one easy way to combat dental disease. The American Academy of Pediatric Dentistry and the American Academy of Pediatrics recommend a first dental visit by one year of age, followed by regular dental visits. During the first dental visit, a dental professional should assess caries risk; evaluate the child's mouth and teeth; look for the beginning of caries (white spot lesions) and any other abnormalities; educate parents about healthy habits to prevent disease; and apply fluoride varnish if indicated. In Colorado, 8.1 percent of children visit a dentist by one year of age.[5]

In Colorado, primary care providers are providing limited preventive oral health services during well child visits to young children, and they are encouraging dental visits by one year of age. Cavity Free at Three (CF3), a statewide initiative, is leading the charge with a training program for health care providers. By teaching providers how to improve outreach, education and service delivery to families, CF3 seeks to eliminate early childhood caries in Colorado children.

The American Academy of Pediatric Dentistry recommends a first dental visit by one year of age, yet only 1 in 10 Colorado children visits the dentist by age one.

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