



Oral Health and Learning

When Children's Oral Health Suffers, So Does Their Ability to Learn

Tooth decay is nearly 100% preventable, and yet it is the most common chronic childhood disease. It can affect children's ability to learn, as well as their speech development, eating habits, activity levels and self-esteem.

Colorado kids miss an estimated 7.8 million hours of school every year due to mouth pain and infection. This increases the achievement gap, making it difficult for children to perform as well as their peers. This nationwide trend, reported in 2007 by the Department of Health and Human Services, is especially true for poor and minority children. They continue to suffer the most from dental decay and receive less preventive care, such as tooth sealants.

Nearly 60 percent of low-income kindergartners in Colorado have suffered from tooth decay. For more than one in four of those children, tooth decay goes untreated. Most of those kindergartners have dental coverage through publicly funded programs—Medicaid and Child Health Plan Plus (CHP+). But fewer than half use the coverage. Only one in four visited the dentist by age 1 as is recommended.

Safe, inexpensive preventive measures such as fluoride and sealants are available, but many children lack access to these interventions. In 2002, the Task Force on Community Preventive Services, a national independent, nonfederal, multidisciplinary task force appointed by the director of the Centers for Disease Control and Prevention (CDC), strongly recommended school sealant programs as an effective strategy to prevent tooth decay. CDC further estimates that if 50 percent of children at high risk participated in school sealant programs, over half of their tooth decay would be prevented and money would be saved on their treatment costs.

NCHD's School-Based Oral Health Program

In 2008, Northeast Colorado Health Department formed several partnerships to provide free school-based oral health services in Phillips and Sedgwick Counties. Through generous grant support and the assistance of several Registered Dental Hygienists, we can provide services to children in preschool through second grade. All children in these grades receive oral health education and a bag with a new toothbrush and other items. Over the past 5 years approximately 55% of parents of the children we educated in Phillips and Sedgwick Counties completed permission slips allowing us to provide dental services to their children. Our hygienists completed 1,200 visual screenings and fluoride applications in the schools. More than 360 of those screenings resulted in a referral to the dentist because of decay, infection, or other needs. We have placed sealants on 180 children who have their first molars. In 2013, Caring for Colorado awarded NCHD with a grant that has allowed us to expand services into Logan and Morgan Counties. The following services may be offered:

Screening and Fluoride Varnish

A Registered Dental Hygienist will do a visual screening to evaluate the teeth and soft tissue for possible decay and infection. Unless otherwise noted on the permission slip, a fluoride varnish will be applied.

Fluoride varnishes are advantageous to other topical fluoride vehicles, such as gels, rinses, and foams. They are inexpensive and safe, particularly in younger children, who are less likely to swallow varnish

than gel. The risk of fluorosis with varnish application is minimal. Varnishes are also better tolerated, without an offensive taste. There is no waiting period for eating and drinking after the application.

Varnishes do not require special preparation of the teeth and application is quick and easy, taking less than 5 minutes to apply. Minimal equipment is needed. We bring all the supplies we need. The average cost of fluoride varnish application is four dollars, thus making it one of the most cost-effective fluoride treatments available.

The varnish enables a high concentration of fluoride to remain in close contact with the teeth for several hours. This strengthens tooth enamel preventing the initiation of disease and even reversing early dental decay. Studies have shown that twice a year application of fluoride decreased caries by 25 percent in the permanent teeth of children living in non-fluoridated communities.

Our preventative school-based services, offered once per year, are not intended to replace the advice and care from children's regular dental provider.

Sealants

Dental sealants are one of the best cavity prevention methods available. They are thin plastic coatings that are painted onto the chewing surfaces of the molars to form a shield over the tooth.

As the back teeth grow, pits and grooves form on the top of the teeth. Food and germs get caught in these grooves and form cavities. Sealants fill the pits and grooves so teeth are easier to keep clean. The vast majority (90 percent) of cavities occur in the chewing surfaces of permanent molars

School-based sealant programs have been shown to be a cost effective and a proven evidence-based way to reduce the incidence of caries in school-aged children. They have been shown to decrease caries by 60 percent in the posterior teeth.

In the school-based program, sealants are typically placed in second grade because this is when it is most likely that the first permanent molars have erupted but do not yet have decay. Getting sealants is painless – drilling and shots are not needed. Sealants only take about 5 minutes per tooth and they can last up to ten years after they are placed.

Education and Follow-up

Education on proper brushing and oral hygiene is offered in the classroom and reiterated as the children who have completed permission slips receive services. A copy of the screening report is sent home to parents along with a list of local dental providers. If a child is referred to the dentist for restorative or emergency care, a Community Health Navigator from NCHD will follow up with the parents in a phone call to see if they were able to see the dentist or if they need help to address any barriers that are keeping them from accessing dental care. Any sealants placed in second grade will be checked the following year and replaced if needed. Please see the attached sheet of space needs and other requests.

Children's oral health is one of the top priorities for the nation—and Colorado.

Colorado's governor has designated children's oral health as one of the state's 10 winnable battles over the next five years.