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## Community-Based Provider Training and Education Enhances Access to Oral Health Screenings and Fluoride Treatments for Low-Income Children

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### Snapshot

#### Summary

Cavity Free at Three is a statewide Colorado initiative to prevent oral disease in children from infancy to age 3. The program provides education and training to health care providers from a variety of disciplines (including family doctors, pediatricians, nurses, physician assistants, public health practitioners, dentists, and dental hygienists) on how to incorporate oral health risk assessment, parent education, and fluoride varnish applications into regular services for young children. The program places particular emphasis on training professionals serving low-income, uninsured children in safety net or public health clinics. The program enhanced access to oral health screenings and fluoride varnish applications for children who otherwise would have limited access to these services and has led to high levels of satisfaction among providers and patients/families.

#### Evidence Rating *(What is this?)*

**Suggestive:** The evidence consists of data on the number of patients served by providers receiving training from the program, along with survey findings and anecdotal feedback from these providers.

#### Developing Organizations

Colorado Area Health Education Center System at the University of Colorado School of Medicine

#### Date First Implemented

2008

#### Patient Population

Age > Infant (1-23 months); Preschooler (2-5 years); Vulnerable Populations > Children; Impoverished; Medically uninsured; Rural populations

## What They Did

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### ***Problem Addressed***

**Although the oral health of children in the United States has steadily improved over the past few decades, tooth decay in early childhood remains a significant problem, particularly among low-income families. Many dentists do not accept children covered by Medicaid, and while many states, including Colorado, allow physicians to bill Medicaid for oral exams and fluoride applications, most general practitioners have not been trained on how to provide such services.**

- **Many children affected:** Tooth decay, one of the most common childhood conditions, is 5 times more common than asthma and 7 times more common than hay fever. Over half of children between the ages of 5 and 9 have had at least one cavity, while 78 percent of all 17-year-olds have experienced tooth decay.<sup>1</sup> In Colorado, 18 percent of 2- to 4-year olds have dental caries, while 16 percent have untreated decay.<sup>2</sup>
- **More common among low-income and uninsured families:** Children living in poverty suffer twice as much tooth decay as do other children, and their cavities are more likely to go untreated. Uninsured children are 2.5 times less likely to receive dental care than are children from families with medical insurance.<sup>1</sup>
- **Access to care a significant barrier:** While more than 20 million children receive coverage through Medicaid,<sup>3</sup> many dentists do not accept public health insurance, leaving many low-income children without adequate access to dental care. In fact, up to two-thirds of children with public health coverage have not visited a dentist in the past year.<sup>4</sup> In addition, children in rural areas often lack access to dentists, with primary care physicians often their only regular source of health care in the area. While Colorado is 1 of 30 States that allow general physicians to bill Medicaid for oral exams and fluoride applications for children up to age 5, many doctors and other health professionals in the State lack the training and education needed to provide such care.

### ***Description of the Innovative Activity***

**Cavity Free at Three is a statewide Colorado initiative to prevent oral disease in children from infancy to age 3. With a focus on safety net and public health clinics, the program provides education and training to physicians, other health care professionals, and health care students on how to incorporate oral health risk assessments, parent education, and fluoride varnish applications into the regular services provided to young children.** Key elements of the program include the following:

- **Training sessions for health care providers:** Cavity Free at Three provides approximately 10 full-day training sessions each year for health care professionals across Colorado, including family doctors, pediatricians, nurses, physician assistants, public health practitioners, dentists, dental hygienists, and others. Since its inception, the program has trained over 300 health professionals through 17 sessions. A technical assistance team comprised of medical and dental professionals conduct the sessions (see the Planning and Development section for

more information), which are held at various public sites. Individual providers, practices, or community organizations can apply to host a session, which is open to all health care professionals in the community. The program gives priority to safety net and public health clinics that wish to host a training. The sessions, provided free of charge, include the following core components:

- **Didactic education:** The first half of each session consists of didactic education on a variety of topics related to the oral health of children, including: the causes, prevention, and prevalence of tooth decay; how to incorporate an oral health risk assessment into well-child doctor visits or other routine medical care; how to use motivational interviewing to encourage oral health behavioral modification in patients and other primary caregivers; and the importance of reaching out to caregivers and pregnant women about proper oral health care for their children.
- **Hands-on component:** The second half consists of a hands-on demonstration of a fluoride varnish application. Participants are asked to recruit a few patients to attend this part of the session; these patients receive a free application conducted by the medical and dental professionals leading the session. Participants closely observe and participate in the demonstration as part of small groups.
- **Certification to receive Medicaid reimbursement:** After completing both portions of the training, medical providers receive paperwork that certifies them to receive reimbursement from Medicaid for oral exams and fluoride applications performed on children up to age 5.
- **Take-home materials and resources for patients:** Those attending the training sessions receive reproducible copies of a variety of patient education brochures, along with instructions on how to download additional free copies if needed. They also receive several hundred fluoride varnish kits, each containing a single dose of fluoride varnish, a toothbrush, and information cards on oral care for children. The program also connects participants to partnering vendor and vocational assistance program Bayaud Enterprises, where they can purchase additional kits at a reduced fee.
- **Followup and technical support:** Program staff provide ongoing technical support and assistance to all providers who have completed a training session. The program sends a mailing to each participant 30 days after the session, asking if they need support in overcoming any obstacles to implementation they may be experiencing. If so, program staff work with the provider, either over the phone or in person, to come up with possible solutions. The program's director of education checks in with each trained provider by telephone once a year (even if the provider has not previously asked for support) to inquire about and offer support related to program implementation.
- **Training for health care students:** Cavity Free at Three has incorporated its model into the curriculum for health care students at the University of Colorado at Denver's Schools of Medicine and Dental Medicine, including students of multidisciplinary health disciplines such as doctors, physician assistants, nursing students, dental technicians, and more. In particular, students participating in the School of Medicine's Rural Track Program all receive Cavity Free at Three training. Training these students, all of whom aim to practice medicine in rural areas of Colorado, provides a prime opportunity to spread the provision of oral care services to rural children (who traditionally have limited access to dental care) in nontraditional primary care settings.

### **References/Related Articles**

The Cavity Free at Three Web site is available at: <http://www.cavityfreethree.org/>.

The Smiles for Life national oral health curriculum is available at:

<http://smilesforlife2.org/home.html>.

### **Contact the Innovator**

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### **Did It Work?**

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### **Results**

**Post-implementation data suggests that the program has enhanced access to oral health screenings and fluoride varnish applications for children who otherwise would have limited access to these services. Providers and patients express high levels of satisfaction with the program.**

- **Enhanced access to services:** Health care professionals trained through the program provided over 2,500 children with oral health education, screenings, and fluoride varnish applications during 2008; program leaders estimate that 5,000 children will have been served by the end of 2009. In the absence of the program, it is unlikely that these children would have had access to these services, since most of those served had never seen a dentist (due primarily to a lack of private insurance).
- **Satisfied providers and patients:** Providers consistently report that the training increased their knowledge of children's oral health concerns and better prepared them to provide oral care education and services to patients. Anecdotally, providers report that patients and their families appreciate the potential to receive services outside of the routine dental setting, particularly those in rural locations.

### **Evidence Rating** (*What is this?*)

**Suggestive:** The evidence consists of data on the number of patients served by providers receiving training from the program, along with survey findings and anecdotal feedback from these providers.

### **How They Did It**

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### **Context of the Innovation**

The Colorado Area Health Education Center System is an academic-community partnership involving the University of Colorado at Denver Health Science Center and a number of community-based health education centers serving designated regions of Colorado. The system aims to improve the quality and accessibility of education for health care professionals in order to enhance the delivery of health care services throughout the state, with special emphasis on frontier, rural, and urban communities and minority populations. Recognizing that significant disparities in access to dental care existed across

Colorado, program leaders began generating ideas on how to use a variety of health care professionals to share the responsibility of providing oral health education and services to young children and their families.

### ***Planning and Development Process***

Key steps in the planning and development process included the following:

- **Assembling team to design program, lead training:** The program recruited a team of nine medical and dental professionals known for being committed community-based providers and/or health professional educators and researchers. This "technical assistance" team, which consists of physicians, dentists, public health practitioners, a pediatrician, and a pediatric dentist, developed the program, and individual team members lead the training sessions. Team members are located in various regions of Colorado, so as to allow sessions to be held throughout the state.
- **Designing training and educational materials:** The team met regularly over a 9-month period to plan and develop program materials, including provider and patient education brochures and the training curriculum.
- **Recruiting participants:** The program initially recruited participants through targeted mailings to potentially interested organizations and previous grantees with a connection to oral health. During the program's second year, program leaders gave multiple presentations at state organization meetings and submitted articles in professional journals, all of which led to an increased interest in the program. Currently, word of mouth from satisfied participants creates a consistent queue of people interested in receiving Cavity Free at Three training.

### ***Resources Used and Skills Needed***

- **Staffing:** The program employs two part-time staff, a program coordinator and a director of education. The program also compensates members of its technical assistance team for each training session they conduct.
- **Costs:** Cavity Free at Three operates on an annual budget of \$353,000.

### ***Funding Sources***

Kaiser Permanente; Caring for Colorado Foundation; Colorado Trust; The University of Colorado at Denver School of Medicine; The University of Colorado at Denver School of Dental Medicine; Colorado Health Foundation; Delta Dental of Colorado Foundation; Rose Community Foundation

## **Adoption Considerations**

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### ***Getting Started with This Innovation***

- **Build multidisciplinary alliance:** Bring together a multidisciplinary group of medical and dental professionals committed to improving oral health outcomes in children to brainstorm ideas on how to improve access to services.
- **Establish public presence in medical field:** Present the program at meetings and conferences designed for medical professionals. Physicians and pediatricians often want to get involved in oral health education and services, but do not know how to do so.
- **Seek multiple funding sources:** Having multiple, well-known donors signifies broad community support, which in turn attracts more funders.

### ***Sustaining This Innovation***

- **Show providers monetary value of participating:** Physicians will be more likely to continue their participation in the program if doing so is cost-effective. For example, with the Cavity Free at Three program, providers can buy a fluoride varnish kit for \$6, and then receive an average \$45 reimbursement from Medicaid for providing the service, thus providing them reasonable compensation for the time involved in doing so.

**Comment on this innovation/Read other comments.**

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<sup>1</sup> Centers for Disease Control and Prevention Division of Oral Health. Children's Oral Health [Web site]. 2004. Available at:

[http://www.cdc.gov/OralHealth/publications/factsheets/sgr2000\\_fs3.htm](http://www.cdc.gov/OralHealth/publications/factsheets/sgr2000_fs3.htm).

<sup>2</sup> Cavity Free at Three. Get Information [Web site]. 2009. Available at:

<http://www.cavityfreeatthree.org/GetInformation>.

<sup>3</sup> American Academy of Pediatrics. Fact Sheet: Children's Health Insurance [Web site].

September 25, 2008. Available at: <http://www.aap.org/research/factsheet.pdf> (If you don't have the software to open this PDF, [download free Adobe Acrobat Reader® software.](#)).

<sup>4</sup> Agency for Healthcare Research and Quality. Medical Expenditure Panel Survey: Dental Use, Expenses, Dental Coverage, and Changes, 1996 and 2004 [Web site]. 2007.

Available at: [http://www.meps.ahrq.gov/mepsweb/data\\_files/publications/cb17/cb17.pdf](http://www.meps.ahrq.gov/mepsweb/data_files/publications/cb17/cb17.pdf).

### Innovation Profile Classification

Disease/Clinical Category: [Dental caries](#); [Tooth diseases](#)

Patient Population: Age > [Infant \(1-23 months\)](#); [Preschooler \(2-5 years\)](#);  
Vulnerable Populations > [Children](#); [Impoverished](#);  
[Medically uninsured](#); [Rural populations](#)

Stage of Care: [Preventive care](#); [Primary care](#)

Setting of Care: Ambulatory Setting > [Dental office](#), [Public health clinic](#);  
[Safety net provider](#)

Patient Care Process: Preventive Care Processes > [Screening](#); [Primary prevention](#); Active Care Processes: Diagnosis and Treatment > [Assessment](#); [Primary care](#); Patient-Focused Processes/Psychosocial Care > [Patient education](#);  
Population Health Processes > [Disparities reduction](#);  
[Improving access to care](#)

IOM Domains of Quality: [Effectiveness](#); [Equity](#)

Organizational Processes: [Incentives](#); [Staffing](#); [Training, knowledge management](#)

Developer: [Colorado Area Health Education Center System at the University of Colorado School of Medicine](#)

Funding Sources: [Kaiser Permanente](#); [Caring for Colorado Foundation](#); [Colorado Trust](#); [The University of Colorado at Denver School of Medicine](#); [The University of Colorado at Denver School of Dental Medicine](#); [Colorado Health Foundation](#); [Delta Dental of Colorado Foundation](#); [Rose Community Foundation](#)

*Original publication: April 28, 2010.*

*Last updated: April 28, 2010.*



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