Forsyth

The Forsyth Institute
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Written testimony submitted to:
House Appropriations Subcommittee on
Interior, Environment, and Related Agencies
In support of Elementary School-Based Caries Prevention

by

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Dear Chairman Simpson and Members of the Committee:

Thank you for the opportunity to provide testimony on behalf of the Forsyth Institute (Forsyth) regarding the importance of elementary-based caries prevention within the Indian Health Service (IHS). This issue of oral health is important for all Americans, but particularly important and critical to the American Indian and Alaskan Native population. Forsyth is a century old, Harvard affiliated, non-profit organization focused entirely on oral and systemic health. In addition to being a global leader in oral health research and education, Forsyth created and runs the program ForsythKids elementary school-based, comprehensive, cavity prevention program. In this program an oral health team of a dentist, hygienists and dental assistants set up care facilities in schools using portable equipment and deliver comprehensive cavity prevention. The program is designed to fill the gap in dental care for at-risk children and ensure that they get preventative care as early as possible. The children enrolled in ForsythKids receive a dental exam, tooth cleaning, preventative care consisting of sealants, fluoride, decay-arresting temporary fillings and oral health education two times per year without ever leaving their school.

At the onset of the ForsythKids, 67 percent of children enrolled in ForsythKids had untreated cavities and 17 percent had acute infections or abscesses. Our studies show that this approach to care can exceed the goals of Healthy People 2020 prior to 2010 (see below). When viewed in the context of the goals set by Healthy People 2010, a national health promotion and disease prevention initiative managed by the U.S. Department of Health and Human Services, the ForsythKids program has already met and exceeded those goals.

Today, 10 million, or nearly 30 percent, of all U.S. school-age children have untreated tooth decay. This is five times more prevalent than asthma. In 2011-2012, to assess the oral health status of the American Indian and Alaskan Native elementary school population, the IHS coordinated a nationwide oral health survey of American Indian and Alaskan Native children in kindergarten, first, second and third grade. The results showed that 47 percent of American Indian and Alaskan Native children had untreated decay and 83 percent had caries experience, defined as instances of untreated

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cavities plus filled cavities. This compares with 45 percent of the general U.S. population of the same age. For point of reference, the Healthy People 2020 target for caries experience in 6-9 year olds is 49 percent. That means that in the next seven years, the rate of caries experience among the American Indian and Alaskan Native population will need to decrease by nearly 50 percent to meet this target.

HIHS Area	Decay			Untreated Decay		
	Percent	95	CI	Percent	95	CI
Aberdeen	86.4	82.	90.	58.1	52.	63.
Alaska	93.8	90.	97.	59.2	51.	66.
Albuquerq	90.0	87.	92.	44.2	38.	50.
Bemidji	82.4	75.	89.	53.6	45.	62.
Billings	86.3	82.	90.	48.3	40.	55.
California	82.5	73.	91.	56.9	46.	66.
Nashville	80.8	76.	84.	46.5	38.	54.
Navajo	91.6	88.	94.	55.5	42.	68.
Oklahoma	61.1	54.	68.	24.2	17.	31.
Phoenix	95.6	91.	99.	51.3	40.	62.
Portland	86.7	81.	91.	46.7	38.	55.
Tucson	82.0	78.	85.	61.6	52.	71.
IHS	83.1	81.	85.	47.4	43.	51.

I am here today to commend the IHS on its Early Childhood Caries program, and voice support for the expansion of this program to include elementary school-based prevention services.

Untreated Caries Have Long-Lasting and Detrimental Educational, Medical, and Social Effects

If left untreated, tooth decay can have serious consequences, including needless pain and suffering, difficulty chewing (which compromises children's nutrition and can slow their development), difficulty speaking and lost days in school. Furthermore, untreated decay increases school absenteeism and impairs classroom learning, since children with an acute toothache cannot pay attention in school or keep up with their peers academically. Worse, 5 percent of children with untreated decay have sepsis, which has the potential to be fatal.

Looking at the long term, oral health problems that start as a child often extend to adulthood. Visibly missing or decayed teeth are the outward markers of a "caste" system, connoting low educational achievement, faulty intellectual development, and poor parenting. Decayed and missing teeth are noticed almost immediately in a face-to-face encounter. Poor projected image contributes to the "death spiral" of unemployment and lack of affordable and accessible health and dental care, and perpetuates one initiating problem - unemployment. Conversely, good dentition is important for good nutrition, systemic health, educational success and normal social interactions.

Clinical Solutions for Caries Prevention

Clinically and cost-effective caries prevention methods are available and have been endorsed by the Centers for Disease Control and Prevention (CDC), the Task Force on Community Preventive Services, the American Dental Association, and the American Academy of Pediatric Dentistry. It is clear from systematic reviews and from high-quality, large scale or long-term, randomized controlled trials that incidences of dental caries can be reduced significantly by use of fluoride varnish and toothpaste, sealants and glass ionomer, and interim therapeutic restorations. Preventive intervention programs can reduce the caries incidence by 40 percent to 80 percent, and their success supports targeting these interventions to high-risk populations

and providing comprehensive prevention. These studies also indicate that these preventive measures are both clinically and cost-effective. Estimates range from two to 10-fold savings in health care costs for prevention, compared to treatment.

School-Based Caries Prevention Programs are Effective

To overcome the lack of access to office-based preventive care, the CDC has long recommended school-based caries prevention programs. The CDC's view is that school-based caries programs are especially important for reaching children from low-income families who are less likely to receive dental care in clinics. The CDC specifically acknowledges that untreated tooth decay results in pain and negatively affects learning. To circumvent barriers to office-based care, this program focuses on school-based care.

Elementary schools are a particularly useful age to begin school-based prevention. This is because during the elementary school years children loose their baby teeth and the permanent teeth emerge. Therefore, protecting the newly erupting teeth prior to initiation of new caries is critical for prevention. Second, this protection begins to shift the disease related oral ecology to a healthy oral ecology. Third, this is also a period when children begin to learn self-efficacy and self-sufficiency along with personal hygiene. Therefore, oral hygiene becomes part and parcel of the learning agenda. Finally, seeing children twice a year in school over the elementary school year offers at least 12 opportunities to protect the teeth, change the ecology, and instill life-long personal hygiene habits with peers.

Although there is clear evidence that caries prevention programs are effective, they are often not implemented or they are delivered only incrementally (e.g., education only; provision of only fluoride varnish, but not sealants; or prevention to only 2nd and 6th grades). For example, the USDHHS "Healthy People" data indicate that in 2010, only 25 percent of children who needed sealants actually received them. That still leaves 75 percent of the population untreated. Thus, there is a clear gap between what we "know" and what we "do". By proposing to increase program reach and implement comprehensive caries prevention to American Indian and Alaskan Native elementary school grades twice per year, we believe this program can exceed the goals of Healthy People 2020, prior to 2020.

The ForsythKids Elementary School-Based Comprehensive Caries Prevention Model

ForsythKids is a model for the school-based caries program. All interventions are supported by guidelines and/or systematic reviews from the CDC, the American Academy of Pediatric Dentistry, and/or the American Dental Association.

<u>Prevention protocol</u>

First, the program has prevention protocol. Children with informed consent receive in-school dental examinations twice per year. Dental hygienists provide primary prevention including prophylaxis, glass ionomer sealants and interim therapeutic restorations as needed. Fluoride varnish, toothbrush, fluoride toothpaste, and health education are also provided. A community health care coordinator facilitates referral of children with emergent or restorative needs to the

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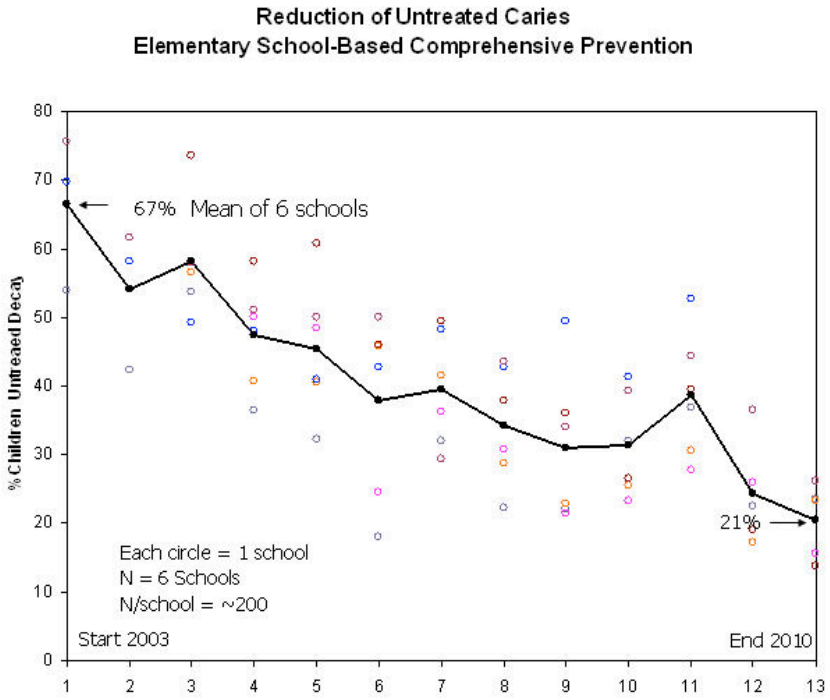
local community health center or dentist.

Reduction in untreated caries

At baseline, 67 percent of children had untreated decay. At 6 years this was reduced to 21% by providing twice yearly comprehensive caries prevention. This result exceeds the Healthy People 2020 goals prior to 2010.



IHS Early Childhood Caries Program

The IHS currently runs the Early Childhood Caries Collaborative, which is a multi-faceted program designed to enhance knowledge about early childhood caries prevention and early intervention among not only dental providers, but also all healthcare providers and the community. The ECC Collaborative has brought great results to the American Indian and Alaskan Native population, but there is more work to be done. By extending this program to include elementary school-based prevention and treatment similar to that provided by ForsythKids, the IHS can significantly reduce tooth decay and the associated health, social and economic risks. Including $5,000,000 for a pilot program for extension of the ECC Collaboration into a school-based caries prevention program on Indian Reservations throughout the nation would demonstrate the clinically and cost-effective nature of the ForsythKids in-school model, and provide an example for further expansion. Such expansion would be a relatively low cost method of meeting and ultimately exceeding the Healthy People 2020 goals for tooth decay in the high-risk American Indian and Alaskan Native population.

Thank you for the opportunity to present this testimony to the Subcommittee. And thank you for your leadership and support on these critical issues. As you deliberate appropriate funding levels for these programs, please consider the important public policy implications these choices entail.