



# The IHS Dental Explorer

*A publication of the IHS Division of Oral Health*

February  
2010

## **Introducing** **The Indian Health Service** **Early Childhood Caries Initiative**



The IHS Early Childhood Caries Initiative is a new program designed to promote prevention and early intervention of dental caries (tooth decay) in young children through an interdisciplinary approach.

Components of the program include: early oral health assessments by community partners such as Head Start, the Women's, Infants, and Children's Program (WIC), nurses, doctors, and Community Health Representatives (CHRs); fluoride varnish application by these community partners and dental teams; dental sealants on primary teeth by dental teams at an early age; the use of Interim Therapeutic Restorations (ITR) to reduce the need of children having to go to the operating room to receive dental treatment; and the establishment of a national oral health surveillance system to measure the impact of this Initiative.



## Why now?



The 1999 IHS Oral Health Survey showed that 79.7% of children under the age of five years had experienced dental caries. We haven't had another national survey conducted since then, but my discussions with many of you over the past five years leads me to believe that we really haven't made significant progress with the problem of Early Childhood Caries (ECC). The disparity in the prevalence of this disease in American Indian/Alaska Native (AI/AN) children is staggering—the prevalence of ECC in the general U.S. population in 2004 was 28%, a difference of over 50% (*National Health and Nutrition Examination Survey, 2004*).

So in July 2009, during the biennial IHS Dental Updates Conference, I put together a select group of dental leaders from across the IHS with the purpose of developing an initiative aimed at preventing ECC. This Steering Committee, in just over six months time, has put together an outstanding program

that includes a packet of information for dental and community partners, two online courses, and a presentation that can be used by dental teams to engage our community partners.

The Steering Committee consists of:

- Dr. Tim Ricks, Nashville Area Dental Officer and IHS Dental Public Health Consultant, Co-Chair;
- Dr. Bonnie Bruerd, IHS Head Start Oral Health Consultant and Consultant for the Northwest Portland Area Indian Health Board, Co-Chair;
- Dr. Patrick Blahut, IHS Deputy Dental Director and IHS HP/DP Coordinator;
- Dr. Mary Beth Kinney, Director of IHS Dental Continuing Education;
- Dr. John Zimmer, Aberdeen Area Pediatric Dentist;
- Dr. Jim Schaeffer, IHS Deputy Dental Director;
- Dr. Pat Sewell, Albuquerque Area Dental Consultant.

As you read this edition of the IHS Dental Explorer, I hope that your questions about the ECC Initiative will be answered and that I can count on you to enact this Initiative at your local clinic. The motto for the Initiative is one that I truly believe in....***TOGETHER, WE CAN MAKE A DIFFERENCE!***

**Christopher G. Halliday, DDS, MPH**  
**Director, IHS Division of Oral Health**



# What is ECC?

Early Childhood Caries (ECC, early childhood tooth decay) is an infectious disease that can start as soon as an infant's teeth erupt. ECC can progress rapidly and may have a lasting detrimental impact on a child's health and well-being. **ECC is a serious health problem.**



ECC is defined as the presence of **one or more** decayed, filled, or missing (due to caries) primary teeth in a child 71 months or younger (under 6 years of age). In other words, **any** caries experience in a child under 6 years of age constitutes Early Childhood Caries.

The 1999 *Oral Health Survey of American Indian and Alaska Native Dental Patients* found that 79% of children between the ages of 2-5 years had experienced dental caries, and 68% of this age group had untreated decay at the time of the dental examination.

## What is the IHS ECC Initiative?

The Indian Health Service (IHS) Early Childhood Caries (ECC) Initiative 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 other community partners. The Initiative provides the entire healthcare team with the tools to begin a successful ECC program.



Components of the Initiative include:

- An ECC Packet to be distributed to all IHS, Tribal, and Urban Dental Programs
- Two online courses: "How to Apply Fluoride Varnish" and "Caries Stabilization"
- A PowerPoint presentation that local clinics can use to engage community and dental partners
- The Basic Screening Survey (BSS), which will form the basis of a national oral health surveillance system
- A webpage designed to publicize ECC best practices



## What is different about this Initiative?

The Indian Health Service has had past ECC initiatives. An ECC (then Baby Bottle Tooth Decay) program in the early 1990's was followed by a demonstration project in 1999 at over ten sites. These initiatives were community-based and focused largely on health education

So what makes this ECC Initiative different than initiatives of the past?

- 1. This ECC Initiative calls for the establishment of a national oral health surveillance system in the IHS.**

The last national survey conducted in the IHS was 1999, and much of our program planning is based on this 10 year-old survey. Using the Basic Screening Survey (BSS), which is used by most states and is endorsed by the Association of State and Territorial Dental Directors (ASTDD), will allow for more rapid surveillance of ECC—perhaps annually. In addition, survey results can be used to compare clinics with their state data.

- 2. This ECC Initiative calls for a more formal approach at reaching out to medical and community partners that will play a key role in ECC prevention and early intervention.**

This Initiative has information specifically designed for medical providers, public health nurses, community health representatives, the

WIC program, Head Start, and Tribal Councils or governing boards.

- 3. This ECC Initiative isn't just about prevention...it also calls for early intervention of ECC.**

Caries stabilization is a major component of this Initiative, with an online course and a handout available on Interim Therapeutic Restorations.

- 4. This Initiative includes many printed materials, online courses, a PowerPoint, and a webpage.**

In February 2010, an ECC Initiative Packet will be mailed out to all dental programs. This packet will contain customized information for community partners and details of every component of the Initiative. A webpage has been developed that will provide not only the ECC Packet documents and two online courses, but also a spotlight on an IHS, tribal, or urban dental program with a successful ECC program, as well as a collection of best practices from around the country.

The Initiative also encourages the development of additional therapies that can be shown to prevent ECC. It is expected that the Initiative will grow in the coming years as more scientific research on other ECC chemotherapeutics become available.



## Goals & Objectives of the Initiative

**Overall Goal: Reduce the prevalence of ECC among 0-5 year old AI/AN children by 25% by FY 2015.**

Evaluation: BSS community-based data will be collected from each IHS Area during FY 2010 to establish a baseline prevalence of ECC. Data will be collected during subsequent years to track the prevalence of ECC in AI/AN communities.

**1. Increase dental access for 0-5 year old AI/AN children by 10% in FY 2010 and 50% by FY 2015.**

Evaluation: RPMS codes 0145, 0150, 0120 by age groups 0-2 and 3-5.

Baseline Data: FY 08

- 0-2 year olds: 8,927 received a dental exam or screening, 10% of 3-year medical user pop
- 3-5 year olds: 22,970 received a dental exam or screening, 25% of 3-year medical user pop

**2. Increase the number of children 0-5 years old who received a fluoride varnish treatment by 10% in FY 2010 and 25% by FY 2015.**

Evaluation: RPMS codes 1203 and 1206

Baseline Data: FY 08

- 0-2 year olds: 8,264 fluoride varnish treatments.
- 3-5 year olds: 25,004 fluoride varnish treatments.

**3. Increase the number of sealants among children 0-5 years old by 10% in FY 2010 and 25% by 2015.**

Evaluation: RPMS code 1351

Baseline Data: FY 08

- 0-2 year olds: 1,904
- 3-5 year olds: 13,717

Evaluation: RPMS code 2940 (code 2940 will be used for ITRs)

**4. Increase the number of Interim Therapeutic Restorations (ITRs) among children 0-5 years old by 10% in FY 2010 and 25% by 2015.**

Baseline Data: FY 08

- 0-2 year olds: 497
- 3-5 year olds: 3,142



# Community Partners: Keys to Success

For this ECC Initiative to really work, we must rely on our community partners—CHRs, WIC, Head Start, medical providers, public health nurses, and governing boards.

Why are community partners essential to the success of the ECC Initiative? Most IHS, Tribal, and Urban Dental Programs have a very low proportion of 0-5 year-olds accessing dental services. Take a look at these statistics:

- ◆ Less than 25% of the entire AI/AN population is able to access dental services, according to recent GPRA reports.
- ◆ Less than 10% of the 0-2 year-old population, and less than 25% of the 3-5 year-old population that accessed IHS, Tribal, and Urban **medical** clinics accessed IHS, Tribal, and Urban **dental** clinics in 2008.

Since access to care is a major problem, and since ECC begins at an early age, often before the age of two years, the IHS has adopted the slogan:

## TWO IS TOO LATE!

What this means is that by two years of age, it is often **too late to prevent** ECC and dentists are already treating caries in young children.

That's where our Community Partners come in. As part of this Initiative, we are strongly encouraging dental programs to work with CHRs, WIC, Head Start, public health nurses, medical providers, and governing boards to:

- Promote key oral health messages about ECC prevention to parents;
- Conduct oral health assessments and refer children when appropriate to dental clinics;
- Apply fluoride varnish on children.

Community partners will be the key to the success of the ECC Initiative. When you receive the ECC Packet and other materials, begin to engage your partners with information on ECC and what a critical role they will play.





# Roll-out Schedule of the Initiative

## Phase I: January 5-15, 2010

**Selected pediatric dentists to review all materials**

## Phase II: January 19, 2010

**Area Dental Officers & Dental Support Centers are introduced to the Initiative**

## Phase III: January 24, 2010

**The ECC Initiative is announced throughout IHS Dental through the release of the IHS Dental Explorer**

## Phase IV: March 1, 2010

**All materials become available to dental clinics and community partners:**

- 1. Dental clinics receive the ECC Packet**
- 2. “Caries Stabilization” and “How to Apply Fluoride Varnish” courses become available**
- 3. The ECC Initiative webpage becomes operational**
- 4. A PP presentation is available to use to engage community partners**

## Phase V: March—July 2010

**The ECC Initiative is described at various national community partner meetings in the hopes of engaging them in the IHS ECC Initiative:**

- 1. March 21—IHS Combined Councils Meeting**
- 2. April 29—Advances in Indian Health Conference**
- 3. March-August—four Head Start conferences focused on oral health**
- 4. July—IHS CHR Conference**
- 5. Others, as they become available**



# What can YOU do to prevent ECC?

<b>ECC Partners</b>	<b>Actions</b>
<b>Area Dental Officers and Dental Support Centers</b>	Support ECC Initiative Assist with local program planning Provide mini-grants to support ECC Initiative Sponsor Caries Stabilization and ECC courses Oversee and support Basic Screening Surveys (BSS) for your Area
<b>Dental Staff</b>	Participate in local program planning of ECC Program Implement caries stabilization Increase access for pregnant women and 0-2 year olds With your ADO or DSC, conduct a Basic Screening Survey
<b>Tribal Health Boards</b>	Sponsor resolutions to support ECC Initiative Support your dental clinic's ECC Initiative community activities
<b>Medical Staff</b>	Apply fluoride varnish, screening, and referrals for 0-2 year olds during well-child visits; provide prevention messages to families
<b>Public Health Nurses Community Health Nurses</b>	Apply fluoride varnish, screening, and referrals for 0-2 year olds during well-child visits; provide prevention messages to families
<b>CHRs</b>	Apply fluoride varnish, screening, and referrals; provide prevention messages to families
<b>WIC</b>	Apply fluoride varnish, screening, and referrals; provide prevention messages to families
<b>Head Start</b>	Daily brushing with fluoride toothpaste Apply fluoride varnish 3-4 times/year onsite Provide prevention messages to families







# Best Practices to Prevent ECC

Pregnancy	Birth—Two Years	Three—Five Years
<p><b><i>COLLABORATE!</i></b></p> <p>Collaborate with the medical, community health, Early Head Start, and dental providers to assure that all pregnant women visit the dental clinic during the early months of pregnancy.</p> <p><b><i>EDUCATE!</i></b></p> <p>Educate the mother about the transmissibility of dental caries and ways to prevent ECC.</p> <p>Provide education and support to promote breastfeeding.</p> <p><b><i>COUNSEL!</i></b></p> <p>Provide nutrition counseling to reinforce the importance of a healthy diet during the <b>perinatal</b> period.</p> <p><b><i>MAKE RECOMMENDATIONS!</i></b></p> <p>Recommend that pregnant women stop using tobacco.</p> <p><b><i>SET AN APPOINTMENT!</i></b></p> <p>The dental staff can provide an oral exam, periodontal disease screening, prophylaxis, recommendations for completing any needed dental treatment, caries control, and appropriate recall.</p> <p>The dental staff can assess the mother's caries risk and prescribe anti-bacterials like chlorhexidine or xylitol for high-risk mothers during the perinatal period.</p>	<p><b><i>COLLABORATE!</i></b></p> <p>Collaborate with the medical, community health, and dental providers to assure that children receive the following oral health services.</p> <p><b><i>ASSESS!</i></b></p> <p>Provide an oral health assessment soon after the first tooth erupts or by 12 months of age. Consider caries stabilization with glass ionomer as appropriate.</p> <p><b><i>PREVENT!</i></b></p> <p>Provide topical fluoride varnish treatments 4 or more times during the period from 9-24 months of age.</p> <p><b><i>EDUCATE FAMILIES!</i></b></p> <p>Educate families about the importance of never putting baby in bed with a bottle, using a cup by 6 months, and weaning off the bottle at 12-14 months of age.</p> <p>Educate families about the protective qualities of fluoride. Ideally, every child should be drinking fluoridated water and have their teeth cleaned twice daily with a small smear of fluoride toothpaste.</p> <p>Teach families to lift the lip and look for chalky white or brown spots, and if they see any signs of dental decay, they should see the dentist.</p> <p><b><i>ENCOURAGE!</i></b></p> <p>Encourage healthy snacks and limited exposure to sweets, refined starches like chips and crackers, and sweetened drinks. Reinforce to families that pop does not belong in a preschooler's diet.</p>	<p><b><i>COLLABORATE!</i></b></p> <p>Collaborate with the medical, community health, Head Start, and dental providers to assure that every child has a dental home.</p> <p>Consider caries stabilization with glass ionomer as appropriate. Consider dental sealants for the primary molars of any children who are at high risk for dental caries.</p> <p><b><i>PREVENT!</i></b></p> <p>Provide topical fluoride varnish treatments 3-4 times a year for children at high risk for dental caries.</p> <p><b><i>EDUCATE FAMILIES!</i></b></p> <p>Educate families about the protective qualities of fluoride. Ideally, every child should be drinking fluoridated water and have their teeth brushed twice daily with a pea-sized amount of fluoride toothpaste.</p> <p>Encourage healthy snacks and limited exposure to sweets, refined starches like chips and crackers, and sweetened drinks. Reinforce to families that pop does not belong in a preschooler's diet.</p> <p><b><i>HEAD START!</i></b></p> <p>Daily supervised brushing with a pea-sized amount of fluoride toothpaste.</p> <p>Through Head Start, consider implementing a fluoride varnish and xylitol program for 3-5 year olds.</p>

Other preventive measures such as chlorhexidine, iodine, and calcium phosphate products may be viable chemotherapeutics along with fluoride varnish and the other strategies outlined in the ECC Initiative, but at this time, these measures have insufficient clinical evidence to be considered best practices. We are encouraging pilot-testing of these and other chemotherapeutics.



# The Basic Screening Survey

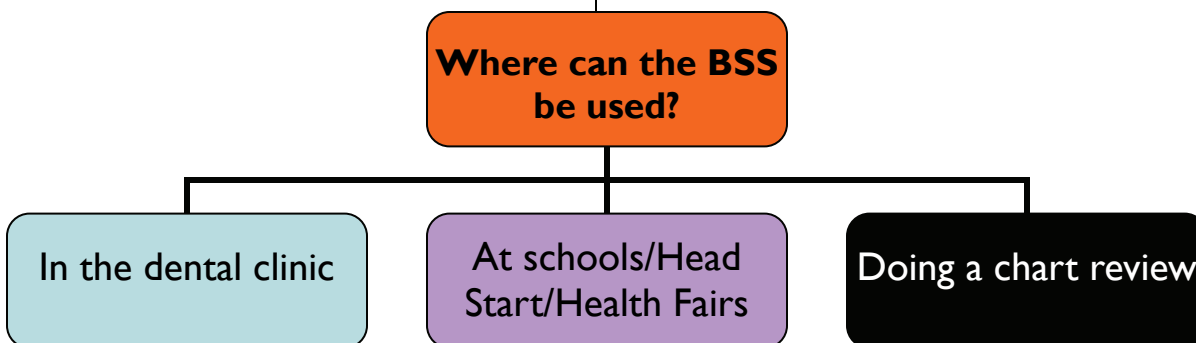
The Basic Screening Survey (BSS) will be the basis of evaluating the effectiveness of the IHS ECC Initiative. The Basic Screening Survey is used by states to assess oral health status. Developed by the American Association of State and Territorial Dental Directors (ASTDD), this survey can be done in the dental clinic, at health fairs, at other screening opportunities, and through a retrospective chart review.

Why do a Basic Screening Survey? This survey will help you determine baseline data for the population you serve. With respect to the IHS Early Childhood Caries Initiative, most of the data we have now on the prevalence of ECC is either old or unreliable: (1) the last IHS Oral Health Survey was done in 1999, so that data is over 10 years old now; (2) RPMS data, in most situations, is not reliable in assessing oral health status in populations because it only includes patients presenting to the dental clinic. Most dental clinics were not consistent in using the IH tracking codes, and then those codes were removed in early 2009 from the DDS package.



The BSS is also important in two other ways. First, it will allow you to measure the extent of ECC in your community as compared to your state. The National Oral Health Surveillance System website - <http://www.cdc.gov/nohss/index.htm> - will allow you to make comparisons between your community's ECC prevalence rate with that of your state and surrounding states. Second, the survey can be used to track the effectiveness of your ECC prevention activities over time.

Training on the BSS will be available to all dental programs beginning in early Fall 2010.





# Caries Stabilization Using ITRs

As stated before, this IHS ECC Initiative isn't only about preventing ECC, but also about early intervention. Below is information on early intervention of ECC through use of ITRs.

## What is an ITR?

An Interim Therapeutic Restoration (ITR) is a restoration placed on teeth to prevent the progression of caries.



## What is the goal of caries stabilization?

To provide treatment without local anesthetic using fluoride-releasing glass ionomer on teeth diagnosed with neither necrotic nor irreversible pulpitis. This procedure can be done by general dentists and their staff, often avoiding dental treatment under general anesthesia.

## Indications for ITR

ITRs are indicated for infants, children, adolescents and patients with special health care needs when conventional restorative care is not available or needs to be deferred.

## Facts about ITR



1. The use of ITR has been shown to reduce the levels of cariogenic oral bacteria.
2. Follow-up care including oral hygiene instructions and the use of fluoride varnishes and fluoride toothpaste may improve the treatment outcome.
3. The American Academy of Pediatric Dentistry recognizes ITR as a "beneficial provisional technique" in pediatric dental restorations.



**Interim Therapeutic Restorations (ITR) are endorsed by both the American Academy of Pediatric Dentistry (AAPD) and the IHS Division of Oral Health for the purpose of caries stabilization.**



# ECC Packet: Dental Teams

When the ECC Packet is mailed out to IHS, Tribal, and Urban Dental Programs in March 2010, the folder will have two sides: one for the dental team and one for the medical and community partners. The materials on the dental side of the folder explain in detail all aspects of the Initiative and should be shared with all members of your dental team. Documents on the Dental Team side of the folder will include:

- ◆ “About the Initiative,” a summary of the Initiative along with goals and objectives
- ◆ “Promoting Awareness of Early Childhood Caries,” a summary fact sheet
- ◆ “Key Oral Health Messages and Setting Goals”
- ◆ “Dental Sealants”
- ◆ “Interim Therapeutic Restorations”
- ◆ “RPMS and Coding Questions on the IHS ECC Initiative”
- ◆ “The Basic Screening Survey and the IHS ECC Initiative”
- ◆ “Getting Your Community Involved”
- ◆ “ECC Initiative Course & Presentation Summaries”
- ◆ “ECC Program Planning”





# ECC Packet: Community Partners



The left side of the IHS ECC Initiative Packet has materials customized for our different medical and community partners. Once dental programs have presented to key community partners about the Initiative using the PowerPoint presentation that will be available on the web page, they can distribute these materials to appropriate community partners. Publications on this side of the ECC Packet include:

- “ECC Initiative Fact Sheet, Community Partners”
- “Head Start’s Role in ECC Prevention & Early Intervention”
- “The WIC Staff’s Role in ECC Prevention and Early Intervention”
- “The CHR Role in ECC Prevention and Intervention”
- “The Public Health Nurse’s Role in ECC Prevention and Early Intervention”
- “The Medical Provider’s Role in Early Childhood Caries Prevention”
- “The Tribal Health Board’s/Governing Body’s Role in ECC Prevention”

**NOTE: Additional copies of all printed materials on both sides of the ECC Packet will be available for download from the IHS ECC Initiative webpage ([www.doh.ihs.gov/ecc](http://www.doh.ihs.gov/ecc)) beginning March 1, 2010.**





## Online ECC Courses

### Caries Stabilization Course

**Target Audience:** General dentists, RDHs, and EFDAs

**Format:** The online course is located on the IHS Dental Portal (<http://www.doh.ihs.gov>) under the CDE tab. You must log in to access the course.

**Goal:** Expand knowledge and increase the use of caries stabilization when treating young children. Caries stabilization involves using glass ionomer for interim therapeutic restorations (ITRs), resin and glass ionomer sealants to protect pit and fissures on primary molars, fluoride varnish, and twice daily use of fluoride toothpaste at home.

### How to Apply Fluoride Varnish Course

**Target Audience:** Medical Staff, CHRs, WIC, Head Start and other partners as appropriate

**Format:** Online course and PowerPoint presentation for group presentations. The course is located on the Head Start homepage (<http://www.ihs.gov/HeadStart/>) and the IHS Dental Portal (<http://www.doh.ihs.gov>) under the CDE tab. The PowerPoint presentation is located on the Head Start homepage and the IHS Dental Portal under the ECC tab.

**Goal:** Involve ECC Initiative medical and community partners to screen, apply fluoride varnish, and appropriately refer children for dental treatment.

**NOTE: These two online courses will be available on March 1, 2010.**





# IHS ECCC

EARLY CHILDHOOD CARIES INITIATIVE

Healthy Teeth

Healthy Families



**Together, we CAN make a difference!**



**IHS Early Childhood Caries Initiative Steering Committee**

- Dr. Tim Ricks, IHS National Dental Public Health Consultant, *Co-Chair*
- Dr. Bonnie Bruerd, IHS Head Start Program, Oral Health Consultant, *Co-Chair*
- Dr. Chris Halliday, IHS Chief Dental Officer, *Ex-Officio*
- Dr. Mary Beth Kinney, Director, IHS Dental Continuing Education Program
- Dr. John Zimmer, Pediatric Dentist, Aberdeen Area
- Dr. Jim Schaeffer, Deputy Director, IHS Division of Oral Health
- Dr. Patrick Blahut, IHS Oral Health Promotion/Disease Prevention Coordinator
- Dr. Patrick Sewell, Albuquerque Area Dental Consultant

**Pediatric Dentist Review Committee**

- Dr. Craig Bruce, IHS National Pediatric Dental Consultant
- Dr. Rick Troyer, Pediatric Dentist and Area Dental Officer, Billings Area
- Dr. Steven Rayes, Pediatric Dentist, Alaska Area
- Dr. Mary Beth Johnson, Pediatric Dentist, Phoenix Area
- Dr. Jan Colton, Pediatric Dentist, Aberdeen Area
- Dr. Marilyn Weeden, Pediatric Dentist, Oklahoma City Area
- Dr. Frank Mendoza, Pediatric Dentist, Portland Area
- Dr. Joyce Biberica, Pediatric Dentist, Nashville Area
- Dr. Katrina Leslie, Pediatric Dentist, Navajo Area
- Dr. Matthew Fisher, Pediatric Dentist, Albuquerque Area