

## **Module 3: Oral Health Screening and Fluoride Varnish for Infants and Toddlers**

**Time: 2 hours**



### **Learning Objectives:**

- List best practices for caries prevention specific to different age groups.
- Perform an oral health screening for infants and toddlers.

### **Additional Materials Needed:**

- PowerPoint presentation
- PowerPoint handout
- 7 Steps handout
- Tips for Managing Child Behavior handout
- Flipchart and markers
- Fluoride Varnish video

### **Introduction**

This module will address Early Childhood Caries, what causes it, and how to prevent it. This module will show you the steps to providing oral health screenings and fluoride varnish treatments for infants and toddlers. There is a lot of information in this module, and I know you'll probably have lots of questions afterwards, so we will make sure we have time for your questions at the end of the module.

Keep in mind that the overall goal of the oral health screening is to improve access to care for young children, to provide counseling for their families, and to prevent Early Childhood Caries.

While we go through this module, think about how this might work in your community.

Slide 1



If we are going to prevent dental decay in the primary teeth, often called Early Childhood Caries, it is critical that we aim prevention programs at children between six months and three years of age.

Slide 2



### What is Early Childhood Caries, or ECC?

The nationally-accepted definition is any tooth decay, including filled or extracted teeth due to decay, in the primary dentition.

**Severe ECC** is characterized by a distinctive pattern of tooth decay in infants and young children, often beginning on the maxillary anterior teeth and rapidly progressing to the other primary teeth as they erupt. ECC can begin to develop as soon as teeth erupt into the mouth at 6-10 months of age which is why an early oral health assessment and fluoride varnish treatments are so important.

Slide 3

- ▣ Most prevalent chronic disease of childhood
- ▣ 5 times more prevalent than asthma
- ▣ 7 times more prevalent than hay fever



Tooth decay is the single, most prevalent chronic disease of childhood in the United States.

It is five times more prevalent than asthma and seven times more prevalent than hay fever.

Slide 4

**ECC is Expensive to Treat!**

- ▣ ECC is very expensive to treat
- ▣ 40-50% of children treated with severe ECC have new decay within 4-12 months
- ▣ We must treat the infection!



**How much does it cost to treat ECC?**

Severe ECC can cost thousands of U.S. dollars to treat. Some of these children need to be hospitalized, and treatment may need to be completed under general anesthesia. ECC places a huge financial burden on insurance companies and public dental clinics, as well as on parents least able to afford treatment.

**Is traditional treatment effective?**

Once the disease is established and caries penetrate to dentin and beyond, restorative care is essential. Close monitoring for follow-up care is needed. Unless there is follow through using contemporary preventive education and other strategies, various studies have shown that 40-50% of children treated for ECC have recurrent decay within 4-12 months. With only traditional treatment and no preventive follow-up, the disease rages on.

Slide 5



**Pain:** children with ECC learn to live with pain day in and day out. As they get older and go to school, some of these children experience an increase in missed school days and an inability to concentrate when they are in school. Pain can also affect a child’s sleep and nutrition, again resulting in poor overall health and well being. After treatment, parents report that their child is sleeping better, doing better in preschool, and simply happier.

**Infection:** Research has linked pain and infection associated with ECC to a failure to thrive and delayed growth patterns. We can no longer ignore this infection until a child is 3 or 4 years old, anymore than we would ignore any other infection that a child might have.

**Self-esteem:** children need their front teeth for eating, and also for smiling. A beautiful smile can be important for good self-esteem.

Slide 6



We want to destroy the myth that the primary teeth are not important. The primary teeth are important for several reasons:

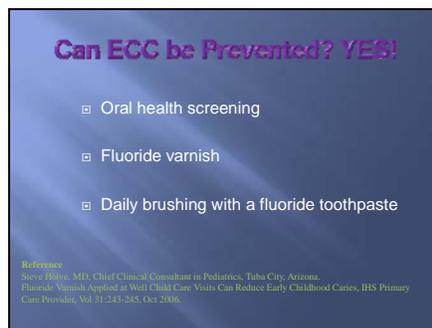
**Eating:** it is difficult to bite an apple or other healthy foods without the front teeth. Early tooth loss can result in poor nutrition and diminished physical growth. Tooth decay can also result in exposed nerves within the teeth that make them sensitive to hot and cold, thereby further affecting eating habits and good nutrition.

**Talking:** children who have their front teeth extracted at an early age generally talk with a lisp.

**Holding space** for the permanent teeth. Baby teeth fall out in a wonderful pattern that guides the permanent teeth into their proper places. When teeth are extracted early due to decay, the permanent teeth are more likely to come in crooked.

**Smiling** We all want our children to have beautiful smiles and good self esteem!

Slide 7



**Yes!** ECC can be prevented!

### **Oral health screening and Fluoride varnish**

Research by Dr. Steve Holve showed that children who received 4 fluoride varnish treatments between the ages of 9-24 months of age had over 30% fewer cavities.

### **Daily brushing with a fluoride toothpaste**

Fluoride toothpaste used daily, beginning when the first tooth erupts, might be the best thing families can do for their children's oral health. This is a message we want to reinforce over and over with the families we work with.

Slide 8

**Oral Health Screening**

- ❑ Soon after the first tooth erupts, and before one year of age, babies should receive an oral health screening.
- ❑ If they are at high risk for dental caries, they should also begin to receive fluoride varnish treatments.
- ❑ Nurses, teachers, and other community health workers can be trained to provide these important services.

*(read slide)*

We will be talking more about how we can prevent cavities among the children in our communities, but this effort will require a community-wide program, to be sure we reach all babies, especially the ones at high-risk for developing dental caries.

Slide 9

**Step #1: Get Ready**

- ❑ 2X2 gauze
- ❑ Baby/child toothbrush
- ❑ Fluoride Varnish
- ❑ Exam gloves
- ❑ Optional Items



**Step #1: Get Ready**

Here is the list of supplies needed for oral health screening and fluoride varnish applications. You will want to have needed supplies ready for both procedures because once the child is positioned, you will accomplish the oral health assessment and fluoride varnish application all in a matter of minutes.

Optional items might include a direct light source, like a flashlight and toys to keep the child distracted.

Slide 10



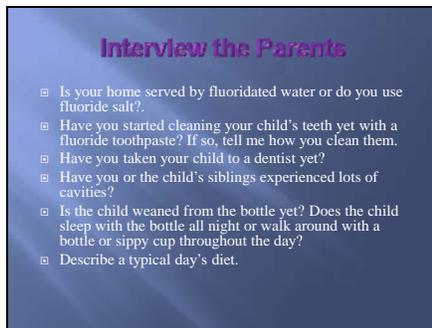
## **Step #2: Greet the Child and Interview the Parent Voice Control and Nonverbal Communication**

When approaching a child, pay attention to voice control and nonverbal communication. If your voice is calm and your nonverbal communication says that you are relaxed and friendly, the child will respond better to you.

## **Positive Reinforcement and Distraction**

Other good tools to build rapport with the child include positive reinforcement and distraction. Use distraction techniques like toys, stories, and humor. If the child is older, involve the child in holding the toothbrush or helping you count the teeth.

Slide 11



## **Interview the Parents**

Talk with the parent, building trust with both the parent and the child, and asking both closed and open-ended questions on the following topics:

*(read slide)*

This information will give you clues about the child's risk for dental caries.

If you are working in a daycare or school setting and the parents are not available, you will skip this interview.

Slide 12



### **Step #3: Position the Child in the Knee to Knee Position**

Note again the knee-to-knee position. The child is initially held in the mother's arms and slowly lowered to the health professional's lap. Ask the parent, or another helper, to hold the child's hands and help keep the child from wiggling.

This can also be done in daycare centers using teachers or other volunteers as helpers.

For children 3 and older, the child can stand in front of you.

Slide 13



### **Babies Cry as a Form of Communication**

Many young children will cry when lowered back into the health provider's lap. This is normal behavior for a young child and gives you a wonderful opportunity to see the child's teeth. The key is to do the screening quickly.

### **Keep Your Cool!**

Use self-talk...this is to help YOU cope. Tell yourself that the child is fine and you will be done in a couple of minutes. Over time, you will become less sensitive to the crying.

Slide 14

**Step #4: Brushing the Teeth and Oral Health Screening**

- Remove plaque so you can see teeth clearly
- Discuss home care
- Reinforce the daily use of fluoride toothpaste



### **Step #4: Brushing the Teeth and Oral Health Screening**

By introducing the toothbrush first, you are using something the child is familiar with, and you can let a toddler “help” with the cleaning of the teeth, while showing the mother proper oral hygiene and positioning techniques. This is a good time to reinforce the importance of cleaning the teeth daily using fluoride toothpaste and a child-size toothbrush. You can even use some toothpaste during the toothbrush cleaning to reinforce its use at home.

Slide 15

**Cleaning the Teeth at Home**

- Begins when first tooth erupts
- Let older children and caregivers practice while you watch



### **Cleaning the Teeth at Home**

Inform caregivers that the earlier they start cleaning the baby’s teeth, the easier it will be as the child grows older. At home, parents can use the knee-to-knee position or the caregiver can hold the baby on her lap, facing outwards, and clean the teeth from behind. Some caregivers clean the teeth during bath time or while the child is on the changing table, approaching the baby from the front. Encourage families to find a method that works for them, and to be sure to include fluoride toothpaste as part of this daily routine.

Slide 16



### **Oral Health Screening**

Use the toothbrush to “count” the child’s teeth, while looking for the following things:

- Plaque
- Chalky white spots, brown spots, or obvious cavities

### **Tip: Use the toothbrush as a mouth prop**

The toothbrush can also serve as a mouth prop, preventing the child from biting down on your fingers...ouch!

Slide 17



### **White Spots**

These are what chalky white spots look like. Remember, the chalky white spots can actually be remineralized with the use of fluoride varnish.

The small brown spot on the front tooth in the second photo is a more advanced cavity.

Slide 18



### **Brown Spots**

As the decay progresses, brown spots will look like this.

Slide 19

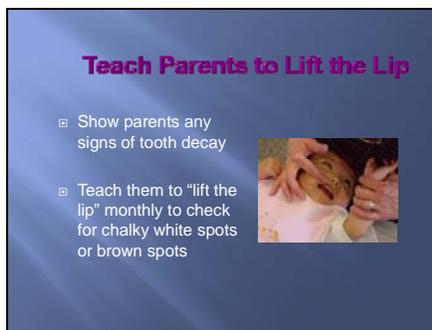


### **Severe ECC**

This is a picture of severe ECC and abscessed teeth.

**These children need to see a dentist soon!**

Slide 20



### **Teach Parents to Lift the Lip**

If you see any signs of tooth decay, you can point these out to the parent. Encourage the caregiver to lift baby's lip while cleaning at home and keep an eye out for chalky white or brown spots, being sure to look at both the front and back of teeth, and near the gum line.

At this point, you have gathered the data you need to provide a risk assessment. Using the information you gathered from the interview and your observations from the dental screening, you can determine if the child is at low or high risk for dental caries.

Slide 21



### **Step #5: Apply Fluoride Varnish**

For any child at high risk for tooth decay, you will want to provide a fluoride varnish treatment to all of the teeth. Fluoride varnish is safe and effective for use with babies and young children.

We recommend that you use the individual dose product, since it is all inclusive with its own applicator, contains the appropriate amount of fluoride, and keeps the procedure simple and safe.

Slide 22



### **Fluoride Varnish Procedure**

*(read slide)*

Slide 23

**Fluoride Varnish Procedure**

- Begin with lower teeth. Do the outsides of all teeth and then the insides.
- Repeat with upper arch
- Develop a pattern that works for you



### Fluoride Varnish Procedure

It is usually good to begin on one side of the mouth and “paint” the varnish on all of the outsides of the teeth and then return and do all of the insides, or tongue-sides of the teeth. Do one arch at a time, beginning with the lower teeth because this is where the saliva will pool. The total procedure shouldn’t take more than a couple of minutes and even less time for babies with only a few erupted primary teeth. If saliva flow is heavy, you may need to dry a few teeth at a time and paint the varnish on, using a “wipe and paint” technique.

Slide 24

**Fluoride Varnish Procedure**

- When in doubt, follow the manufacturer’s instructions



### Fluoride Varnish Procedure

If in doubt, follow the manufacturer’s instructions because this product is likely being improved even as we speak.

Slide 25

**Parent Instructions**

- Mild yellow or brownish tint that will disappear when the teeth are brushed
- Don’t brush until the next day for optimal benefit



### Parent Instructions

Depending on the fluoride varnish product you choose, it might leave a mild yellow or brownish tint on the teeth. The tint will disappear when the teeth are brushed, but we don’t want the parents to clean the child’s teeth until the next day.

The fluoride treatment works best if it is left on the teeth overnight.

Slide 26

**All done!**

- ▣ Raise the child back into their caregiver's arms for comforting
- ▣ Most children stop crying at this point
- ▣ Give them a toothbrush or toy to play with while you talk with the caregiver.



**All done!**

Now it is time to raise the child back up into the mother's lap. Most young children will stop crying at this point. This is a good time to give the child the toothbrush or a soft toy to play with while you talk with the caregiver.

Slide 27

**Step #6: Summarize and Referral**

- ▣ Summarize findings
- ▣ Follow-up and referral



**Step #6: Summarize and Follow Up**

After providing a few key messages to the family, you will want to record any signs of tooth decay, document if the child is at low or high risk, and whether a referral to a dentist is needed.

Reinforce the importance of these referrals to the family, and the fact that tooth decay is an infection and it needs to be treated, not just with fillings, but with diet, fluoride, and sealants or PRAT.

Slide 28

**Reinforce Home Care**

- ▣ It's what families do at home that really counts!



**Reinforce Home Care**

This is another opportunity to reinforce with the family that it is what they do at home that will most likely prevent ECC.

Remind them once again to brush their child's teeth with a small smear of fluoride toothpaste daily!

Slide 29

**Risk-based recall**

- Children at high risk for tooth decay need to be seen more often



### **Risk-based recall**

Finally, you will want to let the caregiver know when you would like to see the child again. Children at high risk for tooth decay need to be seen more often.

If the child is at high risk for ECC, you will want to stress the importance of fluoride varnish applications 3-4 times a year.

Slide 30

**HOW CAN WE WORK WITH BABIES AND THEIR FAMILIES IN OUR COMMUNITIES?**



We will be talking about oral health screenings and fluoride varnish treatments that include having the parents present, but these services can also be provided in daycare centers and schools.

### **Question**

Can any of you think of ways that we might reach high-risk babies and their families in your community?

*You can list the ideas on newsprint, and discuss them briefly, but we just want to get people thinking about how this might work in their community.*

*Turn off projector.*

## Questions

- 1) How many of you have seen children with ECC?
- 2) Do any of you have stories of children with ECC that you would like to share with us?
- 3) Can you picture yourself applying fluoride varnish?



***Training Tip: People have been listening for quite awhile now. It is important to let them comment on what you presented and to share their own stories about children with ECC and their families. It is also important for them to express any concerns about providing screenings and fluoride varnish applications.***

## **Fluoride Varnish Video**

Let's look at a video of an up-close look at the application of fluoride varnish on both a baby and an older child.

***Play video.***

What do you think now that you've watched the video? Does this look like something you might be able to do? Do you have any questions?

## **Handouts**

Let's look at the handouts in your binders

- 1) Fluoride Varnish Application: 7 Steps for Community Workers
- 2) Tips for Managing Child Behavior

***Read through the handouts together, answering questions as they arise.***

Later in the Community Workshop, you will all get a chance to provide oral health screening and fluoride varnish for infants and young children. When we have our practice session, you can keep these handouts nearby to help you remember the 7 steps for fluoride varnish application.