

# Creating Preventive Oral Health Behaviors with Key Motivational Interviewing Questions

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Figure 1: A life-threatening cellulitis caused by a dental infection.

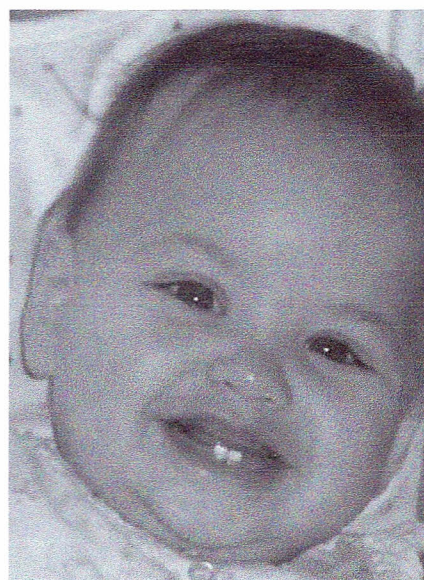


Figure 2: Elise, a healthy seven month old baby.

**D**oes Elise make it easy or hard to brush every day?" Asking caregivers and parents just one properly phrased question could help protect their child from dental disease. If posed with the appropriate demeanor and with sensitivity, a motivational interviewing (MI) question such as this may be the key to clear communication between caretaker and healthcare provider. This can result in an alteration of behavior and healthier lifestyle choices not only for the patient, but for the family as well.

Pediatricians are experts when it comes to health supervision of children, including oral health. Promoting delivery of a timely oral health message has become a priority of the American Academy of Pediatrics.<sup>1</sup> Pediatric medical providers who are committed to the Academy's mission are on the lookout for quick, practical and fun methods of translating complicated scientific dental jargon into simple, targeted anticipatory guidance points likely to promote significant lifestyle change. This article suggests an easy way to begin oral health education in medical offices - ask at least one early childhood caries related MI question.

## Motivational Interviewing

Providers in many areas of healthcare use MI and adaptations of motivational interviewing (AMI) techniques. Their efficacy in promoting behavioral change is well documented in the literature. As

such, physicians should consider adopting these methods in their day-to-day patient encounters. Examples of a Basic Communication Skill Set<sup>2</sup>, MI Principles<sup>3</sup> and AMI (Brief Negotiation) Steps<sup>4</sup> are included in Tables 1, 2 and 3, respectively.

Many pediatric medical providers would like to integrate oral health MI into well-child visits but are hesitant. They know parents want their children to avoid the consequences of dental disease (Figure 1) and want to position their young patients (Figure 2) for a lifetime of healthy smiles. However, lack of training has contributed to lack of confidence and decreased likelihood of oral health discussion.<sup>5</sup> Time constraints are also a constant challenge to implementation.

This article focuses on the information and educational component of oral health MI. Its goal is to help providers whittle down volumes of oral health research evidence into one targeted motivational question. A very basic description of pathologic and preventive factors, risks and influences of caries follows below. Rudimentary terminology and simple metaphors can facilitate dialogue with and improve parent and caregiver understanding.<sup>6</sup> Finally, examples of how to generate a pertinent question will be briefly discussed.

## Cariology in Simple Language

Early childhood caries (ECC) is the most common long-term infectious

### The Caries Balance

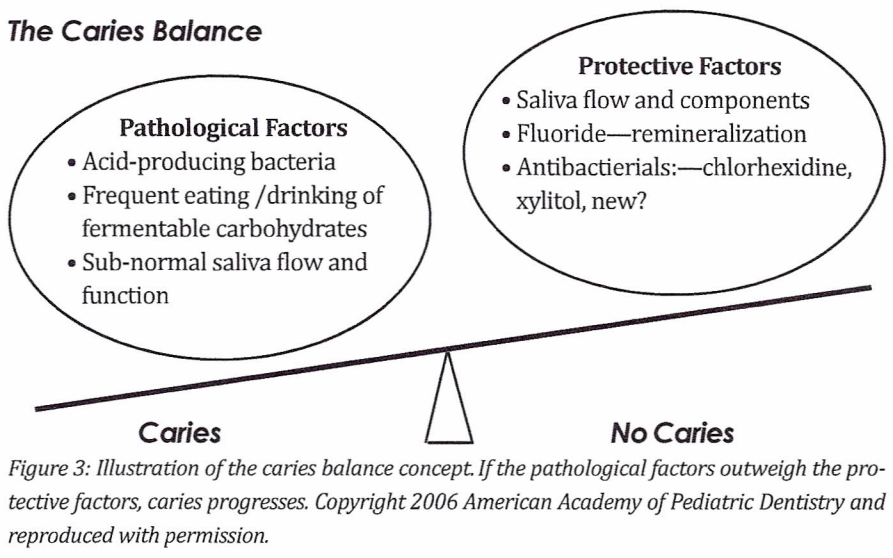


Figure 3: Illustration of the caries balance concept. If the pathological factors outweigh the protective factors, caries progresses. Copyright 2006 American Academy of Pediatric Dentistry and reproduced with permission.



disease of childhood not only in the United States but the world as well. This complicated disease worsens with low socioeconomic status, lack of education and unhealthy behaviors. Saliva from parents spreads the infection of *Streptococcus mutans* and other causative bacteria. These acid-producing germs can be transmitted to children prior to two months of age and set the stage for rapid progress of caries very early in childhood. Since pediatric medical providers see young children frequently for routine examinations they are in an ideal position to provide preventive oral health information at a critical period. Indeed, early intervention has been shown to significantly diminish the need for future invasive (and costly) dental surgery, emergency room visits and general anesthesia.<sup>7</sup>

A cavity can be described simply as a "hole" in a tooth. The offending bacteria "ooze" acid over the teeth and "burn" holes on the non-vital, thin but tough outer layer called enamel. Pediatric providers sometimes describe enamel to children as the tooth's "skin." White spots or lines on the enamel are early surface changes that can progress to cavities. Caretakers and providers should consider these "pre-cavities" as warning signs of dental disease. These early symptoms can be treated medicinally (with fluoride). Nerve containing dentin lies beneath the enamel and insulates teeth. Once the acid gains access to the softer dentin, decay spreads rapidly and the tooth eventually crumbles. At this point the disease has become a dental surgical problem requiring drilling and restoration. If not properly repaired, oral bacteria can enter into deeper tissues and/or the bloodstream resulting in other infectious and sometimes very serious and even life-threatening complications.

The caries balance diagram<sup>8</sup> (Figure 3) offers a basic visual representation of healthy versus harmful influences playing roles in the dental disease process. When protective influences are in place, dental disease can be halted and even reversed. An effective MI question might motivate a change in home care that can tip the patient's oral health balance from being

### **Table 1. Core Communication Skills Set<sup>2</sup>**

- Ask the person where they want to progress to and get to know him or her a bit.
- Inform the person about options and see what makes sense to them.
- Listen to and respect what the person wants to do and offer help accordingly.

### **Table 2. Principles of Motivational Interviewing<sup>3</sup>**

- Express empathy. Change occurs only if the person feels accepted and valued.
- Demonstrate discrepancy. Explore the gaps between the pros and cons.
- Roll with resistance. Avoid arguing and accept resistance as normal.
- Empower and support self-efficacy. Transfer the responsibility of arguing for change to the caregiver.

### **Table 3. Brief Negotiation Steps<sup>4</sup>**

- Set the stage. Ask for permission before beginning to explore thoughts/feelings.
- Provide factual information and elicit feedback.
- Assess the family's readiness to change.
- Explore ambivalence and elicit change talk. Base your approach on parent's/caregiver's readiness to change.
- Close the conversation. Summarize, encourage, acknowledge willingness to discuss change and determine next step.

in the "cavity zone" (under pH 5.7) to the "cavity-free zone."

Saliva functions as the body's natural mouth rinse. Medications which decrease saliva production can increase the risk of tooth decay. Keeping the mouth clear of food and drink allows saliva's healing properties to work. Swishing with water after eating or drinking can also help maintain healthy teeth by removing fermentable carbohydrates that feed the offending bacteria.

As stated above, fluoride in various forms (toothpaste, varnish, etc...), protects the enamel from effects of acid and can even reverse some preliminary tooth destruction, if started early. Consistent brushing with fluoridated toothpaste for two minutes after breakfast and the last thing before bed may be the best way to control caries. Ingesting fluoridated water and fluoride supplementation are also effective but studies have shown that topical fluoride offers the greatest benefit. Pediatric providers sometimes refer to fluoride as "sunscreen" for the tooth's "skin" and emphasize applying it to the most vulnerable places. Fluoride chemoprevention and oral health risk assessment are rapidly becoming mandates as part of all the preventive elements of the

recent Affordable Health Care law passed in March 2010. Fluoride varnish (a one minute application video is available online<sup>9</sup>) is indicated for moderate and high risk patients. Only a risk assessment will accurately identify at risk patients.

### **BEST-D, MI Questions and OHRA Forms**

As with other chronic medical conditions, the etiology of caries is known to be multifactorial with several known and unknown risk factors. Based on history and physical findings, providers determine the child's risk for caries development (low, moderate or high) and present an appropriate plan of care. Materials on oral health risk assessment abound. A pilot study is being conducted with the most evidence-based physician form available.<sup>10</sup> Some clinicians might consider it too lengthy for providers practicing under tight time constrictions. The American Academy of Pediatrics recently released an Oral Health Risk Assessment Tool and Tutorial for use in practice.<sup>11</sup>

A simple acronym of BEST-D "Bacteria, Enamel, Saliva, Time, Diet" (Table 4) may be of use for quick assessment of salient points and documentation of

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## Oral Health

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caries risk. These five items have some overlapping characteristics and are, of course, an oversimplification of caries pathophysiology. However, a cursory oral history (with use of BEST-D documentation, MI question) and oral evaluation may be more likely to be adapted in a routine medical visit. MI experts warn practitioners not to get bogged down with technical concepts to ensure conversations flow naturally. A thorough dental history and complete oral examination can be conducted by a dental provider, ideally before the child's first birthday.

## Conclusion

Although mostly preventable, caries remains the most common chronic infectious disease of childhood. We hope this article provides a simple yet effective tool that helps providers integrate oral health anticipatory guidance into routine medical visits. Please consider starting with a simple action step - ask at least one oral health MI question.

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## Table 4: "BEST D" MI Question Examples

**B Bacteria**  
Did you know the acid that burns the cavities or holes in teeth comes from germs passed in adult saliva to their children?  
(Pointing to plaque on child's teeth)  
Did you know that this is where the bacteria do their mischief?

**E Enamel**  
(While demonstrating) See how easy it is to lift the upper lip and inspect Elise's teeth regularly?  
Did you know brushing with an amount of fluoride toothpaste only the size of a grain of rice protects the teeth from germ acid burns?

**S Saliva**  
How do you keep Elise's mouth clear of all substances so that saliva's natural healing powers can work?  
(Child on medications. Seven of the ten most commonly prescribed medications cause dry mouth.) Have you noticed Elise wanting to drink a lot of water?

**T Time**  
Have you heard visiting the dentist before age one can save your child from getting cavities and save you money?  
Did you know that the more times your child snacks and the longer time food or drinks remain in the mouth the risk of decay keeps going up and up?

**D Diet**  
Would you be surprised to learn that when teething starts, almost all babies can sleep all night without eating or drinking?  
Of course sugar is the worst, but did you know that milk, crackers, cooked starches (potatoes, white rice and white bread) are also changed into acid by bacteria and can damage your child's teeth?