



Ensuring healthy smiles: Pediatric practices should assess caries risk in young patients

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Ensuring healthy smiles

Pediatric practices should assess caries risk in young patients

by Kevin J. Hale, D.D.S., FAAPD

Editor's note: This is the second in a three-part series of AAP News articles looking at oral health assessment and intervention in very young patients, as outlined in the AAP Policy Statement, Oral Health Risk Assessment Timing and Establishment of the Dental Home (Pediatrics. 2003;111:1113-1116).

Every child should begin to receive oral health risk assessments by 6 months of age by a qualified pediatrician or a qualified pediatric health care professional, according to the new AAP oral health policy statement.



Dr. Hale

Before addressing how to implement an oral health program in your office, however, three major points must be reviewed from the previous article on cariology (May 2003, AAP News). First, caries usually result from an overgrowth of aciduric (cariogenic) sub-populations of normally occurring dental flora responding to changes in the oral microbial environment (diet, fluoride, hygiene, stimulated saliva, etc.). Second, infants begin to be colonized with dental flora when the primary teeth begin to erupt at around 6 months of age. Lastly, the ratio of cariogenic to benign flora in the mother's (caregiver's) mouth coupled with the timing of colonization and dietary behaviors will profoundly affect a child's caries experience, perhaps for his or her entire life.

Once the basics of cariology are understood, incorporating the various aspects of oral health risk assessments is justifiable even in the busiest of pediatric practices.

The purpose of an oral health risk assessment is two-fold: to identify infants at risk of developing early childhood caries (ECC) and to make appropriate recommendations based on risk assessment. (A comprehensive review of recommendations will be presented in the third article in this series.)

The three tools required to implement oral health risk assessments are the knee-to-knee exam, the American Academy of Pediatric Dentistry (AAPD) Caries Risk Assessment Tool (CAT) and identification of patients within the six caries risk groups outlined in the AAP policy statement.

Knee-to-knee exam

The greatest challenge to assessing the teeth of very young patients is finding a position that is safe and comfortable, provides thorough visualization, and is time- and ergonomically efficient. The knee-to-knee position meets all of these criteria.

In this position, the examiner sits facing the par-

ent. The child sits facing and straddling the parent with his or her crotch positioned against the parent's waist. The parent holds the patient's hands while the patient lays his head in the examiner's lap. If the patient becomes uncooperative, the parent is perfectly positioned to hold and comfort the child during the short course of the assessment.

This position offers an ideal posture for examination of the entire head and neck and has been accepted by many busy community practitioners. A modified version of this position is to lay the patient on his or her back on the exam table. The parent leans over to stabilize the youngster, and the clinician stands at the patient's head.

A good light source and a toothbrush are the desired accessories for assessing plaque and gingival health; however, both ends of a cotton tipped applicator and a tongue depressor also can be used. Once your armamentarium is assembled, you are ready to

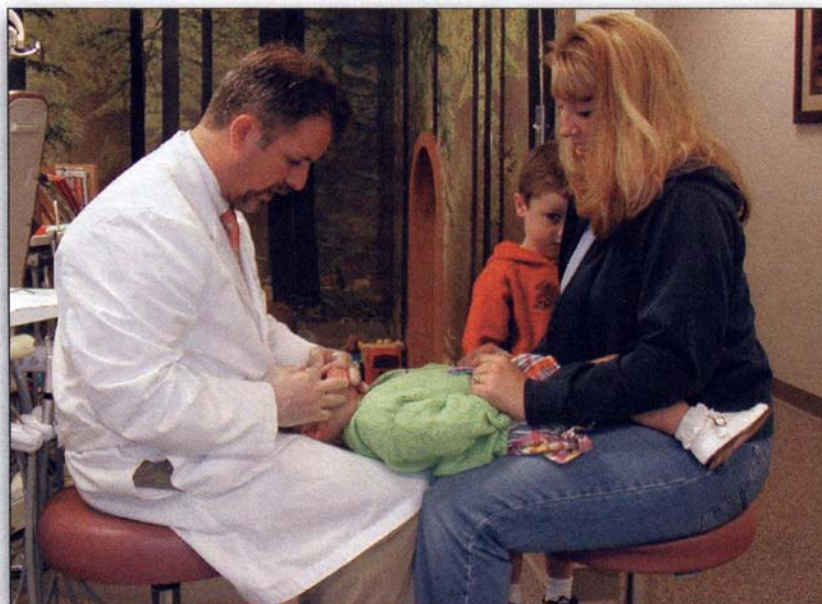


Photo courtesy of Kevin Hale, D.D.S., FAAPD

To assess the teeth of this young patient, Kevin Hale, D.D.S., FAAPD, assumes the knee-to-knee position with the mother.

begin collecting clinical data.

Plaque is the off-white, soft, sticky film that grows along the gum line of the teeth. Brushing the teeth at the gingival margin and observing the presence of bleeding detects inflammation of the gums. The removal of plaque allows not only the assessment of gingival inflammation, but also the visualization of the enamel surface to screen for active caries, demineralization and/or staining. This information then can be combined with the CAT to establish the patient's caries risk.

Caries risk assessment tool

The CAT is a living document designed by pediatric dentists for use by dental and medical personnel to predict a patient's predisposition to dental decay.



This document is continually refined and updated by the AAPD and is available on its Web site, www.aapd.org. (To download the CAT, type "CAT" in the search window on the home page header.)

The CAT is a practical tool that allows practitioners to review all relevant caries risk factors thoroughly and methodically. A patient is classified into a low-, moderate- or high-risk category based on the highest positive risk factor obtained when combining clinical findings with patient and parent histories. As with any new tool, a learning curve is associated with its mastery, and experience with its use will improve speed, comfort and effectiveness.

Caries risk groups

The last items to consider when assessing caries risk are the six risk groups listed in the AAP policy statement.

If after assessment, an infant falls within one of the following risk groups and later develops caries, the care requirements would be significant and surgically invasive. Therefore, these infants should be referred to a dentist as early as 6 months of age and no later than 6 months after the first tooth erupts or at 12 months of age (whichever comes first):

- children with special health care needs;
- children of mothers with a high caries rate;
- children with demonstrable caries, plaque, demineralization and/or staining;
- children who sleep with a bottle or breastfeed throughout the night;
- later-order offspring; and
- children in families of low socioeconomic status.

Even the most judiciously designed and implemented caries risk assessment tool can fail to identify all infants at risk for ECC.

An understanding of the caries process combined with the described risk assessment tools will make the implementation of an assessment program a realistic addition to most pediatric practices. Caries risk assessment should begin at 6 months of age and be re-administered until the patient establishes a dental home. All patients who emerge with significant caries risk should be directed to establish a dental home by age 1 year, and all children should have regular dental visits no later than the early toddler years.

Dr. Hale is a member of the AAP Section on Pediatric Dentistry executive committee.

Coming in July: How to intervene with regard to oral health education and how to advise parents and families on issues of diet, hygiene, fluorides, etc.

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