Cultural Competence and Caries Management in High Risk Populations

The AAPD recommends that when very young children without adequate preventive care that develop early childhood caries (ECC) should receive therapeutic intervention should from a practitioner with the expertise to manage both the child and the disease process.[1]

In the past, treatment decisions were largely made on a clinical examination and radiographs, and the only information recorded on a dental chart was the number of surfaces to be involved in treatment. In contemporary practice, developing a treatment plan that is specific for each patient is facilitated by the use of a caries risk assessment tool (CAT) that will help identify (and facilitate follow-up for) the risk factors that have contributed to the caries process.[2] Identification of these risk factors is essential to understand why the disease is where it is, and whether it is likely to progress and manifest symptoms in the future. The practitioner should pay attention to record pertinent data from the parental interview including specific dietary factors, fluoride intake and familial habits that may have contributed to the caries progression.

The collection of this data can be complicated because a majority of the children affected with ECC belong to minorities with different cultural backgrounds.[3] Growing evidence suggests that providers who have cultural competence that enables them to effectively communicate with patients from diverse cultures and understand cultural differences will be best able to provide comprehensive care for these patients.[4]

We know a purely restorative approach will not stop the disease process.[5] Caries experience is, unfortunately, the single best predictor for future caries development[6], and children with caries in the primary dentition will likely develop caries in the permanent dentition.[7] With these facts in mind, we should work on the development of an individualized and targeted caries management plan that includes preventive and therapeutic interventions that should not only aim at limiting the tissue destruction, but more importantly, actually intercept and limit or stop the disease process.

Immediate restorative treatment, personalized to the patient within the family's resources and background is very important. Interim Therapeutic Restorations (ITR) and conventional restorative materials, as well as the most appropriate behavior-guidance technique for their successful placement should be carefully chosen to bring the patient to a level of oral function and comfort where a prevention plan can be implemented as soon as possible.

But just as important, the accurate evaluation of the risk factors from a CAT should also help to establish a preventive phase that includes[2]:

- Dental sealants if indicated.
- Establishment of a personalized recall schedule that will be appropriate to continue implementation of preventive treatments and encouragement of positive behaviors that will stop disease progression. These recall intervals could be at 3-4 month intervals, or more frequently for children at extreme risk.[8]
- Use of anticariogenic agents like antibacterials (i.e. Chlorhexidine), xylitol, amorphous calcium phosphate products (i.e. MI paste) and fluoride preparations for home use.[9]
- Optimal and realistic dietary recommendations and oral hygiene instructions to fit within the familial-cultural context.
- Caries risk-based fluoride supplementation that should take into consideration parental compliance with different sources of exposure, and must always emphasize tooth brushing with a smear or pea-size amount of fluoride toothpaste at least twice a day.[10]

In reference to fluoride supplementation, it is important to consider populations that come from areas where it is not safe or culturally accepted to drink tap water. These parents may not be taking advantage of water fluoridation even if they live in an area where this benefit is available. Alternate sources of fluoride, like fluoridated bottled water (nursery water), are well-received alternatives.

Another cultural factor to consider that contributes to the poor dental health of minority populations is a child-rearing style that is child-centered. These children often have no fixed schedules: a child goes to bed when tired and eats when hungry. Sugary snacks and beverages may be consumed without the parent's awareness of the effect on their dentition. Misconceptions are common with sugary beverages; some mothers who know that soda is "bad" and milk is "good" do not even think of reporting that they add sugary syrups to the milk because milk is "good." Many parents believe that apple juice has no sugar because the container says "no sugar added." Some cultures accept food tasting with caregivers using the child's spoon, and others even may pre-chew the food of their infant, lacking knowledge of vertical transmission of cariogenic bacteria.[11] Often, patients don't offer this information unless specifically asked, and practitioners can't expect to offer advice if we don't know what behavior is increasing the risk of disease progression.

Developing cross-cultural skills to improve communication with families should include:

1. Increasing our knowledge, respect and validation of differing values, cultures and beliefs, including sexual orientation, gender, age, race, ethnicity and class.
2. Acquiring skills to deal with discomfort/ hostility as a result of cultural discord.
3. Listening to our patients' verbal and nonverbal responses to improve communication skills.
4. Understanding language barriers and working with interpreters when necessary.
5. Improving our negotiating and problem-solving skills.
6. Improving our diagnosis, management and patient-adherence skills that will lead to better patient compliance and motivation. Using a patient-centered approach during clinical consultations seems to be a promising way to achieve this goal.[12]

Although providing information that will increase the parent's knowledge to keep their children healthy will certainly work in some cases, education alone is ineffective in changing health behaviors.[13] Motivational Interviewing has shown promise in counseling high-risk minority populations by offering a brief, patient-centered, personalized approach that uses reflective listening, summarizing, and offering many possible paths to a solution in the form of a "menu of options".[11] This can be in a page format, such as the model provided below, that contains concise, simple, self-management goals for the parent/caregiver to choose, and that are easy to monitor at follow-up visits.[2]

Parental attitudes significantly impact the establishment of habits favorable to oral health[14], and practitioners' ability to efficiently communicate with culturally and ethnically diverse caregivers can significantly influence the outcome of our efforts to deliver adequate care. Although cultural competence courses are now integrated into the curriculum of many dental schools, private practitioners who did not receive this training can acquire this competence by carefully listening and learning from their minority patients, and by incorporating members from similar cultures and backgrounds to the ethnic communities they serve into their dental teams.[15] Making a shift from "authority figure" to "learner" in cross-cultural interactions will pave the way for providing better health care to high-risk populations.

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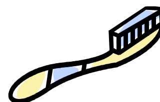
Pt Name:______________________________DOB:________________

Regular dental visits for child

Family receives dental treatment

Healthy Snacks



Brush with fluoride toothpaste at least twice/day.

No soda

Less/no juice

Wean off bottle
Least/no bottle for sleep.

Only water or milk in sippy cup

Chew Xylitol Gum

Drink tap water

Less/no candy & junk food

Important: The last thing that needs to touch your child's teeth before bedtime is the toothbrush with fluoride toothpaste.

On a scale of 1-10, how confident are you that you can accomplish this goal? 1 2 3 4 5 6 7 8 9 10
Not likely ... Definitely

My promise: I agree to this goal and understand that staff may ask me how I am doing with this goal.

Date:__________Signed by:____________________

Review Date:__________ Comments:____________________Staff Initials:______

Review Date:__________ Comments:____________________Staff Initials:______

Modified from Ramos-Gomez FJ et al. Caries risk assessment appropriate for the age 1 visit (infants and toddlers). J Calif Dent Assoc 2007:35:687-702

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This article is the fifth in a series facilitated by AAPD and Children's Dental Health Project's Improving Perinatal and Infant Oral Health Project. The project is a five-year Maternal and Child Health Bureau-funded initiative to promote the oral health of pregnant women and infants, and to increase public awareness of the importance of perinatal and infant oral health. Please watch for additional articles authored by members of the Ad Hoc Committee on Perinatal and Infant Oral Health in future editions of Pediatric Dentistry Today. For more information on the Project or to become involved, please contact Dr. Ned Savide, chair of the Ad Hoc Committee on Perinatal and Infant Oral Health, at NLSavide@aol.com or Project Manager Jessie Buerlein at jbuerlein@cdhp.org.

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