

Early Intervention: Understanding the Need in Children

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Abstract

The traditional approach to dental caries management presumed caries was inevitable. Therefore, the philosophy was to treat the effects of the disease (caries and/or gum disease) then initiate a preventive program. Contemporary guidelines, however, recommend early professional intervention to provide examination, risk assessment, and anticipatory guidance for parents so that disease can be prevented. Therefore, traditional professional intervention aimed at oral health beginning at age 3 years is no longer appropriate. Contemporary management recommendations are that professional intervention begins at approximately 12 months of age or shortly after the primary teeth begin to erupt. This way, disease can be prevented and the effects will never have to be dealt.

Keywords: Infant; Anticipatory guidance; Oral health.

Introduction

Good oral health is an integral component of good health. Many children have inadequate oral and general health because of active and uncontrolled dental caries.¹Dental caries is a complicated, multifactorial, transmissible, infectious disease and it often begins to develop during infancy. It is five times more common than asthma and seven times more common than hay fever in children.^{2, 3}

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intervention aimed at oral health begin-ning at age 3 years is no longer appropriate.⁴

The preventive process must begin early in infancy – during the infant’s first year – to ensure a successful outcome. The goal is to provide infants and toddlers with a pleasant, non-threatening introduction to dentistry and to establish and reinforce the foundation of sound& healthy dental habits.⁵

Goals of infant oral health care

- To break the cycle of early childhood caries (ECC)
- To disrupt the acquisition of harmful microflora
- To manage risk / benefits of habits
- To provide optimal fluoride protection
- Use anticipatory guidance to arm parents in therapeutic alliance

First Dental Visit

Very few infants younger than one year have oral prob-lems that require intervention, but almost all have an oral environment at risk for oral diseases. The goal of the first dental visit is to assess the risk for dental disease, initiate a preventive program, provide anticipatory guidance and decide on

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periodicity of subsequent visits. The first visit should be non-threatening, and requires minimal manipulation of the infant, but at the same time provides sufficient time with the parents to gather historical information and demonstrate appropriate home care procedures.

Bacteria colonize the mouth shortly after birth and increase in number as more teeth erupt. These are commensals that remain in homeostasis with the oral cavity. The window of infectivity, for mutans streptococci, the organism most closely associated with dental caries, is between 19 and 31 months of age. Therefore, early intervention needs to be initiated before age 19 months to prevent colonization and to provide appropriate recommendations to parents on controlling the bacteria. The American Academy of Pediatric Dentistry recommends that infants and their parents seek their first professional evaluation by a dentist around 12 months of age.⁴

Examination of infant & toddler

Infant oral health intervention assumes that the child has no disease but may be prone to disease due to risk behaviors such as nighttime feeding/bottle use or lack of fluoride. Conceptually, these risk factors will eventually lead to disease if not addressed; conversely, if the risk factors are eliminated, the child will be free of disease.⁶

At the infant oral evaluation visit, the dentist should do the following:

- a) A thorough medical and dental history, covering the prenatal, perinatal and postnatal periods should be obtained.
- b) A thorough oral examination is performed.
- c) Assessment of the infant's risk of developing oral and dental disease is done, and the appropriate interval for periodic reevaluation based on the result of the assessment is determined.
- d) Anticipatory guidance for the parent or other caregiver regarding dental and oral development, fluoride status, non-nutritive

oral habits, injury prevention, oral hygiene and effects of diet on dentition is provided.²

Examination procedure

The examination procedures include direct observation and digital palpation. The parents should be informed before the examination that it will be necessary to gently restrain the child and that it is normal for the child to cry during the procedure. The infant is held on the lap of a parent, usually the mother. This direct involvement of the parent provides emotional support to the child and allows the parent to help restrain the child. The dentist's voice should remain unstrained and pleasant during the examination. The dentist's behavior should reassure the child and alleviate the parents' anxiety concerning this first dental procedure.¹

One method of performing the examination is the dentist and the parent is seated face to face with their knees touching. Their upper legs form the "examination table" for the child. The child's legs straddle the parent's body, which allows the parent to restrain the child's legs and hands. The other method is the parent is at a right angle to the direction the dentist is facing. These positions are also convenient for demonstrating oral hygiene procedures to the parents

Anticipatory Guidance

Anticipatory guidance is defined as proactive counseling of parents and patients about developmental changes that will occur in the interval between health supervision visits that includes information about daily caretaking specific to that upcoming interval.

Anticipatory guidance is the complement to risk assessment; addressing protective factors is aimed at preventing oral health problems.⁶

*General anticipatory guidance for the mother includes the following:*⁷

- Oral hygiene: Tooth-brushing and flossing on a daily basis are important for the

parent to dislodge and re-duce bacterial load in dental plaque.

- **Diet:** Important components of dietary education for the parents include the caries potential of their diet, cariogenicity of certain foods and beverages, role of frequency of consumption of these substances.
- **Fluoride:** Using a fluoridated toothpaste and rinsing every night with a mouth rinse containing 0.05% sodium fluoride have been suggested to help reduce plaque levels and help enamel remineralization.
- **Caries removal:** Routine professional dental care for the parents can help keep their oral health in optimal condition. Removal of active caries and subsequent restoration are important to minimize infecting the infant with the parents' oral flora.
- **Delay of colonization:** Education of the parents especially mothers, on sharing utensils (eg, shared spoons), foods and cups can help prevent early colonization of oral flora, by bacteria from parent mouth in their infants.
- **Xylitol chewing gums:** Recent evidence suggests that the use of Xylitol chewing gum (4 pieces per day by the mother) had a significant impact on child's caries rate.

General anticipatory guidance for the young patient (0 to 3 years of age) includes the following⁷

- **Oral hygiene:** Cleansing the infant's teeth as soon as they erupt with either a washcloth or soft brush will help reduce bacterial colonization. The use of dental floss when adjacent teeth are in contact is important to help reduce interproximal caries.
- **Diet:** After the eruption of the first primary teeth, ECC prevention is possible by restricting bottle/breast-feeding to normal meal times and not allowing the infant to feed ad libitum or while sleeping. The parent understanding of the cariogenicity of certain foods can help the infant and child eliminate or reduce their caries levels.
- **Fluoride:** Optimal exposure to fluoride is important to all dentate infants and children. Caution is indicated in the use of all

fluoride-containing products. Decisions concerning the administration of additional fluoride are based on the unique needs of each patient.

Recommendations

Based on accepted guidelines, the following recommendation is made:^{8,9}

1. Infants should be breast-fed during the first year of life, although ad libitum nocturnal breast-feeding should be discouraged after the first primary tooth erupts.
2. Bottle-fed infants should not be put to sleep with the bottle.
3. Children should be weaned from the breast or the bottle by 12 to 14 months of age.
4. Infants older than 6 months and with exposure to less than 0.3 ppm fluoride in their drinking water need dietary fluoride supplements of 0.25 mg fluoride per day.
5. Parents should be advised to reduce their child's sugar consumption frequency.
6. Infants should be allowed to consume only 0.11-0.17 litres of fruit juice per day. They should not be given powdered beverages or soft drinks, as these drinks pose increased risk for dental caries.
7. Only iron-fortified infant cereals along with breast milk or infant formula should be given to infants who are older than 6 months of age.
8. Parents should be counseled on the potential of various foods that constitute a choking hazard to infants

Common conditions of infant oral cavity

Teething

The Latin term 'Dentiodifficilis' was coined due to the importance of teething as a diagnosis.¹⁰

Natal & Neonatal teeth

Natal teeth are present at birth and neonatal present within 30 days of birth.⁶

Early Childhood Caries / Nursing Caries

The American Academy of Pediatric Dentistry (AAPD) defines early childhood caries (ECC) as the presence of one or more decayed (non-cavitated or cavitated), missing (due to caries), or filled tooth surfaces in any primary tooth in a child 71 months of age or younger. The Academy also specifies that, in children younger than 3 years of age, any sign of smooth surface caries is indicative of severe early childhood caries (ECC).¹

Conclusion

Early examinations followed by regular recall examinations contribute to the youngsters' becoming excellent dental patients without fear at very young ages. These children's chance for enjoying excellent oral health throughout life is also enhanced.

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