



Oral Health Care for Nurse Educator, Part 2: The School Year: 6 Years Old to Young Adult



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ABSTRACT

Nurses are often in an ideal position to observe, counsel on effective prevention, and make appropriate and timely referrals for common oral health conditions. This second part in a series of four articles for nurse educators based on a stage of life is focused on the school years, ages 6 to young adult. Specific sections on caries, dental sources of pain, periodontal disease, common oral soft tissue lesions, trauma, and psychosocial issues are presented, which can be incorporated in nursing education as appropriate.

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Introduction

With integrated health care teams becoming the norm in the American health care delivery system, nurses have an opportunity to refine their repertoires for evaluating and caring for the mouth and to develop new strategies for interfacing with the dental community. Nurses are often ideally placed to observe and evaluate oral health, offer important preventive information to patients (See Table 1), and make timely referrals because of their position as trusted, frontline care providers with frequent patient contact.

This article is the second in a series organized around stages of life and intended to provide vetted content and information regarding the mouth and oral cavity that is appropriate for integration into current associate degree nursing curricula. The first article covered birth to age 6 years, and future articles will cover midlife adulthood and geriatric patient groups. For each stage of life, the focus is upon the recognition of the most common oral disease processes affecting that age group, oral health effects of systemic diseases and treatments, and the practical preventive counseling, direct care, and referral a nurse can offer. Here, we address school-aged children and young adults.

Nursing Leadership in the Caries Years

As frontline providers who are taking on expanded health care leadership roles within their communities, nurses should understand

that many of the factors contributing to the development of caries—commonly manifesting as “tooth cavities”—are environmental or social. The same factors also contribute to other important health issues such as diabetes and obesity.

Focusing upon caries, a nurse should know that, although early childhood caries is strictly defined as active caries up to the age of 6 years, the following years of childhood in which a child has mixed dentition—both primary and permanent teeth—is one of the most active times in life for caries. Caries in permanent teeth will impact the oral health of a young patient not only in childhood but also throughout his or her life.

The inoculation of a child with the caries-causing organisms *mutans* *Streptococcus* groups and *Lactobacillus* has already occurred by age 3 to 4 years, as described in the first article in this series. Resulting caries disease is subsequently transmitted from the primary, “baby” teeth to the child’s erupting permanent teeth. Unfortunately, tooth enamel on these newly erupting permanent teeth, not yet strengthened by repeated exposure to fluoride, is especially susceptible to caries (Berkowitz, 2006).

A child’s caries risk is amplified by the fact that he or she simply has more teeth. Until they fully erupt, these new teeth are harder for the developing child to clean. Caries-causing bacteria can collect on the enamel surface without daily oral hygiene performed by the young person, and bacterial plaque forms. Addition factors unique to this age group are as follows:

Increasing Independence in Dietary Choices

As young people develop individual personalities and are allowed independent choices, they often have the ability to afford and to

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Table 1

Key prevention messages for dental caries

Key prevention messages for dental caries
1. Tap water is the best drink.
2. Protein and vegetables are the best snack.
3. Sugarless gum is the best daily treat—especially after meals.
4. The last thing to go in your mouth at night should be a toothbrush with fluoridated toothpaste.

choose sweet food items. Lacking fully formed decision-making skills and information about the potentially adverse consequences of their choices, these young people may not make the best dietary choices in terms of their current and future oral health.

Low Priority for Personal Hygiene

Parental authority declines as a child develops and proceeds into young adulthood, and personal hygiene—including regular care of the mouth and teeth—may suffer. Fortunately for the young person, an increased social awareness, increased desire to be attractive, and peer pressure often correct this situation in the mid to late teens (Macgregor, Regis, & Balding, 1997).

Access to Sugar Sweetened Drinks and Simple Carbohydrate Snacks

Carbohydrates are unequivocally a causative factor in the development of caries. All simple carbohydrates, such as chips, crackers, and candy, should therefore be considered significant contributors to caries disease. The ubiquity of juices, sports drinks, and other sugary drinks such as sugar-sweetened tea and carbonated beverages at home, in schools, and in athletic settings should be of concern to all health care personnel (American Academy of Pediatric Dentistry [AAPD], 2016).

Evaluation of Caries Risk

As observant, frontline health care providers, nurses are well positioned to gauge the risk for caries in a child or adolescent by performing a simple and straightforward evaluation of key risk factors. If risk factors are present, a nurse can then give appropriate counseling or dental referral (Douglass & Clark, 2015; Twetman, 2016). These are the key factors in screening for patients who are at risk for caries:

Past Caries Experience in the Family

Ask the child's caregiver if that caregiver or any other close family member has needed a dental restoration—a “filling”—or a dental extraction because of pain or a cavity in the past 3 years. Either of these events in a caregiver or close family member is highly predictive of the child being at risk for caries. The presence of dental disease throughout a family may be where the common myth of “inherited bad teeth” originates, but always remember that caries is actually an infectious disease.

Diet and Feeding Habits Are Important

Specifically, “grazing” or *ad lib* frequent—defined as more than two times between meals—exposures to sugars or carbohydrates are dietary habits that will increase an individual's caries risk.

Lack of Effective Oral Hygiene

A nurse can easily assess a child's oral hygiene during a routine visual examination of the throat. If oral hygiene is inadequate, oral debris, unpleasant odor, and dental plaque are often readily detectable

(Domejean, White, & Featherstone, 2011; Featherstone, Domejean, Jensen, Wolff, & Young, 2007).

Caries Prevention Strategies

Because the causes for caries are environmentally and family based, measures to prevent caries focus upon the home and the environment. See (Table 1.)

Fluoride and Oral Hygiene

Fluoridated drinking water, which strengthens tooth enamel and makes it more resistant to caries, is the single most effective public health measure to prevent caries, particularly because it is a passive preventive measure requiring no action other than just using the fluoridated water where it is available (Centers for Disease Control, 2001). In addition, brushing with a fluoride toothpaste twice a day for 2 minutes using a pea-sized amount for children is an important measure in preventing caries. Children and their caregivers should be instructed on the importance of not rinsing with water or mouthwash afterwards because this washes away the fluoride and, therefore, reduces the benefit fluoride provides. Health care providers should encourage patients to brush two or three times daily and reinforce the message of “spit, don't rinse.” Bedtime brushing is especially important for a caries-prone group like young children (Ellwood, Fejerskov, Cury, & Clarkson, 2008).

It bears emphasis in the context of fluoride use that there is a crucially important opportunity for nursing leaders to partner with local oral health professionals to support the current science around community water fluoridation. Concepts such as “fluoride is only effective for children as their teeth calcify” have been disproven. In fact, all members of the community, young and old, who have teeth benefit from the caries reducing advantages of water fluoridation.

Diet Management

Eating patterns in the home, those related to the consumption of simple carbohydrates, deserve special attention by a nurse when counseling families about the numerous health-related considerations that involve diet. Oral health pitfalls and benefits may be readily addressed in these dietary messages:

- Frequent nibbling on sugary snacks, eating other carbohydrates such as chips, or sipping on a sugar-sweetened or carbonated beverages over a period of hours are eating habits that can be devastating to tooth structure.
- Fluoridated water is better for keeping teeth healthy than juices, sports drinks, or soda, which should be seen as treats rather than sources of regular fluid intake.
- Snack no more than twice a day and preferably on protein and vegetables.
- Fresh fruits, while certainly an important part of a balanced nutritional diet, are best consumed with meals rather than between meals for optimal oral health. This is because fruit is often acidic and high in sugar, both of which are damaging to teeth.

Of course, nurses and other health care providers who counsel families can increase the effectiveness of such counseling by crafting culturally appropriate and sensitive messages for the whole family that include a dental component (Zero, Moynihan, Lingstrom, & Birkhed, 2008).

Dental Sealants

Sealing the natural pits and fissures in back tooth surfaces where food debris can accumulate with resin sealants is a proven strategy

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