Periodicity of Examination, Preventive Dental Services, Anticipatory Guidance/Counseling, and Oral Treatment for Infants, Children, and Adolescents

Latest Revision
2022

How to Cite: American Academy of Pediatric Dentistry. Periodicity of examination, preventive dental services, anticipatory guidance/counseling, and oral treatment for infants, children, and adolescents. *The Reference Manual of Pediatric Dentistry*. American Academy of Pediatric Dentistry; 2026:336-348.

Abstract

This best practice presents recommendations about anticipatory guidance and timing of other clinical modalities which promote oral health during infancy, childhood, and adolescence. The guidance, though modifiable to children with special health needs, focuses on healthy, normal-developing children and addresses comprehensive oral examination, assessment of caries risk, periodontal risk assessment, professional preventive procedures, fluoride supplementation, radiographic examination, anticipatory guidance, preventive counseling, sealant placement, treatment of dental disease, trauma, treatment of developing malocclusions, evaluation of third molars, and transition to adult care. These preventive recommendations may be applied for the following age groups: 6 to 12 months, 12 to 24 months, 24 months to 6 years, 6 to 12 years, and 12 years and older. The guidance emphasizes the importance of very early professional intervention and continuity of care based upon the individualized needs of the child.

The document was developed through a collaborative effort of the American Academy of Pediatric Dentistry Councils on Clinical Affairs and Scientific Affairs to offer updated information and recommendations regarding oral health services and counseling for pediatric dental patients.

KEYWORDS: ADOLESCENT DENTISTRY; ANTICIPATORY GUIDANCE; CARIES-RISK ASSESSMENT; DENTAL REFERRAL; FLUORIDE SUPPLEMENT; ORAL HYGIENE COUNSELING; PERIODICITY OF EXAMINATION; PREVENTIVE DENTISTRY

Purpose

The American Academy of Pediatric Dentistry (**AAPD**) intends these recommendations to help practitioners make clinical decisions concerning preventive oral health interventions, including anticipatory guidance and preventive counseling, for infants, children, and adolescents.

Methods

This document was developed by the Clinical Affairs Committee, adopted in 1991[1], and last revised by the Council on Clinical Affairs in 2018[2]. This update used electronic database and hand searches of articles in the medical and dental literature using the terms: *periodicity of dental examinations*, *dental recall intervals*, *preventive dental services*, *anticipatory guidance and dentistry*, *caries-risk assessment*, *early childhood caries*, *dental caries prediction*, *dental care cost effectiveness and children*, *periodontal disease and children and adolescents US*, *pit-and-fissure sealants*, *dental sealants*, *fluoride supplementation and topical fluoride*, *dental trauma*, *dental fracture and tooth*, *nonnutritive oral habits*, *treatment of developing malocclusion*, *removal of wisdom teeth*, *removal of third molars*; fields: all; limits: within the last 10 years, humans, English, and clinical trials; birth through age 18. From this search, 2,502 articles matched these criteria and were evaluated by title and/or abstract. When data did not appear sufficient or were inconclusive, recommendations were based upon expert and/or consensus opinion by experienced researchers and clinicians.

Background

Professional dental care is necessary to maintain oral health.[3] The AAPD emphasizes the importance of initiating professional oral health intervention in infancy and continuing through adolescence and beyond.[4] The periodicity of professional oral health intervention and services is based on a patient's individual needs and risk indicators.[5-10] Each age group, as well as each individual child, has distinct developmental needs to be addressed at specific intervals as part of a comprehensive evaluation.[4,11-13] Continuity of care is based on the assessed needs of the individual patient and assures appropriate management of all oral conditions, dental disease, and injuries.[14-20] The early dental visit to establish a dental home

ABBREVIATIONS
AAPD: American Academy of Pediatric Dentistry. **BMI:** Body mass index. **CRA:** Caries-risk assessment. **ECC:** Early childhood caries. **HPV:** Human papilloma virus. **PRA:** Periodontal-risk assessment. **SHCN:** Special health care needs.

provides a foundation upon which a lifetime of preventive education and oral health care can be built.[21] The early establishment of a dental home has the potential to provide more effective and less-costly dental care when compared to dental care provided in emergency care facilities or hospitals.[21-25] Anticipatory guidance and counseling are essential components of the dental visit.[4,11,12,21,24-29] The dental home also can influence general health by instituting additional practices related to general health promotion, disease prevention, and screening for non-oral health related concerns. For example, oral health professionals can calculate and monitor body mass index (**BMI**) to help identify children at risk for obesity and provide appropriate referral to pediatric or nutritional specialists.[28]

Collaborative efforts and effective communication between medical and dental homes are essential to prevent oral disease and promote oral and overall health among children. Medical professionals can play an important role in children's oral health by providing primary prevention and coordinated care. Equally, dentists can improve the overall health of children not only by treating dental disease, but also by proactively recognizing child abuse, preventing traumatic injuries through anticipatory guidance, preventing obesity by longitudinal dietary counseling, and monitoring of weight status.[30] In addition, dentists can have a significant role in assessing immunization status and developmental milestones for potential delays, as well as making appropriate referral for further neurodevelopmental evaluations and therapeutic services.[31] The unique opportunity that dentists have to help address overall health issues strengthens as children get older since frequency of well-child medical visits decreases at the same time the frequency of dental recall visits increases. Research shows that children aged 6- to 12-years are, on average, 4 times more likely to visit a dentist than a pediatrician.[32,33]

Recommendations

This document addresses periodicity and general principles of examination, preventive dental services, anticipatory guidance/counseling, and oral treatment for children who have no contributory medical conditions and are developing normally. Accurate, comprehensive, and up-to-date medical, dental, and social histories are necessary for correct diagnosis and effective treatment planning. Recommendations may be modified to meet the unique requirements of patients with special health care needs (**SHCN**).[34]

Clinical oral examination

The first examination is recommended at the time of the eruption of the first tooth and no later than 12 months of age.[4,21,24,25] The developing dentition and occlusion should be monitored throughout eruption at regular clinical examinations.[29] Evidence-based prevention and early detection and management of caries/oral conditions can improve a child's oral and general health, well-being, and school readiness.[7,26,35-38] The number and cost of dental procedures among high-risk children is less for those seen at an earlier age versus later, confirming the fact that the sooner a child is seen by a dentist, the less treatment needs they are likely to have in the future.[39] On the other hand, delayed diagnosis of dental disease can result in exacerbated problems which lead to more extensive and costly care.[10,35,40-43] Guidance of eruption and development of the primary, mixed, and permanent dentitions contributes to a stable, esthetic, and functional occlusion.[11,29]

Components of a comprehensive clinical examination include

- general health/growth assessment (eg, height, weight, BMI calculation, vital signs).
- pain assessment.
- extraoral soft tissues examination.
- temporomandibular joint assessment.
- intraoral soft tissues examination.
- oral hygiene and periodontal-risk assessment.
- intraoral hard tissue examination.
- assessment of the developing occlusion.
- radiographic assessment, if indicated.
- caries-risk assessment.
- assessment of cooperative potential/behavior of child.[44]

Based upon the visual examination, the dentist may employ additional diagnostic aids (eg, photographs, pulp vitality testing, laboratory tests, study casts).[10,15,44-46]

The interval of examination should be based on the child's individual needs or risk status/susceptibility to disease; some patients may require examination and preventive services at more or less frequent intervals, based upon historical, clinical, and radiographic findings.[8-10,18,20,26,47-49] While the prevalence of caries has decreased in primary teeth, the prevalence of having no caries in the permanent dentition remains unchanged; caries remains a health problems facing infants, children, and adolescents in America.[37] Caries lesions are cumulative and progressive and, in the primary dentition, are highly predictive of caries occurring in the permanent dentition.[6,50] Reevaluation and reinforcement of preventive activities contribute to improved instruction for the caregiver of the child or adolescent, continuity of evaluation of the patient's health status, and potentially allaying anxiety and fear for the apprehensive child or adolescent.[51] Individuals with SHCN may require individualized preventive and treatment strategies that take into consideration the unique needs and disabilities of the patient.[34]

Caries-risk assessment (CRA)

Risk assessment is a key element of contemporary preventive care. CRA should be performed as soon as the first primary tooth erupts and be reassessed periodically by dental and medical providers.[6,27] The goal is to prevent disease by identifying patients at high risk for caries and developing individualized preventive measures and caries management, as well as determining appropriate periodicity of services.[27,52,53] Given that the etiology of dental caries is multifactorial and complex, current caries-risk assessment models entail a combination of

factors including diet, fluoride exposure, host susceptibility, and microflora analysis and consideration of how these factors interact with social, cultural, and behavioral factors. More comprehensive models that include social, political, psychological, and environmental determinants of health also are available.[54-57] CRA forms and caries management protocols aim to simplify and clarify the process.[6,27,58,59]

Sufficient evidence demonstrates certain groups of children at greater risk for development of early childhood caries (**ECC**) would benefit from infant oral health care.[60-64] Infants and young children have unique caries-risk factors such as ongoing establishment of oral flora and host defense systems, susceptibility of newly erupted teeth, and development of dietary habits. Because the etiology of ECC is multifactorial and significantly influenced by health behaviors,[65] preventive messages for expectant parents and parents of very young children should target factors known to place children at a higher risk for developing caries (eg, early Mutans streptococci transmission, poor oral hygiene habits, nighttime feeding, high frequency of sugar consumption).[26,36,57,66] Motivational problems may develop when parents/patients are not interested in changing behaviors or feel that the changes require excessive effort. Parental attitude, self-efficacy, and intention have a strong correlation to oral hygiene practices in preschoolers.[67] Therefore, health care professionals should utilize preventive approaches based on psychological and behavioral strategies. Moreover, they should communicate their recommendations effectively so parents/patients perceive them as behaviors worth pursuing. Motivational interviewing and self-determination theory are examples of effective motivational approaches for caries prevention that share similar psychological philosophies.[68-74]

Studies have reported caries experience in the primary dentition as a predictor of future caries.[75,76] Early school-aged children are at a transitional phase from primary to mixed dentition. These children face challenges such as unsupervised toothbrushing and increased consumption of cariogenic foods and beverages while at school, placing them at a higher risk for developing caries.[77-79] Therefore, special attention should be given to school-aged children regarding their oral hygiene and dietary practices. The use of newer technology including cellular telephones (eg, text messaging, apps) may provide an additional intervention to improve adherence to oral hygiene protocols in children and adolescents.[80]

Adolescence can be a time of heightened caries activity due to an increased number of tooth surfaces in the permanent dentition and intake of cariogenic substances, as well as low priority for oral hygiene procedures.[11,55,56] Risk assessment can assure preventive care (eg, water fluoridation, professional and home-use fluoride and antimicrobial agents, frequency of dental visits) is tailored to each individual's needs and direct resources to those for whom preventive interventions provide the greatest benefit.[11,81,82] Because a child's risk for developing dental disease can change over time due to changes in habits (eg, diet, home care), oral microflora, or physical condition, risk assessment must be documented and repeated regularly and frequently to maximize effectiveness.[13,27]

Periodontal-risk assessment (PRA)

Periodontal-risk assessment is an important component of the routine examination of pediatric patients. The gingival and periodontal tissues are subject to change due to normal growth and development. PRA identifies risk factors that place individuals at increased risk of developing gingival and periodontal diseases and pathologies, as well as factors that influence the progression of the disease. Risk factors for periodontal disease may be biological, environmental (social), and behavioral.[83] Probing assessments should be initiated after the eruption of the first permanent molars and incisors as tolerated by the child.[49] Probing of primary teeth may be indicated when clinical and radiographic findings indicate the presence of periodontal pathology. Bleeding on probing primary teeth during early childhood, even at a low number of sites, is indicative of high susceptibility to periodontal diseases due to the age-dependent reactivity of the gingival tissues to plaque.[84] PRA can improve clinical decision making and allow the implementation of individualized treatment planning and proactive targeted interventions.[85] Maintenance of gingival and periodontal health during childhood and adolescence can help assure periodontal health as an adult.[49]

Prophylaxis and professional topical fluoride treatment

The interval for frequency of professional preventive services is based upon assessed risk for caries and periodontal disease.[5,8-10,12,13,27,49,58-60] Prophylaxis aids in plaque, stain, and calculus removal, as well as in educating the patient on oral hygiene techniques and facilitating the clinical examination.[12] Gingivitis is common in children and adolescents and usually responds to the implementation of therapeutic measures and routine maintenance.[49] Hormonal fluctuations, including those occurring during the onset of puberty and pregnancy, can modify the gingival inflammatory response to dental plaque.[86] Therefore, recognizing modifying factors that may result in the development of periodontal disease is important.[49]

Children who exhibit higher risk of developing caries or periodontal disease would benefit from recall appointments at greater frequency than every 6 months (eg, every 3 months).[5,8,10,12,13,27,49,59] This allows increased professional fluoride therapy application, professional assessment of oral hygiene, and opportunity to foster improvement of oral health by demonstrating proper oral hygiene techniques, in addition to microbial monitoring, antimicrobial therapy reapplication, and reevaluating behavioral changes for effectiveness.[5,12,59,87-90] An individualized preventive plan increases the probability of good oral health by demonstrating proper oral hygiene methods/techniques and removing plaque, stain, and calculus.[8,90]

Fluoride contributes to the prevention, inhibition, and reversal of caries.[91-93] Professional topical fluoride treatments should be based on caries-risk assessment.[21,27,92,94] Plaque and the enamel pellicle are not a barrier to topical fluoride uptake.[12]

Consequently, patients who receive rubber cup dental prophylaxis or a toothbrush prophylaxis before fluoride treatment exhibit no differences in caries rates.[94,95] Precautionary measures should be taken to prevent swallowing of any professionally-applied topical fluoride. Children at high caries risk should receive greater frequency of professional topical fluoride applications (eg, every 3 months).[91,94,96-98] Ideally, this would occur as part of a comprehensive preventive program in a dental home.[21]

Fluoride supplementation

The AAPD encourages optimal fluoride exposure for every child, recognizing community water fluoridation as the most beneficial and cost-effective preventive intervention.[91] Fluoride supplementation should be considered for children at moderate to high caries risk when fluoride exposure is not optimal.[27] Determination of dietary fluoride sources (eg, drinking water, toothpaste, foods, beverages) before prescribing supplements is required and can help reduce intake of excess fluoride.[91] In addition, supplementation should be in accordance with the guidelines recommended by the AAPD[91] and the American Dental Association[99,100].

Radiographic assessment

Radiographs are a valuable adjunct in the oral health care of infants, children, and adolescents to diagnose and monitor oral diseases and evaluate dentoalveolar trauma, as well as monitor dentofacial development and the progress of therapy.[47,48] Timing of initial radiographic examination should not be based on the patient's age, but upon each child's individual circumstances.[47,48] The need for dental radiographs can be determined only after consideration of the patient's medical and dental histories, completion of a thorough clinical examination, and assessment of the patient's vulnerability to environmental factors that affect oral health.[47] Every effort must be made to minimize the patient's radiation exposure by applying good radiological practices (eg, use of protective aprons, thyroid collars, rectangular collimation) and by following the as low as reasonably achievable (ALARA) principle.[47,101]

Anticipatory guidance/counseling

Anticipatory guidance is the process of providing practical and developmentally-appropriate information about children's health to prepare parents for significant physical, emotional, and psychological milestones.[4,11,21,102,103] Individualized discussion and counseling should be an integral part of each visit. Topics should include oral hygiene practices, oral/dental development and growth, speech/language development, nonnutritive habits, diet and nutrition, injury prevention, tobacco/nicotine product use, substance misuse, and intraoral/perioral piercing and oral jewelry/accessories.[4,11,17,21,29,102-111]

Anticipatory guidance regarding the characteristics of a normal healthy oral cavity should commence during infant oral health visits and continue throughout follow-up dental visits. This allows parents to quantify any changes such as, but not limited to, growth delays, traumatic injuries, and poor oral hygiene or presence of caries lesions. Educating parents regarding tooth development and chronology of eruption can help them better understand the implications of delayed or accelerated tooth emergence. Parents also need to be informed about the benefits of topical fluorides for newly erupted teeth which may be at greater risk of developing caries, especially during the posteruption maturation process.[102] Assessment of each child's developmental milestones (eg, fine/gross motor skills, language, social interactions) is crucial for early recognition of potential delays and appropriate referral to therapeutic services.[31] Speech and language are integral components of a child's early development.[108] Abnormal delays in speech and language production can be recognized early with referral made to address these concerns. Communication and coordination of appliance therapy with a speech and language professional can assist in the timely treatment of speech disorders.[108]

Oral habits (eg, nonnutritive sucking: digital and pacifier habits; bruxism; tongue thrust swallow and abnormal tongue position; self-injurious/self-mutilating behavior) may apply forces to teeth and dentoalveolar structures. Although early use of pacifiers and digit sucking are considered normal, pacifier use beyond 18 months can influence the developing orofacial complex.[112] Increased overjet and Class II malocclusion are more strongly associated with a finger habit versus a pacifier habit.[113,114] Children having a nonnutritive sucking habit beyond age 3 have a higher incidence of malocclusions.[29,112] Early dental visits provide an opportunity to counsel parents to help their children stop sucking habits before malocclusion or skeletal dysplasias occur.[29,112] For school-aged and adolescent patients, counseling regarding any existing habits (eg, fingernail biting, clenching, bruxism), including the potential immediate and long-term effects on the craniofacial complex and dentition, is appropriate.[29] Management of an oral habit can include patient/parent counseling, behavior modification techniques, appliance therapy, or referral to other providers including, but not limited to, orthodontists, psychologists, or otolaryngologists.[29]

Oral hygiene counseling involves the parent and patient. Initially, oral hygiene is the responsibility of the parent. As the child develops, home care can be performed jointly by parent and child. When a child demonstrates the understanding and ability to perform personal hygiene techniques, the health care professional should counsel the child. The effectiveness of home care should be monitored at every visit and includes a discussion on the consistency of daily oral hygiene preventive activities, including adequate fluoride exposure.[5,8,11,27,91,115]

The development of dietary habits and childhood food preferences appears to be established early and may affect the oral health as well as general health and well-being of a child.[116] The establishment of a dental home no later than 12 months of age allows dietary and nutrition counseling to occur early. This helps parents to develop proper oral health habits early in their child's life, rather than trying to change established unhealthy habits later. During infancy, counseling

should focus on breastfeeding, bottle or no-spill cup usage, concerns with nighttime feedings, frequency of in-between meal consumption of sugar-sweetened beverages (eg, sweetened milk, soft drinks, fruit-flavored drinks, sports drinks) and snacks, as well as special diets.[28,117] Excess consumption of carbohydrates, fats, and sodium contribute to poor systemic health.[118-120] Dietary analysis and the impact of dietary choices on oral health, malnutrition, and obesity[121,122], as well as quality of life, should be addressed through nutritional and preventive oral health.[28,123] The US Departments of Health and Human Services and Agriculture provide dietary guidelines for Americans 2 years of age and older every 5 years to promote a healthy diet and help prevent chronic diseases.[123]

Traumatic dental injuries in the primary and permanent dentition occur with great frequency with a prevalence of one-third of preschool children and one-fourth of school-age children.[20,124] Facial trauma that results in fractured, displaced, or lost teeth can have significant negative functional, esthetic, and psychological effects on children.[125] Practitioners should provide age-appropriate injury prevention counseling for orofacial trauma.[17,103] Initial discussions should include advice regarding play objects, pacifiers, car seats, and electrical cords. As motor coordination develops and the child grows older, the parent/patient should be counseled on additional safety and preventive measures, including use of protective equipment (eg, athletic mouthguards, helmets with face shields) for sporting and high-speed activities (eg, baseball, bicycling, skiing, 4-wheeling). Dental injuries could have improved outcomes not only if the public were aware of first-aid measures and the need to seek immediate treatment, but also if the injured child had access to emergency care at all times. Caregivers report that, even though their children had a dental home, they have experienced barriers to care when referred outside of the dental home for emergency services.[126] Barriers faced by caregivers include availability of providers and clinics for delivery of emergency care and the distance one must travel for treatment. Therefore, primary care providers should inform parents about ways to access emergency care for dental injuries and provide telephone numbers to access a dentist, including for after-hours emergency care.[110] Teledentistry may serve as an adjunct with time-sensitive injuries or when unexpected circumstances result in difficulties accessing care.[127]

Smoking and smokeless tobacco use almost always are initiated and established in adolescence.[111,128,129] In 2020, 6.7% of middle school students and 23.6% of high school students reported current tobacco product use.[130] The most common tobacco products used by middle school and high school students were reported to be e-cigarettes, cigarettes, cigars, smokeless tobacco, hookahs, pipe tobacco, and bidis (unfiltered cigarettes from India).[130] E-cigarette decreased from 27.5% to 19.6% among high school students and from 5.3% to 4.7% among middle school students from 2019 to 2020.[130] The recent decline reversing previous trends may be attributable to multiple factors including increasing the age of sale of tobacco products from 18 to 21 years.[130] Children may be exposed to opportunities to experiment with other substances that negatively impact their health and well-being. Practitioners should provide education regarding the serious health consequences of tobacco use and exposure to secondhand smoke.[104,130] The practitioner may need to obtain information regarding tobacco use and alcohol/drug misuse confidentially from an adolescent patient.[11,107] When tobacco or substance abuse has been identified, practitioners should provide brief interventions for encouragement, support, and positive reinforcement for avoiding substance use.[104,107] If indicated, dental practitioners should provide referral to primary care providers or behavioral health/addiction specialists for assessment and/or treatment of substance use disorders.[107]

Human papilloma virus (**HPV**) is associated with several types of cancers, including oral and oropharyngeal cancers.[131,132] Seventy percent of oropharyngeal cancers in the US are caused by HPV, and the number of oropharyngeal cancers is increasing annually.[132] Evidence supports the HPV vaccine as a means to lessen the risk of oral HPV infection.[131,133] The vaccine provides the greatest protection when administered at ages 9 through 12.[132] As adolescent patients tend to see the dentist twice yearly and more often than their medical care provider, this is a window of opportunity for the dental professional to counsel patients and parents about HPV's link to oral cancer and the potential benefits of receiving the HPV vaccine.[134]

Complications from intraoral/perioral piercings can range from pain, infection, and tooth fracture to life-threatening conditions of bleeding, edema, and airway obstruction.[106] Education regarding pathologic conditions and sequelae associated with piercings should be initiated for the preteen child and parent and reinforced during subsequent periodic visits. The AAPD strongly opposes the practice of piercing intraoral and perioral tissues and use of jewelry on intraoral and perioral tissues due to the potential for pathological conditions and sequelae associated with these practices.[106]

Treatment of dental disease/injury

Health care providers who diagnose oral disease or trauma should either provide therapy or refer the patient to an appropriately-trained individual for treatment.[135] Immediate intervention is necessary to prevent further dental destruction, as well as more widespread health problems. Postponed treatment can result in exacerbated problems that may lead to the need for more extensive care.[24,36,37,42] Early intervention could result in savings of health care dollars for individuals, community health care programs, and third-party payors.[23,31,32,36]

Treatment of developing malocclusion

Guidance of eruption and development of the primary, mixed, and permanent dentitions is an integral component of comprehensive oral health care for all pediatric dental patients.[29] Dentists have the responsibility to recognize, diagnose, and manage or refer abnormalities in the developing dentition as dictated by the complexity of the problem and the individual clinician's training, knowledge, and experience.[135] Early diagnosis

and successful treatment of developing malocclusions can have both short-term and long-term benefits, while achieving the goals of occlusal harmony and function and dentofacial esthetics.[136] Early treatment is beneficial for many patients but is not indicated for every patient. When there is a reasonable indication that an oral habit will result in unfavorable sequelae in the developing permanent dentition, any treatment must be appropriate for the child's development, comprehension, and ability to cooperate. Use of an appliance is indicated only when the child wants to stop the habit and would benefit from a reminder.[29] At each stage of occlusal development, the objectives of intervention/treatment include: (1) managing adverse growth, (2) correcting dental and skeletal disharmonies, (3) improving esthetics of the smile and the accompanying positive effects on self-image, and (4) improving the occlusion.[29]

Sealants

A 2016 systematic review concluded sealants are effective in preventing and arresting pit-and-fissure occlusal caries lesions of primary and permanent molars in children and adolescents and can minimize the progression of noncavitated occlusal caries lesions.[137] They are indicated for primary and permanent teeth with pits and fissures.[137] At-risk pits and fissures should be sealed as soon as possible. Because caries risk may increase at any time during a patient's life due to changes in habits (eg, dietary, home care), oral microflora, or physical condition, unsealed teeth subsequently might benefit from sealant application.[138] The need for sealant placement should be reassessed at periodic preventive care appointments. Sealants should be monitored and repaired or replaced as needed.[138-140]

Third molars

Panoramic or periapical radiographic assessment is indicated during late adolescence to assess the presence, position, and development of third molars.[47,48] Impacted third molars are potentially pathologic; a 2016 study found the incidence of cysts or tumors associated with impacted mandibular third molars to be 0.41% to 0.71% in patients younger than 30 years.[141] A decision to remove or retain third molars should be made before the middle of the third decade.[142,143] Consideration should be given to removal when there is a high probability of disease or pathology or the risks associated with early removal are less than the risks of later removal.[29, 143,144] Treatment should be provided before pathologic conditions adversely affect the patient's oral or systemic health.[142,143] Postoperative complications for removal of impacted third molars are low when performed at an early age.[145] A Cochrane review in 2012 reported no difference in late lower incisor crowding with removal or retention of asymptomatic impacted third molars.[146] When a decision is made to maintain disease-free impacted wisdom teeth, clinical and radiographic monitoring is appropriate to prevent undesirable outcomes.[147]

Referral for regular and periodic dental care

As adolescent patients approach the age of majority, educating the patient and parent on the value of transitioning to a dentist who is experienced in adult oral health can help minimize disruption of high-quality, developmentally-appropriate health care. At the time agreed upon by the patient, parent, and pediatric dentist, the patient should be referred to a specific practitioner in an environment sensitive to the adolescent's individual needs.[11,148] Until the new dental home is established, the patient should maintain a relationship with the current care provider and have access to emergency services. For the patient with SHCN, in cases where it is not possible or desired to transition to another practitioner, the dental home can remain with the pediatric dentist, and appropriate referrals for specialized dental care should be recommended when needed.[148] Proper communication and records transfer allow for consistent and continuous care for the patient.[44]

Recommendations by age

Six to 12 months

1. Complete the clinical oral examination with adjunctive diagnostic tools (eg, radiographs as determined by child's history, clinical findings, and susceptibility to oral disease) to assess oral growth and development, pathology, and/or injuries; provide diagnosis.
2. Complete a caries-risk assessment.
3. Provide oral hygiene counseling for parents, including the implications of the oral health of the caregiver.
4. Clean teeth and remove supra- and subgingival stains or deposits as indicated.
5. Assess the child's exposure to systemic and topical fluorides (including type of infant formula used) and exposure to fluoridated toothpaste and provide counseling regarding fluoride.
6. Assess appropriateness of feeding practices, including bottle and breastfeeding, and provide counseling as indicated; provide dietary counseling related to oral health.
7. Provide age-appropriate injury prevention counseling for orofacial trauma.
8. Provide counseling for nonnutritive oral habits (eg, digit, pacifiers).
9. Provide required treatment or appropriate referral for any oral diseases or injuries.
10. Provide anticipatory guidance.
11. Assess overall growth and development, and make appropriate referral to therapeutic services if needed.
12. Consult with the child's physician as needed.
13. Determine the interval for periodic reevaluation.

12 to 24 months

1. Repeat the procedures for ages 6 to 12 months every 6 months or as indicated by the child's individual needs or risk status/susceptibility to disease.

2. Assess appropriateness of feeding practices (including bottle, breastfeeding, and no-spill training cups) and provide counseling as indicated.
3. Review patient's fluoride status and provide parental counseling.
4. Provide topical fluoride treatments every 6 months or as indicated by the child's individual needs or risk status/susceptibility to caries.

Two to 6 years

1. Repeat the procedures for 12 to 24 months every 6 months or as indicated by the child's individual needs or risk status/susceptibility to disease, including periodontal conditions. Provide age-appropriate oral hygiene instructions.
2. Assess diet and body mass index to identify patterns placing patients at increased risk for dental caries or obesity. Provide counseling or appropriate referral to a pediatric or nutritional specialist as indicated.
3. Scale and clean the teeth every 6 months or as indicated by individual patient's needs.
4. Provide pit-and-fissure sealants for caries-susceptible anterior and posterior primary and permanent teeth.
5. Provide counseling and services (eg, mouthguards) as needed for orofacial trauma prevention.
6. Assess developing dentition and occlusion and provide assessment/treatment or referral of malocclusion as indicated by individual patient's needs.
7. Provide required treatment or appropriate referral for any oral diseases, habits, or injuries as indicated.
8. Assess speech and language development and provide appropriate referral as indicated.

Six to 12 years

1. Repeat the procedures for ages 2 to 6 years every 6 months or as indicated by child's individual needs.
2. Complete a periodontal-risk assessment that may include radiographs and periodontal probing with eruption of first permanent molars.
3. Provide substance abuse counseling (eg, smoking, smokeless tobacco) and referral to primary care providers or behavioral health/addiction specialists if indicated.
4. Provide education and counseling regarding HPV and the benefits of the HPV vaccine.
5. Provide counseling on intraoral/perioral piercing.

12 years and older

1. Repeat the procedures for ages 6 to 12 years every 6 months or as indicated by the child's individual needs or risk status/susceptibility to disease.
2. During late adolescence, assess the presence, position, and development of third molars, giving consideration to removal when there is a high probability of disease or pathology or the risks associated with early removal are less than the risks of later removal.
3. At an age determined by patient, parent, and pediatric dentist, refer the patient to a general dentist for continuing oral care.

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Recommended Dental Periodicity Schedule for Pediatric Oral Health Assessment, Preventive Services, and Anticipatory Guidance/Counseling

Since each child is unique, these recommendations are designed for the care of children who have no contributing medical conditions and are developing normally. These recommendations will need to be modified for children with special health care needs or if disease or trauma manifests variations from normal. The American Academy of Pediatric Dentistry emphasizes the importance of very early professional intervention and the continuity of care based on the individualized needs of the child. Refer to the text of this best practice for supporting information and references.

AMERICA'S PEDIATRIC DENTISTS
THE BIG AUTHORITY on little teeth®

	AGE				
	6 TO 12 MONTHS	12 TO 24 MONTHS	2 TO 6 YEARS	6 TO 12 YEARS	12 YEARS AND OLDER
Clinical oral examination [1]	•	•	•	•	•
Assess oral growth and development [2]	•	•	•	•	•
Caries-risk assessment [3]	•	•	•	•	•
Radiographic assessment [4]	•	•	•	•	•
Prophylaxis and topical fluoride [3,4]	•	•	•	•	•
Fluoride supplementation [5]	•	•	•	•	•
Anticipatory guidance/counseling [6]	•	•	•	•	•
Oral hygiene counseling [3,7]	Parent	Parent	Patient/parent	Patient/parent	Patient
Dietary counseling [3,8]	•	•	•	•	•
Counseling for nonnutritive habits [9]	•	•	•	•	•
Injury prevention and safety counseling [10]	•	•	•	•	•
Assess speech/language development [11]	•	•	•		
Assessment developing occlusion [12]			•	•	•
Assessment for pit and fissure sealants [13]			•	•	•
Periodontal-risk assessment [3,14]			•	•	•
Counseling for tobacco, vaping, and substance misuse				•	•
Counseling for human papilloma virus/ vaccine				•	•
Counseling for intraoral/perioral piercing				•	•
Assess third molars [10]					•
Transition to adult dental care					•

1 First examination at the eruption of the first tooth and no later than 12 months. Repeat every 6 months or as indicated by child's risk status/susceptibility to disease. Includes assessment of pathology and injuries.

2 By clinical examination.

3 Must be repeated regularly and frequently to maximize effectiveness.

4 Timing, types, and frequency determined by child's history, clinical findings, and susceptibility to oral disease.

5 Consider when systemic fluoride exposure is suboptimal. Up to at least 16 years.

6 Appropriate discussion and counseling should be an integral part of each visit for care.

7 Initially, responsibility of parent; as child matures, jointly with parent; then, when indicated, only child.

8 At every appointment; initially discuss appropriate feeding practices, then the role of refined carbohydrates and frequency of snacking in caries development and childhood obesity. Monitor body mass index beginning at age 2.

9 At first, discuss the need for nonnutritive sucking: digits vs. pacifiers; then the need to wean from the habit before mal-occlusion or deleterious effect on the dentofacial complex occurs. For school-aged children and adolescent patients, counsel regarding any existing habits such as fingernail biting, clenching, or bruxism.

10 Initially pacifiers, car seats, play objects, electric cords; secondhand smoke; when learning to walk; with sports and routine playing, including the importance of mouthguards; then motor vehicles and high-speed activities.

11 Observation for age-appropriate speech articulation and fluency as well as achieving receptive and expressive language milestones.

12 Identify: transverse, vertical, and sagittal growth patterns; asymmetry; occlusal disharmonies; functional status including temporomandibular joint dysfunction; esthetic influences on self-image and emotional development.

13 For caries-susceptible primary molars, permanent molars, premolars, and anterior teeth with deep pits and fissures; placed as soon as possible after eruption.

14 Periodontal probing should be added to the risk-assessment process after the eruption of the first permanent molars.