

The dental home

A primary care oral health concept

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The concept of a dental home for children is new to most of the dental profession. For medical practitioners, however, the concept of identifying a child with a practitioner in a familiar and safe health supervision relationship is well-established.¹ The U.S. surgeon general's recent concern about the low use of oral health services by children² and the persistence of early childhood caries³ suggest that dentistry should consider taking a closer look at the potential benefits of an analogous concept of a "dental home." It could improve access to and provide children with a source of care and anticipatory guidance as early as 1 year of age.

This article provides a rationale for creating a dental home, what a family could expect once they find a home and what improvements in oral health might occur as a result. We compare the characteristics of the medical home and its demonstrated benefit to children's health with what a dental home might offer for children's oral health.

The dental home could increase opportunities for preventive oral health services for children that can reduce disease disparities.

THE MEDICAL HOME CONCEPT

The American Academy of Pediatrics, or AAP, proposed a definition of a medical home in 1992 in the form of a policy statement.¹ The essential concept is that medical care of children of all ages is best managed when there is an established relationship between a practitioner who is familiar with the child and the child's family. This relationship fosters care that is accessible, coordinated and compassionate and that encourages mutual responsibility and trust. The medical home also presumes that the physician caring for the child is well-trained and capable of supervising health and managing illness.

The medical home becomes the place where a child receives preventive instruction, immunizations, coun-

Background. The pediatrics community has promoted the concept of a medical home to improve families' care utilization. The authors describe the medical home and propose a dental home concept to improve families' access to dental care.

Description. The dental home is a locus for preventive oral health supervision and emergency care. It can be a repository for records and the focus for making specialty referrals. When culture and ethnicity are barriers to care, the dental home offers a site adapted to care delivery and is sensitive to family values.

Clinical Implications. The dental home can provide access to preventive and emergency services for children. Establishment of the home early in the child's life can expose a child to prevention and early intervention before problems occur, reduce anxiety and facilitate referral.

seling and anticipatory guidance. In a rather bold statement for today's health care, the framers of this definition proposed that management of acute illness be available 24 hours a day. They also proposed that long-term continuity be an important consideration and that the provider initiate and coordinate subspecialty care and function as the child's link to community agencies regarding health issues. The medical home's physical location should be the safe repository of the child's medical records.

In a subsequent publication,⁴ the AAP addressed the medical home concept for children with special health care needs in managed care programs. This view of the medical home emphasized the need for coordination of specialized medical and community services and acknowledged the role of subspecialists as a more appropriate home for these children, based on individual need. The complexities of care, as well as the introduction of an additional care manager, were emphasized as all the more reason for a care-supervising medical home.

TABLE 1

CHARACTERISTICS OF A MEDICAL HOME.*	
CHARACTERISTIC	DESCRIPTION
Accessible	<ul style="list-style-type: none"> ■ Care provided in the child's community ■ All insurance accepted and changes in coverage accommodated
Family-Centered	<ul style="list-style-type: none"> ■ Recognition of the centeredness of the family ■ Unbiased complete information is shared on an ongoing basis
Continuous	<ul style="list-style-type: none"> ■ Same primary care providers from infancy through adolescence ■ Assistance with transitions (for example, to school) provided
Comprehensive	<ul style="list-style-type: none"> ■ Health care available 24 hours per day, seven days per week ■ Preventive, primary, tertiary care provided
Coordinated	<ul style="list-style-type: none"> ■ Families linked to support, education and community services ■ Information centralized
Compassionate	<ul style="list-style-type: none"> ■ Expressed and demonstrated concern for child and family
Culturally Competent	<ul style="list-style-type: none"> ■ Cultural background recognized, valued, respected

* Source: American Academy of Pediatrics.⁵

Table 1 delineates the seven characteristics of a medical home.⁵ Cultural competence was added to the original six in the description by AAP to account for the need to reach underrepresented populations who traditionally have had difficulty gaining access to care.

DOES THE MEDICAL HOME AFFECT CARE?

The medical home construct was not a health promotion, but rather a response to empirical and systematic observations dating back 20 years or more that the primary care relationship between the physician and the child fostered access and use of services. The dental home is supported empirically by testimonial and professional opinion.^{6,7} An exhaustive review of the numerous studies describing the benefits of the medical home is beyond the scope of this article, but some areas for which evidence exists include immunizations,⁸ appropriate use of care for acute and routine illnesses,⁹ and the relationship between publicly financed programs and the medical home.¹⁰ Immunization status does not seem to be improved with a medical home⁸; race, insurance status and family income are more important. However, in a comparison of a capitated state-funded primary care program with traditional Medicaid and private insurance, Kempe and col-

leagues¹⁰ found that immunization shifted to the primary care site for children in capitated programs and that other services were comparable to those of children with other payment mechanisms. St. Peter and colleagues⁹ noted that children

with a source of care were more likely not only to receive services but also to get both care when sick and well care at these sites. A continuity of care relationship also seems to be associated with less use of emergency departments as a source of nonemergent care.^{11,12} The literature suggests that for medical care, both the likelihood and appropriateness of care are better when a patient has a medical home.

HOW A DENTAL HOME WOULD AFFECT CARE

In an era in which access to care has received such emphasis as a solution to oral health disparities, it would seem that the benefit of a dental home would not be questioned. The concept of a dental home, however, is too new to have been studied as a predictor of oral health. In 1999, Nowak¹³ described the term in relation to the desired recurrence of preventive oral health supervisory services as propagated by the American Academy of Pediatric Dentistry, or AAPD. National data on the characteristics of patients who have had a dental visit in the past year do not provide useful information for children on the benefits of a dental home as indicated by a dental visit.¹⁴

Indirect measures, analogous to those used in medicine, suggest that a dental home, or a rela-

tionship with a dentist, has beneficial consequences of appropriate care, has reduced treatment costs and provides access to otherwise unavailable services. One measure is the association of children seeking emergency dental care with an established dental relationship. Sheller and colleagues¹⁵ found that the emergency visit was the first contact for 52 percent of children 3.5 years of age and younger who had a caries-related emergency in a children's hospital. In another study of the same patient population, Zeng and colleagues¹⁶ noted that 62 percent of 1,482 children seen for dental emergencies in a children's hospital from 1982 to 1991 had no regular source of dental care. Von Kaenel and colleagues¹⁷ study had similar findings. The suggestion here is that the majority of children whose parents sought emergency dental care for them in a hospital have no dentist.

Doykos¹⁸ suggests that early association with a dentist has the benefit of reduced cost of care, with the difference being attributed to an increased need for treatment services for those who delay the first dental visit. In a recent analysis of the Access to Baby and Child Dentistry, or ABCD, program in Washington state, Grembowski and Milgrom¹⁹ found that children in the ABCD program had an increased use of services, particularly preventive services, compared with children not enrolled in the program. While the ABCD program is not a "dental home" program, it does train both families and dentists to manage young children and their oral health early and appears to have resulted in beneficial relationships between dentists and families sooner than traditional norms.

Iben and colleagues²⁰ compared appointments broken by Medicaid dental patients in private and clinic settings and found higher rates in private practice. More germane to the "dental home" is that, in spite of this, the private practice was able to see more Medicaid patients than the clinics studied. If a private practice setting is seen as the ideal home, then for those with traditional access problems it offers the advantage of efficiency and greater likelihood of exposure to preventive services. If one can assume that lack of access is equivalent to "dental homelessness," then the detriment of not having a dental home becomes important. Minority children have more access problems and fewer sealants than do nonminority children.^{21,22}

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National data on adults strongly associate having natural teeth with care utilization and less dental caries.²³ The surgeon general's report² provides a snapshot of the U.S. military, in which everyone has a "dental home," and in which dental care utilization is high and dental disease low. The report also identifies the continuation of early childhood caries as a problem. Current standards of care, maintained by the medical community, delay dental intervention until 3 years of age.²⁴ Unfortunately, by that age, 5 to 10 percent of preschool-aged children have caries, and in some populations who even have good access to and utilization of medical services the rate is double that of the general population. By 5 years of age, six of 10 children have experienced dental caries.²⁵ It seems unlikely that this caries starts

between 3 and 5 years of age. It is reasonable to ask whether establishment of a dental home by age 1 year—with the benefits of early detection, risk assessment, appropriate amounts of prescribed fluoride, sealants and early intervention of incipient disease—would reduce the prevalence of caries in

preschoolers and ultimately reduce the 60 percent of 6- to 8-year-olds with dental caries.

It could be argued that the concept of the dental home never has been studied. However, if access and utilization are used as indirect measures of the benefits of a dental home, then the concept has merit to improve oral health of children.

CHARACTERISTICS OF THE DENTAL HOME

Although a dental home most often connotes a building, place or clinic, it also has to be a philosophy embraced by the dental practice. The characteristics and practical advantages are listed in Table 2. A practice based on periodic emergency care counters the concept of a dental home. A practice that embraces children early and continues to follow them periodically through life would be the ideal. The dental home may begin in the office of a pediatric dentist and then move to that of a family practitioner, once the child has matured and is more comfortable being treated by the parents' dentist.

As in medicine, the dental home should embrace prevention at the earliest time possible to prevent or at least reduce the effects of oral disease. It also should provide a place for children to

TABLE 2

IDEAL CHARACTERISTICS AND PRACTICAL ADVANTAGES OF A DENTAL HOME.

CHARACTERISTIC	DESCRIPTION	PRACTICAL ADVANTAGES
Accessible	<ul style="list-style-type: none"> ■ Care provided in the child's community ■ All insurance accepted and changes in coverage accommodated 	<ul style="list-style-type: none"> ■ Source of care is close to home and accessible to family ■ Minimal hassle encountered with payment ■ Office ready for treatment in emergency situations ■ Office is nonbiased in dealing with children with special health care needs, or CSHCN ■ Dentist knows community needs and resources (fluoride in water)
Family-Centered	<ul style="list-style-type: none"> ■ Recognition of the centeredness of the family ■ Unbiased complete information is shared on an ongoing basis 	<ul style="list-style-type: none"> ■ Low parent/child anxiety improves care ■ Care protocols are comfortable to family (behavior management) ■ Appropriate role of parents in home care is established
Continuous	<ul style="list-style-type: none"> ■ Same primary care providers from infancy through adolescence ■ Assistance provided with transitions (for example, to school) 	<ul style="list-style-type: none"> ■ Appropriate recall intervals are based on child's needs ■ Continuity of care is better owing to recall system vs. episodic care ■ Coordination of complex dental treatment is possible (traumatic injury) ■ Liaison with medical providers for CSHCN is improved (congenital heart disease)
Comprehensive	<ul style="list-style-type: none"> ■ Health care available 24 hours per day, seven days per week ■ Preventive, primary, tertiary care provided 	<ul style="list-style-type: none"> ■ Emergency access is ensured ■ Care manager and primary care dentist are in same place
Coordinated	<ul style="list-style-type: none"> ■ Families linked to support, education and community services ■ Information centralized 	<ul style="list-style-type: none"> ■ Records centralized ■ School, workshop, therapy linkages established and known (cleft palate care)
Compassionate	<ul style="list-style-type: none"> ■ Expressed and demonstrated concern for child and family 	<ul style="list-style-type: none"> ■ Dentist-child relationship is established ■ Family relationship is established ■ Children less anxious owing to familiarity
Culturally Competent	<ul style="list-style-type: none"> ■ Cultural background recognized, valued, respected 	<ul style="list-style-type: none"> ■ Mechanism is established for communication for ongoing care ■ Specialized resources are known and proven if needed ■ Staff may speak other languages and know dental terminology

be treated in case of emergency, where parents can feel comfortable and not have to worry that the management of their child's oral emergencies would be minimal.

THE DENTAL HOME ADVANTAGE

The dental home embraces the importance of early intervention with optimal preventive strategies chosen based on the risk of the patient and would encourage the first dental visit by approximately 1 year of age. Parents may welcome professional support and anticipatory guidance to ensure that their children have healthy mouths at this age. Practitioners can provide personalized preventive approaches for children based on their

families' histories, the oral examination and the risk factors identified. These risk factors include medical history, dietary habits, medication, fluoride availability and parental attitudes. Abundant literature supports the role of risk factors early in life²⁶⁻³⁰ as predictors of dental caries. The AAPD's Recommendations for Periodic Preventive Care³¹ provide a framework for the practitioner to consider when developing office policies and recommendations.

An important feature of a dental home is to provide anticipatory guidance to the parents so that they are aware of their children's growth and development, as well as possible risk factors that occur as children age. Anticipatory guidance pro-

vides a framework for practitioners and their staff members to periodically engage parents in conversations about the anticipated needs of the children.

Another advantage of the dental home is that preventive intervention can be personalized to the needs of the child. Risk assessment remains an emerging science, and, although empirical suggestions are available for children who are at greater risk, the observations of the practitioner still are valid. In fact, recent consensus validates the power of the dentist's opinion on individual caries risk.³² Too often, a "shotgun" approach is suggested, and all children are given the same preventive intervention no matter what their risks. Studies confirm that this approach is both inefficient and ineffective.³³ An individualized preventive program can be recommended for optimum protection of children in different risk categories within a good cost-benefit range.

SPECIALIZED CARE REFERRAL

Another feature of the dental home would be coordination of specialized care for the child. When a child has been observed over a period, appropriate recommendations can be made for other treatments such as orthodontic referral and observation. Using age-related guidelines and recommendations from the orthodontic community, appropriate scheduling of referrals can be made to optimize treatment and eliminate numerous referrals before treatment is initiated.

It is known that after children are 2 or 3 years of age, dentists see them more frequently than do primary care medical providers. This provides a wonderful opportunity for the primary dental provider to recognize changes in growth and development that can be discussed with the parent, as well as make appropriate recommendations to seek further consultation from the child's physician. The continuous care provided by a dental team also would recognize other developmental milestones that may suggest needed attention. For example, dental practitioners can observe problems with speech development at periodic visits, discuss them with the parents and make appropriate referrals to speech pathologists.

In a dental home, the office can track the sequencing of preventive interventions. For example, the timing of the placement of dental sealants on permanent first molars can be anticipated from previous appointments and scheduled appropriately, or primary tooth exfoliation and

permanent tooth eruption can be monitored so that growth and development problems are reduced. Another example is ensuring the appropriate use of supplemental fluoride when families change residence and are served by new community water supplies, choose to purchase home water-processing units or begin to use bottled water, all of which frequently can be associated with fluoride deficiency.

Behavioral research supports a child's increased levels of comfort and reduced anxiety levels as familiarity increases with the dental environment.³⁴ Being greeted cheerfully by the receptionist and staff in a nonthreatening, child-friendly environment reduces anxiety and improves behavior. This becomes an important issue for many parents who do not want to see their children experience stress in a health provider's office. Maternal anxiety remains a strong predictor of child anxiety.³⁵ Provider and staff stress diminishes when children are happy to be in the office and can engage in the care experience without fear.

Lastly, the dental home can provide a personalized and individualized recall program for the child. Too frequently, recall programs are based on a schedule suggested by reports when caries was a normally distributed problem among all children, who thus needed close monitoring. Today, the majority of dental problems occur in high-risk populations, and all children may not require the same schedule of periodic supervision. Frequency of oral health supervision visits also may need to change during the child's life, as there are times when more frequent observation and monitoring are necessary to ensure the child's health and to answer the parent's questions.

Having a place to receive emergency treatment can be important. Going to a provider and an office that are familiar and where the child has a history of care can reduce the parent's anxiety in case of an unintended injury. To be able to pick up the telephone and immediately contact the office either during or after working hours and be sure that the dentist is available can be important to the family.

Gaining access to dental care is a major health issue for children with special health care needs. Families with such children who have a dental home can know that an office is accessible and that the dentist and staff members are trained in and comfortable with treating special needs. All

children with special health care needs should be welcomed in the dental office, and if the relationship is established early in the child's life, significant oral-systemic problems can be prevented or managed.

CONCLUSIONS

We conclude that the dental home is an important concept for the dental profession to embrace. Evidence supports the advantages of receiving early professional dental care and intervention that are complemented by anticipatory guidance for parents, as well as periodic supervision visits based on the child's risk of dental disease. The dental home could increase opportunities for preventive oral health services for children that can reduce disease disparities.

The dental home is a concept that deserves support, further investigation and, in conjunction with the medical home, would provide the comprehensive health care to which all children are entitled. ■

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"Bright Futures in Practice: Oral Health" (Casamassimo P, ed. Arlington, Va.: National Center for Education in Maternal and Child Health; 1997) provides an in-depth understanding of preventive oral care and information that is comprehensive, contemporary and culturally based. To order a copy, call the National Center for Education in Maternal and Child Health at 1-703-524-7802 or go to "www.ncemch.org/pubs/default.html" on the World Wide Web.

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