# Are We Home Yet? In Pursuit of a Dental Home Today

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## Introduction

Most dentists are familiar with the concept of a dental home[1], a physical metaphor for the ongoing relationship between a patient and a dentist offering care, information, and collaborative management of oral health. In the case of children, the traditional dental home embraces the family in recognition of the triangular constellation of parent, child, and provider. Not as familiar, or perhaps even unknown, is the concept of spatial justice which, very simply stated, is the recognition of the impact of where one lives on health.[2] Intuitively, and in fact, this concept explains aspects of access and availability of quality care. Distance is a very understandable aspect of spatial justice, but concepts such as nearby availability of services, comprehensiveness of locally available care, and the values and health care practices of that community are other aspects of the concept. Overwhelmed small community hospitals during the COVID-19 pandemic vividly illustrate the concept, along with vaccination obstacles due to ultra-refrigeration requirements in early versions.

In health as in real estate, it is location, location, location.

The intersection of spatial justice and the dental home may not be obvious, but the lack of specialists or tertiary care facilities, existence of food deserts, lack of public transportation in rural locations, limited or no access to the internet in many communities, the prevalence of HPSAs, homes relying on well or lead-tainted water, and the longstanding maldistribution of dentists make the concept clearer. Some children can't and maybe never will enjoy the ideal dental home. In those situations, what alternatives are acceptable? What scope and accessibility of services are adequate to provide a standard of care that can insure oral health? That question – and its answer – should be a major driver in developing and funding community-based programs for children's oral health. A historical acceptance of "some care is better than no care" has led to inequities and their perpetuation.

The dental home concept was created to establish a touchstone against which to measure adequacy of oral health care for individuals. It also provides a yardstick for policy and programs. We remain a long way from determining measurable benchmarks to rate alternate dental homes against the idealized dental home, since confirmation of the benefits of the dental home has not faced rigorous scientific examination. The dental home was derived in large part from the concept of a medical home – born largely of

expert opinion. To date, research on the dental home's effectiveness and the value of its core components remains limited,[3, 4] but in both cases, available studies have strengthened the conceptual base. The essential four "C's" of comprehensiveness, continuous accessibility, care coordination, and centeredness on family remain strong.

The purpose of this commentary is to look at alternatives when the ideal is unachievable, raise issues about how they can go further to reach the benefits of a dental home, and whether the dental home concept needs an overhaul in today's changing health environment.

## Alternative Models of Care and the Dental Home

Barriers to dental care are multifaceted, and many are linked to social determinants of health. Multiple approaches have been employed to deliver dental care to vulnerable populations beyond traditional dental settings, including school-based oral health programs, medical-dental integration, and teledentistry and community partnerships.

### *School-Based Oral Health Programs (SBOHP)*

School-based oral health aims to increase access to dental care for children in school settings who otherwise may not receive care. Programs vary as to type and range of services provided (preventive only vs. comprehensive care) and their logistical set-ups (fixed clinic inside the school, portable equipment, or mobile dental van parked on school premises). Advantages of these programs are delivering dental services to children where they are and eliminating barriers of transportation, missed school hours, missed work hours for parents, shortage of providers and difficulty with scheduling dental appointments – all factors working against a traditional dental home. These alternatives make it easier to get dental services to children, but are not without their own challenges. SBOHPs can struggle to meet the ideals of the dental home, including obtaining parental consent. This time and labor intensive process is typically completed for only 25-50% of eligible students.[5] Another challenge resulting in low participation is parental fear of entrusting their child to someone they don't know and wanting to be present at the appointment. Provider engagement and interaction with a caregiver is more limited in these settings compared to traditional dental settings. Comprehensiveness of services, a principle of the dental home, may not be possible. Many SBOHPs focus on preventive services, such as the provision of dental sealants and fluoride varnish. Referral of children with other treatment needs can be difficult. Coordination of care, another dental home principle, may be limited as relationships outside the SBOHP may be sparse or non-existent. Finally, sustainability can be problematic. Many programs are initiated with grant funding and rely on future grants as Medicaid revenues are often not enough to cover the cost of operation. In particular, programs utilizing mobile vans typically have high maintenance costs. Successful

models tend to be part of health centers, hospitals, or school systems that have more reliable sources of funding.

*Medical-Dental Integration*

In this model, oral health services are provided in a primary medical care office either by a non-dental health professional or a dental hygienist embedded in the medical office. The type of services provided in these settings are typically limited to risk assessment, education, case-management and preventive services. Advantages of this model include increased access to preventive services and ease of utilization. In particular, for very young children with more medical visits early in life, this model can increase exposure to preventive services and may serve as the child's first dental home.

Cost-benefit data analysis of fluoride varnish application in pediatric offices in Florida shows a positive financial benefit. This approach may offer sustainability through a financial incentive for medical providers to implement varnish application.[6] However, based on claims data, the uptake of vanish application generally appears to be low among primary care providers. Less than 8% of Medicaid-insured and fewer than 5% of privately-insured children receive fluoride varnish in medical settings.[7,8] Lack of time and competing priorities are among the barriers medical providers experience that limit their engagement in oral health activities. To address these barriers, models of co-locating (independent hygiene) or embedding a dental hygienist in medical practices (Colorado) have been tried.[9] Inability to provide on-site acute or comprehensive dental care is a major disadvantage of this model. Achievement of coordination and comprehensiveness may be difficult if dental referral sources are not there.

*Teledentistry*

Teledentistry includes use of various technologies for communication and sharing of clinical information, including images, to meet requirements for a remote dental visit. It can be synchronous (live interaction with the patient) or asynchronous (review of records without patient presence). The COVID pandemic accelerated its use in many places at varying paces and without time or a mechanism to assess quality of care. The limited services that can be provided by a dentist in this model include consultation and triage, oral health assessment, education, prescription, care coordination and supervision. If used in conjunction with supervision of allied dental professionals, it can also expand the range of dental services as permitted by the state dental practice act. Although the rules for teledentistry vary from state to state, services mostly include education, caries control, prevention, and care coordination.

Teledentistry can facilitate a "virtual dental home" model in community settings such as schools, Head Starts, and nursing homes. The advantage of this model is that it brings care to underserved populations and eliminates barriers of distance, shortage of providers and geographic isolation. It can result in cost-savings and add efficiencies to

the system when the dentist is supervising auxiliaries remotely. This model falls short of meeting even a basic test of ideal dental home characteristics. It does not provide acute or comprehensive care, includes reliance on broadband/internet accessibility which might not be available in rural areas, and requires equipment set up and information security, as well as family literacy in technology.

## Where from Here?

Defining the high bars of the dental home and their measurement means going beyond simply counting claims and other coarse indications of utilization. To date, the Dental Quality Alliance of the American Dental Association comes closest to applicable measures, but those are still mainly indicators of utilization. [10] The comprehensive measurement of the four "Cs" of the dental home and their applicability and contribution to health outcomes remains limited and should be a priority for research. Rather than look at an improved dental home model with integration of emerging concepts, policy often looks at unproven approaches such as increasing provider numbers, randomly trying new provider types, and surrendering to alternatives to traditional restorative and rehabilitative care that may not be in the best interests of children. Integrating models and evaluating a new and improved dental home concept is the better approach in both individuals' care and oral health policy. Telehealth, for example, is here to stay and must be considered in a modernized version of the dental home in some way. The optimal dental home for a child, in a real world, will be found in linkages and incorporation of these alternatives into a more comprehensive, but less traditional constellation. That will be the dental home for our children in the future.

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