

Review Article

Dental Home: A Concept for Early and Everlasting SmileAnjan Giriraju¹, Nagesh Lakshminarayan²¹Reader, Department of Public Health Dentistry, Rajarajeswari Dental College and Hospital, Bangalore, Karnataka, India²Professor and Head, Department of Public Health Dentistry, Bapuji Dental College and Hospital, Davangere, Karnataka, India***Corresponding author**

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Abstract: Oral health of children living in developed countries has improved remarkably over the last few decades; many children especially in the developing countries still continue to suffer from oral diseases such as dental caries, gingivitis & dental malocclusion. There are many reports and studies which report risk factors associated with the development of oral disease in children but none of them provide a strategy to determine accurately which infant at birth will develop oral diseases later in its life course. To develop such strategy there is need for early identification & management of risk factors at the earliest in the life course (within 1st year of infant life), which can be achieved only by the *CONCEPT OF PREVENTION* of oral diseases. The answer for implementing concept of prevention lies in seeking professional counseling and services as early as possible. Keeping this idea in mind this paper tries to discuss the concept of Dental Home and its various strategies that can be employed by the developing countries like India to take a step forward for better oral health of the entire nation starting from childhood.

Keywords: Dental Home, Age one visit, Anticipatory guidance in Dentistry, Medical Home, infants

INTRODUCTION

"Home is the one place in this entire world where hearts are sure of each other. It is the place of confidence. It is the place where we tear off that mask of guarded and suspicious coldness which the world forces us to wear in self-defense, and where we pour out the unreserved communications of full and confiding hearts. It is the spot where expressions of tenderness gush out without any sensation of awkwardness and without any dread of ridicule". – *Frederick W Robertson* [1].

CONCEPT OF MEDICAL HOME

Medical home is defined as "an approach to providing comprehensive primary care, that facilitates partnerships between individual patients, and their personal providers and when appropriate, the patient's family". -Pediatrics Ad Hoc Task Force on Definition of the Medical Home, American Academy of Pediatrics [2].

The American Academy of Pediatrics [AAP] believes that the medical care provided ideally should be accessible, continuous, comprehensive, family centered, coordinated and compassionate. Medical care should be delivered or directed by well-trained physicians who are able to manage or facilitate

essentially all aspects of pediatric care. The physician should be known to the child and family and should be able to develop a relationship of mutual responsibility and trust with them. The main aim should be to provide "Medical home" for all children, even though there are many barriers to provide medical home to all children [2].

Services recommended by AAP in the concept of Medical Home [2]:

- Provision of preventive care including immunization, growth and development assessment, appropriate screening, health care supervision, patient and parental counseling about health.
- Round the clock provision of ambulatory and in patient services to all patients with acute illness.
- Provision of care over an extended period of time to enhance continuity.
- Identification of the need for subspecialty consultation.
- AAP also addresses Medical home concept for children with special health care needs through managed care programs.
- It emphasizes the need to establish co-ordination with specialized medical community to provide a proper medical care to these children.

- It emphasizes the need for additional care manager to provide specialized care for these children.

CONCEPT OF DENTAL HOME

“The dental home is the ongoing relationship between the dentist and the patient, inclusive of all aspects of oral health care delivered in a comprehensive, continuously accessible, coordinated, and family-centered way. Establishment of a dental home begins no later than 12 months of age and includes referral to dental specialists when appropriate.”-*American Academy of Pediatric Dentistry (AAPD), 2004* [3].

Need for concept of Dental Home [4, 5]

1. The advent of social medicine in pediatric health care
2. Expanding knowledge about pediatric oral health risk and disease management
3. Trends in oral health and dental care disparities and forces that propel them
4. Perceived needs to dental care services and other barriers that propel need for dental home utilization
5. Dentistry as an independent profession
6. Dental capacity system for all children including children with special dental care needs

Statements from officials of AAPD regarding importance of Dental Home

“It is gratifying to know that we have the support of the dental and health care community in our ongoing efforts to ensure quality oral health care of all our children [6].

“By establishing a Dental Home and taking preventive steps recommended by the pediatric dentist, parents can avoid their children contracting early childhood caries—which is extensive devastating tooth decay that results in pain, failure to thrive, and in many cases, extensive and costly restorative work” [6].

Evidences of benefits from Dental Home and some key findings from review of literature

- I. An article from the October 2004 issue of *Pediatrics*, the official journal of the American Academy of Pediatrics, found that seeing children earlier for oral health examinations and preventive services saves money. Pediatric dental faculty at UNC-Chapel Hill led by Dr. Jessica Y. Lee spearheaded the research, which examined a cohort of 9200 Medicaid children in North Carolina between 1992 and 1997. The average cost per child who had a dental visit before age 1 was \$262. This doubled to \$546 when the child’s first visit was not until ages 4-5. (these costs are per child over the 5 years of the study, not annual costs) [7].
- II. Medicaid-enrolled children who had an early preventive dental visit were more likely to use subsequent preventive services and experience lower dental costs [8].

Missions of Dental Home as recommended by AAPD [9]

1. An oral disease-free population.
2. Access of appropriate oral health care for all children and patients with special health care needs.
3. To be centered on the Dental Home.

Services to be provided by Dental Home [9]

- ✓ Comprehensive oral health care including acute care and preventive services in accordance with AAPD periodicity schedules.
- ✓ Comprehensive assessment for oral diseases and conditions
- ✓ Individualized preventive dental health program based upon a caries-risk assessment and a periodontal disease risk assessment.
- ✓ Anticipatory guidance about growth and development issues, (teething, digit or pacifier habits)
- ✓ Plan for acute dental trauma.
- ✓ Information about proper care of the child’s teeth and gingiva. This would include prevention, diagnosis, and treatment of disease of the supporting and surrounding tissues and the maintenance of health, function, and esthetics of those structures and tissues.
- ✓ Dietary counseling.
- ✓ Referrals to dental specialists when care cannot directly be provided with the dental home.
- ✓ Education regarding future referral to a dentist.

Principles guiding the concept of Dental Home [10]

1. The Age One Visit

The AAPD recommends the child’s first visit to be no later than age one, but preferably when the first tooth erupts. By visiting the dentist at that time, a Dental Home can be established and Anticipatory Guidance be made part of the child’s total health care experience. Nowak in 1997 stated that: “The goal of the first oral supervision visit is to assess the risk of dental diseases, initiate a preventive program, provide anticipatory guidance and decide on the periodicity of subsequent visits”.

Anticipatory guidance as used in pediatric health care, is the process of providing practical, developmentally appropriate health information about children to their parents in anticipation of significant physical, emotional and psychological milestones. The information provided by anticipatory guidance guides parents by alerting them to impending change, teaching them their role in maximizing their children developmental potential and also helps them to identify their children special needs. In field of pediatrics this concept of anticipatory guidance have been established through “Well- Child- Care Visits”. The information provided through anticipatory guidance is well received by the parents because the process of questioning by the

pediatric provider gives parents the opportunity to talk about their child and also clear their doubts.

2. Anticipatory Guidance In Dentistry

It is a new paradigm of enhancing growth & development, caries prevention and overall oral health. Anticipatory guidance in Dentistry provides oral health education, professional examinations, preventive procedures and dietary instructions from approximately age 6 months through 2 years. It is a step-by-step program taught by the dental professionals in an office to care seekers and is tailored to each specific child. It is a time-intensive procedure that includes, but is not limited to oral examinations, prophylaxis, diet analysis, home care instructions, supplemental fluoride [both topical and systemic] and general feeding instructions.

Advantages of Anticipatory Guidance in Dentistry

- a) Busy dentists and their patients benefit from a program based on anticipatory guidance.
- b) The inherent nature of this clinical program is easily learned by the clinical staff at all levels.
- c) Anticipatory guidance establishes a clinician and parent interaction.
- d) Anticipatory guidance resolves a time-honored motivational problem encountered in traditional disease based programs – repetition of same simplistic message.
- e) Applying anticipatory guidance to dental preventive education is an organized way for all dental providers to enjoy the attention of parents and be more successful in preventive dentistry.

Project implemented based on Dental Home concept

“DENTAL HOME FOR ALL TEXANS”- As a part of Frew’s agreement the State of Texas had launched a program for children of under three years of age called “The First Dental Home Initiative”. Under this program pediatrics and general dentists are being trained to conduct infant’s oral health screening, risk assessment, fluoride varnish application and parent education/ training. In 17 states of U.S.A, Medicaid program provide reimbursement to pediatricians for providing preventive modalities of treatment [11].

Common challenges in establishing Dental Home [12]

- Finding dentists willing to serve families
- Some dentists are reluctant to see young children.
- Paying for needed dental services
- Identifying resources for children who lack coverage
- Cost of care
- Overcoming transportation and other barriers.
- Arranging for transportation
- No shows / missed appointments
- Limited services in some rural areas.
- Getting parents to understand the importance of oral health and dental care for young children.
- Lack of knowledge about modern dental care

- Negative personal experiences / fear of going to the dentist.

Concept of Dental Home in Indian scenario

About 50% of children aged 5 years and 80% of middle age people in India suffer from tooth decay. A high prevalence of dental diseases in India attributes to the fact that dentistry focuses more on treatments than prevention of them. The increase in availability of dental care (number of dentists, teaching institutes) and technological advances have done little in terms of true prevention. The dental diseases are preventable to a great extent; however, it is often believed that prevention is a responsibility of Government and allied organizations and not of clinicians in practice. Definitive preventive strategies such as water fluoridation, restricting/substituting sugar substances have not been implemented in India due to complexities involved in such issues. Many a time, a common man, thus remains unaware of preventive dental care and conveys ignorance (and at times frustration) about his oral problems requiring complicated treatments.

The AAPD concept of a ‘Dental Home’ can be modified to be called as an Indian ‘Dental Home’ [13] which is nothing but a *Preventive Dentistry Clinic* set up for detecting need for preventing dental disease in an individual or in a family, and advocating preventive techniques to them in a specific manner. The onus is on us to inform people sufficiently and timely as regards the prevention on dental diseases. A *Preventive Dentistry Clinic* thus has following objectives to meet for instance- a. To begin early in terms of dental care – emphasis on primordial and primary prevention b. Making dentistry a more responsible profession. c. Promotion of health concept. d. Bridging the communication gap between the dentist and the public. The primordial prevention takes into account the identification and eradication of risk factors associated with a disease.

Creation of awareness about prevention of oral diseases using concept of Dental home [13, 14]

In order to render such preventive care, it is important to meet parents/ prospective parents early. Gynecologists, pediatricians, family physicians are the people who come in contact with them much before we do. We must establish communication with them such that effective and timely referrals are made to PDCs. Also, schools and pre-school day care centers can be informed about the dental home concept or a PDC. A notice such as – “Do you know you can benefit your child’s teeth and oral health by starting preventive dental care *before* child-birth?”- can attract the attention of prospective parents if put in a gynecologist’s office. Similarly, an instruction such as the following one can be displayed in a pediatrician’s clinic. *A visit to the dentist/pediatric dentist is recommended within six months of the eruption of the first tooth and no later than child’s first birthday.*

We must popularize preventive dentistry to common man in a simple and effective manner; such as

- A. Preventive dentistry means a healthy smile for your child.
- B. Children with healthy mouths chew more easily and gain more nutrients from the foods they eat.
- C. They learn to speak more quickly and clearly.
- D. They have a better chance of general health, because disease in the mouth can endanger the rest of the body.
- E. A healthy mouth is more attractive, giving children confidence in the in appearance.
- F. Preventive dentistry means less extensive, and less expensive, treatment for your child.

CONCLUSIONS

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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