

Dental Home – An Indian Perspective

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Abstract: Caries with its effects (either treated or untreated) has a capacity to affect the overall well-being of the patient. While treated caries can compromise the form and function of the restored oral tissues to a certain extent, untreated dental caries can have a severe incapacitating defect on the oral tissues, their form and function. Restorative Dentistry with the use of newer materials and techniques is not a panacea for dental caries. The answer lies in seeking professional counselling and services as early as possible. This paper discusses the importance of Dental Home and the various strategies that can be employed by the developing countries including India in particular to take a step forward for better oral and general health.

Key Words: Dental Home, Early Childhood Caries, Infant Oral Health, Integrated Child Developmental Services (ICDS), National Rural Health Mission (NRHM)

I. Introduction

Though the oral health of children living in industrialised countries has improved remarkably over the last two decades, many children especially in the developing countries continue to suffer from oral diseases such as caries, gingival infection & malocclusion. Many studies report the risk factors associated with the development of oral disease in children but none provides a formula to determine accurately at birth the infant who will succumb to the pathogens of oral disease later in life^[1]. So early identification & management of contributing factors plays a pivotal role not only in prevention of oral disease but also contributes for the development of optimal health in children.

Very few infants younger than 1 year have oral problems that require intervention, but almost all have an oral environment at risk for oral disease^[1]. Early Childhood Caries has far reaching effects and other ramifications beyond the consequences of decayed teeth such as reduction in the ideal body weight of children, children who experience failure to thrive, children's hours lost from school and parents hours lost from work which can disproportionately burden the children from families of low socioeconomic status.^[2] Early Childhood Caries also represents significant financial and societal burden and the timeliness of preventive and early intervention is critical for effective management of Early Childhood Caries^[2].

Also literature supports the fact that the average cost for providing professional dental services for children shows a clear trend towards escalation as the first dental visit is delayed beyond the age of 1 year^[2]. So the foundation for good oral health must be built early in life & it is recommended that a child visit a dentist by 1 year of age which can be best accomplished by establishment of dental home which serves as a locus for preventive oral health supervision and emergency care and can also serve as a repository for records.^[3] Children with a Dental home are more likely to receive appropriate preventive and routine oral health care.^[4]

Benefits of dental home are substantial and intuitive, although not yet substantiated by research and include an increasing emphasis on prevention and disease management, advancements in tailoring care to meet individual needs, better health outcomes at lower costs. But certain environmental forces may impact the implementation of the dental home.

Some of these factors are:^[5, 6]

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

1. Advent of Social Medicine In Paediatric Health Care:

A few decades ago dental care functioned substantially to relieve pain and infection removing teeth which are today retained through routine dental repair. Health care alone no matter how regular and complete cannot ensure that children obtain and maintain positive health outcomes as health is “multifactorial” being affected by factors such as genetics, environment, health behaviours and health care. This understanding has stimulated the development of fields such as genomics, environmental paediatrics and social medicine. Social medicine concepts important to dental home are:-

- “Wellness”^[5] which can be ensured by effective implementation of
 - i) Primary Prevention^[5]
 - ii) Anticipatory Guidance^[5]
- “Life Course Modelling”^[5] with its appreciation of differential health trajectories that begin in childhood and continue well into adulthood and even into senescence.
- “Social Determinants”^[5] of health with its understanding of nonbiologic factors (environmental factors) that regulate health status and outcomes
- “Family Paediatrics”^[5] with its approach to managing situations in which a family’s distress is reflected on child’s physical, mental emotional health and demands professional care
- “Quality of life measurement”^[5] with its implicit recognition that broad physical and emotional functionality is an integral outcome of quality healthcare.

These concepts are reflected in efforts to envision future systems of paediatric care delivery within the larger frameworks of family, community and society. This new approach also recognises the importance of early life in establishing a “scaffolding for physical, cognitive and socio-emotional health”, which is not endowed at birth but develops over time.^[5]

2. Expanding Knowledge Of Early Childhood Caries Risk And Management:

Since inception Dentistry followed the concept of “Drill and Fill.” But with greater understanding of the dynamics of Dental Caries greater emphasis is being placed on prevention and so a Dental Home can prove to be an ideal place to sow the seeds of primary prevention the benefits of which are reaped throughout the life time of the individual.

3. Trends In Oral Health And Dental Care Disparities And The Forces That Propel Them:

Review of literature reveals that children with special health care needs have a greater prevalence of dental diseases and unfortunately these children (and their health) are often neglected mainly due to the lack of trained professionals and resources to cater to their needs. So the establishment of a Dental home becomes highly beneficial not only for these patients but also for those children from lower socioeconomic strata, foster homes and single parent households.

4. Perceived Needs For Dental Services And Other Barriers To Dental Home Utilisation:

Establishment of a Dental home helps in dissolution of certain “barriers” such as financial constraints, lack of provision of professional care and guidance to the most vulnerable children of the society.

5. Dentistry As An Independent Health Profession In Developing Countries (Especially In The Rural Areas):

Majority of people belonging to the lower socioeconomic strata are not only ignorant about the maintenance of oral health, but also the existence of Dentistry as a separate profession. The general physicians may not be well versed and may even lack the skills in diagnosing, managing and in prevention of oral disease. So it becomes all the more imperative for the establishment of dental home to enable the provision of professional dental services and guidance during the early critical stages of development.

II. Dental Home Implementation In Developing Countries

The establishment of a dental home at the earliest contributes immensely towards the oral health of an infant. But in developing countries and in India where majority of the population is in rural areas and below the poverty line, people lack the awareness of the importance of health. So the establishment of dental home in such countries is fraught with problems. So certain criteria which can be considered when establishing a dental home in such countries include:-

1. Coordinated care with the paediatricians and the obstetricians: Providing paediatric oral health care in conjunction with the obstetricians and the dentist at an early age (less than 1 year) which enables the paediatric dentist to plan and to adequately counsel the parents regarding the infant’s oral health.

So provision of a “coordinated care centre” or a “HEALTH HOME” – (MEDICAL HOME PLUS DENTAL HOME) together with the obstetrician and the paediatrician basically in a primary health centre helps

the majority of the population to utilise the services of the paediatric dentist and due to the paediatric dentist to counsel and to treat more number of children and complies with the policy of “catch them young.”

2. Role of Anticipatory Guidance: Using Oral Anticipatory Guidance during “well child” medical visits to the paediatrician is an effective tool for educating parents about how to ensure the best possible oral health for the infant.

Also the paediatricians and paediatric health care professionals may be trained to acquire the basic knowledge to perform oral health risk assessment on all patients beginning at 6 months of age, so that the patients with higher risk of caries development may be directed to establish a dental home by 1 year of age⁽⁷⁾. By increasing their involvement in oral health prevention, paediatricians may play an important role in improving oral health of their patients⁽⁸⁾.

3. Role of Dental Hygienist, Dental Assistant and Expanded Function Dental Assistant/Auxiliary (EFDA):

The allied dental personnel such as dental hygienist, expanded function dental assistant / auxiliary, dental assistant can be trained to provide preventive oral health education and services to the community which would mitigate a later need for more extensive and expensive therapeutic services⁽⁹⁾

4. Prenatal counselling: Also the establishment of a coordinated care centre with the other medical specialties contributes to a great extent towards the prenatal counselling and the antenatal counselling of the parents in accordance with the promotion of infant’s oral health and to take early step to fight ECC. This also ensures overall development of the child and contributes to a great extent towards the “healthy” development of the infant.

5. Educating the public: The dental home/ health home becomes an ideal place to educate the parents and to emphasize on the prevention of dental diseases. Patient education is of utmost importance in a developing country like India as it creates awareness about the importance of oral health from infancy and the relationship between oral health and general health and thus motivates the patient/ parents to take greater interest in the development of overall health of the child.

6. Manpower: One of the most obvious problems faced in the establishment of dental home is the lack of qualified paediatric dentists. This can be overcome to a certain extent by emphasizing the importance of infant oral health and to train the undergraduate dentists in providing proper and adequate counsel to the public. The under graduate dental personnel can impress upon the parents the importance of prevention, role of fluorides in promoting oral health, maintenance of oral hygiene from infancy, diet counselling and most importantly the milestones of development and their timing and significance

7. Establishment of dental home at primary health care centres & government hospitals: In a developing country like India where majority of the population do not have access to quality dental care, establishment of a dental home in primary health care centres and government hospitals would help to cater to the dental needs of a major section of the population. They could promote oral health of the population by catering to the restorative needs of the patients, preventive counselling, promoting the awareness and motivation and by referring the patient to a specialist when needed.

8. Role of Schools: In areas where establishment of dental home in primary health care centres or hospitals is not possible, then establishment of a “health home” with a pedodontist, paediatrician and nutritionist in the school premises itself would ensure that not only children of that particular school but also children in the nearby vicinity will not miss out on basic health care.

9. Role of Day Care Centres: Establishment of a “Health home” at day care centres, play schools and crèches helps to target the children at an early age and to implement various programmes on dental health

One can impress upon the children the importance of maintaining oral hygiene, proper brushing techniques, importance of balanced diet and the importance of visiting a dental professional at periodic intervals.

Another advantage of such health homes is that the patient attrition is reduced and one can regularly monitor the disease process and the efficacy of both therapeutic and preventive treatment strategies for the patients.

III. Strategy To Implement Dental Home In India

Implementation of Dental Home as a concept that can help identify, rectify and rehabilitate people suffering from oral diseases at an early stage with the focus on creating awareness of the disease process & active prevention rather than expensive, resource intensive therapeutic interventions is bound to have a significant impact in how oral diseases are managed in the future.

Our future generations will benefit immensely if we can adapt a multi-pronged approach that is inclusive in nature. If we could adapt a three level strategy to tackle this problem of oral disease prevention & care we can achieve much for the children.

The three level strategy consists of utilizing existing networks of health care delivery systems in India such as the ICDS (Integrated Child Development Services) Scheme⁽¹⁰⁾ & NRHM (National Rural Health Mission)⁽¹¹⁾ and may include screening, creating awareness about dental diseases processes and their early

active intervention which may help us mitigate the scourge of dental diseases for a large extent in the Indian context.

The first level of intervention is to train the basic workers such as Anganwadi ^[10] &ASHA (Accredited Social Health Activist) workers ^[11] about the significance of oral care, the importance of creating awareness in the mother, child and the general populace about the need for early intervention for oral diseases and the benefits thereof and also to segregate high risk groups for further secondary professional care in a Primary Health Centre or District Hospital setup where qualified Paedodontists & post graduates pursuing the subject can intervene & give therapeutic care where necessary.

Further, as common drugs have been subsidized or are given at no cost to the patients at these centres, oral health care aids such as tooth brushes or local alternates such as neem sticks/miswak sticks along with tooth powder/ pastes can also be distributed after screening, education and early preventive measures are implemented. This would motivate the populace to take proper care and ensure follow up in the long term.

Major rehabilitations can be taken up at teaching hospitals at a tertiary level and such patients can be referred or initially reviewed through the use of technology such as Telemedicine (Video conferencing).

Since this approach can screen a very large populace and isolate high risk groups, major malformations, etc at a very early stage and also educate the parents & future generations in the need for dental care (prenatal counselling, post natal check-ups, infant & child screening and preventive therapeutics) the need for expensive care at a tertiary centre at a later age is negated for the majority of the people. Further, since there is a chain of workers monitoring the child throughout their development stages early identification & intervention becomes possible, especially in cases of clefts, congenital malformations etc.

IV. Conclusion

The concerned government agencies may take up a more detailed study of this scenario and start pilot projects to assess the sustainability of this idea.

Further, public private partnerships in this area between the Governments and the private dental institutions can also help in taking the concept of Dental Home to the majority of the people without any major fiscal or logistic burdens. The time for a paradigm shift in our policy towards early holistic approaches to child welfare and care is due and will be welcomed by all.

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