

Preventive Dentistry Clinic - 'Dental Home' for Children

“Changing patients’ behaviour is the cornerstone of preventive treatments.”

(Edwina Kidd)

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 (no. 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.

Tooth decay is an infectious and transmissible disease and the first transmission to a child is through kissing, sharing spoons by parents (mainly mothers) with high decay status. The bottle feeding and/ or prolong on-demand breast feeding can result in a severe form of dental decay known as “Nursing Caries” or “Early Childhood Caries (ECC)” in young pre-school children requiring complicated, extensive and expensive dental treatments at times even under general anesthesia. Prospective parents and parents with young children visiting us can benefit from timely information on dental prevention, caries risk assessment, dietary and fluoride recommendations by us; if we develop clinical set-ups 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 American Association of Pediatric Dentistry (AAPD) supports the concept of a ‘**Dental Home**’ for infants, children, adolescents, and persons with special healthcare needs and encourages parents and other care providers to help every child establish a dental home by 12 months of age. Referral of children to dental homes, as early as 6 months of age and no later than child’s first birthday, provides with time-critical opportunities to implement preventive strategies to prevent diseases such as Early Childhood Caries.

The AAPD concept of a ‘**Dental Home**’ can be modified to be called as an **Indian** ‘**Dental Home**’ 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 understanding and the pattern of dental caries has changed considerably over last few decades. A high prevalence of dental diseases in India is a classic example of how high risk communities have failed to benefit from the effects of true prevention. The population approaches such as water fluoridation, restriction of sugar intake, dental health education through mass media either have not been implemented effectively or are not considered feasible. Also, However, Identifying and targeting *individuals* at high risk is *not* a strategy in public health. None of the risk assessment models are precise for doing so and there exist practical problems in treating individual successfully with use of them. Hence, a clinician's judgment is still the most reliable predictor of caries.

Dentistry as a profession is responsible for the high prevalence of dental diseases in India. We're all familiar with parents conveying ignorance about their young child's severe devastation of teeth, and requirement of complicated dental treatments at times even under general anesthesia; treatments sought only after the child gets pain; bottle feeding and/ or prolong, on-demand breast feeding continues much beyond weaning age; and statements like "we never knew children's teeth require treatments"!

The onus is on us to inform people sufficiently and timely as regards the prevention of dental diseases. A **Preventive Dentistry Clinic** thus has following objectives to meet for instance:

- To begin early in terms of dental care – emphasis on primordial and primary prevention
- Making dentistry a more responsible profession
- Promotion of health concept
- 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. We should treat ECC *as a disease* and *not as lesions*! A thorough caries risk assessment directed at evaluation of all risk factors involved with the disease must be carried out at a PDC. A PDC should have facilities for

- Good examination
- Data gathering, reporting
- Demonstrations, education
- Caries risk assessment (including microbial, saliva testing)

- Preventive and routine treatments

Therefore, a basic dental set-up with X-ray machine, ultrasonic scaler, and computer is all that is needed in a PDC. A multifactorial risk assessment model such as CARIOGRAM can be used to identify the caries-risk factors for the individual and provide examples of preventive and treatment strategies to the clinician. Alternatively, the Caries-risk Assessment Tool (CAT) developed by AAPD may be utilized for the risk assessment. The following table summarizes the risk factors associated with ECC.

<u>Caries risk assessment in parents</u>	<u>ECC risk assessment in infants</u>
<ul style="list-style-type: none"> ▪ Parent's lifestyle, work-place ▪ Oral hygiene habits • Dietary habits – sugar exposure • How many visits to dentists per year • Earlier visits to dentists: reasons, recommendations • How many children they have • Presence of S. mutans (----CFU/ml) • Caries Activity Testing • Diet Analysis • Proportion and frequency of dietary carbohydrates • Salivary factors -flow rate, viscosity, buffering capacity • Health behaviours - common risk factors • Past caries experience 	<ul style="list-style-type: none"> ▪ $>10^5$ CFU/ml S.mutans in Mother's saliva ▪ Early teething ▪ Kissing, sharing spoons ▪ Feeding habits ▪ Dietary habits - sugar exposures ▪ Fluoride exposure ▪ Oral hygiene practices ▪ Family history ▪ Dental care neglect in family ▪ Low socio-economic status ▪ PEM, HIV or any other immuno-suppression ▪ Working parents

A reporting of present status of risk is important for recommendation purpose and periodic evaluation of effects of recommended preventive strategies. The **anticipatory guidance and parent education** must include the following for the prevention of transmission and colonization of MS (Mutans Streptococci):

1. Oral hygiene instructions- brushing, flossing daily (Demonstrations), rinsing after meals
2. Diet: Caries potential of their diet, cariogenicity of certain foods, frequency and consumption of them, demineralization and remineralization process
3. Use of fluoride toothpastes and mouthrinses
4. Delay of colonization - discourage sharing spoons, utensils, kissing
5. Use of Xylitol chewing gums by mothers
6. Restorations or temporary sealing of all active carious lesions to reduce bacterial reservoir
7. Use of topical chlorhexidine gels, varnishes for lowering MS level
8. Infant oral care: Cleaning gumpads with a washcloth, commencing brushing after first teeth have erupted, reducing ad libitum feeding and feeding frequency after first teeth have erupted, necessary fluoride supplementation and dietary recommendations.

Creation of awareness: In order to render such preventive care, it is important to meet parents/ prospective parents early. Gynaecologists, 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 centres 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 gynaecologist’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.* Also, we must popularize preventive dentistry to common man in a simple and effective manner; such as –

- Preventive dentistry means a healthy smile for your child.
- Children with healthy mouths chew more easily and gain more nutrients from the foods they eat.
- They learn to speak more quickly and clearly.
- They have a better chance of general health, because disease in the mouth can endanger the rest of the body.

- A healthy mouth is more attractive, giving children confidence in the in appearance.
- **Finally, preventive dentistry means less extensive, and less expensive, treatment for your child.**



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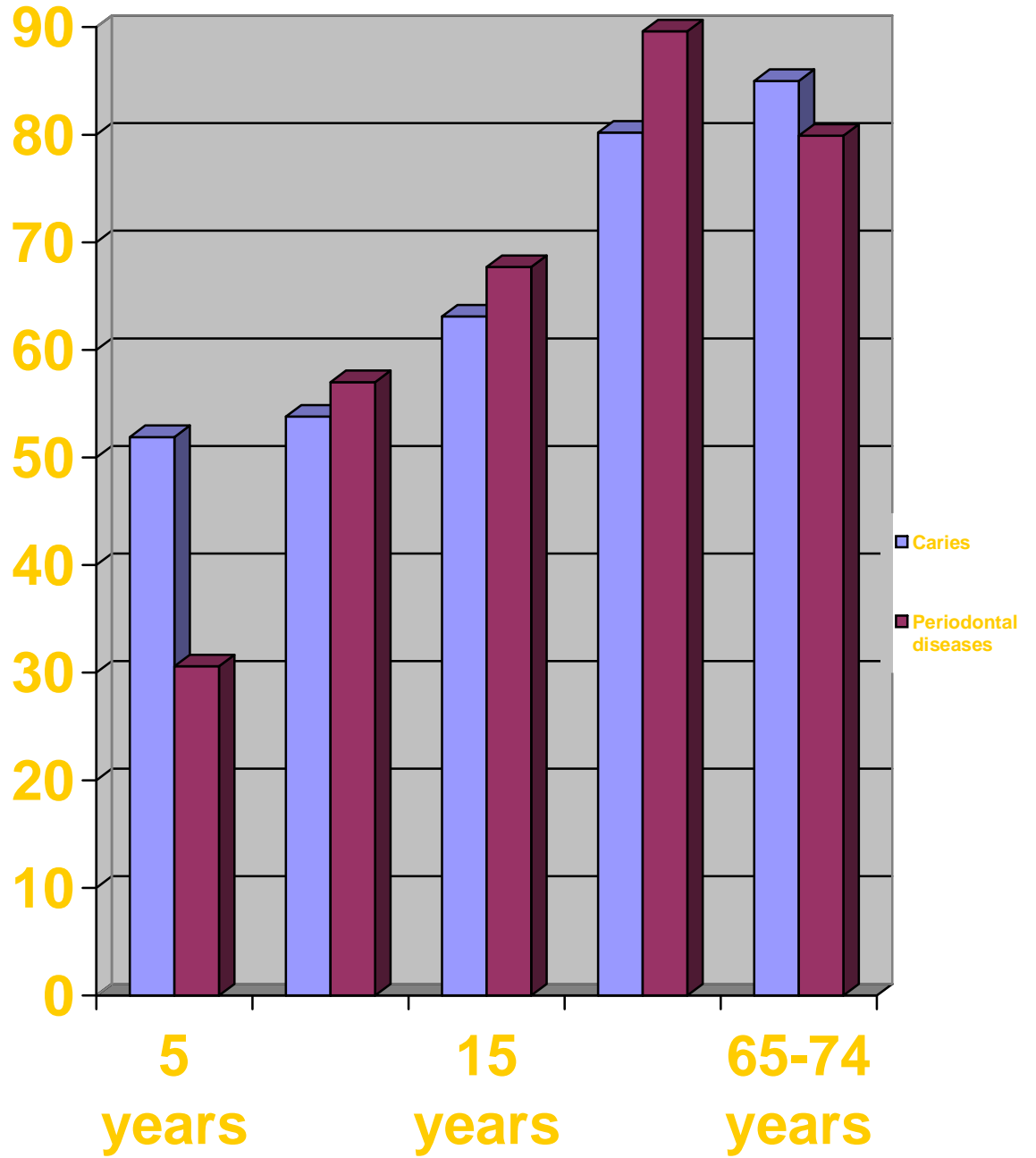
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Picture1: Graph showing prevalence of dental diseases in India



Picture2: Dental Home for Children (Integrated with Medical Home)

