National School Oral Health Policy

The intent of this document is to assist school administrators, dentists, dental hygienists, nurses, parents and volunteers in promoting oral health and preventing oral disease among school children and adolescents.

FOR : Healthy School Concept

HEALTHY SCHOOL is a school which constantly strengthens its capacity as a healthy setting for living, learning and working. We need to recognize that Health as an integral part of excellence in education. Good health supports successful learning and vice versa. And **Oral health is essential to overall health and quality of life**.

EAT SMART | BRUSH SMART | PLAY SMART | DRINK SMART

INDEX

Train the school nurses and other staff
Staff Training

IV SCHOOL ACCREDITATION PROGRAMME

Pilot School Oral Health Accreditation Programme
Criteria for accreditation
Key parameters
a) Healthy School Environment
b) Healthy Eating
c) Oral Health Education
d) Oral Health Service

V PLANNING THE INTERVENTIONS

School's Role
Education and active prevention
Diet and prevention
Classroom tooth brushing
Classroom-based fluoride programs
Pit-and-fissure sealants application

Teacher's role

Role of dental professional
Primary prevention
Caries assessment
Secondary prevention – advice about
Occlusal considerations
Malocclusion
Third molars
Temporomandibular joint (TMJ) problems
Congenitally missing teeth
Ectopic eruption
Prevention of traumatic injuries

Role of government
Oral Health Education

Role of Public-private partnerships

VI IDA's SCHOOL-ORAL HEALTH PLAN

Guiding principles
School Oral Health CENTERS
Oral health education
Dental Hygiene Examination\ Screening
Fluoride Varnish
Sealants

VII CHALLENGES AND SOLUTIONS

I INTRODUCTION

School Oral Health Programme is a **conceptual framework** to improve the oral health of children and adolescents. It is directed to **establish healthy oral habits** during the **formative years** when children\ adolescents are most **receptive to information**; and lastly to **maintain and reinforce** this regularly throughout the school years.

Schools are ideal settings\environment to reach children and adolescents along with their families. School Oral Health Programme proposes to encourage choosing health through smart eating habits, smart drinking, smart brushing and smart play. The document focusses on advocating for oral hygiene practices, nutritious diet which is less in sugar, saturated and trans-fat, low fiber and processed meals; choosing water or milk over sugar sweetened beverages and preventing dental trauma through safe play area and protective mouth guards.

A. Meaning of oral health

Oral health is the state of the mouth, teeth and orofacial structures that enables individuals to perform essential functions such as eating, breathing and speaking, encompasses psychosocial dimensions such as self-confidence, well-being and the ability to socialize and work without pain, discomfort and embarrassment. Oral health varies over the life course from early life to old age, is integral to general health and supports individuals in participating in society and achieving their potential. Oral health is fundamental to general health and well-being, significantly impacting quality of life. Oral health means more than healthy teeth.

B. Importance of oral health

A healthy mouth is an asset that helps us chew and digest food, enables ability to speak and smile while affecting the overall appearance and self-esteem.

Oral diseases encompass a range of diseases and conditions that include dental caries, periodontal (gum) disease, tooth loss, oral cancer, oro-dental trauma, noma and birth defects such as cleft lip and palate. Oral diseases are among the most common noncommunicable diseases worldwide, affecting an estimated 3.5 billion people. While the global burden of oral health conditions is growing, particularly in low- and middle-income countries, the overall burden of oral health conditions on services is likely to keep increasing because of population growth and ageing.

Oral diseases disproportionately affect the most vulnerable and disadvantaged populations. People of low socioeconomic status carry a higher burden of oral diseases and this association remains across the life course, from early childhood to older age, and regardless of the country's overall income level.

Specifically in children poor oral health can have a detrimental effect on one's performance in school and their success in later life. Children who suffer from poor oral health are more likely to miss school than those who do not.

Given that childhood diet and oral hygiene are related to socioeconomic and psychosocial factors, and that tooth loss is irreversible, adult oral health is rooted in early life conditions, while upward and downward social mobility influences oral health trajectories.

C. Reasons for drafting the policy

School Oral Health Policy is intended to yield benefits to individuals, communities and nation. Such benefits include improved quality of life; because oral health is fundamental to general health and well being.

1. **Children do not practice oral hygiene**

   Children must clean their teeth and gums with fluoridated toothpaste twice daily. A small proportion of children do not clean their teeth at all. Some may not have access to a toothbrush; cleaning is done using neem stick among the deprived\rural sections of population; availability, affordability and quality of fluoride toothpaste remain a problem; many households do not have access to safe water for drinking, let alone for cleaning teeth.

2. **Inadequate oral health knowledge and awareness**

   Children\mothers have limited\poor knowledge of the causes and prevention of tooth decay and gum disease; and the role of fluoride in the prevention of dental decay. Only a small proportion of people are aware of the harmful effects of hidden sugars and sugary drinks.

   a) **Tooth decay (dental caries) and gum disease** (inflammatory periodontal disease) affect 50% to 100% of 12-years-old children. **Early childhood caries (ECC)** is one such form of dental caries that affects teeth of infants as soon as they erupt (*Ferro R, Cecchin C, Besostri A, Olivieri A, Stellini E, Mazzoleni S. Social differences in tooth decay occurrence in a sample of children aged 3 to 5 in north-east Italy. Community Dent Health. 2010 Sep;27(3):163–166. [PubMed] [Google Scholar]*. The prevalence of ECC in developing countries is reported to be as high as 70% *(De Silva Sanigorski AM, Calache H, Gussy M, Dashper S, Gibson J, Waters E. The VicGeneration study. A birth cohort to examine the environmental, behavioural and biological predictors of early childhood caries: background, aims and methods. BMC Public Health. 2010 Feb 25;10:97. [PMC free article] [PubMed] [Google Scholar]*.

b) **Dental erosion** (tooth wear) is linked to increased consumption of carbonated and fruit drinks, is becoming a problem. In most cases, abnormal tooth wear results in a loss of normal enamel contour (developmental enamel defect), but in severe cases the interior of the tooth may be affected. Other forms of tooth wear, **attrition and abrasion** are related to tooth grinding habits, and abrasive dietary and inappropriate oral hygiene practices (e.g. brushing with a hard brush, abrasive toothpaste or other materials such as charcoal).

c) **Premature tooth loss of deciduous** (milk) teeth impact appearance; cause malalignment of the permanent (adult) teeth; affect the nutritional intake and consequently growth and development of children.

d) **Enamel defects\ demarcated opacities (white marks on the teeth)** are found on the upper front teeth, while diffuse opacities or fluorosis (discoloration of the teeth) affecting all the teeth. Some childhood systemic diseases and malnutrition during tooth formation could lead to hypoplasia (discoloration and structural damage to the teeth).

e) **Trauma of teeth and jaws due to** unintentional at playground\sports related injuries; violence, as well as general and road traffic accidents; often affect the head, neck and mouth. These injuries have a significant impact on the front teeth, sustained damage to tooth enamel or permanent tooth loss. Traumatized baby teeth may lead to tooth loss and may affect the permanent teeth under development.

f) **Oral infection can kill**. It has been considered a risk factor for a number of general health conditions. Systemic spread of germs can cause, or seriously worsen, infections throughout the body, particularly among individuals with suppressed immune systems, heart disease and diabetes.

3. Healthy dietary behaviors are essential to growth and development

The relationship between diet and oral disease is well established. It is therefore essential to reduce the amount, and more importantly the frequency, of sugary foods, snacks and drinks (including carbonated drinks and fruit juices) in a well-balanced diet with sufficient fresh fruit and vegetables. Similarly foods high in saturated fats and trans-fat, processed, canned food products must be avoided in children.

4. Early onset of oral diseases is reversible

Most oral diseases are irreversible. Childhood oral diseases, if untreated, can lead to irreversible damage, pain, disfigurement, more serious general health problems, lost school time, low self-esteem and poor quality of life. However, with appropriate measures, early onset of gum disease and dental decay is reversible. In contrast, advanced or established lesions progressively become

more serious and difficult to treat. Advanced oral disease necessitate complex, costly and, possibly, more traumatic treatments, such as surgery, root canal therapy, extractions and treatment under general anaesthesia and hospitalization. Playground related injuries, including injuries to head and face are costly to treat. Clearly, prevention is better than cure.

5. Lack of professional preventive care

Early dental visiting experience enables children to develop a good rapport and relationship with the dental team, so that preventive measures can be implemented before oral disease begins. Professional care is an important component for attaining and maintaining optimal oral health. However, a significant proportion of children have **no access to dental care**. A staggering number of children have not visited a dentist before starting school. Consequently, few have preventive oral care.

6. Poor oral health affects learning, general health and well being

The experience of pain, endurance of dental abscesses, problems with eating and chewing, embarrassment about the discoloration, damage or shape of teeth can distract children from play and effective learning. Studies have suggested that oral diseases (such as dental decay and gum disease) are associated with a variety of problems such as:

- failure to thrive;
- poor nutrition due to poor eating abilities;
- speech impairments;
- personal confidence and relationships;
- psychological and mental problems;
- well-being and enjoyment of life.

7. Need to create positive behaviors

The high-risk behavior of an individual (e.g. excessive alcohol and tobacco use) begins during childhood and adolescence when they first start consuming these products; thus are at an increased risk of oral cancer in later life. Cigarette smoking, 'chewing' or tobacco use among adolescents is seen to be increasing every year, 35% of those who use tobacco are having tobacco-related oral lesions. Tobacco containing products are marketed with attractive packing and flavor directly at children and adolescents are pan masala, bidis and ghutka.

IDA therefore framed appropriate policies\guidelines to :-

- spot children at highest risk for oral disease;
- reach parents for oral health awareness;
- serve healthy foods on campus with the intent to improve diet and nutrition;
- create safe playgrounds;

- check risky behaviors related to tobacco use;
- take necessary action in case of a dental emergency.

This will help schools improve the health of students, staff, parents and community members: to help all schools become **Health-Promoting Schools.**

This policy will provide both the information and guidelines that will assist schools to:

- ✓ understand the concept of a Healthy School;
- ✓ help incorporate oral health promotion in schools as an integral part of school activities;
- ✓ design, plan, implement and evaluate oral health promotion interventions as part of developing a Healthy School.

D. Who should read this document?

This policy has been prepared particularly to help those who are engaged in, and committed to health promotion:

- ✓ Government policy-makers and decision-makers, programme planners and coordinators at local, district, regional and national levels;
- ✓ Members of non-governmental agencies and institutions responsible for planning and implementing the interventions including programme staff and consultants of international health, education and development agencies who are interested in working with schools to promote health;
- ✓ Decision-makers / administrators in health and education sectors;
- ✓ Service providers of oral and medical health care, including the primary health care team, particularly dentists and oral health educators; school nurses and community health workers;
- ✓ Community leaders, local residents, health care providers, social workers and members of organized groups who are interested in improving health, education and well being in schools and the community;
- ✓ Members of the school community, including teachers and their representative organizations, students, staff, volunteers, governors, parent groups, coaches, caretakers and school-based health workers.

II SCHOOLS THE PERFECT PLATFORMS FOR PROMOTING ORAL HEALTH

Schools are the perfect platform for oral health promotion

As they are microcosms of the larger community; with existing structures and systems in place, schools provide excellent opportunities for integrating oral health into the curriculum that is acceptable, appropriate and effective. Children are receptive to guidance and they are familiar with the learning environment and culture in school. Schools can effectively inform and influence students' **oral health knowledge, beliefs, attitudes and behavior.**

Healthy behaviors and lifestyles developed at a young age are more sustainable

It is important to reach children, particularly at kindergartens and primary schools. Pupils need to acquire knowledge and skills that facilitate a healthy lifestyle and help them cope with social and peer pressure. Children are empowered to take control over their own health early in their lives and are encouraged to develop positive attitudes toward preventive measures.

This is particularly crucial when they reach adolescence when they are challenged and exposed to risk factors such as tobacco and alcohol use and poor dietary practices. They become more mobile and travel independently in motor vehicles and bicycles, and engage more in sports and other high-risk activities that are more prone to craniofacial injuries. They may begin to experiment with sexual practices during this period, potentially subjecting themselves to infections that predispose to general and oral health problems.

School policies and physical environment are also imperative in the attainment of optimal health. Policies on diet, particularly in relation to sugars and carbonated drinks, are necessary to enable the canteen and tuck shops to promote healthy eating and sensible sugar intake.

A safe physical environment in schools, particularly in play areas, helps reduce craniofacial injuries. With appropriate dental trauma policies in place, timely actions can be taken in case of emergency to minimize permanent damage. Policies on bullying and violence between students, supported by education and empowerment, also help prevent intentional injuries. The provision of safe water and sanitation, together with pollution free environments, is a prerequisite for health.

By providing these facilities, schools are able to promote effective learning, to reinforce health messages and, particularly for oral health, to undertake health promotion activities.

Schools, a well-established system, have the potential to reach a large group of people efficiently. Schools are more widely distributed even in rural areas.

Special attention can be given to students who are more susceptible to, or at a higher risk of, oral disease. Working collaboratively with the health services, dental treatment and preventive oral health measures can be made available in the school, a cost-effective approach with minimum disruption to learning and school activities.

Children are encouraged to develop a good relationship with the dental team and a positive attitude towards regular dental attendance. The school dental clinic also provides important physical facilities for baseline assessment, monitoring, research and evaluation. Schools are often seen as a place for oral health knowledge and information by parents and the local community.

Teachers play an important role in this process. It is therefore imperative that teachers and school staff are equipped with adequate oral health knowledge and skills. Schools form the heart of the community, a means for social networking for parents through local events and meetings. The schools can capitalize this school-home-community interaction to address common concerns, to form a united force to lobby for water fluoridation and healthy environments in the community where they live, work and learn.

Children have an important role to play in oral health promotion. These schools will empower children to take control over their health and become an active and responsible citizen in society. They are encouraged to impart their knowledge to benefit other members of the family and society. Children may have a strong influence on their family and community.

Schools as a platform for promoting oral health

Many oral conditions, diseases or disorders are preventable through school-based efforts

The school provides an ideal setting for promoting oral health. Schools remain an important setting, offering an efficient and effective way to reach children and, through them, families and community.

The school years cover a period that runs from childhood to adolescence. These are influential stages in people's lives when lifelong sustainable oral health related behaviors, as well as beliefs and attitudes, are being developed. Children are particularly receptive during this period and the earlier the habits are established, the longer lasting the impact. Children may also be equipped with personal skills that enable them to make healthy decisions, to adopt a healthy lifestyle and to deal with stressful situations such as violence and conflicts.

Schools can provide a supportive environment for promoting oral health like the tooth brushing activities in schools. A safe physical environment in the playgrounds, and indeed throughout the school to reduce the risk of dental trauma with appropriate policies and practices to save the traumatized tooth/teeth, avoiding tooth loss and associated problems in later life. School policies and practices on healthy diet that ensure healthy foods and drinks, restraint on sugar intake, serve to promote healthy dietary behaviors from an early age.

More importantly, schools may be the only place for children, who are at the highest risk of dental disease, to have access to oral health services. This is particularly true in India where children from deprived families have limited access to dental clinics. With adequate training, school teachers can play an important role in oral health activities.

III INTRODUCING ORAL HEALTH IN SCHOOLS

HEALTHY SCHOOL is a school which constantly strengthens its capacity as a healthy setting for living, learning and working. We need to recognize that Health as an integral part of excellence in education. Good health supports successful learning and vice versa. And **Oral health is essential to overall health and quality of life**. This involves a positive approach to a student's health and wellbeing by introducing the following: -

A. How will this policy help schools promote health?

Indian Dental Association (IDA) believes that our School Oral Health Policy is designed to help address a broad range of factors that impact on oral health and help schools become 'Healthy Schools' by the following:-

• **Create Healthy Public Policy.** This policy provides information that can be used to argue for increased local, district and national support and resources for oral health promotion in schools.

• **Develop Supportive Environments.** This policy suggests physical, psychological and social enhancements to schools and community environment to promote oral health and well being.

• **Strengthen Community Actions.** This policy identifies actions that may be taken by schools and the community to promote oral health. It details ways in which schools can collaborate with the community to implement such actions and to strengthen school programmes.

• **Develop Personal Skills**. This document identifies skills that children and young people need to develop and maintain to adopt healthy lifestyles and behavior in order to reduce the risks of oral diseases. It also emphasizes skills that others can develop to create conditions that are conducive to oral health through schools, families and the community.

• **Reorient Health.** This policy outlines how health services and resources can be oriented toward outreach care and made more accessible to support effective oral health promotion within a **Healthy- School setting** by involving the following.

Healthy eating: A balanced diet combining carbohydrates, protein, and a little fat provides with the nutrients needed to stay healthy but also helps to keeps energy levels up.

Nutrition: Everyone needs the right balance of vitamins, minerals and nutrients (like protein, carbohydrate and fats) to feel energized, grow and stay healthy.

B. IDA's Agenda

CREATE awareness

First create awareness about the importance of oral health maintaining oral hygiene; knowledge about oral disease & risk factors; promote cessation of tobacco use; promote nutrition & safety from preschool to high school keeping in mind why we are promoting the concept and logic of **EAT SMART | BRUSH SMART | PLAY SMART | DRINK SMART |**.

Nutritional awareness

EAT SMART is awareness about nutrition; checking obesity and diabetes; reducing consumption of junk food and sweetened beverages as this puts children at an increased risk for dental caries; promoting in-school oral health self-care habits. IDA advocates that fruit-based drinks, vegetable-based drinks and to drink water with no added sweetener, and electrolyte replacement beverages must contain no more than 42 grams of added sweetener per 20 ounce serving.

Our edge is partnership with FSSAI and NetProFan

Here, IDA's has collaborated with FSSAI and NetProFan to provide advocacy and inspection for the **Eat Right School** \ Healthy School launched by FSSAI. It aims at creating awareness about food safety, nutrition and hygiene among school children to ultimately reach the community at large. An Oral Health Guide has been developed for the school children to bring awareness about oral hygiene, nutrition, and sports dentistry.

Awareness about playing smart

Playing smart is a must to prevent oral and physical injuries by wearing appropriate protective gear like mouth-guard & headgear for contact sports i.e. football, basketball, hockey, wrestling, skating and volleyball. School personnel can also be taught how to recognize and manage common oral emergencies that occur on the playground or oral manifestations of possible abuse and neglect – ensuring that students receive appropriate professional care.

Counseling, Psychological & Social Services

Increase awareness that oral health impacts self-esteem and this affects both learning and social interactions to help children who are self-conscious or bullied about their teeth or appearance. It would be helpful to meet families to discuss such issues about **corrective orthodontic treatments**.

Campus free from tobacco

Establish policies on tobacco use because the use of tobacco, alcohol and other substances has been linked to oral health problems, programmes that discourage students' use of these substances can positively impact their oral health. IDA advocates tobacco-specific student instruction, reinforcement

activities, special events, intervention and cessation programmes for students. We aim stop the use of smokeless tobacco, as well as cigarettes, guktkas or even E-cigarettes and to include tobacco prevention messages in health education curricula. IDA has special skill set for tobacco de-addiction as we are actively involved in tobacco cessation by via our initiative **Tobacco Control and Cessation (TCC).**

Family/Community Involvement

Enlist family and community support to prevent tobacco use, support preventive oral care in order to improve access to dental care. Improving oral health of children needs consistent reinforcement by parents. Schools must provide information on the importance of oral health to overall health and school readiness. Parents should be encouraged to obtain an oral health exam for their child prior to school admission.

C. Oral health services IDA offers

IDA advocates provision of oral health care by check-ups; delivery of dental sealants & fluoride varnishes; establishing dental clinics; making dental referrals; training school nurses; developing school oral health centers.

Identification of high risk - Organizing oral health check-ups for caries and identification of high risk students at or near school sites enables students to more easily access oral care in a safe environment, usually at minimal or no cost to students and their families.

Application of fluoride and sealants - Fluoride mouth rinsing or use of fluoride tablets may be a reasonable procedure students age six or older who are at high risk for dental cavities. Application of fluoride varnish, a film of fluoride that can be painted on teeth quickly 2-3 times a year to stop caries in child at high-risk. **Dental sealants** - a protective coating placed on the biting surfaces of teeth to seal the grooves, is another service that helps reduce dental decay in school-age children. Children who received sealants have 60% fewer new decayed pit and fissure surfaces in back teeth for up to 2 to 5 years after a single application. Among children, 90% of decay is in pits and fissures.

Train the school nurses and other staff so that they can share information with parents when the child has a severe problem and must be referred for further treatment or **secondary prevention for cavities; malocclusion; dental restorations needed due to remineralization of non cavitated, demineralized tooth surfaces; Temporomandibular joint (TMJ) issues, congenitally missing teeth, ectopic eruption** etc.

Staff Training

Provide in-service training; deliver oral/facial injury prevention and nutrition education; promote cessation of tobacco use among staff.

Dental professionals who are knowledgeable about school oral health can be invited as speakers for in-service sessions, education conferences or school nursing conferences. Incentive systems might be created for teachers who participate in such professional development, especially on a voluntary basis.

School staff, especially school nurses, should be made aware of materials that they might share with parents and health care providers in the community.

IV SCHOOL ACCREDITATION PROGRAMME

Indian Dental Association (IDA) promotes oral health policy for creation of healthy schools. We can see our significant investment oral health yield the great educational benefits. We acknowledge that schools can make a substantial contribution to a student's health and wellbeing by promoting oral health, healthy eating and an environment which promotes growth and development.

Pilot School Oral Health Accreditation Program

We are promoting **School Accreditation Programme** which will entail awarding an **accreditation certificate** to schools who are creating awareness among their students about the importance of oral health, conducting oral check-up camps to inculcate oral hygiene habits among their staff and students. **The programme is encouraged by the Ministry of Health and Family Welfare, various special associations from the dental fraternity and WHO India.**

Key parameters

School Accreditation System has been developed by IDA on the following parameters: --
a) Healthy School Environment
b) Healthy Eating
c) Oral Health Education
d) Oral Health Service

A) Healthy School Environment

A healthy school environment focuses on developing a risk and preventable injury environment with safe and well designed school buildings and playgrounds to prevent injury. A comprehensive health policy has been formatted and implement. The school has a policy in place which addresses ban on sugary food, alcohol and smoking or tobacco chewing on the school premises. A commitment for provision of safe facilities for sports and leisure is promoted.

B) Healthy Eating

School canteen are focused on balanced diet and ensure holistic development of child. A comprehensive training to school staff as well as to the parents on importance of diet and nutrition is part of academic curriculum.

C) Oral Health Education

The school has regular training session for school children's on importance of oral hygiene. Oral health education session must be integrated in the forms of competition mainly drawing to engage children. Training session and workshops are organized for school staff to handle dental emergency.

D) Oral Health Services

The school collaborates with local dental services for regular screening and referral for emergency and urgent cases. Makes regular visit to dental clinic mandatory for students and deals with dental emergency.

Criteria for Healthy School

Criteria for giving accreditation

Key Focus Areas	Description	Checklist	Comments (Measures taken by school)
Healthy School Environment		(Yes/No)	
	Signage of no tobacco on the school premises		
	Provision of first aid kit on school		
	Provision of onsite doctor for emergency		
	School health committee for monitoring health promotion activities		
	Parent Teachers Association		
	Participation with local communities and civil society for healthy school program		
Healthy School Canteen			
	Provision of Nutritious Meal		
	No soft beverages, candies, sugary food in the canteen		
	No vending machine on school premises		
	No smoking or chewing tobacco in the premises		
Oral Health Education			
	Regular training Session for staff		
	Regular training Session for School Children		
	Integration of oral health education in school curriculum		

	Parents Education and information session on oral health		
	Competition – posters, drawing, role play as a part of theme based events		
Oral Health Services			
	Provision of regular dental check up		
	Annual examination of school children for oral disease		
	Annual examination of school staff		
	Dental caries score less than (20%- Based on clinical examination)		
	Periodontal Score less than (20% - based on clinical examination)		
	Availability of school health nurse		

V PLANNING THE INTERVENTIONS

Once oral health is recognized as a key area, the next step is to plan the interventions. It is imperative to identify and involve relevant stake-holders with mutual aim of improving oral health while also including students, parents, teachers and community members to make better decisions, practice healthy behaviors and create school environments conductive to health.

Indian Dental Association (IDA) intends to conduct oral health interventions in schools annually for two\three months during which we will provide (STEPS FOR PRIMARY PREVENTION) by education and active prevention (provide oral hygiene awareness & importance of oral health); conduct classroom tooth brushing and application of fluoride; diet and prevention awareness; and pit-and-fissure sealants application.

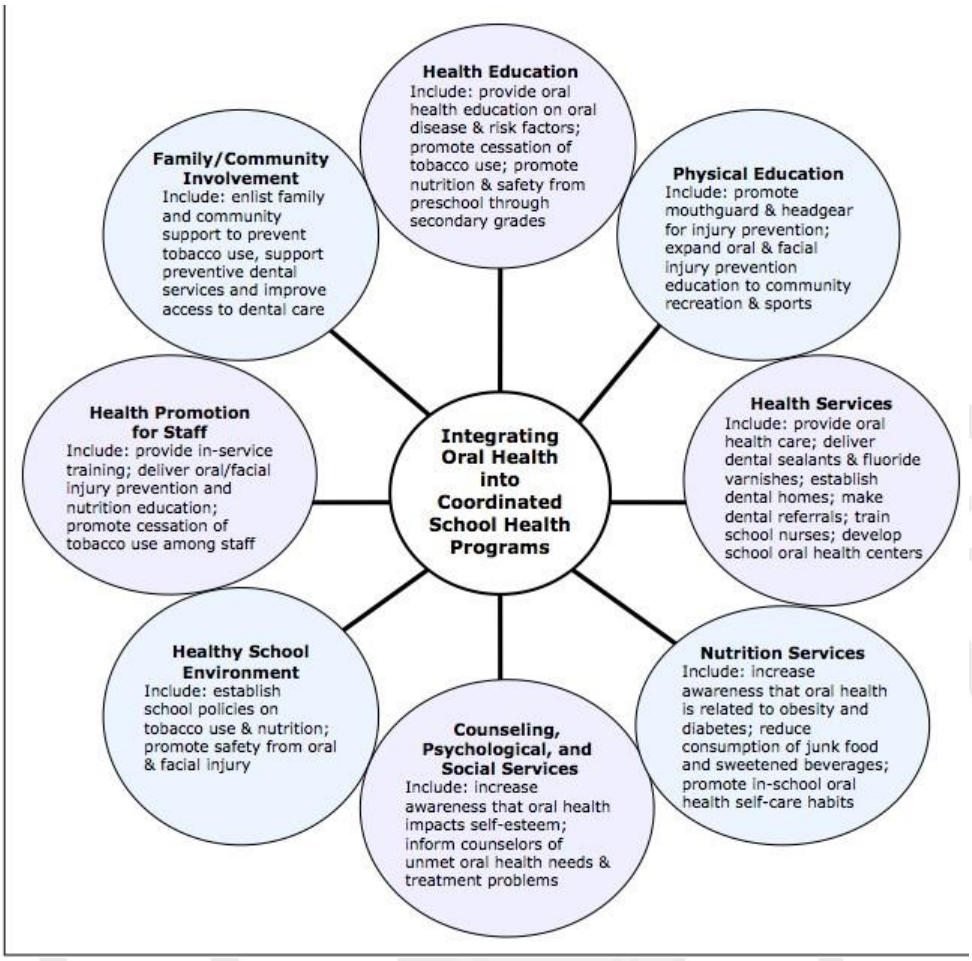
School's Role

WHAT SCHOOLS CAN DO

- Incorporate oral health into curriculum
- Conduct dental screenings
- Provide leadership from school nurse/others for coordination, identification of students, getting parent consent
- Provide space/transportation and time for oral health services and screenings
- Educate parents on better oral health and nutrition
- Identify children with special needs; assess need for dental access. (pregnant teens, students with learning and developmental disabilities, cerebral palsy, autism, asthma, diabetes, HIV)

The school role is of prime importance in the provision of oral health as the success of the school oral health programme is dependent on school's involvement and support. Healthy development continues to support learning throughout childhood and later life. "Health in the earliest years—actually beginning with the future mother's health before she becomes pregnant—lays the groundwork for a lifetime of well-being…" *(Center on the Developing Child at Harvard University (2010).* The Foundations of Lifelong Health Are Built in Early Childhood. *Retrieved from http://www.developingchild.harvard.edu)*

Schools also provide valuable area for conducting oral health check-up, medical histories of students to ensure that the dental care can be provided safely, schedule teachers and administrators for supportive care; and finally are involved in the distribution and collection of the consent forms. Schools also serve as a liaison between the parents/guardians for referral of additional dental treatment.



Finally, the schools should be knowledgeable to address the concerns of parents/guardians after the dental professionals have completed their check-ups in the school. They should ensure that meal either served or provided by parents meet the nutritional needs of the child and builds a lifetime of apt dietary habits; frequent exposure to foods and beverages high in sugar content should be refrained from as this increases the risk for and severity of tooth decay.

Education and active prevention

The main advantages to a school-based oral health programme are that - the children are available for preventive or treatment procedures; - school clinics are less threatening than private offices; - a school dental programme facilitates and increases the effectiveness of teaching dental subjects, and- the dental services supplement the school nursing services by helping to provide total health care for children.

Diet and prevention

Basic information on diet and nutrition helps students understand that sugar consumption is a key component of the dental decay process and that sugar must be present for caries to occur. Ideally,

dietary information are mixed with the preventive measures of appropriate fluoride regimens, oral hygiene measures and pit and fissure sealants.

Classroom tooth brushing

The daily brushing of teeth in the classroom may be an ideal objective. This will be beneficial to control gingivitis. Thus the teacher should be trained to encourage routine use of the Bass technique to help control gingivitis, and the use of a fluoride dentifrice to help control caries. The ultimate objective of tooth brushing instruction is prevention. Reinforcement of the therapeutic benefits of tooth brushing coupled with fluoride dentifrice is required.

Classroom-based fluoride programs

The use of fluoride mouth rinses can prevent caries-and are effective and easy to implement. Rinsing programmes are advised for grade 1 through 12. In general fluoride rinses results in significant caries reduction of about 30% to 35%. School based-fluoride programmes are supervised readily by schoolteachers, teacher aids or volunteers after minimal in-service training. Advantages of this kind of programme are - safe and effective; inexpensive; easy to learn and implement; non-dental personnel can supervise; well accepted by students - good compliance; little time is required - 5 minutes/week.

Pit-and-fissure sealants

The effect of systemic or topical fluorides in preventing dental caries is effective only on the smooth surfaces of teeth; it's effect on pit and fissure caries is relatively small. Therefore Fissure sealants can prevent pit and fissure caries. They are applied mainly to the occlusal surfaces of molar teeth in order to obliterate the occlusal fissures, and remove the sheltered environment in which caries thrive. Fissure sealing is a most conservative way of tackling the problem of occlusal caries, involving a minimum of treatment which most children have no difficulty in accepting. Sealing is especially indicated for teeth that have marked pits or fissures, and for high-risk patients.

Teeth should be sealed as soon as possible after they erupt. Sealing of all caries-susceptible pits and fissures are ideal treatment. The highest priority may be given to sealing first permanent molars of children between the age of 6 and 8 years, and second permanent molars of children between the age of 11 and 13 years.

This needs involvement of a dental professional in the prevention programme for topical fluoride applications, oral prophylaxes, to teach tooth brushing and flossing, counseling on diet, placement of pit and fissure sealants and screening and referral of suspected oral pathology for definitive diagnosis and treatment.

The final level of a preventive dentistry programme in a school involves the identification of referral for early treatment of children with oral pathology. To attain this objective, an annual screening should be performed for all children and at least a semi-annual screening done for children classified as high risk. The combination of education, active prevention programmes greatly reduces caries and maintains oral health in a school.

Teacher's role

Committed, knowledgeable teachers are the cornerstone of all effective school-based oral health programmes. Teachers need raining to prepare them to teach oral health. Teachers cannot, however, be expected to possess expertise in a constantly changing pool of scientific knowledge about primary preventive procedures, health promotion, and dental treatment options.

Training teachers will be beneficial as children are fast learners, and when learning starts at an early age it can be reinforced with a variety of teaching techniques that enhance absorption and retention. It also is possible that with appropriate information, behavior change will occur. Changes in health-related knowledge, practices, and attitudes increase with the amount of instruction; therefore greater integration of oral health education into the curriculum should be a goal of a school-based programme.

Most oral health problems can be prevented by teachers when they promote oral health of students and create awareness of their parents by the following:

- Conduct an oral health assessment on students by asking them about their personal oral hygiene practices (e.g., brushing and flossing their teeth).
- Add prompts to problem list (print or electronic records) that remind dental professionals to ask students about their oral health and provide education.
- Offer preventive oral health care services (e.g., fluoride varnish) delivered by oral health professionals.
- Stress the importance of good oral hygiene, including brushing teeth with fluoridated toothpaste at least twice a day and flossing per day, preferably before brushing at night.
- Teach students what a healthy mouth looks; recognize signs of oral disease, and how to reverse or treat oral disease.
- Encourage students to drink water throughout the day instead of sweetened beverages like sports drinks, fruit drinks, and cold drinks.
- Encourage students to wear mouth guards and other protective gear when participating in physical activities or sports such as biking, skateboarding, or in- line skating or when playing baseball, basketball, football or hockey.
- Discourage students from obtaining oral piercings and wearing mouth jewelry that can result in chipped teeth and gum recession.

Role of dental professional

WHAT DENTISTS CAN DO

- Work with IDA's National School Oral Health Programme to establish strong referral and follow-up systems
- Provide leadership for implementing school based services
- Serve as advisors to school and oral health coalition to address unmet need

The dentist-led oral health education is effective in improving the oral health knowledge and oral hygiene status of students. This will inculcate good oral behavior, monitor high caries rate among children; increased risk for traumatic injury and periodontal disease; a tendency for poor nutritional habits; increase esthetic desire and awareness for proper teeth by opting for braces; help tackle the complexity of combined orthodontic and restorative care (e.g., congenitally missing teeth); reduce dental phobia; check potential use of tobacco, alcohol, and other drugs; eating disorders; and monitor unique social and psychological needs.

Here, Indian Dental Association (IDA) is concerned with primary prevention but also offer referral for secondary prevention:-

Primary prevention

Caries – school age marks a period of significant caries activity and periodontal disease due to an increased intake of cariogenic substances and inattention to oral hygiene procedures. Immature tooth enamel and environmental factors such as diet and a low priority for oral hygiene are the main reason for prevalence of caries.

Caries assessment

CARIES RISK INDICATORS	LOW RISK	MODERATE RISK	HIGH RISK
Clinical conditions	• No caries in past 24 mths • No enamel demineralization • No visible plague; gingivitis	• Caries teeth in past 24 mths • 1 area of enamel demineralization • Gingivitis	• Caries teeth in past 12 mths • More than 1 area of enamel demineralization • Dimineralization (enamel caries 'white-spot lesions'} • Visible plague on anteria (front teeth) • Radiographic enamel caries • High tiers of mutuans streptococci • Wearing dental or orthopedics

			appliances • Enamel hyperplasia
Environmental characteristics	• Optimal systemic and topical fluoride exposure • Consumption of simple sugars or foods strongly associated with caries initiation primarily at meal times • Higher socio-economic status • Regular visits to a dentist	• Suboptimal systemic fluoride exposure • Occasional (ie 1-2) between meals exposures to simple sugars or foods strongly associated with caries • Mid-level economic status • Irregular visits to dentist	• Suboptimal topical fluoride exposure • Frequent (i.e 3 or more) between meals exposures to simple sugars or foods strongly associated with caries • Low-level economic status • No dental visits • Active caries present in the mother
General health conditions			• Children with special health need • Conditions impairing saliva composition\flow

Our r**ecommendations:**

- We emphasize the positive effects of fluoridation, professional topical fluoride treatment, routine professional care, education, and personal hygiene to counter the pattern of caries. Professional removal of plaque and calculus will depend upon on the individual's assessed risk for caries/periodontal disease and call for referral.
- **Oral hygiene:** Brushing teeth twice a day with fluoridated toothpaste will be recommended as it can provide benefit through the topical effect of the fluoride.
- **Diet management:** Children are exposed to and consume high quantities of refined carbohydrates and acid containing beverages. Diet analysis, along with professional recommendations for maximal general and oral health will be given.
- **Sealants:** Sealant placement is an effective caries-preventive technique for any tooth, primary or permanent, that is judged to be at risk for pit and fissure caries. Children at risk for caries will be recommended for sealants.

Secondary prevention

The children where dental restorations is needed due to remineralization of non cavitated, demineralized tooth surfaces will be referred to dentists on IDA panel. Molars with extensive caries or malformed, hypoplastic enamel—for which traditional amalgam or composite resin restorations are not feasible— may require full coverage restorations. These children having irreversible damaged teeth will be recommended a personal age-appropriate oral hygiene programme (plaque removal and diet modification) and regular professional interventions. Children with progressive periodontal disease will be referred to dentist when the treatment needs are beyond the scope of treatment in the school.

Occlusal considerations advice was given. Malocclusion can be a significant treatment need among children or the adolescent population as both environmental and/or genetic factors come into play. Although the genetic basis of much malocclusion makes it unpreventable, numerous methods exist to treat the occlusal disharmonies, temporomandibular joint dysfunction, periodontal disease, and disfiguration which may be associated with malocclusion. Congenitally missing teeth present complex problems and often require combined orthodontic and restorative care for satisfactory resolution. These children will be seen and referred.

Malocclusion: Any tooth/jaw positional problems that present significant esthetic, functional, physiologic, or emotional dysfunction are potential difficulties for the adolescent. These can include single or multiple tooth malpositions, tooth/jaw size discrepancies, and craniofacial disfigurements. (*Adolescent Oral Health Carehttps://www.aapd.org › media › bp_adoleshealthP)* The children will be screened for malposition of teeth, malrelationship of teeth to jaws, tooth/jaw size discrepancy, skeletal malrelationship, or craniofacial malformations or disfigurement that presents functional, esthetic, physiologic, or emotional problems for the child\adolescent and referred for evaluation.

Third molars also can present acute and chronic problems for the adolescent. Impaction or malposition leading to such problems as pericoronitis, caries, cysts, or periodontal problems merits evaluation for removal. A rough evaluation of third molars will be conducted and certain cases will be referred.

Temporomandibular joint (TMJ) problems: A comprehensive evaluations of the TMJ and related structures, jaw movements will be done and cases where symptoms appeared more prevalent will be referred.

Congenitally missing teeth: An evaluation of congenitally missing permanent teeth will be conducted. Missing permanent tooth on the developing dentition can be significant. Referral will be made.

Ectopic eruption: Abnormal eruption patterns of the adolescent's permanent teeth can contribute to root resorption, bone loss, gingival defects, space loss, and esthetic concerns. Early diagnosis and treatment of ectopically erupting teeth can result in a healthier and more esthetic dentition. Prevention and treatment may include extraction of deciduous teeth, surgical intervention, and/or endodontic, orthodontic, periodontal, and/or restorative care for which they will be diagnosed and referral done. *(https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3220171/)*

Lastly we educated the school children about prevention of **traumatic injuries** to permanent teeth due to falls, traffic accidents, violence, or sports. Even the administrators\staff\principals\ teachers of the school will be educated and awareness created to significantly reduce oral trauma by introducing mandatory protective equipment such as face guards and mouthguards. Additionally, we will educate youths participating in leisure activities such as roller skating, and bicycling the benefit from appropriate protective equipment.

We will also educate the students concerned about esthetics the need to improve the dentition by tooth whitening and removal of stained areas or defects. Use and safety of bleaching agents, microabrasion, placement of an esthetic restoration, or a combination of treatments will be also covered taking into consideration the child's dental developmental stage, oral hygiene, and caries status.

Advice and counseling about tobacco use will be given: Significant oral, dental, and systemic health consequences and death associated with all current forms of tobacco use including the use of products

such as cigars, cigarettes, electronic-cigarettes, snus, hookahs, smokeless tobacco, pipes, bidis, kreteks and dissolvable tobacco. Our observation is that smoking and smokeless tobacco use are initiated and established primarily during adolescence.

Additional examples of oral problems associated with adolescent behaviors include, but are not limited to:

- perimyolysis (severe enamel erosion) in bulimia
- traumatic injury to teeth and oral structures in athletic or other activities
- intraoral and perioral piercing will be seen.

Role of government

he government can develop a comprehensive Oral Health Plan to address the issue of poor oral health of students in schools. There is a need to recognize that oral health is an integral part of personal health and effective prevention solutions are a good investment particularly for the children and the future generations.

The government needs to support initiatives to expand access to oral health screening and treatment in school-based settings (including fluoride varnish and dental sealant application for children), recruit and retain oral health providers in rural and medically underserved areas, use of teledentistry and tele-health applications, where appropriate, to connect patients in rural areas to oral health screening and treatment resources and greater awareness of the importance of maintaining good oral health.

The government can play a role in:
• Educating school authorities about the link between oral health and student learning and achievement
• Develop a policy framework that supports and offers solutions
• Format best oral health practices in schools
• Promote school-based oral health projects

There is a need for education; promoting community-based prevention strategies; encouraging the integration of oral health into total health; and work to improve access to and the quality of oral health services in order to improve the oral health status of the nation's underserved and vulnerable populations.

A school-centered oral health policy has the potential to:

- create oral health literacy among high risk children;
- build skills and habits essential for optimal oral health;
- address and create awareness at community level to uplift the family;
- ensure systematic delivery of preventive services such as topical fluoride and dental sealants applications when children are most susceptible to the onset of oral disease; and

Government can propose oral health education at school level for improving health and well being of nation:

Oral Health Education

Oral health education in schools is planned learning that ensures students have the information, skills, and competencies they need to develop and maintain positive, healthy oral health practices throughout their lives. Instruction should align with the National Health Education Standards and incorporate characteristics of effective health education curricula for teaching functional health information; shaping personal values and beliefs that help develop healthy behaviors; shape family norms that value a healthy lifestyle; and develop the essential skills to adopt, practice, and maintain health-enhancing behaviors.

Oral health education instruction should be based on scientific evidence, integrated sequentially as developmentally appropriate across a comprehensive K-12 health curriculum, and taught by qualified, trained teachers. Learner objectives should be the following: the anatomy and physiology of the mouth; oral disease and how to prevent it; effective oral hygiene practices such as brushing, flossing, and drinking fluoridated water; the effects of tobacco, “vaping,” smokeless tobacco, alcohol, and other drug use on oral health; diet and nutrition; safeguarding teeth and preventing oral injuries; and accessing a dental home.

Public-private partnerships

For a strong School Oral Health Programme, Indian Dental Association (IDA) suggests we need to coordinate these efforts and promote active public-private partnerships (PPP) by the involvement of state and local dental associations, state dental boards, educational institutions, philanthropic organizations and primary care associations.
Efforts include assessing and analyzing oral health needs of schools, setting priorities to address the most urgent needs and implementing, managing and evaluating programmes. PPP can play a pivotal role to improve oral health outcomes because by encouraging PPP ie. public and private sectors come together to overcome each other's weaknesses and work like a potent bullet to slay oral problems at school level.

VI IDA's SCHOOL-ORAL HEALTH PLAN

Indian Dental Association (IDA) aims at promoting oral health in schools by maintaining good oral health and reinforcing importance of ORAL HEALTH regularly throughout the school years; because we recognize that good physical and mental health is critically important for a student. Our aim is to foster knowledge, skills, and attitudes that students need in order to lead healthy lives and avoid high-risk behaviors.

GUIDING PRINCIPLES

1. IDA will work with school personnel to minimize disruption of class time.
2. Oral health will be provided in coordination with other dentists, school nurses, and primary care providers.
3. Our care will focus on low income and underserved sections of the community.
4. Consent for treatment must be provided by the parent/legal guardian. Parents will receive information about any treatment provided to their child.
5. This oral health care in schools does not replace comprehensive, regular care given at dentist's clinic.
6. We respect, understand, and incorporate sensitivity to ethnic, linguistic, and cultural diversity.
7. The focus of school programmes is preventive care. However, we ensure that every child screened will have reasonable access to needed treatment – preferably in a dental clinic or through the school/program.
8. The program will abide by all government laws and professional standards of practice.
9. Lastly, the programme should incorporate continuous quality improvement and outcome evaluation methods.

IDA also proposes setting up of School Oral Health CENTERS

- To incorporate a caries risk assessment tool into primary care practice
- Train staff to adequately/thoroughly assess for oral health risk and for caries detection
- Have protocols for evaluation and treatment of dental abscesses and mouth trauma/avulsed teeth
- Adequately educate patients i.e., incorporate patient education/teaching into patient visits e.g., demonstrate tooth brushing
- Reach out to children with special health care needs (CSHCN): Learning Disability, Developmental Disability, Cerebral Palsy, Autism, Asthma, Diabetes, HIV)

Under this we provide

Oral health education

Dental Hygiene Examination\ Screening	Dentist notes the presence of caries, periodontal disease, traumatic injury, nutritional habits, eating disorders, need for braces, checks for use of tobacco, alcohol, and other drugs.
	Necessary equipment needed: Dental Chair
Fluoride Varnish	Is applied every 6 months to the tooth's surface to prevent dental caries in the primary and permanent teeth of children and adolescent at moderate to high risk. The resin quickly dries on the tooth and is absorbed over the course of several hours. For children at high risk, receive fluoride varnish every 3 months.
	Necessary equipment needed: Dental Chair
Sealants	Applied on children's decay-free permanent chewing surface of molars in school using portable equipment. Sealants require a retention check two weeks after application to assure that the sealant remains intact.
	Necessary equipment needed: Dental Chair Light Source (Curing Light) Water and Suction Unit Compressor

School-based oral health care can be provided in a mobile, portable, or fixed site.

- Mobile dental care utilizes a full set of dental equipment placed on a van or other mobile vehicle.
- Portable dental programmes use dental equipment that can be transported via a car and set up within a school.

Fixed clinic is one in which a full dental clinic is permanently installed within a school.

- School-based programmes provides ONLY screenings to comprehensive dental care.

Next, an important component of school oral health programmes is a referral network of dentists who are willing to diagnose and treat children who may be identified as having possible treatment needs.

VII CHALLENGES AND SOLUTIONS

The successful implementation of school oral health policy needs involvement of school, communities, families, or individuals in assuming responsibility for improving oral health of children. Two main ingredients needed are: **knowledge and motivation.** It is impossible for dental professionals to impart oral health awareness to the public and encourage positive behavior for optimal oral health without mass education which can only be accomplished via the school system.

Educational curriculum is formatted with the end purpose of education to:
- provide the information and experience for people to earn a living;
- make life more worthwhile.

Optimal oral health contributes to the latter.

The core components of a school oral health policy therefore stresses on: -
- Appropriate regimens to prevent dental caries, and gingivitis;
- Assurance of periodic oral examination and treatment;
- Effective referral and follow-up procedures for children in need of treatment;
- Emergency first aid for accidental oral injuries at school.

Future Roadmap

- Create conducive environment to upgrade oral health for children and adolescents
- Make research and development, innovation and entrepreneurship priority to improve oral health
- Identify key indicators benchmarking the oral health sector-wise.
- Create adaptive models considering the social, cultural and environmental conditions as per regions
- Gap analysis of dentists in handling special cases in children with multi-morbidities and mental or physical challenges.

Aimed at optimal oral health for improving life and well-being.

CONCLUSION

Improving the oral health will require sustained commitment at all levels and by many stakeholders - communities, parents, health providers, local and government bodies. Therefore, a strong and focused approach on preventive oral health care is essential to improve the oral health outcomes of the future generations.