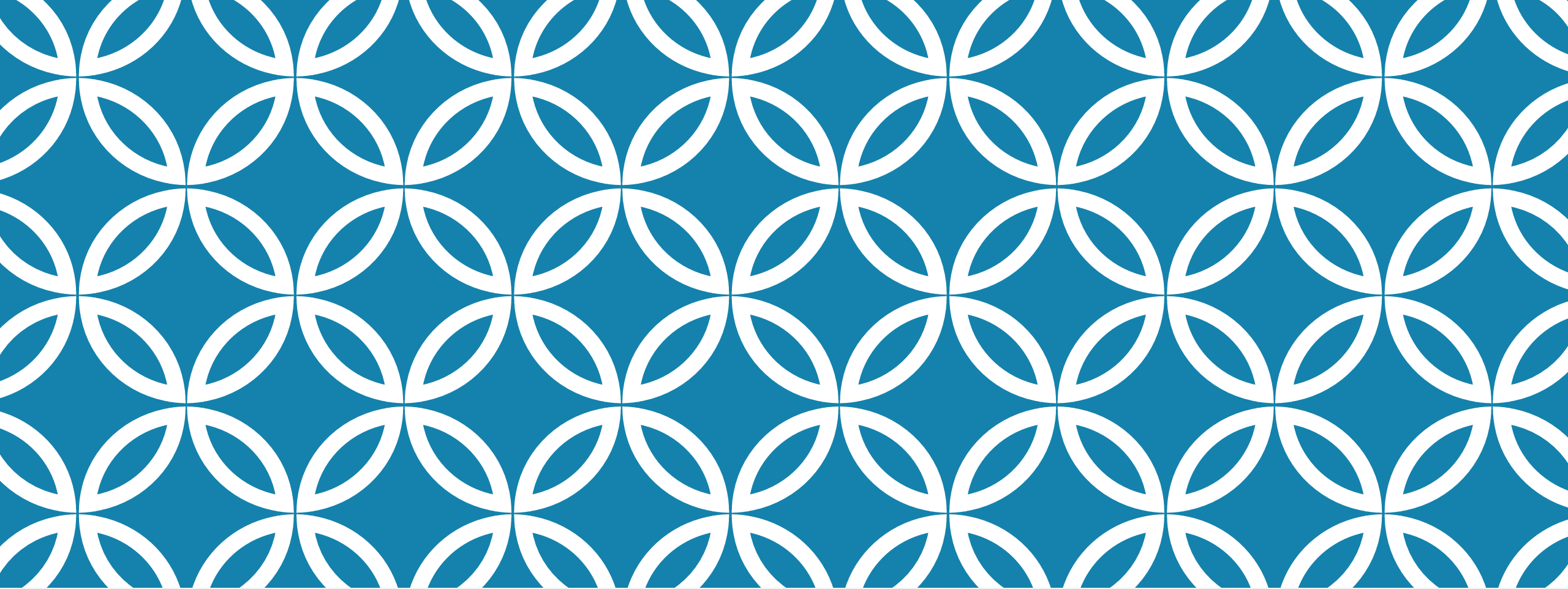




**D Y PATIL DENTAL SCHOOL**

DEPARTMENT OF  
PUBLIC HEALTH DENTISTRY



**SCHOOL DENTAL  
HEALTH PROGRAM**



# CONTENTS

- Introduction & History
- Definition
- Aspects of School Health Service
- Advantages of SDHP
- Objectives of SDHP
- School Dental Health Policies
- Elements/Component Of School Dental Health Program
- School Dental Health Programs
- School Dental Health Programs In India
- Conclusion

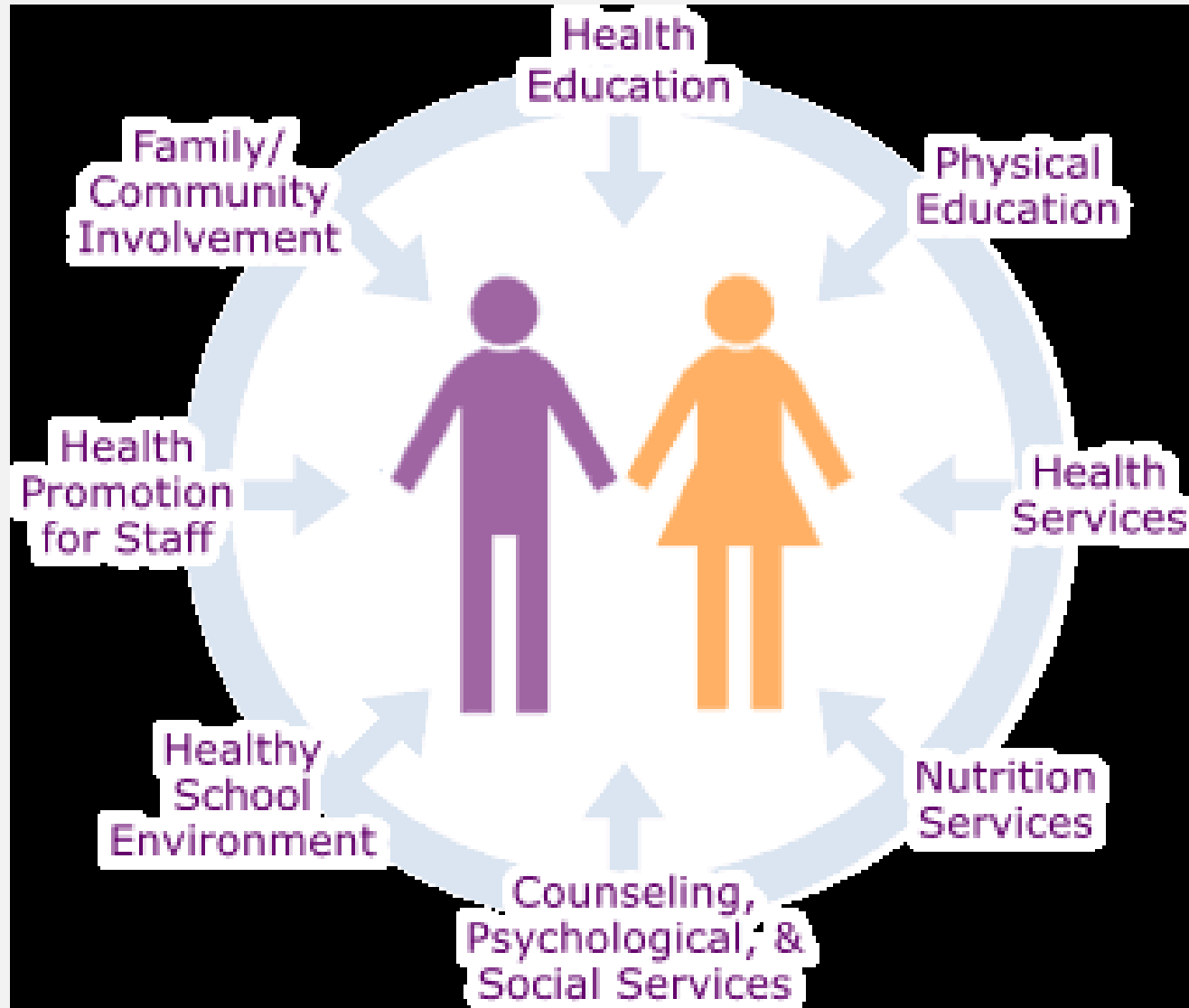
# DEFINITION

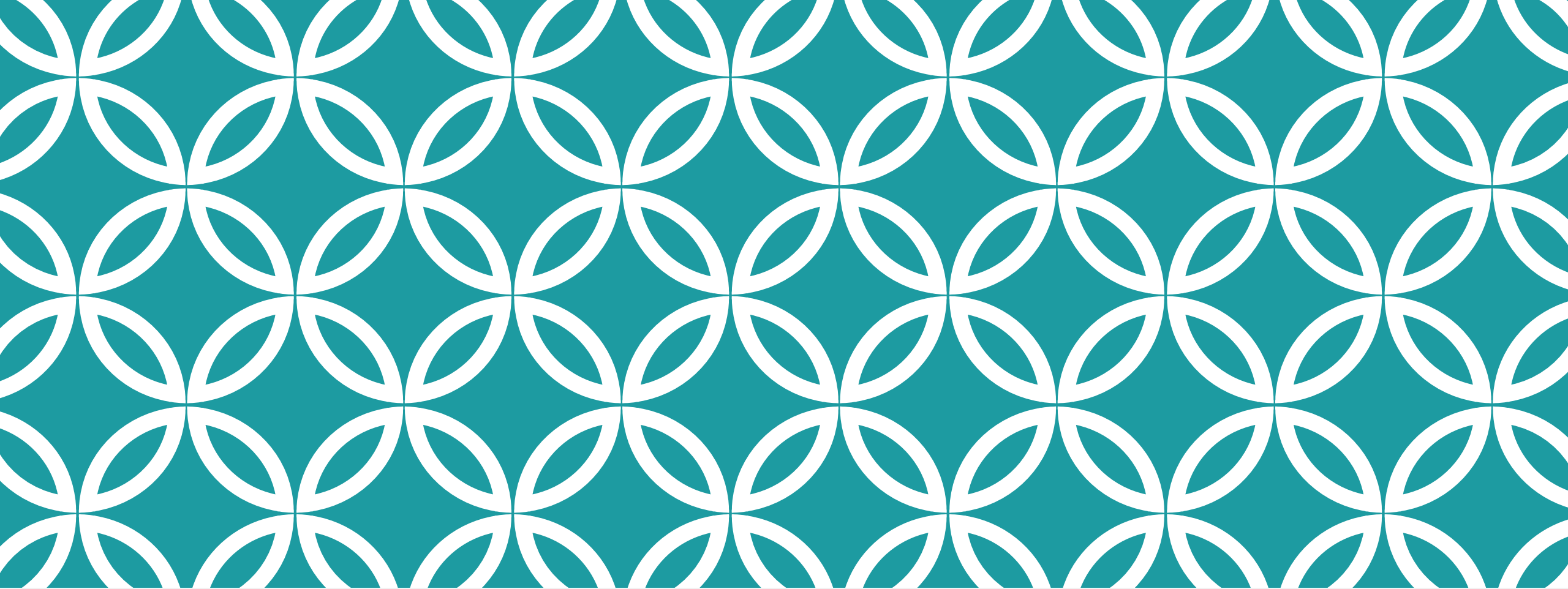
- School Health Program is defined as the school procedures that contribute to the understanding, maintenance and improvement of the health of pupils and school personnel, including health services, health education and healthful school living.

By The Committee on Terminology of The American Association for Health, Physical Education and Recreation 1951

- 
- School health services are defined as the “procedures which are established
  - To appraise the health status of pupils and school personnel;
  - Counsel pupils, parents, and others concerning appraisal findings;
  - Encourage the correction of remediable defects;
  - Help plan for the health care and education of handicapped children;
  - Help prevent and control disease;

# ASPECTS OF SCHOOL HEALTH SERVICES





# ASPECT OF SCHOOL HEALTH SERVICES



# HEALTH APPRAISAL

It is defined as ***“the process of determining the total health status of child through such means as health histories, teacher and nurse observations, screening test; and medical, dental and psychological examinations”***



# HEALTH COUNSELING

Following appraisal comes health counseling, which is defined as ***“the procedure by which nurse, teachers, physicians, guidance personnel, and others interpret to pupils and parents, the nature and significance of the health problem and aid them in formulating a plan of action which will lead to solution of the problem”***



# EMERGENCY CARE AND FIRST AID

- Since teachers are the first to realize any emergency in school, they should be trained in handling simple emergencies such as traumatic injuries to teeth during contact sports



# SCHOOL HEALTH EDUCATION

- It is the process of providing learning experiences for the purpose of influencing knowledge, attitude or conduct relating to individual or community health



It should cover the aspects of :

1. Personal hygiene
2. Environmental health
3. Family life



# MAINTENANCE OF SCHOOL HEALTH RECORDS

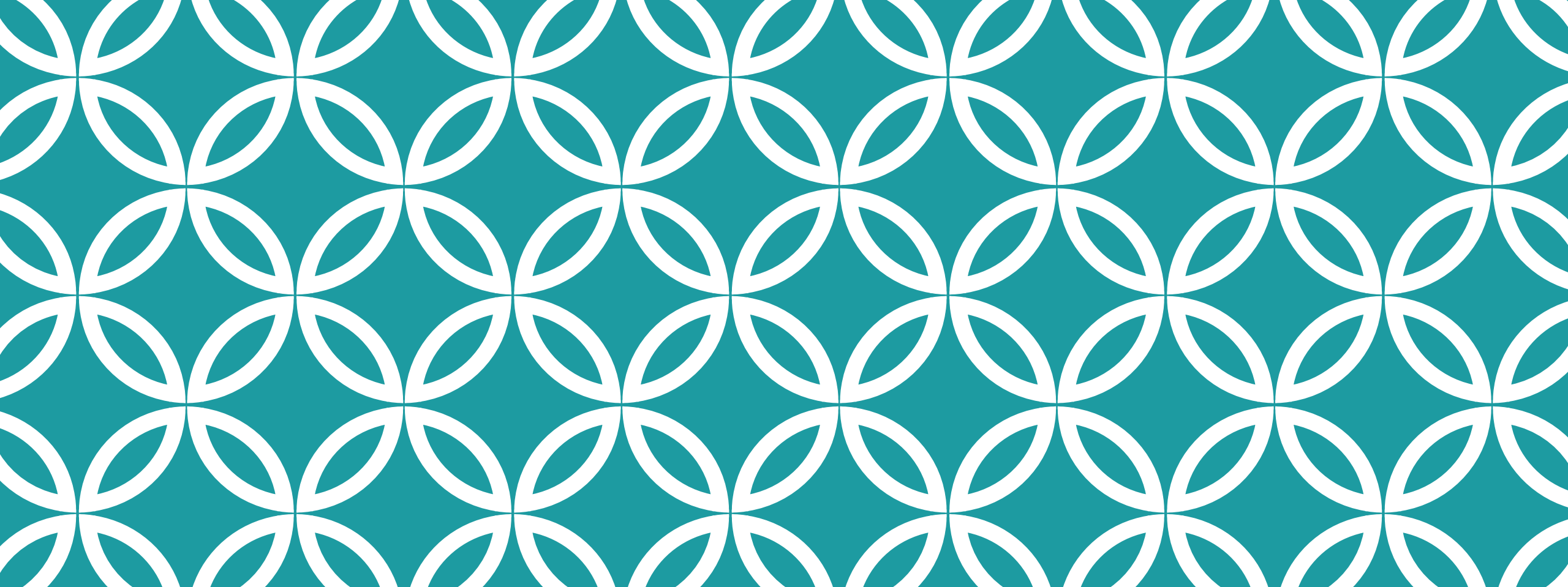
- These records are useful in analyzing and evaluating school health programs and to provide a useful link between the home, the school and the community



# CURATIVE SERVICES

- They include regular dental checkups and prompt treatment wherever possible and referral for special problems.





**ELEMENTS OF  
SCHOOL DENTAL HEALTH PROGRAM**



# IMPROVING SCHOOL - COMMUNITY RELATION

- School provides a valuable link between the school, parents and the community
- One of the first steps in organizing a dental health program is the formation of advisory committee.
- It should include broad representation from parents, teachers, school administrators, dental professionals, health officers and community leaders

The task of these committees is -

- To apprise and publicize the dental needs of the school children
- To address the school administration's concern in the promotion of oral health
- To make people realize the importance of dental health



# CONDUCTING DENTAL INSPECTIONS



- Matter of debate because of high prevalence of dental diseases.
- Every child unless proved otherwise is considered to be free from dental disease ,the positive findings, on such children will provide greater motivation towards dental health.
- Provides an opportunity for individual health education.
- Provides with baseline information upon which treatment program can be built.

## Sample form for use when dental inspection is made in school

Parent / Guardian \_\_\_\_\_

Your child \_\_\_\_\_ has received

a dental inspection which shows the conditions checked as :



Dental attention is needed within six months. It is recommended that your family dentist be consulted as soon as possible.



Dental attention is urgently needed if loss of teeth is to be avoided.



No dental defects are apparent. This inspection however does not constitute a complete examination and it is recommended that your child visit the family dentist for such an examination.

# BENEFITS:

- It serves as a basis for school dental health instruction
- It builds a positive attitude in the child towards the dentist and dental care
- Provide greater motivation towards dental health
- Teacher, students, and dentists concerned with dental health may use the dental inspection as a fact-finding experience

# LIMITATIONS:

- Parents and children rely on dental inspections completely
- Sometimes tend to discourage rather than promote the development of the habit of visiting the dentists at an early age
- Parents can't always be present for dental inspections

# CONDUCTING DENTAL HEALTH EDUCATION



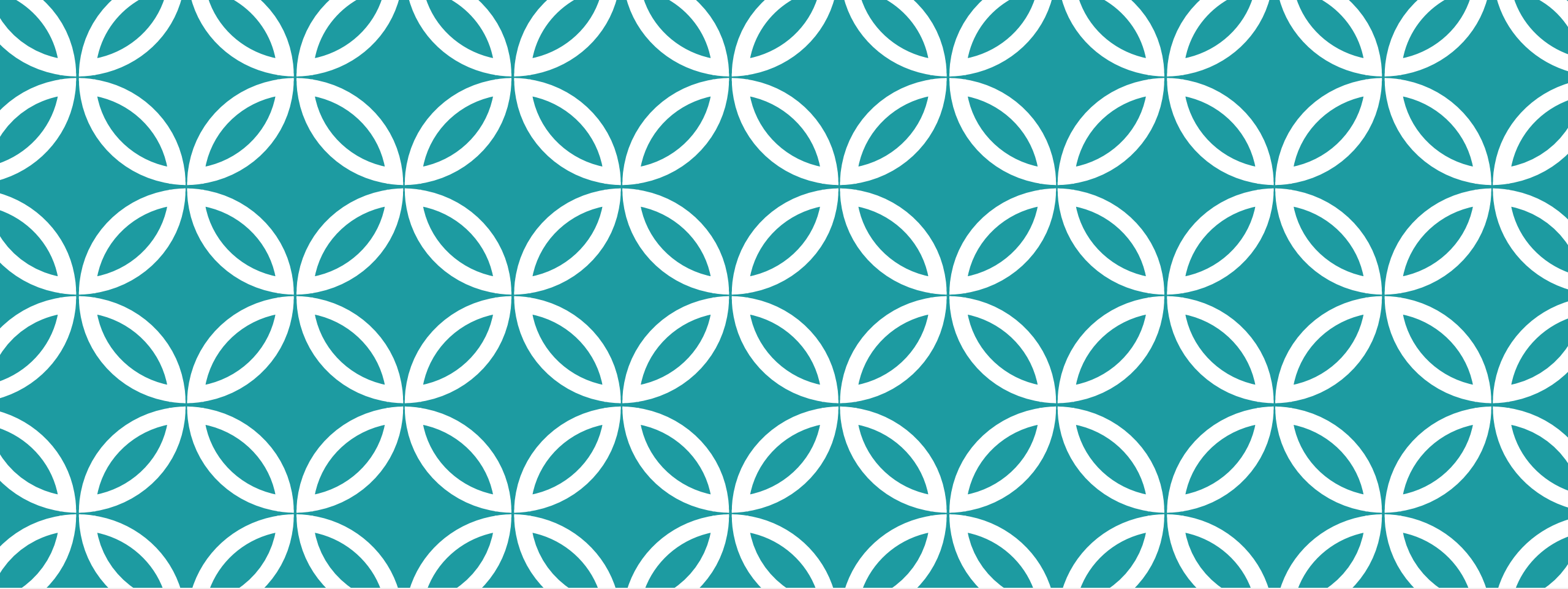
- The dentist serves as the expert resource person to strengthen the teacher's classroom instruction program
- He should give each teacher sincere attention
- This is important in developing proper attitudes and personal dental health practices by the teacher which can be passed on to the classroom

# PERFORMING SPECIFIC PROGRAMS



- TOOTH BRUSHING PROGRAMS
- In the classroom, 6-8 children can be taught as a group Each is given a cup, a napkin, and a kit containing a disclosing tablet, a toothbrush, and a tube of fluoride dentifrice
- The mastery of the 45 degree angulations and the short vibratory strokes can then be repeated on an oversized dentform model

- Next, the children are asked to chew a disclosing tablet and to swish it around the mouth for 30 seconds. They are then encouraged to look at each others' teeth with appropriate emphasis on the fact that the red stain colors the plaque in which the bacteria live.
- Next a magnifying mirror is passed around so the participants can note that their teeth are no different from those of their neighbor i.e. all people have plaque
- Guided brushing can then begin, with the instructor establishing the sequence of teeth to be brushed
- At the end, the mirror is again passed around to show that progress has been made




# **CLASSROOM BASED FLUORIDE PROGRAMMES**



# FLUORIDE 'MOUTH-RINSE' PROGRAM

- A once-a-week mouth rinse can be expected to result in 20% to 40% reduction in dental caries
- The dispenser is graduated so that 2.0 gm. of packaged sodium fluoride powder can be placed in a jug and water is added to the 1000-ml mark
- The rinse should be non-sweetened and non-flavored to discourage swallowing

- 
- Rinsing programs are advised for grades 1 to 12 but not below
  - Five ml of the rinse is dispensed in to each cup and all the children
  - are instructed to rinse the solution in the mouth for 1 minute, after which they are to spit carefully in to the cup
  - The napkin is used to wipe the mouth, after which it is forced into the bottom of the cup to absorb all fluid
  - Fluoride mouth- rinse programs received official recognition of safety

- In Japan, the first trial of the school-based fluoride mouth rinse programme (FMR) was started in 1970 in Yahiko Primary School, Niigata.
- In 1978 in order to prevent the dental caries of 1st permanent molars erupting in preschool age, the FMR was also practiced in nursery schools.
- Since the number of schools carrying out this programme has gradually increased, the Ministry of Health, Labour and Welfare in Japan released the guidelines in 2003, recommending that the FMR be introduced from preschool age children.

# FLUORIDE TABLET PROGRAM

- Is easier to accomplish
- One tablet is given to each student
- The students then chew, swish the 2.2 mg sodium fluoride (1 mg fluoride) around the mouth for a minute and then swallow (swish and swallow technique)
- The daily tablet is more effective than the weekly rinse



# SCHOOL WATER FLUORIDATION PROGRAMS



- The amount of fluoride added to school drinking water must be greater than that used in communal water supplies, i.e. 4.5 times the optimum concentration since children are in school for shorter hours and less water is consumed during that time
- Study have shown a reduction in dental caries prevalence by about 40% among children attending school that support school water fluoride programs a major disadvantage is that children do not receive benefits until they begin school

# NUTRITION AS A PART OF SCHOOL PREVENTIVE DENTISTRY PROGRAMS

- School lunch programs are designed to provide the child with an intake of nutrients i.e. approximate one third of the daily intake of essential carbohydrates, proteins, fat, minerals and vitamins
- Also sugar discipline can be aided through counseling by the school dietician, dental hygienist or teacher



# SEALANT PLACEMENT

- The placement of pit-and-fissure sealants is ideally suited for a school program.
- 1st, 2nd, 6th and 7th standards would be desirable levels to selectively intervene to prevent pits-and-fissure lesions.

# SCIENCE FAIRS

- Science fair not only helps in educating and motivating school children to improve their oral health but also provides an excellent opportunity for dentistry to contribute substantially to the building of a growing reservoir of students who may same day choose a career in dentistry.



# REFERRAL FOR DENTAL CARE

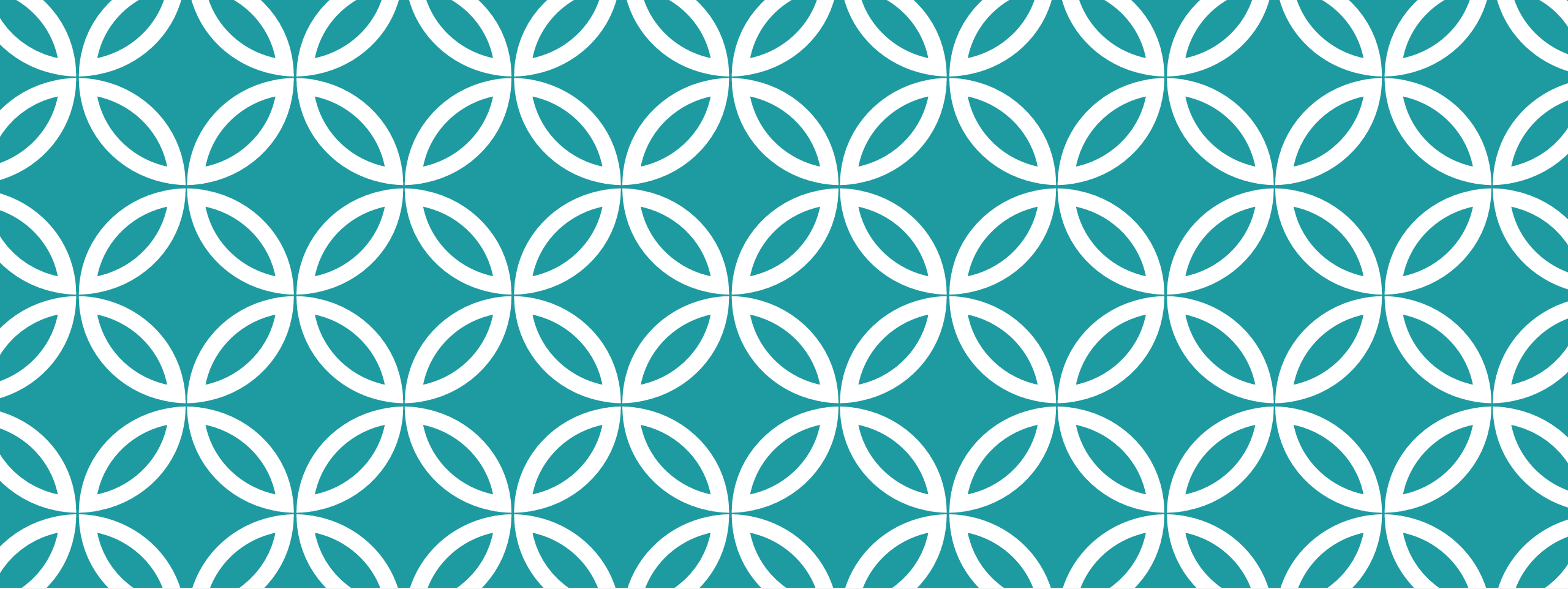
- In few schools dental care is provided at the school itself. However if only emergency treatment is provided, for e.g. the dental auxiliary places eugenol - soaked cotton in a child's cavity to relieve the pain, the parent does not see the child in pain and might conclude that the school has taken care of the dental problem
- Therefore the parent should be informed and made to understand that such emergency treatment is not a cure and they will have to visit the dentist of their choice for proper treatment

# “BLANKET” REFERRAL

- A program that has proved to be effective in many schools is “blanket” referral of all children to their family dentists.
- In this program, all children are given referral cards to take home and subsequently to the dentist, who sign the cards upon completion of examination, treatment, or both.
- The signed cards are then returned to the school nurse, or classroom teacher, who plays an important role in following up the referrals with the child and parents.

# FOLLOW UP

- The mere insurance of referral slips to children will be of little value if steps are not taken to make it clear that the school is interested in defect correction.
- This needs a good follow up system.
- The dental hygienist is the logical person to conduct such follow-up examinations.



# SCHOOL BASED DENTAL PROGRAMS



# “LEARNING ABOUT YOUR ORAL HEALTH” A PREVENTION ORIENTED SCHOOL PROGRAM.

- Developed by the American dental association and their consultants in co-ordination with the 1971 ADA house of delegates and is presently available to school systems throughout the USA.
- Main aim: to develop adequate plaque control skills and knowledge among the school children
- Other topics included: significance of fluoride, oral safety, and the relationship of oral health with total health

# IMPLEMENTATION:

- Divided into five levels –
  1. Preschool (designed for children too young to read)
  2. Level I (kindergarten through grade 3)
  3. Level II (grades 4 through 6)
  4. Level III (grades 7 through 9)
  5. Level IV (grades 10 through 12)




# EDUCATIONAL MATERIAL CONSISTS OF A TEACHING PACKET :

- A teacher's self-contained guide on "dental health facts" with a section on handicapped children
- A glossary of dental health terms
- A curriculum guide featuring content, goals, behavioral objectives and suggested activities for the preschool level and seven or more lesson plans for each of the other levels
- Four overhead transparencies
- Twelve spirit masters (for copying)
- Methods and activities for parental involvement

# EVALUATION OF THE PROGRAM:

- Program influenced favorably the oral health behavior and changes in attitudes towards oral health practices (Dr. Oliver Ezell, 1974)
- Dr. Donald B. Stone and colleagues in 1975 evaluated level 2 of the program aimed at determining the impact of intensive in-service training for teachers versus teacher exposure to minimal orientation.
- No significant difference between the mean knowledge scores of students

- 
- Peterson and Rubinson in 1980 evaluated level 4 :
  - Knowledge, attitude, practices and dental health status of high school students
  - Program produced minor positive changes in dental attitudes, dental status of children, none of which was statistically significant
  - Greater impact on females

# TEXAS STATE WIDE PREVENTIVE DENTISTRY PROGRAMME “TATTLE TOOTH PROGRAMME”

- Cooperative effort between health professional organizations, the Texas Department of Health and the Texas Education Agency (1974 - 76)
- The program was pilot tested in 1975 and field tested in spring 1976 in schools within the states of Texas
- Initially implemented on approx. half million children
- In 1985 extended to 3 million children

# PROGRAMME PHILOSOPHY AND GOALS:

1. Deals mainly with health education in field of primary prevention
  2. Separate lesson plans were developed for each grade
  3. Teacher -training package
- The basic goal of the program was to reduce dental diseases and develop positive dental habits to last a lifetime

# PROGRAM IMPLEMENTATION:

- Texas divided into 8 regions
- Hygienist instruct teachers with videotapes designed for training them
- Class demonstration & field trip to dental office
- Resources and information related to dental diseases also provided

# PROGRAM EVALUATION:




- Dental health knowledge was significantly increased at all grade levels
- Plaque levels were decreased by approximately 15% in randomly selected sample of 2142 children
- Program was well received by teachers
- On average 4.2 hours spend on oral health teaching

# ASKOV DENTAL DEMONSTRATION



- Askov is a small farming community with a population mostly of Danish extraction.
- Very high dental caries - initial surveys made in 1943 and 1946.
- Department of health supervised a demonstration school dental health program in a Askov, including caries prevention and control, dental health education and dental care

- 
- All recognized methods for prevention dental caries were used in the demonstration with the exception of communal water fluoridation
  - Dental care was rendered by a group of five dentists from nearby communities employed by the Minnesota department of health.

# PROGRAM EVALUATION:

1. 28% reduction in dental caries in deciduous teeth of children aged 3 to 5 years
2. 34% reduction in caries in the permanent teeth of children 6 to 12 years old
3. 14% reduction in permanent teeth of children 13 to 17 year old
4. Improvements in filled-tooth ratios

# NORTH CAROLINA STATEWIDE PREVENTIVE DENTAL HEALTH PROGRAMME

- In 1973, a 10 year preventive dentistry was initiated
- Largest of all programmes
- Program philosophy and goals:
  1. Dedicated to the mission of assuring conditions in which North Carolina citizens can achieve optimal oral health
  2. Main components: dietary changes, tooth brushing & flossing habits, sealants and varnish placements

# PROGRAM IMPLEMENTATION :



- Various program on weekly fluoride mouth rinse, sealant placement and dental health education undertaken
- Teacher training program
- Fluoridation of communal water supply

# PROGRAM EVALUATION:

- In 1968 survey, 34% caries reduction from school water fluoridation for last 8 years
- Community water fluoridation results in 53% reduction in DMF (Ashville,1976 )
- 86% total sealant retention (1984)




# HEAD START —PRE-SCHOOL DENTAL HEALTH PROGRAM

- Head start is a program of the United states Department of Health and Human Services initiated in 1965 that focuses on assisting children from low-income families.
- It is the longest-running program for stopping the cycle of poverty in United States.
- It provides comprehensive education, health, nutrition, and parent involvement services to low-income children and their families.

# SCHOOL HEALTH ADDITIONAL REFERRAL PROGRAMME (SHARP)



- This program was instituted in Philadelphia with the purpose of motivating parents into initiating action for correction of defects in their children through effective utilization of community resources.
- The project was carried out by district nurses with the co-operation of school personnel.

- 
- The nurses made daytime visits to families in which the mother were at home.
  - Working parents were contacted by phone.
  - The one-to-one basis of health guidance between parent and health worker established better rapport between school and home.

# BRIGHT SMILES, BRIGHT FUTURES

- Collaboration of Colgate and IDA
- Starting in July 2003, targeting 45 lakh children
- Free toothpaste and toothbrush distributed
- Teachers Training Program



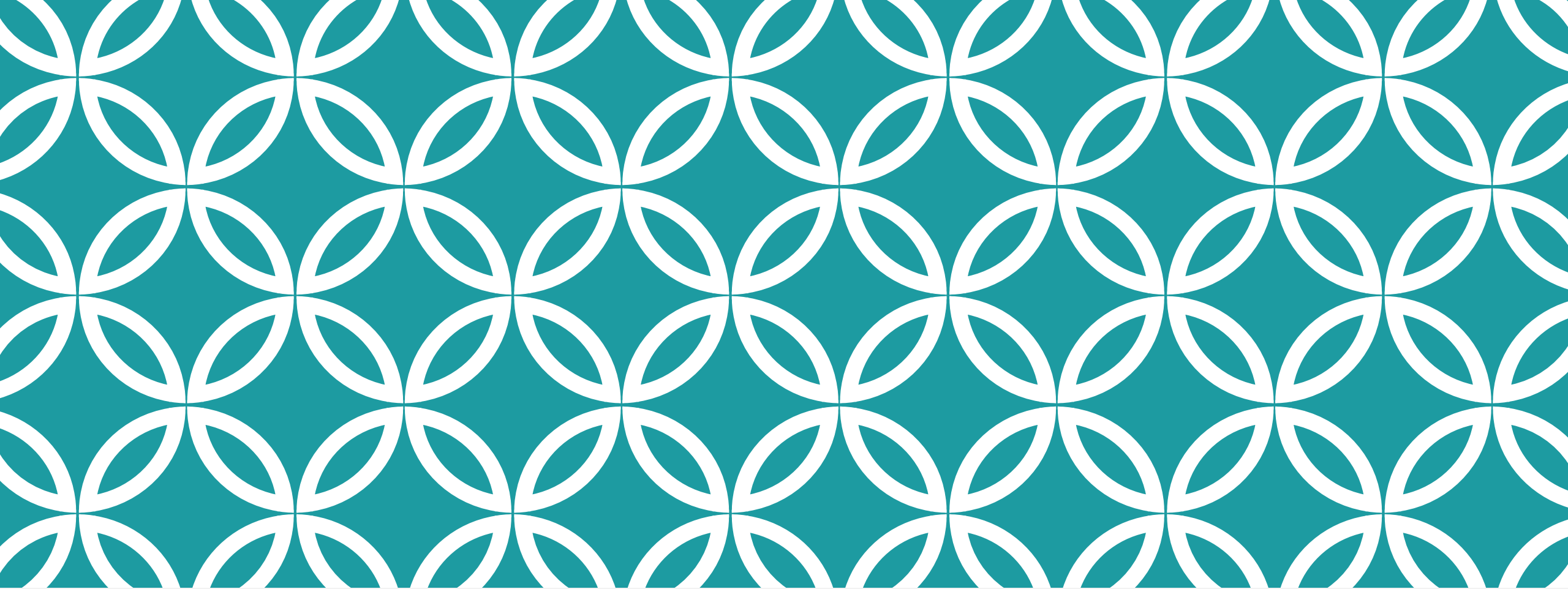


- Deficiencies of program:

1. No follow up

2. Oral health education depends upon imported charts and films

3. No live demonstration



# **VARIOUS SCHOOL DENTAL HEALTH PROGRAMMES IN INDIA**



# ORAL HEALTH SELF CARE PROJECT (OHSEC)


- A health promotion programme covering 7,50,000 children from over 1600 primary schools (nursery to class V) in rural and urban Delhi
- Started in 1986

# AIMS:

- To improve health of municipal primary school children in Delhi through an education programme
- To increase awareness and understanding of causes of ill health amongst children
- Teaching modules and manuals:
  - 3 modules for class 3<sup>rd</sup> , 4<sup>th</sup> & 5<sup>th</sup> .

# RESULTS(1995):

- Teachers
  1. High level of satisfaction with program
  2. Increase in knowledge and confidence in teaching health related topics
- Parents
  1. Increased awareness

- 
- Children
    1. Significant reduction in dental plaque and gingivitis
    2. Increase in knowledge and attitude especially towards self-care

# INTENSIVE DENTAL HEALTH CARE PROGRAM

- Launched in 1989-90 by Govt. of Punjab for school children, school teachers and general public
- To monitor and implement all the dental programmes it was proposed to establish a post of District Dental Health Officer for all the districts of the State

# AIMS:

- To bring down the incidence of oral and dental diseases to less than 40%.
- To provide total oral health coverage to all the school going children in the age group of 6 – 12 years.
- To provide Dental Health Education Training to all the primary school teachers, medical & paramedical personnel.

# PROGRAM IMPLEMENTATION:

- Under this Programme one sub-division is selected and the schools are covered block – wise. After covering the whole Sub-division the next Sub-division is taken up
- At present three Medical Officers (School Health Clinic-I, Intensive Dental Health Care Programme-I & P.H.C. Medical Officers (Dental) – I) visit the schools as per the detailed programmes circulated to them

- The Special feature of this Programme is that in addition to the imparting of Dental Health Education training to the School children & detailed Oral Health check up, each child is given a mouth rinses with the freshly prepared 2 % solution of sodium fluoride to arrest the initiation & progress of dental caries and this process is repeated after every six months
- The children suffering from Dental Diseases are provided necessary Dental treatment on the Mobile Dental Clinic Vans

# PARIVARTAN

- Initiated by Dept. of Pedodontics, Ahmedabad Dental College, Ranchhodpura in the year 2010
- PARIVARTAN is a school based dental care programme which provides comprehensive, therapeutic and preventive dental treatment for school children
- 15 schools including more than 10,000 children have been covered in this programme

- The programme which began on a very small scale initially for create awareness is presently showing good results and a lot of promise and potential for the future.
- Dental treatment provided for children is completely free of cost and participating children are provided with free food, transportation and oral hygiene kit.
- The programme aims to include more and more children in future to make them dentally healthy and responsible individuals.

# NEEV


- The School Dental Program "Neev" would be initiated across Government Schools run by Govt. of NCT of Delhi in Delhi State as a Pilot Project
- The Dental Team along with the Mobile Dental Clinic would draw a district plan which would cover different schools round the year

# PRIMARY INTENTION IS TO:

- Promote oral health through Dental Health Education and organize dental check up/ Screening
- Provide Primary and Secondary Dental care through Mobile Dental Clinic in the Schools
- Make necessary referrals for advanced care available at Maulana Azad Institute of Dental Sciences

# TARGET GROUP:

- The Program would be run for one year during which it would cover all the Public funded schools in any one District, Delhi State (at least 50 schools) and include all children from Class 6th to Class 10th
- Training and involving Teachers, School authorities and Parents as team members
- Collaborating ultimately into the existing Health Care system at the school level

- 
- Currently the project is under review by the Department of Health and Family Welfare and would be sent to Department of Finance for final approval. This project has been supported by School Health Scheme run by the Govt. of Delhi

Authors	Year of Publication	Study Area	Study Population	Type of Intervention	Plaque/Gingival Scores	Dental Caries	Knowledge, Attitude & Practice
Tewari et al., [9]	1992	Ambala	5-16 year	Anganwadi workers, school teachers, professional instruction	-	-	Significant increase in brushing frequency
Kapadia et al.,[10]	1999	Mumbai	9 year	School teachers, professional instruction	Significant reductions in plaque	-	Significant increase in knowledge
Goel et al.,[11]	2005	New Delhi	10-13 year	Professional instruction, charts and models	-	-	Improvement in dental health awareness
Shenoy et al.,[12]	2010	Mangalore	12-13 year	Professional instruction, audio-visual aids	Highly significant reductions	-	Significant improvement
Ajithkrishnan et al.,[13]	2010	Vadodra	12-15 year	Professional instruction, models, charts and posters	Reduced plaque score but no reduction in gingival scores	No reduction in DMFT scores	-
Hebbal et al.,[14]	2011	Belgaum	12 year	Professional instruction, audiovisual aids, chalk and blackboard	Reduced scores	-	Increase in knowledge scores
Chachra et al.,[15]	2011	Chandigarh	5-16 year	Coloured albums, preventive package including fluoride, professional instruction	-	Highly significant reduction in DMFT and DMFS scores	Significant increase in oral health KAP
Chandrashekar et al., [16]	2012	Hyderabad	12-15 year	Professional instructors and school teachers, photos, brochures	Significant reductions	-	-
Bhat et al., [17]	2012	Bangalore	12-16 year	Power point presentations, professional instruction	-	-	Significant increase in oral health knowledge
D'Cruz et al., [18]	2012	Bangalore	13-15 year	Powerpoints and professional instructions	Significant reductions in both the scores	-	Improvement in oral hygiene knowledge

**[Table/Fig-2]:** Summary of studies depicting the impact of school dental health education programmes in India

# CONCLUSION

- Lacunae in provision of oral health services and oral health education in schools.
- Government's role is key for provision of school OHP programs.
- School based oral health programs in both urban and rural areas, if well co-ordinated can probably help solve the problem.