



School Oral Health Program, Kuwait-Forsyth



School Oral Health Program, Kuwait-Forsyth (1982-2011)

Outline:

- Introduction
- Program Overview:
 - Program History
 - Administration Structure
 - Functional Structure
- Target population
- Available resources
- Program Activities
 - Health Education
 - Prevention
 - Treatment
- Program Evaluation
- Program Highlights and Future plans
- Conclusions

School Oral Health Program, Kuwait-Forsyth

➤ Introduction:

School Oral Health Program, Kuwait is a comprehensive school-based/linked program providing Oral health Education, Prevention and Treatment to almost 270,000 Kuwaiti school children. This program is a joint venture between Ministry of Health, Kuwait and Forsyth Research Institute, Boston, USA. This program was established in 1982-83 on pilot basis and expanded later. This is one of the largest/long standing School Oral Health Program in the world and only one of its kinds in the Gulf region where there is a great need for such programs.

➤ Program Overview:

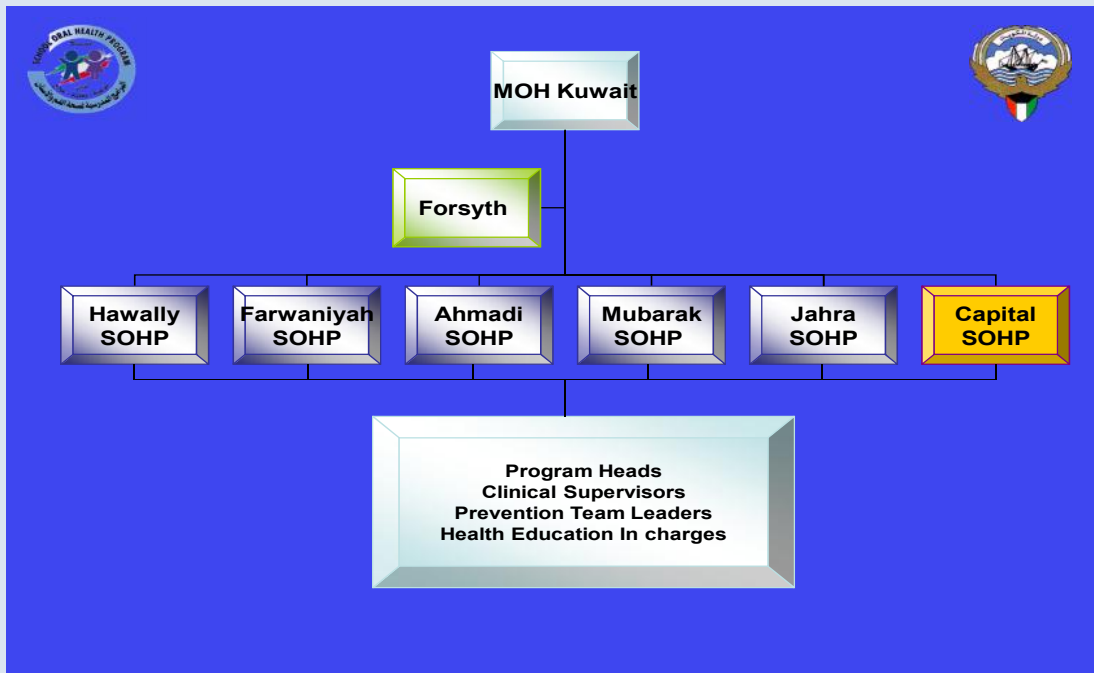
▪ Program History:

1982-83	After the initial needs assessment by Forsyth Institute, Boston, pilot program was started in Capital Governorate.
1986	After the initial success the program was extended to Ahmadi Governorate under the supervision of Royal Dental College, Denmark.
1990-1992	Program activities were suspended because of war.
1993-1994	Separate programs were started in all the governorates with Farwaniah Governorate under the supervision of Royal Dental College, Denmark, Hawally Governorate under Kentucky University and Jahra Governorate under Forsyth Research Institute
1999-2000	All the governorates came under Forsyth Research Institute, Boston.
2003	3 Clinics for children with special needs was set up
2004	New program started functioning at the new governorate of Mubarak Al Kabeer

School Oral Health Program, Kuwait-Forsyth

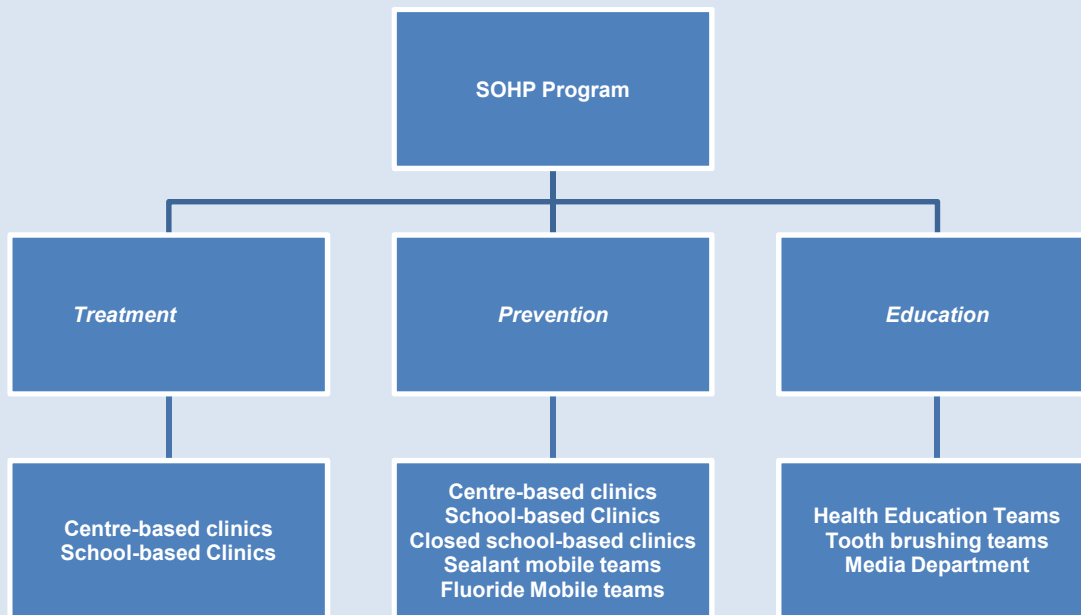
Today, School Oral Health Program, Kuwait-Forsyth operates in all the 6 governorates of Kuwait and follows the standardized protocol for Education, Prevention and Treatment.

Administration Structure:



- Capital SOHP belongs directly to MOH but follows the same protocol as other programs.

Functional Structure:



School Oral Health Program, Kuwait-Forsyth

➤ Target population:

KG Schools/Students	Primary Schools/Students	Intermediate Schools/Students	Total Schools/Students
196	246	175	617
40,564	128,744	90,663	259,971

In brief, this school-based program provides only Oral health promotion and Prevention to Kindergarten children and provides, Oral Health Promotion, Prevention and Treatment to all the children in Primary and Intermediate schools. Hence this program covers all the school children in the age range of 4 to 15 years. All the services are provided to children with positive consents.

➤ Available resources:

Program	Morning Clinics				Evening Clinics	Total
	Centre	School Clinics	Sealant(Mobile)	Fluoride(Mobile)		
Farwaniah	09	20	05	07	9	50
Jahra	06	09	08	05	10	38
Mubarak	07	07	07	03	7	31
Hawally	10	14	07	04	11	46
Ahmadi	11	11	08	05	11	46
Capital	14	3	08	05	14	44
<i>Total</i>	<i>57</i>	<i>64</i>	<i>43</i>	<i>29</i>	<i>62</i>	<i>255</i>

School Oral Health Program, Kuwait-Forsyth

Prevention, Education along with treatment is provided in School-based and Center-based clinics whereas mobile teams perform exclusively prevention and cover those schools without clinics. This program has around 200 dentists, 330 dental nurses and around 25 dental hygienists working for it.

➤ Program Activities:

▪ Health Education:

1. All the students get at least two oral health education lessons with supervised tooth brushing during every school year.
2. Oral health education sessions are organized for parents and pregnant mothers.
3. Dental health education programs are conducted for school teachers.
4. Participating in school activities.
5. Participating in the community activities in public places.
6. Each year around 4,000 hours are spent on health education.
7. Concentrated efforts to make health education need-based.
8. Health Education Teams work closely with Prevention Teams.....
9. Recently Department has come up with 10 new brochures and 6 posters.
10. Since 2008-2009, 80,000 emails and SMSs are being sent with important messages each year....



Figure 1: KG Children visiting the centre for Education

School Oral Health Program, Kuwait-Forsyth



Figure 2: Tooth brushing demonstration in Schools



Figure 3: Supervised Group Tooth brushing



Figure 4: Parent Education



Figure 5: Activities within the center



Figure 6: Group Activities in center

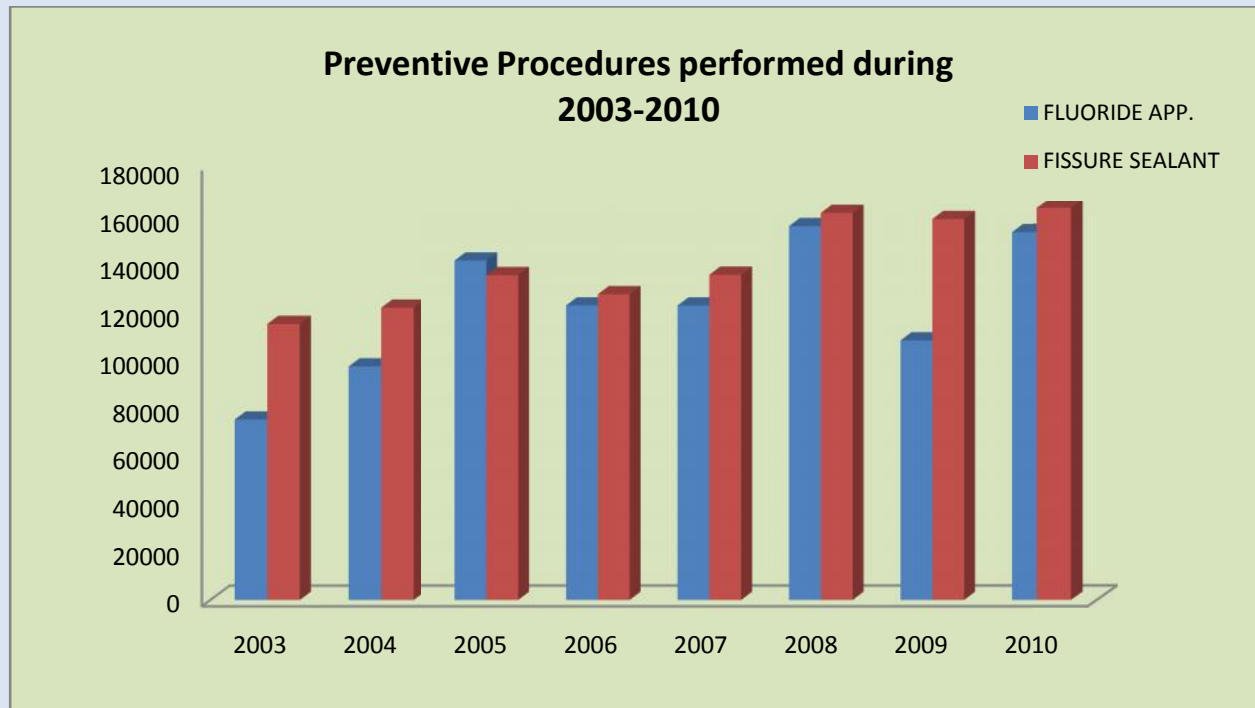


Figure 7: Activities for children with Special needs

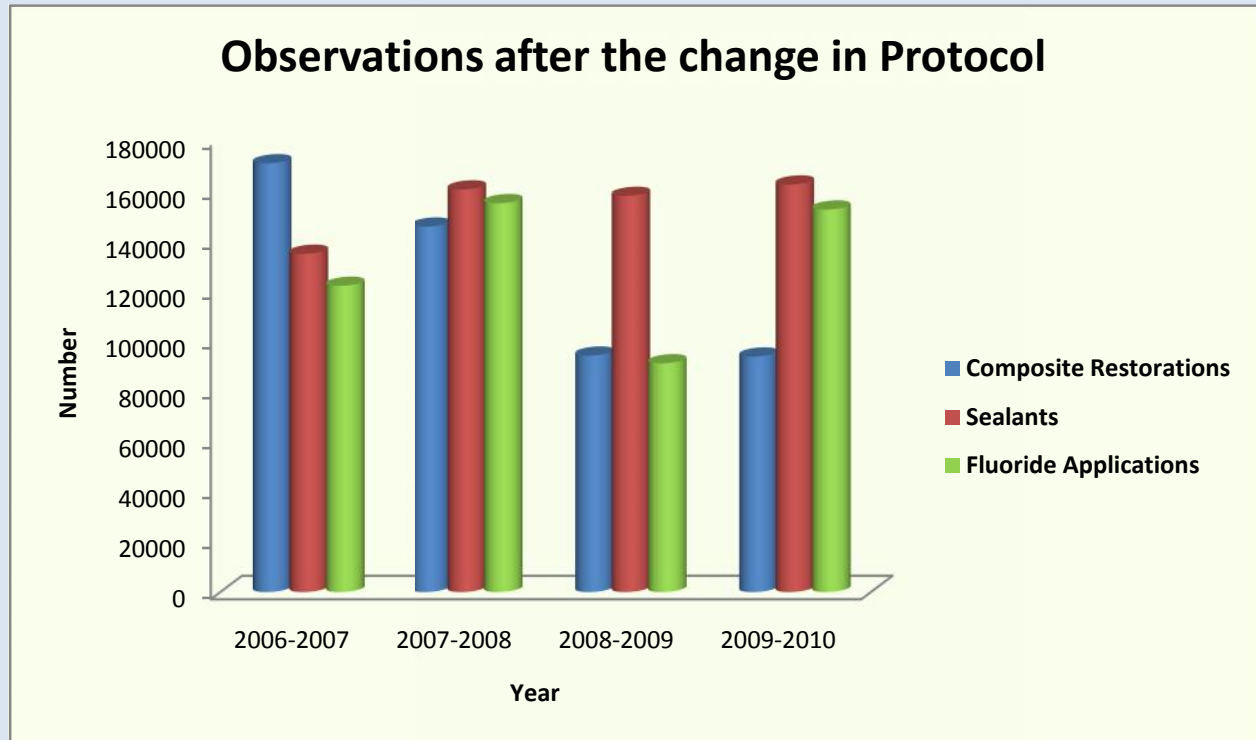
School Oral Health Program, Kuwait-Forsyth

▪ Prevention:

1. Primary Prevention is provided to all the children in the age group of 4 to 16 years with positive consents.
2. Type and mode of delivery of preventive care under SOHP has evolved during the recent years.
3. Biannual application of Fluoride varnish and Pit and Fissure Sealants on newly erupted Permanent molars and pre-molars are the forms of primary prevention performed under SOHP.
4. Fluoride gel was replaced with Fluoride varnish since 2006.
5. Prevention productivity has increased during the recent years which have been possible due to the efficient use of portable units for prevention.
6. Today SOHP has 43 mobile teams for Sealants and around 30 teams for fluoride varnish application. These teams cover schools that do not have fixed dental clinics.



- Shows an increasing trend in prevention productivity.
- Decrease in Fluoride productivity during 2009 is because of the closure of schools due to Swine flu.
- Our Sealant productivity has increased since 2007 after we decided to seal early Caries Lesions.



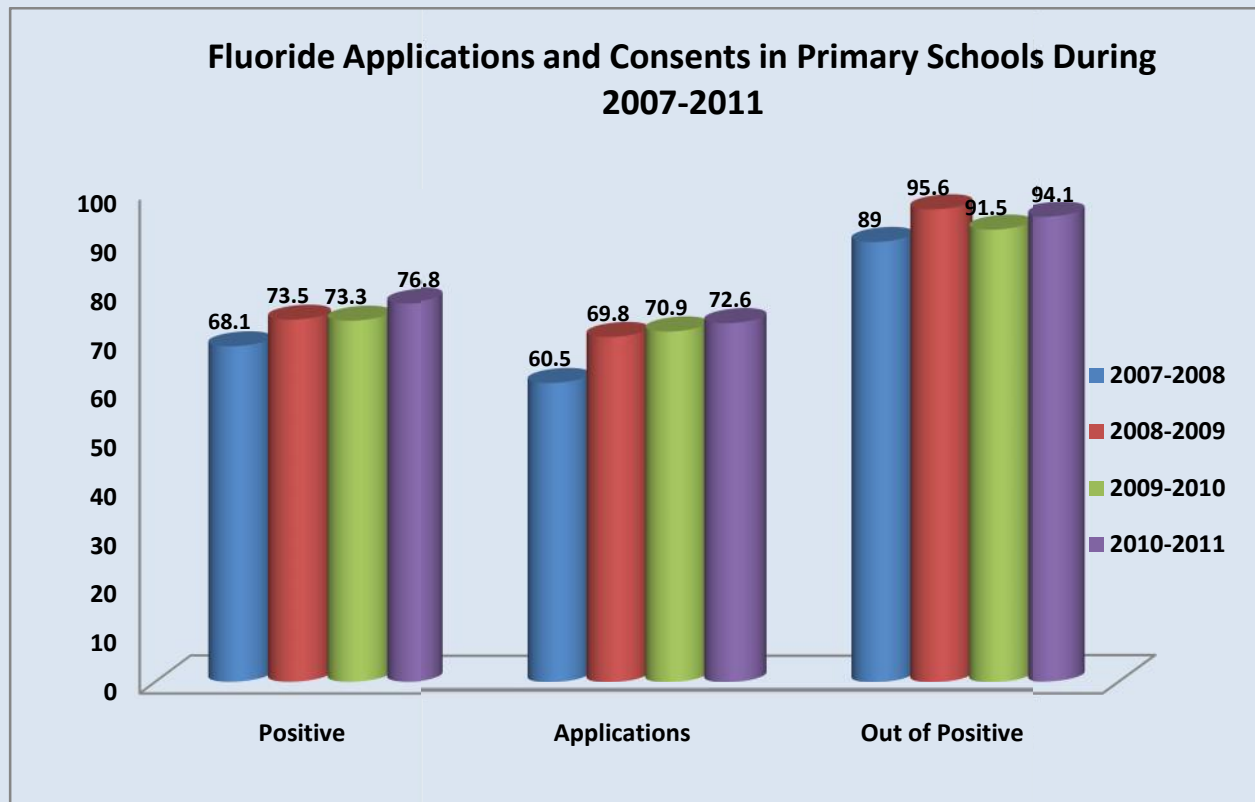
- After SOHP decided to seal Early lesions, our composite restorations have decreased drastically and at the same time Sealants have increased.
- This is a very healthy change for the program, a shift from “Treatment to Prevention”.



Figure 8: Fluoride Varnish Application



Figure 9: Sealant application by mobile teams using Portable units

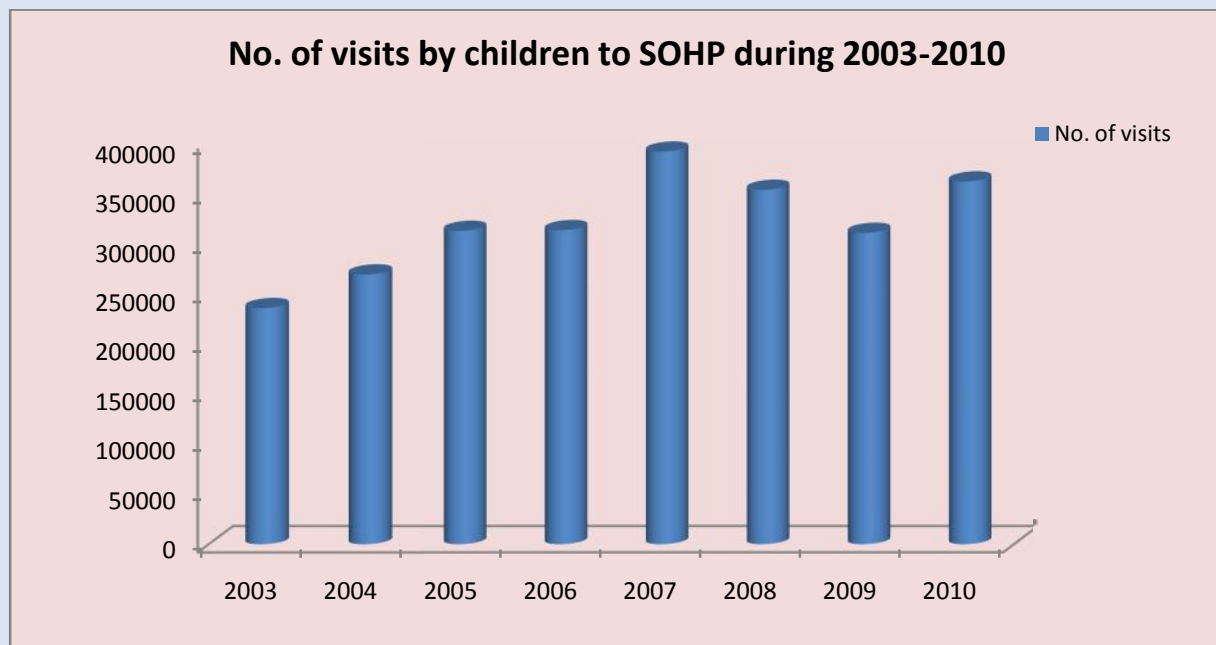


- This shows increasing trends in positive consents and coverage in primary schools during the last few years.
- Increase in consents is largely due to the efforts of our education teams in creating awareness about the importance of prevention program.

School Oral Health Program, Kuwait-Forsyth

■ Treatment:

1. Treatment is provided to all the children in the age group of 6 to 16 years with positive consents.
2. Treatment is performed in centre-based and school-based clinics.
3. General Pediatric dentistry procedures are performed along with Root Canal Therapy.
4. All the procedures performed are outlined in SOHP clinical protocol.
5. Procedures are performed on quadrant basis in order to minimize the no. of appointments to the child.
6. Four-handed dentistry is practiced for all the procedures.



- Children visits have increased during the recent years mainly because of increased prevention coverage.
- It also indicates the increase in coverage by the program.



Figure 10: Four-handed dentistry practiced in one of our center-based clinics



Figure 11: School-based clinic



Figure 12: SOHP Clinical staff

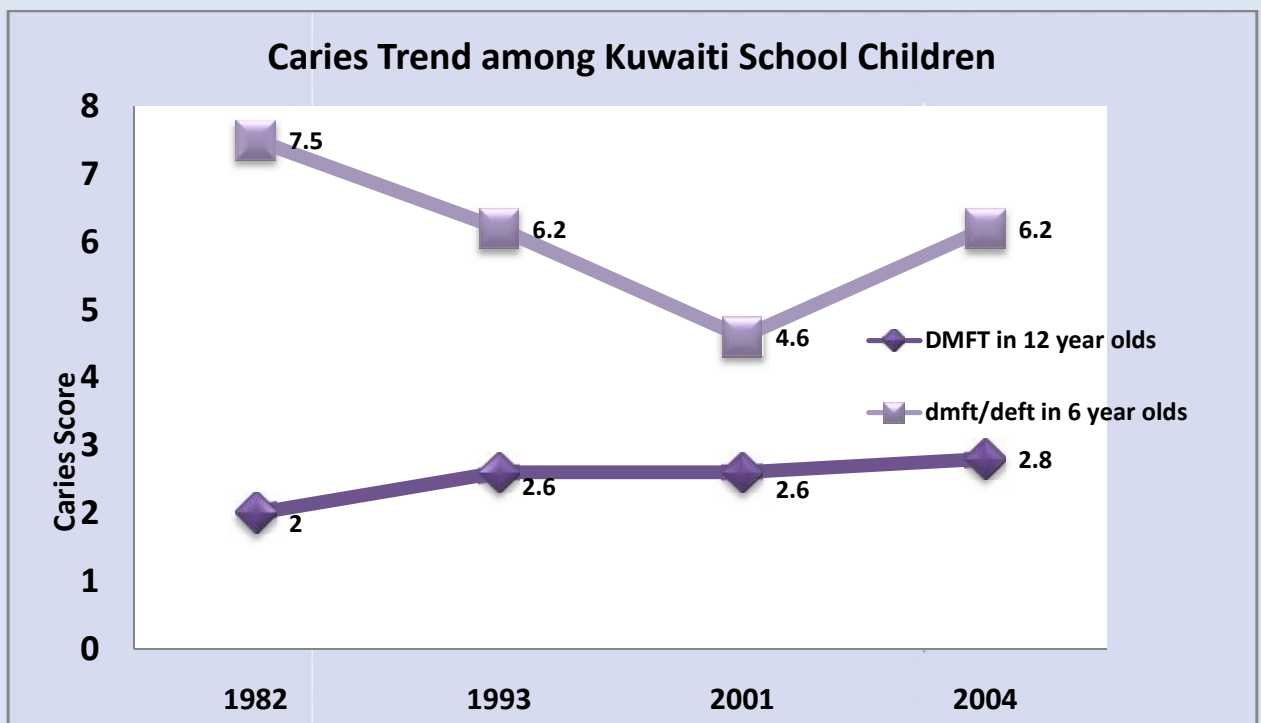
➤ Program Evaluation:

Different methods are employed to evaluate various aspects of this program

1. Staff Evaluation: All the staff (Clinical and non-clinical) are evaluated on an annual basis.
2. Outcome Evaluation: Overall effectiveness of this program is evaluated once in 5-6 years by evaluating the oral health status of 4 to 16 year old Kuwaiti children under this program. Because of the efforts of this program the increasing trends in Caries levels has been stabilized.
3. Standard methods are employed to evaluate all the clinical and infection control procedures performed.
4. Evaluation for Sealant Retention: Two kinds of retention checks are performed on the sealants placed,
 - a) Short-term Sealant retention checks.
 - b) One year Sealant retention checks.

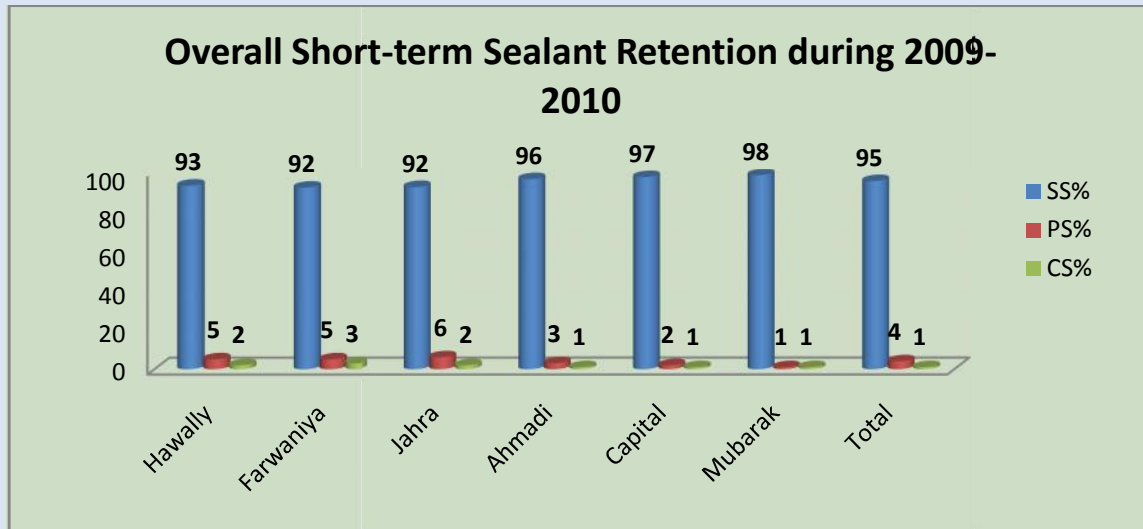
These retention checks have immensely helped SOHP in improving the quality of sealants placed and controlling Dental Caries.

Some of the evaluation results are shown below:



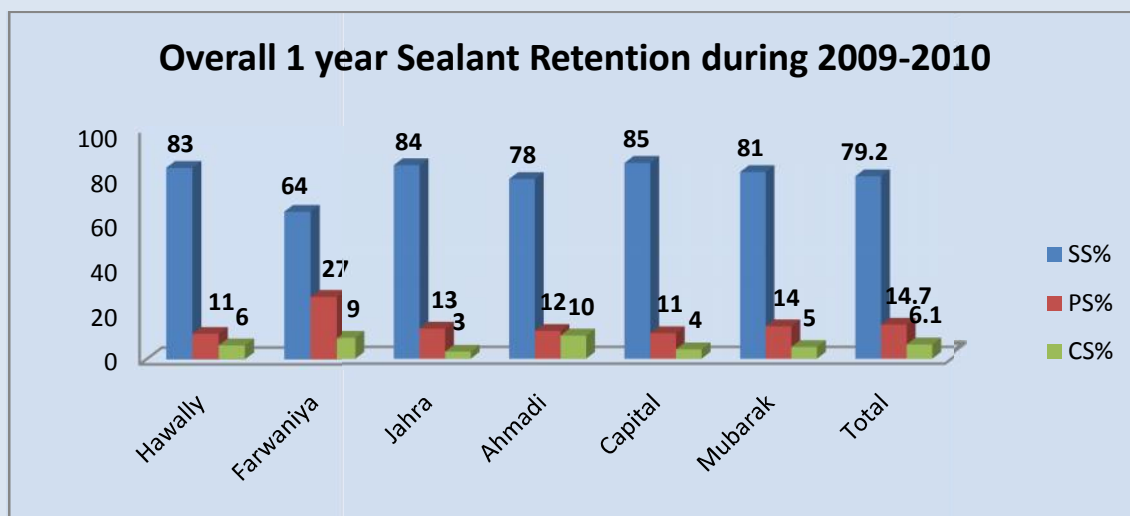
- Increasing trends previously seen have been stabilized.
- Please note that during 2001 only dft was recorded in primary teeth without “m” component.

School Oral Health Program, Kuwait-Forsyth



SS- Sound Sealants, PS- Partially lost Sealants, CS- Completely lost Sealants

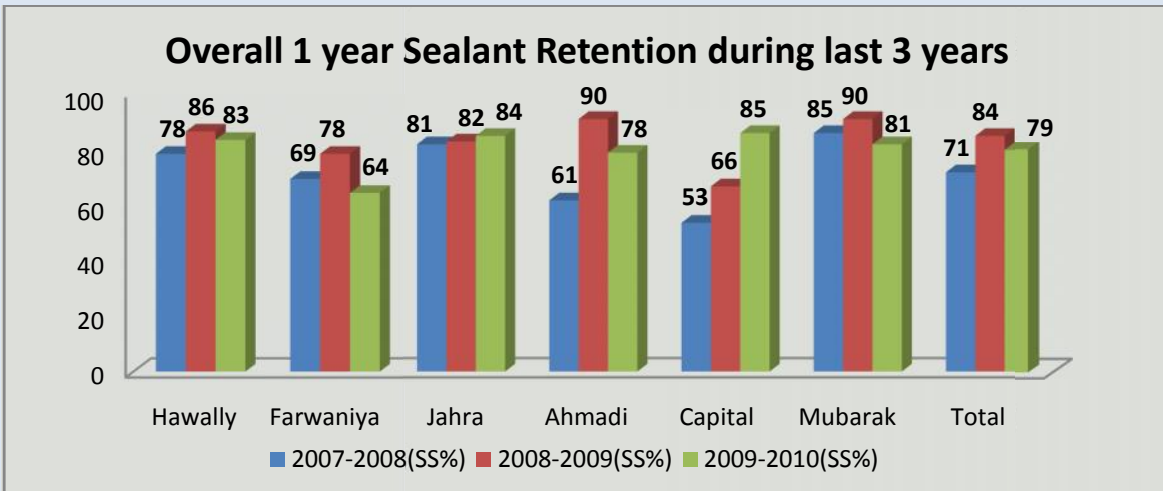
- Almost 95% of the sealants placed were completely retained during 2009-2010.
- Short-term evaluation is done within few days after the sealant is placed.



SS- Sound Sealants, PS- Partially lost Sealants, CS- Completely lost Sealants

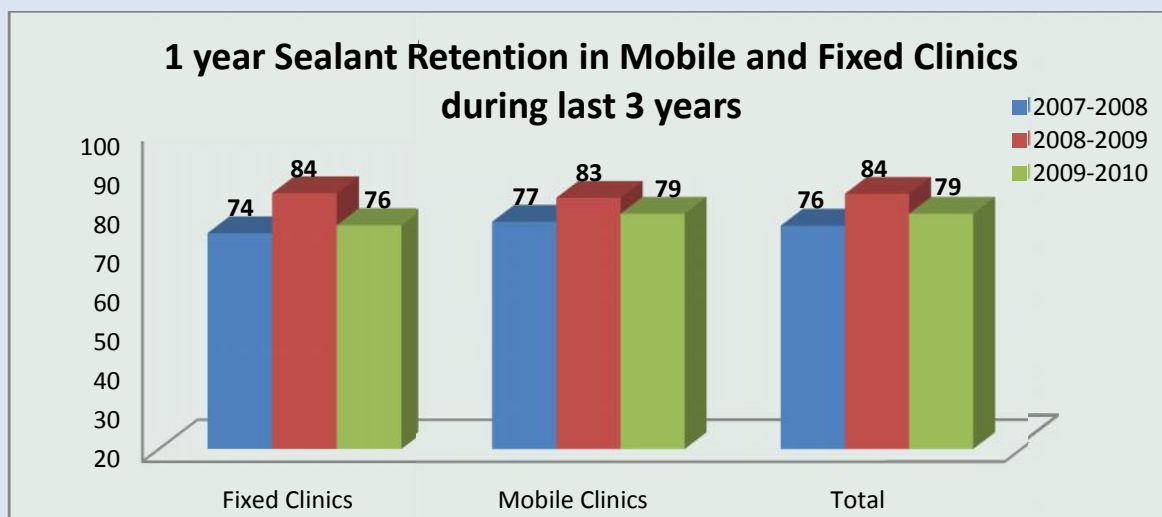
- After 1 year almost 80% of our sealants are completely retained this is almost in line with the international standards for a school-based program.
- Sealants placed during 2009-2010 were evaluated during 2010-2011 for retention by neutral calibrated examiners.

School Oral Health Program, Kuwait-Forsyth



SS- Sound Sealants

- We have been doing 1 year retention checks for the sealants placed during the last 3 years.
- Comparison for all the 6 governorates in Kuwait.



SS- Sound Sealants

- Three year comparison of the sealants placed in mobile and fixed clinics shows that those placed through mobile clinics fared better most of the time.

➤ **Program Highlights and Future Plans:**

- a) Research is one of the major highlights of this program. SOHP has more than 20 publications in peer-reviewed journals.
- b) All the clinical staff recruited receives theoretical and practical training pertaining to SOHP protocol but not limited to it.
- c) All our patient files in the centers are electronic since last 4 years.
- d) SOHP follows universal infection control procedures which is constantly monitored for quality assurance.
- e) Separate school-based clinics for children with special needs are another important milestone of SOHP.
- f) Recently the radiology technology here has been digitalized.
- g) Effective utilization of portable units for prevention has been a major achievement of this program.
- h) SOHP is the only school-based oral health program in the Gulf region and a rare one internationally covering such a large student population.

• **Future Plans:**

- a) Start a oral health prevention and education program for children below 4 years of age.
- b) Increase coverage each year and reduce the burden of dental caries.
- c) Collaborate and cooperate with other departments like Ministry of Education, Ministry of Trade, etc to achieve our objectives.

➤ **Conclusions:**

Today SOHP has become a trendsetter in the field of school-based oral health prevention and education and hence has become a model for oral health planners in Gulf region. With the adoption of evidence-based methods this program has become very comprehensive.