



## Dental Public Health Activities & Practices

**Practice Number:** 40001  
**Submitted By:** Oral Health Program, Office of Family Health, Oregon Department of Human Services  
**Submission Date:** November 2001  
**Last Updated:** November 2001

<b>SECTION I: PRACTICE OVERVIEW</b>		
<b>Name of the Practice:</b> King Fluoride School-Based Rinse/Tablet Program		
<b>Public Health Functions:</b> Assurance – Population-based Interventions Assurance – Oral Health Communications		
<b>HP 2010 Objectives:</b> 21-1 Reduce dental caries experience in children. 21-2 Reduce untreated dental decay in children.		
<b>State:</b> Oregon	<b>Region:</b> Northwest Region X	<b>Key Words:</b> Fluoride mouthrinse, fluoride supplement, school based program, oral health education, prevention
<b>Abstract:</b> The Oregon Department of Human Services, Oral Health Program (OHP) administers the King Fluoride Program, a school-based program providing weekly fluoride mouthrinses or daily chewable fluoride tablets, as well as oral health education, to children in grades K-6. The program began statewide in 1974 with fluoride mouthrinses, and chewable tablets were added as an option in 1987. Schools with 30% or more of their students participating in the Free and Reduced Lunch Program living in non-fluoridated communities and in communities with $\leq 0.3$ ppm fluoride levels in the drinking water are eligible for the program. Program supplies and training materials are provided at no cost to the participating schools. During the 2000-01 school year, 118 grade schools and 6 Pre-Kindergarten/Head Start programs participated in the program from 27 of 36 counties in the state, providing fluoride mouthrinses or tablets to a total of 17,300 children.		
<b>Contact Persons for Inquiries:</b> Rosa C. Sanchez Dieter, R.D.H., B.S., Oral Health Program Coordinator, Oral Health Program, Office of Family Health, Oregon Department of Human Services, 800 NE Oregon Street, Suite 825, Portland, Oregon 97232, Phone: 503-872-6736, Email: <a href="mailto:rosa.c.sanchez-dieter@state.or.us">rosa.c.sanchez-dieter@state.or.us</a>		

## SECTION II: PRACTICE DESCRIPTION

### **History of the Practice:**

The Oral Health Program (OHP) school-based fluoride program started statewide in 1975, under the name "Swish and Swash." In 1983, the program became known as the "King Fluoride Program." Chewable fluoride tablets were offered as an option in delivering fluoride supplements through the program since 1987.

### **Justification of the Practice:**

Oregon has over 3.5 million people. Only 24.8% of the population is served by optimally fluoridated water systems. Three counties have no dental providers and 11 counties are federally designated Health Professional Shortage Areas. According to 1993 Oregon Oral Health Needs Assessment, 47% of Head Start children aged 3-5 have experienced decay, 55% of children aged 6-8 and 46% of those aged 10-12 have a history of decay in their primary or permanent teeth, and only 27% of 8 year olds have dental sealants in their first permanent molars. There are 28 community health centers providing dental services of varying degrees; however, the majority of these are in the urban areas of the state resulting in a large underserved segment of the population in the rural areas. The OHP administers the King Fluoride Program in an effort to increase the awareness of the importance of fluoride, initiate good oral health practices at an early age and deliver an effective prevention.

### **Administration, Operations, Services, Personnel, Expertise and Resources of the Practice:**

The King Fluoride Program is supervised and coordinated statewide by a 0.5 FTE dental hygienist who serves as the Oral Health Program Coordinator and five Dental Health Consultants of the Oregon Department of Human Services, Oral Health Program (OHP). The program's weekly fluoride mouthrinses or daily chewable fluoride tablets are distributed and implemented by local public health nurses; school district nurses; teachers; aides; school administrative staff, parents and/or volunteers as designated by each school. All supplies and training materials are provided at no charge by the program. Funding for the program comes from Maternal and Child Health Title V funds.

The program coordinator supervises five salaried dental health consultants who coordinate the program in seven counties only due to funding limitations. The five Dental Health Consultants are registered dental hygienists or expanded function dental assistants. Each Consultant is budgeted to work a maximum of 100-200 hours per school year and their duties include: introducing the program to newly enrolled schools, providing training and technical support to schools in implementing weekly fluoride mouthrinses or providing daily fluoride tablets, and delivering oral health education to school officials, teachers, volunteers and students.

Schools with a with 30% or more of their students participating in the Free and Reduced Lunch Program living in non-fluoridated communities and in communities with  $\leq 0.3$  ppm fluoride levels in the drinking water are eligible for the program. Once a school is enrolled in the program, all students in the school are eligible to participate. Parental consent is required for students to receive fluoride mouthrinses or chewable tablets. The schools, with the guidance of the Dental Health Consultants, decide on the option of mouthrinses or chewable tablets for their students. For example, very young children who are unable to competently "swish and spit" may be recommended to take chewable fluoride tablets. The program follows the recommended dietary fluoride supplement schedule from the American Academy of Pediatric Dentistry and the American Dental Association. In the classroom students swish once per week with 10ml (2tsp) solution for 60 seconds and then return it to the cup and are instructed not to eat or drink for 30 minutes. The tablets are taken in the classroom once per day while the students are in school session. The students are instructed to take the tablet in their mouths chew for 30 seconds, swish the resultant solution for 30 seconds, and then directed to swallow the solution. The students are reminded not to eat or drink for 30 minutes. The program supplies and training materials are provided at no cost to the participating schools. During the 2000-01 school year, 118 grade schools and 6 Pre-Kindergarten/Head Start programs participated in the program from 27 of 36 counties in the state, providing fluoride mouthrinses or tablets to a total of 17,300 children.

**Budget Estimates and Formulas of the Practice:**

- Biennium budget of \$84,676 for staffing – 0.5 FTE Oral Health Program Coordinator and 5 Dental Health Consultants (each Consultant with a maximum of 200 hours per school year).
- Biennium budget of \$10,765 for in-state travel.
- Biennium budget of \$26,165 for the King Fluoride Program supplies and services (e.g., toothbrushes, fluoride supplies, office supplies, printing, copying, etc.).

**Lessons Learned and/or Plans for Improvement:**

The Oral Health Program is investigating the development of rules specific to the administration of school fluoride under the current medication administration rules in Oregon. We will continue to pursue the development of a “standing order prescription” for the administration of the tablets that will be signed by the state medical consultant or state dental director (currently we require a signed prescription by a local dental or medical professional for each county). Efforts will continue in the pursuit of funding more Dental Health Consultants to reach more counties in the state. Better data collection for program services and school site evaluation is needed to improve the program.

**Available Resources - Models, Tools and Guidelines Relevant to the Practice:**

- King Fluoride Program guide and training manual for school coordinators and volunteers to implement the fluoride mouthrinse/tablet program.
- Oral health education materials and video loan library:
  - ADA “Dudley the Dinosaur” - oral health education series videos and curriculum guides
  - Colgate Bright Smiles Bright Futures - oral health series videos
  - “The Daily Tablet...for Healthier Smiles” - video
  - “Holding Court with King Fluoride” - fluoride rinse instructional video
  - Washington State “Tooth Tutor” - curriculum guide K-6<sup>th</sup> grade
  - Other videos are available on early childhood caries and water fluoridation

## SECTION III: PRACTICE EVALUATION INFORMATION

### **Impact/Effectiveness**

*Does the practice demonstrate impact, applicability, and benefits to the oral health care and well-being of certain populations or communities (i.e., reference scientific evidence and outcomes of the practice)?*

A definitive impact statement cannot be made about this population because baseline data was not collected. No correlation can be made between this population and the data from the 1993 Oral Health Needs Assessment. Teachers and nurses have stated their gratitude for the program and the impact they feel it has made in the habits of their students. One school district nurse, in Columbia county, used the King Fluoride Program to increase awareness of the dental care needs in the community. As a result of her persistence and dedication she was able to secure funding for a new school based health center with a complete dental facility.

### **Efficiency**

*Does the practice demonstrate cost and resource efficiency where expenses are appropriate to benefits? Are staffing and time requirements realistic and reasonable?*

A cost benefit analysis has not been done. A minimum of 4 additional dental health consultants working 200 hours each per school year are necessary to coordinate the program at the community level. The King Fluoride Program costs ~\$3.50 per child (\$60,800 annual program cost and 17,300 children served). For every \$1 spent on a fluoride mouthrinse or tablets in the program, it is estimated that \$12 is saved on dental treatment.

### **Demonstrated Sustainability**

*Does the practice show sustainable benefits and/or is the practice sustainable within populations/communities and between states/territories?*

The King Fluoride Program has been implemented since 1975. From 1996–2001, the program had provided fluoride to children in the range of 17,300 to 22,900 annually. Interest in the King Fluoride Program has remained the same; however, motivation to administer the programs in the schools has decreased due to several factors: a decrease in the number of dental health consultants available to the counties; a decrease in school nursing contracts due to school budget reductions; increased demands in school curriculum and special aptitude testing.

### **Collaboration / Integration**

*Does the practice build effective partnerships/coalitions among various organizations and integrate oral health with other health projects and issues?*

Participation in the King Fluoride Program helped two communities bring awareness of the dental health care needs in their communities. As a result, the Josephine County and Jackson County Departments of Health and Community Action secured funding for Dental Health Education Programs in their respective counties. These programs are staffed by a part time dental health educator whose job is to integrate and develop prevention programs as needed in the community and provide resource information and dental referral.

### **Objectives / Rationale**

*Does the practice address HP 2010 objectives, the Surgeon General's Report on Oral Health, and/or build basic infrastructure and capacity?*

The King Fluoride Program addresses HP 2010 objectives related to reduction in dental caries experience in children and reduction of untreated dental decay in children (as a result of dental screenings and referrals provided at participating schools).

### **Extent of Use Among States**

*Is the practice or aspects of the practice used in other states?*

Many states across the country implement school-based fluoride programs. ASTDD State Synopses showed that between 1998-2000, 35 states and two territories reported having a school fluoride

mouthrinse program (AL, AZ, CA, CO, CT, FL, GA, HI, ID, IL, IN, IA, KY, ME, MD, MA, MI, MS, MO, MT, NB, NH, NJ, NM, NY, NC, ND, OH, OR, UT, VT, VA, WV, WI and WY). Two territories reported having fluoride mouthrinse programs (American Samoa and Republic Palau). The Synopses also showed that between 1998-2000, 24 states have a fluoride supplement program (AL, AR, CA, CT, GA, IL, IN, IA, KY, ME, MD, MA, MN, MT, NV, NM, NY, NC, ND, OR, UT, WA, WV and WI). Five territories have a fluoride supplement program (American Samoa, Guam, N. Mariana Islands, Puerto Rico and Republic of Palau).