



Dental Public Health Activities & Practices

Practice Number: 15001
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SECTION I: PRACTICE OVERVIEW		
Name of the Practice: Idaho School Fluoride Mouthrinse Program		
Public Health Functions: Assurance – Population-based Interventions Assurance – Building Linkages & Partnerships for Interventions		
HP 2010 Objectives: 21-1b Reduce the proportion of children with dental caries experience in their primary and permanent teeth. 21-12 Increase the proportion of low-income children and adolescents who received any preventive dental service during the past year.		
State: Idaho	Region: Northwest Region X	Key Words: Fluoride mouthrinse, FMR, school-based program, prevention, children prevention services
Abstract: The Idaho Department of Health and Welfare Oral Health Program (OHP) funds a statewide school-based fluoride mouthrinse program. The program targets elementary-age children, grades 1-6, at schools with ≥ 30 percent of children on the Free/Reduced National School Lunch Program in fluoride-deficient communities. The OHP contracts with seven District Health Departments to coordinate and conduct the rinse program at eligible schools. Services are provided as directed in the program manual, <i>Idaho School Fluoride Mouthrinse Program Guidelines</i> . The rinse program was initiated in 1976 and has been ongoing since that time. During school year 2001, participation totaled 33,383 students in grades 1 through 6 at 160 schools.		
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SECTION II: PRACTICE DESCRIPTION

History of the Practice:

The Idaho School Fluoride Mouthrinse Program was initiated at one school in 1976 and expanded in subsequent years to a statewide program.

Justification of the Practice:

Less than half of Idaho's population (45 percent) on public water supplies have adequate levels of fluoride in their drinking water. Because Idaho is rural, with many households utilizing private wells, an estimated two-thirds of Idaho residents overall do not have fluoridated drinking water (adjusted or natural). Data from the 2001 Idaho State Smile Survey shows that 66 percent of third grade students have experienced dental caries and 27 percent have untreated caries. One in six Idaho children lack health insurance (58,000 children under age 19). Based on the U.S. Surgeon General's estimate of 2.6 children without dental insurance for every child without medical insurance, Idaho may have as many as 151,000 children without the resources to access regular preventive dental care. Statewide, 39 percent of Idaho school-age children are low income and eligible for the Free/Reduced National School Lunch Program. Most childhood tooth decay is preventable through the combined use of fluorides, dental sealants and regular professional care. Research has shown that weekly school-based rinse programs in fluoride deficient communities, using a 0.2 percent neutral sodium fluoride solution, reduce caries an average of 31 percent.

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

The Idaho Department of Health and Welfare, Oral Health Program (OHP) contracts with each of the seven District Health Departments to coordinate and conduct the rinse program at eligible schools identified by the District as participants. OHP purchases program supplies from a contracted vendor for direct delivery to District Health Departments and schools. One employee in each health district coordinates the fluoride mouthrinse program. The coordinator is a dental hygienist in four of the seven health districts, a nurse in two districts, and a foreign-trained dentist in one district.

The fluoride mouthrinse program is targeted to schools in areas with below optimum water fluoride levels and with 30 percent or more of children on the free and reduced school lunch program. To be eligible, schools must have an average rate of two or more decayed, missing or filled teeth per student. The program is funded from the Title V Maternal and Child Health Block Grant, with matching funds provided by the District Health Departments.

Parental permission is required to participate in the fluoride mouthrinse program. Students rinse once a week, for one minute, with adult supervision. Only children in grades one through six may participate in the program. The rinse is a 0.2 percent neutral sodium fluoride and is provided in pre-mixed, pre-measured 10ml unit dose packaging. A staff person designated by the school principal coordinates the mouthrinse program within the school setting and assures storage of supplies in a secure place, allowing only authorized persons access to the rinse. Standing orders for conducting the school rinse program are signed annually by the consulting dentist. At the end of the school year, each District submits a report to OHP on the number of children, by grade and school, participating in the fluoride mouthrinse program. A program evaluation of school compliance, based on the amount of fluoride delivered, the number of students participating and the amount unused at the end of the year is also submitted to OHP.

During school year 2001, participation totaled 33,383 students in grades 1 through 6 at 160 participating schools. Eighty-one percent of enrolled students at participating schools used the fluoride rinse during school year 2001.

Budget Estimates and Formulas of the Practice:

- \$59,000 to contract with District Health Departments for local program coordination; funds allocated among Districts based on previous year's fluoride rinse program participation as a percentage of state participation
- \$50,000 for unit dose fluoride rinses

Lessons Learned and/or Plans for Improvement:

Larger school districts have become increasingly resistant to outside programs that take away from classroom instruction time. Many of these districts have specific protocols that must be followed in

order to gain outside program approval. Proposals must be presented well in advance, sometimes up to a year ahead of the start date. By having clear objectives and targeting the fluoride mouthrinse program to schools with the greatest number of low-income students and the greatest demonstrated need, these objections can be overcome. Working with school nurses, and in one instance a local pediatric dentist, has been effective in implementing new programs and continuing existing ones. Some schools opt not to continue the program, even after years of participation, and that is their prerogative. Support of school administrators and onsite coordination by a school secretary or parent volunteer contribute to the success of the program. Lack of teacher support is the biggest barrier to overcome in most schools.

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

- Idaho School Fluoride Mouthrinse Program Guidelines (manual)
- List of fluoride mouthrinse vendors

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)?

Fluoride mouthrinses are proven cariostatic agents. They were approved by the US Food and Drug Administration in 1974 and accepted by the American Dental Association in 1975. Studies of fluoride mouthrinsing have shown consistently positive results. For the school-based method, using the 0.2 percent rinse, caries reductions in fluoride-deficient communities range from 16 to 44 percent, with an average of 31 percent. The mean annual number of tooth surfaces saved per year is 0.55 surfaces, based on averaging the results of studies conducted in the 1980's.

Symposium on Appropriate Uses of Fluoride in the 1990s, "A Critique of Topical Fluoride Methods (Dentifrices, Mouthrinses, Operator-, and Self-applied Gels) . . .," *Journal of Public Health Dentistry*, Vol. 51, No. 1, Winter 1991, pp. 23-41.

Efficiency

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

33,383

Total # unduplicated Idaho students participating in FY01.

16,691

Estimate of minimum # of one surface cavities prevented (0.5 tooth surfaces per year per child).

\$701,022

Estimate of minimum dollars saved at the Medicaid reimbursement rate of \$42.00 for a one-surface amalgam restoration in a permanent tooth. Current Medicaid rate represents 50-60% of the usual and customary rate (UCR) charged by private dental practitioners. This estimate does not reflect the cost of an oral examination, radiographs or more expensive restorative materials. Caries that progress to more than one surface or have pulpal involvement before treatment is sought will also cost more to restore.

\$1,201,752 - \$1,383,353

Estimate of minimum dollars saved if restorative treatment is provided by a private practice dentist at a fee of \$72 - \$83.

\$102,969

Total cost for staff salaries and fluoride mouthrinse to conduct FY01 program.

Demonstrated Sustainability

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

The Idaho School Fluoride Mouthrinse Program was initiated in 1976 and has been ongoing since that time.

Collaboration/Integration

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

The Idaho School Fluoride Mouthrinse Program is a collaborative effort between the State Oral Health Program, District Health Departments and schools.

Objectives/Rationale

Does the practice address HP 2010 objectives, the Surgeon General's Report on Oral Health, and/or build basic infrastructure and capacity for state/territorial oral health programs?

The Idaho School Fluoride Mouthrinse Program addresses two of the HP 2010 oral health objectives: reduction of caries experience and increased access to preventive services for low-income children.

Extent of Use Among States

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

Fluoride mouthrinse programs are one of the most widely used caries-preventive public health methods, second only to community water fluoridation. ASTDD State Synopses showed that in 2001, 34 states reported having programs for fluoride mouthrinse.