



## Dental Public Health Activities & Practices

**Practice Number:** 28004  
**Submitted by:** Oral Health Program, Missouri Department of Health and Senior Services  
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<b>SECTION I: PRACTICE OVERVIEW</b>		
<b>Name of the Practice:</b> Community Water Fluoridation Program		
<b>Public Health Functions:</b> Assessment – Acquiring Data Policy Development – Oral Health Program Policies Policy Development – Oral Health Program Organizational Structure and Resources Assurance – Population-based Interventions		
<b>HP 2010 Objectives:</b> 21-9 Increase persons on public water receiving fluoridated water. 21-1 Reduce dental caries experience in children. 21-2 Reduce untreated dental decay in children and adults. 21-3 Increase adult with teeth who have never lost a tooth.		
<b>State:</b> Missouri	<b>Region:</b> Midwest Region VII	<b>Key Words:</b> Fluoridation, community water fluoridation, fluoridated water supply
<b>Abstract:</b> The Centers for Disease Control and Prevention recognizes community water fluoridation as one of the 10 most important public health advances of the 20 <sup>th</sup> Century. The Missouri Department of Health, Oral Health Program administers the Community Water Fluoridation Program, funded by a MCH Block Grant, since the 1960's. The mission of the program is to maintain and monitor the current communities that adjust their fluoride to the optimal level and to have new communities fluoridating each year. The program collaborates extensively with the Department of Natural Resources, Public Drinking Water Program and works closely with their state fluoridation engineer. The program monitors 166 water systems annually, fluoridates an average of two new communities each year, and trains 25 water plant operators per year. As of 2001, the state has approximately 80% of its population served by fluoridated community water supplies.		
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## SECTION II: PRACTICE DESCRIPTION

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

Missouri's Community Water Fluoridation Program has been in existence since the 1960's.

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

The Association of State and Territorial Dental Directors' *Guidelines for State and Territorial Oral Health Programs (July 1997)* refers to community water fluoridation as essential in both the core public health functions of assessment and assurance. CDC reports community water fluoridation as one of the 10 most important public health advances of the 20<sup>th</sup> Century. In the *Guide to Community Preventive Services*, the Task Force on Community Preventive Services (an independent, non-federal Task Force with multi-disciplinary representatives) strongly recommends community water fluoridation as a population-based and public health intervention based on the strength of the evidence of effectiveness found during systematic reviews.

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

The Missouri Department of Health, Oral Health Program administers the Community Water Fluoridation Program. The fluoridation program is funded by a MCH Block Grant. The mission of the program is to maintain and monitor the current communities that adjust their fluoride to the optimal level and have two new communities fluoridating each year. Activities of the program are integrated in the functions of the personnel of the Oral Health Program. There is field staff in each district office to support the program. Key services of the program include promoting fluoridation through education for communities, providing technical support/training for water plants to initiate the process, tracking the fluoride content of all community water supplies in the state, and participating in the CDC's Water Fluoridation Reporting System (WFRS). The program provides fluoridation equipment at no cost to the community starting fluoridation and in some situations provides replacement equipment. One form of communication of the state's fluoridation status is the use of a color map that graphically displays all natural and adjusted water supplies with the names of their water systems. In addition, a web page is being developed that will display this map with related fluoridation data. The program collaborates extensively with the Department of Natural Resources, Public Drinking Water Program, where the state fluoridation engineer is located. Further, the program contracts with the Drinking Water Program to train water plant operators and monitor fluoridation installations and follows the CDC's engineering and administrative recommendations for water fluoridation (1995). As of 2001, the state has 80% of its population served by fluoridated community water supplies. Each year, the program monitors 166 water systems, fluoridates an average of two new communities, and trains 25 water plant operators.

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

- Approximate budget for the community water fluoridation program is \$110,000 per year.
- In FY 2001, the program spent approximately \$27,000 for new and replacement fluoridation equipment.
- In FY 2001, the program contracted with the Public Drinking Water Program for approximately \$43,000 for the state fluoridation engineer to train water plant operators and monitor water systems.

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

Community Water Fluoridation is an integral part of Missouri's Oral Health Program, and provides one of the most effective and efficient means of prevention of dental caries. Missouri reached the HP 2000 and HP 2010 goal of 75% of the population on fluoridated community water supplies in 1998. The state's current goal is to attain 90% by 2010.

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

- Association of State and Territorial Dental Directors (ASTDD). *Guidelines for State and Territorial Oral Health Programs*. July 1997.
- Task Force on Community Preventive Services. *Guidelines for Community Preventive Services*. (<http://www.health.gov/communityguide>)
- Centers for Disease Control and Prevention. *Engineering and Administrative Recommendations for Water Fluoridation*, 1995. MMWR September 29, 1995/44 (RR-13);1-40. (<http://www.cdc.gov/epo/mmwr/preview/mmwrhtml/00039178.htm>)

- Centers for Disease Control and Prevention. Achievements in Public Health, 1900-1999: Fluoridation of Drinking Water to Prevent Dental Caries. MMWR Oct. 22, 1999 / 48(4);933-940. (<http://www.cdc.gov/mmwr/preview/mmwrhtml/mm4850a1.htm>)
- Guide to Community Preventive Services ([http://www.thecommunityguide.org/home\\_f.html](http://www.thecommunityguide.org/home_f.html))
- Missouri Fluoridation Status Map. Missouri Department of Health, Oral Health Program.

## 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)?*

Missouri reached the HP 2000 and HP 2010 goal of 75% of the population on fluoridated community water supplies in 1998. As of 2001, Missouri has 80% of its population served by fluoridated community water supplies. The state's goal is to reach 90% of the population served by fluoridated community water supplies by 2010. In the *Guide to Community Preventive Services*, the Task Force on Community Preventive Services (an independent, non-federal Task Force with multi-disciplinary representatives) strongly recommends community water fluoridation as a population-based and public health intervention based on the strength of the evidence of effectiveness found during systematic reviews.

### **Efficiency**

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

Preventing disease is viewed as always being preferable to restoring the damage. Per capita cost savings from one year of fluoridation may range up to \$53 among large communities with a high incidence of disease (CDC, unpublished data, 1999). The Oral Health Program integrates the activities of the community water fluoridation program in their staff functions. In addition, the partnership with the Public Drinking Water Program improves efficiency of the Community Fluoridation Program through the services of the state fluoridation engineer.

### **Demonstrated Sustainability**

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

Missouri's Community Water Fluoridation Program has been active since the 1960's. Having funding to purchase new and replacement fluoridation equipment sustains the capacity of the program to initiate fluoridation in communities annually. Integrating the program activities into the duties of the state oral health program's staff also contributes to the program sustainability. MCH Block Grant Funding has been stable over time lending sustainability to the program.

### **Collaboration / Integration**

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

The program has built a good partnership with the Department of Natural Resources, Public Drinking Water Program. The two programs collaborate extensively to implement and monitor fluoridation in the state. Collaboration with local agencies and organization plays a major role in successfully fluoridating a community.

### **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?*

HP 2010 calls for increasing persons on public water receiving fluoridated water. The Surgeon General's Report on Oral Health recognizes community water fluoridation as an effective, safe, and ideal public health measure that benefits individuals of all ages and socioeconomic strata. The Report also recognizes the need for further efforts over the next decade to increase persons receiving the benefits of fluoridated water. Promoting community water fluoridation is an essential dental public health service for state/territorial oral health programs.

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

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

ASTDD State Synopses show that in 2000, 45 states reported that they have community water fluoridation programs.