



# Dental Public Health Activity Descriptive Report

**Practice Number:** 39001  
**Submitted By:** Dental Health Services, Oklahoma State Department of Health  
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<b>SECTION I: PRACTICE OVERVIEW</b>		
<b>Name of the Dental Public Health Activity:</b> <span style="color: blue; font-weight: bold;">Oklahoma Water Fluoridation Program</span>		
<b>Public Health Functions:</b> Policy Development – Oral Health Program Policies Assurance – Population-based Interventions Assurance – Building Linkages and Partnerships for Interventions Assurance – Building Community Capacity for Interventions		
<b>Healthy People 2020 Objectives:</b> OH-1 Reduce the proportion of children and adolescents who have dental caries experience in their primary or permanent teeth OH-2 Reduce the proportion of children and adolescents with untreated dental decay OH-3 Reduce the proportion of adults with untreated dental decay OH-13 Increase the proportion of the U.S. population served by community water systems with optimally fluoridated water		
<b>State:</b> Oklahoma	<b>Federal Region:</b> Region VI	<b>Key Words for Searches:</b> Fluoridation, community water fluoridation, prevention
<b>Abstract:</b> <p>The Oklahoma State Department of Health (OSDH), Dental Health Service, administers a community water fluoridation (CWF) program supporting fluoridation as safe and cost-effective while providing equitable benefits to all those who drink the water. The practice of CWF has existed in Oklahoma since the early 1950’s and is seen as an important public health program. The State Dental Director, Fluoride Consultant and Epidemiologist share the demands and duties of the Program. Together, the OSDH and the Oklahoma Department of Environmental Quality (DEQ) assist communities with water fluoridation. The DEQ, as the regulatory agency, ensures the delivery of safe drinking water to the consumer under state and federal rules. Of the current active community water system in Oklahoma, 38 systems adjust the fluoride level, 252 purchase water from other public water systems that adjust (referred to as consecutive water systems), and 59 systems are naturally fluoridated. The OSDH, along with stakeholders from the Governor’s Task Force on Children and Oral Health, the Oklahoma Oral Health Coalition, and the Oklahoma Dental Association work collectively to promote and sustain oral health initiatives statewide.</p> <p>The CWF program includes promoting and monitoring CWF activities; recording and compiling data from water treatment plants and other stakeholders; communicating with water treatment plants to verify fluoridation status; serving as a liaison with federal and state partners; increasing awareness regarding the effectiveness of water fluoridation among academic institutions, medical and dental organizations; maintaining a publicly accessible fluoridation data base through CDC; providing relevant information to stakeholders and policy makers; and providing information, statistical analysis and trends on water fluoridation regarding health effects, cost effectiveness, and safety.</p> <p>In 2012, OSDH prepared a state <a href="#">Community Water Fluoridation Plan</a>. The goal of the plan is to improve the oral health status of all Oklahomans. American’s Health Rankings (2013) identifies Oklahoma as 44<sup>th</sup> in the nation in the percent of adults who have visited the dentist or a dental clinic within the past year for any reason. In addition, 60 percent of Oklahoma’s third grade children have caries experience according to a 2013 survey. Widespread CWF results in the remarkable decline in</p>		

the prevalence and severity of dental decay, saving money for both families and the health care system and improving overall health.

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**SECTION II: PRACTICE DESCRIPTION**

**History of the Practice:**

The community water fluoridation program, initiated in the early 1950s, has always been a part of the Oklahoma oral health program. However, there has not been a consistent funding source to support fluoridation activities. In the early 1980s, the state received fluoridation dollars from CDC. In FY2000, funding was secured with state-appropriated dollars to help pay some or all of the initial start-up costs. This grant was depleted prior to 2008 and there are no designated funds for fluoridation; therefore Oklahoma’s public water systems that adjust with fluoride are locally funded. The State Oral Health Program is currently maintained through state funds.

**Justification of the Practice:**

The effectiveness of water fluoridation in the prevention of tooth decay has been well documented. Widespread use of fluoride has been a major factor in the decline in the prevalence and severity of dental caries in the United States and other economically developed countries for more than 65 years. Fluoridation is simply the process of adjusting fluoride in the water to the optimal level that prevents tooth decay. This process saves money for families and the healthcare system and has been proven to reduce dental decay by 20 – 40 percent. At a time when many families lack dental insurance, this form of decay prevention is especially crucial.

**Inputs, Activities, Outputs and Outcomes of the Practice:**

Oklahoma State Department of Health Dental Health Services’ personnel (the state dental director, fluoride consultant, and epidemiologist, in cooperation with county health departments, the Oklahoma Dental Association and other partners administer the community water fluoridation program. The program includes the following activities:

- (1) Promote water fluoridation to the public and policy makers.
- (2) Educate stakeholders about CWF including professional health organizations, private practicing dentists, physicians, other healthcare providers, civic groups, student groups and community leaders.
- (3) Collaborate with the Oklahoma Department of Environmental Quality, and share technical support and fluoride data.
- (4) Participate in the CDC’s Water Fluoridation Reporting System (WRFS), a surveillance database.
- (5) Promotes the CDC’s Community Water Fluoridation training for staff and stakeholders.

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

The State Oral Health Program is currently maintained through state funds which cover staff and CDC training. No funds are designated specifically for community water fluoridation initiation costs, equipment, products or system maintenance.

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

The Oklahoma Water Fluoridation Program has been successful through a multi-pronged approach including public education; working with partners, stakeholders, and policy makers; preparing a state CWF plan; and collecting and monitoring fluoride data. A fluoride consultant and epidemiologist remain critical for a successful oral health program.

The principal challenges have been overcoming the widespread belief that water fluoridation is less necessary in modern life; identifying the reasons a public water system discontinues the practice of fluoridation, whether philosophical, mechanical or financial; and continuing efforts to collect and monitor fluoride data, with local cost data being most difficult to obtain. Many city officials fail to recognize the value of CWF

Oklahoma remains proactive in identifying resources that support CWF as we continue to optimize efforts to promote CWF.

**Available Information Resources:**

This link <http://den.health.ok.gov> will take you to the:

- Oklahoma Community Water Fluoridation Plan
- Community Water Fluoridation Brochure
- Oklahoma Fluoridation Map.

<b>SECTION III: PRACTICE EVALUATION INFORMATION</b>
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**Impact/Effectiveness**

*How has the practice demonstrated impact, applicability, and benefits to the oral health care and well-being of certain populations or communities (i.e., reference scientific evidence, outcomes of the practice and/or evaluation results)?*

The Oklahoma Water Fluoridation Program has educated and informed communities on the value of CWF. In 2000 Oklahoma had 74.5percent of the population receiving water from public water systems with optimally fluoridated water. As of October 2014, there has been a decline resulting in the current figure of 62.5 percent. Overwhelmingly, the reason given for the reduction in fluoridation has been financial constraints at the local level. The program continues to build strong coalitions of fluoridation supporters that include key health advocates. Furthermore, the program has successfully worked with organizations to develop resolutions and policy statements supporting water fluoridation. Ultimately, the decision to fluoridate rests with the local city officials and the community at large.

**Efficiency**

*How has the practice demonstrated cost and resource efficiency where expenses are appropriate to benefits? How has the practice demonstrated realistic and reasonable staffing and time requirements? Provide unit cost analysis or cost-benefit analysis if appropriate.*

Community water fluoridation is cost-effective and well documented in scientific literature. Communities that participate in water fluoridation have seen a reduction in dental caries among children and adults by between 18 and 40 percent. For every dollar invested on water fluoridation, a person saves up to \$38 in oral health treatment costs. Local officials often dismiss the value of CWF and cite "cost savings to the city" as the most common reason to cease the practice.

**Demonstrated Sustainability**

*How has the practice showed sustainable benefits and/or how has the practice been sustainable within populations/communities and between states/territories? What mechanisms have been built into the practice to assure sustainability?*

In 2013, 32 public water systems in Oklahoma received CDC Water Fluoridation Quality Awards. Recognition letters accompanied the awards sent to the mayor and water treatment plant supervisor. A press release was sent to newspapers within the community receiving awards with the primary message being preventive dental care programs such as CWF make a real difference improving the health status of Oklahomans.

### **Collaboration/Integration**

*How has the practice built effective partnerships/collaborations among various organizations and integrated oral health with other health projects and issues? What are the traditional, non-traditional, public and private partnerships/collaborations established by the practice for integration, effectiveness, efficiency and sustainability?*

The CWF program includes promoting and monitoring CWF activities; recording and compiling data from water treatment plants and other stakeholders; communicating with water treatment plants to verify fluoridation status; serving as a liaison with federal and state partners; increasing awareness regarding the effectiveness of water fluoridation among academic institutions, medical and dental organizations; maintaining a publicly accessible fluoridation data base through CDC; providing relevant information to stakeholders and policy makers; and providing information, statistical analysis and trends on water fluoridation relating to health effects, cost effectiveness, and safety.

The Oklahoma Oral Health Coalition recognizes CWF as a key component in addressing the oral health of the state's children and their families. With its diverse membership, the coalition promotes oral health through collaboration, coordination and education.

### **Objectives/Rationale**

*How has the practice addressed HP 2020 objectives, met the National Call to Action to Promote Oral Health, and/or built basic infrastructure and capacity for state/territorial/community oral health programs?*

The Oklahoma Water Fluoridation Program supports efforts to address HP 2020 objectives and the Surgeon General's Report on Oral Health by increasing the proportion of the population served by community water systems with optimally fluoridated water and providing the benefits of fluoridation in preventing dental decay, thereby lowering the cost of dental care and reducing disparities in preventing dental decay among different socioeconomic, racial and ethnic groups.