



# Dental Public Health Activity Descriptive Report

**Practice Number:** 53002  
**Submitted By:** Office of Drinking Water, Virginia Department of Health  
**Submission Date:** February 2002  
**Last Updated:** February 2015

<b>SECTION I: PRACTICE OVERVIEW</b>		
<b>Name of the Dental Public Health Activity:</b> <b>Community Water Fluoridation Program</b>		
<b>Public Health Functions:</b> Assessment – Acquiring Data Assessment – Use of Data Assurance – Population-based Interventions Assurance – Building Linkages and Partnerships for Interventions Assurance – Building Community Capacity for Interventions Assurance – Program Evaluation for Outcomes and Quality Management		
<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-4 Reduce the proportion of adults who have ever had a permanent tooth extracted because of dental caries or periodontal disease OH-13 Increase the proportion of the U.S. population served by community water systems with optimally fluoridated water		
<b>State:</b> Virginia	<b>Federal Region:</b> East -Region VI	<b>Key Words for Searches:</b> Fluoridation, community water fluoridation, prevention
<b>Abstract:</b>  The Virginia Department of Health, Office of Drinking Water administers a community water fluoridation program. The program provides five core services/functions: 1) Monitors water systems for Virginia Department of Health, Office of Drinking Water using monthly operational reports and inspection reports. 2) Reporting and managing water system data and monthly fluoridation data for the Centers for Disease Control and Prevention Water Fluoridation Reporting System (WFRS). 3) Provides information about fluoridation issues to citizens and communities. 4) Provides training opportunities for water operators, engineers and health care professionals. 5) Provides grant funding for communities to start or upgrade fluoridation equipment for water systems and includes fluoride split sample test kits for designated water treatment plants. Since 1981, the program has assisted over 65 communities to initiate or upgrade their fluoridation systems. Funding sources include the Preventive Health and Health Services Block Grant (PHHS) and Center for Disease Control and Prevention (CDC) State-base Oral Disease Prevention Program Grant. The annual budget has consistently provided \$100,000 in mini-grants to meet equipment needs and \$25,000 for training and outreach opportunities. This year the mini-grant opportunity has been increased to \$125,000. The average grant is approximately \$10,000.		
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## SECTION II: PRACTICE DESCRIPTION

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

This program began in the early 1980's with the establishment of the categorical Fluoridation Grants under President Carter, administered by CDC. It is now supported by funds from the Preventive Health and Health Services Block Grant and categorical funds administered by CDC.

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

Fluoridation continues to be the most effective method for the prevention of dental caries for individuals on the community level. CDC has profiled it "as one of 10 great public health achievements of the 20<sup>th</sup> Century." Community water fluoridation is the most effective, safe, and economical way to prevent dental decay. It benefits persons of all ages and socioeconomic status.

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

The Community Water Fluoridation Coordinator provides five core services/functions:

- Monitors water systems for Virginia Department of Health, Office of Drinking Water using monthly operational reports and inspection reports;
- Reports and manages water system data and monthly fluoridation data for the Centers for Disease Control and Prevention Water Fluoridation Reporting System (WFRS);
- Provides information about fluoridation to citizens and communities;
- Provides training opportunities for water operators, engineers and health care professionals;
- Provides grant funding for communities to start or upgrade fluoridation equipment for water systems and includes fluoride split sample test kits for designated water treatment plants. Grant funding is provided utilizing PHHS and CDC funding.

The program is funded with monies from the PHHS Block Grant and CDC Oral Health Prevention grant. One full time dentist, has previously served as the Fluoridation Coordinator, and was responsible for the promotion and administration of the program. This position is now open and is being actively recruited.

The program has provided funding for the Fluoridation Coordinator and Health Department Environmental Engineers to attend the "Basic Water Fluoridation Engineering" course offered by CDC. Training has also been offered through the State Office of Drinking Water for community waterworks operators through both Short School training and a two day intensive fluoridation course. Additionally, the Virginia Rural Water Association, in partnership with the Office of Drinking Water provides a course on fluoridation safety and testing.

Since 1981, the program's implementation of the mini-grants, made available through the PHHS grant, has assisted over 65 communities to initiate or upgrade their fluoridation systems. Detailed requests are received annually from community waterworks that provide a justification of their need, the equipment desired, and engineering construction plans for installation. Presently, 95% of the Virginians served by water from public water systems receive the benefits of fluoridation. This represents approximately 81% of the total state population; many members of remaining population have private wells or small private water systems.

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

The costs are based on the salary of one full time staff member and the grant amounts of monies, which vary from year to year, to carry out activities or functions listed above. Grant funding is currently available for fluoridation projects including infrastructure maintenance and training using PHHS and CDC funding. The 2013-2014 budget for fluoridation grants to localities, split sample test kits and trainings was \$142,000. Staffing costs was approximately W\$100,000 (salary and fringe included) and was paid from existing non-grant funds.

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

Financial incentives for small communities are essential. Periodic training for water works operations on new equipment or procedures is very important.

**Available Information Resources:**

Contracts with local communities for upgrading or initiating fluoridation in their public water supply are offered. The protocol for requests for funding, procurement and contracts with localities to complete grant projects are described in the 2013 Grant Fact Sheet under "Funding Opportunities" on the website: <http://www.vdh.virginia.gov/ofhs/childandfamily/dental/cwf/>. Current monitoring of systems fluoridating is performed using criteria established by CDC. Virginia has participated in CDC WFRS since 2002, with public links to My Water Fluoride and Oral Health Maps. The Fluoridation Coordinator provides data management of WFRS.

<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)?*

Fluoridation continues to be the most effective method for the prevention of dental caries for individuals on the community level. Virginia has improved the def/DMF rate since the initiation of fluoridation in 1952.

Since 1981, the program has assisted over 65 communities to initiate or upgrade their fluoridation systems. Presently, 95 % of the people served by public water systems in Virginia are receiving optimally fluoridated water.

**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.*

Based on dollars spent each year and looking at the long-term operation of a fluoridation system, the oral health benefits accrued to individuals over a lifetime are truly significant. The cost effectiveness is supported by numerous scientific peer-reviewed research studies.

**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?*

The program has been in operation since 1981 with funds from the original federal categorical Fluoridation Grant. The program is presently funded with monies from the PHHS Block Grant and the CDC Oral Health Prevention Grant.

**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 program is very successful, due to the collaborative efforts of the Office of Drinking Water, the Dental Health Program and the local county health departments. Important external partners include the Virginia Dental Association, the Virginia Oral Health Coalition, and the Virginia Rural Water Association, the Virginia Chapter of the American Academy of Pediatrics, as well as, other state and local agencies.

**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 program addresses the following Healthy People 2020 oral Health Objectives:

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-4	Reduce the proportion of adults who have ever had a permanent tooth extracted because of dental caries or periodontal disease
OH-13	Increase the proportion of the U.S. population served by community water systems with optimally fluoridated water