



Dental Public Health Activities & Practices

Practice Number: 16007
Submitted By: Division of Oral Health, Illinois Department of Public Health
Submission Date: April 2002
Last Updated: April 2002

SECTION I: PRACTICE OVERVIEW		
Name of the Practice: Fluoridation Program		
Public Health Functions: Assessment – Acquiring Data Assessment – Use of Data Policy Development – Collaboration for Planning and Integration Policy Development – Oral Health Program Policies Assurance – Population-based Interventions Assurance – Building Linkages & Partnerships for Interventions Assurance – Program Evaluation for Outcomes and Quality Management		
HP 2010 Objectives: 21-1 Reduce dental caries experience in children. 21-9 Increase persons on public water receiving fluoridated water.		
State: Illinois	Region: Midwest Region V	Key Words: Prevention, population-based, fluoridation, fluoride, water fluoridation, community water fluoridation, fluoridation law, legislation
Abstract: Illinois is one of only twelve states with a mandatory fluoridation law. The Illinois Fluoridation Statute was enacted in 1967 and requires all community water systems to adjust their fluoride to optimal levels (0.90 - 1.20 milligrams per liter). The Division of Oral Health monitors community water systems and provides education and technical expertise to the water system operators in order to keep fluoride levels within the legal range. During 1997, more than 85 percent of the Illinois population received benefits of fluoridated water. This meets and surpasses the <i>Healthy People 2010</i> oral health objective for water fluoridation of 75 percent.		
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SECTION II: PRACTICE DESCRIPTION

History of the Practice:

On August 8, 1951 the Illinois Department of Public Health (IDPH) adopted a policy supporting water fluoridation and launched an aggressive program to promote community water fluoridation. Despite well-organized opponents of fluoridation in Illinois, 148 municipalities initiated fluoridation. By the end of 1962, over five million Illinoisans received the benefits of fluoridation, including the City of Chicago. On August 4, 1966, representatives of the IDPH and the Illinois State Dental Society met to discuss plans to adopt mandatory fluoridation of Illinois public water supplies. It was decided that legislation was the best path to expand fluoridation in Illinois. Senate Bill 516 passed both houses of the Illinois Legislature and was signed into law by Governor Kerner on July 18, 1967. Communities were given one year to implement fluoridation operations in their water supplies. By 1973, nine million people in Illinois were drinking fluoridated water. In 1970, the public water supply control program was transferred from IDPH to the newly created Illinois Environmental Protection Agency (IEPA); however, most fluoridation responsibilities remained with IDPH in the Division of Oral Health (DOH). The fluoridation program activities consisted of surveillance, education and compliance monitoring.

Justification of the Practice:

In 1999, CDC profiled the widespread practice of fluoridating community drinking water to prevent dental decay as one of the 10 great public health achievements of the 20th Century. A Task Force, in developing the Guide for Community Preventive Services, strongly recommends community water fluoridation as an effective intervention strategy based on systematic review of scientific evidence (MMWR, August 2001).

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

Illinois law mandates that public water supplies maintain fluoride levels between 0.9 and 1.2 milligrams per liter. Approximately 860 of the 1800 community water systems in Illinois adjust their fluoride levels. DOH monitors fluoridation status of every system in the state and fluoridation performance of those systems that adjust their fluoride levels. In the early 1980s, the DOH developed a computerized database to monitor the water systems' fluoridation status. The data system is housed on a mainframe and collects the water systems' monthly fluoride test results. In 2001, the DOH began developing a data system to expand capability and flexibility as links are established electronically with the Illinois Environmental Protection Agency (IEPA), water systems, labs, local health departments and the CDC.

In efforts to improve performance of the water systems, DOH participates in water operator training throughout the state collaboratively with the IEPA, state colleges, local health departments, the Illinois Section – American Water Works Association, Illinois Potable Water Supply Operators Association and the Illinois Rural Water Association. DOH uses a Fluoridation Training Manual that it developed for water systems specific to Illinois fluoridation needs and requirements.

The DOH relies on positive reinforcement of the fluoridation law while IEPA is the regulatory authority. DOH recognizes systems for compliance with the state requirements and annually presents awards of commendation to systems that maintain fluoride levels in the legal range, one of the only opportunities for water systems in Illinois to receive public recognition for doing a good job. DOH distributes a statewide press release, submits the award list to the IEPA and water association publications, and hosts two award ceremonies at statewide water association meetings.

To assist Illinoisans who reside on property with private wells rather than public water to receive appropriate fluoride exposure, DOH works with the IDPH lab and local health departments to facilitate private well testing for fluoride level and follow up information and technical assistance for the well owners and their physicians or dentists.

Communities participating in the community-based fluoridation improvement program coordinate a variety of activities to improve the fluoridation status of their residents:

- Assess the fluoridation status of their community or refer to their Oral Health Needs Assessment and Planning program plan if the assessment determined fluoridation as an oral health priority.
- Convene a planning group to develop a fluoridation plan based on the fluoridation needs assessment.

- Establish communication with municipalities and community water systems (CWSs) to raise awareness of the importance of optimal water fluoridation in dental caries prevention. Communicate regularly with community municipalities and CWSs.
- Annually recognize municipalities and CWSs for maintaining optimal fluoride levels. (The Division of Oral Health (DOH) will provide a list of award recipients, mailing labels, Certificates of Recognition signed by the IDPH and IEPA and letters of recognition and a press release announcing the awards.) The health departments are encouraged to publicly recognize the award winners at municipal meetings and through the media.
- Assist CWSs with difficulties in optimal fluoridation maintenance by linking the system with IEPA engineering staff.
- Contact mobile home parks (that do not adjust fluoride or provide water with adjusted fluoride levels) to raise awareness of the importance of water fluoridation in dental caries prevention.
- Test private wells for fluoride levels for new residential drills, health department clients (especially low income families), and requests from dentists and physicians. Contact homeowners and clients to explain private well fluoride test results and provide technical assistance on ways to improve fluoridation status when necessary.
- Assure regular, timely fluoridation information sharing between the participating local health department divisions, i.e., Environmental Health, Maternal and Child Health, Health Education.
- Establish communication with dental hygienists, dentists, nurses and physicians to raise awareness of the importance of community water fluoridation and private well testing for fluoride levels.

DOH works collaboratively with IEPA on all aspects of the fluoridation program and shares data with IEPA and community-based fluoridation program pilot sites. Furthermore, DOH works together with IEPA, the community-based fluoridation program pilot sites and the Illinois water associations to provide technical assistance and training to water system operators.

Budget Estimates and Formulas of the Practice:

\$30,000 per year

Lessons Learned and/or Plans for Improvement:

Accomplishments during the past decade of the Illinois Water Fluoridation Program include:

- Implemented an awards program recognizing water system operators for excellence;
- Developed a Fluoridation Training Manual specific to Illinois' needs and requirements;
- Maintained a fluoridation monitoring and surveillance database;
- Surpassed the Healthy People 2000 oral health objective of 75 percent of the population receiving the benefits of optimal levels of fluoride;
- Provided educational opportunities for community water system operators;
- Facilitated private well testing for fluoride levels with follow-up education and consultation;
- Developed a community-based fluoridation program.

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

- Illinois Fluoridation Manual
- Private Well Testing Program educational materials

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)?

Community water fluoridation is the Division of Oral Health's only program with a legislative mandate and is our cornerstone program. The surveillance, education, awards and community activities are all exemplary components to the successful program. Accomplishments during the past decade of the Illinois' Water Fluoridation Program follow:

- Implemented an awards program recognizing water system operators for excellence
- Developed a Fluoridation Training Manual specific to Illinois' needs and requirements
- Maintained a fluoridation monitoring and surveillance database
- Surpassed the Healthy People 2000 oral health objective of 75 percent of the population receiving the benefits of optimal levels of fluoride
- Provided educational opportunities for community water system operators
- Facilitated private well testing for fluoride levels with follow-up education and consultation
- Developed a community-based fluoridation program

Efficiency

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

Water fluoridation costs, on average 72 cents per person per year in the U.S. Every \$1 invested in water fluoridation yields \$38 savings in dental treatment costs.

With the recent addition of a staff person designated to the fluoridation data, the program has become more efficient.

Demonstrated Sustainability

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

As soon as the Illinois Fluoridation Statute was enacted in 1967, it was tested through the Illinois court system. In 1986, it was ruled constitutional according the Illinois Supreme Court. There have been bills introduced into the Legislature to overturn the fluoridation law, but all have failed to garner support or move out of committee in order to be considered.

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 relationships with non-traditional partners for the DOH, such as with Environmental Health in local and state agencies. Working collaboratively with the IEPA has been an excellent blend of health with engineering.

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?

Yes. The Illinois' Fluoridation Program supports the Healthy People 2010 objective to increase persons on public water receiving fluoridated water.

Extent of Use Among States

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

Yes. According to the 2001 ASTDD State Synopses, all 51 states including District of Columbia have programs for fluoridated community water supplies.