



Dental Public Health Activities & Practices

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SECTION I: PRACTICE OVERVIEW

Name of the Practice:

Community Water Fluoridation in Manchester, New Hampshire

Public Health Functions:

Assessment – Acquiring data
 Policy Development – Collaboration & Partnership for Planning and Integration
 Policy Development – Oral Health Program Policies
 Assurance – Population-based Interventions
 Assurance – Building Linkages & Partnerships for Interventions

HP 2010 Objectives:

21-1 Reduce dental caries experience in children.
 21-3 Increase adults with teeth who have never lost a tooth.
 21-9 Increase persons on public water receiving fluoridated water.

State:

New Hampshire

Region:

Northeast
 Region I

Key Words:

Fluoride, fluoridation, community water fluoridation, fluoridation campaign, legislation, fluoridation law

Abstract:

In April 1999, the Healthy Manchester Leadership Council (HMLC), a community collaborative representing 20 health and human services organizations in Manchester, published a special report, "The Oral Health Status of the City of Manchester, New Hampshire," which provided the motivation and impetus for taking community-wide action to improve oral health in Manchester. In preparation for the campaign, the State Department of Health and Human Services, the New Hampshire Attorney General's Office and the Department of Environmental Services provided preliminary groundwork with regard to state legislation. Since New Hampshire Law requires a referendum prior to initiating community water fluoridation, the Manchester City Clerk's Office and City Solicitor's Office were also involved in providing legal guidance. The municipal election of November 2, 1999 was the next opportunity to attempt this referendum. The process involved first obtaining of the required number of signatures from registered Manchester voters (10%) to place the question on the 11/2/1999 ballot, and secondly to assure there would be a majority of voters approving the fluoridation question on 11/2. The signature collection phase and "kick off" for our "Smiles for the Future" campaign on 5/11/1999. Petitions were distributed to provider offices, to community social service agencies, and at community events. Petitions and fluoridation information were sent to thousands of homes of registered voters and a petition was also placed in the newspaper for people to sign and return. A HMLC representative made presentations to community service clubs and PTA groups and conducted media interviews. The required signatures were obtained. The Board of Mayor and Alderman held a public hearing. With only five weeks of campaigning and a limited budget, ads were placed in the local newspaper. Post cards were mailed to residents who had signed petitions to remind them to vote on 11/2. The fluoridation question was approved by the voters of Manchester by a margin of less than 1% of the total vote. Fluoridation of the Manchester Water, which also serves portions of six surrounding communities, began on December 19, 2000. As of July 2007, community water fluoridation continues for the City of Manchester.

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SECTION II: PRACTICE DESCRIPTION

History of the Practice:

Durham was the first New Hampshire community to become fluoridated in 1955. Since then, nine other communities have joined Durham, including Manchester. One other New Hampshire community is partially fluoridated through water supplied by a neighboring community in Maine. In addition, a number of New Hampshire communities which purchase water from the ten New Hampshire fluoridated communities also benefit from fluoridation.

The fluoridation process in New Hampshire is governed by New Hampshire Statutes, RSA 44:16, 52:23 and 485:14. The laws require that prior to the addition of fluoride, the written application of 10% of the voters in any city must be submitted to the City Clerk. A majority of voters at the municipal election must approve the addition of fluoride. If the measure fails, it may not be introduced for a minimum of three years from the date of the last popular referendum.

Justification of the Practice:

In addition to the overwhelming data supporting the public health benefits of community water fluoridation, Manchester specific data was also used to support the need for this program. The Healthy Manchester Leadership Council (HMLC) published a special report, "The Oral Health Status of the City of Manchester, New Hampshire," in April 1999. This report highlighted the work of the Manchester Health Department's Dental Hygienists over the past 20 years. In particular, data was presented that showed that the number of children in Manchester's elementary schools was 29.6% in Title 1 Schools and 14.7% in all other schools. Dental carries experience was 55% in Title 1 Schools and 44.7% in all other schools. The Mean Decayed, Missing and Filled Teeth for children in grades 1-3 in Manchester was approximately 2.5 in Title 1 Schools and 2.1 in all other schools. The number of children with dental sealants was 20% for children in Title 1 Schools and 35% in all other schools. Also, a survey of patients served by the Manchester Dental Alliance, which serves low-income families, reflected even poorer oral health status. Of children under age 5 served, 88.6% had untreated dental caries; age 6-18, 83.3%; age 19-35, 80%; age 36-50, 77%; and age 51 and above, 66.7%. The percent of patients with dental caries experience was 93% for age 5 and under, 92.6% for those age 6-18, and 100% for those age 19 or older. Further data reflected that many low-income residents had no access to routine dental care. As a result of a survey conducted in Manchester, most of the City's census tracts were designated a Dental Professional Shortage Area. The low-income population-to-dentist ratio in Manchester in 1998 was 19,655:1. Only one dentist in the community was accepting new Medicaid patients.

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

The HMLC's mission is to improve the quality of life for all Manchester-area residents. Since its formation in 1997, the HMLC has focused on a results-orientated community health improvement process. In 1997 the HMLC published an overall community needs assessment. This report highlighted a number of issues and concerns in Manchester, including adolescent pregnancy, oral health, housing, poverty and others. In 1998, the HMLC was designated a local Turning Point Partnership by the W.K. Kellogg and Robert Wood Johnson Foundations. The HMLC was very concerned about the status of oral health in Manchester. Many council members served populations with very poor oral health and a lack of access to dental treatment. The HMLC decided in late 1998 to make oral health the next major area for action.

The Manchester Health Department was charged with assessing the overall oral health of Manchester residents and to prepare a report for the HMLC that would be used to mobilize the community to address this concern. In April 1999, the report, "The Oral Health Status of the City of Manchester, New Hampshire," was released by the HMLC. In discussions held prior to the release of this report, the HMLC had decided to undertake an effort to fluoridate Manchester's water. The HMLC recognized that fluoridation was the single most effective action a community could take to improve its oral health. The HMLC also realized that other areas of oral health needed to be addressed, such as access to care, however the fluoridation effort was given top priority.

The goal was to place the fluoridation question on the ballot for the November 2, 1999 municipal election. Prior to embarking on this campaign, the State Departments' of Health and Human Services, Environmental Services and Attorney General were involved in review of appropriate State Statutes. In particular, they were concerned that since Manchester Water Works sold water to some residents or other water companies in surrounding communities, petitions may be required in these other communities. The Attorney General's Office concluded that since the Water Department is owned and operated by Manchester, only Manchester residents were required to sign petitions and vote on any subsequent referendum. The proper format for petitions was also cleared with the Manchester City Clerk and the City Solicitor's Office to assure it met all legal requirements.

On May 11, 1999, the HMLC had a "kick-off" summit for what was now called the HMLC "Smiles for the Future" campaign. A number of community organizations, dentists, physicians and others were invited to this "kick off." They were provided information packets, petitions and "Smiles for the Future " buttons to wear and distribute. Information packets contained American Dental Association pamphlets, booklets on Fluoride Facts, Centers for Disease Control and Prevention information, etc. A local pamphlet in English-Spanish and English-French was produced in large quantities to be used for public distribution and during signature gathering activities.

The goal was to collect at least 4,380 (10% registered Manchester voters) signatures that would be certified by the City Clerk by September 15, 1999 in order to get the fluoridation question on the ballot. During this period, a representative of the HMLC made contact with all the major service clubs and organizations in Manchester and requested the opportunity to make a presentation to their membership. As a result, they were able to address key business and community leaders and present both the health needs and economic benefits of fluoridation. They also gathered signatures during these events and petitions were widely distributed in the community. The Manchester Dental Society became a powerful ally during this period. Almost every dental office in Manchester and in offices outside Manchester serving Manchester residents actively worked to have patients sign the petitions. Many physicians, especially in pediatric offices, actively worked to have their patients sign petitions also. Members of the HMLC and other individuals and community organizations carried petitions and worked to obtain signatures. Throughout the spring and summer of 1999 individuals worked at community events, fairs and any gathering in the community to obtain signatures. School nurses also maintained petitions and gathered signatures from parents and teachers. HMLC members attended PTA/PTG meetings to gather signatures. One of the most successful efforts was attending evening and weekend baseball and soccer league activities and gathering signatures. A direct mail campaign was begun in July 1999 to help stimulate signature gathering. A list of registered voters was obtained from the City Clerk. From this list, thousands of letters with information on fluoridation and return self-addressed stamped petitions were sent to voters. In addition, an ad was taken in the local newspaper with a petition that individuals could cut and return with their signature. Parish nurses and other faith leaders were also helpful in obtaining signatures. As petitions were gathered, they were sent to the City Clerk for certification. A running total of certified signatures was maintained and forwarded to HMLC members. After countless hours of work, there were 4,589 signatures certified by September 15, 1999.

Throughout the signature-gathering phase, there was also an educational effort to educate the public regarding the safety and benefits of fluoridation. A local business agreed to place fluoridation pamphlets in every grocery bag during customer check out. A very conscious decision was made to keep a somewhat low-profile approach during this phase of the initiative. The goal was to avoid conflict, negative press and keep the anti-fluoridation forces off guard. This strategy was successful to some extent. The anti-fluoridation forces began to work in the summer of 1999, and they initiated a rather large anti-fluoridation letter writing campaign to the local newspaper. They also challenged the HMLC to debate the fluoridation issue, an invitation which was declined.

With reaching the goal of obtaining 10% of Manchester voters as required by State Statute, a public hearing was required to be held by the Board of Mayor and Alderman before the fluoridation question could be officially placed on the November 2, 1999 municipal election ballot. The public hearing was held on September 22, 1999. In anticipation of this hearing, a number of dentists, physicians, and civic leaders had been contacted to testify in favor of the fluoridation referendum to counter the expected anti-fluoridation forces. Prior to this hearing, each elected official was provided an Elected Official Fluoridation Information kit by the Manchester Health Department. The Board of Mayor and Alderman voted the placement of the fluoridation question on the ballot.

At his point, the HMLC embarked on the second phase of their initiative – approval of the fluoridation question on the ballot. With a little over five weeks to the election, most of the effort involved developing a media advertising strategy and securing funds to support this effort. As required by State Law, a campaign committee was established and a fiscal agent appointed. All

funds were to be collected by the fiscal agent and reported to the City Clerk at the conclusion of the election. Donations were solicited from the dental and medical community as well as others.

Sufficient funds were obtained to purchase a number of half-page and full-page ads beginning four weeks prior to the election, with the bulk appearing in the final five days leading up to the vote. The major ads consisted of a full-page ad that contained letters from each of the pediatric groups in the community urging their patient's parents to vote in support of fluoridation. We also requested and received a letter of support and endorsement from former Surgeon General Koop, now at the Koop Institute at Dartmouth College in New Hampshire. This letter was published as part of a half-page ad. A half-page ad was also purchased with a photo of Dr. Koop accompanied by a quote from him endorsing community water fluoridation. Lawn signs supporting fluoridation were also printed and distributed throughout the community. The week prior to the election, post cards were sent to those who had signed petitions reminding them to vote on November 2nd. On Election Day, there were representatives outside all the polling stations holding "vote yes" fluoridation signs. At approximately 9:00 p.m. on November 2, 1999, it was learned that the fluoride question had been approved by voters of Manchester by approximately 650 votes, less than a 1% margin of victory.

Fluoridation of the Manchester Water, which also serves portions of six surrounding communities, began on December 19, 2000.

As of July 2007, community water fluoridation has continued for the City of Manchester.

Budget Estimates and Formulas of the Practice:

The total campaign was accomplished for approximately \$15,000. This includes, newspaper advertisements and some printing. Many other aspects of the campaign were in-kind donations of stamps, envelopes, posters, post cards, and pamphlets. Delta Dental and the Manchester Dental Society also provided their own advertisements.

Lessons Learned and/or Plans for Improvement:

One key lesson is that the signature campaign a month could have been started a month earlier to avoid the panic and last minute frantic effort to get the necessary signatures. Avoiding debate with the anti-fluoridation folks is still the best approach, but be prepared to take some heat for this decision. Before initiating a signature gathering effort that is based on a percent of the voters, make sure that the City Clerk has purged the voter list recently. This may lower the number of signatures that will need to be gathered. Use a community coalition and not a government agency as the lead for the initiative. Some people still use the "big brother" argument if government is the force behind the effort.

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

- American Dental Association, Fluorides and Fluoridation, <http://www.ada.org/prof/resources/topics/fluoride.asp>
- American Dental Association, Council on Access, Prevention and Interprofessional Relations (CAPIR), Community Water Fluoridation Resources, http://www.ada.org/prof/resources/topics/topics_fluoridation_resources.pdf
- Centers for Disease Control and Prevention (CDC), Community Water Fluoridation Fact Sheets, http://www.cdc.gov/fluoridation/fact_sheets/
- Health Effects of Ingested Fluoride, National Research Council, National Academy Press, 1993
- Review of fluoride: Benefits and Risks, Department of Health and Human Services, February 1991
- Toxicological profile for Fluorides, TP-91/17, Dept. of Health and Human Services, April 1993
- ADA & CDC Nature's Way to Prevent Tooth Decay: Water Fluoridation
- Smiles for the Future, Healthy Manchester Leadership Council pamphlet
- The Oral Health Status of the City of Manchester, New Hampshire, A Special Report of the Healthy Manchester Leadership Council, April, 1999
- Centers for Disease Control and Prevention (CDC), MMWR, October 22, 1999, Achievements in Public Health; 1900-1999
- National Center for Fluoridation Policy and Research (University of Buffalo, NY, Dr. Mike Easley)

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)?

An August 2001 report in MMWR showed that based on a systematic review of scientific evidence for effectiveness, water fluoridation is strongly recommended.

The impact of this project in immediate terms is that all Manchester residents and others living in surrounding communities now receive optimum fluoride levels. For many, they are able to discontinue the effort of trying to administer daily fluoride supplements to their children and saving approximately \$15/month/child in pharmacy costs. In the long term, the decrease in dental caries experience among Manchester children will be monitored. Community water fluoridation has been in place for more than six years as of July 2007.

Efficiency

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

As stated, fluoridation is the best and most efficient means of preventing dental disease. The capitol outlay by the Water Department for equipment and construction was approximately \$150,000.

Demonstrated Sustainability

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

The battle to keep the water supply fluoridated continues. We are currently awaiting the Court's decision regarding a suit that was filed regarding the outlying communities not having a vote in the decision to fluoridate Manchester's water. Beyond that, we expect that the anti-fluoridation forces will attempt to hold a referendum in 2003 asking voters to halt fluoridation. Beyond these efforts, the practice and its benefits in preventing tooth decay are otherwise sustainable over the long-term.

Collaboration / Integration

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

This initiative had the effect of strengthening and solidifying the HMLC. The HMLC became a more unified force internally and became a recognized force which gained legitimacy within the community. Secondly, this initiative brought the Manchester Dental Society and other organizations in the community together not only for fluoridation, but also in the broader effort to improve oral health in the 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?

Yes. The fluoridation of Manchester supports advancement towards the Healthy New Hampshire 2010 Objective to have 65% of residents benefiting from fluoridated drinking water. The baseline for the state is currently 38%.

Extent of Use Among States

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

Other New Hampshire communities can benefit from Manchester's experience, as well as communities across the nation that require a referendum to approve community water fluoridation. ASTDD State Synopses demonstrate that in 2007, all 51 states including District of Columbia reported having programs for fluoridated community water supplies. The experience of the Manchester fluoridation campaign can contribute to the knowledge base for communities trying to initiate water fluoridation.