



Massachusetts Fluoridation Update 2006

MYRON ALLUKIANJR DDS, MPH

Dr. Allukian is a nationally recognized expert on fluoridation and dental public health. He was the dental director for the city of Boston for 34 years and is past president of the American Public Health Association. He can be reached at myalluk@aol.com.

This year, more than 3.8 million people living in 137 communities in Massachusetts will have the health and economic benefits of community water fluoridation (see Table 1).¹ However, Massachusetts is ranked only 35th in the country for fluoridation, with just 63 percent of our population on public water supplies living in fluoridated communities. Nationally, more than 170 million Americans, or 67.3 percent, of the U.S. population on a central water supply live in fluoridated communities.² The goal in Healthy People 2010, the United States' national health objectives to increase the quality and years of healthy life and to eliminate health disparities, is that 75 percent of the U.S. population will live in fluoridated communities by the year 2010.³ Sadly, it appears unlikely that Massachusetts will reach this goal. However, this goal could be achieved nationally, as the San Diego area metropolitan water districts, affecting approximately 17 million people, have already agreed to fluoridate and are expected to become fluoridated in the next few years.

however, it was defeated for the fourth time with 56 percent of the vote in opposition. Although a significant amount of money was spent to achieve fluoridation, not enough time was spent to adequately educate all the constituents, given the history of strong antifluoridation sentiment in the city since the 1950s. In contrast, the effort to achieve fluoridation for Boston was an eight-year effort⁴ and the movement to fluoridate the San Diego area began in the 1980s. This is not to imply that that many years are needed to fluoridate every community; both the Greater Boston and San Diego water districts are very large and complex. Every community has its own unique characteristics and decision-making process, but a low-key educational effort for all constituencies about fluoridation is a must.

Fluoride Misinformation and the Internet

Due to the Internet, there is much more misinformation readily available to the public today on fluorides and fluoridation than in the past. This results in healthcare professionals having to spend more time to properly educate the public and policymakers on the health, safety, and economic benefits of fluoridation. When one "Googles" the word "fluoride," there are more than

Although there has been some activity to move ahead with fluoridation in Massachusetts in recent years, progress has been slow for a variety of reasons. In order to achieve fluoridation for a community, the decision-makers and the public need to be well informed. A low-key educational campaign that may take several years, depending on the community involved, is necessary to dispel misinformation and achieve success. For example, the City of Worcester had a referendum vote on fluoridation in 2001;

Table 1: 137 Massachusetts Communities Receiving Water Fluoridation----2006 Fluoridated at 1 ppm-1 part fluoride per million parts water (ppm) or mg/l

City/Town	Yr of start up	2000 Population
Acton	1970	20,331
Acushnet***	2006	10,161
Amesbury	1968	16,450
Amherst	1987	34,874
Andover	1969	31,247
Aquinnah (WHA Part)	1996	80(E)
Arlington*	1978	42,389
Ashburnham	1957	5,546
Athol	1952	11,299
Attleboro	1973	42,068
Bedford	1978	12,595
Belchertown (Part)	1987	243(E)
Belmont*	1978	24,194
Berlin(SP Mall only)	1997	
Beverly	1952	39,862
Billerica	1992	38,981
Boston*	1978	589,141
Bourne (Otis ANG)	1960	1,000(E)
Bridgewater (MCI)	1989	2,230
Brookline*	1978	57,107
Burlington	1993	22,876
Cambridge (FL)*	1974	101,355
Canton	1978	20,755
Charlton**		150(E)
Charlton (Part)	1996	150(E)
Chelsea	1978	35,080
Cohasset	1956	7,261
Concord	1970	16,993
Danvers	1951	25,212
Dedham	1977	23,464
Dighton (Part)	1971	2,200(E)
Dover (Part)	1997	159(E)
Dracut	1982	28,562
Dudley (Part)*		45(E)
Duxbury	1987	14,248
Essex	1970	3,260
Everett*	1978	38,037
Fall River	1973	91,938
Fitchburg	1975	39,102
Framingham (FL)*	1970	66,910
Franklin	1970	29,560
Freetown Water Co.	1978	2,500(E)
Gardner	1987	20,770
Gloucester	1981	30,273
Groveland	1995	6,038
Hamilton	1956	8,315
Hardwick EHS**		50(E)
Haverhill	1971	58,969
Hingham	1953	19,882
Holden	1995	15,621
Holliston	1970	13,801
Holyoke	1970	39,838
Hudson	1985	18,113
Hull	1953	11,050
Ipswich	1971	11,873
Lawrence	1983	72,043
Lexington*	1978	30,355
Lincoln	1971	7,666
Longmeadow	1989	15,633
Lowell	1982	105,167
Lynn	1983	89,050
Lynnfield (FL)*	1972	11,542
(Lynnfield Center)	1959	
Malden*	1978	56,340
Manchester by the Sea	1983	5,228
Mansfield	1997	22,414
Marblehead*	1978	20,377
Marlborough	1982	36,255
Medford*	1978	55,765
Medway	1953	12,448
Melrose*	1978	27,134
Middleton	1951	7,744

City/Town	Yr of Start up	2000 Population
Millis	1983	7092
Milton	1978	26062
Nahant	1978	3632
Natick	1997	32170
Needham	1971	28911
New Bedford***	2006	93768
Newbury (Part)	1969	1000 (E)
Newburyport	1969	17189
Newton (FL)	1963	83829
Norfolk (Part)	1977	40(E)
North Andover	1975	27202
North Attleboro	2002	27143
Northborough	2001	14013
North Reading	1971	13837
Norwood*	1978	28587
Oak Bluffs	1991	3713
Orange (Part)	1975	120(E)
Oxford	1987	13352
Peabody	1983	48129
Pelham (Part)	1987	309(E)
Pembroke	1969	16927
Plainville (Part)		
Quincy*	1978	88025
Reading	1970	23708
Revere*	1978	47283
Rockport (Part Natural)	1984	7767
Royalston		400(E)
Rutland	1985	6353
Salem	1952	40407
Saugus*	1978	26078
Scituate	1954	17863
Seekonk	1952	13425
Sharon	1953	17408
Shrewsbury	1953	31640
Somerset	1969	18234
Somerville*	1978	77478
Southborough	1996	8781
Southbridge	1971	17214
Stoneham*	1978	22219
Sturbridge	1990	7837
Sudbury	1960	16841
Swampscott**	1978	14412
Swansea	1969	15901
Taunton	1981	55976
Templeton	1951	6799
Tewksbury	1983	28851
Topsfield	1953	6141
Tyngsboro	1987	11081
Wakefield*	1978	24825
Walpole	1977	22824
Waltham*	1978	59226
Watertown (FL)*	1971	32986
Wayland	2000	13100
Wellesley	1987	26613
Wenham	1967	4440
Westborough	1974	17997
Westfield (White Oak SH)		
Westford	1994	20754
Westminster	1968	6907
West Newbury	1969	4149
Weston (FL)*	1973	11469
Westport (Part)	1975	1000(E)
Westwood	1977	14117
Weymouth	1972	53988
Winchester (FL)*	1956	20810
Winthrop*	1978	18303
Woburn(Part)*	1978	20615(E)
Worcester(Part)	1995	250(E)

*Members of Massachusetts Water Resources Authority (MWRA) fluoridated in 1978 (old MDC)

**Naturally Fluoridated at 7 or higher ppm

***Expected to fluoridate in mid-2006

Prepared by MA Department of Public Health—Office of Oral Health Updated January 2006

(Part) Communities partially fluoridated

(FL) Fluoridating prior to MDC

(E) Estimated population served

5.4 million references; the first six are negative sources with misinformation, while entry number 7, the American Dental Association (ADA), is the first credible resource, followed by number 9, the National Center for Fluoridation.⁵ In other words, of the first 10 references to come up, only two are credible resources. The findings are similar for the words "fluoridation," "water fluoridations," and even "fluoride toothpaste." For the phrase "community water fluoridation," the first 10 references are credible. When "tooth brushing" is used as a control, there are 3.2 million hits, with no negative references in the first 20. What this means is that the public or decision-makers who wish to learn about fluoridation end up receiving a lot of misinformation that could confuse them, create doubts, or convince them there is something wrong with fluoridation, when in fact, nothing could be further from the truth.

Recent Antifluoridation Activity & the Harvard Study

In June 2005, the Environmental Working Group (EWG) petitioned the National Institutes of Health to list fluoride in tap water as a carcinogen based on "new data" from a Harvard School of Dental Medicine study.⁶ The EWG is a Washington, DC, advocacy organization that has been characterized as "a peddler of fear . . . using unsound science to foment health scares ..." On July 22, 2005, the *Wall Street Journal* published an article titled "Fluoridation, Cancer: Did Researchers Ask the Right Questions?" The article reported, "Questions about fluoridation have returned with renewed vigor because of allegations of scientific misconduct against a prominent researcher at the Harvard School of Dental Medicine." The article goes on to say that "a study done by a doctoral student at Harvard reported an increase in the risk of osteosarcoma in boys who had lived in fluoridated communities."

The alleged misconduct arose because the student's professor had stated in writing to the National Research Council that there was no evidence that fluoridation increased the risk of osteosarcoma, a rare form of bone cancer that occurs in about 400 Americans each year. The student's study had not been published or submitted for peer review. According to the ADA, "the student notes in her thesis that there are several limitations to her study and recommends that the findings be confirmed with data from other studies . . . she notes that the study may not accurately reflect the actual amount of fluoride consumed by study subjects."

This is not the first time in the history of fluoridation that antifluoridationists have tried to confuse the public with misleading information and limited or nonpeer-reviewed studies. The Harvard student's retrospective study was part of a much larger study that is more sophisticated and included bone specimens. If public policies were changed to allow one limited, nonpublished paper done by one student to dictate policy, we would be living in a very chaotic society. The bulk of the evidence released by previously published studies on cancer, osteosarcoma, and fluoridation show no evidence of a relationship. Even the *Wall Street Journal* article stated, "to be sure, one study proves nothing."⁶

The media likes to present both sides and the antifluoridationists take advantage of this. In August 2005, a letter was sent to the Environmental Protection Agency (EPA) administrator and key congressional committees calling for a

nationwide moratorium on fluoridation, citing the Harvard student's study.⁹ The EPA responded by stating, "EPA is aware of this work . . . it must be considered . . . scientific information must undergo independent peer review before being included for EPA decision making . . . and dose response evaluation is needed."¹⁰ Two months later, in October 2005, *Time* magazine published an article titled "Not in My Water Supply," which reiterated the Harvard allegations and the alleged concerns about fluoridation.¹¹

Once the full Harvard study is completed, one expects that it will show, as previous reputable studies have shown, no relationship between osteosarcoma and fluoridation. The American Cancer Society and the National Cancer Institute continue to recognize the public health benefits of fluoridation.

Overwhelming Support for Fluoridation

The safety, health, and economic benefits of fluoridation have been well documented.^{12,13} As a matter of fact, the U.S. Centers for Disease Control and

Prevention have called fluoridation "one of the top 10 public health achievements of the 20th century."¹⁴ More than 100 major reputable health and scientific organizations and agencies in the United States and abroad, including the World Health Organization, have recognized the public health benefits of fluoridation (see Table 2).¹² Since 1950, when the U.S. Public Health Service first endorsed community water fluoridation as a beneficial public health measure, every U.S. Surgeon General henceforth has also supported it.

In spite of the overwhelming evidence and more than half a century of fluoridation safety and benefits, there is still resistance to fluoridation. January 25, 1945, was the first day of adjusted community water fluoridation in the United States. This means we have had 60-plus years of experience with fluoridation, with millions of people in more than 10,000 water systems. We have yet to see any credible evidence of the allegations that have been made concerning negative health effects of fluoridation over the years. The allegations have ranged from "a Communist plot" to AIDS, cancer, heart disease, birth defects, allergies, mutagens, and kidney failure. In the past, these allegations have been refuted by reputable scientists, studies, organizations, agencies, and the courts, and they continue to be refuted today.^{15,19} The National Research Council is currently reviewing all the recent studies on fluoride to determine whether there is a need to change the EPA's maximum contaminant level of fluoride for a public water supply, which is now 4 parts per million-four times greater than the recommended level for fluoridation. This report is expected to be available in 2006.

History of Fluoridation in Massachusetts

In 1950, the U.S. Public Health Service and the ADA recommended fluoridation as a public health measure. One year later, in 1951, the first three Massachusetts communities became fluoridated: Danvers, Middleton, and Templeton. These communities now have a total population of approximately 39,755.¹ From 1951 to 1956, another 14 communities became fluoridated, adding a population of about 257,811.¹

Table 2: National and International Organizations that Recognize the Public Health Benefits of Community Water Fluoridation for Preventing Dental Decay

Academy for Sports Dentistry	Canadian Dental Association
Academy of Dentistry International	Canadian Dental Hygienists Association
Academy of General Dentistry	Canadian Medical Association
Alzheimer's Association	Canadian Nurses Association
America's Health Insurance Plans	Canadian Pediatric Society
American Academy of Family Physicians	Canadian Public Health Association
American Academy of Nurse Practitioners	Child Welfare League of America
American Academy of Oral and Maxillofacial Pathology	Children's Dental Health Project
American Academy of Orthopaedic Surgeons	Children's Health Fund, The
American Academy of Pediatric Dentistry	Chocolate Manufacturers Association
American Academy of Pediatrics	Consumer Federation of America
American Academy of Periodontology	Council of State and Territorial Epidemiologists
American Academy of Physician Assistants	Delta Dental Plans Association
American Association for Community Dental Programs	Dental Health Foundation (of California)
American Association for Dental Research	FDI World Dental Federation
American Association for Health Education	Federation of American Hospitals
American Association for the Advancement of Science	Hispanic Dental Association
American Association of Endodontists	Indian Dental Association (U.S.A.) Institute of Medicine
American Association of Oral and Maxillofacial Surgeons	International Association for Dental Research
American Association of Orthodontists	International Association for Orthodontics
American Association of Public Health Dentistry	International College of Dentists
American Association of Women Dentists	March of Dimes Birth Defects Foundation
American Cancer Society	National Association of Community Health Centers
American College of Dentists	National Association of County and City Health Officials
American College of Physicians	National Association of Dental Assistants
American Society of Internal Medicine	National Association of Local Boards of Health
American College of Preventive Medicine	National Association of Social Workers
American College of Prosthodontists	National Confectioners Association
American Council on Science and Health	National Council Against Health Fraud
American Dental Assistants Association	National Dental Assistants Association
American Dental Association	National Dental Association
American Dental Education Association	National Dental Hygienists' Association
American Dental Hygienists' Association	National Down Syndrome Congress
American Dietetic Association	National Down Syndrome Society
<i>American Federation of Labor and Congress</i>	National Eating Disorders Association
of Industrial Organizations American Hospital Association	National Foundation of Dentistry for the Handicapped
American Legislative Exchange Council	National Head Start Association
American Medical Association	National Health Law Program
American Nurses Association	National Healthy Mothers, Healthy Babies Coalition
American Osteopathic Association American Pharmacists	National Kidney Foundation
Association American Public Health Association	Oral Health America
American School Health Association	Robert Wood Johnson Foundation
American Society for Clinical Nutrition	Society for Public Health Education
American Society for Nutritional Sciences American	Society of American Indian Dentists
Student Dental Association	Special Care Dentistry
American Veterinary Medical Association	-Academy of Dentistry for Persons with Disabilities
American Water Works Association	-American Association of Hospital Dentists
Association for Academic Health Centers	--American Society for Geriatric Dentistry
Association of American Medical Colleges	U.S. Department of Defense
<i>Association of Clinicians for the Underserved</i>	U.S. Department of Veterans Affairs
Association of Maternal and Child Health Programs	U.S. Public Health Service
Association of State and Territorial Dental Directors	-Centers for Disease Control and Prevention (CDC)
Association of State and Territorial Health Officials	-Health Resources and Services Administration (HRSA)
Association of State and Territorial Public Health Nutrition	-National Institute of Dental and Craniofacial
Directors	Research (NIDCR)
British Fluoridation Society	World Federation of Orthodontists
	World Health Organization

In 1957, the Massachusetts state legislature passed a law requiring a public vote-a binding mandatory fluoride referendum-before a local board of health could order fluoridation. From 1957 to 1967, while this law was in effect, only five communities, with a combined population now of 94,815, implemented fluoridation. The City of Cambridge voted for fluoridation and implemented it in 1960-and then voted it out in 1963. This was due to an intense anti-fluoridation campaign that included a postcard with a picture of a dead rat that was mailed to every household right before the vote.

In 1967, Massachusetts was ranked 48th in the country for fluoridation, with only 8.2 percent of the population on public water supplies living in fluoridated communities.²⁰ That same year, a Special Legislative Commission on Dental Health recommended and filed a bill calling for the mandatory fluoridation referendum to be repealed and stating that upon the recommendation of the State Commissioner of Public Health, a local board of health may order fluoridation. After an

intense and successful educational effort by the dental, public health, and health communities, the bill passed the state legislature in 1968.²² The new fluoridation law also allowed a public vote if 10 percent of the registered voters filed a petition within 90 days of the public notice of the fluoridation order. The vote would then have to be on the ballot at the next town or city election. This fluoridation law has essentially been the same since 1968.

From 1968 to 1997, 78 communities implemented fluoridation as a result of 135 fluoridation orders by 112 communities.²³ Another 18 communities also became fluoridated due to a shared water supply or fluoridation orders that were not documented. Thus, during this time frame, another 3.1 million people were living in fluoridated communities.²³ Studies of anti-fluoridation activity were done during that time.^{24,25} The largest increase in the number of people with fluoridation occurred in 1978, when the 33 cities and towns of Greater Boston, now affecting 2.5 million people, became fluoridated after a well-planned and well-organized community effort. During that eight-year period, about 70 bills were filed in the state legislature to stop or weaken fluoridation efforts; all were defeated.⁴

dation efforts; all were defeated.⁴

Only three communities became fluoridated in the period from 1998 to 2005: North Attleborough, North-borough, and Wayland, a total of 54,256 people. In November 2000, the voters in North Attleborough approved fluoridation in a public referendum, 59 percent to 41 percent. In 2005, the North Attleborough Board of Health invited three known anti-fluoridationists from out of state to speak in their community. In 2006, this board of health plans to file a suit in Superior Court to discontinue fluoridation.²⁶ Although one would expect that there is no merit to this lawsuit, it will be up to the courts to decide. Also, in January 2006 the Yarmouth Board of Health decided against fluoridating its community's water supply at this time.²⁷ New Bedford and Acushnet are expected to implement fluoridation by mid-2006, adding another 103,929 people living in fluoridated communities.

Major Cities and Towns

All, of the largest cities and towns in Massachusetts are fluoridated, except for five: Barnstable, Brockton, Chicopee, Springfield, and Worcester; with a total population of about 526,852 (see Table 3). (New Bedford is expected to be fluoridated in 2006.) Fluoridation has been defeated four times by referenda in Worcester, was ordered in Brockton in 1972 but never implemented, and was defeated 2-1 by referendum in Springfield in 1983. It has never been ordered in Chicopee or Barnstable; Cape Cod and western Massachusetts have very few fluoridated communities. Fluoridation activity in Massachusetts in recent years had been quite limited, until 2005.

Mandatory Fluoridation Bill

In December 2004, Health Care for All, a consumer advocacy organization that has an Oral Health Advocacy Task Force made up of both dental and nondental

Table 3: 2006 Fluoridation Status of the 25 Most Highly Populated Cities/Towns in Massachusetts

City Town	Pop 4-1-2000	Fluoridated	Year Implemented
Boston	589,141	Yes	1978**
Worcester	172,648	No	
Springfield	152,082	No	
Lowell	105,167	Yes	1982
Cambridge	101,355	Yes	1974
Brockton	94,304	No	
New Bedford	93,768	No	***
Fall River	91,938	Yes	1973
Lynn	89,050	Yes	1983
Quincy	88,025	Yes	1978**
Newton	83,829	Yes	1963
Somerville	77,478	Yes	1978**
Lawrence	72,043	Yes	1983
Framingham	66,910	Yes	1970
Waltham	59,226	Yes	1978**
Haverhill	58,969	Yes	1971
Brookline	57,107	Yes	1978**
Malden	56,340	Yes	1978**
Taunton	55,976	Yes	1981
Medford	55,765	Yes	1978**
Chicopee	54,653	No	
Weymouth	53,988	Yes	1972
Peabody	48,129	Yes	1983
Barnstable	47,821	No	
Revere	47,283	Yes	1978**

*Source: <http://www.citypopulation.de/USA-Massachusetts.html>, accessed Jan 31, 2006

** Members of Ma Water Resource Authority

*** Expected to fluoridate in mid 2006

individuals, was instrumental in the sub-mission of a statewide mandatory fluoridation bill, HB-2633 and SB-122. This bill-titled "An Act to Improve the Oral Health of Children and Other Residents of the Commonwealth"-- would require all municipal water supplies in Massachusetts serving more than 5,000 people to become fluoridated. Subject to appropriation, the Massachusetts Department of Public Health would pay reasonable expenses for compliance with this law. The public hearing was held in October 2005.

This bill was developed and submitted without a long-term, low-key education effort of constituencies and decision-makers. As a result, it stimulated and organized the antifluoridationists in Massachusetts, instilling doubts about fluoridation among state legislators. The proponents of the bill requested it be put into "study" rather than be voted on. For such a mandatory fluoridation law to be approved, a well-thought-out strategy and education plan needs to be developed.

What Dental Professionals Can Do

The following are recommendations for what dental professionals-dentists and hygienists-can do to improve a

community's knowledge and attitudes toward fluoride and fluoridation:

- Be well versed on the facts of fluoridation. There are many different resources for this information, including reputable sources on the Internet (see Table 4). One of the best is the ADA's Fluoridation Facts, which was just updated in 2005.¹² It includes well-documented information on such topics as benefits, safety, public policy, and cost-effectiveness.
- Continue to educate patients on the safety, health, and economic benefits of fluoride and fluoridation. This should be done whether the dentist practices in a fluoridated or nonfluoridated community and irrespective of whether his or her patients live in a fluoridated or non-fluoridated community. The Massachusetts Dental Society has produced a sign "This Office Recommends Water Fluoridation for Healthier Teeth" that should be posted in every dental office.
- Make a special effort to educate community leaders and decision-makers on the benefits of fluoridation. A previous study of Massachusetts legislators showed

that although most of them saw a dentist on a regular basis and were prevention oriented, they received most of their information on fluoridation from people against this preventive measure, not their own dentists.²⁵ If dentists cannot answer questions about fluoridation asked by decision-makers, they may obtain information from the resources listed in Table 4 or Fluoridation Facts.¹²

- Prescribe systemic fluoride drops and tablets for patients 6 months to 16 years of age who live in nonfluoridated communities (see Table 5). This should be done routinely, and the parents of the children should be educated on the benefits of fluoride and fluoridation. A copy of the Massachusetts Department of Public Health's "Listing of Fluoridated Communities in Massachusetts" (see Table 1) should also be available in every dental office as a reference. For more up-to-date information on the fluoridation status of a community, contact the community's local board of health.

Table 4: Fluoridation Information Resources

Agency/Organization	Web Address	Phone or email
Local Board of Health	Check your local listing	Check your local listing
MA Dental Society	www.massdental.org	800-342-8747
MA Department of Public Health – Office of Oral Health	www.mass.gov/dph/fch/ooh.htm	617-624-6074
American Dental Assoc. (ADA)	www.ada.org/goto/fluoride	800-621-8099 x2860 CAPIR*
U.S. Center for Disease Control and Prevention (CDC)	www.cdc.gov/oralhealth	oralhealth@cdc.gov

*CAPIR is the Council on Access, Prevention, and Interprofessional Relations

Table 5: Recommended Dietary Fluoride Supplement Schedule

Concentration of Fluoride in Drinking Water (ppm)*				
Age of Child	<0.3	0.3 - 0.6	>0.6	Preparation
6 months - 3 years	0.25 mg**	0	0	Drops
3 – 6 years	0.50 mg	0.25 mg	0	Tablets
6 – 16 years	1.0 mg.	0.50 mg	0	Tablets

Amounts recommended by the American Dental Association, American Academy of Pediatrics, and American Academy of Pediatric Dentistry, 1994

* 1.0 part per million (PPM) = 1 milligram per liter (mg/l)

** 2.2 mg sodium fluoride contains 1 mg fluoride ion

- If you live or practice in a nonfluoridated community, find out what can be done to move your community toward fluoridation. For assistance, contact any of the Massachusetts resources listed in Table 4. The ADA also has an excellent planning manual, titled "Community Organization for Water Fluoridation," and it also has a Community Water Fluoridation Resource Kit that is very helpful and quite comprehensive.
- Become involved in the leadership of your local community. Massachusetts has more than 300 local boards of health, but less than a handful have a dentist or hygienist as a board member. The majority of board members are interested laypersons. Dental professionals need to become more involved in the leadership of their local communities, whether as members of the board of health, school board, library board, or town meeting.

Summary

Massachusetts has a long history of activity with community water fluoridation. Although the state has 3.8 million people living in 137 fluoridated communities, there are more than 2 million people who do not have these benefits. The Bay State is ranked 35th in the country regarding the percent of people on public water supplies with fluoridation. We can do better than that.

We have more than 60 years of experience receiving the health and economic benefits of fluoridation in our country; however, there is still a lot of misinformation about fluoridation, and the unreliable nature of information posted on the Internet exacerbates much of this misinformation.

Dental professionals, their patients, and decision-makers must be continuously educated about the safety, health, and economic benefits of community water fluoridation. Patients from 6 months to 16 years of age living in nonfluoridated communities should be prescribed supplemental fluoride. Dental professionals in nonfluoridated communities should assist them to become fluoridated. All dental professionals need to become more involved in the leadership of their communities. ■

Author's Addendum National Research Council Report Doesn't Affect Community Water Fluoridation

As this issue of the JOURNAL was going to press on March 22, 2006, the National Research Council, National Academy of Sciences released its report, "Fluoride in Drinking Water: A Scientific Review of EPA Standards." The purpose of this review was to determine if the Environmental Protection Agency's (EPA) current maximum contaminant level goal (MCLG) at 4 parts per million (ppm) fluoride should be changed for naturally fluoridated communities.

The committee recommended that the goal be lowered to protect against severe dental fluorosis. Severe dental fluorosis doesn't occur in communities where the fluoride level is lower than 2 ppm. The EPA will now have to determine what the maximum contaminant level (MCL) should be based on benefit, risk, cost, and practicality. (The MCLG is a goal and nonenforceable, whereas the MCL is a limit that is enforceable by EPA.) The committee had no new data for this recommendation but reinterpreted previous data. This report does not affect community water fluoridation at the recommended level of 0.7 to 1.2 ppm, but anti-fluoridationists may use excerpts of this report to confuse the public.

For more information about fluoridation and this study, please visit www.ada.org.

References

1. Office of Oral Health. Available from: <http://www.mass.gov/dph/fch/ooh.htm>. Accessed 2006 Feb 2.
2. Centers for Disease Control. Water Supply Statistics; 2002 National Oral Health Surveillance System, Atlanta; 2002 Dec 31.
3. US Department of Health and Human Services. Healthy People 2010, Chapter 21. Oral health. Washington: US Government Printing Office.
4. Allukian M, Dunning JM, Steinhurst J. Community organization and a regional approach to fluoridation of the Greater Boston area. JADA 1981;102:491-3.
5. www.google.com. Accessed 2006 Jan 15.
6. Begley S. Fluoridation, cancer: did researchers ask the right question? Wall St J, Sci J; 2005 Jul 22.
7. Cohen BR. The environmental working group—peddler of fear. Washington: Capital Research Center; 2004 Jan.
8. American Dental Association. ADA statement

on fluoridation and bone cancer; 2005 Jul 22. Available from:

http://www.ada.org/prof/resources/positions/statements/fluoride_bonecancer.asp.

9. Welch DA, Hirzy JW, et al. Bone cancer-fluoride link. Letter to Honorable Stephen L. Johnson, Administrator, US Environmental Protection Agency, Coalition of US EPA Unions; 2005 Aug 5.
10. Ghanian EV. Letter to Mr. Dwight A. Welch and Mr. J. William Hirzy, US Environmental Protection Agency, Washington; 2005 Aug 29.
11. Roosevelt M. Not in my water supply. Time 2005 Oct 24:62-3.
12. American Dental Association. Fluoridation facts. Chicago: ADA; 2005. p 69.
13. Allukian M, Horowitz AM. Effective community prevention programs for oral diseases. In: Gluck G, Morgenstein W., editors. Jong's community dental health. 5th ed. St. Louis: Mosby Press; 2002. p 237-76.
14. Centers for Disease Control. Ten great public health achievements—United States, 1900-1999. MMWR 1999 Apr;48:12.
15. Elwell KR, Easlick KA. Classification and appraisal of objections to fluoridation. Ann Arbor (MO: University of Michigan; 1960. p 8.
16. Consumer Reports. Two-part report on fluoridation, part I: the cancer scare; part II: the misleading claims. Consumer Rep 1978 Jul-Aug:8.
17. Wulf C, Hughes KF, Smith KG, Easely MW. Abuse of the scientific literature in an anti-fluoridation pamphlet. 2nd ed. American Oral Health Literature 1988:184.
18. Report of the Ad Hoc Subcommittee on Fluoride of the Committee to Coordinate Environmental Health and Related Programs, Public Health Service. Review of fluoride, benefits and risks. USHHS 1991:2:134.
19. National Research Council. Health effects of ingested fluoride. Washington: National Academy Press; 1993. p 181.
20. US Department of Health, Education, and Welfare. Fluoridation census 1967 USPHS, Division of Dental Health; 1968.
21. Commonwealth of Massachusetts. Report of the special commission on the condition of dental health. State House, Boston; 1967.
22. Allukian M. Fluoridation: a continual struggle in Massachusetts. Harvard Dent Alumni Bul 1968;28:77-80, 84.
23. Hendricks JR, Allukian M. Water fluoridation in Massachusetts: a 30-year review. J Mass Dent Soc 1998;47(2):8-10, 12-4, 16-7.
24. Allukian M Jr., Frankel JM. Sixteen referenda on fluoridation in Massachusetts: an analysis. Pub Health Dent 1973;33(2).
25. Allukian M, Ackerman J, Steinhurst J. Factors that influence the attitudes of first-term legislators in Massachusetts toward fluoridation. JADA 1981;104(4):494-6.
26. DeMelia A. NA Board reviewing fluoride suit. Sun Chronic 2006 Jan 11.
27. Salters C. Yarmouth says no to fluoridation. Yarmouthport Register 2006 Jan 26.