



# ORAL HEALTH IN UNDERSERVED POPULATIONS: MORE IMPORTANT THAN YOU THINK!

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# THE UNITED STATES IS CURRENTLY IN A DENTAL HEALTH CRISIS

- 181 million US residents did not visit the dentist in 2010
- 1 in 2 US residents over the age of 30 suffer from some form of gum disease
- 1 in 4 children under 5 years of age already have at least one cavity
- Over 90% of adults have at least once cavity; 1 in 4 of them remain untreated

## **Response: Healthy People 2020 Oral Health Initiative**

1. Reduce the proportion of adults with untreated dental decay by 15%
2. Reduce the number of children under 18 with untreated dental decay by 15%
3. Increase the proportion of low income children who received any preventive dental services during the past year by 15%

Amendments to the Public Health Service Act reauthorizes the award of grants dedicated to oral health initiatives aimed at preventing dental disease and reducing the barriers to accessing competent oral health services

# Medicaid Adult Dental Coverage and Expansion Decision



1. Idaho provides extensive dental coverage to adults with disabilities and other special health care needs; all other adult members receive emergency only benefits. Virginia provides extensive benefits to pregnant women. Arizona will provide extensive benefits to persons with disabilities effective October 1, 2016

Sources: Kaiser Family Foundation, "Current Status of Medicaid Expansion: State Decisions," Updated July 7, 2015; DentaQuest Foundation, August 2, 2015.

# THE UNITED STATES IS CURRENTLY IN A DENTAL HEALTH CRISIS: MA IS NOT EXEMPT!

- 57% of women did not have their teeth cleaned during their pregnancy
  - 17% of the state's 3rd graders had untreated decay
- 90% of residents between ages 25 and 44 living in dental health professional shortage areas have lost at least one tooth
  - 59% of nursing home residents have untreated decay
- Massachusetts ranks 36th in the nation for water fluoridation status
- 66% of licensed dentists with a Massachusetts address are not MassHealth providers

# WHAT IS FLUORIDE?

## WHAT ARE ITS USES?



- Supplement
  - Prevention of tooth decay
  - Protect from bacteria
  - Promotes new bone formation
  - Prevents further bone loss
-

# TOPICAL VS. SYSTEMIC



Use a tiny smear of fluoride toothpaste the size of a grain of rice, from the first tooth up to the third birthday.



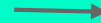
A pea for me at age 3...and always with fluoride!

# COMMUNITY WATER FLUORIDATION

Fluoride occurs naturally in water

Water fluoridation is the process of adjusting fluoride in public water supplies to achieve the optimal level of fluoride

Holden Water Treatment Plant



# COMMUNITY WATER FLUORIDATION DEBATE

## Pros:

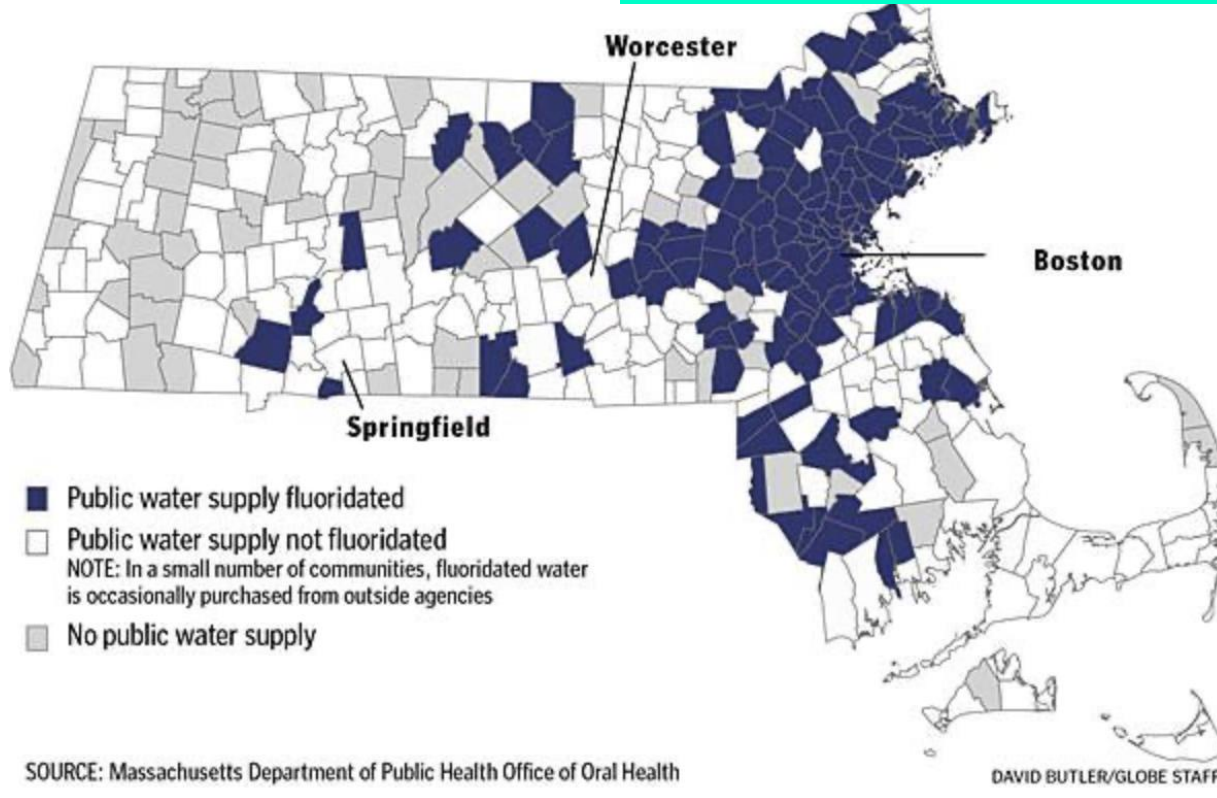
- Protection against dental caries, especially in children
- Well-documented safety at recommended level of 0.7 mg/L
- Cost effective
  - Annual per-person saving for those aged 6-65 ranges between \$28.70-\$35.90 depending on the size of the community
- Equitable and fair access to all members of a community regardless of age, education, or income

## Cons:

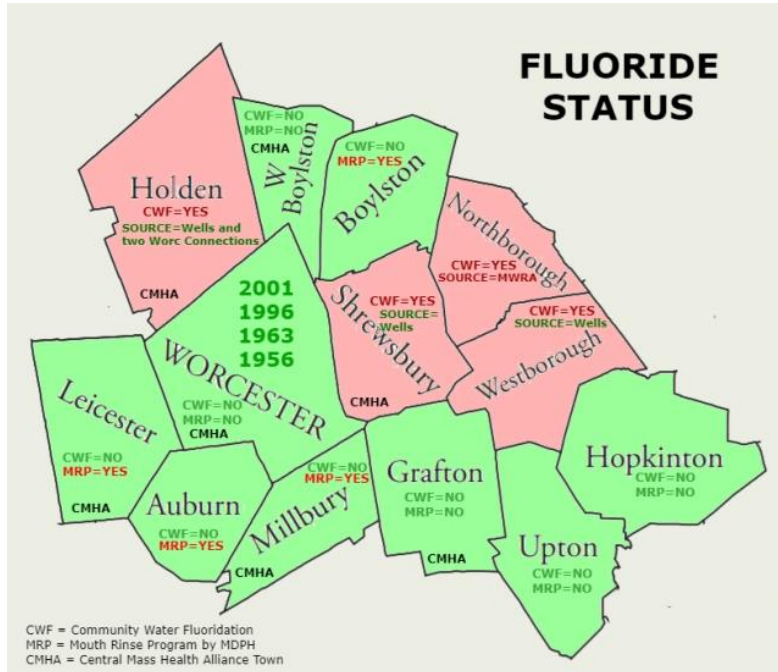
- Fluoride is harmful in high doses
  - Dental fluorosis and skeletal fluorosis
- Difficult to control intake of fluoride
- Effectiveness of water fluoridation has not been validated with a randomized controlled trial
- Lack of autonomy



# FLUORIDE IN MA



# FLUORIDE IN WORCESTER



Sustainable Shrewsbury (2019)

- Attempts to fluoridate water has failed on 4 separate occasions (1956, 1963, 1996, 2001)
- 2001- Voters rejected fluoridation 56 percent to 44 percent.
- \$400,000 spent on pro-fluoridation campaign
- Arguments against fluoride centered around consent, autonomy, and fluoride toxicity

# NEW CHANGES IN WORCESTER & POTENTIAL IMPACT ON WATER FLUORIDATION

- Worcester city counselor Konnie Lukes, who helped vote down fluoridation in the past, will not be seeking re-election after 2019 term ends.
- Worcester Board of Health, which has held an advisory role for many years, had its regulatory powers reinstated in 2014.
- Worcester BoH agrees that data on fluoridation that has been discussed at meetings has largely shown a net benefit to adding fluoride in water supply.



Toy (2017)

- Water in Worcester: A Campaign for Public Fluoridation: 3 case points:
  - Fluoride research and benefits
  - Political research
  - Electoral research

*\*\*\* While previous attempts have failed, there is hope that with a strong argument fluoridation can happen in Worcester*

# FLUORIDE IN WORCESTER

# WHO IS INVOLVED IN ORAL HEALTH LEGISLATION?



**HEALTH CARE  
FOR ALL**



**ADA**  
American  
Dental  
Association®



# WHAT CAN WE DO AS HEALTH CARE PROFESSIONALS?

THE 191ST GENERAL COURT OF THE  
COMMONWEALTH OF MASSACHUSETTS

Bills & Laws Budget Legislators Hearings & Events Committees & Commissions State House

FIND MY LEGISLATOR

Search the Legislature..

Find My Legislator

Find your legislator by entering your street address, city/town, and ZIP code.  
Please note that you can only search addresses within Massachusetts.

Street Address

123 Main Street

City/Town

Boston

ZIP Code

02210

Mass.Gov State Offices & Courts State A-Z Topics State Forms

## Health and Human Services

Find a Dentist


Home Dentists Members Partners Trading Partners ER Services

### Welcome to the MassHealth Dental Program!

The MassHealth Dental Program serves over 1.8 million residents of the Commonwealth. The team at MassHealth / DentalQuest works with several partners to ensure access to care, great customer service and implementation of programs to educate and inform members and stakeholders.

Above, we have created tabs to allow our partners to access needed information and resources. The tabs included are for:

- Dentists** - Access the provider web portal, information as to how to become a provider, our online application / re-credentialing system App Central, important documents and contact information.
- Members** - Access dental benefit information, oral health brochures, the member web portal, important forms, the Find a Provider tool and contact information.
- Partners** - Access important documents, contact information and the client web portal for those who have been granted access by MassHealth.
- Trading Partners** - Access the trading partner portal to submit 837 files.
- ER Services** - Physicians and their teams working in urgent care or emergency room settings can access important information about our ER Diversion program, contact information and the online entry page to submit information regarding MassHealth members treated for oral health related conditions.



1. Know how to find and contact your legislators!

2. Recognize the importance of good history taking and oral exams even if you are not a dental professional

3. Be aware of the resources in your community available to your patients!

# ACKNOWLEDGEMENTS

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Dr. CM Vera at Worcester Kids Dental  
Dr. Brandon Cairo  
Dr. Charles Seitz at Bethany Health Care Center  
The Esther M. Wilkins Forsyth Dental Hygiene Clinic at MCPHS  
Massachusetts Dental Society  
Town of Holden Department of Public Works  
Health Care for All  
Massachusetts Department of Public Health  
Massachusetts Representative Kevin Honan



HEALTH CARE  
FOR ALL





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<https://malegislature.gov/Search/FindMyLegislator>

<https://www.masshealth-dental.net/>

<https://www.mass.gov/orgs/department-of-public-health>

<https://www.worcestermag.com/news/20190501/after-30-years-on-city-council--konnie-lukes-opts-not-to-seek-re-election-in-worcester>

<https://www.telegram.com/news/20170226/fluoridation-remains-complicated-matter-for-worcester>

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# ORIGINS OF WATER FLUORIDATION

- Early 1900's, dentists discovered that there were patients with 'mottled brown spots' on their teeth, deemed Colorado Brown Stain due to original location
- After 30 years of research across the country with different populations who had this brown stain to their teeth, it was found to have an origin in the water supply directly related to fluoride concentration
- The fluoride levels in the water clearly caused the discoloration called fluorosis- however, there was also a benefit to this discoloration
- Researchers discovered that teeth of children and adults with mottled enamel were resistant to decay
- Grand Rapids, Michigan was the first city to add fluoride to the drinking water after determining an ideal amount to provide protection (1.0 ppm)
- Saw a 60% decrease in dental caries in 30,000 school children across a 15-year study

# WHO BENEFITS FROM FLUORIDE?

- Not only children, but also adults benefit from fluoride since it is absorbed more easily by demineralized enamel than sound enamel
- Drinking water with an appropriate level of fluoride is also beneficial in decreasing the prevalence of dental caries- particularly root caries- in older adults
- Fluoride works best when small amounts are constantly maintained in the mouth, therefore the easiest and most reliable way to do this would be through the water supply
  - Most beneficial time for fluoride exposure is shown to be from 6 mo. to 6 years of age
  - Since young children do not have the capacity to understand the benefits of fluoride use, the easiest and most effective way to ensure appropriate exposure is to do so through the water source
  - Relying on fluoride supplementation of toothpastes and varnishes in young children cannot ensure that there is consistent and frequent use

# WHO HAS DENTAL CARIES?

- Despite the advances in fluoridation, there is still a clear division of the prevalence of dental caries
    - Low SES, inadequate access to dental care, those without dental insurance, low levels of parental education, etc. are all risk factors for dental caries
    - The most accessible and proven method of ensuring fluoride exposure is through water sources—can reach everyone without regard for SES or accessibility to care
-

# IS TOO MUCH FLUORIDE DANGEROUS?

- Risk for enamel fluorosis is only present during certain stages of tooth eruption- after pre-eruptive maturation of teeth is complete, around age 8, enamel is no longer susceptible to enamel fluorosis
- Despite having many forms of fluoride available, only the ingestible forms are going to increase overall fluoride concentration to a point where systemic effects may be seen
  - This is not seen in the US because of the relatively low concentrations of fluoride in the water compared with other areas of the world
- Enamel fluorosis in the US may be seen at a very low prevalence in its mildest form, which is purely a cosmetic concern
- Cases of moderate and severe forms of fluorosis occurred in areas with both low and high fluoride concentrations in the water
- Fluoride is a naturally occurring element which in excess can cause systemic problems just like many other naturally occurring elements (vitamin A, vitamin D, iron, sodium chloride, water, oxygen, etc.)

<https://www.cdc.gov/mmwr/preview/mmwrhtml/rr5014a1.htm#top>

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4851520/>

# CDC: PUBLIC HEALTH RECOMMENDATIONS

# LOOK HERE

Slides to discuss:

- Fluoride background -- targeted population of children - topical vs systemic, fluoride rinse (Canary)
- Why we care/why it is a public health issue -- healthcare coverage/dentists vs HCPs (Abiola)
- Community water fluoridation debate: fluoridation plant (Kathryn)
  - Pros vs Cons
- Policies in the works/ maps of MA fluoridation particularly Worcester (status of it being voted down) (Sahil)
- What's already being done now for Worcester (Sabiha)
- What can we do now? Barriers? (Alex)