





July 8, 2016

Madeline Drexler
Editor, *Harvard School of Public Health Magazine*Harvard T.H. Chan School of Public Health
Office for External Relations
90 Smith Street, Fourth Floor
Boston, MA 02120

RE: Response to "Is Fluoridated Drinking Water Safe?": Dental Students' Call to Action

Dear Ms. Drexler:

As members of the Harvard School of Dental Medicine (HSDM), Class of 2018, we stand in support with the previous letters submitted by the following authors refuting the recent publication in the *Harvard Public Health* magazine Spring 2016 issue entitled, "Is Fluoridated Drinking Water Safe?":

- Kathleen T. O'Loughlin, D.M.D., M.P.H., Executive Director American Dental Association
- Richard W. Valachovic, D.M.D., M.P.H., Sc.M., President and CEO American Dental Education Association
- Christopher H. Fox, D.M.D., Sc.M., D.M.Sc., Executive Director American Association for Dental Research
- Carol Gomez Summerhays, D.D.S., President American Dental Association
- Benard P. Dreyer, MD, FAAP, President American Academy of Pediatrics
- Frances Kim, DDS, MPH, DrPH, President AAPHD
- Scott L. Tomar, DMD, MPH, DrPH, Chair APHA Oral Health Section
- Bruce Donoff, DMD, MD, President AAPHD, Chair APHA Oral Health Section, Dean Harvard School of Dental Medicine

We find concern with the following frank inaccuracies and misleading concepts in the article:

- Misleading Charts (re: Corrected June 15, 2016 showing Chile's and Australia's use of fluoridated water).
- Based on solitary, questionable work<sup>1-3</sup>, previously refuted<sup>4-7</sup>.
- Misleading conclusions of Cochrane Collaboration.
- Lack of expert oral health consultation.
- Neglect to mention previous HMS, HSPH, and HSDM support for water fluoridation.

We support previous calls for the full retraction of this article and the promotion of a more accurate "State of the Science" from the Harvard T.H. Chan School of Public Health. Evidence-based discussions pertaining to fluoride should include the points listed below:

- Fluoride is naturally found in water and many of the foods we eat<sup>8</sup>.
- There is agreement amongst oral health experts and over 100 international organizations on the safety and efficacy of fluoridation<sup>9</sup>.
- Community-based water fluoridation has been implemented in the United States for over 70 years, without any known negative health effects occurring at recommended levels<sup>10-13</sup>
- Water fluoridation refers to the control of fluoride concentration in water, which can mean both raising or lowering healthy levels to 0.7ppm depending on the water source. Over 214 million Americans, 74.7 percent of the U.S. population, live in communities which supply fluoridated water<sup>14</sup>.
- For every \$1 spent on water fluoridation there is a savings in treatment costs of ~\$38 based on community size, costs, and different study methodologies<sup>15,16</sup>.
- Fluoride is highly effective in both preventing and remineralizing active caries<sup>17-19</sup>.

## **Our Call for Action**

The oral health professions are responsible for promoting the oral health and well-being of their communities. Perhaps the most effective and well understood manner in which this can be achieved is through supporting community-based water fluoridation, clinical fluoride applications, and home-based fluoride therapies. We call upon fellow dental students to affirm, promote, and advance the following:

- Guarding against harmful practices and misconceptions on fluoride.
- Promotion of evidence-based dentistry and preventive care.
- Promotion of evidence-based fluoride knowledge and practices in dentistry and the broader health, public health, and lay communities.
- Discussion about the benefits of fluoride in prevention of caries, pain, and unnecessary financial costs.
- Collaboration with oral health colleagues to promote strong relationships, healthy communities, and optimal patient care.
- Collaboration with and education of other health-professional students and programs about oral health prevention and promotion.
- Engagement in research, evaluation, and discussion of fluoridation practices for optimal oral health.

Dental schools provide the foundation of knowledge for future oral health professionals and are responsible for training future providers to communicate effectively with patients about best oral health care practices. As such, dental schools across the country and internationally are uniquely responsible for teaching students the skills to discuss and translate evidence-based medicine pertaining to the beneficial effects of fluoride in oral health. We call upon all dental schools and dental students to affirm, promote, and advance the following:

• Discussion about oral health prevention and education between future oral health providers and patients.

- Curriculum competencies that educate graduating dentists on effective strategies to discuss fluoride safety and efficacy.
- Advocacy for the American Dental Education Association (ADEA), American Dental Association (ADA), American Student Dental Association (ASDA) and other organized dentistry groups to support evidence-based, pro-fluoridation policies.
- Continued support for research and evaluation of evolving evidence for the safety of fluoridation practices for optimal overall health outcomes.

## Supported by,

Class of 2018

Harvard School of Dental Medicine

Saw J. Hosmberg

Class of 2017

Catril Vange

Harvard School of Dental Medicine

Class of 2019

Harvard School of Dental Medicine

Harvard Student Chapter

American Dental Education Association

Harvard Student Chapter American Student Dental Association Bruce Donoff, DMD, MD

Walter C. Guralnick Distinguished Professor of

Oral and Maxillofacial Surgery

Dean, Harvard School of Dental Medicine

Vice President, Student Council
Harvard School of Dental Medicine

MS The

Harvard Medical School

## References

- 1. Choi AL, Sun G, Zhang Y, Grandjean P. Developmental fluoride neurotoxicity: a systematic review and meta-analysis. *Environ Health Perspect*. 2012;120(10):1362.
- 2. Grandjean P, Landrigan PJ. Neurobehavioural effects of developmental toxicity. *Lancet Neurol.* 2014;13(3):330-338.
- 3. Begley S. Fluoridation, cancer: Did researchers ask the right questions? *Wall Street Journal*. 2005 Jul 22: B1.
- 4. Sabour S, Ghorbani Z. Developmental fluoride neurotoxicity: clinical importance versus statistical significance. *Environ Health Perspect*. 2013 Mar;121(3):A70.
- 5. Feldman V. Neurodevelopmental toxicity: still more questions than answers. *Lancet Neurol*. 2014 Jul;13(7):645-6.
- 6. Kim FM, Hayes C, Williams PL, Whitford GM, Joshipura KJ, Hoover RN, Anderson HC. An assessment of bone fluoride and osteosarcoma. *J Dental Res*. 2011;90(10):1171-1176.
- 7. Whitford GM, Whitford JL, Hobbs SH. Appetitive-based learning in rats: lack of effect of chronic exposure to fluoride. *Neurotoxicology and Teratology*. 2009;31(4):210-215.
- 8. Liteplo R, Gomes R, Howe P, Malcolm H; FLUORIDES; Environmental Health Criteria; ICPS/WHO; Geneva 2002.
- 9. American Dental Association. <a href="http://www.ada.org/en/public-programs/advocating-for-the-public/fluoride-and-fluoridation-facts/fluoridation-facts-compendium">http://www.ada.org/en/public-programs/advocating-for-the-public/fluoride-and-fluoridation-facts/fluoridation-facts-compendium</a>>.
- 10. Cox GJ, Matuschak MC, Dixon SF, Dodds ML, Walker WE. Experimental dental caries IV. Fluoride and its relation to dental caries. *J. Dent Res* 1939; (57):481-90.
- 11. Dean HT, Arnold Jr FA, Knutson JW. Studies on mass control of dental caries through fluoridation of the public water supply. *Public Health Rep* 1950; 65(43):1403-8.
- 12. Ast DB, et al. Newburgh-Kingston caries- fluorine study: final report. *J Am Dent Assoc* 1956;52(3):290-325.
- 13. Brown HK, Poplove M. The Brantford-Samia-Stratford fluoridation caries study: final survey, 1963. *Med Serv J Can* 1965;21(7):450-6.
- 14. Centers for Disease Control and Prevention. 2012 Water Fluoridation Statistics website. http://www.cdc.gov/fluoridation/statistics/2014stats.htm Accessed June 28, 2016.
- 15. Griffin SO, Jones K, Tomar SL. An economic evaluation of community water fluoridation. *J Publ Health Dent* 2001;61(2):78–86.
- 16. Griffin SO, Gooch BF, Lockwood SA, Tomar SL. Quantifying the diffused benefit from water fluoridation in the United States. *Community Dent Oral Epidemiol* 2001:29:120–129.
- 17. Horowitz HS. The effectiveness of community water fluoridation in the United States. *J Public Health Dent* 1996;56(5 Spec No):253-8.
- 18. Murray JJ. Efficacy of preventive agents for dental caries. *Caries Res* 1993;27(Suppl 1):2-8.
- 19. Newbrun E. Effectiveness of water fluoridation. *J Public Health Dent* 1989;49(5):279-89.