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Kansas Legislature Committee on Health and Human Services Hearing for HB 2372 Wednesday, February 5, 2014 at 1:30 Room 546-S

Chairman Crum and Members of the Committee:

I write on behalf of the Pew children's dental campaign to share information about water fluoridation, an issue that has recently come before the legislature. As members of the Committee review House Bill 2372, it is important to consider what is at stake. Not only does this bill misrepresent the science backing fluoridation, it would also compel community water systems to share a false claim with their customers. Quite simply, water fluoridation is one of the safest, most cost effective ways to reduce tooth decay for all members of a community.

Although America's dental health has improved in recent decades, tooth decay remains the most common chronic childhood disease — five times more prevalent than asthma. Untreated tooth decay can undermine children's ability to eat, sleep, grow, and learn.² A 2011 study found that schoolchildren with oral health problems are more likely to miss class and perform poorly.³ A 2012 study revealed that teens with toothaches were four times more likely to have a low grade point average than their peers.⁴

As you may know, fluoride is a mineral that exists naturally in water.⁵ Fluoridation is simply the process of adjusting fluoride to the optimal level that prevents tooth decay. Fluoride counteracts tooth decay and strengthens teeth by fighting harmful acids and drawing calcium back into the enamel. Drinking water is an ideal vehicle for fluoride because it offers these benefits without requiring families to spend extra money or change their routine. At a time when many families lack dental insurance, this form of decay prevention is especially crucial.

Fluoridation reduces the incidence of decay by about 25 percent over a person's lifetime.⁶ Seniors benefit from fluoridation partly because it helps prevent decay on the exposed root surfaces of teeth—a condition that especially affects older adults. Fluoridated water may be the only form of prevention that many seniors on fixed incomes receive. Their health and quality of life are worth considering as you ponder the impact of House Bill 2372.

Compare these credible, science-based sources with the kinds of assertions that anti-fluoride groups make. For example, some claim that the fluoride added to water is a "toxic" substance, but the evidence does not back them up. First, all fluoride additives are required to meet strict quality and safety standards. Second, PolitiFact—an independent fact-checking service investigated the "toxic" claim and two other common arguments used by anti-fluoride activists. PolitiFact found that each one of these claims was deceptive. The American Water Works Association points out that "water providers undergo thorough and extensive training to safely apply fluoride in the amount recommended by the world's most respected public health authorities."

Like some of the assertions made above, House Bill 2372 makes several claims that do not hold up to additional scrutiny. For example, the bill claims that more studies are needed to show the safety of water fluoridation. This is simply untrue. As the Centers for Disease Control and Prevention notes, "For many years, panels of experts from different health and scientific fields have provided strong evidence that water fluoridation is safe and effective." Residents of St. Louis, Denver, Chicago, and many other U.S. cities have consumed fluoridated water for more than 50 years. If the safety concerns raised by anti-fluoride groups were valid, researchers would likely have seen ample evidence of it by now. The American Academy of Pediatrics, the American Dental Association, the Institute of Medicine and many other respected medical and health organizations support fluoridation. The U.S. Centers for Disease Control and Prevention (CDC) has praised water fluoridation as one of "10 great public health achievements of the 20th century."

Most worrying is that House Bill 2372 would require communities to publicize a false claim that fluoride causes lower IQ scores in children. This is a misrepresentation of this research. Many of the studies that this research is based on were from areas in China, Mongolia and Iran in which the *natural* fluoride levels were at least four or five times higher than the level used to fluoridate water in Kansas. One study included fluoride levels that reached as high as 11.5 milligrams per liter—a concentration that is roughly 10 times higher than the level that is used to fluoridate American communities. Anti-fluoride groups also ignore historical evidence that undermines their claim—between the 1940s and the 1990s, the average IQ scores of Americans improved 15 points while fluoridation steadily expanded to serve millions of additional people. ¹⁴

In addition, the Harvard researchers who examined these IQ studies found that each of the studies "had deficiencies, in some cases rather serious, which limit the conclusions that can be drawn." Furthermore, in an article published in the *Wichita Eagle*, the Harvard researchers publicly distanced themselves from the way that anti-fluoride groups were misrepresenting these IQ studies. ¹⁶

Even in an era when fluoride toothpaste is widely used, fluoridated water still provides critical, added protection. Research from the past few years demonstrates this benefit:

- Within the past three years, studies in Alaska and New York have demonstrated that fluoridated water helps to protect teeth from decay. ¹⁷ The Alaska study revealed that children living in non-fluoridated areas had a 32 percent higher rate of decayed, missing or filled teeth than kids in fluoridated communities.
- A 2010 Nevada study examined teenagers' oral health and found that living in a non-fluoridated community was one of the top three factors associated with high rates of decay.¹⁸

- A 1998 study of communities in Illinois and Nebraska found that children in the fluoridated town had a tooth decay rate that was 45 percent lower than the rate among kids in the non-fluoridated communities. This benefit occurred even though the vast majority of children in *all* of these communities were using fluoridated toothpaste. 19
- A 2010 study in New York State found that Medicaid enrollees in less fluoridated counties needed 33 percent more fillings, root canals, and extractions than those in counties where fluoridated water was much more prevalent.²⁰ As a result, the treatment costs per Medicaid recipient were \$23.65 higher for those living in less fluoridated counties.²¹

When we fail to use proven strategies like fluoridation, the consequences are felt by nearly everyone — not just those who say they don't want fluoridated water. Each year, hundreds of thousands of people seek emergency room treatment for toothaches or other dental problems that could have been prevented. Many of these ER patients are enrolled in Medicaid or other taxpayer-funded programs.²² In one way or another, the impact of oral health stretches across all communities.

Please do not support a bill that has the potential to deny thousands of children and adults the benefits that fluoridation provides.

Sincerely,

Shelly Gehshan, Director Pew children's dental campaign

Sources

¹ "Preventing Cavities, Gum Disease, Tooth Loss, and Oral Cancers: At A Glance 2010," from the "Oral Health" page of the U.S. Centers for Disease Control and Prevention (2010),

http://www.cdc.gov/chronicdisease/resources/publications/AAG/doh.htm, accessed on October 20, 2010.

2 "Poor Oral Health Can Mean Missed School, Lower Grades," Ostrow School of Dentistry of the University of

² "Poor Oral Health Can Mean Missed School, Lower Grades," Ostrow School of Dentistry of the University of Southern California, August 2012, http://dentistry.usc.edu/2012/08/10/poor-oral-health-can-mean-missed-school-lower-grades/.

³ S.L. Jackson et al., Impact of Poor Oral Health on Children's School Attendance and Performance," *American Journal of Public Health* (October 2011), Vol. 101, No. 10, 1900-1906, http://ajph.aphapublications.org/doi/abs/10.2105/AJPH.2010.200915.

⁴ "Poor Oral Health Can Mean Missed School, Lower Grades," Ostrow School of Dentistry of USC, August 2012, http://dentistry.usc.edu/2012/08/10/poor-oral-health-can-mean-missed-school-lower-grades/.

J. Fawell et al., "2.1 Fluoride distribution in water," *Fluoride in Drinking-Water*, World Health Organization (2006), 6, http://www.who.int/water_sanitation_health/publications/fluoride_drinking_water_full.pdf.

⁶ "Community Water Fluoridation: An Overview," Centers for Disease Control and Prevention, http://www.cdc.gov/fluoridation/benefits/background.htm.

⁷ "Achievements in Public Health, 1900-1999: Fluoridation of Drinking Water to Prevent Dental Caries," *Morbidity and Mortality Weekly Report*, Centers for Disease Control and Prevention, (October 22, 1999), Vol. 48, No. 41, 933-940, http://www.cdc.gov/mmwr/preview/mmwrhtml/mm4841a1.htm.

⁸ "Water Fluoridation Additives," Centers for Disease Control and Prevention, accessed on October 9, 2012 at http://www.cdc.gov/fluoridation/fact-sheets/engineering/wfadditives.htm.

Austin resident says fluoride compound added to local water supply is "toxic waste'," Austin American-Statesman, April 19, 2011, http://www.politifact.com/texas/statements/2011/apr/19/mike-ford/austin-resident-says-flouride-compound-added-local/; "Truth about fluoride doesn't include Nazi myth," PolitiFact, *Tampa Bay Times*, October 6, 2011, http://www.politifact.com/florida/statements/2011/oct/06/critics-water-fluoridation/truth-about-fluoride-doesnt-include-nazi-myth/; "Milwaukee alderman says fluoride in toothpaste is a poison," PolitiFact, *Milwaukee Journal-Sentinel*, July 9, 2012, http://www.politifact.com/wisconsin/statements/2012/jul/09/jim-bohl/milwaukee-alderman-says-fluoride-toothpaste-poison/.

alderman-says-fluoride-toothpaste-poison/.

10 "AWWA backs best science on fluoridation," a statement by the American Water Works Association, January 7, 2011, accessed on February 10, 2011 at

http://www.awwa.org/publications/breakingnewsdetail.cfm?itemnumber=55972.

¹¹ "Community Water Fluoridation: Safety," Centers for Disease Control and Prevention, accessed November 9, 2011 at http://www.cdc.gov/fluoridation/safety.htm.

¹² "Protecting All Children's Teeth (PACT)," a training module by the American Academy of Pediatrics, accessed on Jan. 20, 2011 at http://www.aap.org/oralhealth/pact/ch6 intro.cfm; "Fluoride & Fluoridation," American Dental Association, accessed on Jan. 12, 2011 at http://www.ada.org/fluoride.aspx; Improving Access to Oral Health Care for Vulnerable and Underserved Populations, Institute of Medicine (2011), 63, http://books.nap.edu/openbook.php?record_id=13116.

Ten Great Public Health Achievements – United States, 1900-1999," Centers for Disease Control and Prevention, *Morbidity and Mortality Weekly Report*, April 2, 1999, Vol. 48, No. 12, 241-243, accessed on January 25, 2011 at: http://www.cdc.gov/mmwr/preview/mmwrhtml/00056796.htm.

¹⁴ Ulric Neisser, "Rising Scores on Intelligence Tests," *American Scientist*, September-October 1997, http://www.americanscientist.org/issues/id.881.y.0.no..content.true.page.1.css.print/issue.aspx.

¹⁵ A.L. Choi et al., "Developmental Fluoride Neurotoxicity: A Systematic

Review and Meta-Analysis," *Environmental Health Perspectives*, published online July 20, 2012, http://ehp03.niehs.nih.gov/article/fetchArticle.action?articleURI=info%3Adoi%2F10.1289%2Fehp.1104912.

¹⁶ Dion Lefler, "Harvard scientists: Data on fluoride, IQ not applicable in U.S.," *Wichita Eagle*, September 11, 2012, http://www.kansas.com/2012/09/11/2485561/harvard-scientists-data-on-fluoride.html#storylink=cpy.

¹⁷ J.V. Kumar, O. Adekugbe and T.A. Melnik, "Geographic Variation in Medicaid Claims for Dental Procedures in

¹⁷ J.V. Kumar, O. Adekugbe and T.A. Melnik, "Geographic Variation in Medicaid Claims for Dental Procedures in New York State: Role of Fluoridation Under Contemporary Conditions," *Public Health Reports*, (September-October 2010) Vol. 125, No. 5, 647-54; "Dental Caries in Rural Alaska Native Children – Alaska, 2008," *Morbidity and Mortality Weekly Report*, Centers for Disease Control and Prevention, (September 23, 2011) Vol. 60, No. 37, 1275-1278, http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6037a2.htm?s_cid=mm6037a2_x.

¹⁸ M. Ditmyer, G. Dounis, C. Mobley and E. Schwarz, "A case-control study of determinants for high and low dental caries prevalence in Nevada youth," *BMC Oral Health*, (2010), Vol. 10, No. 24, http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2989299/.

¹⁹ R.H. Selwitz et al., "Dental caries and dental fluorosis among schoolchildren who were lifelong residents of communities having either low or optimal levels of fluoride in drinking water," *Journal of Public Health Dentistry*, (Winter 1998) Vol. 58, No. 1, 28-35, http://www.ncbi.nlm.nih.gov/pubmed/9608443.

²⁰ Kumar J.V., Adekugbe O., Melnik T.A., "Geographic Variation in Medicaid Claims for Dental Procedures in New York State: Role of Fluoridation Under Contemporary Conditions," *Public Health Reports*, (September-October 2010) Vol. 125, No. 5, 647-54.

²¹ The original figure (\$23.63) was corrected in a subsequent edition of this journal and clarified to be \$23.65. See: "Letters to the Editor," Public Health Reports (November-December 2010), Vol. 125, 788.

²² A Costly Dental Destination, Pew Center on the States, (February 2012), www.pewstates.org/dental.