HB 1605
Hearing Date: 2/03/2025
ND House Human Services Committee

Person Providing Testimony:
Tegwyn H. Brickhouse DDS PhD
Pediatric Dentist
Bridging the Dental Gap
Ronald McDonald House Charities Mobile Dental Program
Bismarck ND

Position: In Opposition To

Chair Ruby and honorable members of the House Human Service Committee,

My name is Tegwyn Brickhouse. I am a pediatric dentist and oral epidemiologist that treats children here in Bismarck at Bridging the Dental Gap and across our state with the RMHC Mobile Dental Program. I am in opposition to House Bill 1605.

Water is intrinsically linked to our health and our healthcare. Community water fluoridation (CWF) is a safe and beneficial evidence-based practice that reduces cavities and promotes oral and overall health. Fluoride is a naturally occurring mineral, and 75 years of research has demonstrated consistently that when fluoride is added to water at optimal amounts (0.7 milligrams per liter), it is a safe and incredibly effective way to reduce cavities – offering place based preventive care at its core. When water is fluoridated, everyone in that community has access to preventive oral health care regardless of income, age, or educational background.

Like everything, the amount matters. Too much of a good thing (iron, many vitamins, even oxygen and water!) usually isn't good, and fluoride is no exception. In very large doses, fluoride has been shown to have some negative effects. Some recent studies have highlighted potential risks, leading to understandable (and essential) curiosity. Water fluoridation has not been a national topic of conversation for some time – and recent headlines have been confusing and, in some cases, inaccurate – the opportunity now is to have a frank discussion about its substantial benefits, how we know the level in our water is optimal with a productive understanding of the potential risks of too much fluoride.

The science showing its effectiveness and safety is plentiful: optimal fluoridation of community water systems can reduce the prevalence of cavities by approximately 25% for both children and adults. This reduction in dental decay translates directly to less pain, fewer dental procedures, and less time lost from school or work due to dental issues.

The economic advantages are substantial: The average lifetime cost per person to fluoridate a water supply is less than the cost of just one dental filling. For most municipalities, every $1 invested in water fluoridation saves $38 in dental treatment costs. For communities with populations of 1,000 or more, the return on investment can reach up to $20 for every $1 spent on water fluoridation, with this return increasing as community size grows.

Calgary, a large city in Canada, is resuming city-wide fluoridation early next year at great expense after the city stopped water fluoridation in 2011. After water fluoridation stopped, the negative aftereffects were extreme; the number of cavities in adults and children rose substantially, and the number of children who needed to be treated for dental decay under general anesthesia increased by almost 80%[1]. Similar effects have been seen in Israel. When the country stopped fluoridating its water, the number of children with cavities nearly doubled[2]. Fluoride, when ingested over a long period of time in very high doses (double and triple the amount in optimally fluoridated water), is shown to cause joint pain and nausea[3]. In some areas of China, fluoride levels in water are up to four times higher than published safety thresholds, and in extreme cases like this, higher fluoride levels have been linked to reduced IQ[4]. This study has been criticized for numerous deficiencies but regardless of its debated flaws, the fluoride levels in this water were far above anything the has ever been use in water systems across the United States.

Studies examining fluoride levels consistent with those found in U.S. municipal water systems do not show such developmental impacts. As with any substance, dose matters, and the fluoride levels used in U.S. water systems are well within the range deemed safe by health authorities. The benefits and safety of water fluoridation are an important and worthwhile conversation; CWF has been protecting the health and well-being of Americans in the background for nearly 80 years. Organizations such as the American Dental Association (ADA), the American Academy of Pediatrics (AAP), the U.S. Public Health Service endorse CWF for its demonstrated safety and significant public health benefits. More resources about CWF are available from the American Dental Association and I Like My Teeth.

Well water may be less safe because it is not routinely monitored or tested and often may have higher levels of naturally occurring fluoride than is recommended or none at all. Relying on bottled water is costly. It's 2,000 times more expensive than tap water, less regulated, and less rigorously tested than tap water, and typically not fluoridated. Thirty-five billion tons of plastic bottles are thrown away yearly.

I affirm that community water fluoridation is a vital public health practice that improves oral health, saves costs, and enhances overall well-being. By maintaining optimal levels of fluoride in community water, we can continue to support the health and prosperity of our communities for generations to come. That is why I am fully in opposition to HB 1605.

Sincerely,

Tegwyn H. Brickhouse DDS PhD
Pediatric Dentist/Oral Epidemiologist

References

[1]Yazdanbakhsh E, Bohlouli B, Patterson S, Amin M. Community water fluoride cessation and rate of caries-related pediatric dental treatments under general anesthesia in Alberta, Canada. Can J Public Health. 2024 Apr;115(2):305-314 DOI: 10.17269/s41997-024-00858-w. Epub 2024 Feb 22. PMID: 38389035; PMCID: PMC11027763.

[2]Tobias, G., Mordechai, F., Tali, C. et al. The effect of community water fluoridation cessation on children's dental health: a national experience. Isr J Health Policy Res 11, 4 (2022). https://doi.org/10.1186/s13584-022-00514-z

[3] https://ods.od.nih.gov/factsheets/Fluoride-HealthProfessional/

[4]Choi AL, Sun G, Zhang Y, Grandjean P. Developmental fluoride neurotoxicity: a systematic review and meta-analysis. Environ Health Perspect. 2012 Oct;120(10):1362-8. doi: 10.1289/ehp.1104912. Epub 2012 Jul 20. PMID: 22820538; PMCID: PMC3491930.