

Municipal Water Fluoridation

A Very Brief Public Health Ethics Case

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This short document presents a case study comprising a scenario and accompanying resources for further reading. We originally produced this case for use during a workshop at The Ontario Public Health Convention in March 2015.¹ We have adapted this and other cases and republished them together so that they might be used in combination with the summary versions of ethics frameworks for public health that we have produced to date. They are intended to give public health practitioners some material for practice in ethical deliberation.

Case

Based on community consultations and recommendations from public health, the municipality of Clearwater has decided to fluoridate all municipal water, effective immediately. There remains significant opposition in the community, amounting to about 15% of citizens, particularly from one school district.

Instructions

Through deliberation, please:

- Identify the ethical issues that arise in this case.
- Make a decision about whether your health unit should
 - Approve this project
 - Approve a modified version of the project
 - Reject this project / propose an alternative.
- Give reasons for your decisions.



Figure 1 Fluoridated drinking water

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Some considerations

- It is estimated that water fluoridation reduces tooth decay rates by about 20% overall. Approximately 45% of Canadians have fluoridated water (CPHA, 2010).
- “Fluoridation of drinking water is a safe, effective and inexpensive measure for the prevention of cavities. This measure reduces cavities by 20% to 40% in the population and reduces the costs associated with cavity treatment and prevention” [translation] (Directeur nationale de santé publique, 2010, p. 2).
- “At the recommended fluoride concentrations, which vary from 0.6 mg/l to 1.2 mg/l around the world, no scientific evidence has shown a link between fluoridation and a particular health problem” [translation] (Directeur nationale de santé publique, 2010, p. 3).
- At these low concentrations in drinking water, fluoride has beneficial effects for teeth. At higher levels of exposure, whether from water or other sources, it can give rise to adverse effects (Fawell et al., 2006).
- “Case studies of fluorosis in communities with high levels of fluoride in drinking water illustrate the critical importance of monitoring fluoride concentrations, particularly in rural areas with weaker infrastructure” (McLaren & McIntyre, 2011, p. 2).

¹ The PowerPoint and handouts are available online at: http://www.nchpp.ca/128/presentations.ccnpps?id_article=1375



- To mention only two vulnerable populations, children and persons of lower socioeconomic status are more susceptible to oral health problems than the rest of the population. This inequality in oral health outcomes can be mitigated by fluoridation (McLaren & McIntyre, 2011, p. 5).

Resources and additional reading

Adapted summaries of public health ethics frameworks and cases:

http://www.ncchpp.ca/127/Publications.ccnpps?id_article=1525

A repertoire of ethics frameworks for public health (with links to the documents):

http://www.ncchpp.ca/708/Repertoire_of_Frameworks.ccnpps

Population and Public Health Ethics: Cases from research, policy, and practice

This book brings together 16 cases of ethical issues encountered across a range of public health issues and sectors and presents accompanying analyses by leading experts in public health ethics.

http://www.ncchpp.ca/127/publications.ccnpps?id_article=720

References

Canadian Public Health Association. (2010). *12 Great Achievements / Healthier Environments – Fighting the Good Fight*. Retrieved online on December 17, 2015 at: <http://www.cpha.ca/en/programs/history/achievements/05-he/fluoridation.aspx>

Directeur nationale de santé publique. (2010). *Fluoruration de l'eau potable : Position du directeur national de santé publique*. Québec: La Direction des communications du ministère de la Santé et des Services sociaux du Québec. Retrieved from: <http://publications.msss.gouv.qc.ca/msss/fichiers/2012/12-231-01F.pdf>

Fawell, J., Bailey, K., Chilton, J., Dahi, E., Fewtrell, L., & Magara, Y. (2006). *Fluoride in Drinking-water*. Geneva: World Health Organization (WHO). Retrieved from: http://www.who.int/water_sanitation_health/publications/fluoride_drinking_water_full.pdf?ua=1

McLaren, L. & McIntyre, L. (2011). *Drinking water fluoridation in Canada: Review and synthesis of published literature*. Ottawa: Public Health Agency of Canada. Retrieved from: <http://www.albertahealthservices.ca/poph/hi-poph-surv-phids-drinking-water-fluoridation.pdf>

Questions or comments?

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