

NOTES

Drinking Water Fluoridation

February 10, 2011 – 1:00 to 5:00 PM

Champagne Ballroom, Novotel Toronto Centre, 45 The Esplanade, Toronto

WELCOME

V. Sterling welcomed participants to the meeting and introduced the speakers for this afternoon.

THE LATEST EVIDENCE

Dr. Peter Cooney

Dr. Peter Cooney, Chief Dental Officer, Health Canada, presented on the national and international perspectives on fluoride. He began by providing some background on dental disease as the number one chronic disease in children and adolescents. Because it is linked to a number of system diseases, oral health's importance and contribution to overall general health cannot be underestimated.

Health Canada reviewed the science on fluoride in 2006, focusing on the level of dental fluorosis in Canada, non-dietary sources of fluorides, and fluoride's impact on the body. It found that there has been a general decrease in the total daily intake of fluoride by Canadians, the first three years of life is the period of most concern for fluorosis (white mottling on the teeth due to excessive fluoride), the point of concern is moderate to severe fluorosis, and there is no conclusive evidence of fluoride's effect on health (bone fractures, cancers, intelligence quotient, etc.).

In January 2007, Health Canada released its recommendations of the Fluoride Expert Panel Meeting. These include the maximum allowable concentration (MAC) of 1.5 mg/L for fluoride in drinking water should be reaffirmed and the level of 0.7 mg/L for fluoride in drinking water should be adopted as the optimal target.

Dr. Cooney indicated that there is currently widespread support for fluoridation of drinking water from local, provincial, national and international groups. In addition to showing national trends in water fluoridation and dental decay rates, he cited examples of international studies that support water fluoridation. Dr. Cooney concluded his presentation with the statement that Health Canada continues to recognize the benefits of community water fluoridation, and supports it as a safe and effective method to prevent tooth decay.

FLUORIDATION IN ONTARIO

Dr. Arlene King

Ontario's chief medical officer of health Dr. Arlene King opened her presentation by stating that the Ontario government agrees with the Health Canada position. In Ontario, fluoride additives are required

to meet rigorous standards. The current provincial recommendation on the level of fluoride in drinking water ranges from 0.5 to 0.8 mg/L. In Ontario, the decision to fluoridate water is made by each municipality. The Water Fluoridation Act states that a local municipality, through a bylaw, may require the fluoridation of its municipal water system. The anti-fluoride movement is presently an issue for provinces across the country, not just Ontario.

From the province's perspective, a next step will be to release a comprehensive, updated literature review on water fluoridation in April 2011. Questions for future discussion include: a) How should public health moved forward at the local level on the fluoridation issue and what should be the province's role; and b) Should municipalities that stop fluoridating be responsible for the cost of providing alternative fluoride treatments? and How would the vulnerable members of the population be targeted in this instance, and what would it cost?

Q&A with Dr. Peter Cooney, Dr. Arlene King and Dr. David Williams

Q: How does fluoride protect the teeth? What is it's effect?

A: (Dr. Cooney) The major effect of fluoride is topical. Fluoride works topically by hardening tooth enamel, making teeth more resistant to decay and increases mineralization of teeth. Fluoride also reduces de-mineralization of teeth by rehardening enamel. The systemic effect of fluoride on teeth is much less than the topical effect and occurs primarily when teeth are forming and enamel is developing in young children. When children ingest fluoride, it is incorporated into the body of the enamel during formation. Another effect occurs when fluoride comes back into the mouth through the saliva at very, very low levels of concentration. However, it is unclear if this effect has a large impact on dental health. Regarding dosage, it is better to receive fluoride constantly at low levels over time versus receiving it all at once in a large quantity. Low doses of fluoride helps to continually re-mineralize and protect teeth. Even though approximately 50% of ingested fluoride gets stored in the bone, the evidence shows that fluoride plays little or no role in bone strength and fracture.

Q: If this is a health issue, then why do non-expert bodies and individuals get to make the decision to fluoridate water?

A: (Dr. King) It would seem that one of the prerequisites is that decision-makers in government need to be really well-informed in order to make the assessment on fluoridation.

Q: As a follow up to a question posed earlier by the CMOH, what can we in public health do?

A: (Dr. King) Those of us in health need to share the information and expert advice in a more consistent, effective manner and better align our efforts given the very active, highly skilled minority of anti-fluoridation groups.

Q: How should we respond to the ethical question posed by anti-fluoridationists on what right does the government have to add things to the public's food, water, etc.?

A: (Dr. King) One argument is that government puts additives in water such as disinfectant in order to protect the population's health. There is likely greater public awareness of the significant outcome of not disinfecting water rather than the adverse health consequences of not fluoridating. Maybe we are not getting the right information out. Perhaps the information we have heard today is not being translated into knowledge that may be easily digested by the average person.

A: (Dr. Cooney) A key message is that oral health is important to overall general health. It's a quality of life issue.

Q: Has there ever been a class action lawsuit on behalf of people whose communities do not fluoridate water?

A: (Dr. Cooney) No. Often, the people who need fluoridated water the most and are most at risk of dental decay cannot afford such legal costs.

Q: Has there ever been a comparison between the dental decay rates in Vancouver, which does not fluoridate its water, and other big Canadian cities which do fluoridate?

A: (Dr. Cooney) Dr. Chris Mackie at City of Hamilton Public Health has looked at the issue of costs of replacing fluoridation in communities that stopped fluoridating. He has found that for every dollar that tooth decay is reduced by fluoridation, it takes \$3 for toothpaste and \$15 for fluoride varnishes to reduce decay for a lesser effect.

In Vancouver, school-based programming have been implemented as an alternative to fluoridation. Decay rates in Vancouver children were similar with the rest of the Canada. However, in adults and seniors in British Columbia, decay rates exceeded those in other provinces. This seems to show that one can fill the gaps in children's decay rates in communities without fluoridated water using alternatives such as school-based programs. This is only delaying the onset of caries because once these BC children leave school, decay rates worsen as they approach adulthood compared to children in other provinces.

Q: Can the province legislate fluoridation? What are the options provincially and federally?

A: (Dr. King) My job here today is to listen to you and see what are the options provincially, and take today's comments under advisement. There are many issues related to fluoridation. I am willing to help advance the issue and welcome further feedback on short-term and long-term measures. It would be useful to have the province do a technical briefing for media as an element of a public awareness campaign to increase understanding of adverse health consequences of non-fluoridation. Federally, there is no option regarding legislation as fluoridation is handled at the local level across the country.

A: (Dr. Cooney) In US and Canada, there will be a 20 to 40% reduction of dental decay rates with fluoridation. With toothpaste there is generally a 15 to 25% reduction and 15% reduction with fluoride varnishes. The ideal situation in seeing significant decreased decay rates is having all of these measures (fluoridation, toothpaste and fluoride varnishes) in place.

Q: How do we in public health counter a few highly credentialed experts (e.g. Prof. Hardy Limeback at University of Toronto) and their support of non-fluoridation?

A: (Dr. Cooney) Many in the health community disagree with these credentialed experts, who are few in numbers. However, the anti-fluoridation movement will continue to quote these experts. The evidence shows they are wrong.

Q: How do we convince the aging population to add fluoride to water or support it other than to mention their grandchildren?

A: (Dr. Williams and Dr. King) Present the data to them in a clear and proactive way that will resonate with them. Perhaps have a common slide deck for MOHs to use as well as technical documents/data at their fingertips.

Q: Public health doesn't need more science. We are losing to the anti-fluoridationists on the political advocacy and public relations fronts. What resources can the feds/province offer to counter these groups?

A: (Dr. Williams) This province, as well as others, need to do better in educating the public.

A: (Dr. Cooney) Maybe we need a collective approach and get the public health communications professionals (local and provincial) together with the federal communications people to come up with a strategy and finetune our messages.

Q: Will the MOHLTC allow health units to use its excellent Q&A document on fluoridation?

A: (Dr. King) Another issue we need to move on is on social media and be more sophisticated. My office can look into the Q&A issue which shouldn't be a problem at all.

General comments from the floor:

- At its earlier meeting today, COMOH affirmed its support of drinking water fluoridation as a safe, effective contribution to oral health.
- A statement from the CMOH on fluoridation would be helpful. Also, it might be useful to get people who are not health professionals speaking out in favour of fluoridation.
- Municipalities that opt out fluoridation should cover the costs of dental treatment for affected children and adults.
- Another barrier to municipalities to get fluoridation up and running could be infrastructure costs. Perhaps the province could assist with these costs.
- The anti-fluoridationists are well-organized fanatics and see this issue as their life's work. Facts and figures have little or no impact on them. A major barrier to moving forward lies in the decision making framework that is currently in place, which allows the decision to fluoridate or not to be made at the local level, and allows for the choice of action vs. inaction on a decision. Historically, the province has only stepped in once all the municipalities have acted (e.g. smoke free legislation). The default should be fixing the problem of this chronic disease, i.e. dental disease, with one mechanism or another. The default should not be doing nothing. (Applause.)
- There needs to be a provincial approach to fluoridation. A good paradigm for this would be the provincial smoke-free legislation. Also, we need to get our message out loudly and clearly across the country that the science shows fluoridation is safe and effective.

TOWARDS A POSITION

The purpose of the discussion that followed the presentations was to understand where the alpha membership stood on the issue of community water fluoridation in Ontario and identify any questions and concerns that needed to be addressed. Facilitating the group discussion were Pat Fisher and Daniela Seskar-Hencic from Region of Waterloo Public Health.

Potential Position

Prior to discussion, each participant was asked to think about their individual position on the following draft alpha position statement:

*NOW THEREFORE BE IT RESOLVED that the Association of Local Public Health Agencies strongly and publicly state its support for the practice of community water fluoridation as a proven, cost-effective and equitable public health intervention that significantly contributes to improving the overall health of the population;
AND FURTHER that the Association of Local Public Health Agencies call for the Province of Ontario to support municipalities in the fluoridation of community drinking water.*

Participants indicated their position with a coloured card (green, yellow, orange and red), each of which represented the degree of support for the draft position statement. *Green* represented readiness to support the position statement with no comments, *yellow* indicated readiness to support with friendly wording amendments to the statement, *orange* represented substantial concerns with the statement with a chance of being convinced to support, and *red* indicated opposition to the statement with no chance of being convinced to support. These cards were collected and counted as follows:

62 - green, 16 - yellow, 3 - orange, 1 - red

Group Discussion

With a majority reached to support alPha's draft position statement on water fluoridation, participants discussed the following issues and identified a number of next steps.

Messaging and Communications Strategies

- Public health needs to frame fluoridation as less of a dental disease issue and more of a health and chronic disease issue, i.e. a key message is universal health and equity.
- It is still useful to include the science in public health messaging. Good science combined with the economic argument remains a valid communication strategy.
- Health unit staff and officials need to be aware of the key messages and in support of the public health view of fluoridation. There is no place for personal views on fluoridation.
- Fluoridation within a public health ethics framework needs to be considered.

Provincial Support of Community Water Fluoridation

- A policy statement from the Province in support of community water fluoridation is needed to assist local health units that are facing challenges to water fluoridation.
- Also needed is a provincial communications plan to educate the public on fluoridation. The Ontario Agency for Health Protection and Promotion could be enlisted to gather the facts and evidence showing fluoridation's safety and effectiveness as a preventive health measure.
- Provincial legislation requiring mandatory fluoridation across all Ontario communities would be ideal. It would be best to avoid the same process that was taken to bring about the provincial smoke-free legislation. A comprehensive legislation on water that includes fluoridation would be helpful.
- alPha needs to issue a call to action for the government to support drinking water fluoridation with province-wide legislation.

Costs of Fluoridation and Infrastructure

- Ideally, the province should invest in the infrastructure for equitable water fluoridation, i.e. sustained government funding.
- Collaboration from all three levels of government (municipal, provincial and federal) is needed.
- Use a downstream approach in working with government (e.g. through the Ministry of Education, public health would go into schools to promote fluoridation).
- Partner with insurance companies to work out cost-benefits analyses of water fluoridation and chronic disease, and present results to targeted stakeholders such as seniors.

MOVING AHEAD

Participants shared their answers to the following questions:

What can our group (professional groups such as alPha, COMO, BOH Section) do to help promote this position?

- Undertake an education campaign (promote this position and share our rationale) with local groups such as seniors and encourage them to adopt our position;
- Learn from our past tobacco advocacy efforts: advocate at the ground level (work with citizens' groups), consider moral suasion, consider the role of individual choice vs. government legislation;
- Shift the focus away from dental disease to chronic disease; and

- Focus on the health of children, grandchildren to motivate targeted groups to support our position.

What can we do together as alPHa?

- Form strategic alliances;
- Become familiar with and use social media to reach audiences;
- Send our position statement with a cover letter to each municipal council that is facing challenges to fluoridation (counter the tactic of anti-fluoridationists who meet one-on-one with councillors);
- Appoint champions of fluoridation within communities (e.g. seniors); and
- Lobby the Minister of Health and Long-Term Care; work with the CMOH, COMO and Ontario Association of Public Health Dentistry to meet with Minister Deb Matthews.

What role could/should the province play?

- Legislate and fund province-wide fluoridation;
- CMOH should issue a strong public statement supporting fluoridation, lead and coordinate a strong public health voice on the issue;
- Coordinate with alPHa and other groups on a public health strategy; and
- Set up and staff a Fluoridation Office to act a central resource and advocacy group.

Next Steps

- alPHa will immediately implement the feasible, low-cost suggestions from today's discussion;
- alPHa will finalize the draft position statement following tomorrow's COMO and Board of Health Section meetings; and
- alPHa will approach Dr. Arlene King's office regarding collaboration on fluoridation.

2011 Winter Symposium

alPHa RESOLUTION

TITLE: Fluoridation of Drinking Water

WHEREAS the relationship between poor oral health and poor overall health is well established; and

WHEREAS the relationship between poor oral health and social risks including speech development, ability to thrive and readiness to learn in children, and self-respect and employability in adults is also well established; and

WHEREAS the burden of poor oral health is greater for marginalized populations; and

WHEREAS most preventive and restorative oral health services in Ontario are “out-of-pocket” expenses that favour those with the ability to pay; and

WHEREAS there has been a documented marked decline in the rates of tooth decay where fluoride has been added to municipal water supplies; and

WHEREAS it is estimated that every \$1 invested in community water fluoridation yields an estimated \$38 in avoided costs for dental treatment; and

WHEREAS the current evidence supports that fluoridation based on a maximum allowable concentration (MAC) of 1.5 mg/L is safe; and

WHEREAS these health benefits extend to all residents in a community regardless of age, education, socio-economic status or access to other preventive measures,

NOW THEREFORE BE IT RESOLVED that the Association of Local Public Health Agencies strongly and publicly state its support for the practice of community water fluoridation as a proven, cost-effective, safe and equitable public health intervention that significantly contributes to improving the overall health of the population.

AND FURTHER THAT the Association of Local Public Health Agencies call for the Province of Ontario to provide support, including provincial legislation and funding to municipalities for the fluoridation of community drinking water.

Moved and seconded.

Passed in Toronto on February 11, 2011