

May 3, 2018

Dear Windsor City Council,

I am a professional biostatistician working in the field of cancer research, and earned my Master's degree at the Dalla Lana School of Public Health, University of Toronto.

I wish to bring to your attention some troubling problems with the Windsor-Essex County Health Unit's Oral Health Report 2018 Update, including what appears to be scientific fraud, data that is disturbingly unreliable, and WECHU's contrived "*public support*" for community water fluoridation.

I sincerely hope that you will reject this unscientific and misleading report, and reject WECHU's proposed motion to disseminate this report and to reintroduce community water fluoridation.

Below are just some of the problems I have noted, and I wish I had time to elaborate more fully.

1. An illogical, unscientific and grossly misleading dental fluorosis statistic.

WECHU's dental fluorosis statistic (pages 29, 35) is based on screenings of kindergarten students, however kindergarten students are too young to assess for dental fluorosis because the required indicator teeth have not yet erupted from their gums.

Reporting '*no moderate or severe dental fluorosis*' in these children is like reporting that 0% of children who refuse to open their mouths have gum disease since no gum disease can be seen in their mouths.

[Windsor-Essex County Health Unit is not alone in publishing such illogical, misleading data. After at least 2 reports on oral health in the Region of Peel indicated alarming rates of dental fluorosis (i.e. 34% of 7 year old schoolchildren in fluoridated Brampton), Peel Public Health started leaving dental fluorosis out of their '*comprehensive*' oral health reports altogether (see slides 6 - 10 and 16 for details). Demands for updated data lead to the release of their fraudulent 2017 statistic (page 61) based on JK, SK, and grade 2 students: <https://www.peelregion.ca/health/resources/pdf/2017-oral-health-report.pdf>]

I hope that you will investigate what role the Ministry of Health and Long-Term Care has played in this situation and that those responsible at both the municipal and provincial levels will be held accountable.

2. Irresponsible dismissal of mild dental fluorosis.

Dental fluorosis is a visible biomarker for fluoride toxicity that develops before tooth eruption. Health Canada's Guidelines for Canadian Drinking Water Quality Guideline Technical Document on Fluoride, 2010 describe it as *"a permanent hypomineralization of tooth enamel due to fluoride-induced disruption of tooth development... in people with high exposure... occurs only when exposure to fluorides happens during tooth formation."*

<https://www.canada.ca/en/health-canada/services/publications/healthy-living/guidelines-canadian-drinking-water-quality-guideline-technical-document-fluoride/page-3-guidelines-canadian-drinking-water-quality-guideline-technical-document-fluoride.html#a101>

Peel Public Health explains that *"Fluorosis results in tooth discolouration which may range from patchy white staining of the tooth enamel in its mildest form to pitted brown staining in its most severe form"* (page 146: <https://www.peelregion.ca/health/resources/pdf/immigrant-ethno-health.pdf>).

WECHU reports on only *moderate or severe* dental fluorosis, thus dismissing as irrelevant the mild cases of this biomarker for fluoride toxicity. This is a departure from the Association of Public Health Epidemiologists in Ontario's Core Indicator for dental fluorosis, which can be viewed on APHEO's website: <http://core.apheo.ca/index.php?pid=157>

WECHU's footnote to their Supplementary Table 1, which lists *"Core indicators for the oral health of children and youth as identified by the Association of Public Health Epidemiologists in Ontario"* (pages 42/43) acknowledges that: *"This indicator is a modified version of the APHEO core indicator, which reports on the proportion of children with fluorosis of any level of severity (score  $\geq 1$  on a 0-4 score Dean's index)"*].



3. An unsupported, illogical statement on dental fluorosis.

WECHU states that “... incidences of fluorosis remain relatively rare” (page 29). However, as already pointed out, WECHU provides no data on dental fluorosis in general, only data on moderate and severe dental fluorosis in children who were too young to assess for the condition.

4. Contrived public support for water fluoridation.

WECHU reports that “Approximately 4 in 5 residents in Windsor-Essex County support community water fluoridation” (implying 80% support, page 7) and that “the vast majority of adult residents in Windsor-Essex County support community water fluoridation” (“77.6%”, pages 18/19).

However, WECHU previously reported in their Community Needs Assessment Summary Report 2016 (in which they conflated contrived public support with “need”) that only 63.8% of respondents indicated support for adding fluoride to public drinking water (page 11).

Further, WECHU withheld from respondents critical information about the serious health risks of fluoride ingestion and the unlawful nature of water fluoridation, and WECHU posed their survey question in a blatantly leading fashion: “Do you support adding fluoride to public drinking water to help prevent tooth decay?”

4. Bizarre methodology for reporting trends.

WECHU reports that “Between 2011/2012 to 2016/2017, the percentage of children with decay or requiring urgent care has increased by 51%” (page 7).

This “trend” is taken from their Table 8 entitled “Trends of the core indicators for oral health as identified by the Association of Public Health Epidemiologists in Ontario, Windsor-Essex County (2011-2017).” Table 8 contains data for various indicators, from 6 consecutive timeframes. However WECHU’s reported “trends” were calculated using only the first and last years, ignoring all data points from the middle 4 years, some of which went up and down over the years.

5. Alarmist statements on the increase in the proportion of children eligible for topical fluoride.

WECHU reports that “A three-fold increase in the proportion of children eligible for topical fluoride was observed between the 2011/2012 and 2016/2017 school years” (page 7), and that “The most alarming trend was the 3-fold increase in the proportion of children eligible for topical fluorides (a change of 236%) over this time period” (page 28).

However, as WECHU also notes, “Eligibility for topical fluoride occurs when children meet at least two of the following criteria: (i) community water fluoride concentration is less than 0.3 ppm, (ii) a past history of smooth surface decay, (iii) a presence of smooth surface decay

(OMHLTC, 2008b). Hence, the cessation of community water fluoridation in 2013 in Windsor may explain the increase in children eligible for topical fluoride” (page 28).

Prior to the cessation of water fluoridation, a child had to meet both of the surface decay criteria; post cessation they only needed to meet one of the surface decay criteria. Obviously the cessation of water fluoridation caused an increase in eligibility.

Further, note that the new eligibility criteria in the MOHLTC’s Oral Health Protocol, 2018 are such that most children will now qualify for *both* Professionally Applied Topical Fluoride and Pit and Fissure Sealants (see pages 4/5: [http://www.health.gov.on.ca/en/pro/programs/publichealth/oph\\_standards/docs/protocols\\_guidelines/Oral\\_Health\\_Protocol\\_2018\\_en.pdf](http://www.health.gov.on.ca/en/pro/programs/publichealth/oph_standards/docs/protocols_guidelines/Oral_Health_Protocol_2018_en.pdf))

6. Shockingly unstable, unreliable data for emergency department visits and day surgeries.

WECHU understatedly reports that “Counts and rates of ED visits and day surgeries may be higher from previous reports, due to the availability of more up-to-date data at the time of data extraction” (page 14).

Further below are WECHU’s tables showing “The annual number of oral health-related emergency department (ED) visits by children (1-17 years old) and adults (≥18 years old) in Windsor-Essex County” as reported in their 2016 and 2018 Oral Health Reports. Note the enormous changes from one report to the next, in data points that ought to be stable.

For example, the reported number of children aged 1-17 that had an oral health-related emergency department visit in 2010 climbed from 32 to 53, an increase of 66%, from the 2016 report to the 2018 report. For adults in 2010 the count changed from 560 to 799. The 2011 children’s count doubled from 24 to 48 visits, and the 2013 count climbed from 21 to 50.

Apparently the National Ambulatory Care Reporting System data provided in WECHU’s 2016 report was ‘incomplete’ to the point of being useless, and one must wonder how accurate the counts provided in the 2018 are.

I hope that Council will investigate how it is that emergency visits between 2010 – 2014 were still being “uploaded” (as claimed by WECHU on Twitter) after January 8, 2016, and that you will warn other municipalities of the grossly unreliable nature of National Ambulatory Care Reporting System data.

WECHU's Oral Health Report 2016:

	2010	2011	2012	2013	2014
■ ED Visits (Children)	32	24	43	21	17
■ ED Visits (Adults)	560	599	623	596	205

*"Source: Ambulatory Emergency External Cause [2010-2014], Ontario Ministry of Health and Long-Term Care, IntelliHEALTH ONTARIO, Date Extracted: [Jan 8, 2016]."*

WECHU's Oral Health Report 2018 Update:

*"Source: Ambulatory Emergency External Cause [2010-2016], Ontario Ministry of Health and*

	2010	2011	2012	2013	2014	2015	2016
Total	852	845	885	1004	1005	948	907
■ Children (1 to 17 years)	53	48	65	50	60	52	56
■ Adults (18+)	799	797	820	954	945	896	851

*Long-Term Care, IntelliHEALTH ONTARIO, Date Extracted: [March 19, 2018]."*

7. Tables, figures providing counts without rates/percentages.

Numerous tables and figures throughout WECHU's report provide only counts, without rates or percentages, making comparisons across years and other variables impossible.

8. Inconsistent, illogical percentages.

WECHU's Table 8 reports that the percentage of children with *"decay and urgent dental needs"* was higher, in every year, than the percentage of children with *"urgent dental needs"*, which is impossible and illogical.

Further, they state that *"Between 2011/2012 to 2016/2017, the percentage of children with decay or requiring urgent care has increased by 51%"* (my emphasis, page 7). This "trend" is taken from the entry in Table 8 for *"decay and urgent dental needs"*.

Hence, it appears that the percentages WECHU published in Table 8 under *"Children with decay and urgent dental needs"* are actually for *"Children with decay or urgent dental needs"*, and that WECHU did not provide the core indicator as specified by the Association of Public Health Epidemiologists in Ontario" (<http://core.apheo.ca/index.php?pid=156>).

9. Data for dental fluorosis and other oral health outcomes are based on a “no touch” screening ... done by a Registered Dental Hygienist. A ten to thirty second visual inspection of the child’s mouth....’ (page 27).

10. WECHU recommends illogical, harmful, unlawful activity that violates the fundamental and Charter rights of Canadians.

*“The Windsor-Essex County Health Unit’s Board of Directors recommends that the Province of Ontario amend the regulations of the Safe Drinking Water Act to require community water fluoridation for all municipal water systems (when source-water levels are below the Health Canada recommended level of 0.7 mg/L) to prevent dental caries (tooth decay) and provide the funding and support to municipalities required”* (page 44).

Dental fluorosis caused by overexposure to fluoride during tooth formation is now widespread, even in unfluoridated communities (i.e. 16% of seven year old school children in unfluoridated Caledon, according to a study funded by the Region of Peel that also found no benefit whatsoever from water fluoridation in terms of cavities, see page 32: <http://cof-cof.ca/wp-content/uploads/2012/10/Dick-Ito-DDS-A-Cross-Sectional-Study-To-Compare-Caries-And-Fluorosis-In-7-Year-Old-Schoolchildren-From-A-Fluoridated-Area-With-Those-In-A-Neighbouring-Non-Fluoridated-Area-In-Ontario-MSc-Thesis-U.-Of-Toronto-2007.pdf>).

Results from Health Canada’s Oral Health Component of the Canadian Health Measures Survey 2007–2009 (when less than half, 45%, of Canadians had fluoridated water): 40% of children with 'non-normal' teeth with respect to dental fluorosis (Page 107: [http://publicatigns.gc.ca/cglllectigns/cglllectign\\_2010/sc-hc/H34-221-2010-eng.pdf](http://publicatigns.gc.ca/cglllectigns/cglllectign_2010/sc-hc/H34-221-2010-eng.pdf)).

Health Canada and the FDA warn parents to call poison control or seek medical attention right away if one time their child under age 6 swallows any more than a pea-sized bit of fluoridated toothpaste (which is regulated as a drug in Canada, while unfluoridated toothpaste is considered a cosmetic) (see <http://webprod.hc-sc.gc.ca/nhp/nd/bdipsn/atReg.do?atid=oral.health.sante.bucco.dentaire>).

The CDC and dentists also insist that children be taught to spit out the pea-sized bit of fluoridated toothpaste and not swallow it.

What most people, including dentists, don’t realize is that 0.25 mg is the typical amount of fluoride in the pea-sized bits of fluoridated toothpaste that everyone agrees must be spit out (<https://www.cdc.gov/mmwr/preview/mmwrhtml/rr5014a1.htm>) and that every 350 ml of 0.7 ppm fluoridated drinking water consumed by children (and bottle-fed infants) daily, year after year, contains 0.25 mg of bioaccumulative fluoride.

According to Statistics Canada, average daily consumption of beverages for children aged 4 – 8 is more than 1000 grams (which corresponds to more than 1 litre of water). And of course, some children consume higher than average amounts. The majority of their beverage consumption is made up of water and drinks made with water (fruit drinks/ juices/sodas). <https://www.statcan.gc.ca/pub/82-003-x/2008004/article/10715/t/6500237-eng.htm>

"Health Canada does not consider fluoride as an essential nutrient" (hence, you do not see fluoride listed on nutrient labels).

[http://www.oag-bvg.gc.ca/internet/English/pet\\_221\\_e\\_30308.html](http://www.oag-bvg.gc.ca/internet/English/pet_221_e_30308.html)

Health Canada: "Fluoride supplements.... Only take them if an oral health professional advises you to." <https://www.canada.ca/en/health-canada/services/healthy-living/your-health/environment/fluorides-human-health.html#s3>

Health Canada: "...The action of fluoride is topical. No fluoride should be given before the teeth have erupted... Supplemental fluoride should be given only after 6 months of age..." Yet fetuses and bottle-fed infants in fluoridated communities are systemically dosed daily.

<https://www.canada.ca/en/health-canada/services/first-nations-inuit-health/health-care-services/nursing/clinical-practice-guidelines-nurses-primary-care/pediatric-adolescent-care/chapter-7-nutrition.html>

National Research Council (2006): Fluoride has the ability to "interfere with the functions of the brain and the body by direct and indirect means."

<https://www.nap.edu/read/11571/chapter/9#222>

National Scientific Council on the Developing Child (Australia) (2009): It's not just about dose. Most important is "the timing during the developmental process... The immature nervous system of an embryo or fetus is even more vulnerable to toxic exposures than is that of an infant."

<https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=4&ved=0ahUKewj93-3p3OraAhXITd8KHU5TDUoQFgg1MAM&url=http%3A%2F%2Fwww.aph.gov.au%2FDocumentStore.ashx%3Fid%3Df9eaeccb-2d20-428c-887f-ba7d9b420156%26subId%3D32202&usg=AOvVaw35ekUuLRrEGRYBZ-yfNJHm>

EPA Neurotoxicology Division (2009): A team of researchers found "substantial evidence" that fluoride is a "developmental neurotoxicant" in the same category with alcohol, arsenic, bisphenol A, lead, mercury, and nicotine. [https://www.fluoridealert.org/wp-content/uploads/epa\\_mundy.pdf](https://www.fluoridealert.org/wp-content/uploads/epa_mundy.pdf)

To knowingly expose children and babies, born and unborn, to increased levels of a developmental neurotoxin is inexcusable. Yet this is what happens every single day in fluoridated communities.

Fluoride is a regulated water contaminant, not a nutrient, and not a magic tooth medicine that effectively prevents cavities and causes no harm regardless of dosage, health status, or years of ingestion. It is not something that should be added to any individual's drinking water without their informed consent, especially at the request of public servants who ought to know better than to violate fundamental healthcare rights encoded in Ontario's *Healthcare Consent Act, 1996* and the international covenants that were signed by Canada, are recognized by the Supreme Court and flow through the *Charter of Rights and Freedoms*.

Water fluoridation chemicals, as expert Dr. Gilles Parent proved for the Region of Peel's Community Water Fluoridation Committee in April 2018, are hazardous waste chemicals

unlawfully used as unregulated, unapproved, untested as drugs:  
<http://www.fluoridefreepeel.ca/wp-content/uploads/2018/04/Are-fluoridation-products-Unregulated-Unapproved-Illegal-drugs-2018.pptx>

Best wishes,  
Christine Massey, M.Sc.  
Brampton, ON  
Spokesperson, [Fluoride Free Peel](#)