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## Message from the Medical Officer of Health

Dear Colleagues,

As we move into the New Year, it's a good time to reflect on the many challenges we faced in 2020 and the work that is still ahead in 2021. The COVID-19 vaccine has brought on a lot of optimism and we look forward to working closely with you to respond to our communities' needs on this and many other fronts. As health care providers, you have played a critical role in the response to the COVID-19 pandemic, and I thank you for your ongoing work in keeping our communities safe and healthy. We will continue to provide you with clinical alerts and guidance, as needed. I encourage you to visit [phsd.ca/COVID-19](https://phsd.ca/COVID-19) for the most current information.

This issue of *The Advisory* covers a wide-range of public health topics from information on sodium in Sudbury and districts drinking water supply to recommended changes to formulations of rabies immune globulin. We also share findings from the *Needs Assessment and Feasibility Study for Supervised Consumption Services* within Greater Sudbury and provide an update on the COVID-19 vaccine.

Other important information covered in this issue includes background on verotoxin-producing *Escherichia coli* and an update on the revised referral pathway for the enhanced 18-month well-baby visit in Sudbury and districts.

As we continue our important work during the COVID-19 pandemic, the importance of mental health must remain top-of-mind. As you are aware, mental health is key to our well-being and we can't truly be healthy without it. We encourage you to stay connected during this difficult time—we are all (still) in this together.

On behalf of our team at Public Health Sudbury & Districts, I wish you a safe and healthy New Year.

Sincerely, Dr. Penny Sutcliffe, Medical Officer of Health



# Verotoxin-producing *Escherichia coli*

→ Ashley DeRocchis, Health Protection

Verotoxin-producing *Escherichia coli* (VTEC) is a subtype of *E. coli* distinguished by its ability to produce Shiga toxins (also called verotoxins). VTEC is considered highly pathogenic. The most common VTEC associated with illness in humans is *Escherichia coli* O157:H7<sup>1</sup>.

In late 2018 and early 2019, *Escherichia coli* O157:H7 was identified as the causative organism of various outbreaks linked to romaine lettuce in both the United States and Canada. In Canada, 10 individuals were hospitalized in relation to this outbreak, with 2 experiencing hemolytic-uremic syndrome (HUS)<sup>2</sup>. In autumn 2019, *E. coli* was also the cause of a nationwide beef and veal related food recall, although no illnesses had been directly linked to the recalled product at the time the recall was issued<sup>3</sup>.

As *E. coli* can be found in raw or undercooked meat products as well as contaminated raw fruits and vegetables<sup>4</sup>, individuals who consume meat—as well as those with a vegetarian or vegan diet—are at risk.

The incubation period of VTEC is anywhere from two to ten days with a median of three to four days. Clinical presentation includes

bloody or non-bloody diarrhea and severe abdominal pain or cramping. Fever typically is not present<sup>1</sup>. Possible complications include HUS, thrombocytopenic purpura, or pulmonary edema<sup>5</sup>. HUS typically develops seven days after the onset of diarrhea, but can develop up to three weeks after the onset of diarrhea. Validated tests for VTEC include standard culture, including serotyping, enzyme immunoassay for the detection of verotoxin/shigatoxin, and nucleic acid amplification tests for the detection of genes encoding verotoxin/shigatoxin<sup>5</sup>.

As per the *Health Protection and Promotion Act*, diseases of public health significance such as Verotoxin-producing *E. coli* are reportable to public health<sup>6</sup>. Public health inspectors investigate all reports of enteric diseases of public health significance to determine the most likely source of illness and to reduce the risk of transmission to family members and the general public. A provincial standardized questionnaire is used to investigate such reports and a detailed food history is obtained. Travel, source of drinking water, recreational water use, and animal contact are other factors of interest during the investigative process.





Symptomatic individuals identified as working in high-risk settings such as food handlers, health care providers, and daycare staff should be excluded from their place of work until two consecutive negative stool specimens or rectal swabs have been received. Specimens or swabs must be taken a minimum of 24 hours apart and, if applicable, at least 48 hours after the completion of antibiotics or anti-diarrheal medications<sup>1</sup>.

Clinicians and the general public can consult a public health inspector about VTEC or file a report for further investigation of a food premises suspected of causing illness. A public health inspector is available by calling Public Health

Sudbury & Districts at 705.522.9200, ext. 464. If your inquiry is of an urgent nature, a public health inspector is available after regular business hours by calling 705.688.4366

## References

- 1 ↪ Ministry of Health and Long-Term Care. 2019. Infectious Disease Protocol – Appendix A: Disease-Specific Chapters, Verotoxin-producing *E. coli* infection indicator conditions, including Hemolytic Uremic Syndrome (HUS).
- 2 ↪ Government of Canada. 2019. Public Health Notice – Outbreak of *E. coli* infections linked to romaine lettuce. Retrieved from: <https://www.canada.ca/en/public-health/services/public-health-notices/2018/outbreak-ecoli-infections-linked-romaine-lettuce.html>
- 3 ↪ Canadian Food Inspection Agency. 2019. Updated food recall warning – Various raw beef and raw veal products recalled due to *E. coli* O157:H7. Retrieved from: <http://www.inspection.gc.ca/about-the-cfia/newsroom/food-recall-warnings/complete-listing/2019-10-21/eng/1571695842942/1571695843304>
- 4 ↪ Government of Canada. 2018. *E. coli* (*Escherichia coli*) infection. Retrieved from: <https://www.canada.ca/en/public-health/services/diseases/e-coli.html>
- 5 ↪ Ministry of Health and Long-Term Care. 2019. Infectious Disease Protocol-Appendix B: Provincial Case Definitions for Diseases of Public Health Significance.
- 6 ↪ Health Protection and Promotion Act, R.S.O. 1990, c. H. 7 S 25

# Sodium in Sudbury and districts drinking water supplies

➔ Burgess Hawkins, Health Protection

Sodium levels are routinely monitored in all government regulated water supplies in Ontario. The aesthetic objective for sodium in drinking water is 200 mg/L, above which it can be detected by a salty taste. Sodium is not considered a toxic element; therefore, a maximum acceptable concentration for sodium in drinking water has not been specified.

The average intake of sodium from water comprises only a small fraction of that consumed in a normal diet (Table 1). In general, healthy adults require only 1500 mg of sodium per day<sup>2</sup>. Most Ontarians consume more than double that amount – approximately 3400 mg<sup>2</sup>. By comparison, the highest measured sodium content in drinking water within the last several years was 154 mg/L (Table 2). Assuming a water intake of up to 2 litres per day, this amounts to less than 10% of the average Ontarian’s sodium consumption.

**Table 1: Examples of sodium content found in common foods<sup>1</sup>**

Food	Sodium content
75 g of chicken breast	56 mg
250 mL skim milk	109 mg
1 slice whole wheat bread	184 mg
Small bag plain potato chips	229 mg
4 canned olives	249 mg
1 dill pickle medium	833 mg
250 mL canned chicken vegetable soup	1128 mg

Nonetheless, sodium reduction represents an important preventive health measure. Persons with a history of hypertension or congestive heart failure may require a sodium-restricted diet, in which case the intake of sodium from drinking water may become clinically relevant. The local Medical Officer of Health is notified when the sodium concentration of drinking water exceeds 20 mg/L (Table 2).



**Table 2: Water systems reported to have sodium concentrations above 20 mg/L**

Facility	Location	Date	Sodium concentration (mg/L)
C. A. MacMillan Place Well Supply	Webbwood	2015	20.9 – Resample 20.4 –
Chapleau Drinking Water System	Chapleau	2018	26.3 – Resample 23.1 –
Dowling Drinking Water System	Dowling	2020	33.8, 40.4 – Resample –
Falconbridge Drinking Water System	Falconbridge	2020	22.8, 22.8, 25.6 – Resample –
Terry Wong Trailer Park	Chapleau	2020	154
Humarcin Residents’ Organization	Sudbury	2017	106
Onaping/Levack Drinking Water System	Onaping/Levack	2020	109.0, 96.6 – Resample –
Peace Valley Trailer Park	Wahnapiatae	2011	107.1
Résidence des pionniers de Noëlville	Noëlville	2020	97.0
Sudbury Drinking Water System – David Street	Sudbury South End	2020	54.1 – Resample –
Sudbury Drinking Water System – Garson	Garson	2020	67.7 – Resample –
Bleazard Valley – Capreol Drinking Water System	Valley, Capreol, Azilda, Chelmsford	2020	26.1, 21.6 – Resample –
Vermilion Water Treatment Plant	Lively, Whitefish, Naughton, Copper Cliff	2018	20.4 – Resample 20.0 –
Villa Notre Dame	St. Charles	2020	30.3 – Resample 30.5 –
Warren Well Supply	Warren	2017	105 – Resample 104 –

*Sampling frequency: The Ministry of the Environment, Conservation and Parks requires that samples be taken every five years. The Medical Officer of Health is advised of water systems that contain sodium concentrations higher than 20 mg/L. Resamples are taken if the original sample is over 20 mg/L to confirm results.*

*Many of the distribution systems within a community may reflect a blended supply of water. Details regarding specific water supplies can be obtained by contacting the local municipal office.*

# Sodium in Sudbury and districts drinking water supplies (Continued)

→ Burgess Hawkins, Health Protection

We encourage physicians to review sodium reduction strategies with all patients both for preventive care and as part of chronic disease management. More information on sodium reduction is available from Public Health Sudbury & Districts <https://www.phsd.ca/health-topics-programs/water/drinking-water/sodium-drinking-water/>



## References

- 1 → Health Canada. (2013, March 18). Nutrient Value of Some Common Foods. Retrieved November 21, 2017, from <https://www.canada.ca/en/health-canada/services/food-nutrition/healthy-eating/nutrient-data/nutrient-value-some-common-foods-2008.html>
- 2 → Dietitians of Canada. (2017, April 6). Cut out the Salt. Retrieved November 21, 2017, from <https://www.eatrightontario.ca/en/Articles/Heart-Health/Cut-out-the-Salt.aspx>

## ! We're going digital! !

We will be discontinuing printed copies and moving to a digital only format of *The Advisory* in the future. We will be distributing via email and on [phsd.ca](https://www.phsd.ca). If you are interested in receiving future issues directly through email, please email [phsd@phsd.ca](mailto:phsd@phsd.ca) to indicate your interest.

# Changes to formulations of rabies immune globulin

→ Ashley DeRocchis, Health Protection

Public Health Sudbury & Districts investigates potential rabies exposures and conducts a risk assessment on all potentially exposed individuals to determine the appropriate next steps. Based on the outcome of the risk assessment, Public Health provides a recommendation to the attending health care provider as to whether post-exposure rabies treatment should be administered.

Post-exposure rabies treatment includes the following:

- rabies vaccine
- rabies immune globulin (RabIg)

In July 2019, the Ministry of Health informed Public Health Units that rabies immune globulin (RabIg) would now be available in one of two formulations:

- 2 mL vials containing 150 IU/mL; or
- 1 mL vials containing 300 IU/mL

This change affects the formulae required to calculate the immune globulin dosage for the patient.



## For 150 IU/mL RabIg in 2 mL vials:

- $20 \text{ IU/kg} \times (\text{client wt in kg}) \div 150 \text{ IU/mL} = \text{dose in mL}$  or
- $9.09 \text{ IU/lb} \times (\text{client wt in lb}) \div 150 \text{ IU/mL} = \text{dose in mL}$

## For 300 IU/ml RabIg in 1 mL vials:

- $20 \text{ IU/kg} \times (\text{client wt in kg}) \div 300 \text{ IU/mL} = \text{dose in mL}$  or
- $9.09 \text{ IU/lb} \times (\text{client wt in lb}) \div 300 \text{ IU/mL} = \text{dose in mL}^1$

Attending health care providers will be provided with an information package outlining the pertinent information. In addition, the public health inspector who delivers the rabies biologicals will indicate the RabIg formulation dispensed as well as the dosage formulae required. However, as the ultimate responsibility is that of the health care provider administering these products, please be aware of the information above.

Should you have any questions regarding the use of rabies post-exposure prophylaxis or to report an incident that may result in the transmission of rabies to persons, please contact Public Health Sudbury & Districts at 705.522.9200, ext. 464 (toll-free 1.866.522.9200).

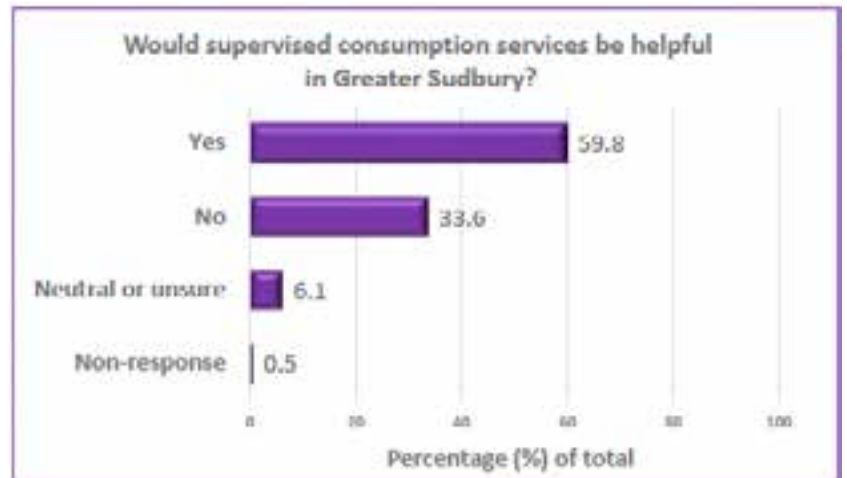
## References

- Ministry of Health. (July 2019). Memo: Changes to formulations of RabIg available in Ontario.
- Ministry of Health and Long-Term Care. (2019). Rabies Prevention and Control Protocol, 2019.

# Findings from the *Needs Assessment and Feasibility Study for Supervised Consumption Services within Greater Sudbury*

→ Josée Joliat, Health Promotion

The various harms associated with substance use are significant, and our community is increasingly being affected by these harms. In 2018, Sudbury & districts ranked 12<sup>th</sup> in the province for opioid-related emergency department visits\*, 7<sup>th</sup> in the province for confirmed opioid-related deaths\*, and 10<sup>th</sup> for opioid-related hospitalizations\*<sup>1</sup>. In 2018, the Public Health Sudbury & Districts service area was the 11<sup>th</sup> highest public health region for opioid prescribing—both overall and for new individuals—with a rate of 140.6 per 1 000 population<sup>2</sup>. In our area, opioid-related overdose deaths increased in 2019 at 55 deaths, compared to 32 deaths in 2018, and 34 deaths in 2017<sup>3</sup>.



In June 2020, the Community Drug Strategy for the City of Greater Sudbury released the results of the *Supervised Consumption Service (SCS) Degree of Needs Assessment and Feasibility Study* (<https://www.phsd.ca/health-topics-programs/alcohol-drugs/community-drug-strategy/>). This study concluded that Greater Sudbury would benefit from an SCS and that these services would be a feasible strategy for the city to address the harms associated with substance use in the community. The study consisted of a peer-led survey with 190 people who inject drugs (PWID), an online survey responded to by 2 251 Greater Sudbury community members and focus groups with 52 community partners and stakeholders. Almost two-thirds of community respondents believed that an SCS would be helpful. The results of the study also identified that three-quarters (75.0%) of respondents from the survey of PWID said they had injected drugs in public. More than half had overdosed in their lifetime. The need for a safe and supported space is clear.

**\*per 1 000 population**



Photo by: P199 - Own work, CC BY-SA 4.0, <https://commons.wikimedia.org/w/index.php?curid=3733701>



Currently, the Community Drug Strategy is completing the required provincial and federal applications to proceed to the next steps. A federal exemption is required under the *Controlled Drugs and Substances Act (CDSA)* to permit a site to operate. Provincial approval is required to secure funding for operations. The applications require details about location and other services associated with the SCS.

Once an SCS is functioning in our community, PWID will be offered a safe space to use substances. Together with other interventions based on the principles of harm reduction and health promotion, a local SCS will assist in making our community healthier and safer from the harms associated with substance use. To stay up-to-date on the developments of this project, please visit [phsd.ca/cds](https://phsd.ca/cds).



## References

- 1 ↗ Ontario Agency for Health Protection and Promotion (Public Health Ontario). (2019). Interactive Opioid Tool. Toronto, ON: Queen's Printer for Ontario. Retrieved from: <https://www.publichealthontario.ca/en/data-and-analysis/substance-use/interactive-opioid-tool>
- 2 ↗ The Ontario Drug Policy Research Network (ODPRN). (2016). Opioid Use and Related Adverse Events in Ontario. Retrieved from <https://odprn.ca/wp-content/uploads/2016/11/ODPRN-Opioid-Use-and-Related-Adverse-Events-Nov-2016.pdf>
- 3 ↗ Ontario Agency for Health Protection and Promotion (Public Health Ontario). (2020). Interactive Opioid Tool. Toronto, ON: Queen's Printer for Ontario. Retrieved from: <https://www.publichealthontario.ca/en/data-and-analysis/substance-use/interactive-opioid-tool>

# Enhanced 18-month well-baby visit: revised referral pathway for Sudbury and districts

✦ Tania Freimanis, Health Promotion

First launched in 2009, the Enhanced 18-month well-baby visit supports the use of a standardized developmental review and evaluation for every 18-month-old child in Ontario. The introduction of the **A002 OHIP** billing codes reinforced this best practice by compensating clinicians for the increased time needed to complete the 18-month screening tools.

As a child's last regularly scheduled visit with a clinician before entering school, the 18-month visit allows clinicians a unique opportunity to improve the quality of early year experiences and improve the trajectory of the child's health. Research has shown that this developmental period is a critical time in a child's development, where early identification of possible concerns and timely interventions can have a positive impact on the child's future.

The 18-month visit provides clinicians with an opportunity to examine and evaluate a child's progress, have a discussion with parents about their child's development, address any parenting concerns, as well as help to identify any difficulties with self-regulation, communication, and language. Additionally, clinicians can help parents build a secure attachment with their

child and foster their parenting skills by directing them to universal child and parenting services in the community. For children not meeting developmental milestones, having an awareness of specialized services can help clinicians to support all families while providing extra assistance for families at risk.

In 2013, Public Health Sudbury & Districts developed and disseminated an 18-month referral pathway (<https://www.phsd.ca/wp-content/uploads/2020/02/18-Month-Referral-Pathway.pdf>) to support clinicians in facilitating referrals to local specialized services. An updated version is now available in both paper and electronic formats. The electronic version can be used as a quick reference tool in the EMR and can be accessed by visiting [www.phsd.ca/professionals/](http://www.phsd.ca/professionals/).

For more information on available resources to support the Enhanced 18-month well-baby visits, please visit:

- ✦ Public Health Sudbury & Districts Health Information Line, 705.522.9200, ext 342.
- ✦ MacHealth's [18monthvisit.ca](http://18monthvisit.ca)
- ✦ <http://www.rourkebabyrecord.ca/> which can be incorporated into EMRs
- ✦ <https://lookseechecklist.com/en/> (previously NDDS)



## References

- 1 ✦ R Williams, J Clinton, A Biscaro. Ontario and the enhanced 18-month well-baby visit: Trying new approaches. *Paediatr Child Health* 2008;13(10):850-856.
- 2 ✦ R Williams, J Clinton. Getting it right at 18 months: In support of an enhanced well-baby visit. *Paediatr Child Health* 2011;16(10):647-650.
- 3 ✦ V Catry, D Dowling, C Wowk, D Batchelor, D Martin, K Hail Barber, K Moore. Improved implementation of the Enhanced 18-Month Well-Baby Assessment: Kingston area primary care-public health partnership advances developmental health and well-being of children. *Ontario Medical Review Feature* 2012:29-32.

# COVID vaccine – what we know so far

✦ Hannah Ballantyne, Karen Joblin, and Karen Adamic, School Health, Vaccine Preventable Diseases, and COVID Prevention

Vaccines are an important tool in the response against COVID-19, and their development is underway. Health Canada is focusing on reviewing and approving COVID-19 vaccines that are safe and effective.

## What we know

### Federal Level

Several COVID-19 vaccines have been submitted for approval. As of December 9, 2020, the Pfizer vaccine (<https://www.canada.ca/en/health-canada/services/drugs-health-products/covid19-industry/drugs-vaccines-treatments/vaccines/pfizer-biontech/authorization.html>) has been authorized for Canadian use by Health Canada (<https://www.canada.ca/en/health-canada/news/2020/12/health-canada-authorizes-first-covid-19-vaccine0.html>). In early December, the first doses arrived in Canada with progressively increasing supplies expected throughout the month. In a series of shipments, up to 249 000 doses will arrive in the country. Shipping will be from the point of manufacture to the point of use, related to logistical challenges as the Pfizer-BioNTech vaccine requires ultra-low temperatures for storage and transportation. Initially, there will be limited supply of vaccines, warranting prioritization of immunization to high-risk groups.

### Provincial Level

The Province of Ontario is responsible for the overall immunization strategy. The vaccine is expected to be delivered in three phases and the province has identified key groups (<https://news.ontario.ca/en/release/59508/ontario-identifies-key-groups-for-distribution-of-initial-covid-19-vaccines>) to receive the vaccine. On December 14, the initial roll out began in regions with the highest rates of COVID-19 infection with a pilot project at two hospital sites in Toronto and Ottawa. This pilot program aims to immunize over 2 500 health care workers in hospital and long-term care at the University Health Network and the Ottawa hospital.

## Local planning and response

Early and strategic conversation on vaccine preparedness and planning is underway in local communities. On December 3, 2020, Public Health Sudbury & Districts hosted a high-level strategic session with key stakeholders in Greater Sudbury and another with key stakeholders

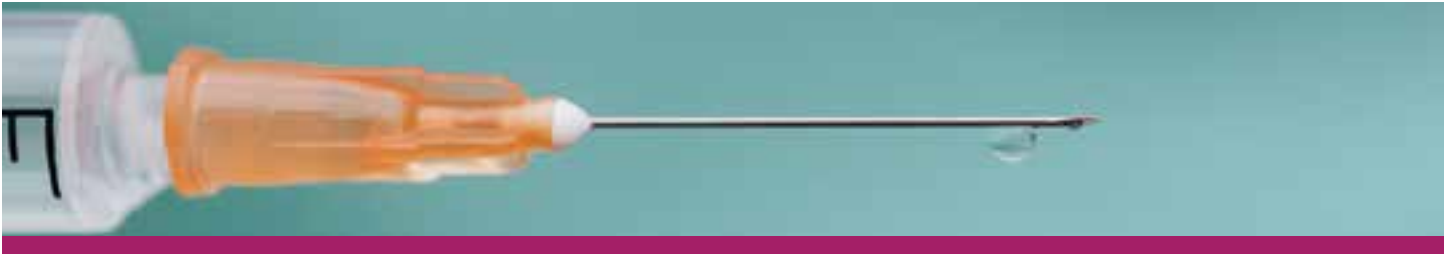


# COVID vaccine – what we know so far (Continued)

✦ Hannah Ballantyne, Karen Joblin, and Karen Adamic, School Health, Vaccine Preventable Diseases, and COVID Prevention

from the Sudbury and Manitoulin districts. Public Health Sudbury & Districts has started work on various aspects of planning for the COVID-19 vaccine rollout including distribution, administration, data collection, and public communication. Local engagement, geography, access, and equity are being considered in planning.

Many questions remain unanswered. Stay informed by visiting Health Canada (<https://www.canada.ca/en/public-health/services/diseases/2019-novel-coronavirus-infection/prevention-risks/covid-19-vaccine-treatment.html>), the Government of Ontario (<https://covid-19.ontario.ca/covid-19-vaccines-ontario>), and Public Health Sudbury & Districts' COVID-19 information (<https://www.phsd.ca/health-topics-programs/diseases-infections/coronavirus/>).



## References

- 1 ✦ Canada, H. (2020, December 09). Health Canada authorizes first COVID-19 vaccine. Retrieved December 10, 2020, from <https://www.canada.ca/en/health-canada/news/2020/12/health-canada-authorizes-first-covid-19-vaccine0.html>
- 2 ✦ Canada, P. (2020, December 07). Canada to receive early delivery of Pfizer-BioNTech COVID-19 vaccine. Retrieved December 10, 2020, from <https://www.canada.ca/en/public-services-procurement/news/2020/12/canada-to-receive-early-delivery-of-pfizer-biontech-covid-19-vaccine.html>
- 3 ✦ City of Toronto. (2020, November 09). City of Toronto launches COVID-19 Immunization Task Force to prepare for arrival of COVID-19 vaccine. Retrieved December 10, 2020, from <https://www.toronto.ca/news/city-of-toronto-launches-covid-19-immunization-task-force-to-prepare-for-arrival-of-covid-19-vaccine/>
- 4 ✦ Government of Ontario. (n.d.). COVID-19 vaccines for Ontario. Retrieved December 10, 2020, from <https://covid-19.ontario.ca/covid-19-vaccines-ontario>

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