

## What's Inside

HIV care cascade: implications for health care practitioners

Heads up! Updated concussion protocols for school communities

Immunization update: working with vaccine-hesitant parents

Sodium in Sudbury and district drinking water supplies

IGRA now available locally for the diagnosis of latent tuberculosis infection

## Message from the Medical Officer of Health

Dear Colleagues,

Welcome to the latest edition of *The Advisory*!

In this issue, we examine HIV testing and diagnostic indicators throughout the province, as well as the impact that an HIV care cascade can have on health care providers. This is big news as it is the first time Public Health Sudbury & Districts has had these indicators for our region.

Next is an issue that is a topic of conversation for young athletes and their families—concussions. With the release of new concussion protocols, we explain what patients, guardians, and schools may be expecting of you as a health care provider called upon to treat a suspected concussion.

According to the World Health Organization, anti-vaccination viewpoints are one of the top threats to global health. As health care providers, you play a major role in helping vaccine-hesitant parents make evidence-informed decision regarding whether or not to immunize their children. In this issue of *The Advisory*, we outline five strategies from the Canadian Paediatrics Society you can use to engage with vaccine-hesitant parents.

Our next article examines sodium levels in our local drinking water and how it may impact your patients, especially those managing chronic diseases.

Finally, we're happy to share that an Interferon Gamma Release Assay is now available in Greater Sudbury. This device should help with the diagnosis of latent tuberculosis infection.

As always, please send us your thoughts, comments, and feedback.

Dr. Penny Sutcliffe, Medical Officer of Health



# HIV care cascade: implications for health care practitioners

→ Annie Berthiaume and Sandra Bertoli, Clinical Services

## The Ontario HIV Epidemiology and Surveillance Initiative recently released a report summarizing data on HIV testing and diagnosis indicators, as well as HIV care cascade indicators.<sup>1</sup>

Data was extracted from the Public Health Ontario Laboratory database and broken down by the 36 public health unit regions. The full report can be found at <http://www.ohesi.ca/documents/OHESI-HIV-by-PHU-2018-11.pdf>. This is the first time that Public Health Sudbury & Districts has had these indicators summarized for its region.

The following are key highlights and clinician practice implications of the results reported for residents of Public Health Sudbury & Districts' service areas.<sup>1</sup>

## Testing and diagnosis Results

→ Between 2013 and 2017, a total of 29 188 HIV tests were completed for residents of Public Health

Sudbury & Districts' service area. This equals an average rate of 29 HIV tests completed per 1000 population (versus 36 per 1000 in Ontario overall).

- Testing rates were similar among males (28 per 1000) and females (29 per 1000).
- The number of HIV tests completed increased each year, from 5202 in 2013 to 6754 in 2017.
- The average HIV positivity rate was 0.14% locally, compared to 0.17% in Ontario, overall.
- Between 2013 and 2017, there were four new HIV diagnoses per 100 000 population per year on average, compared to six new diagnoses per 100 000 population per year in Ontario overall.
- Local diagnosis rates were higher among males (five per 100 000) than females (three per 100 000)

## Implications for clinician practice

Testing needs to continue to increase, especially amongst the five HIV at-risk populations in Ontario, who are as follows:

1. gay and bisexual men
2. African and Caribbean Ontarians
3. people who use injection drugs
4. Indigenous Peoples
5. women—and those who engage in HIV risk activity with them.<sup>2</sup>

## Care cascade

To achieve the UNAIDS 90-90-90 targets by 2020 ([http://www.unaids.org/sites/default/files/media\\_asset/90-90-90\\_en.pdf](http://www.unaids.org/sites/default/files/media_asset/90-90-90_en.pdf)), 81% of all people living with HIV would have to be on ART and 73% would have to be virally suppressed<sup>1,3</sup>.

## Results

- In 2015, an estimated 182 people were living with diagnosed HIV in Public Health Sudbury & Districts' region.
- Of those (182), 84% were in care (versus 87% of those diagnosed in Ontario), 74% were on antiretroviral therapy (ART; compared to

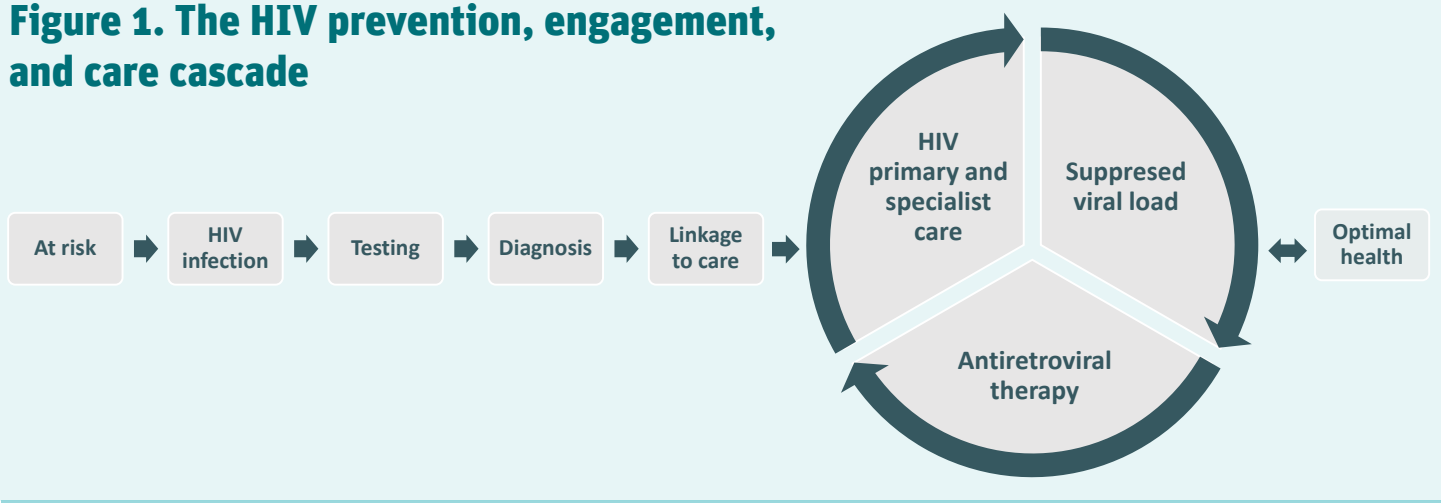
81% in Ontario), and 69% were virally suppressed (compared to 80% in Ontario).

→ Rates of both ART and viral suppression amongst residents of Public Health Sudbury & Districts' service region was amongst the lowest in Ontario.

## Implications for clinician practice

Once in care of an HIV specialist, it is imperative that the primary care clinician continue to support the patient by assessing compliance with the treatment plan, identifying any barriers impeding patient compliance and provide any additional care the patient may require to improve/maintain adherence to therapy throughout the lifespan.<sup>4</sup>

**Figure 1. The HIV prevention, engagement, and care cascade**



### References

- 1 → Ontario HIV Epidemiology and Surveillance Initiative. (2018). HIV in Ontario by public health unit: Testing, new diagnoses and care cascade. Retrieved from <http://www.ohesi.ca/documents/OHESI-HIV-by-PHU-2018-11.pdf>
- 2 → Ministry of Health and Long-Term Care. (2018). Ontario HIV/AIDS Infection Rates. Retrieved from [http://www.unaids.org/sites/default/files/media\\_asset/90-90-90\\_en.pdf](http://www.unaids.org/sites/default/files/media_asset/90-90-90_en.pdf)
- 3 → UNAIDS. (2014). 90-90-90: An ambitious treatment target to help end the AIDS epidemic. Retrieved from [http://www.unaids.org/sites/default/files/media\\_asset/90-90-90\\_en.pdf](http://www.unaids.org/sites/default/files/media_asset/90-90-90_en.pdf)
- 4 → OHTN HIV Clinical Guidelines Working Group. (2018). Clinical Care Guidelines for Adults and Adolescents Living with HIV in Ontario, Canada. Retrieved from <http://occguidelines.com/guidelines/>

# Heads up! Updated concussion protocols for school communities

✦ Stacey Gilbeau and Crystal Walker, Health Promotion

## Do you know what parents/guardians and schools may expect from you as a physician or nurse practitioner for suspected concussions?

The Ontario Physical Education Safety Guidelines has released new concussion protocols. These protocols align with the Berlin Consensus “Statement on Concussion in Sport and the Canadian Guideline on Concussion in Sport”<sup>1</sup>. The Ministry of Education has identified these concussion protocols to be the minimum standard in development and implementation of concussion policies in school boards in Ontario<sup>2</sup>.

## Here are three important changes to the guidelines:

1. The changes to these protocols include more comprehensive assessment tools and a clearer explanation of the responsibilities teachers and parents have at each step, from identification of concussions through diagnosis and recovery planning. The recovery process is now broken down from one Return to Learn/Return to Physical Activity Plan into two more concise plans with updated content including activities that are permitted or not permitted. The first plan covers stages to be completed at home (Home Preparation for Return to School and Return to Physical Activity Plan), and the second plan is implemented once the student has successfully progressed through the stages and has recovered enough to return to school (Return to School and Return to Physical Activity Plan). As a physician or nurse practitioner, you need to be aware of what the recommended activities and restrictions are in both plans to be able to assist the student to work through the recovery process.
2. When a student is suspected to have sustained a concussion, they will be provided a Medical Assessment form. Parents or guardians must complete and communicate the results of the assessment back to the school before the student can return to school. The form includes the results of the clinician’s assessment (for instance, whether or not a concussion has been diagnosed) and, subsequently, sets expectations for the student in terms of a recovery plan.
3. Students who have recovered to the point of being able to fully participate in non-contact or full-contact practices will require clinician assessment. You will be asked to complete a Medical Clearance form.



Visit <http://safety.ophea.net/concussions> to view these concussion safety guidelines, sample medical assessment and clearance forms.

### References

- 1 ✦ Concussions (2018). Retrieved September 20, 2018 from <http://safety.ophea.net/concussions>.
- 2 ✦ Policy/Program Memorandum 158: School Board policies on Concussion (March 19, 2014). Retrieved September 21, 2018 from <http://www.edu.gov.on.ca/extra/eng/ppm/158.pdf>.

# Immunization update: working with vaccine-hesitant parents

✦ Ariella Zbar, Associate Medical Officer of Health

**As you know, health care providers play a major role in ensuring that our community is protected from vaccine-preventable diseases.**

One challenge to this role is dealing with vaccine-hesitant parents. Recently, the Canadian Paediatrics Society published a practice point to help you work with these parents (<https://www.cps.ca/en/documents/position/working-with-vaccine-hesitant-parents>).

**The practice point outlines five evidence-based steps practitioners can take to engage with vaccine-hesitant parents:**

1. Understanding the health care provider's key role in parental decision-making and not dismissing vaccine refusers from practice
2. Using presumptive and motivational interviewing techniques to identify specific vaccine concerns
3. Using effective, clear language to present evidence for disease risks and vaccine benefits fairly and accurately
4. Managing pain on immunization
5. Reinforcing the importance of and parental responsibility for community protection (for instance, community protection or herd immunity does not guarantee personal protection)<sup>1</sup>



## References

- 1 ✦ Canadian Paediatrics Society. (2018). Working with vaccine-hesitant parents: an update. Retrieved from <http://www.cps.ca/en/documents/position/working-with-vaccine-hesitant-parents>.

# Sodium in Sudbury and district drinking water supplies

➤ Burgess Hawkins, Environmental Health

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, at which point 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 155mg/L (Table 2). Assuming a water intake of up to 2 L per day, this amounts to less than 10% of the average Ontarian’s sodium consumption.

More information on sodium reduction is available from Public Health Sudbury & Districts: <https://www.sdhu.com/health-topics-programs/food-healthy-eating/making-healthy-choices-contextual-page/sodium>.



**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 suffering from hypertension or congestive heart failure may require a sodium-restricted diet, in which case, the intake of sodium from drinking water may become significant. The local Medical Officer of Health is notified when the sodium concentration of drinking water exceeds 20 mg/L (Table 2).

We encourage physicians to review sodium reduction strategies with all patients both for preventive care and as part of chronic disease management.

## References:

- 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>
- 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>

**Table 2. Water systems reported to have sodium concentrations higher than 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	2013	23.7; Resample 22.8
Dowling Drinking Water System	Dowling	2015	29.2 to 35.0 – Resample 30.3 to 35.6
Falconbridge Drinking Water System	Falconbridge	2015	21.7 to 25.3 – Resample 21.1 to 28.2
Gervais Trailer Park	Chapleau	2015	155
Gogama Well Supply	Gogama	2013-2014	22.9 – Resample 21.8
Humarcin Residents' Organization	Sudbury	2017	106
Maytown Mobile Home Village	Massey	2013	45.6 – Resample 46
Onaping/Levack Drinking Water System	Onaping/Levack	2015	65.7 – Resample 52.9
Peace Valley Trailer Park	Wahnapiatae	2011	107.1 (no current sampling data available)
Résidence des pionniers de Nœlville	Nœlville	2015	90.2 – Resample 91.2
Sudbury Drinking Water System – David Street	Sudbury South End	2015	52.8 – Resample 52.3
Sudbury Drinking Water System – Garson	Garson	July/November 2015	24.5/58.5 – Resample 23.0/56.4
Valley Drinking Water System	Valley East	May/November 2015	24.2 to 34.4/26.6 to 72.6 – Resample 30.9/26.2 to 70.1
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.

# IGRA now available locally for the diagnosis of latent tuberculosis infection

✦ Stephanie Hastie, Clinical Services

**The Interferon Gamma Release Assay (IGRA), QuantiFERON® TB Gold, is now available in Greater Sudbury through LifeLabs Medical Laboratory Services, however only at their 65 Larch Street location.**

IGRA is recommended to detect latent tuberculosis infection (LTBI) in patients who:

- ✦ Have a history of receiving BCG vaccine
- ✦ Are from groups that historically have poor rates of return for TB skin test (TST) reading (for example, people living in poverty)
- ✦ Have a positive TST result but have low risk factors for the disease

Further information on the indications and recommendations for IGRA testing are available in chapter four of the Canadian Tuberculosis Standards, 7<sup>th</sup> edition, available at: [https://www.canada.ca/en/public-health/services/infectious-diseases/canadian-tuberculosis-standards-7th-edition/edition-16.html#a6\\_0](https://www.canada.ca/en/public-health/services/infectious-diseases/canadian-tuberculosis-standards-7th-edition/edition-16.html#a6_0).

Clients seeking IGRA will need a laboratory requisition from their health care provider. The cost of the test is \$95 and is not covered by OHIP. The turnaround time for the result is one to two weeks.

Should you require further information, please do not hesitate to contact our TB line at 705.522.9200, ext. 457.



## Public Health Sudbury & Districts

*The Advisory* is produced by Public Health Sudbury & Districts three times a year and is distributed free of charge for the information of health care professionals. Articles may be reprinted without permission, provided the source is acknowledged. *The Advisory* is available in French and will be posted on [phsd.ca](http://phsd.ca) within one month of the paper issue. Please send your comments, questions, or suggestions to [phsd@phsd.ca](mailto:phsd@phsd.ca) or call 705.522.9200 (toll-free 1.866.522.9200).

📞 705.522.9200 (toll-free: 1.866.522.9200)

🌐 [phsd.ca](http://phsd.ca)    📱 @PublicHealthSD    @SantePubliqueSD



**Public Health  
Santé publique**  
SUDBURY & DISTRICTS