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Message from the Medical Officer of Health

Dear Colleagues,

The signs of fall are all around us—the chill in the air, the falling leaves, and the shorter days.

Another sign of fall is the renewed interest from our clients and patients to receive their annual flu shots. This year, as in previous years, we are encouraging everyone to get their flu shots early in the season. As you well know, health care providers and pharmacists play a pivotal role in providing clients and patients with clear, factual information to help them make informed decisions for their health and the health of those in their care. Together, we can help beat the flu.

I am very pleased to share this edition of *The Advisory* with you, which is focused on norovirus, rabies post-exposure prophylaxis (rPEP), and healthy eating behaviours in children. For example, with respect to norovirus we focus on the importance of prevention. Regarding rPEP, we review the legislative reporting requirements and common errors in administering vaccine. And lastly, we explore how health care providers can promote healthy eating behaviours with all patients, regardless of weight status.

With winter fast approaching, it won't be long before we can encourage and participate in a new variety of outdoor pursuits.

Stay warm!

Sincerely,

Dr. Penny Sutcliffe, Medical Officer of Health

Norovirus

Burgess Hawkins, Manager, Environmental Health

Sudbury & District Health Unit (SDHU) has historically observed an increased incidence of gastrointestinal illness during the fall and winter months throughout the Sudbury and Manitoulin districts. As one of the most common causes of gastrointestinal illness and outbreaks, here is what you need to know about norovirus.

Norovirus, also known as Norwalk and Norwalk-like viruses, refers to a group of viruses causing sporadic gastroenteritis across all age groups with the highest rates occurring in children younger than five and the more severe disease among adults older than 65 and immunocompromised individuals. These highly contagious viruses are spread through the fecal-oral route by direct

person-to-person transmission and indirectly through contaminated food, water and environmental surfaces. Transmission can also occur through aerosolization of vomit and commonly occurs among household contacts.

The disease is usually self-limited and mild to moderate in severity. Symptoms can include one or more of the following: nausea, vomiting, diarrhea, abdominal pain, headache, myalgia, and low-grade fever. Dehydration is the most common complication. Illness tends to occur 24 to 48 hours following exposure and usually lasts one to three days. Norovirus shedding can occur up to 3 weeks after cessation of symptoms.¹

Norovirus is not a reportable disease listed under the *Health Protection and Promotion Act*. However, the Health Unit is notified when a gastrointestinal outbreak might be occurring in institutions, such as hospitals, long-term care facilities, retirement homes, and day nurseries.² The Health Unit works with these institutions to identify and manage enteric outbreaks in order to minimize the public health risk.³

In the case of an institutional norovirus outbreak, the 2010 Position Statement from the Ministry of Health and Long-Term Care (MOHLTC) recommends a period of exclusion of 48 hours following symptom resolution. This applies to symptomatic staff working at hospitals, long-term care facilities, retirement homes, food service establishments, and day nurseries, as well as children attending day nurseries. The same period of time is also required for isolation of those residing in institutions.

If no new cases are seen over a period of five days (one incubation period of two days plus one period of communicability of three days), the MOHLTC recommends declaring a norovirus outbreak to be over.

The Health Unit will follow the recommendations made in the MOHLTC position statement, which can be provided upon request.⁴



**Stop the spread.
Clean your hands.
Arrêtez la propagation.
Nettoyez-vous les mains.**

There is no vaccine for this infection.

Supportive treatment includes fluid and electrolyte replacement as required for dehydration.

Help prevent the spread of norovirus:

- 1 Wash hands thoroughly** — especially after using the toilet and after changing diapers. Hands should always be washed before and after handling food.
- 2 Do not handle food if you are ill.** People who are ill with norovirus-like symptoms should not handle food.
- 3 Do not visit hospitals or long-term care facilities if you are ill.** People who are ill with norovirus-like symptoms should not visit family and friends in hospitals or long-term care facilities.
- 4 Stay home if you are ill.** People who are ill should stay home for 48 hours following symptom resolution.
- 5 Prevent contamination.** Feces and material contaminated with feces must be carefully disposed of, and all contaminated surfaces must be disinfected.
- 6 Clean all surfaces.** All washrooms and all hand contact surfaces should be cleaned and sanitized with a solution of 1 part bleach to 9 parts water (that is, 1 oz. bleach in 9 oz. water) once daily or as needed.



Rabies post-exposure prophylaxis

Holly Browne, Environmental Health

Did you know that animal bites, or “any animal contact that may result in rabies”, is a mandatory reporting requirement for physicians under the *Health Protection and Promotion Act*?⁵

Physicians must notify the Medical Officer of Health as soon as possible, including on weekends.

After receiving a report, a staff member from the Health Unit performs a risk assessment to be used to guide the physician on the decision to provide rabies post-exposure prophylaxis (rPEP).

The risk assessment includes:

1. the type of exposure (i.e. bite, non-bite, bat)
2. the anatomical location of the exposure
3. the risk of rabies in the animal species involved
4. the presence of rabies in the area where the incident occurred
5. the behaviour and health status of the implicated animal
6. exposure circumstances (i.e. provoked or unprovoked exposure)
7. rabies immunization status of the animal
8. rabies immunization status of the human⁶

rPEP is not typically required when the offending animal is alive and can be observed for a 10-day period. For wounds involving the head and neck region, rPEP should not be delayed. If the decision to provide post-exposure prophylaxis is made, “rPEP should be started as soon as possible after exposure and should be offered to exposed individuals regardless of the elapsed time interval”.⁶



Regardless of whether or not rPEP is indicated, mandatory reporting is still required.

rPEP consists of both vaccination and the rabies immune globulin (RabIG). “The recommended dose of RabIG is 20 IU/kg of body weight for all age groups, including children, given on the first day of initiation of therapy (day 0)”.⁷

The latest edition of the *Canadian Immunization Guide* includes changes to the vaccination schedule, which can be found at <http://www.phac-aspc.gc.ca/publicat/cig-gci/p04-rabi-rage-eng.php>.

Adhering to the schedule ensure that treatment is effective.

Resources

Two posters (pages 6-7) are available to support health care providers. Both are available for pick-up at the Health Unit or by calling 705.522.9200, ext. 464.

- “*It’s the law*” (poster): includes the contact numbers needed to report incidents 24 hours per day, 7 days a week.
- “*Rabies Post-Exposure Prophylaxis Vaccine Administration*” (poster): if rPEP is indicated, this resource provides information based on the Canadian Immunization Guide.

The most commonly reported errors in administration of rabies post-exposure prophylaxis are:

- Vaccination not administered according to the schedule provided in the *Canadian Immunization Guide*
- Failure to administer the entire dose of rabies immune globulin on day zero



It's the law!

Notification must be made by:

- Faxing an Animal Incident Reporting Form to 705.677.9607 (form available at: <https://www.sdhu.com/professionals/health-professionals/reporting/rabies-health-professionals>), AND
- Reporting by phone by calling 705.522.9200, ext. 464, during office hours, or calling 705.688.4366 after-hours.



RABIES POST-EXPOSURE PROPHYLAXIS VACCINE ADMINISTRATION

for persons previously NOT immunized with rabies vaccine

If indicated, initiate post-exposure prophylaxis as soon as possible but administer regardless of the time interval since exposure.

DAY 0

Dose: 20 IU/kg body weight (dose should not be exceeded)

RABIES IMMUNE GLOBULIN (RABIG)

If possible, the full dose of **RabIg** should be thoroughly infiltrated into the wound and surrounding area. If not anatomically feasible, any remaining volume of **RabIg** should be injected, using a separate needle and syringe, intramuscularly (IM) at a site distant from the site of vaccine administration.

Dose: 1.0 mL Human Diploid Cell Vaccine (HDCV) or Purified Chick Embryo Cell Vaccine (PCECV)

RABIES VACCINE

Administer IM into deltoid muscle for older children and adults, and into the vastus lateralis muscle (anterolateral thigh) in infants less than 12 months of age but never in the gluteal region.

The rabies vaccine and RabIg should be given at different anatomical sites, using separate needles and syringes.

DAY 3

Dose: 1.0 mL HDCV or PCECV

RABIES VACCINE

Administer IM into deltoid muscle for older children and adults, and into the vastus lateralis muscle (anterolateral thigh) in infants less than 12 months of age but never in the gluteal region.

DAY 7

Dose: 1.0 mL HDCV or PCECV

RABIES VACCINE

Administer IM into deltoid muscle for older children and adults, and into the vastus lateralis muscle (anterolateral thigh) in infants less than 12 months of age but never in the gluteal region.

DAY 14

Dose: 1.0 mL HDCV or PCECV

RABIES VACCINE

Administer IM into deltoid muscle for older children and adults, and into the vastus lateralis muscle (anterolateral thigh) in infants less than 12 months of age but never in the gluteal region.

In those who **have not previously been immunized and are immunocompromised or are taking antimalarials**, a **fifth dose of 1.0 mL IM HDCV or PCECV** should be given on **day 28** followed by post-vaccination serology 7 to 14 days after completion of the series.

For additional information regarding rabies post-exposure prophylaxis, to request rabies post-exposure prophylaxis, or to report a potential rabies exposure, please contact the Sudbury & District Health Unit at 705.522.9200, ext. 464 or toll-free at 1.866.522.9200 from Monday to Friday (8:30 a.m. to 4:30 p.m.), or 705.688.4366 after regular business hours, weekends, and statutory holidays.

IT'S THE LAW!

“Any animal bite or other animal contact that may result in rabies in persons” must be reported to the Medical Officer of Health as soon as possible.

To report an animal bite or scratch to a human:

Complete an *Animal Incident Report*, available at sdhu.com and fax to the **Sudbury & District Health Unit**

and;

Report by phone to a public health inspector in the Environmental Health Division of the Sudbury & District Health Unit.



Monday to Friday (8:30 a.m. to 4:30 p.m.)

Ph: 705.522.9200, ext. 464

Toll-free: 1.866.522.9200

Fax: 705.677.9607

**After hours, including weekends
and statutory holidays: 705.688.4366**



Sudbury & District

Health Unit

Service de
santé publique

Influenza season

Clarifying confusion about influenza vaccine effectiveness

There have been recent changes in the recommendations for the live attenuated influenza vaccine (LAIV) FluMist® for children and adolescents in both Canada and the United States. Below, we outline what changed, why it changed, as well as the current National Advisory Committee on Immunization (NACI) recommendations regarding LAIV and the inactivated influenza vaccine (IIV) for children 6 months up to and including 17 years of age.

2016/17 NACI Recommendations

Children 6 months to 17 years should receive a quadrivalent influenza vaccine which is composed of two influenza A and two influenza B strains. Protection against the extra B strain in the quadrivalent vaccine compared to the trivalent vaccine is particularly important for children and adolescents, who are more likely to acquire influenza B than adults. Several quadrivalent vaccines are publicly funded in Ontario for eligible children without contraindications, depending on their age. Efficacy of available quadrivalent vaccines is considered equal with the decision of vaccine product choice resting primarily on the age/eligibility of the child and provider/patient preference.

Vaccines offered as part of the Ontario influenza publicly funded program include:

- IIV for children 6 months up to and including 17 years of age (Fluzone® Quadrivalent or Flu Laval Tetra®); OR
- LAIV for children 2 years up to and including 17 years of age, given by nasal spray (FluMist®)

Previously, NACI had preferentially recommended LAIV over IIV for children 2 to 6 years of age and suggested it may also be more effective for children in older age groups, with the exact age when it is no longer more effective being unknown. This preferential recommendation was made based on three randomized controlled trials.

However, recent studies have shown LAIV and IIV to have similar vaccine effectiveness against influenza A(H3N2) and B, and in some studies but not others, IIV performs somewhat better than LAIV against influenza A(H1N1)pdm09. Based on this information, the National Advisory Committee on Immunization (NACI) removed the preferential recommendation for LAIV over IIV and recommends any quadrivalent product for the 2016/17 season.

Further details about these studies is available on the Public Health Ontario website http://www.publichealthontario.ca/en/eRepository/LAIV_IIV_Factsheet_for_HCP_2016.pdf? (Public Health Ontario).



Antiviral medications: recommended recipients

Antiviral medications are an important adjunct to influenza vaccination in the prevention and control of influenza, particularly among persons at high risk of influenza complicationsⁱ, for those with severe or complicated illness, and among residents and unimmunized staffⁱⁱ in institutional settings during influenza outbreaks.

In Canada, two antiviral medications are recommended for use: oseltamivir (Tamiflu[®]) and zanamivir (Relenza[®]). Both are active against influenza A and B viruses. For treatment purposes, antivirals should be taken as soon as possible, ideally within 48 hours of symptom onset. And, although not routinely indicated, when used for chemoprophylaxis, antiviral medications are approximately 70 to 90% effective in preventing influenza.

Recommended recipients

Influenza antiviral medications are recommended for:

- Treatment of moderate, progressive, severe, or complicated influenza, such as individuals who are hospitalized with influenza-like illness.
- Treatment of those at high risk for complications of influenza, such as children less than 5 years of age, adults 65 years of age and over, and those with underlying medical conditionsⁱ.
- Treatment and prevention in influenza outbreaks in institutional settings.
- Indications, dosage and duration of therapy (for those without contraindications)

Oseltamivir (oral medication)

- Authorized for use in persons 1 year of age and older; may be used in younger persons on a case-by-case basis.
- Children \geq 1 year of age: weight-based-dosing when \leq 15 kg to 40 kg.
- Older children and adults ($>$ 40 kg):
- Treatment: 75 mg twice daily x 5 days
- Chemoprophylaxis: 75 mg once daily x 10 days (or in institutional outbreaks until the outbreak is declared over)
- Dosing adjustments are required for patients with known renal impairments.

Zanamivir (dry powder for inhalation)

- Authorized for use in persons 7 years of age and older.
- Persons \geq 7 years of age:
- Treatment: (two 5 mg inhalations) twice daily x 5 days
- Chemoprophylaxis: (two 5 mg inhalations) once daily x 10 days (or in institutional outbreaks until the outbreak is declared over)

Full treatment and chemoprophylaxis regimen information is available from the Association of Medical Microbiology and Infectious Disease Canada Guideline at: <https://www.ammi.ca/Content/Guidelines/Flu%20%28published%20version%29%20FINAL.pdf>.

ⁱ List of conditions that increase the risk for influenza complications: chronic pulmonary disease, including asthma; cardiovascular disease (excluding hypertension); malignancy; chronic renal insufficiency; diabetes mellitus and other metabolic disease; anemia and hemoglobinopathies, such as sickle cell disease; immunosuppression due to disease or medication; neurologic and neurodevelopmental disorders; children younger than 5 years of age; individuals 65 years of age or older; people of any age who live in nursing homes or other chronic care facilities; pregnant women and up to 4 weeks post-partum; individuals 3 z-scores above the mean for age and gender; Indigenous peoples.

ⁱⁱ Or for all staff working in institutions during an influenza outbreak when the circulating virus and vaccine are mismatched.

Promoting healthy eating behaviours in children

Paula Ross and Melanie Martin, Health Promotion

It's not just about what they eat

For children, good nutrition is essential for proper growth, development, energy, immunity, and cognitive functioning.⁸ Many of our adult eating behaviours and habits are developed in childhood. Health care professionals who work with children and families have a role to play in promoting healthy eating. The promotion of healthy eating must consider nutritious choices, the eating environment and the ability to recognize and respect internal cues.

Consider focusing your assessments, teaching, or goal-setting on one of the following key areas related to healthy eating that are known to influence the health and weight of children.

Eating environment

- **Regular breakfast consumption.** Encourage families to eat breakfast regularly as this has been consistently shown to protect against overweight and obesity in children and youth.⁹
- **Eating meals as a family.** Encourage more frequent family meals. Evidence shows that meals eaten together as a family without distractions, such as TV and handheld screens, are associated with improved nutrition and obesity-related behaviours.^{9,10}

Recognize and respect internal cues

- **Trusting hunger cues.** Restricting food intake, overfeeding, and pressuring children to eat have been associated with weight-related issues.⁹ Recommend families follow the Division of Responsibility model (Ellyn Satter Institute, <http://ellynsatterinstitute.org/dor/divisionofresponsibilityinfeeding.php>). In this model, caregivers are responsible for **what food** is offered, and **where** and **when** it is offered, and the child is responsible for **how much to eat** and **whether they eat**. This helps children learn to enjoy food and become competent eaters.

Nutritious choices

- **Limiting sugar-sweetened beverage consumption.** Recommend that families increase their water consumption and limit their intake of sugary drinks like pop, flavoured milks, and 100% fruit juice. Evidence shows that a large portion of sugar intake comes from added sugar and that children get almost half of their daily sugar intake from beverages.¹¹
- **Increasing vegetable and fruit consumption.** Vegetable and fruit consumption has been shown to be a good marker of overall diet quality.⁹ Children and youth should consume 4 to 8 servings of vegetables and fruit per day, depending on their age and gender.¹²
- **Limiting consumption of fast foods and convenience foods.** Research has shown that over 60% of the foods purchased in Canada are ultra-processed (e.g. ready-to-eat meals, granola bars, chips, and restaurant meals).¹³ Encourage families to limit these foods as much as possible as they are often high in sugar, salt and fat, and are very calorie dense and provide little nutrition.¹¹

When addressing feeding and nutrition, probe to learn more about potential barriers to healthy eating.

Examples can include inadequate income, lack of skills needed to prepare healthy meals, limited access to a kitchen or equipment, limited access to stores with nutritious and affordable options, religious diets, traditions or beliefs centred on food.

For information on social, community, health, and government services in northern Ontario, call 2-1-1 or visit www.211north.ca.

Discussions about healthy behaviours need to take place with all patients, regardless of weight status

The focus should always be on improving the health and well-being of all children and their families. Individuals of all ages, shapes, and sizes can benefit from the many health effects of eating well, living actively, getting adequate sleep and having positive self-esteem.

For more information for parents to help their child achieve a healthy weight, please direct them to the Health Unit's website at www.sdhu.com/health-topics-programs/weight/reach-best-tips-parents.



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Norovirus (page 2)

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Sudbury & District Health Unit

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Please send your comments, questions, or suggestions to sdhu@sdhu.com or call 705.522.9200.



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