2018 West Nile Virus Update

West Nile Virus (WNV) is a mosquito-borne disease, endemic in Peel region since 2001.

In 2017, there were 154 human WNV cases across Ontario, a significant increase compared to 2016 when there were 50 cases. In 2017, there were nine cases in Peel region.

As of July 26, 2018 there have been two human WNV cases in Ontario (one travel-related) but no human WNV cases in Peel region. In Ontario, 12 adult mosquito traps tested positive for WNV, with one in Peel. More positive mosquito pools are expected. The number of WNV human cases and positive mosquito pools varies year-to-year, with weather and precipitation playing a significant role.

Clinical Presentation
The incubation period for WNV ranges from 2 to 15 days. Most WNV cases are asymptomatic.

Approximately 20% of infected persons develop WNV fever (non-neurological syndrome). Symptoms include:
- Fever, headache and body aches
- Skin rash
- Swollen lymph nodes
- Nausea and vomiting
- Eye pain or photophobia

Approximately 1% of WNV infected people will develop neuroinvasive disease, including:
- Meningitis
- Encephalitis
- Acute flaccid paralysis

Persons over 50 years of age and immunocompromised persons have the highest risk of severe disease.

Diagnostic Testing
Submit a serum or CSF sample. All CSF samples must be submitted together with a serum sample.

Use a General Public Health Ontario Laboratory (PHOL) requisition form. Indicate that the test is for “West Nile Virus” and include:
- Symptoms and onset date
- Mosquito bite history
- Travel history
- History of Japanese encephalitis virus vaccination or yellow fever vaccination

Interpreting Test Results
A reactive IgM antibody response is specific for recent WNV infection and is rarely due to cross-reaction with other flaviviruses (e.g. dengue, St. Louis encephalitis, Japanese encephalitis, Powassan, or yellow fever virus). A reactive IgG antibody response may be due to past infection with WNV or cross-reaction from other flaviviruses.
Reporting
As a disease of public health significance, human cases of WNV are to be reported to the Medical Officer of Health. Report all suspect or confirmed cases of WNV to Region of Peel - Public Health at (905) 799-7700.

Additional Resources
PHO Labstract: West Nile Virus Update

PHO Laboratory Services: West Nile Virus
https://www.publichealthontario.ca/en/ServicesAndTools/LaboratoryServices/Pages/West_Nile_Virus_Serology.aspx

Reminder: Tick Submissions - Additional Drop-Off Locations
Any tick found on a human can be dropped off for identification and testing, Monday to Friday, 8:30 am to 4:30 pm at the following locations:
- Service Peel, 7120 Hurontario Street, Mississauga
- Town of Caledon Administrative Offices, 6311 Old Church Road, Caledon
- Service Peel, 10 Peel Centre Drive, Brampton

Reminder: Complete Lyme Disease Clinical Assessment Questionnaire
Lyme disease (LD) remains rare in Peel region; however, various Ontario communities are considered LD risk areas. Risk areas are adjusted based on the most recent tick and human case surveillance data. The risk areas for LD are evolving in Ontario.

Reporting
As a disease of public health significance, human cases of LD are to be reported to the Medical Officer of Health. Report all suspect or confirmed cases of LD to Region of Peel - Public Health at (905) 799-7700.

Public Health Inspectors (PHI) follow up on human LD cases with residents and physicians. PHIs will clarify any physician questions related to the diagnostic algorithm and provide physicians the LD Clinical Assessment Questionnaire, which assists the PHI in determining if the case definition has been met. If you are contacted by a PHI, please complete and return the Questionnaire.