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Key Messages:

- West Nile virus is endemic in Peel region.
- Mosquitos collected in Peel began testing positive for West Nile virus beginning in mid-July.
- Clinicians should consider West Nile virus neuroinvasive disease in patients with fever and acute onset of encephalitis, viral meningitis, acute flaccid paralysis, tremor, myoclonus, or Parkinsonian-like condition.
- West Nile virus is a reportable disease. Report all suspected or confirmed cases to Peel Public Health.

REMINDERS: West Nile Virus clinical presentation, diagnostic testing, reporting, and preventative measures

Clinical presentation:

- Most WNV infected persons are asymptomatic with approximately 20% of cases developing a non-neurological syndrome that presents with mild flu-like illness. Symptoms include:
 - Fever, headache, and body aches
 - Fatigue
 - Skin rash on the stomach, chest or back
 - Swollen lymph nodes
 - Nausea and vomiting
 - Eye pain or photophobia
- Less than 1% of WNV infected persons will develop neuro-invasive disease, including:
 - Meningitis
 - Encephalitis
 - Flaccid Paralysis
- Persons over 50 and immunocompromised individuals are at greatest risk of severe disease.
- The incubation period for WNV is typically 2-6 days but ranges from 2 to 15 days, and up to 21 days in immunocompromised people.

Diagnostic testing:

- For **WNV neuroinvasive disease**, CSF Serology is the preferred method of testing. If submitting CSF for serology, a paired serum specimen must also be submitted. Consider WNV neuroinvasive disease for patients with fever and acute onset of encephalitis, viral meningitis, acute flaccid paralysis, tremor, myoclonus, or Parkinsonian-like condition.

UPDATE: West Nile virus risk in Peel

- West Nile virus (WNV) is a mosquito-borne disease, endemic in Peel region since 2001.
- The number of human WNV cases and positive mosquitos varies year-to-year, with temperature and precipitation playing a significant role.
- Peel Public Health monitors WNV activity at 33 mosquito traps collected and tested weekly from mid-June to September.
- In 2023, mosquitoes collected in Peel began to test positive for the WNV beginning in mid-July.
- As of August 25, 2023, Peel Public Health has not confirmed any human cases of WNV; however, three human cases have been reported in by other Health Units across the Province including Toronto Public Health.
- Human cases of WNV typically occur from late July through to the end of September.
- For current WNV surveillance data and activity in the Province please visit:
<https://www.publichealthontario.ca/en/data-and-analysis/infectious-disease/west-nile-virus>

Diagnostic testing (continued):

- For **WNV non-neurological syndrome**, acute and convalescent clotted blood or serum specimens for serology should be collected 2-3 weeks apart. Consider ordering WNV serology for patients who have at least two symptoms with no apparent alternative cause and a recent exposure to mosquitoes.
- Use a Public Health Ontario Laboratory (PHOL) General Test Requisition form and indicate “West Nile Virus - Serology” as well as onset date, symptoms, date of any significant mosquito exposures and travel history, and whether the test is for acute or convalescent serology testing. For more information refer to PHOL’s test information index, at:
<https://www.publichealthontario.ca/en/Laboratory-Services/Test-Information-Index/West-Nile-Virus-Serology>
- Consultation with PHOL or Peel Public Health may be necessary to interpret results of WNV serology or PCR. For more information on interpreting WNV serology please refer to PHOL’s lababstract:
<https://www.publichealthontario.ca/-/media/documents/lab/lab-sd-011-west-nile-virus-interpreting-serology-results.pdf>

<https://canada.ca/en/health-canada/services/about-pesticides/insect-repellents.html>

- Take extra care during peak mosquito biting time (dusk and dawn) by using mosquito repellent and wearing protective clothing.
- Remove standing water from your property, where mosquitoes can breed.
- Ensure your home has tight-fitting screens on windows and doors.

Reporting:

- WNV disease is a reportable disease. Report all suspect or confirmed cases by faxing Peel Public Health at 289-801-0257.

Preventive Measures:

- Remind patients to take effective preventive measures, including:
 - Wearing light-coloured, long-sleeved shirts and pants when outdoors.
 - Applying a Health Canada approved insect repellent effective against mosquitoes, such as those that contain DEET or icardin. Refer to Health Canada’s Insect Repellent webpage for more information: