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2008 West Nile Virus Update

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FROM:

David L. Mowat, MBChB MPH FRCPC
Medical Officer of Health

Introduction

West Nile virus (WNV) was first detected in Peel in 2001. It has reappeared in Peel every year since then. WNV is a reportable disease.

Physicians should report WNV human cases directly to Peel Public Health by calling 905-799-7700.

Summary of WNV in Peel for 2007

- One Peel resident had laboratory evidence of recent WNV infection
- 2 birds tested positive for WNV
- 3 WNV positive mosquito batches were detected
- Ontario had a total of 15 confirmed WNV human cases
- A record number of human cases (2,353) were reported across Canada. These cases were concentrated primarily in Manitoba and Saskatchewan.

WNV in Peel in 2008 To Date

- **To date, one positive batch of mosquitoes has been detected.** The positive mosquito batch was found in Brampton in the vicinity of Hurontario Street and Highway 407.
- The larviciding program runs from May 5 - September 30, 2008. Larviciding involves applying environmentally friendly products to reduce mosquito larvae living in stagnant water. The products are applied to municipal catch basins and selected sites on public property.

When to Consider WNV in the Diagnosis Differential

In Canada, the period of greatest risk for human WNV acquisition is from mid-July to the end of September depending on the weather.

During WNV season, WNV should be considered in all cases of:

- Encephalitis
- Viral meningitis
- Acute flaccid paralysis (e.g. Guillain-Barré – like Syndrome)
- Meningoencephalitis,
- Movement disorders (e.g. tremor, myoclonus)
- Parkinsonism
- Other neurological syndromes,

Where there is a history of exposure in an area where WNV activity is occurring or history of exposure to an alternative mode of transmission such as organ donation.

Symptoms of WNV may include:

- Fever,
- myalgia,
- arthralgia,
- headache,
- fatigue,
- lymphadenopathy and
- maculopapular rash.

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The incubation period for WNV ranges from 3 to 14 days.

The most significant risk factor for developing severe neurological disease is advanced age.

Diagnostic Testing of Acute Cases

- Serologic testing of clotted or serum blood remains the mainstay of diagnosis for WNV.
- Blood should be collected in a red cap tube (5-10ml).
- **The requisition for all initial WNV blood tests should indicate: “Testing is for suspect WNV”.** Clinical information, including symptoms and travel history, should be documented on the requisition.
- Negative or equivocal results from samples taken <10 days after symptom onset should be repeated 10 days after the first sample was taken to confirm the diagnosis.
- CSF may also be tested for WNV through PCR. While this test is less sensitive than serologic testing (PCR testing is positive in only 50% of cases), it may be valuable in the immuno-compromised who may not mount a full antibody response.
- For PCR processing, contact the Provincial Lab (416-235-6071).

Diagnostic Testing for Immunity

A Physician may want to test for immunity (IgG) to WNV in certain patients, such as outdoor workers who experienced a WNV-like illness last year.

The serology requisition needs to clearly state: “this is a test for immunity to WNV” to differentiate from acute testing.

For more information on West Nile Virus, contact Peel Health at 905-799-7700 or visit <http://www.peel-bugbite.ca>

Reference:
MOHLTC West Nile Virus Laboratory Diagnostic Guidelines
➤ http://www.health.gov.on.ca/english/providers/program/pubhealth/westnile/wnv_03/wnv_phy_pack_guidelines.html