

Local West Nile Virus Activity

Attention: Physicians, Emergency Departments, Infection Control Practitioners, Walk-In Clinics/Urgent Care Clinics, Nurse Practitioners

Date: August 30, 2017

To better determine the risk of West Nile Virus (WNV) illnesses within Simcoe Muskoka District Health Unit (SMDHU) and provincially, human case surveillance data and adult mosquito trapping programs work to identify the presence of WNV. **To date, there have been two probable human WNV cases within SMDHU; one with likely acquisition in South Simcoe.** As of August 22, 2017, fourteen probable and confirmed human cases were reported in Ontario. This is still lower compared to the 2002 (60 cases provincially) and 2012 (150 cases provincially).

So far in 2017, mosquitos from traps located in the towns of Collingwood and Bradford West Gwillimbury have tested positive for WNV within SMDHU. These are below provincial rates.

SMDHU will continue to monitor WNV surveillance data and will notify community partners if trends demonstrate a notable increase in activity. It is important to note that 80% of infected cases are asymptomatic.

West Nile Virus Illness Clinical Presentation:

- There are three clinical manifestations of WNV; asymptomatic, non-neurological and neurological.
- About 20% of infected persons develop the usually less severe symptom complex of WNV non-neurological syndrome. This presents with a mild flu-like illness with fever, headache and body aches, occasionally with a skin rash and swollen lymph nodes or other non-specific symptoms that last several days. Other symptoms may include nausea, vomiting, eye pain or photophobia.
- WNV neurological symptoms can present as an encephalitis illness, acute flaccid paralysis or Parkinson's disease. Less than 1% of infected people will develop neurological symptoms.

Diagnosis and Laboratory Testing:

Diagnosis is based on clinical presentation and serological test results.

- Serologic testing of clotted or serum blood is the preferred method of testing for WNV. West Nile virus IgG and IgM serology are performed using ELISA.
 - **A reactive IgM antibody response using ELISA is specific for WNV** and is rarely due to cross-reaction with other flaviviruses
 - On the requisition please include mosquito bite history, symptoms, onset date, relevant travel history, history of Japanese encephalitis vaccination or yellow fever vaccination.
- Specimens early in the season may also undergo a plaque reduction neutralization testing (PRNT) which is highly specific for WNV.
- Indeterminate results for any of the WNV assays may be due to the presence of low-level antibodies or non-specific reactions. More information about testing and interpretation is available at:
http://www.publichealthontario.ca/en/eRepository/LAB_SD_011_West_Nile_virus_interpreting_serology_results.pdf

For more information on vector borne diseases of interest in Simcoe Muskoka please visit the Health Professionals Portal at www.smdhu.org/HPPortal

Note: SMDHU has launched its **new interactive Reportable Disease Toolkit** which provides easier access to disease specific testing, treatment recommendations and patient and clinician resources. Available at: <http://www.smdhu.org/reportablediseaselist>