

OTHER ANIMAL SURVEILLANCE

Wild birds are usually the most predominant host animal for WNV; however, the virus can also infect amphibians, domestic poultry, domestic mammals (especially horses), and apes and monkeys.⁹

In 2002, there were no reports of WNV infection in other animals such as horses, dogs or cats in the Region of Peel. Other municipalities in Ontario reported WNV activity among horses, including 41 probable or confirmed in Windsor-Essex and 12 in the Niagara region. A total of 107 horses were either presumptive (6) or confirmed (101) as having WNV in Ontario in 2002.³⁵

In North America in 2002, there were over 14,000 horses reported as having clinical illness due to WNV.² A vaccine manufactured in the United States has been available in Canada since September 2001 to protect horses from disease caused by WNV. Initially allowed for use under an “emergency use permit system”, the vaccine was licensed and registered for use in Canada as of February 2003.³⁶ Numbers of infected horses would be expected to decline in the future with increased use of this vaccine.



CONCLUSION

In Peel in 2002, the first indication of WNV activity was a WNV-infected dead bird found in Mississauga on May 19th. The first human illness onset on August 4th occurred during a spike in reported sightings of dead crows that started July 21st and continued until August 10th. The first WNV-positive pool for adult mosquitoes was from a sample collected on June 20.

Analysis of the Region of Peel's complete surveillance results shows that these monitoring systems have the potential to predict human risk from WNV in the future. Detailed analysis of information on Peel mosquitoes shows that *Culex* mosquitoes play a key role in local transmission of WNV as reported for other similar areas in the North American literature. In Peel, *Culex* mosquitoes were numerous and had high rates of transmission. It is appropriate that the Peel WNV Prevention and Control Plan focus control efforts on *Culex* mosquitoes.

While rates of human illness from WNV increase with increasing age, a large number of Peel residents under 50 years of age were diagnosed with disease from WNV. Use of this type of information is crucial to refining Peel's WNV public education program.

This report has provided and demonstrated the importance of detailed information from WNV surveillance in Peel. It is one of three essential pillars in a full WNV prevention and control program along with public education and mosquito reduction.

