

Prince Edward Island Strategy
on
West Nile Virus

Prince Edward Island Department of
Health and Social Services

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PRINCE EDWARD ISLAND STRATEGY on WEST NILE VIRUS

Background

West Nile virus (WNV) has been circulating in Africa and parts of Asia and Europe for decades. In 1999, the virus was first detected in New York City when an outbreak occurred.

The virus is carried by birds and can be spread to many mammals and humans through the bites of mosquitoes that have fed on an infected bird. Crows, ravens, and blue jays are the species of birds most likely to die from WNV. Horses are the mammals most likely to die from infection with the virus.

Humans can become ill after being infected. However, most humans either do not have any symptoms after getting the virus or develop flu symptoms and completely recover. Some humans do become seriously ill with meningitis encephalitis or muscle weakness, which can require a respirator and can be fatal. While those over 65 years of age and those with decreased immunity have been the groups most likely to become seriously ill with WNV, there have been some healthy younger persons who have become very ill with West Nile fever.

It is true that the virus now present in North America has caused more serious illness than that in the Africa, Asia, and Europe. In addition, the WNV in North America has been found to be spread through blood transfusions, organ donations, and from pregnant mother to her infant before birth.

Surveillance for WNV in the Maritime Provinces

Surveillance of dead birds for WNV has been conducted in the Maritime provinces for the past 3 years. This testing has resulted in no birds being found with WNV in either N.B. or P.E.I. during 2000, 2001, and 2002. Four birds positive for WNV were found in N.S. in 2002.

No human illness due to WNV has ever been diagnosed in the three Maritime provinces.

Mosquito Surveillance in P.E.I.

A study of mosquitoes in P.E.I. was conducted in 2000 by Dr. Donna Giberson at the University of Prince Edward Island. This study provided valuable information regarding the species and population of mosquitoes on P.E.I.

Strategy to Control West Nile Virus on P.E.I.

It is likely that the WNV will reach P.E.I. in 2003 in birds. It may be impossible to completely prevent the possibility of a human getting the virus because of the extent of the mosquito population in the province. However, of 34 species of mosquito on P.E.I., only three are in the group that is effective at passing on the virus. This is because the virus can't survive in most mosquitoes.

Culex species, the usual carriers of West Nile virus, are present, but not common, on P.E.I. Although the vast majority of mosquitoes on PEI are nuisance mosquitoes, and are not a concern for WNV, steps may be taken to reduce the chances of being bitten by a mosquito.

The following are the initiatives being undertaken this year in P.E.I.:

- 1) Educational materials are available entitled:
 - a) *Information about West Nile virus (brochure)*
 - b) *Common Questions about West Nile virus*
 - c) *What you Need to Know about Preventing West Nile virus*
 - d) *Important Information About Insect Repellents*

This information can be picked up at Access PEI sites and regional health offices, or by calling 1-800-368-4683. The information is also available on the website www.gov.pe.ca/westnile

- 2) Dead Bird Surveillance

Again this year residents of P.E.I. will be asked to submit dead crows, blue jays, and ravens for testing by calling 368-4683 or toll free 1-866-368-4683.

- 3) Human Surveillance

West Nile virus is a reportable disease in Prince Edward Island. Physicians, hospitals, and laboratories will be asked to report any cases of WNV illness to the Department of Health and Social Services.

- 4) Human Testing

A screening test for West Nile virus will be available in the Maritime provinces later this spring.

5) Mosquito Survey

The Department of Health and Social Services, in conjunction with the Department of Fisheries, Aquaculture and Environment, has hired a mosquito technician to conduct a mosquito survey of adult mosquitoes in seven sampling sites across P.E.I. this summer, Alberton, O'Leary, Summerside, Cavendish, Charlottetown, Montague and Souris. The survey will also include larvae sampling with identification of the species and relative numbers of mosquitoes found. This will provide information regarding the patterns of mosquito populations across the province.

6) Mosquito Control

The Department of Health and Social Services and other government departments will be constantly reevaluated the situation with regards to West Nile virus control. Larviciding (eliminating mosquitoes in the larval stage) or adulticiding (spraying of mosquitoes in the adult stage) are means of reducing populations of mosquitoes. However, these methods of control will need to be evaluated based upon the knowledge obtained about the mosquitoes in the province and what measures are considered useful and efficient as a means of control.

7) Public Education

In addition to making public education materials available, the Department of Health and Social Services will be encouraging Islanders, through advertising and other measures, to eliminate mosquito breeding grounds on their property.

Culex mosquitoes multiply in stagnant water in sources such as old tires, bird baths, cans, clogged gutters, and any other area where water can collect and remain for four days or more. Prince Edward Island residents will be encouraged to eliminate these sources of standing water near their homes and cottages.

Culex mosquitoes can develop from egg to adult in as little as four days in stagnant water in very hot weather. It is important to empty containers of stagnant water every four days.

Conclusion

It is likely that West Nile virus will remain active in North America for some time in the future. Anyone who is exposed to mosquitoes in an area where WNV has been detected in birds, mosquitoes or other animals, is at some degree of risk for infection. Although the chances of being bitten by infected mosquitoes are small, it is important the Department of Health and Social Services provides Islanders with the best information possible so people can take steps to avoid or at least minimize exposure to mosquitoes, if WNV activity is documented.