



Immediately notifiable disease (IND) - *Factsheet*

West Nile Fever (West Nile Virus)



Epidemiology:

Etiology: West Nile Virus (*Flaviviridae*)

Agent type: Virus

Mode of Transmission: Vector transmitted disease

Susceptible species and reservoirs:

Reservoirs/Natural host: Avian (mostly Passeriformes)
 Vector: Mosquitoes (*Culex*). Hippoboscid flies, ticks and lice (*Philopterus* spp.) may have a minor role.
 Dead-end hosts: Most frequent hosts: Equine and Human
 Other hosts: Other mammals, some reptiles and amphibians

Descriptive information		Source
OIE-listed	Yes	(1)
Zoonotic (Public Health impact)	Yes; Asymptomatic 80%, Flu-like syndrome 20%; neurological <1% (fatal in 4-14% of neurological cases). No vaccine for human available	(2-5)
Global distribution	Europe, Africa, Asia, Australia, Americas	(5)
Animal occurrence in Canada and USA	Canada : Endemic seasonal disease; IND (immediately notifiable disease) cases reported by year in domestic horses: 123 (2018), 54 (2017), 46 (2016), 19 (2015). Cases have been reported in alpaca, domestic avian, wildlife animals and a few other mammals. USA : Endemic seasonal disease in USA.	(6, 7)
Clinical signs*	Equine: Clinical signs must include ataxia (including stumbling, staggering, wobbly gait, or incoordination) or at least two of the following: circling, hind limb weakness, inability to stand, multiple limb paralysis, muscle fasciculation, proprioceptive deficits, blindness, lip droop/paralysis, teeth grinding, fever, acute death.	(5, 8)
Animal Health impact	Equine: Neurological disease with up to 30% mortality, 10-20% recovered with residual defects Poultry and other species may be affected clinically	(3, 9)



Criteria for reporting a case of immediately notifiable disease:

Compatible clinical signs* plus one or more of the following:

- isolation of West Nile virus from tissues;
- an associated 4-fold or greater change in IgG ELISA testing or sero neutralization (SN) test antibody titre to WNV in appropriately-timed, paired sera;
- detection of IgM antibody to WNV by ELISA testing in serum or cerebrospinal fluid (CSF) in animals that are not known to have been vaccinated in the preceding 45 days;
- a positive polymerase chain reaction (PCR) to WNV genomic sequences in tissues and appropriate histological changes;
- a positive immuno-histochemistry (IHC) for WNV antigen in tissue and appropriate histological changes.(8)

References

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