Wild Tiger Health Centre Information Sheet

Disease threat: West Nile virus - WNV

Hazard description: West Nile virus is a flavivirus, which can infect a wide range of vertebrate species (Erdelyi 2012). Most flavivirus species, of which there are more than 50, are human pathogens, causing fever, encephalitis and haemorrhagic fever. WNV was first isolated in Uganda from a human febrile patient (Erdelyi 2012).

Host species: Birds are the principal hosts, with viral transmission by mosquitos. Horses are the most clinically affected of the mammalian species (Erdelyi 2012). Reported infections in domestic cats have been largely subclinical (Egberink et al. 2015). Wild felid susceptibility to disease is unknown, but assumed to be low, based on the absence of disease reports.

Pathogenesis: Causes a range of symptoms in most mammals, from a mild transient flu-like illness to severe neurological signs (Erdelyi 2012).

Diagnosis: RT-PCR on blood (if viraemic) or pharyngeal/cloacal swabs of birds, or tissues post-mortem.

Vaccination: None. Vaccines available for horses.

Free-ranging tiger occurrence: No reports found.

Distribution: Wide geographic distribution since first detected in 1937. Assume likely to be present in all tiger range states.

Assumptions: Low susceptibility of wild felids.

Limitations: Data deficient.