

# Murray Valley Encephalitis Virus (MVEV) and West Nile virus/Kunjin (WNV/KUN)

13 March 2020

- Sentinel chickens located in various parts of the state are regularly tested throughout the mosquito season for MVEV and WNV/KUN. Chickens are a good indicator of mosquito borne disease risk to the community as they readily produce antibodies to MVEV and WNV/KUN.
- Blood samples collected from sentinel chickens located in Ramco (near Waikerie) on 28/02/2020 have tested positive for MVEV and WNV/KUN.
- MVEV and WNV/KUN infection is spread by mosquito bites. There is no person to person spread. There is no specific treatment for MVEV or WNV/KUN infection and no vaccine to prevent infection.

## Murray Valley Encephalitis Virus (MVEV)

- No human cases of MVEV infection have been notified in South Australia since 2011. MVEV is endemic in birds in northern Australia but illness in humans is rare.
- Many people infected with MVEV are asymptomatic or have mild symptoms such as fever, headache, nausea and vomiting. About one in 1000 people develop meningitis or encephalitis and symptoms may include: increasing confusion, headaches, neck stiffness, tremors, drowsiness and seizures. In infants and young children meningitis or encephalitis may present as irritability or floppiness. About 20% of persons who develop severe MVEV infection will die. Approximately 40% of those who survive will have permanent neurological damage. Others still may take several months to recover.

## West Nile Virus/Kunjin

- No human cases of WNV/KUN infection have been notified in South Australia for more than 20 years, though it occurs slightly more commonly in northern Australia. As it is so rare there is limited information on the clinical pattern of the disease. While many cases of WNV/KUN infection in humans are probably asymptomatic, symptoms similar to Ross River virus infection, such as fever, headache, rash, arthralgia, myalgia, fatigue and lymphadenopathy can occur. Symptoms usually last a few weeks or months, but can last longer.
- In rare cases WNV/KUN infection can cause more severe symptoms and present as encephalitis with fever, drowsiness, headache, neck stiffness, nausea and dizziness, which can progress to convulsions, coma, permanent brain damage and death. In young children fever may be the only early sign before the development of neurological signs and symptoms.

## Medical practitioners are advised to:

- **Encourage** prevention of mosquito bites through measures such as:
  - Avoiding exposure outdoors when mosquitoes are active.
  - Covering up with long, loose fitting clothing of sufficient thickness to prevent mosquitoes biting through the fabric.
  - Using an insect repellent containing DEET or Picaradin on exposed skin (but avoid use in babies and toddlers).
  - Using mosquito nets, mosquito-proof tents and screened houses.
- **Test** for MVEV and WNV/KUN infection **only** where there is history of exposure to mosquitoes, high clinical suspicion and compatible neurological symptoms and signs. Diagnosis is made by serology on blood or molecular detection of MVEV in CSF. Tests are done in interstate laboratories so results may take some time.
- **Notify** suspected and confirmed cases of MVEV and WNV/KUN to the Communicable Disease Control Branch on **1300 232 272**.

- See Fight the bite.

**Dr Louise Flood – Director, Communicable Disease Control Branch**

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