Government of **Western Australia**
Department of **Health, WA**
Communicable Disease Control Directorate

16 March 2023

ALERT FOR CLINICIANS – JAPANESE ENCEPHALITIS VIRUS IN WA

KEY POINTS

- **Prior Japanese encephalitis virus (JEV) activity has been detected in a remote area of the northern Kimberley. This is the first evidence of JEV activity in Western Australia.**
- **Consider Japanese encephalitis (JE) in patients presenting with signs of encephalitis.**
- **Notify any suspected or confirmed case of JE urgently to Public Health.**
- **People residing in high-risk areas in the Kimberley may be eligible for JEV vaccination.**

Background

- Prior JEV activity has been detected via the presence of antibodies in feral pigs in a remote area of the northern Kimberley, through retrospective testing of samples collected in October 2022.
- JEV is transmitted to humans and other animals (such as pigs and waterbirds) by infected mosquitoes. Most infections are asymptomatic, however, around 1 in 250 people will develop a severe infection, including encephalitis, and 20-30% of severe infections are fatal.
- Other flaviviruses, including Murray Valley encephalitis virus, are currently active in the Kimberley and Pilbara regions.
- Human cases of JE have been reported in New South Wales, Victoria, and South Australia this summer, and cases of MVE are occurring in the Northern Territory and Victoria.

Clinical presentation

- Initial symptoms are usually atypical, and include fever, anorexia and headache. Vomiting, nausea, diarrhoea, muscle aches and dizziness may also occur.
- More severe infections may cause neurological dysfunction with photophobia, lethargy, irritability, drowsiness, neck stiffness, confusion, ataxia, aphasia, intention tremor, convulsions, coma and death. Seizures are common in children. Long term neurological sequelae are common.

Testing and management

- Test for JEV and other flaviviruses in patients with symptoms of encephalitis, if they live in or have visited the Kimberley or Pilbara, or have travelled from other flavivirus-prone areas in Australia.
- Recommended testing for patients with encephalitis, especially with compatible MRI or CT findings:

Blood	CSF	Urine
Serum tube – 2mL from children, 8mL from adults for acute and convalescent (3-4 weeks post-onset) serology for flavivirus and JEV Whole blood EDTA sample for PCR	At least 1mL Flavivirus and JEV PCR Flavivirus and JEV serology	2-5mL in sterile urine jar Flavivirus and JEV PCR

- Consult Infectious Diseases and/or Clinical Microbiology regarding testing and management.

Vaccination and prevention

- Vaccination against JE is available for Kimberley residents in areas at highest risk and will be expanded as vaccine supply permits. See eligibility at https://www.healthywa.wa.gov.au/Articles/J_M/Japanese-encephalitis
- Advise on the importance of mosquito-borne disease prevention; avoid outdoor exposure especially at dawn and early evening, wear long, loose-fitting, light-coloured clothing when outdoors, apply effective personal repellent containing diethyltoluamide (DEET), picaridin or oil of lemon eucalyptus, use insect screens, mosquito nets and coils, remove water-holding containers from around the home.

Notification (urgent)

- Notify JE cases to the Communicable Disease Control Directorate (ph 9222 0255 or A/H 9328 0553).
- Further notification information: https://www.health.wa.gov.au/en/Articles/J_M/Japanese-encephalitis

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