



ALERT FOR CLINICIANS
UPDATE ON JAPANESE ENCEPHALITIS AND MURRAY VALLEY ENCEPHALITIS IN WA

KEY POINTS

- **Further Japanese encephalitis virus (JEV) activity has been detected in the Kimberley and Pilbara regions in sentinel chicken flocks from samples collected in February 2023.**
- **This is the first evidence of JEV activity in the Pilbara region.**
- **The first human case of Murray Valley encephalitis (MVE) for 2023 has been confirmed in a Kimberley resident.**
- **Consider JE and MVE in patients with encephalitis.**

Background

- JEV activity was identified in WA in March 2023 for the first time through JEV antibodies in feral pig samples collected in October 2022 from a remote area of the northern Kimberley.
- JEV seroconversion of chickens in the Kimberley (Kununurra and Wyndham) and Pilbara (Newman) from samples collected during February 2023 indicates there is ongoing JEV activity and a risk of transmission to humans.
- Other flaviviruses, including MVEV and Kunjin Virus, are currently circulating in the Kimberley and Pilbara regions.
- There have been no cases of Japanese encephalitis (JE) reported in people in WA to date.

Clinical presentation and testing

- Most people with a flavivirus infection (JE and MVE) will have asymptomatic or mild illness.
- Flavivirus infections may be clinically indistinguishable from one another. Symptoms may include fever, headache, nausea, vomiting and myalgia/arthralgia. Around 1 in 250 people develop encephalitis or meningitis with neck stiffness, severe headache, photophobia and altered central nervous system.
- Severe infections may result in death (20-30%) or long-term neurological complications.
- Test for flavivirus infection in patients with clinically compatible presentations, particularly if they have been in the Kimberley, Pilbara or have visited another flavivirus-prone areas.
- Recommended laboratory testing for flavivirus infections (JE and MVE) includes:

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

- There are no specific treatments for flavivirus infections.
- Consult Infectious Diseases and/or Clinical Microbiology regarding testing and management.

Vaccination

- Vaccination against JE is currently available for Kimberley residents in areas at highest risk. The vaccination program is being reviewed for expansion to residents of highest risk areas. See up to date eligibility at https://www.healthywa.wa.gov.au/Articles/J_M/Japanese-encephalitis
- There are no vaccines for MVE.

Prevention of mosquito bites is essential to reducing the risk of flavivirus infection

- Advice includes: 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; and remove water-holding containers from around the home.

Notification (urgent)

- Notify confirmed flavivirus infections (JE, MVE and Kunjin) to the Communicable Disease Control Directorate (ph 9222 0255 or A/H 9328 0553).

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Access Clinician Alerts online at: https://ww2.health.wa.gov.au/Articles/F_I/Health-alerts-infectious-diseases