

Risk for Japanese Encephalitis Virus (JEV) following detection in mosquitoes



SAFETY INFORMATION 009/24

Issue date:	12 December 2024
Replaces:	SI:013/23
Content reviewed by:	Health Protection NSW
Distributed to:	Chief Executives; Directors of Clinical Governance; Director, Regulation and Compliance Unit
KEY MESSAGE:	<p>There is an increased risk of JEV and other mosquito borne viruses west of the Great Dividing Range in NSW.</p> <p>Clinicians should be alert to JEV infection in patients presenting with fever, headache, confusion, disorientation, or seizures, especially in patients who live in or spend time in <u>local government areas (LGAs) of higher JEV concern</u>. Consider other flaviviruses with similar presentations (Murray Valley Encephalitis (MVE) and Kunjin).</p>
ACTION REQUIRED BY:	Clinicians
REQUIRED ACTION:	<ol style="list-style-type: none"> Distribute this Safety Information to all relevant clinicians and clinical departments for awareness. For primary care services, offer JEV vaccination to eligible patients. Vaccination can be given by primary care providers, Authorised Nurse Immunisers and pharmacists (see: <u>JEV Vaccination</u>).
DEADLINE:	N/A
We recommend you also inform:	<p>Directors, Managers and Staff of:</p> <ul style="list-style-type: none"> Emergency Departments Intensive Care Neurology Infectious Diseases Paediatrics General Medicine Public Health Nursing/Midwifery
Website:	https://www.health.nsw.gov.au/sabs/Pages/default.aspx http://internal.health.nsw.gov.au/quality/sabs/index.html
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What is updated in this Safety Information from SI:013/23?

This Safety Information replaces Safety Information SI:013/23 *Risk forecast for encephalitic flaviviruses (JEV, MVEV, KUNV) and JEV vaccination eligibility update* which has now been **rescinded**. JEV has been detected in NSW. Clinicians should be alert to potential JEV infection and other flaviviruses in cases of unexplained encephalitis. Consider opportunities to offer or advise vaccination to eligible patients. Detailed eligibility information can be found at [Japanese encephalitis vaccination](#).

Situation

There is an increased risk of JEV and other mosquito borne viruses west of the Great Dividing Range.

On 3 December 2024, JEV was detected in mosquitoes collected near Griffith in the Murrumbidgee region of NSW during routine surveillance. This is the first detection of JEV in mosquitoes since January 2022. This early detection comes before the peak of the mosquito season, which typically occurs from late summer to autumn.

No human cases of JEV have been reported in NSW since October 2022, but the risk of cases is now increased.

Background

JEV is a flavivirus that is transmitted through the bite of infected mosquitoes and can cause rare but potentially fatal encephalitis. It infects humans and animals, with pigs serving as amplifying hosts. While most human infections are asymptomatic, severe cases can cause encephalitis, which can lead to significant morbidity and mortality.

In early 2022, JEV was detected for the first time in NSW and resulted in 14 human cases of JEV likely acquired in NSW.

A free JEV vaccination is available to specific high-risk populations based on their likelihood of exposure to infected mosquitoes. Detailed eligibility information can be found at [Japanese encephalitis vaccination](#).

Assessment

Although no human cases of JEV have been reported in NSW since October 2022, the detection of JEV in mosquitoes indicates potential risk for human infections, particularly in high-risk areas.

Clinical recommendations

Clinicians should:

- Remain aware of JEV and other mosquito borne diseases, particularly in [local government areas \(LGAs\) of higher JEV concern](#).
- Take a travel history for the previous month, country of birth, occupation and history of vaccination for JEV and Yellow Fever Virus (YFV).
- Consider JEV or other encephalitic flaviviruses (MVE, Kunjin) in cases of unexplained encephalitis/meningitis.
- Discuss any suspected cases with your local Infectious Disease physician. Infectious Disease physicians can seek further specialist advice by contacting the Clinical Microbiologist on call at NSWHP-ICPMR through the Westmead Hospital Switchboard (02 8890 5555).
- A clinically compatible case with a concern for acute JE, MVE or Kunjin requires a blood and urine test as well as CSF sampling, where appropriate, for further investigation:
 - Blood: 1) Serum – (2-5 mL from children, 5-8 mL from adults) for acute and convalescent (3-4 weeks post onset) testing for Flavivirus group, JEV MVEV and KUNV IgM, IgG and Total Antibody (Ab), AND 2) Whole blood (EDTA tube) for JEV PCR (+/- viral culture) on an acute sample.

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- Urine (2-5 mL in sterile urine jar) for JEV PCR and viral culture Offer or advise vaccination for eligible patients.
- Encourage prevention where practicable by advising on JEV vaccination and mosquito bite prevention.
- Refer to [NSW Health's Japanese encephalitis virus resources](#) for more details.

Further information

[Japanese encephalitis - Information for health professionals](#)