

Mosquito-borne viruses alert

Information for General Practitioners – 1 February 2023

Key Points

- **Murray Valley encephalitis (MVE) virus and West Nile virus/Kunjin (WNVKUN) have been detected in mosquitoes this season in multiple jurisdictions in South-eastern Australia where they have not been detected in recent years.**
- **There have been no detections of arboviruses in trapped mosquitoes in the ACT so far this season.**
- **Japanese Encephalitis virus (JEV) continues to be a Communicable Disease Incident of National Significance.**
- **Consider MVE, WNVKUN and JEV infection in any patients presenting with a clinically compatible illness and refer to hospital for further investigation and management.**
- **Encourage all your patients to protect themselves from mosquito bites, particularly patients travelling to areas where these mosquito-borne viruses have been detected.**

Current situation

- Murray Valley Encephalitis (MVE) virus has been detected in mosquitos this season in multiple locations in [New South Wales](#), [Victoria](#) and [South Australia](#) where it has not been previously detected in recent years.
- West Nile virus/Kunjin (WNVKUN) has been detected in mosquitoes this season in northern Victoria.
- Most of these mosquito-borne virus detections are in regions along the Murray River, as well as Griffith and Menindee in NSW and Bendigo in Victoria. Given that this is an evolving situation, please refer to the [NSW Health](#), [SA Health](#) and [Victorian Department of Health](#) websites for current information.
- Japanese Encephalitis Virus (JEV) continues to be a Communicable disease incident of national significance.
- Ross River virus and Barmah Forest virus are also mosquito-borne viruses – both have been detected this season in mosquitoes in NSW.
- There have been no detections of these viruses in mosquitoes or humans in the ACT so far this season.
- Travellers to affected areas may be at risk of developing these diseases.

Background

- JEV, MVE virus and WNVKUN virus are transmitted to humans and other animals via the bite of an infected mosquito. There is no human-to-human transmission for these viruses, nor risk from consumption of or contact with reservoir animals.
- Recent weather conditions have resulted in increased numbers of suitable vector mosquitoes and reservoir migratory waterbirds across southern Australia.
- Human cases of JEV have been confirmed in other jurisdictions, but not in the ACT. No human cases of MVE or WNVKUN have been identified to date this season in Australia.

- JEV, MVE virus and WNVKUN virus are all flaviviruses causing a similar clinical presentation which may be clinically indistinguishable. Most cases are asymptomatic. Symptomatic cases are usually mild and are associated with fever and headache with or without myalgia or rash. Rarely, cases can develop acute meningoencephalitis.
- There is no specific treatment for JEV, MVE or WNVKUN. Prevention is through avoidance of mosquito bites.

High risk groups

- People visiting areas where there are significant mosquito populations or engaging in outdoor activities (e.g. camping, fishing, hiking) near significant mosquito populations, particularly near waterways, or those working in commercial piggeries may be at increased risk of being infected.

Clinical recommendations

General Practitioners are advised to:

- **Educate** patients on mosquito bite prevention.
- **Consider** a diagnosis of JEV, MVE or WNVKUN in patients presenting with a clinically compatible illness and take an appropriate travel and occupational history.
- **Refer** patients with suspected meningoencephalitis to hospital for investigation and management.

Mosquito bite prevention

Everyone should take the following steps to avoid mosquito bites:

- Cover-up with a loose fitting, light-coloured, long-sleeved shirt, long pants and covered shoes when outside.
- Apply DEET, picaridin or oil of lemon eucalyptus containing mosquito repellent to exposed skin.
- Take special care during peak mosquito biting hours (in the ACT, most mosquitoes become active at dawn and dusk, and into the evening).
- Remove potential mosquito breeding sites from around the home.
- Screen windows and doors.
- Further information regarding mosquito bite prevention can be found here: [Mosquitoes – risk and prevention | Health \(act.gov.au\)](#).

Vaccination

- JEV vaccines are available and are ACT-government funded for specific at-risk groups. Privately funded vaccines are available for travellers who do not meet these criteria. Further information regarding ACT-government funded vaccine availability and updated eligibility can be found here: [Japanese encephalitis virus \(JEV\) | Health \(act.gov.au\)](#).
- There are no vaccines for MVE virus or WNVKUN virus.



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