

Mosquito-borne viruses alert

Information for ACT Hospital Clinicians – 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.**
- **Clinicians should test for JEV, MVE or WNVKUN in patients presenting with a clinically compatible illness and immediately notify ACT Health of suspected cases.**

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 humans or mosquitoes 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 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 and [JEV vaccination for recommended groups](#).

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

Hospital clinicians are advised to:

- **Consider** a diagnosis of JEV, MVE or WNVKUN in patients presenting with a clinically compatible illness, including patients with symptoms of meningoencephalitis. Take an appropriate travel and occupational history.
- **Discuss an appropriate laboratory diagnostic** approach with the Clinical Microbiologist at ACT Pathology on 0413 518 581.
- **Laboratory testing may include:**
 - CSF to exclude standard meningoencephalitis pathogens and test for flaviviruses
AND
 - Blood (Serum **and** EDTA tube – 2 – 5mLs from children, 5 – 8mLs from adults):
 - Serum tube: Acute and convalescent (4 weeks post onset) for flavivirus antibodies
 - EDTA tube: Acute sample for flavivirus PCR/culture
AND
 - Urine (2 – 5mL in sterile urine jar) for flavivirus PCR
- **Notify** ACT Health via immediate telephone call on diagnosis or on the basis of reasonable clinical suspicion

How to Contact ACT Health

Please contact **ACT Health Communicable Disease Control** for more information or to report a suspected or confirmed case:

- Phone: 02 5124 9213
- Email: cdc@act.gov.au
- Fax: 02 5124 8810
- After-hours pager: 02 9962 4155



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ACT Health
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