Mosquito-borne infections in Victoria: quick comparison table for GPs (valid 29 November 2023)

By Dr Jeannie Knapp, GP and Primary Health Care Improvement GP Adviser, North Western Melbourne Primary Health Network.

	Japanese Encephalitis	**Ross River Fever**	**Murray Valley Encephalitis**	**Barmah Forest Fever**	**Buruli Ulcer**
Type of causative agent	Flavivirus	Alphavirus	Flavirus	Alphavirus	Mycobacterium ulcerans
Hosts	Pigs and wading birds	Mammals	Water birds	Mammals - probably marsupials	Possibly mosquitos and possums (unconfirmed)
Mosquito vector to humans	*Culex tritaeniorhynchus*	Multiple including *Culex annulirostris* (common banded mosquito), *Aedes vigilax* (salt marsh mosquito) and *Aedes notoscriptus* (Australian backyard mosquito)	*Culex annulirostris* (common banded mosquito)	*Culex annulirostris* (common banded mosquito) in inland areas, *Ochlerotatus camptorhynchus* (southern parts of Victoria and Tasmania) and *Ochlerotatus vigilax* (New South Wales) are the major vectors in coastal regions	Still being researched but evidence points to *Aedes notoscriptus* (Australian backyard mosquito)
Current at-risk areas	• Benalla • Buloke • Campaspe • Gannawarra • Greater Bendigo • Greater Shepparton • Hindmarsh • Horsham • Indigo • Loddon • Mildura	Most of Victoria including around waterways and coastal areas - not currently metro Melbourne	Northern Australia but outbreaks have occurred in south eastern Australia when heavy rainfall, flooding and hot weather favour bird and mosquito breeding	Endemic throughout Victoria, especially the Murray Valley and Gippsland area.	In Victoria, the disease is being identified in an increasing number of geographic areas, both coastal and non-coastal. These locations include: • Mornington peninsula region • Bellarine peninsula region

	• Moira • Northern Grampians • Strathbogie • Swan Hill • Towong • Wangaratta • West Wimmera • Wodonga • Yarriambiack				• Westernport region • Frankston/Langwarrin region • South eastern Bayside suburbs • East Gippsland • Phillip Island (particularly Cowes), although much less common now • Aireys Inlet and the Surf Coast • Several suburbs of Greater Geelong, in particular Belmont, Highton, Newtown, Wandana Heights, Grovedale and Marshall • Inner Melbourne suburbs including Essendon, Moonee Ponds, Brunswick West, Pascoe Vale South and Strathmore
Incubation period	5-15 days	3 to 9 days but can range up to 21 days	7 to 12 days, but can be as short as 5 days or as long as 28 days.	7 to 10 days but can range from 3 to 21 days	4 weeks to 9 months, with a median of 4 to 5 months
Clinical syndrome	Sudden onset of fever, headache and vomiting and risk of acute encephalitis	Fever, rash, fatigue, arthralgia and can be persistent	Less than 1% develop clinical illness. Fever, headache, nausea, vomiting and loss of appetite, diarrhoea and	Fever, arthralgia, fatigue and rash, similar to Ross River Fever and can also be persistent	Non-healing ulcer

			muscle aches. Rarely encephalitis		
Diagnosis	Serology and PCR testing. For more information visit the Victorian Department of Health's website.	Serological testing	Serological testing or PCR of cerebrospinal fluid	Serological testing	2 dry swabs for AFB and PCR and culture. For more information visit the Victorian Department of Health's website.
Notifiable?	Yes - urgent	Yes - routine	Yes - urgent	Yes - routine	Yes - routine
Vaccine?	Yes - for high-risk groups and high risk LGAs, as above	No	No	No	No
More information can be found on the Victorian Department of Health's website	Link	Link	Link	Link	Link