

**ARBOVIRAL INFECTIONS****NON-IMMEDIATE NOTIFICATION****EPIDEMIOLOGY PROGRAM**

**Note:** West Nile virus (WNV), Eastern equine encephalitis (EEE) virus, Dengue, Jamestown Canyon virus (JCV), Powassan virus, Yellow Fever, and Zika virus each have their own product codes and separate case classification manual chapters.

Arbovirus (other) (ARBO) -- may include, but not be limited to, California serogroup virus diseases (California encephalitis, Keystone, La Crosse, Snowshoe hare, Trivittatus viruses), Chikungunya virus, St. Louis encephalitis virus, Western equine encephalitis virus, Oropouche virus, Colorado Tick Fever, Japanese encephalitis virus

Event Name:	ARBO	
Event Time Period:	60 days	
Clinical Description (CSTE 2015):	<p>Cases of arboviral disease are classified either as neuroinvasive or non-neuroinvasive, according to the following criteria:</p> <p><b>Neuroinvasive disease</b></p> <ul style="list-style-type: none"><li>• Meningitis, encephalitis, acute flaccid paralysis, or other acute signs of central or peripheral neurologic dysfunction, as documented by a physician, <b>AND</b></li><li>• Absence of a more likely clinical explanation. Other clinically compatible symptoms of arbovirus disease include: headache, myalgia, rash, arthralgia, vertigo, vomiting, paresis and/ or nuchal rigidity.</li></ul> <p><b>Non-neuroinvasive disease</b></p> <ul style="list-style-type: none"><li>• Fever (chills) as reported by the patient or a health-care provider, <b>AND</b></li><li>• Absence of neuroinvasive disease, <b>AND</b></li><li>• Absence of a more likely clinical explanation. Other clinically compatible symptoms of arbovirus disease include: headache, myalgia, rash, arthralgia, vertigo, vomiting, paresis and/ or nuchal rigidity.</li></ul>	
CSTE Event Classification (2015):	<i>Confirmed neuroinvasive</i>	<p>A case that meets the clinical criteria for neuroinvasive disease and one or more of the following laboratory criteria:</p> <ul style="list-style-type: none"><li>• Isolation of virus from, or demonstration of specific viral antigen or nucleic acid in, tissue, blood, CSF, or other body fluid, <b>OR</b></li><li>• Four-fold or greater change in virus-specific quantitative antibody titers in paired sera, <b>OR</b></li><li>• Virus-specific IgM antibodies in serum with confirmatory virus-specific neutralizing antibodies in the same or a later specimen, <b>OR</b></li><li>• Virus-specific IgM antibodies in CSF, with or without a reported pleocytosis, and a negative result for other IgM antibodies in CSF for arboviruses endemic to the region where exposure occurred.</li></ul>
	<i>Probable neuroinvasive</i>	<p>A case that meets the clinical criteria for neuroinvasive disease and the following laboratory criteria:</p> <ul style="list-style-type: none"><li>• Virus-specific IgM antibodies in CSF or serum but with no other testing.</li></ul>
	<i>Confirmed non-neuroinvasive</i>	<p>A case that meets the clinical criteria for non-neuroinvasive disease and one or more of the following laboratory criteria:</p> <ul style="list-style-type: none"><li>• Isolation of virus from, or demonstration of specific viral antigen or nucleic acid in, tissue, blood, or other body fluid, excluding CSF, <b>OR</b></li><li>• Four-fold or greater change in virus-specific quantitative antibody titers in paired sera, <b>OR</b></li><li>• Virus-specific IgM antibodies in serum with confirmatory virus-specific neutralizing antibodies in the same or a later specimen.</li></ul>

<i>Probable non-neuroinvasive</i>	A case that meets the clinical criteria for non-neuroinvasive disease and the following laboratory criteria: <ul style="list-style-type: none"> <li>• Virus-specific IgM antibodies in serum but with no other testing.</li> </ul>
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# ARBOVIRAL INFECTIONS (continued)

Report Type	Test Type	Source	Result	New event or beyond report period?	Data Entry
Laboratory report	Culture	Clinical specimen	Specific virus result such as Chikungunya or La Crosse, etc.	Yes	New event SUSPECT
				No	Same event
Select:	Virus identified: PrId: Pt: xxx: Nom: Virus culture				
Laboratory report for Saint Louis encephalitis virus	IFA (indirect or antibody)	Serum or CSF	Positive (if titer value given, note in Result Value field)	Yes	New event SUSPECT
				No	Same event
Select(IgM specific):	Saint Louis encephalitis virus Ab. IgM: Titr: Pt: Ser: Qn: IF				
Select(IgG specific):	Saint Louis encephalitis virus Ab. IgG: Titr: Pt: Ser: Qn: IF				
Laboratory report for Saint Louis encephalitis virus	ELISA	Serum or CSF	Positive (if titer value given, note in Result Value field)	Yes	New event SUSPECT
				No	Same event
Select(IgM specific):	Saint Louis encephalitis virus IgM Titr xxx ELISA				
Select(IgG specific):	Saint Louis encephalitis virus IgG Titr xxx ELISA				
Laboratory report for Saint Louis encephalitis virus	Plaque Reduction Neutralization Test (PRNT)	Serum or CSF	Positive (if value given, note in Result Value field)	Yes	New event SUSPECT
				No	Same event
	Saint Louis encephalitis virus AB xxx QI Nt				

# **ARBOVIRAL INFECTIONS (continued)**

Report Type	Test Type	Source	Result	New event or beyond report period?	Data Entry
Laboratory report for California encephalitis virus	IFA	Serum or CSF	Positive	Yes	New event SUSPECT
				No	Same event
Select:	California encephalitis virus IgG Ab [Titer] in Serum by Immunofluorescence				
Laboratory report for Chikungunya virus	PCR	Serum or CSF	Positive	Yes	New event SUSPECT
				No	Same event
Select:	CHIKV RNA XXX PCR				
Laboratory report for Chikungunya virus	ELISA	Serum or CSF	Positive (if titer value given, note in Result Value field)	Yes	New event SUSPECT
				No	Same event
Select (IgM specific):	CHIKV IgM Titr xxx ELISA				
Select (IgG specific):	CHIKV IgG Titr xxx ELISA				
Laboratory report for Chikungunya virus	Plaque Reduction Neutralization Test (PRNT)	Serum or CSF	Positive (if value given, note in Result Value field)	Yes	New event SUSPECT
				No	Same event
Select:	CHIKV AB xxx QI Nt				
Laboratory report for Chikungunya virus	IFA	Serum or CSF	Positive (if titer value given, note in Result Value field)	Yes	New event SUSPECT
				No	Same event
Select (IgM specific):	CHIKV IgM Titr SerPI IF				
Select (IgG specific):	CHIKV IgG Titr SerPI IF				
Laboratory report for Western equine encephalitis	IFA	Serum or CSF	Positive (if titer value given, note in Result Value field)	Yes	New event SUSPECT
				No	Same event
Select (IgM specific):	Western equine encephalitis virus Ab.IgM: Titr: Pt: Ser: Qn: IF				
Select (IgG specific):	Western equine encephalitis virus Ab.IgG: Titr: Pt: Ser: Qn: IF				

Report Type	Test Type	Source	Result	New event or beyond report period?	Data Entry
Laboratory report for <b>Western equine encephalitis</b>	EIA	Serum or CSF	Positive (if titer value given, note in Result Value field)	Yes	New event SUSPECT
				No	Same event
<i>Select (IgM specific):</i>	<b>Western equine encephalitis virus Ab.IgM: ACnc:Pt:XXX:Ord:EIA</b>				
<i>Select (IgG specific):</i>	<b>Western equine encephalitis virus Ab.IgG: ACnc:Pt:XXX:Ord:EIA</b>				
Laboratory report for <b>La Crosse virus</b>	IFA (indirect or antibody)	Serum or CSF	Positive (if titer value given, note in Result Value field)	Yes	New event SUSPECT
				No	Same event
<i>Select(IgM specific):</i>	<b>LA Crosse virus Ab.IgM Titr Pt Ser Qn IF</b>				
<i>Select(IgG specific):</i>	<b>LA Crosse virus Ab.IgG Titr Pt Ser Qn IF</b>				
Laboratory report for <b>La Crosse virus</b>	ELISA	Serum or CSF	Positive (if titer value given, note in Result Value field)	Yes	New event SUSPECT
				No	Same event
<i>Select(IgM specific):</i>	<b>La Crosse virus IgM Titr xxx ELISA</b>				
<i>Select(IgG specific):</i>	<b>La Crosse virus IgG Titr xxx ELISA</b>				
Laboratory report for <b>La Crosse virus</b>	Plaque Reduction Neutralization Test (PRNT)	Serum or CSF	Positive (if value given, note in Result Value field)	Yes	New event SUSPECT
				No	Same event
	<b>La Crosse virus AB xxx QI Nt</b>				
Laboratory report for <b>Oropouche virus</b>	PCR	Serum or CSF	Positive	Yes	New event SUSPECT
				No	Same event
<i>Select:</i>	<b>Oropouche virus RNA Spec QI NAA+probe</b>				
Laboratory report for <b>Colorado tick fever virus</b>	IFA	Serum or CSF	Positive (if titer value given, note in Result Value field)	Yes	New event SUSPECT
				No	Same event
<i>Select (IgM specific):</i>	<b>CTFV IgM Titr Ser IF</b>				
<i>Select (IgG specific):</i>	<b>CTFV IgG Titr Ser IF</b>				
Laboratory report for <b>Colorado tick fever</b>	Plaque Reduction	Serum or CSF	Positive (if value given, note in Result Value field)	Yes	New event SUSPECT

Report Type	Test Type	Source	Result	New event or beyond report period?	Data Entry
virus	Neutralization Test (PRNT)			No	Same event
Select:	CTFV AB xxx QI Nt				
Laboratory report for Japanese encephalitis virus	ELISA	Serum or CSF	Positive (if titer value given, note in Result Value field)	Yes	New event SUSPECT
				No	Same event
Select (IgM specific):	JEV IgM Titr xxx ELISA				
Laboratory report for Japanese encephalitis virus	Plaque Reduction Neutralization Test (PRNT)	Serum or CSF	Positive (if titer value given, note in Result Value field)	Yes	New event SUSPECT
				No	Same event
	JEV AB xxx QI Nt				