

**ZIKA VIRUS****NON-IMMEDIATE NOTIFICATION****EPIDEMIOLOGY PROGRAM**

Event Name:	ZIKA	
Event Time Period:	Lifelong	
Zika Status:	<b>Non-Congenital Disease</b>	
Clinical criteria (CSTE 2023):	<p>A person with one or more of the following not explained by another etiology:</p> <ul style="list-style-type: none"> <li>• Acute onset of one or more of the following symptoms: fever (measured or reported), generalized rash, arthralgia, or non-purulent conjunctivitis,</li> <li>• Guillain-Barré syndrome,</li> <li>• Loss of a fetus at greater or equal to 20 weeks gestation.</li> </ul>	
Epidemiologic linkage criteria (CSTE 2023):	<ul style="list-style-type: none"> <li>• Resided in or traveled to an area with a risk of Zika virus transmission in the 14 days before the onset of symptoms, in the 28 days before the onset of Guillain-Barré syndrome, or during pregnancy; <b>OR</b></li> <li>• Laboratory exposure to Zika virus before onset of symptoms or during pregnancy; <b>OR</b></li> <li>• Receipt of blood, blood products, organ transplant, or tissue transplant within 30 days of symptom onset or during pregnancy from a person who has either been diagnosed with Zika virus infection or returned from traveling to an area with risk of Zika virus transmission; <b>OR</b></li> <li>• Sexual contact, within 14 days of symptom onset or during pregnancy, with a person who in the last 90 days has either been diagnosed with Zika virus infection or has returned from traveling to an area with a risk of Zika virus transmission.</li> </ul>	
CSTE Event Classification (2023):	<i>Confirmed</i>	<p>Meets clinical criteria <b>AND</b> meets the following laboratory criteria:</p> <ul style="list-style-type: none"> <li>• Detection of Zika virus, viral antigen, or viral RNA in a body fluid or tissue; <b>OR</b></li> <li>• Detection of anti-Zika virus IgM antibodies in blood or CSF, with positive Zika virus-specific neutralizing antibody titers and negative neutralizing antibody titers against dengue or other flaviviruses endemic to the region where exposure occurred.</li> </ul> <p><b>AND</b> has at least one of the epidemiologic linkages above.</p>
	<i>Probable</i>	<p>Meets clinical criteria <b>AND</b> meets the following laboratory criteria:</p> <ul style="list-style-type: none"> <li>• Detection of anti-Zika virus IgM antibodies in blood or CSF with a negative anti-dengue virus IgM antibody test in the same specimen with no neutralizing antibody testing performed; <b>OR</b></li> <li>• Four-fold or greater rise in anti-Zika virus-specific neutralizing antibody titers in paired blood specimens; <b>OR</b></li> <li>• In the setting of a Zika virus outbreak with minimal circulation of other endemic flaviviruses, detection of anti-Zika virus IgM antibodies in blood or CSF</li> </ul> <p><b>AND</b> has at least one of the epidemiologic linkages above.</p>
Massachusetts Event Classification (2016):	<i>Confirmed</i>	Follows the CSTE event classification
	<i>Probable</i>	Follows the CSTE event classification
	<i>Suspect</i>	Individual who would otherwise meet the confirmed or probable Zika non-congenital disease case definition for whom a confirmed or probable Dengue event exists which has been determined to be the primary cause of illness.

## **ZIKA VIRUS (continued)**

Zika Status:	<b>Congenital Disease</b>
Clinical Description (CSTE 2023):	<p>To meet the clinical criteria for congenital Zika virus disease, the liveborn infant must not have an identified genetic or other cause for the findings, including a positive test for another likely etiology, and should have one or more of the following brain or eye anomalies or neurological sequelae specific for congenital Zika virus disease and typically identifiable in the neonatal period:</p> <ul style="list-style-type: none"><li>• microcephaly (occipital frontal circumference &gt;2 standard deviations below the mean for age and sex) at birth or postnatal onset,</li><li>• cortical hypoplasia or abnormal gyral patterns (polymicrogyria, lissencephaly, heterotopia),</li><li>• increased volume of cerebrospinal fluid (CSF) (hydrocephalus ex vacuo, unspecified hydrocephalus, ventriculomegaly) due to loss of brain parenchyma,</li><li>• intracranial calcifications (most commonly between the cortex and subcortex),</li><li>• congenital contractures of major joints (arthrogryposis) associated with structural brain anomalies,</li><li>• congenital paralysis of the diaphragm associated with structural brain anomalies,</li><li>• corpus callosum agenesis/hypoplasia,</li><li>• cerebellar hypoplasia,</li><li>• scarring of the macula with coarse deposits of pigment in the retina (focal retinal pigmentary mottling),</li><li>• other structural eye anomalies (microphthalmia, cataracts, chorioretinal atrophy, optic nerve hypoplasia).</li></ul>
Epidemiologic linkage criteria (CSTE 2023):	<ul style="list-style-type: none"><li>• Resided in or traveled to an area with a risk of Zika virus transmission in the 14 days before the onset of symptoms, in the 28 days before the onset of Guillain-Barré syndrome, or during pregnancy; <b>OR</b></li><li>• Laboratory exposure to Zika virus before onset of symptoms or during pregnancy; <b>OR</b></li><li>• Receipt of blood, blood products, organ transplant, or tissue transplant within 30 days of symptom onset or during pregnancy from a person who has either been diagnosed with Zika virus infection or returned from traveling to an area with risk of Zika virus transmission; <b>OR</b></li><li>• Sexual contact, within 14 days of symptom onset or during pregnancy, with a person who in the last 90 days has either been diagnosed with Zika virus infection or has returned from traveling to an area with a risk of Zika virus transmission.</li></ul>

CSTE Event Classification (2023):	<i>Confirmed</i>	<p>An infant that meets the clinical criteria <b>AND</b></p> <p>meets one of the following laboratory criteria</p> <ul style="list-style-type: none"> <li>• Detection of Zika virus, viral antigen, or viral RNA in infant CSF, blood, urine, or postmortem tissue; <b>OR</b></li> <li>• Detection of anti-Zika virus IgM antibodies in infant CSF or blood, with positive anti-Zika virus-specific neutralizing antibody titers.</li> </ul> <p><b>AND</b> whose gestational parent meets</p> <ul style="list-style-type: none"> <li>• epidemiologic linkage criteria, <b>OR</b></li> <li>• confirmatory laboratory criteria for non-congenital Zika virus disease during this pregnancy.</li> </ul>
	<i>Probable</i>	<p>An infant that meets the clinical criteria <b>AND</b></p> <p>meets one of the following laboratory criteria</p> <ul style="list-style-type: none"> <li>• Detection of Zika virus, viral antigen, or viral RNA in amniotic fluid, placenta, umbilical cord, or cord blood; <b>OR</b></li> <li>• Detection of anti-Zika virus IgM antibodies in infant CSF or blood with no neutralizing antibody testing performed.</li> </ul> <p><b>AND</b> whose gestational parent meets</p> <ul style="list-style-type: none"> <li>• epidemiologic linkage criteria, <b>OR</b></li> <li>• confirmatory laboratory criteria for non-congenital Zika virus disease during this pregnancy.</li> </ul>
Massachusetts Event Classification (2016):	<i>Follows the CSTE event classification</i>	

# **ZIKA VIRUS (continued)**

Report Type	Test Type	Source	Result	New event or beyond report period?	Data Entry
Laboratory report for <b>Zika virus</b>	PCR	Serum, urine, CSF, tissue, amniotic fluid, semen or saliva	Positive	Yes	New event SUSPECT
				No	Same event
	Zika RNA xxx QI PCR				
Laboratory report for <b>Zika 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
	Zika AB xxx QI Nt				
Laboratory report for <b>Zika virus</b>	ELISA	Serum or CSF	Positive	Yes	New event SUSPECT
				No	Same event
Select (IgM specific):	Zika IgM Titr xxx ELISA				
Select (IgG specific):	Zika IgG Titr xxx ELISA				
Laboratory report -- these are seen on American Red Cross results	NAT or Transcription mediated amplification (TMA) assay	Whole blood or serum	Zika virus reactive, Positive	Yes	New event SUSPECT
				No	Same event
	Transcription mediated amplification (TMA) assay				

**Data entry note:** When entering Zika virus test results, also include any results (positive, negative, indeterminate, inconclusive or equivocal) listed for Dengue and Chikungunya virus.