Event Name:	DENG
Event Time Period:	180 days (6 months)[1]

CSTE Clinical Description (2025):	In the absence of a more likely alternative diagnosis:
	Clinical evidence of **Dengue** includes fever or chills as reported by the patient or healthcare provider* **AND** the presence of one or more of the following manifestations:
	• nausea or vomiting, which may be persistent (e.g., ≥ 3 episodes in 1 hour or ≥ 4 episodes in 6 hours),
	• rash,
	• headache,
	• retro-orbital pain,
	• arthralgia (joint pain),
	• myalgia (muscle aches),
	• positive tourniquet test,
	• leukopenia (e.g., a total white blood cell count of <5,000/mm^3),
	• thrombocytopenia (e.g., platelet count <150,000/mm^3, abdominal pain or tenderness, extravascular fluid accumulation (e.g., pleural or pericardiqal effusion, ascites) without respiratory distress,
	• mucosal bleeding** (e.g., gums, nose [epistaxis], vagina [menorrhagia], kidney [macroscopic hematuria] or mild GI bleeding),
	• liver enlargement >2 centimeters, and
	• increasing hematocrit (>20% in 2 measurments taken 6 hours apart).
	
	**The vast majority of dengue cases are characterized by fever and chills. If fever or chills are not present, careful consideration of patient's clinical course, exposure history, and environment risk are recommended.*
	*** If bleeding is severe (see below), consider severe dengue.*
	
	Severe dengue is characterized by any one or more of the following scenarios:
	• Severe plasma leakage characterized by one or more of the following:
	  ○ Shock, **OR**
	  ○ Extravascular fluid accumulation (e.g., pleural or pericardial effusion, ascites) **AND** respiratory distress
	• Severe bleeding defined as one or more of the following:
	  ○ Bleeding (most commonly gastrointestinal, e.g., hematemesis, melena) that results in hemodynamic instability or blood transfusion (except platelets), **OR**
	  ○ Bleeding that results in permanent disability (e.g., CNS bleed or intraocular bleed), **OR**
	  ○ Bleeding classified as severe by a clinical provider
	• Severe organ involvement defined as one or more of the following:
	  ○ Elevated liver transaminases: aspartate aminotransferase (AST) or alanine aminotransferase (ALT) ≥ 1,000 units per liter (U/L), **OR**
	  ○ Impaired level of consciousness or diagnosis of encephalitis, encephalopathy, or meningitis, **OR**
	  ○ Heart or other organ involvement including myocarditis, cholecystitis, and pancreatitis.

Epidemiologic Linkage Criteria (2025):	• Resided in or traveled to an area with a risk of DENV transmission in the 14 days before the onset of symptoms; **OR** • Association in time and place before onset of symptoms (e.g., household member, family member, classmate, coworker, or neighbor) with a confirmed or probable dengue case; **OR** • Laboratory exposure to DENV within 14 days of onset of symptoms; **OR** • Reciept of blood, blood products, organ transplant, or other tissue transplant within 30 days of symptom onset from a person who has either been diagnosed with DENV infection or returned from traveling to an area with risk of DENV transmission in the 14 days before donation.	

CSTE Event Classification (2025):	*Confirmed*	Dengue:
		Meets clinical criteria for dengue **AND** meets confirmatory laboratory evidence, **OR**
		Meets non-antibody based confirmatory laboratory evidence **AND** meets epidemiologic linkage criteria **AND** has clinical evidence of fever or chills only, **OR** has other clinical evidence compatible with dengue in the absence of fever or chills.
		
		• Detection of dengue virus (e.g., growth in cell culture), viral antigen (e.g., NS1 antigen-capture ELISA, immunohistochemistry), or viral RNA (e.g., PCR) in a serum, plasma, blood, cerebral spinal fluid (CSF), other body fluid, or tissue specimen, **OR**
		• Detection of anti-DENV IgM antibodies in a serum or CSF specimen **AND**
		  o Detectable DENV-specific neutralizing antibody titers by plaque reduction neutralization (PRNT), **AND**
		  o Negative neutralizing antibody titers against other flaviviruses endemic to the region where exposure occurred.
		
		Severe Dengue:
		Meets confirmed case definition for dengue **AND** meets clinical criteria for severe dengue.

	Probable	Dengue: Meets clinical criteria for dengue **AND** meets presumptive laboratory evidence **AND** meets epidemiological linkage criteria. • Detection of anti-DENV IgM antibodies in a serum specimen, **OR** • Demonstration of a $\geq$ 4-fold rise in DENV-specific neutralizing antibody titers in paired serum samples optimally collected $\geq$ 2 weeks apart with a $\geq$ 4-fold higher end point titer as compared to other flaviviruses tested. Severe Dengue: Meets probable case definition for dengue **AND** meets clinical criteria for severe dengue.
	Suspect	Dengue: Meets clinical criteria for dengue **AND** meets epidemiological linkage criteria **AND** with no laboratory testing performed, **OR** Meets clinical citeria for dengue **AND** meets epidemiological linkage criteria **AND** has negative IgM results with no PCR/NS1 testing on a sample collected <5 days after illness onset. Severe Dengue: Meets suspect case definition for dengue **AND** meets clinical criteria for severe dengue.
Massachusetts Event Classification	*Confirmed*	Follows CSTE case definition
	Probable	Follows CSTE case definition
	Suspect	

(2025):		Receipt of positive laboratory report with no clinical information available.

1. A person with two clinical episodes of dengue occurring at least two weeks apart and shown to be due to different infecting serotypes confirmed by molecular diagnostic testing would be enumerated as two different cases, OR In the absence of molecular testing evidence showing infection due to different infecting serotypes, a person with two clinical episodes of dengue occurring more than 90 days apart would be enumerated as two different cases.

DENGUE VIRUS INFECTIONS (continued)

Report Type	Test Type	Source	Result	New event or beyond report period?	Data Entry
Laboratory report	Culture	Clinical speicmen	Dengue virus (with no type (1-4) noted)	Yes	New event -- SUSPECT
				No	Same event
Select:	**Virus identified : PrId : Pt : xxx : Nom : Virus culture**				
Laboratory report	Culture	Clinical speicmen	Dengue virus, type 1 Dengue virus, type 2 Dengue virus, type 3 Dengue virus, type 4	Yes	New event -- SUSPECT
				No	Same event
Select:	**Microorganism: Prld:Pt:xxx:Nom:Culture**				
Laboratory report	IFA (indirect or antibody)	Clinical specimen	Positive	Yes	New event --SUSPECT
				No	Same event
Select (antibody not specificed):	**Dengue virus Ab :Titr : Pt : Ser : Qn : IF**				
Select (IgM-specific):	**Dengue virus Ab.IgM : ACnc : Pt : Ser : Qn : IF**				
Select (IgG-specific):	**Dengue virus Ab.IgG : ACnc : Pt : Ser : Qn : IF**				
Laboratory report	IFA (direct or antigen)	Clinical specimen	Positive	Yes	New event --SUSPECT
				No	Same event
Select:	**Dengue virus Ag: ACnc: Pt:xxx:Ord:IF**				
Laboratory report	NS1 antigen	Clinical specimen	Positive	Yes	New event--SUSPECT
				No	Same event
Select:	**DENV NS1 Ag SerPl Ql IA**				
Laboratory report	EIA	Clinical specimen	Positive	Yes	New event --SUSPECT
				No	Same event
Select (IgM-specific):	**Dengue virus Ab.IgM : ACnc : Pt : Ser : Qn : EIA**				
Select (IgG-specific):	**Dengue virus Ab.IgG : ACnc : Pt : Ser : Qn : EIA**				
Laboratory report	PCR	Clinical specimen	Positive	Yes	New event --SUSPECT
				No	Same event
Select (Type not specified):	**DENV RNA Ser Ql PCR**				
Select (Type 1 specific):	**DENV1 RNA Ser Ql PCR**				
Select (Type 2 specific):	**DENV2 RNA Ser Ql PCR**				
Select (Type 3 specific):	**DENV3 RNA Ser Ql PCR**				
Select (Type 4 specific):	**DENV4 RNA Ser Ql PCR**				
Select (Type 2+4 specific):	**DENV2+4 RNA Ser Ql PCR**				
Select (Type 1+3 specific):	**DENV1+3 RNA Ser Ql PCR**				

DENGUE VIRUS INFECTIONS (continued)

Laboratory report	Plaque reduction neutralization test (PRNT)	Clinical specimen	Positive	Yes	New event SUSPECT
				No	Same event
Select (Type 1 specific):	**Dengue1 Ab:Titr:Pt:xxx:Qn:Neut**				
Select (Type 2 specific):	**Dengue2 Ab:Titr:Pt:xxx:Qn:Neut**				
Select (Type 3 specific):	**Dengue3 Ab:Titr:Pt:xxx:Qn:Neut**				
Select (Type 4 specific):	**Dengue4 Ab:Titr:Pt:xxx:Qn:Neut**				
Select (Type1-2 combined):	**Dengue1-2 Ab: Titr: Pt: xxx: Qn: Neut**				
Select (Type not specified or Type1-4 combined):	**Dengue1-4 Ab: Titr: Pt: xxx: Qn: Neut**				

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