CASE ID: _____ Reporting Jurisdiction: _____
(Please enter the case ID as assigned by your jurisdiction)

Dengue Case Investigation Form

NOTES: Enter dates as MM/DD/YYYY unless otherwise specified, Guidance, see page 6
This form includes a combination of variables that are reported to ArboNET (the national arbovirus surveillance system) and optional variables that may be helpful for case investigations but are not reportable to CDC. The optional variables are clearly indicated in marked sections.

PATIENT INFORMATION

Date of birth *(YYYY/MM/DD)*:_____ Age: ____ ○ years ○ months Sex: ○ Male ○ Female ○ Unknown

Country of birth: _____ Country of usual residence: _____

State of residence: _____ County of residence: _____

Zip Code of residence: _____

Race *(check all that apply)*:
☐ American Indian/Alaska Native ☐ Black/African American ☐ White ☐ Other, specify:
☐ Asian ☐ Native Hawaiian/Pacific Islander ☐ Unknown _____

Ethnicity: ○ Hispanic or Latino ○ Not Hispanic or Latino ○ Unknown ○ Other, specify: _____

OPTIONAL VARIABLES FOR JURISDICTION USE

Last name: _____ First name: _____

Patient email: _____ Patient phone: _____

CLINICAL INFORMATION

Date of illness onset: _____ Was the patient hospitalized? ○ Yes ○ No ○ Unknown

Did the patient die from this illness? ○ Yes ○ No ○ Unknown Date of death: _____

OPTIONAL VARIABLES FOR JURISDICTION USE

Physician name: _____ Physician phone: _____

Hospital or clinic name: _____

Date of first evaluation by healthcare provider: _____ ***If hospitalized***, admission date: _____ Discharge date: _____

EPIDEMIOLOGICAL INFORMATION

Where was this illness acquired? Please indicate if this was an imported case *(i.e., travel outside of the jurisdiction in the past 14 days prior to illness onset?)*
○ International ○ Imported, but not able to determine source state and/or country ○ Indigenous, within jurisdiction (locally acquired)
○ Out of state ○ In state, out of jurisdiction ○ Unknown

Imported Cases

If this case was imported (Acquired out of country or state), please list all countries or states visited during the 14 days before symptom onset.

What was the country of origin of the infection? _____

Other country 1: _____ Other country 2: _____

Other country 3: _____

Other country, specify: _____

OR, What was the U.S. state/territory of origin of the infection? _____

Other state/territory 1: _____ Other state/territory 2: _____

Other state/territory 3: _____ Other state/territory, specify: _____

CLINICAL SIGNS AND SYMPTOMS

Dengue-like illness (Condition Code 11704)			
Fever	○ Yes	○ No	○ Unknown
Dengue (Fever plus any of the following; Condition Code 10680)			
Headache	○ Yes	○ No	○ Unknown
Myalgia (muscle pain)	○ Yes	○ No	○ Unknown
Arthralgia (joint pain)	○ Yes	○ No	○ Unknown
Pain behind the eyes	○ Yes	○ No	○ Unknown
Rash	○ Yes	○ No	○ Unknown
Nausea/vomiting	○ Yes	○ No	○ Unknown
Leukopenia (defined as the total white blood cell count <5000mm3)	○ Yes	○ No	○ Unknown
Positive tourniquet test	○ Yes	○ No	○ Unknown
Warning Signs			
Abdominal pain or tenderness	○ Yes	○ No	○ Unknown
Persistent vomiting (e.g., ≥ 3 episodes in 1 hr or ≥4 in 6 hrs)	○ Yes	○ No	○ Unknown
Extravascular fluid accumulation (pleural effusion, ascites, or pericardial effusion, etc.)	○ Yes	○ No	○ Unknown
Mucosal bleeding *(e.g. gums, nose, vagina [metrorrhagia or hypermenorrhea], kidney [macroscopic hematuria])*	○ *Yes*	○ No	○ Unknown
Altered mental status (irritability, drowsiness, lethargy, restlessness, Glasgow coma scale score <15)	○ Yes	○ No	○ Unknown
Liver enlargement (≥ 2cm below costal margin)	○ Yes	○ No	○ Unknown
Increase in hematocrit concurrent with rapid decrease in platelet count	○ Yes	○ No	○ Unknown
Severe dengue (Condition Code 11705)			
Severe plasma leakage *Evidenced by hypovolemic shock or extravascular fluid accumulation (e.g., pleural or pericardial effusion, ascites) with respiratory distress.*	○ Yes	○ No	○ Unknown
Severe bleeding *Bleeding from the gastrointestinal tract (hematemesis, melena) or vagina (menorrhagia) as defined by requirement for medical intervention including IV fluid resuscitation or blood transfusion*	○ Yes	○ No	○ Unknown
Severe organ involvement *Including any of the following:* *- Elevated liver transaminases (AST or ALT >= 1000 U/L)* *- Impaired level of consciousness or diagnosis of encephalitis, encephalopathy, or meningitis* *- Heart or other organ involvement including myocarditis, cholecystitis, and pancreatitis*	○ Yes	○ No	○ Unknown
Other symptoms			
Chills or rigors	○ Yes	○ No	○ Unknown
Diarrhea	○ Yes	○ No	○ Unknown
Conjunctivitis	○ Yes	○ No	○ Unknown

Other symptoms (specify)**:**

CASE PATIENT INFORMATION

Possible Modes of Transmission

If the patient is an infant, was the infant breastfed at anytime during the two weeks prior to symptom onset?
○ Yes ○ No ○ Unknown

Was the patient identified through blood donor screening?
○ Yes ○ No ○ Unknown

Was the patient a blood donor in the 30 days prior to illness onset?
○ Yes ○ No ○ Unknown

If yes, date of donation: _____

Did the patient receive a blood transfusion in the 30 days prior to illness onset?
○ Yes ○ No ○ Unknown

Did the patient donate organs in the 30 days prior to illness onset?
○ Yes ○ No ○ Unknown

Did the patient receive an organ transplant in the 30 days prior to illness onset?
○ Yes ○ No ○ Unknown

Did the patient likely acquire this illness as a result of work with infectious agents in a laboratory setting?
○ Yes ○ No ○ Unknown

Did transmission of this arboviral disease occur through a mode other than mosquito bite? (select the appropriate mode, as applicable):

Perinatal transmission indicates that the patient is an infant that was infected around the time of delivery while transplacental transmission indicates that the patient is an infant that was infected during pregnancy

○ Perinatal ○ Sexual ○ Transplacental (In Utero) ○ Other, specify: _____

Pregnancy Information

Was the patient pregnant during illness?
○ Yes ○ No ○ Unknown ○ Not applicable (male)

What were the pregnancy complications?

☐ Fetal growth abnormality
☐ Fetus with central nervous system (CNS) abnormalities
☐ Intacranial calcification
☐ Microcephaly
☐ None
☐ Unknown

What were the pregnancy outcomes?

☐ Live birth
☐ Premature birth
☐ Fetal death
☐ Therapeutic abortion
☐ Stillbirth
☐ Still pregnant
☐ Perinatal death
☐ Unknown

Which of the following conditions did the newborn experience?

☐ Intracranial calcification
☐ Intrauterine growth retardation
☐ Limb defects
☐ Microcephaly
☐ Ocular defects
☐ Congenital anomaly of central nervous system
☐ None
☐ Unknown

OPTIONAL VARIABLES FOR JURISDICTION USE

NOTE: Enter dates as MM/YYYY

Did the patient previously receive a yellow fever vaccine?
○ Yes ○ No ○ Unknown

***If Yes*, month/year of vaccination (MM/YYYY):** _____

Did the patient previously receive a dengue vaccine?
○ Yes ○ No ○ Unknown

***If Yes*, month/year of vaccination (MM/YYYY):** _____

***If Yes*, month/year of vaccination (MM/YYYY):** _____

***If Yes*, month/year of vaccination (MM/YYYY):** _____

LABORATORY INFORMATION

Dengue virus test type††	Date Collected	Specimen Type§§	Performing Laboratory	Interpretation
Example: IgM	mm/dd/yyyy	Example: Serum, unknown	Example: State Public Health Lab	○ Positive ○ Negative ○ Indeterminate/ equivocal
				○ Positive ○ Negative ○ Indeterminate/ equivocal
				○ Positive ○ Negative ○ Indeterminate/ equivocal
				○ Positive ○ Negative ○ Indeterminate/ equivocal
				○ Positive ○ Negative ○ Indeterminate/ equivocal

†† For appropriate dengue testing please review the recommended CDC dengue testing guidelines: https://www.cdc.gov/dengue/hcp/diagnosis-testing/index.html
§§ The types of specimen collected may include: acute phase serum, amniotic fluid, blood, body fluid, cerebrospinal fluid, convalescent phase serum, cord blood, fetal cytologic material, fetus, saliva, seminal fluid, serum, placenta, tissue, brain tissue.

Dengue Virus type result:
○ Dengue virus, type 1
○ Dengue virus, type 2
○ Dengue virus, type 3
○ Dengue virus, type 4
○ Unknown

Serum Paired Antibody Result:
○ 4-fold rise
○ Positive
○ Negative
○ Not done

Cerebrospinal Fluid Pleocytosis (>=5 WBC):
○ Yes
○ No
○ Unknown

CASE CLASSIFICATION

If you need assistance with case classification, please reach out to CDC Dengue Branch at dengue@cdc.gov

Dengue Case classification:
○ Confirmed ○ Probable ○ Suspected ○ Not a case ○ Unknown

OPTIONAL VARIABLES FOR JURISDICTION USE

LOCALLY ACQUIRED CASE INFORMATION

Does the patient know of other persons (e.g household member, family member, classmate, neighbor, work colleague, etc.) experiencing similar illness?

○ Yes ○ No ○ Unknown

If yes, please list contact information in the following table to initiate investigation of possible other cases:

Name	Email Address	Phone	Address *(street, city, state)*

People infected with dengue virus can be viremic (have circulating virus) from a few days before symptom onset up to 14 days afterwards and can infect competent mosquito vectors biting them during that period. Can the patient share information about areas visited in the two weeks after symptom onset where mosquito exposure could have occurred?

○ Yes ○ No ○ Unknown

Please list locations where patient had possible mosquito exposure during this viremic period:

Date	Location *(e.g., church, friend's house, school)*	Address *(street, city, state)*

Comments:

INVESTIGATOR INFORMATION

Date of first report to health department: _____ Date investigation started: _____ Date investigation completed: _____

Date of transmission to ArboNET: _____

Reporting entity (select all that apply):

☐ Lab ☐ Clinic ☐ Other, specify: _____
☐ Hospital ☐ Department of Health

Name of investigator: _____ Investigator phone number: _____

Investigator Email: _____

Investigator role:

○ Department of Health employee or staff
○ Physician
○ Nurse
○ Other, specify: _____

Investigation Status:

○ In progress
○ Complete
○ Complete – not reportable to Department of Health
○ Unable to complete

Case Definition

Case Definition available at:
https://ndc.services.cdc.gov/case-definitions/dengue-virus-infections-2015/

Clinical description

Dengue

Dengue is defined by fever as reported by the patient or healthcare provider and the presence of one or more of the following signs and symptoms: Nausea/vomiting, rash, aches and pains (e.g., headache, retro-orbital pain, joint pain, myalgia, arthralgia, tourniquet test positive, leukopenia (a total white blood cell count of <5,000/mm3), or any warning sign for severe dengue: abdominal pain or tenderness, persistent vomiting, extravascular fluid accumulation (e.g., pleural or pericardial effusion, ascites), mucosal bleeding at any site, liver enlargement >2 centimeters, and increasing hematocrit concurrent with rapid decrease in platelet count.

Dengue-like illness

Dengue-like illness is defined by fever as reported by the patient or healthcare provider.

Severe dengue

Severe dengue is defined as dengue with any one or more of the following scenarios:

- Severe plasma leakage evidenced by hypovolemic shock and/or extravascular fluid accumulation (e.g., pleural or pericardial effusion, ascites) with respiratory distress. A high hematocrit value for patient age and sex offers further evidence of plasma leakage.
- Severe bleeding from the gastrointestinal tract (e.g., hematemesis, melena) or vagina (menorrhagia) as defined by requirement for medical intervention including intravenous fluid resuscitation or blood transfusion.
- Severe organ involvement, including any of the following:
  - Elevated liver transaminases: aspartate aminotransferase (AST) or alanine aminotransferase (ALT) ≥1,000 per liter (U/L)
  - Impaired level of consciousness and/or diagnosis of encephalitis, encephalopathy, or meningitis
  - Heart or other organ involvement including myocarditis, cholecystitis, and pancreatitis

Laboratory criteria for diagnosis

Confirmatory:

- Detection of dengue virus (DENV) nucleic acid in serum, plasma, blood, cerebrospinal fluid (CSF), other body fluid or tissue by validated reverse transcriptase-polymerase chain reaction (PCR), or
- Detection of DENV antigens in tissue by a validated immunofluorescence or immunohistochemistry assay, or
- Detection in serum or plasma of DENV NS1 antigen by a validated immunoassay; or
- Cell culture isolation of DENV from a serum, plasma, or CSF specimen; or
- Detection of IgM anti-DENV by validated immunoassay in a serum specimen or CSF in a person living in a dengue endemic or non-endemic area of the United States without evidence of other flavivirus transmission (e.g., West Nile Virus (WNV) , St. Louis Encephalitis Virus (SLEV) , or recent vaccination against a flavivirus (e.g., Yellow Fever Virus (YFV), Japanese Encephalitis Virus (JEV)); or

- Detection of IgM anti-DENV in a serum specimen or CSF by validated immunoassay in a traveler returning from a dengue endemic area without ongoing transmission of another flavivirus (e.g., WNV, JEV, YFV), clinical evidence of co-infection with one of these flaviviruses, or recent vaccination against a flavivirus (e.g., YFV, JEV); or
- IgM anti-DENV seroconversion by validated immunoassay in acute (i.e., collected <5 days of illness onset) and convalescent (i.e., collected >5 days after illness onset) serum specimens; or
- IgG anti-DENV seroconversion or ≥4-fold rise in titer by a validated immunoassay in serum specimens collected >2 weeks apart, and confirmed by a neutralization test (e.g., plaque reduction neutralization test) with a >4-fold higher end point titer as compared to other flaviviruses tested.

Probable:

- Detection of IgM anti-DENV by validated immunoassay in a serum specimen or CSF in a person living in a dengue endemic or non-endemic area of the United States with evidence of other flavivirus transmission (e.g., WNV, SLEV), or recent vaccination against a flavivirus (e.g., YFV, JEV).
- Detection of IgM anti-DENV in a serum specimen or CSF by validated immunoassay in a traveler returning from a dengue endemic area with ongoing transmission of another flavivirus (e.g., WNV, JEV, YFV), clinical evidence of co-infection with one of these flaviviruses, or recent vaccination against a flavivirus (e.g., YFV, JEV).

Suspected:

- The absence of IgM anti-DENV by validated immunoassay in a serum or CSF specimen collected <5 days after illness onset and in which molecular diagnostic testing was not performed in a patient with an epidemiologic linkage.

Epidemiologic linkage

- Travel to a dengue endemic country or presence at location with ongoing outbreak within previous two weeks of onset of an acute febrile illness or dengue, or
- Association in time and place (e.g., household member, family member, classmate, or neighbor) with a confirmed or probable dengue case.