North Carolina Department of Health and Human Services
Division of Public Health • Epidemiology Section
Communicable Disease Branch

North Carolina Public Health

ATTENTION HEALTH CARE PROVIDERS:
Please report relevant clinical findings about this disease event to the local health department.

DENGUE
Confidential Communicable Disease Report—Part 2
NC DISEASE CODE: 7

REMINDER to Local Health Department staff: If sending this form to the Health Care Provider, remember to attach a cover letter from your agency indicating the part(s) of the form the provider should complete.

Patient's Last Name	First	Middle	Suffix	Maiden/Other	Alias	Birthdate *(mm/dd/yyyy)* / /
						SSN

NC EDSS LAB RESULTS Verify if lab results for this event are in NC EDSS. If not present, enter results.

Specimen Date	Specimen #	Specimen Source	Type of Test	Test Result(s)	Description (comments)	Result Date	Lab Name—City/State
/ /						/ /	
/ /						/ /	
/ /						/ /	

NC EDSS PART 2 WIZARD COMMUNICABLE DISEASE

Is/was patient symptomatic for this disease? ☐Y ☐N ☐U
If yes, symptom onset date (mm/dd/yyyy): __/__/____
CHECK ALL THAT APPLY:
Fever ☐Y ☐N ☐U
☐ Yes, subjective ☐ No
☐ Yes, measured ☐ Unknown
Highest measured temperature_____
Fever onset date(mm/dd/yyyy): ____/____/____
Was the fever recurring, remittent, or intermittent? ☐Y ☐N ☐U
Headache ☐Y ☐N ☐U
Joint pains (arthralgias) ☐Y ☐N ☐U
Muscle aches / pains (myalgias) ☐Y ☐N ☐U
Skin rash ☐Y ☐N ☐U
Eye pain ☐Y ☐N ☐U
Hemorrhagic symptoms/signs ☐Y ☐N ☐U
Specify (check all that apply):
☐ Petechiae
☐ Ecchymosis
☐ Purpura
☐ Nasal bleeding (epistaxis)
☐ Gingival bleeding
☐ Vomiting blood (hematemesis)
☐ Frank blood in stool
☐ Blood in urine (hematuria, i.e., urinalysis >5 RBC/hpf or positive for blood)
☐ Vaginal bleeding
☐ Melena
☐ Other

CLINICAL FINDINGS

Chills or rigors ☐Y ☐N ☐U
Altered mental status ☐Y ☐N ☐U
Patient displayed (check all that apply):
☐ Confusion ☐ Disorientation ☐ Coma
Seizures/convulsions ☐Y ☐N ☐U
Specify:
☐ New onset
☐ Exacerbation of underlying seizure disorder
☐ Other, specify:_____
Conjunctivitis ☐Y ☐N ☐U
Nasal congestion ☐Y ☐N ☐U
Hemorrhage-subungual and retinal (trich) ☐Y ☐N ☐U
Sore throat ☐Y ☐N ☐U
Cough ☐Y ☐N ☐U
Hemorrhagic pleural effusion ☐Y ☐N ☐U
Nausea ☐Y ☐N ☐U
Vomiting ☐Y ☐N ☐U
Diarrhea ☐Y ☐N ☐U
Jaundice (yellow skin, eyes, light or gray stools, hyperbilirubinemia) ☐Y ☐N ☐U
Ascites (abdominal effusion) ☐Y ☐N ☐U
Thrombocytopenia ☐Y ☐N ☐U
Elevated hematocrit? ☐Y ☐N ☐U
Hypotension ☐Y ☐N ☐U
Lowest BP: _____
Other symptoms, signs, clinical findings, or complications consistent with this illness ☐Y ☐N ☐U
Specify:

PREGNANCY

Is the patient currently pregnant? ☐Y ☐N ☐U
Estimated delivery date_____
Is patient a post-partum mother (≤6 weeks)**?** ☐Y ☐N ☐U

HOSPITALIZATION INFORMATION

Was patient hospitalized for this illness >24 hours? ☐Y ☐N ☐U
Hospital name: _____
City, State:_____
Hospital contact name: _____
Telephone: (_____) _____ - _____
Admit date (mm/dd/yyyy): ____/____/____
Discharge date (mm/dd/yyyy):____/____/____

Patient's Last Name	First	Middle	Suffix	Maiden/Other	Alias	Birthdate *(mm/dd/yyyy)* / /
						SSN

CLINICAL OUTCOMES

Discharge/Final diagnosis:_____

_____

Survived? ☐ Y ☐ N ☐ U
Died? ☐ Y ☐ N ☐ U
Died from this illness? ☐ Y ☐ N ☐ U

Date of death (mm/dd/yyyy):_____/_____/_____

HEALTH CARE FACILITY AND BLOOD & BODY FLUID EXPOSURE RISKS

During the 14 days prior to onset of symptoms, did the patient have the following health care exposure?

☐ **Transplant recipient** (tissue/organ/bone/bone marrow)

Date received (mm/dd/yyyy): _____
Type of donation/transplant_____
Provider name_____
Facility name_____
Contact name at facility_____
Address_____
City_____State _____
Country _____

CASE INTERVIEWS/INVESTIGATIONS

Was the patient interviewed? ☐ Y ☐ N ☐ U
Date of interview (mm/dd/yyyy): ____/____/____
Medical records reviewed (including telephone review with provider/office staff)? ☐ Y ☐ N ☐ U
Specify reason if medical records were not reviewed:

Notes on medical record verification:

TRAVEL/IMMIGRATION

The patient is:
☐ Resident of NC
☐ Resident of another state or US territory
☐ Foreign Visitor
☐ Refugee
☐ Recent Immigrant
☐ Foreign Adoptee
☐ None of the above

Did patient have a travel history during the 14 days prior to onset of symptoms? ☐ Y ☐ N ☐ U

List travel dates and destinations _____

_____

_____

Additional travel/residency information:

VECTOR EXPOSURES

During the 14 days prior to onset of symptoms, did the patient have an opportunity for exposure to mosquitoes ☐ Y ☐ N ☐ U

Exposed on(mm/dd/yyyy): ____/____/____
Until(mm/dd/yyyy): ____/____/____
Frequency:
☐ Once
☐ Multiple times within this time period
☐ Daily

City/county of exposure_____
State of exposure _____
Country of exposure _____

GEOGRAPHICAL SITE OF EXPOSURE

In what geographic location was the patient MOST LIKELY exposed?

Specify location:
☐ In NC
City _____
County_____
☐ Outside NC, but within US
City _____
State _____
County_____
☐ Outside US
City _____
Country _____
☐ Unknown

Is the patient part of an outbreak of this disease? ☐ Y ☐ N

Notes:

VACCINE

Has patient ever received vaccine related to this disease? ☐ Y ☐ N ☐ U

Vaccine type _____
☐ Unknown vaccine or immune globulin
Date of administration (mm/dd/yyyy): ____/____/____
Source of this vaccine information_____

_____

How many days prior to illness onset was vaccine received?
☐ Fewer than 14 days
☐ 14 days or more
Vaccine date unknown ☐ Yes ☐ No

Dengue Fever *(Dengue Hemorrhagic Fever)* *(Dengue Shock Syndrome)*

2010 Case Definition

CSTE Position Statement Number: 09-ID-19

Dengue Fever
Dengue Hemorrhagic Fever
Dengue Shock Syndrome

Laboratory criteria for diagnosis

Confirmatory:

- Isolation of dengue virus from or demonstration of specific arboviral antigen or genomic sequences in tissue, blood, cerebrospinal fluid (CSF), or other body fluid by polymerase chain reaction (PCR) test, immunofluorescence or immunohistochemistry, OR
- Seroconversion from negative for dengue virus-specific serum Immunoglobulin M (IgM) antibody in an acute phase (≤5 days after symptom onset) specimen to positive for dengue-specific serum IgM antibodies in a convalescent-phase specimen collected ≥5 days after symptom onset, OR
- Demonstration of a ≥4-fold rise in reciprocal Immunoglobulin G (IgG) antibody titer or Hemagglutination inhibition titer to dengue virus antigens in paired acute and convalescent serum samples, OR
- Demonstration of a ≥4-fold rise in PRNT (plaque reduction neutralization test) end point titer (as expressed by the reciprocal of the last serum dilution showing a 90% reduction in plaque counts compared to the virus infected control) between dengue viruses and other flaviviruses tested in a convalescent serum sample, OR
- Virus-specific immunoglobulin M (IgM) antibodies demonstrated in CSF.

Presumptive/Probable:

- Dengue-specific IgM antibodies present in serum with a P/N ratio ≥2.

Exposure

- Travel to a dengue endemic country or presence at location with ongoing outbreak within previous two weeks of dengue-like illness, OR
- Association in time and place with a confirmed or probable dengue case.

Case classification

Suspected: A clinically compatible case of DF, DHF or DSS that is epidemiologically linked to a confirmed case.

Probable: A clinically compatible case of DF, DHF or DSS with laboratory results indicative of presumptive infection.

Confirmed: A clinically compatible case of DF, DHF or DSS with confirmatory laboratory results.

Dengue Fever

Clinical description

Dengue fever (DF) is most commonly an acute febrile illness defined by the presence of fever and two or more of the following, retro-orbital or ocular pain, headache, rash, myalgia, arthralgia, leukopenia, or hemorrhagic manifestations (e.g., positive tourniquet test, petechiae; purpura/ecchymosis; epistaxis; gum bleeding; blood in vomitus, urine, or stool; or vaginal bleeding) but not meeting the case definition of dengue hemorrhagic fever. Anorexia, nausea, abdominal pain, and persistent vomiting may also occur but are not case-defining criteria for DF.

Dengue Hemorragic Fever (DHF)

Clinical description

Dengue hemorrhagic fever (DHF) is characterized by all of the following:

- Fever lasting from 2-7 days
- Evidence of hemorrhagic manifestation or a positive tourniquet test
- Thrombocytopenia (≤100,000 cells per mm3)
- Evidence of plasma leakage shown by hemoconcentration (an increase in hematocrit ≥20% above average for age or a decrease in hematocrit ≥20% of baseline following fluid replacement therapy), OR pleural effusion, or ascites or hypoproteinemia.

Dengue Shock Syndrome

Clinical description

Dengue shock syndrome (DSS) has all of criteria for DHF plus circulatory failure as evidenced by:

- Rapid and weak pulse and narrow pulse pressure (<20mm Hg), OR
- Age-specific hypotension and cold, clammy skin and restlessness

Comment

Asymptomatic Blood or Tissue Donor
Dengue virus - specific viral antigen or genomic sequences demonstrated in donated blood or organs during screening and confirmatory testing in the absence of symptoms in the donor.

Dengue viruses are members of the Flaviviridae and have sufficient antigenic similarity to yellow fever virus, Japanese encephalitis virus, and West Nile virus that previous infection or vaccination may raise cross-reactive serum antibodies. After a primary infection with a heterologous flavivirus, subsequent antibody testing by ELISA may produce false positive results for a different flavivirus. PRNT can often resolve cross-reactive serum antibodies in this situation and identify the infecting virus. However, high-titered cross-reactive antibody levels produced from multiple previous flavivirus infections cannot be resolved by PRNT. This demonstrates the complexity inherent in serological diagnosis and differentiation in populations living in regions where more than one flavivirus co-circulates. However, only a small proportion of the US population has evidence of previous flavivirus infection (or vaccination) so that cross-reactive flavivirus antibodies should not be a significant limitation to dengue diagnosis among most US travelers. Among US residents, most testing for dengue is done through private clinical laboratories using IgM or IgG detection techniques.

Reference testing is available from CDC's Dengue Branch, Division of Vector-Borne Infectious Diseases, National Center for Infectious Diseases, 1324 Calle Cañada, San Juan, PR 00920-3860, telephone 787-706-2399, fax 787-706-2496.