

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



ATTENTION HEALTH CARE PROVIDERS:

Please report relevant clinical findings about this disease event to the local health department.

**HEMOLYTIC-UREMIC SYNDROME
Confidential Communicable Disease Report—Part 2
NC DISEASE CODE: 59**

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): _____
Altered mental status Y N U
 Patient displayed (select all that apply)
 Delirium Hallucinations
 Coma Illusions
 Disorientation
Nausea Y N U
Vomiting Y N U
Abdominal pain or cramps Y N U
Diarrhea Y N U
 Describe (select all that apply)
 Bloody
 Non-bloody
 Watery
 Other
 Maximum number of stools in a 24-hour period: _____
Proteinuria Y N U
Acute renal insufficiency Y N U
Acute renal failure Y N U
Elevated creatinine Y N U
Hemolytic uremic syndrome (HUS) Y N U
Thrombotic thrombocytopenic purpura (TTP) Y N U
Thrombocytopenia Y N U
 Platelet count _____
 Platelets <150,000
Anemia Y N U
 Acute hemolytic anemia Y N U
 Acute with microangiopathic changes Y N U
 Hemoglobin <11 Y N U
 Hematocrit <33 Y N U

Patient in child care? Y N U
Patient a child care worker or volunteer in child care? Y N U
Patient a parent or primary caregiver of a child in child care? Y N U
Is patient a student? Y N U
Is patient a school WORKER / VOLUNTEER in NC school setting? Y N U
 Give details: _____

During the 31 days prior to onset of HUS, was the patient:
Employed as food worker? Y N U
 Where employed? _____
 Specify job duties: _____
 What dates did the patient work? _____
Employed as food worker while symptomatic? Y N U
 Where did the patient work? _____
 What dates did the patient work? _____
 What day did the patient return to food service work? _____
 Date: _____
 Where did patient return to work? _____
Non-occupational food worker (e.g. potlucks, receptions) during contagious period? Y N U
 Where employed? _____
 Specify dates worked during contagious period: _____
Health care worker or child care worker handling food or medication in the contagious period? Y N U
 Where employed? _____
 Specify dates worked during contagious period: _____

During the 31 days prior to onset of HUS, did the patient have exposure to animals (includes animal tissues, animal products, or animal excreta)? Y N U
 If yes, specify and give details: _____
Household pets? Y N U
 If yes, specify and give details: _____
Did patient / household contact work at, live on, or visit a farm, ranch, or dairy? Y N U
 If yes, specify and give details: _____
Was patient exposed to animals associated with agriculture or aviculture (domestic/semi-domestic animals)? Y N U
 If yes, specify and give details: _____
Did the patient work at or visit a fair with livestock or a petting zoo? Y N U
 If yes, specify and give details: _____
Did the patient work at or visit a zoo, zoological park, or aquarium? Y N U
 If yes, specify and give details: _____
Did patient work in a veterinary practice or animal laboratory, animal research setting, biomedical laboratory, or an animal diagnostic laboratory? Y N U
 If yes, specify and give details: _____

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

Any immunosuppressive conditions? Y N U
Specify _____

Gastrointestinal disease Y N U
Did patient have diarrhea within 3 weeks of onset of HUS? Y N U
Other underlying illness Y N U
Please specify _____

REASON FOR TESTING

Why was the patient tested for this condition?
 Symptomatic of disease
 Screening of asymptomatic person with reported risk factor(s)
 Exposed to organism causing this disease (asymptomatic)
 Household contact to a person reported with this disease
 Other, specify _____
 Unknown

TREATMENT

Did the patient receive an antibiotic for this diarrheal illness? Y N U
Specify name of first antibiotic used: _____
Date first antibiotic began (mm/dd/yyyy): _____
Number of days first antibiotic taken: _____
Did the patient receive a SECOND antibiotic for this diarrheal illness? Y N U
Specify name of second antibiotic used: _____
Date second antibiotic began (mm/dd/yyyy): _____
Number of days second antibiotic taken: _____
Did the patient need kidney dialysis as a result of this illness? Y N U
Notes:

HOSPITALIZATION INFORMATION

Was patient hospitalized for this illness >24 hours? Y N U
1. Hospital name: _____
City, State: _____
Hospital contact name: _____
Phone: _____
Admit date ____/____/____
Discharge date ____/____/____
If applicable:
2. Hospital name: _____
City, State: _____
Hospital contact name: _____
Phone: _____
Admit date ____/____/____
Discharge date ____/____/____

ISOLATION/QUARANTINE/CONTROL MEASURES

Restrictions to movement or freedom of action? Y N
Check all that apply:
 Work Sexual behavior
 Child care Blood and body fluid
 School Other, specify _____
Date control measures issued: _____
Date control measures ended: _____
Was patient compliant with control measures? Y N
Did local health director or designee implement additional control measures? (example: cohort classrooms, special cleaning, active surveillance, etc.) Y N
If yes, specify: _____
Were written isolation orders issued? Y N
If yes, where was the patient isolated? _____
Date isolation started? _____
Date isolation ended? _____
Was the patient compliant with isolation? Y N
Were written quarantine orders issued? Y N
If yes, where was the patient quarantined? _____
Date quarantine started? _____
Date quarantine ended? _____
Was the patient compliant with quarantine? Y N

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): _____

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 31 days prior to onset of HUS? Y N U
List travel dates and destinations _____
Does patient know anyone else with similar symptom(s) who had the same or similar travel history? Y N U
List persons and contact information: _____
Additional travel/residency information:

BEHAVIORAL RISK & CONGREGATE LIVING

During the 31 days prior to onset of HUS did the patient live in any congregate living facilities (correctional facility, barracks, shelter, commune, boarding school, camp, dormitory/sorority/fraternity)? Y N U
Name of facility: _____
Dates of contact: _____
During the 31 days prior to onset of HUS, did the patient attend social gatherings or crowded settings? Y N U
If yes, specify: _____
In what setting was the patient most likely exposed?
 Restaurant Place of Worship
 Home Outdoors, including woods or wilderness
 Work Athletics
 Child Care Farm
 School Pool or spa
 University / College Pond, lake, river or other body of water
 Camp Hotel / motel
 Doctor's office / Outpatient clinic Social gathering, other than listed above
 Hospital In-patient Department Travel conveyance (airplane, ship, etc.)
 Hospital Emergency Department International
 Laboratory Community
 Long-term care facility / Rest Home Other (specify) _____
 Military Unknown
 Prison /Jail /Detention Center

OTHER EXPOSURE INFORMATION

Does the patient know anyone else with similar symptoms? Y N U
If yes, specify: _____
During the 31 days prior to onset of HUS did the patient have contact with sewage or human excreta? Y N U

WATER EXPOSURE

During the 14 days prior to onset of HUS, did the patient have recreational, occupational, or other exposure to water, including aerosolized water in household, community or health care settings? Y N U
If yes, describe in detail giving type of activity, water, route of exposure, water sources, factors contributing to water contamination, and any water treatment methods:

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FOOD RISK & EXPOSURE

During the 31 days prior to onset of HUS, did the patient eat any raw or undercooked meat or poultry? Y N U

Specify meat/poultry: _____

Specify place of exposure: _____

During the 31 days prior to onset of HUS did the patient eat any raw or undercooked seafood or shellfish (i.e., raw oysters, sushi, etc.)? Y N U

Specify type of seafood/shellfish _____

Specify place of exposure _____

Describe the source of drinking water used in the patient's home (check all that apply):

- Bottled water supplied by a company
- Bottled water purchased from a grocery store
- Municipal supply (city water)
- Well water

Does the patient have a water softener or water filter installed inside the house to treat their water? Y N U

During the 31 days prior to onset of HUS, did the patient drink any bottled water? Y N U

Specify type/brand _____

Where does the patient/patient's family typically buy groceries?

Store name: _____

Store city: _____

Shopping center name/address: _____

During the 31 days prior to onset of HUS, did the patient:

Eat any food items that came from a produce stand, flea market, or farmer's market? Y N U

Specify source: _____

Eat any food items that came from a store or vendor where they do not typically shop for groceries? Y N U

Specify source(s): _____

Handle raw meat other than poultry? Y N U

Specify type of meat:

- Beef (hamburger/steak, etc)
- Pork (ham, bacon, pork chops, sausage, etc)
- Lamb/mutton
- Wild game, specify: _____
- Other, specify: _____
- Unknown

Handle raw poultry? Y N U

Specify type of poultry:

- Chicken
- Turkey
- Other, specify: _____
- Unknown

Handle shell eggs? Y N U

Drink unpasteurized milk? Y N U

Specify type of milk:

- Cow
- Goat
- Sheep
- Other, specify: _____
- Unknown

Eat any other unpasteurized dairy products? Y N U

Specify type of product:

- Queso fresco, Queso blanco or other Mexican soft cheese
- Butter
- Cheese from raw milk, specify: _____
- Food made from raw dairy product, specify: _____
- Other, specify: _____

Drink unpasteurized juices or ciders? Y N U

Specify juices or ciders:

- Apple
- Orange
- Other, specify: _____

Eat ground beef/hamburger? Y N U

Eat other beef/beef products? Y N U

- Roast
- Steak

Other, specify: _____

Eat any poultry/poultry product? Y N U

Eat eggs or any dish having eggs as an ingredient? Y N U

Taste/eat any uncooked batter (uncooked cake/cookie batter, ice cream containing cookie dough) containing eggs? Y N U

Eat pork/pork products? Y N U

Specify type of pork/pork product:

- Sausage
- Smoked Unsmoked
- Chops
- Roast
- Ham
- Smoked Cured Canned
- Other, specify: _____

Bacon BBQ Other, specify: _____

Eat wild game meat (deer, bear, wild boar)? Y N U

Specify type of wild game meat:

- Deer/venison
- Bear
- Wild boar/javelina/feral hog
- Other, specify: _____

Eat other meat / meat products (i.e. ostrich, emu, horse)? Y N U

Specify other meat/meat product:

- Ostrich
- Emu
- Horse
- Other, specify: _____

Handle/eat finfish (i.e. Tuna, Mackerel, Skip Jack, Amber Jack, Bonito, mahi-mahi / dorado, Blue fish, Salmon, Puffer fish, Porcupine fish, Ocean sunfish, sushi)? Y N U

Specify type of finfish:

- Tuna
- Mackerel
- Skip Jack or Amberjack
- Bonito
- Mahi-mahi
- (dorado/"blue dolphin")
- Sushi, unknown type of fish
- Other, specify: _____
- Unknown
- Puffer fish
- Parrot fish
- Porcupine fish
- Ocean sunfish (Mola mola)
- Bluefish
- Salmon

Eat raw fruit? Y N U

Specify raw fruit:

- Apples
- Bananas
- Oranges
- Grapes, specify: _____
- Pears
- Peaches
- Berries, specify _____
- Melon, specify _____
- Mangoes
- Other, specify: _____

Eat raw salads or vegetables other than sprouts? Y N U

Specify raw salad or vegetable:

- Bagged salad greens without toppings, type: _____
- Salad with toppings, specify: _____
- Lettuce, type: _____
- Spinach
- Tomatoes, type: _____
- Cucumbers
- Mushrooms, type: _____
- Onions, type: _____
- Potatoes, type: _____
- Other, specify: _____

Eat sprouts? Y N U

Specify type of sprouts:

- Alfalfa Clover Bean
- Other, specify: _____
- Unknown

Eat fresh herbs? Y N U

Specify:

- Basil Thyme
- Parsley Cilantro
- Oregano Rosemary
- Cummin
- Other, specify: _____

Eat ready-to-eat dried, preserved, smoked, or traditionally prepared meat (i.e. summer sausage, salami, jerky)? Y N U

Specify type of prepared meat:

- Summer sausage, specify: _____
- Salami
- Jerky
- Other, specify: _____

Eat deli-sliced (not pre-packaged) meat? Y N U

Specify type of meat:

- Bologna
- Turkey
- Ham
- Roast beef
- Chicken
- Other, specify: _____

Eat meat stews or meat pies? Y N U

Specify: _____

Eat gravy (i.e. beef, chicken, turkey)? Y N U

Specify: _____

Eat potentially hazardous foods (i.e. pastries, custards, salad dressings)? Y N U

Specify:

- Pastries
- Custards
- Salad dressings
- Other, specify: _____

Eat at a group meal? Y N U

Specify:

- Place of Worship
- School:
- Social function
- Other, Specify: _____

Eat food from a restaurant? Y N U

Name: _____

Location: _____

Additional notes:

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

During the 31 days prior to onset of HUS did the patient:

Own, work at, or visit a pet store, animal shelter, and/or animal breeder/wholesaler/distributor? Y N U
 If yes, specify and give details:

Work with animal importation? Y N U
 If yes, specify and give details:

Work at or visit a slaughterhouse (abattoir), meat-packing plant, poultry or wild game processing facility? Y N U
 If yes, specify and give details:

CASE INTERVIEWS/INVESTIGATIONS

Was the patient interviewed? Y N U
 Date of interview (mm/dd/yyyy): ___/___/___

Were interviews conducted with others? Y N U
 Who was interviewed?

Were health care providers consulted? Y N U

Medical records reviewed (including telephone review with provider/office staff)? Y N U
 Sources:
 Hospital Clinic/Health Care provider
 Other _____
 Please specify reason if medical records were not reviewed:

Notes on medical record verification:

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:

Hemolytic-Uremic Syndrome, post-diarrheal

1996 CDC Case Definition

Clinical description

Hemolytic-uremic syndrome (HUS) is characterized by the acute onset of microangiopathic hemolytic anemia, renal injury, and low platelet count. Thrombotic thrombocytopenic purpura (TTP) also is characterized by these features but can include central nervous system (CNS) involvement and fever and may have a more gradual onset. Most cases of HUS (but few cases of TTP) occur after an acute gastrointestinal illness (usually diarrheal).

Laboratory criteria for diagnosis

The following are both present at some time during the illness:

- Anemia (acute onset) with microangiopathic changes (i.e., schistocytes, burr cells, or helmet cells) on peripheral blood smear and
- Renal injury (acute onset) evidenced by either hematuria, proteinuria, or elevated creatinine level (i.e., greater than or equal to 1.0 mg/dL in a child aged less than 13 years or greater than or equal to 1.5 mg/dL in a person aged greater than or equal to 13 years, or greater than or equal to 50% increase over baseline)

Note: A low platelet count can usually, but not always, be detected early in the illness, but it may then become normal or even high. If a platelet count obtained within 7 days after onset of the acute gastrointestinal illness is not less than 150,000/mm³, other diagnoses should be considered.

Case classification

Probable:

- An acute illness diagnosed as HUS or TTP that meets the laboratory criteria in a patient who does not have a clear history of acute or bloody diarrhea in preceding 3 weeks or
- An acute illness diagnosed as HUS or TTP, that a) has onset within 3 weeks after onset of an acute or bloody diarrhea and b) meets the laboratory criteria except that microangiopathic changes are not confirmed

Confirmed: an acute illness diagnosed as HUS or TTP that both meets the laboratory criteria and began within 3 weeks after onset of an episode of acute or bloody diarrhea

Comment

Some investigators consider HUS and TTP to be part of a continuum of disease. Therefore, criteria for diagnosing TTP on the basis of CNS involvement and fever are not provided because cases diagnosed clinically as postdiarrheal TTP also should meet the criteria for HUS. These cases are reported as postdiarrheal HUS.