



# Infectious Disease SOP— Yellow Fever

Original Effective Date:

8/2008

Review / Revision Date:

7/20/2017

Environmental Health  
Procedure:

2017.07.018

Maintenance Steward: Epidemiology Supervisor

History: ☐ New ☒ Revised ☐ Archived

## Organizational Scope:

☐ Full Agency ☒ Administration ☒ Community Services ☒ Environmental Health ☐ Health Services

## Frequency of Review:

☐ Annually ☒ Biennially ☐ 5 Years ☒ As Needed ☐ Other:

## Location:

S-Drive: S: → Users → Common → Policies &amp; Procedures

Website: [www.lucascountyhealth.com/employee-login/](http://www.lucascountyhealth.com/employee-login/)

Hardcopy: Environmental Health and Community Services Director's Office

Archived Version(s): S:\CSRP\SOGs\Archives

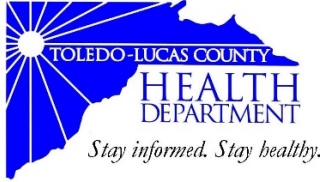
## Requisite Signatures

☒
  
 Medical Director

 7-20-17  
 Date
☒
  
 Health Commissioner

 08-03-17  
 Date
☒
  
 Director of Environmental Health & Community Services

 7/20/2017  
 Date



## Infectious Disease SOP— Yellow Fever

### I. Policy

It is the policy of the Toledo-Lucas County Health Department (TLCHD) to adhere to all state, federal, and local statutes governing the management and case investigation of individual communicable disease cases and outbreaks within Lucas County.

### II. Scope

This procedure/process establishes guidelines for yellow fever investigations. Per the Ohio Administrative Code (OAC) 3701-3, Yellow Fever is a Class A disease and must be reported immediately via telephone according to 3701-3-02, 3701-3-03, 3701-3-04, and 3701-3-05 of the Administrative Code.

### III. Purpose

This procedure/process establishes guidelines for yellow fever investigations. Per the Ohio Administrative Code (OAC) 3701-3, yellow fever is a Class A disease and must be reported immediately via telephone according to 3701-3-02, 3701-3-03, 3701-3-04, and 3701-3-05 of the Administrative Code.

### IV. Background

Yellow fever virus is a flavivirus that cross-reacts serologically with other flaviviruses such as St. Louis encephalitis, West Nile, dengue, and Japanese encephalitis viruses. A single bite from an infectious mosquito can be enough to deliver an infectious dose. The overall case fatality rate for patients who develop jaundice due to the disease is 20%-50%. Monkeys serve as the vertebrate reservoirs in the sylvatic cycle whereas humans serve as the vertebrate reservoir in the urban cycle. Enzootic sylvatic (forest-dwelling) yellow fever occurs in Africa south of the Sahara and in South America. The urban yellow fever is transmitted by the mosquito, *Aedes aegypti*. Sylvatic vectors include *Haemagogus* species and other *Aedes* species. Humans are infectious to certain vector mosquito species from symptom onset through day 5. The incubation period is usually 3-6 days.

### V. Case Definition

#### A. Case Description

1. Yellow fever is a mosquito-borne illness that is characterized by acute onset and constitutional symptoms followed by a brief remission and a recurrence of fever, hepatitis, albuminuria and, in some cases, renal failure, shock, and generalized hemorrhages.

#### B. Laboratory Criteria for Diagnosis

1. Four-fold or greater rise in yellow fever antibody titer in patients who have no history of recent yellow fever vaccination and cross-reactions to other flaviviruses have been excluded, OR

2. Demonstration of yellow fever virus, antigen, or genome in tissue, blood, or other bodily fluids.

## **VI. Case Classification**

### **A. Probable::**

1. A clinically compatible case with supportive serology (stable elevated antibody titer to yellow fever virus. Cross reactive serologic reactions to other flaviviruses must be excluded, and the patient must not have a history of yellow fever vaccination.

### **B. Confirmed:**

1. A clinically compatible case that is laboratory confirmed

### **C. Not a case:**

1. This status is not generally used when reporting a case, but may be used to reclassify a report if investigation revealed it was not a case.

## **VII. Procedure**

The procedure/process of the Infectious Disease Program is to ensure that all cases are investigated in the same format.

When a report is received, a member of the ID team will complete an interview of the contact.

### **A. Outbreak Response**

1. Call ODH ORBIT at 614-995-5599 for guidance

### **B. Public Health Investigation Process**

1. ODRS:
  - a. Check to see if the patient is entered into ODRS. If not, enter the patient into ODRS
  - b. Key fields for ODRS reporting include:
    - i. Import status
    - ii. Date of illness onset
    - iii. All fields in the Epidemiology module
    - iv. Vaccine information if previously vaccinated or reason why the case was not vaccinated
    - v. Travel details in the Travel History module
2. Investigation
  - a. Case investigation should start as soon as possible following notification.
  - b. Contact the patient's provider and/or hospital to obtain demographic information, symptoms, date of onset of symptoms, pertinent test results, and vaccination history for yellow fever, and travel history.
  - c. Once the provider and/or hospital ICP has been contacted call the patient/parent and complete the interview.
    - i. Provide education from the fact sheet on the IDCM website at [http://www.odh.ohio.gov/pdf/IDCM/yellow\\_fever.pdf](http://www.odh.ohio.gov/pdf/IDCM/yellow_fever.pdf). This information is also located in S:\CSRP\SOGs\Yellow fever.

- 1) If no one answers, leave a message requesting a call back.
- 2) Mail an informational letter requesting a callback.
- 3) Continue to attempt phone contact with the patient for three more times in the span of 48 hours after the informational letter was sent.
- 4) Travel history for the week prior to symptom onset to an endemic area is important data to elicit. Toledo Lucas County HD progress notes will be utilized to record the necessary information and travel activity.
- 5) After interview is completed, ask the patient/parent whether they would like more information. If they express an interest, ask what the best method to deliver the information would be (e.g. e-mail, mail, etc.)

**C. Treatment**

1. Treatment is supportive and yellow fever patients should be hospitalized for close observation.

**D. Isolation/Follow Up Specimens**

1. Ohio Administrative Code (OAC) 3701-3-13 (EE) states: “a person with confirmed or suspected yellow fever shall be isolated to prevent access of mosquitoes to the patient for at least five days after onset of disease.”
2. A convalescent sample should be obtained two or more weeks after the acute sample. Autopsy blood and/or tissue samples may also be taken. If the CDC laboratory is used, proper protocol is to send the sample(s) to the CDC via the ODHL.

**E. Prophylaxis**

1. The International Certificate of Vaccination (ICV) against yellow fever is required by many countries to gain entry and is highly recommended for travel to infected areas.
2. The ICV is valid for 10 years beginning 10 days after the date of vaccination.

**F. Contacts (Exclusion)**

1. No prophylaxis is indicated for contacts of cases.

**G. Notification**

1. Notify TLCHD contacts immediately after investigation with patient (in sequential order)
  - a. Supervisor of Epidemiology
  - b. Director of Community Services and Environmental Health
  - c. Medical Director
  - d. Health Commissioner
2. The Toledo Lucas County Health Department environmental supervisor should be contacted as well as the Lucas County sanitary district entomologist to determine if *Aedes aegypti* or *Aedes albopictus* are present near the patient’s home.
3. Public health recommendations and interventions will be shared with the public by the PIO or to specific individuals within 6 hours of identification of the agent as determined by ODH and supervisory staff at the local health department. An OPHCS alert will be distributed within 12 hours of a positive test result as determined by supervisory local health department staff and ODH.

**H. Documentation**

1. Enter information into ODRS as it is obtained.
2. Include a note documenting investigation, education, and intervention.

*Sample: Spoke with mother by phone on [date]. EDUCATION: Reviewed disease facts, transmission, and symptoms. DISEASE COURSE: Client has history of [medical conditions] and started [symptoms] on [date]. Started [treatment] on [date]. HOUSEHOLD: HH contacts include [relationships]. All are [asymptomatic/symptomatic] [Include information about sensitive settings for HH contacts]. OCCUPATION: [job] TRAVEL HISTORY: [Include information about travel history within the past 2-3 weeks]. MAILING: Mailed fact sheet and cover letter to home address.*

3. Include a note for each occupation, activity, or other notification and any actions taken.

#### I. Closing a case

1. Ensure that all available information is entered into ODRS before closing. Close case and print record. Staple with investigation sheet and any related documents and file in the appropriate file drawer for the current year located in the CSRP office.

### VIII. Appendices

None

### IX. Reference/Investigation Forms

- A. Yellow Fever Disease Factsheet is located in S:\CSRP\SOGs\VHF.
- B. For additional information please refer to the ODH IDCM at [http://www.odh.ohio.gov/pdf/IDCM/yellow fever.pdf](http://www.odh.ohio.gov/pdf/IDCM/yellow%20fever.pdf)

### X. Maintenance

#### A. Review

1. The Infectious Disease standard operating procedures are to be reviewed every other year or as needed to ensure compliance with both agency and accreditation standards.
2. If guidance/recommendations from the Centers for Disease Control, Ohio Department of Health or law changes regarding this infectious disease, TLCHD will follow the most up-to-date guidance and adjust the SOP(s) as needed.

#### B. Revision

1. All changes made to this SOP are to be noted on the **Record of Change**. Substantial changes will require renewed signatures from all applicable parties. This includes changes to the intent, scope, procedures, or policy statement.
2. Changes in style, format, grammar or minor error correction will not require renewed signatures but must be indicated on the Record of Change.

## Record of Change

(Required for all procedures)

Date of Change	Changes Made By	Changes Made/Notes	Approved By