



## Infectious Disease SOP— Viral Hemorrhagic Fever (VHF)

<b>Original Effective Date:</b> <p style="text-align: center;">8/2008</p>	<b>Review / Revision Date:</b> <p style="text-align: center;">7/20/2017</p>	<b>Environmental Health Procedure:</b> <p style="text-align: center;">2017.07.017</p>
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**Maintenance Steward:** Epidemiology Supervisor      History:  New  Revised  Archived

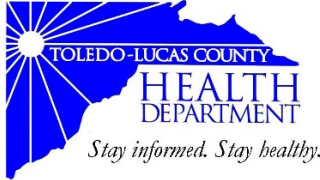
**Organizational Scope:**  
 Full Agency  Administration  Community Services  Environmental Health  Health Services

**Frequency of Review:**  
 Annually  Biennially  5 Years  As Needed  Other:

**Location:**  
*S-Drive:* S: → Users → Common → Policies & 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**

<input checked="" type="checkbox"/> <u></u> Medical Director	<u>8-19-17 7-20-17</u> Date
<input checked="" type="checkbox"/> <u></u> Health Commissioner	<u>07-20-17</u> Date
<input checked="" type="checkbox"/> <u></u> Director of Environmental Health & Community Services	<u>7/20/2017</u> Date



## Infectious Disease SOP— Viral Hemorrhagic Fever (VHF)

### 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 standard procedure applies to the Infectious Disease Program when investigating one case of viral hemorrhagic fever. When an outbreak occurs, call ODH ORBIT. In an outbreak, refer to the “Epi and Surveillance OB Procedure.”

### III. Purpose

This procedure/process establishes guidelines for viral hemorrhagic fever investigations. Per the Ohio Administrative Code (OAC) 3701-3, viral hemorrhagic 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

Viral hemorrhagic fever (VHF) refers to a group of illnesses that are caused by several distinct families of viruses. In general, the term “viral hemorrhagic fever” is used to describe a severe, multi-organ system syndrome. Common examples include: Ebola virus disease, Lassa fever, and Marburg hemorrhagic fever. VHF viruses are distributed throughout the world and each virus is associated with one or more nonhuman hosts, restricting natural occurrences of VHF to the areas inhabited by these species. The mode of transmission, source, and incubation period all depend on the specific type of virus being examined.

### V. Case Definition

#### A. Clinical Description

1. An illness with acute onset with ALL of the following symptoms:
  - a. A fever > 40°C
  - b. One or more of the following clinical findings:
  - c. Severe headache
  - d. Muscle pain
  - e. Erythematous maculopapular rash on the trunk with fine desquamation 2-4 days after onset of rash
  - f. Vomiting
  - g. Diarrhea
  - h. Pharyngitis
  - i. Abdominal pain
  - j. Bleeding not related to injury

- k. Retrosternal chest pain
- l. Proteinuria
- m. Thrombocytopenia

**B. Laboratory Criteria for Diagnosis**

1. One or more of the following laboratory findings:
  - a. Detection of VHF viral antigens in blood by enzyme-linked immunosorbant assay (ELISA) antigen detection
  - b. VHF viral isolation in cell culture for blood or tissues
  - c. Detection of VHF-specific genetic substance by Reverse Transcriptase Polymerase Chain Reaction (RT-PCR) from blood or tissues
  - d. Detection of VHF viral antigens in tissue by immunohistochemistry

**C. Criteria for Epidemiologic Linkage**

1. One or more of the following exposures within the 3 weeks before onset of symptoms:
  - a. Contact with blood or other body fluids of a patient with VHF
  - b. Residence in or travel to a VHF endemic area
  - c. Work in a laboratory that handles VHF specimens
  - d. Work in a laboratory that handles bats, rodents, or primates from endemic areas
  - e. Exposure to semen from a confirmed acute or convalescent case of VHF within 10 weeks of that person's onset of symptoms

**VI. Case Classification**

**A. Suspect:**

1. Case that meets clinical and epidemiologic linkage criteria

**B. Confirmed:**

1. Case that meets the clinical and laboratory criteria

**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
- 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, occupation, pertinent test results, animal contact, and travel history. This includes potential contact with rodents, mice, ticks, and mosquitoes.
    - i. If there are multiple cases, consider terrorist activity.
      - 1) Call JTTF/FBI Immediately if terrorist activity is suspected
        - a) Local FBI Contact: Louie Espinosa—419-779-6600 or [lespinosa@fbi.gov](mailto:lespinosa@fbi.gov)
  - 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/VHF.pdf>. This information is also located in S:\CSRP\SOGs\VHF.
      - 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) Additional important information to elicit includes names of all close contacts of the ill individual for 21 days prior to the illness symptoms. Contacts should be isolated and active surveillance completed by having body temperature recorded twice a day for 3 weeks. Contacts with a temperature greater than 100.4 degrees F should be hospitalized.
      - 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.)
  - d. Once information is obtained about case, inform the following agencies, as VHF is a select agent reportable under 7CFR Part 331, 9 CFR Part 121, and 42 CFR Part 73:
    - i. Local FBI Contact: Louie Espinosa—419-779-6600 or [lespinosa@fbi.gov](mailto:lespinosa@fbi.gov)
- 3. Treatment
  - a. Supportive therapy should be provided.
  - b. Ribavirin is an antiviral drug that has been used with success in Lassa fever patients.
- 4. Isolation/Follow Up Specimens
  - a. Ohio Administrative Code (OAC) 3701-3-13 (DD) states: “a person with suspected or confirmed viral hemorrhagic fever shall be placed in airborne isolation until no longer considered infectious.”
  - b. Clinicians evaluating suspect cases should use standard (e.g. hand hygiene), airborne (e.g. N-95 respirator) and contact (e.g. gloves and gowns) precautions.
- 5. Prophylaxis
  - a. With the exception of yellow fever and Argentine hemorrhagic fever, no vaccines exist that can protect against VHF diseases.

6. Contacts (Exclusion)
  - a. There is currently no post-exposure prophylaxis available for individuals exposed to these agents.
7. Notification
  - a. Notify TLCHD contacts immediately after investigation with patient (in sequential order)
    - i. Supervisor of Epidemiology
    - ii. Director of Community Services and Environmental Health
    - iii. Medical Director
    - iv. Health Commissioner
  - b. Hospitals should be advised not to attempt to culture any specimens. The hospital should hold on to any specimens and ODH will coordinate shipping to a public health laboratory. Additional specimens may be requested from CDC.
  - c. 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.
8. Documentation
  - a. Enter information into ODRS as it is obtained.
  - b. 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.*
  - c. Include a note for each occupation, activity, or other notification and any actions taken.
9. Closing a case
  - a. 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 CSR office.

## VIII. Appendices

None

## IX. Reference/Investigation Forms

- A. VHF Disease Factsheet is located in S:\CSR\SOgs\VHF.
- B. For additional information please refer to the ODH IDCM at <http://www.odh.ohio.gov/pdf/IDCM/VHF.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