12/8/2014

Lewis & Clark

Bloodborne Pathogens Exposure Control Plan

Bob Tomlin
LEWIS & CLARK COLLEGE

Lewis & Clark
Bloodborne Pathogens
Exposure Control Plan

Last revision date: December 5, 2014

The administration of Lewis & Clark is committed to the prevention of incidents or accidents that will result in injury and illness, and to comply with the Oregon OSHA Bloodborne Pathogens Standard, OAR 437-02-1910.1030; and through this written exposure control plan, share responsibility to ensure performance under that responsibility. Lewis & Clark adopts this exposure control plan as an element of its Safety and Health Policy and Procedures.

A. *PURPOSE*

The purpose of this exposure control plan is to:

1. Eliminate or minimize employee occupational exposure to human blood or other potentially infectious materials (hereafter referred to as OPIM). OPIM includes:
   a. Urine
   b. Feces
   c. Synovial fluid
   d. Amniotic fluid
   e. Lymphatic fluid
   f. Pericardial fluid
   g. Cerebral-spinal fluid
   h. Semen
   i. Saliva
   j. Vaginal secretions
   k. Vomitus
   l. Pus

2. Identify employees occupationally exposed to blood or OPIM while performing their regular job duties.

3. To provide employees exposed to blood and OPIM information and training. A copy of this plan is available to all employees during normal work hours at Facilities Services (Building 47), Risk Management Office, Room 206.

4. Comply with the Oregon Bloodborne Pathogens Standard, OAR 437-02-1910.1030.

A. *EXPOSURE DETERMINATION*

Lewis & Clark has performed an exposure determination for all common job classifications that may be expected to incur occupational exposures to blood or OPIM. This determination was made without regard to the use of Personal Protective Equipment (hereafter referred to as PPE). The following lists those job classifications in this category.

1) Health Services nurse practitioners
2) Health Services nurses both registered and limited practical
3) Health Services medical assistants
4) Health Services laboratory technologists
5) Health Services physicians
6) Health Services office manager

The following is a list of job classifications in which some employees may have occupational exposures. Not all of these employees are expected to incur exposure to blood or OPIM. The job classification, tasks, and procedures are listed below.

Job Classification	**Task/Procedure**
1) Campus Living department Resident Advisors	First aid-collateral duty
2) Campus Living department Area Directors	First aid-collateral duty
3) Campus Safety Officers.	First aid-collateral duty
4) Physical Education/Athletics Trainers	First aid-collateral duty
5) Physical Education/Athletics Lifeguards	First aid-collateral duty
6) Facilities Services personnel	Handling sharps
7) Animal laboratory personnel	Handling sharps

B. ***COMPLIANCE METHODS***

1. Universal Precautions

Universal precautions recognize all body fluids as though they are contaminated with bloodborne pathogens. This method of infection control requires the employer and employee to assume that all human blood and specified human body fluids are infectious for Human Immunodeficiency Virus (hereafter referred to as HIV) and Hepatitis B Virus (hereafter referred to as HBV), and other bloodborne pathogens. Where differentiation of types of body fluids is difficult or impossible, all body fluids are to be considered as potentially infectious.

2. Engineering Controls and Work Practices

Engineering controls:

- Self-sheathing hypodermic syringes

- Puncture-resistant disposal containers for contaminated sharps, orthodontia wire, or broken glass
- Mechanical needle recapping devices
- Bio-safety cabinets

Work practice controls:

- Providing readily accessible hand washing facilities
- Washing hands immediately after glove removal
- Equipment sterilization/decontamination
- Prohibiting eating, drinking, or smoking in work areas were there is a likelihood of exposure to bloodborne pathogens or OPIM

Engineering controls and work practice controls will be used by all employees to eliminate or minimize occupational exposure at Lewis & Clark. The following engineering controls must be followed:

1. Sharps containers must:

    a. Be puncture resistant
    b. Be properly labeled/color-coded for biohazards
    c. Be leak proof
    d. Not allow employees to reach into the container by hand
    e. Be conveniently located within the work area
    f. Maintained in an upright position
    g. Be replaced routinely and not allowed to overfill

3. Storage, transportation or shipping containers must:

    a. Be closeable
    b. Be properly labeled or color-coded for biohazards.
    c. Be leak proof
    d. Be puncture resistant

The following are work practices that must be followed by employees with occupational exposure:

1. Wash hands with soap and water immediately or as soon as possible after removing gloves or other protective equipment.

2. Flush mucous membranes with water immediately or as soon as possible following contact of body areas with blood or OPIM.

3. Do not bend, recap or remove contaminated needles unless no alternative is feasible or such action is required by a specific medical

procedure. The preferred method is to place contaminated needles in the sharps container immediately after use.

4. Do not shear or break contaminated needles.

5. Immediately close sharps containers when full. Place in a secondary container if leakage is possible.

6. Do not eat, drink, smoke, apply cosmetics, apply lip balm, or handle contact lenses in work areas where there is a likelihood of occupational exposure.

7. Do not keep food and drink in refrigerators, freezers, shelves, cabinets, or on countertops or bench tops where blood or OPIM are present.

8. Perform procedures involving blood or OPIM to minimize splashing, spraying, spattering, and generation of droplets.

9. Do not pipette blood or OPIM by mouth suction.

10. Place blood or OPIM only in containers that prevent leaks during collection, handling, processing, storage, transport, or shipping.

11. If a specimen could puncture a container, it must be placed in a puncture resistant secondary container.

12. Examine and properly decontaminate, if feasible, all equipment prior to serving or shipping.

13. Attach a warning label to all parts or equipment that remain contaminated, and make sure all affected employees, the servicing representative and/or manufacturer, as appropriate are informed of its status.

14. Wear gloves when you anticipate hand contact with blood OPIM, mucous membranes, and non-intact skin, and when you perform vascular access procedures and/or handle or touch contaminated items or surfaces.

15. Remove disposable gloves as soon as possible when contaminated or as soon as possible when torn, punctured or ineffective as a barrier. Never wash disposable gloves for re-use.

16. Properly decontaminate utility gloves before re-using. Discard utility gloves if they are cracked, peeling, torn, punctured, or exhibit other signs of deterioration.

17. Remove garments immediately or as soon as possible if they are penetrated by blood or OPIM.

18. Remove all personal protective equipment before leaving the work area.

19. Place used personal protective equipment only in designated areas or containers for storage, washing, decontamination, or disposal.

20. Do not pick up broken glassware directly with the hands. Use mechanical means such as a dustpan and broom, tongs, or forceps.

3. Personal Protective Equipment (PPE)

The following PPE will be provided at not cost to employees:

a. Body protection: gown, smocks, lab coats (Health Services staff only)
b. Gloves: natural rubber latex (all subject employees)
c. Face masks: (all subject employees)
d. Eye protection: (Health Services staff only)

The directors of departments with subject employees are responsible for issuing appropriate, readily accessible, PPE, without cost to the employees. Hypoallergenic gloves, glove liners, or powderless gloves, or other similar alternatives will be issued to employees who are allergic to the gloves normally provided.

All PPE will be removed prior to leaving the work area. All PPE will be cleaned, laundered, and disposed of by Lewis & Clark at no cost to the employee. PPE, when removed, will be placed in the disposal room of the Health Center, basement, Templeton Student Center.

4. Housekeeping

A. General Housekeeping Procedures:

All equipment and environmental and working surfaces will be cleaned and decontaminated using appropriate disinfectants as soon as feasible after any contact with blood or OPIM.

Protective coverings will be used to cover equipment and environmental surfaces and will be removed/replaced when contaminated or at the end of the workday.

Skyline Building Maintenance will clean the Health Center in all patient treatment/examining areas on a daily basis.

B. Regulated Waste:

Contaminated sharps and other regulated waste will be discarded using only approved containers that are sturdy, leak proof, and appropriately labeled. Where there is risk of the container contents puncturing the container it will be placed in secondary puncture-resistant container.

C. Contaminated Laundry:

Contaminated laundry shall be handled as little as possible with minimum agitation. It must be bagged or containerized where it was used and must not be sorted or rinsed where it was used.

Contaminated laundry must be placed and transported in bags or containers that are properly labeled for biohazards.

When contaminated laundry is wet and could possibly soak through or leak from a bag or container, it must be placed in leak-proof bags or containers.

Employees will wear proper PPE when handling contaminated laundry.

5. Hepatitis B Vaccine, Post-Exposure Evaluation, and Follow-up:

A. Hepatitis B Vaccination:

Lewis & Clark will offer at no cost to exposed employees the HBV vaccination series, and the post-exposure follow-up to those who have had an exposure incident within 10 workdays. The Medical Coordinator of the Student Health Service is in charge of administering the HBV vaccinations.

The Medical Coordinator of the Student Health Service will ensure that all medical evaluations and procedures including the hepatitis B vaccine and vaccination series and post-exposure follow-up, including prophylaxis are:

1) Made available at no charge to the employee, at a reasonable place and time.
2) Performed or supervised by a licensed healthcare professional according to CDC recommendations.

B. Post-Exposure Evaluation and Follow-up:

When an employee has an exposure incident, it will be reported to the Lewis & Clark Risk Management Coordinator.

Following a reported exposure incident, the exposed employee will immediately receive a confidential medical evaluation that will include the following elements:

1) It is at no cost to the employee.
2) It is made available at a reasonable time and place.
3) It is performed by/or under the supervision of a licensed physician or healthcare professional, and
4) Provided according to recommendations of the U.S. Public Health Service current at the time evaluations and procedures take place.
5) All sample analysis is performed at an accredited laboratory at no cost to the employee.

All employees who incur an exposure incident will be offered post-exposure evaluation and follow-up. All post-exposure follow-ups will be performed by the Oregon Health Sciences University.

C. Information Provided to the Healthcare Professional

The Risk Management Coordinator will ensure that the healthcare professional responsible for the employee's hepatitis B vaccination is provided with the following:

1) A copy of OAR 437, Division 2, Subdivision Z, Toxic and Hazardous Substances, Bloodborne Pathogens (29CFR 1910.1030)

2) A description of the exposed employee's duties as they relate to the exposure incident.

3) Documentation of the route(s) of exposure and circumstances under which exposure occurred.

4) Results of the source individual's blood testing, if available; and

5) All medical records relevant to the appropriate treatment of the employee including vaccination status.

D. **Healthcare Professional's Written Opinion**

The Risk Management Coordinator will obtain and provide the employee with a copy of the evaluating healthcare professional's written opinion with 15 days of the completion of the evaluation.

The healthcare professional's written opinion for HBV vaccination will be limited to whether HBV is indicated for an employee, and if the employee has received such vaccination.

6. **Communication of Hazards**

1. **Labels and Signs.** The Medical Coordinator of the Student Health Services will ensure that biohazard labels are on each container of regulated waste according the section g of the standard.

   Warning labels must be affixed to all containers, including refrigerators and freezers containing blood or OPIM. Refer to the standard for label design requirements.

2. Information and Training

The Risk Management Coordinator will ensure training is provided at the time of initial assignment to tasks where occupational exposure to blood or OPIM may occur, and that it shall be repeated annually. Said training will occur so as to be paid time for the employees attending. Training will include:

1) The regulation (29CFR 1910.1030).
2) Epidemiology and symptoms of bloodborne pathogens.
3) Modes of transmission of bloodborne pathogens.
4) The exposure control plan.
5) Methods for recognizing tasks that involve potential exposure to blood or OPIM.
6) Universal precautions (engineering controls, work practices, and PPE).
7) Proper decontamination and disposal procedures.
8) Appropriate PPE.
9) HBV vaccination.
10) Emergency actions regarding blood and OPIM.
11) Exposure incident procedures.
12) Post-exposure and follow-up.
13) Signs/labeling for regulated waste.

EXPOSURE CONTROL SAFETY RULES

1. If hand washing facilities are not available use antiseptic hand cleaner in conjunction with clean paper towels or antiseptic towelettes and wash hands with soap and water as soon as possible.

2. Wash hands immediately or as soon as feasible after removal of gloves or other PPE.

3. Wash hands and any other skin with soap and water, or flush mucous membranes with water immediately or as soon as possible after contact with blood or OPIM.

4. Contaminated needles will not be bent, recapped, broken, or sheered. All needles used are single use, disposable needles. After use they will immediately be placed in sharp's containers.

5. Eating, smoking, drinking, or the application of cosmetics or lip balm is not allowed in work areas where there is any likelihood of exposure to blood or OPIM.

6. Refrigerators containing blood or OPIM specimens will not be used to store food or drink.

7. Mouth pipetting/suctioning of blood or OPIM will not be used.

Lewis & Clark
Hepatitis B Vaccination & Declination Form

Dear Colleague,

As a result of a risk assessment of your functional job activities it has been determined that you are at risk of work related exposure to hepatitis B virus (HBV), a serious and potentially life-threatening illness. By this letter Lewis & Clark hereby offers you vaccination with HBV vaccine. This vaccine would be administered in three injections over a six month period and is offered **at no cost to you.** This is not mandatory. Your options are:

- ☐ Receive the vaccine (schedule an appointment at the Student Health Center).
- ☐ Receive a titers blood draw to test for HBV antibodies if you think you may already have been vaccinated (also at the Student Health Center and also **at no cost to you**).
- ☐ Decline vaccination.

Please indicate your choice by checking **ONE** of the boxes above. Declining vaccination is appropriate if you are absolutely certain HBV vaccination has already been received. If in doubt, titers is recommended. If you are declining vaccination, please carefully read the following:

> I understand that due to my occupational exposure to blood or other potentially infectious materials I may be at risk of acquiring hepatitis B virus (HBV) infection. I have been given the opportunity to be vaccinated with hepatitis B vaccine, at no charge to myself. However, I decline hepatitis B vaccination at this time. I understand that by declining this vaccine, I continue to be at risk of acquiring hepatitis B infection, a serious disease. If, in the future, I continue to have occupational exposure to blood or other potentially infectious materials and I want to be vaccinated with hepatitis B vaccine, I can receive the vaccination series at no charge to me.

Please print your name, date, and sign this form and return it to: Risk Management, Mailstop Code 76, Facilities Services.

_____ _____

Name (please print) Date

_____

Signature

Addendum – Ebola Procedures
Source – CDC Infection Control for Viral Hemorrhagic Fevers in the African Healthcare Setting

NOTE: To conform with CDC terminology the term viral hemorrhagic fever (VHF) is used to denote Ebola and other filoviruses such as Marburg.

The principles for handling VHFs is in its broadest sense the same as other bloodborne pathogens. When confronted with any blood or OPIM from an unknown source it will be assumed to be capable of causing illness.

Standard Precautions (to be used with all patients)

Health workers throughout the world are aware of the risks for transmitting human immunodeficiency virus (HIV) and hepatitis viruses in the health care setting. Many use precautions (such as wearing gloves) for preventing contact with infected blood.

Other dangerous diseases are also transmitted through contact with blood or other body fluids and pose a significant risk in the health care setting. For instance, a patient with a VHF may come to the health facility at any point in his or her illness when the possibility of exposure is often highest, and before the specific cause of the patient's illness is not known. Because a health worker cannot always know when a patient's body fluids are infectious, Standard Precautions should be used with all patients in the health care setting, regardless of their infection status.

Standard Precautions are designed to prevent unprotected contact between the health care worker and:

- Blood and all body fluids whether or not they contain blood
- Mucous membranes.

When a specific diagnosis is made, additional precautions are taken, based on how the disease is transmitted.

Establish and Maintain a Minimum Level of Standard Precautions

The minimum level is essentially the same for all Bloodborne pathogens including VHFs; namely, until one knows with certainty that a patient is not infected the assumption is that they are. Impermeable barriers must be put in place between the caregiver and the patient. Usually this will consist of gloves, eye protection, respiratory protection and lab or examination clothing.

One time use, disposable protective equipment is preferred. Reason: it eliminates the need for laundering and disinfection and thus reduces the handling of blood or OPIM.

At a minimum, consider the services in the health facility that present a risk of disease transmission due to potential contact with blood and all body fluids, broken skin or mucous membranes.

For health facility staff who work in such areas, establish at least:

- A source of clean water
- Routine hand washing before and after any contact with a patient who has fever
- Safe handling and disposal of sharp instruments and equipment, including needles and syringes.
-

Establish Routine Hand washing

Hand washing is the most important precaution for the prevention of infections.

Hand washing before and after contact with a patient who has fever should be a routine practice in the health facility — even when VHF is not present. Washing hands with soap and water eliminates microorganisms from the skin and hands. This provides some protection against transmission of VHF and other diseases.

In services where health care workers see patients with fever, provide at least:

- Soap
- Soap dishes with holes to allow water to drain from the bottom (if using cake soap)
- Clean, running water
- Dish washing facilities
- One-use, disposable towels

Make sure health facility staff know the steps of hand washing:

1. Place a piece of soap in the palm of one hand.

2. Wash the opposite hand and forearm. Rub the surfaces vigorously for at least 10 seconds. Move soap to the opposite hand and repeat.

3. Use clean water to rinse both hands and then the forearms.

4. Dry the hands and forearms with a clean, one-use towel. First dry the hands and then the forearms. Or let rinsed hands and forearms air-dry.

Handle and Dispose of Sharp Instruments Safely

Disease transmission can occur through accidental needlestick injuries. Make sure health facility staff always handle sharp instruments safely. Do not recap needles after use. Limit invasive procedures to reduce the number of injectable medications. This will limit the opportunities for accidental needlestick injuries.

When an injection ***is*** necessary, always use a sterile needle and sterile syringe for each injection.
To discard disposable needles and syringes safely: Disposable needles and syringes should be used only once. Discard the used disposable needle and syringe in a puncture-resistant container. Then burn the container in an incinerator or pit for burning.

If puncture-resistant containers are not available, use empty water, oil, or bleach bottles made with plastic or other burnable material. Adapt them for use as puncture-resistant containers.

Disinfect Reusable Needles and Syringes Safely

Reusable needles and syringes are ***not*** recommended. If reusable needles and syringes are used, clean, disinfect and sterilize them before reuse, according to Student Health Center policy.

Note: Needles and syringes used with VHF patients require special care. Cleaning staff should wear two pairs of gloves when handling needles and syringes used with any patient with a known or suspected VHF.

Disinfect Disposable Needles and Syringes That Must Be Reused

Remember! Whenever possible, use disposable needles and syringes only once and then discard them safely.

In situations when disposable needles and syringes ***must*** be reused, make sure they are cleaned and disinfected after each use. Disinfection with bleach will reduce the risk of transmission of VHF and blood-borne diseases, such as HIV infection and viral hepatitis.

1. Obtain a jar or pan. Clean and disinfect it. Use it in Step 8 to store the disinfected needles and syringes.

2. Place the disposable needle and syringe in a pan of soapy water after use. Fill the needle and syringe with soapy water. Leave them to soak until they are cleaned.

3. Take the soaking needles and syringes to the cleaning area.

4. Clean them very carefully in soap and water. Remove any blood or OPIM, especially from the area around the syringe fittings. Blood or OPIM may collect in these small openings.

5. Draw full-strength bleach into the needle and syringe.

6. Soak for 30 seconds, and then expel bleach into a container for contaminated waste.

7. Soak again by once more drawing full-strength bleach into the needle and syringe. Soak for 30 seconds, and then expel bleach into the container for contaminated waste.

8. Let the disinfected needle and syringe air-dry. Store them in a clean jar or pan that has been disinfected.

Use VHF Isolation Precautions

When a VHF is suspected, those health facility staff who will have contact with the patient or with the patient's blood or OPIM should intensify Standard Precautions and use VHF Isolation Precautions.

As soon as a case of VHF is suspected in the health facility, alert authorities and start VHF Isolation Precautions.

USE VHF ISOLATION PRECAUTIONS

Regular in-service training will strengthen skills for using VHF Isolation Precautions. When a VHF is suspected, efforts will have to be focused on providing care. There will not be enough time or opportunity to provide initial training in skills for VHF Isolation Precautions.

If health facility staff already know how to use VHF Isolation Precautions when a VHF is suspected, authorities can be alerted and VHF Isolation Precautions started without delay. If health facility staff do not know how to use VHF Isolation Precautions when a VHF case is suspected, training will need to take place immediately.

Steps of VHF Isolation Precautions

1. Isolate the patient.

2. Wear protective clothing in the isolation area, in the cleaning and laundry areas and in the laboratory. Wear a scrub suit, gown, apron, two pairs of gloves, mask, headcover, eyewear, and rubber boots.

3. Clean and disinfect spills, waste, and reusable equipment safely.

4. Clean and disinfect soiled linens and laundry safely.

5. Use safe disposal methods for non-reusable supplies and infectious waste.

6. Provide information about the risk of VHF transmission to health facility staff. Reinforce use of VHF Isolation Precautions with all health facility staff.

7. Provide information to families and the community about prevention of VHFs and care of patients.

Select a VHF Coordinator

- Many health facilities already have an emergency coordinator or emergency team who could assume the role of a "VHF Coordinator." The "VHF Coordinator" will:

- Oversee advance preparations and ensure that health facility staff are prepared to use VHF Isolation Precautions.

- Serve as the focal point and coordinate activities when a VHF case is suspected.

- Take the lead in mobilizing the community when an urgent situation occurs. Once a staff person is identified to serve as the VHF Coordinator, he or she can review the recommendations in this manual and begin preparations. The VHF Coordinator can also encourage efforts to strengthen and reinforce the routine practice of a basic level of Standard Precautions with all patients.

Remember! Using a minimum level of Standard Precautions routinely will prevent transmission of contagious diseases, such as HIV infection, viral hepatitis and VHF.

Identifying Suspected Cases of VHF

In an outbreak situation, several cases occur around the same time. They may be grouped together, and there may be person-to-person transmission. An initial diagnosis of a VHF can be made based on the signs and symptoms of the specific VHF.

Suspecting a VHF during a non-outbreak situation in a single case is more difficult. The early symptoms of a VHF include high fever and headache. These are also symptoms for many infections that would be seen at the health facility. Bear in mind, that most patients who present with fever will not have VHF.

The health worker probably will not suspect a VHF until more severe signs develop and the patient does not respond to recommended treatment for other illnesses.

However, health workers should be aware of the possibility for suspecting a VHF in a non-outbreak situation. As soon as a VHF is suspected, VHF Isolation Precautions should begin. This will help reduce the number of people exposed to the VHF.

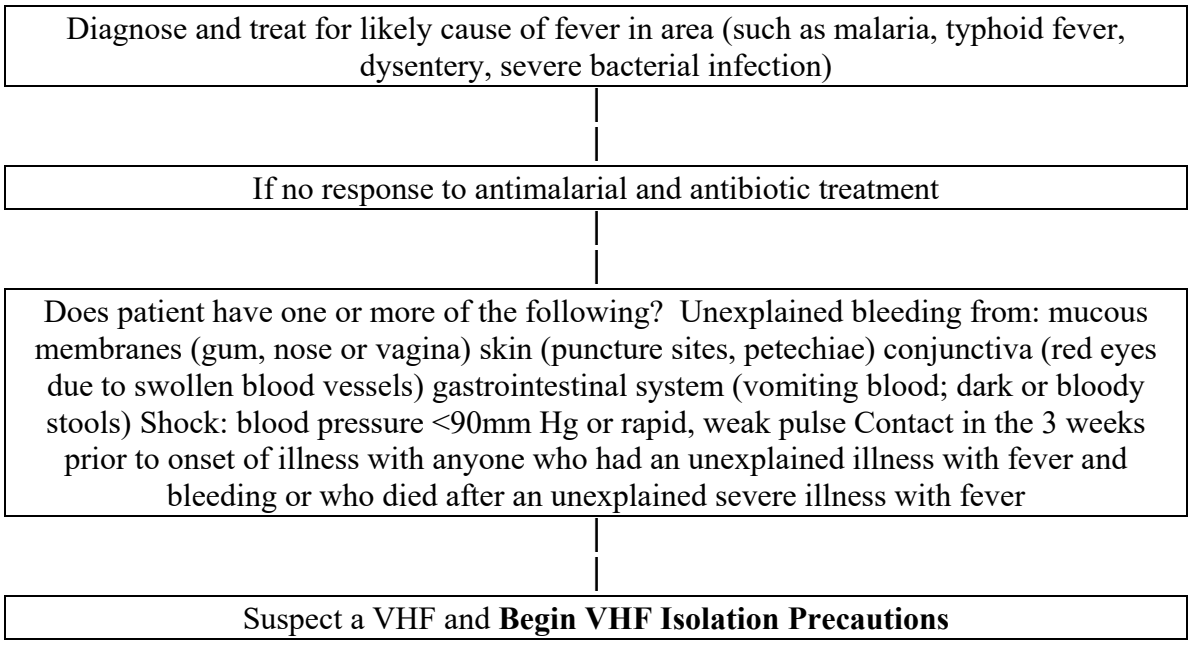
Use Information from Previous Outbreaks to Suspect a VHF

When a patient presents with fever, use the available diagnostic tools in your health facility to identify or exclude the cause of fever. For example, a student who recently traveled to West Africa it would be prudent to do a malaria smear or take a stool culture.

- Treat the most likely cause of the fever according to the appropriate treatment guidelines.
- If the fever continues after 3 days of recommended treatment, and if the patient has signs such as bleeding or shock, consider a VHF.
- Review the patient's history for any contact with someone who was ill with fever and bleeding or who died from an unexplained illness with fever and bleeding.
- If no other cause is found for the patient's signs and symptoms, suspect a VHF. Begin VHF Isolation Precautions.

Use Isolation Precautions for Suspected VHF Cases

Severe illness with weakness and fatigue Measured fever (38.5oC or 101oF) for more than 72 hours and less than 2 weeks



Begin VHF Isolation Precautions

The designated VHF Coordinator will carry out the following functions:

- Refer the patient to the isolation area and take the necessary steps to begin VHF Isolation Precautions.
- Limit the number of health facility staff and visitors in the patient's room.
- Limit the use of invasive procedures and reduce the number of injectable medications.

Important! Between the time when VHF is suspected and when the patient is received in the isolation area, there is a risk for disease transmission from the patient's blood and OPIM (stool, urine, vomit, etc.). Prevent disease transmission to other patients, visitors and health staff in the waiting area by placing the suspected VHF patient apart from other patients. Make every effort to reduce this waiting time.

Alert Health Facility Staff about Specific Risks for VHF Transmission

As soon as a VHF is suspected, alert the relevant health staff who should begin using VHF Isolation Precautions, especially:

- Doctors or nurses providing direct patient care
- Cleaning, laundry, and waste disposal staff who clean and disinfect contaminated material and supplies

- Laboratory staff who handle samples from the suspected VHF cases
- Medical or support staff who prepare or handle deceased VHF patients.

Explain how VHF transmission can occur in the health facility and the risks to health facility staff. Remind the staff that VHF is a highly infectious disease. They must use VHF Isolation Precautions whenever they have contact with the VHF patient, the patient's blood or OPIM, or contaminated supplies and equipment. Specific precautions to be taken:

1. Wash hands frequently
2. Isolate the patient
3. Wear protective clothing
4. Dispose of sharps safely
5. Dispose of dead bodies safely

Report the Suspected Case to the Health Authorities

Within the City of Portland, VHF cases should be reported to:

The Multnomah County Health Department
426 SW Stark St., 8th Floor
Portland, OR 97204
Phone: 503-988-3674
(after hours) 503-988-3604

Identify Patient's Contacts and Travel History

Ask the patient (or a family member who can answer for the patient):

- Where do you live?
- When did the symptoms begin?
- Who else is sick in your family (or community)?
- Where have you travelled recently?

Use the answers to identify others who had contact with the patient. Provide them with information about VHF and when to seek care.