Health Advisory:
Evaluating, reporting and managing suspect Ebola Virus Disease cases

Situation

An epidemic of Ebola Virus Disease (EVD) is ongoing in several West African countries (currently Guinea, Liberia, Sierra Leone, and Nigeria). As of 28 August 2014, CDC has reported 3069 confirmed and suspected cases and over 1,552 deaths. A separate recent outbreak in the Democratic Republic of Congo does not have a clear link with the outbreak in West Africa. The situation creates the potential for EVD in the U.S. among persons traveling from the epidemic areas.

Ebola does not pose a significant public health risk in the United States. Nevertheless, health care providers in San Joaquin County (SJC) should be aware of how to evaluate, report, and manage suspect EVD patients. Healthcare workers and others traveling from the epidemic area may present for medical care with symptoms compatible with EVD. Knowing the right approach is critical to reduce the risk of transmission and to provide optimal care. Recommendations for assessment and management, based on the guidance from the CDC, are provided in an algorithm attached to this health advisory.

Current science clearly shows that people cannot get EVD through air, food, or water. Ebola virus is transmitted through direct contact with the blood or bodily fluids of an infected symptomatic person or though exposure to sharp objects (such as needles) that have been contaminated. Persons are not contagious until they develop symptoms. The virus is detected in blood only after onset of symptoms, most notably fever. Effective isolation of patients and appropriate infection control measures applied to any suspect EVD patient will contain any potential spread.

Actions requested of providers
Review the Assessment and Management of Persons with Potential EVD using the attached algorithm. The algorithm and associated tables 1-5 provide step-by-step guidance regarding the assessing, diagnosing, managing, and reporting of suspect EVD cases in SJC. Key actions include:

- Consider EVD in any patient who presents ill within 21 days of working or traveling in the epidemic area (as of August 29, 2014, defined as Guinea; Liberia; Sierra Leone; and Lagos, Nigeria).
- Assess the patient’s level of exposure, symptoms, and signs to guide management, testing and reporting. During evaluation, keep patients in a single room (with a bathroom and, preferably, an anteroom) with the door closed; limit entry and maintain a log of people who enter the room; use standard, contact and droplet precautions; and perform only essential diagnostic laboratory testing.
- Report immediately all suspect EVD cases to the SJC Public Health Services (PHS) Communicable Disease Unit (CDU) at 209-468-3822 (nights/weekends: 209-468-6000). Suspect cases are all persons with a positive travel history who have signs and symptoms of EVD, who have either high- or low-risk EVD exposures.

Additional Resources

- U.S. Centers for Disease Control and Prevention (CDC):
  More information and a full range of guidance documents can be found at the CDC Ebola Web site: http://www.cdc.gov/vhf/ebola/index.html, including information for (not complete list):
  Healthcare professionals: http://www.cdc.gov/vhf/ebola/hcp/index.html
- World Health Organization Disease Outbreak News:
Evaluation of Persons for Potential Ebola Exposure and Illness
San Joaquin County Public Health Services (PHS) Communicable Disease Unit (CDU)

This algorithm provides guidance for clinicians evaluating a patient for suspect Ebola virus disease (EVD). Evaluation for suspect EVD should be limited to persons who have traveled or worked in the epidemic areas during the previous 21 days (see Table 1). Persons who have not been in the epidemic areas during this period are not at risk for EVD and should be evaluated for other causes of illness. Updated information is available on the CDC website (http://www.cdc.gov/vhf/ebola/hcp/index.html), should the epidemic areas change.

Persons with a positive travel history should be evaluated for fever and other symptoms, and for exposure to EVD patients, as described in the algorithm below. During evaluation, keep patients in a private room with the door closed; limit entry and maintain a log of people who enter the room; use standard, contact and droplet precautions; and perform only essential diagnostic and laboratory testing. All persons classified as high- and low-risk should be reported immediately to the CDU (weekdays: 209-3822; nights/weekends: 209-468-6000). Persons with a positive travel history, no identified risk factors and no symptoms should be reassured and told to self-monitor for fever or other symptoms and return for care as needed. Reporting is not required for those with no identified risks and who are asymptomatic.

Laboratory testing for suspect EVD is available at the CDC. Consultation with CDU staff is required for testing; instructions and assistance in specimen collection and handling will be provided by the PHS public health laboratory.

Algorithm for assessment and management of persons with suspect EVD

- **Travel to risk area in past 21 days (T 1*)**
  - No
    - No EVD; evaluate patient for other illnesses
  - Yes
    - Hemorrhage & multi-organ failure (T 3.3)
      - No
        - Exposure Risk (T 2)
          - High-risk (T 2.1)
            - Symptoms (T 3.1-3.2)
              - Isolate (T 4.1); Contact CDU for guidance on testing (T 5) and contact tracing
          - Low-risk (T 2.2)
            - No symptoms
              - Conditional release; control movement for 21 d after last exposure (T4.2-4.3)
          - No identified risk (T 2.3)
            - Symptoms (T 3.1-3.2)
              - Isolate (T 4.1); Contact CDU to determine if testing (T 5) and contact tracing is indicated
              - Conditional release; control movement for 21 d after last exposure (T 4.2-4.3)
            - No symptoms
              - Medical evaluation in consultation with CDU
              - No restrictions; Self-monitor 21 d post-travel (T 4.4); return for care if symptoms

*Refer to designated table (T) and column or row as indicated
**Tables 1-5: Assessment and management of persons with potential EVD**

### Table 1. EBOLA RISK AREAS

Current outbreak (as of 8/29/14): Guinea; Liberia; Sierra Leone; and Lagos, Nigeria

### Table 2. EXPOSURE RISK

<table>
<thead>
<tr>
<th>1 - High risk</th>
<th>2 - Low risk</th>
<th>3 - No identified risk</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percutaneous (e.g., needle stick) or mucous membrane exposure to body fluids of an EVD patient</td>
<td>Household member or other casual contact with an EVD patient</td>
<td>No known low-risk or high-risk exposures</td>
</tr>
<tr>
<td>Direct care of an EVD patient or exposure to body fluids without appropriate personal protective equipment (PPE)</td>
<td>Providing patient care or casual contact without high-risk exposure with EVD patients in health care facilities in outbreak-affected countries</td>
<td></td>
</tr>
<tr>
<td>Laboratory worker processing body fluids of confirmed EVD patients without appropriate PPE or standard biosafety precautions</td>
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<tr>
<td>Participation in funeral rites which include direct exposure to human remains in the geographic area where outbreak is occurring without appropriate PPE</td>
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### Table 3. SYMPTOMS AND SIGNS

1 - **Fever:** T ≥ 38.6°C / 101.5°F or subjective history of fever

2 - **Other symptoms:** Headache, joint and muscle aches, abdominal pain, weakness, diarrhea, vomiting, stomach pain, lack of appetite, rash, red eyes, hiccups, cough, chest pain, difficulty breathing, difficulty swallowing, bleeding internally or externally

3 - **Hemorrhage and multi-organ failure:** Bleeding from GI tract or other sites, shock, DIC, renal failure, hemodynamic instability, or other symptoms/signs of severe illness

### Table 4. ISOLATION AND MOVEMENT RESTRICTIONS

1 - **Isolation:**
   - Single patient room with the door closed; limit entry of personnel to room
   - Standard, contact and droplet precautions
   - Limit phlebotomy and only perform essential diagnostic and clinical laboratory tests.
   - PPE – Gloves, gown, eye protection (goggles or face shield); facemask; additional PPE if copious blood or other fluid in the environment would include double gloving, disposable shoe covering, leg covering. Discard PPE on leaving room taking care to avoid contamination when removing; hand hygiene immediately after removing PPE
   - Aerosol generating procedures – Limit procedures as possible. If procedures required, conduct in a private room and ideally in an Airborne Infection Isolation Room (AIIR). Personnel should use respiratory protection that is at least as protective as a NIOSH certified fit-tested N95 filtering facepiece respirator or higher (e.g., powered air purifying respiratory or elastomeric respirator)

2 - **Conditional release:** Daily monitoring by public health authority; twice-daily self-monitoring for fever; notify public health authority if fever or other symptoms develop

3 - **Controlled movement:** Notification of public health authority; no travel by commercial conveyances (airplane, ship, train, bus, taxi); timely access to appropriate medical care if symptoms develop

4 - **Self-monitor:** Check temperature and monitor for other symptoms

### Table 5. RECOMMENDATIONS FOR SPECIMEN COLLECTION, HANDLING AND TRANSPORTATION

To consult with the PHS Laboratory after hours, call 209-468-6000 and ask for the public health nurse. All specimens for testing must be approved by PHS prior to shipment.