UTAH DEPARTMENT OF HEALTH

IN PARTNERSHIP WITH UTAH'S PUBLIC HEALTH DEPARTMENTS

Last updated: 11/24/15

Management and Transport of Persons Under Investigation (PUIs) for Ebola Virus Disease (EVD)

[Disclaimer: This document is a work in progress and will continue to be updated as national updates and guidelines change.]

Summary of Recent Changes

The guidance was updated on October 26, 2015, 2015, to reflect the following:

- *Recent travel to current Ebola-affected countries (Guinea) should result in immediate isolation and management of patients according to this protocol, including notification to public health.*
- *Travelers from Sierra Leone are recommended to self-observe until 21 days after departing Sierra Leone. Self-observation means that people should "watch their health" for possible symptoms of illness including feeling feverish, diarrhea, vomiting, weakness, fatigue, stomach pain, muscle pain, or unexplained bleeding or bruising. People who develop any of these symptoms should begin taking their temperature and notify public health authorities or seek healthcare at the earliest sign of illness.*
- *Utah healthcare providers should continue to ask all patients encountered with symptoms indicating a possible infectious disease (e.g., fever, respiratory symptoms, etc.) about their travel history; this should be standard-of-care.*

A. **Background.** Ebola preparedness is a concern for hospitals and healthcare providers throughout the nation. As the Utah public health system has worked through the complexities of preparing for EVD with hospitals and observed the experiences in Texas and New York City, it has become apparent that each state must develop a carefully considered plan to diagnose persons under investigation (PUIs) and to provide ongoing care and treatment for a patient with Ebola. The Centers for Disease Control and Prevention (CDC) defines a PUI as an individual with 1) fever (with or without other symptoms, e.g., severe headache, fatigue, muscle pain, vomiting, diarrhea, or unexplained hemorrhage), and 2) an epidemiologic risk factor for Ebola (see http://www.cdc.gov/vhf/ebola/hcp/case-definition.html). Risk factors for Ebola include travel to an Ebola-affected country (currently, Sierra Leone and Guinea), providing care to Ebola patients, and contact with a known Ebola patient. The incubation period for Ebola is 2-21 days so the exposure risk must have occurred within 21 days of onset of symptoms.

   Utah public health has worked with many partners including the Utah Hospital Association (UHA), the emergency medical system (EMS), infectious disease experts, and local health departments (LHDs) to develop this plan for initial management of PUIs on site and rapid transfer of them to locations where they can get a higher level of care if needed.

B. **Preparedness for all providers: "Identify, Isolate and Inform."** Any healthcare provider may be the initial entry point for a person at risk for Ebola. (See CDC guidance for frontline providers at: http://www.cdc.gov/vhf/ebola/hcp/preparing-frontline-healthcare-facilities.html). This includes hospital emergency departments, outpatient clinics, private physicians' offices, walk-in clinics, etc. Therefore, all providers must routinely be on alert for patients who may be at risk for Ebola and be prepared to provide initial management for such patients on site. Utah healthcare providers should continue to ask all patients encountered with symptoms indicating a possible infectious disease (e.g., fever, respiratory symptoms, etc.) about their travel history; this should be standard-of-care. Recent

travel to Ebola-affected countries (including Liberia) within the past 21 days should result in immediate isolation and management of patients according to this protocol, including notification to public health. If the patient has fever, s/he should immediately be isolated in a private room away from other patients and staff. *The provider should then follow facility/system-specific processes and contact their LHD or UDOH to notify them of the PUI and begin communication on how to manage the situation* (see Table). A "Think Ebola!" poster has been developed by UDOH with these instructions (http://health.utah.gov/epi/diseases/ebola/think_ebola.pdf). The CDC has developed a poster for ambulatory clinics on recommended procedures (http://www.cdc.gov/vhf/ebola/pdf/ambulatory-care-evaluation-of-patients-with-possible-ebola.pdf). These posters or one with similar content should be prominently posted in areas where patients are likely to be initially evaluated or triaged. All providers should create a response plan for an encounter with a patient who may be at risk for Ebola. This plan should include a procedure for isolating the patient and ensuring proper use of personal protective equipment (PPE) by healthcare workers and others coming into contact with the patient (see item E below). LHDs will work with all primary care providers, emergency rooms, ambulatory care clinics and hospitals in their jurisdictions to ensure they have received this information.

C. **Hospital readiness to assess and treat Ebola patients.** CDC has deployed rapid response teams to hospitals throughout the nation to observe preparedness for admitting patients for Ebola assessment and treatment. Based on their observation, CDC has developed interim guidance for a tiered approach to management of PUIs based on their observations (http://www.cdc.gov/vhf/ebola/hcp/us-hospital-preparedness.html.) In Utah, public health has been working with several tertiary care hospitals on their preparations for admitting PUIs for assessment (i.e., laboratory testing for Ebola) and care and treatment of Ebola, if a PUI is found to be positive for Ebola. Verification of readiness to accept a PUI for testing and treatment consists of one or more on-site visits to the tertiary care hospital by a team with members from UDOH (including epidemiologists, preparedness experts, healthcare-associated infections experts, laboratory, etc.), the local health department, emergency response, and others. The team then works with the hospital's Ebola preparedness team to ensure that the hospital is ready to accept PUIs according to CDC guidelines (for assessment: http://www.cdc.gov/vhf/ebola/hcp/preparing-ebola-assessment-hospitals.html; and for treatment: http://www.cdc.gov/vhf/ebola/hcp/preparing-ebola-treatment-centers.html.) As a low prevalence state, it is unlikely that there will be many PUIs that need assessment and treatment in Utah. Therefore, because of this fact and concerns that delay in transfer of a patient may result in less optimal care for patients and increase the risk of transmission to emergency transfer personnel and healthcare workers, UDOH is recommending that no facilities in the state should do assessment (i.e., laboratory testing for Ebola) only; PUIs should only be transferred to tertiary care hospitals verified as having the capacity to both test for and treat Ebola. If an Ebola patient is being treated in a Utah tertiary care hospital, s/he may be transferred to one of the national containment centers depending on the availability of beds and condition of the patient.

D. **Active monitoring of persons returning from Ebola-affected countries.** Beginning on October 27, 2014, CDC announced a program to conduct mandatory active monitoring of persons returning from Ebola-affected countries. All states, including Utah, participate in the active monitoring program. At present, 100% of travelers entering the United States from the Ebola-affected countries are routed through one of five international airports (Atlanta Hartsfield-Jackson, Chicago O'Hare, Dulles, JFK, and Newark) where they undergo a thorough screening process. The screening process includes obtaining good contact information for follow-up (including name, address where the traveler will reside in the U.S., email addresses, phone numbers, and contact information for a friend or relative) and instructions on how to self-monitor for fever for 21 days after departure from the Ebola-affected country. They are given a care package which includes these instructions and a thermometer. They are also told that their local health department will be contacting them for follow-up. (Seehttp://www.cdc.gov/vhf/ebola/hcp/monitoring-and-movement-of-persons-with-exposure.html) All state health departments receive a list of these travelers for active monitoring.

In Utah, we are conducting active monitoring of travelers returning from Ebola-affected countries. A separate procedures document for active monitoring has been developed by UDOH in collaboration with LHDs. UDOH has also modified the electronic surveillance system (UT-NEDSS) so data on travelers can be entered and reports routinely generated on persons under active monitoring. During encounters with the traveler, the LHD or UDOH epidemiologists will elicit information on risk exposures, health insurance status, and the hospital the patient would go to if symptoms develop. This information will help public health to plan for optimal care of the patient.

On September 21, 2015, enhanced entry screening was discontinued for travelers coming to the United States from Liberia; On November 10, 2015, enhanced entry screening was discontinued for travelers coming to the United States from Sierra Leone. These travelers will no longer be funneled through one of the U.S. airports that are conducting enhanced entry screening. At this time, travelers will still undergo exit screening before departing from Liberia or Sierra Leone. This change does not affect U.S. enhanced entry screening and post-arrival monitoring for travelers returning from Guinea.

E. **Encounter scenarios and management of PUIs while awaiting transfer to a hospital with verified capacity to care for EVD patients.** This section is divided into likely scenarios to assist LHDs and providers with their response if they identify a PUI.

Scenario 1 – Person who is being actively monitored calls the LHD to report early symptoms of Ebola (e.g., fever). During the active monitoring process, the traveler should be instructed to call the LHD if s/he develops fever and/or other symptoms. “Fever” is not strictly defined since normal temperatures vary across the population. Therefore, if an individual reports feeling febrile and the temperature is higher than usual based on active monitoring, s/he should be considered for further assessment. With active monitoring in place, most PUIs will present with very early symptoms, and the LHD or UDOH epidemiologist is likely to be the first point of contact. The LHD or UDOH epidemiologist on-call should ask about severity of symptoms and do the following:

- If the patient is not stable*, the LHD or UDOH epidemiologist should call 9-1-1 for stabilization and transport to the nearest hospital. Local emergency medical teams should have been instructed on proper transport of such patients, including use of PPE, according to CDC guidance: http://www.cdc.gov/vhf/ebola/hcp/interim-guidance-emergency-medical-services-systems-911-public-safety-answering-points-management-patients-known-suspected-united-states.html. Utah-specific guidance for EMS and 9-1-1 dispatch can be found at: http://health.utah.gov/epi/diseases/ebola/Utah_EMS_Prehospital_Ebola_Preparedness_Response_Recom.pdf. While the patient is being stabilized, The LHD or UDOH epidemiologist should call the on-call medical officer at the LHD and/or UDOH who will coordinate transport to a hospital verified as having the capacity to test for and treat Ebola (which medical officer coordinates this transfer depends on each LHD’s policy; UDOH on-call epidemiologists are aware of policies specific to each LHD);
- If the patient is stable but located far (>2 hours by car**) from a hospital with verified capacity to test for and treat Ebola, call 9-1-1 for transport to the nearest local hospital, where the patient can be supported while arrangements for transport to the higher level hospital is coordinated by the LHD and/or UDOH medical officer on-call;
- If the patient is stable and located within a short distance (≤2 hours by car) of a hospital with verified capacity to test for and treat Ebola, instruct the patient to remain isolated in the place of residence and avoid contact with anyone. Tell him/her to await transport to the hospital. The LHD and/or UDOH medical officer on-call should then arrange transport

with the Gold Cross Ebola Rapid Transport Team (see below) to a hospital with verified as having the capacity to test for and treat Ebola;

- While awaiting transfer, the LHD or UDOH epidemiologist should elicit the information necessary from the patient to complete the **Ebola Virus Disease (EVD) Recognition Form** to be provided to the referral hospital;
- S/he should also elicit contacts and assess exposure risks to plan for contact tracing and follow-up;
- LHD and UDOH epidemiologists on-call are responsible for informing the leadership in their agencies that a PUI has been identified and being transferred to a hospitals verified as having the capacity to test for and treat Ebola.

(**Determining the stability of a patient is difficult to do over the telephone. Therefore, if there is any doubt about the patient's condition, the epidemiologist should put the patient in touch with a qualified clinician [e.g., physician or nurse] who regularly makes these decisions*.

***The 2-hour time frame is arbitrary and a qualified clinician can determine if the patient can stay in place for a longer period of time.)*

Scenario 2 – Person who is being actively monitored calls his/her provider with symptoms. The provider should do the following:

- Ask about severity of symptoms;
- If the patient is not stable, call 9-1-1 for stabilization and transport to the nearest hospital;
- If the patient is stable, instruct him/her to remain isolated in the place of residence and avoid contact with anyone. Tell him/her to wait for a call from public health for instructions; and
- The provider should call the LHD or UDOH to report the patient. The LHD and/or UDOH epidemiologist will work with the LHD and/or UDOH medical officer to arrange for patient transport to a hospital with verified capacity to test for and treat Ebola. Depending on the anticipated time it will take for the Gold Cross Ebola Rapid Transport Team to arrive, public health will instruct the patient to wait at place of residence or will call 9-1-1 for local EMS transport to the nearest hospital as for Scenario 1. The LHD or UDOH epidemiologist will also collect information from the patient, elicit contacts and inform leadership as for Scenario 1.

Scenario 3 –Person who presents at a hospital emergency room (ER) or other provider with symptoms of Ebola. Because of high media coverage, many people who have recently returned from Africa and have symptoms may seek care in an ER, outpatient clinic or with a private provider. ***Keep in mind: Most of these persons are not at risk for Ebola!*** It is essential that the person initially encountering the patient take an accurate travel history to assist public health to decide whether testing for Ebola is indicated. Knowing that the patient has not traveled to one of the Ebola-affected countries will avoid unnecessary delays in addressing the patient's chief complaint. If the patient is symptomatic and, in the past 21 days, has a history of travel to one of the countries or has had contact with someone who traveled to these countries, then the provider should:

- Immediately place the patient in a private room with a closed door and, if possible, a private bathroom. (Such a room should be previously identified.);
- Provide the patient with a surgical mask and demonstrate proper use;
- Minimize the number of staff interacting with the patient, and do not perform phlebotomy;
- Staff interacting with the patient should follow standard droplet and contact precautions (http://www.cdc.gov/vhf/ebola/hcp/infection-prevention-and-control-recommendations.html) and don appropriate PPE before entering the isolation room;

- Call the LHD and/or UDOH epidemiologist on-call to report the case. They will work with the on-call medical officer to arrange transport by the Gold Cross Ebola Rapid Transport Team to a hospital with verified capacity to test for and treat Ebola. The LHD or UDOH epidemiologist will also work with the provider to complete the **Ebola Virus Disease (EVD) Recognition Form;**
- Attend to the patient's immediate needs with supportive treatment, but minimize patient contact and procedures, while awaiting transfer; and
- Maintain a list of all healthcare workers and others who come into contact with the PUI in your facility. If the PUI is diagnosed as an Ebola case, provide this list to the LHD so that these persons can also be monitored for 21 days.

Scenario 4: Patient or clinic contacts 911 with symptoms of suspected EVD. The UDOH has distributed a recommended response plan to 9-1-1 Dispatch and EMS providers. In general, this plan recommends that a *stable* patient be isolated in place and LHD or UDOH epidemiology personnel be contacted to determine risk of EVD and dispatch of the specialized Gold Cross Ebola Rapid Transport Team to take the patient to a hospital with verified capacity for initial evaluation and diagnosis of Ebola. If the patient is located >2 hours from this hospital or is *unstable*, public health will arrange with local EMS (utilizing recommended PPE) to transport the patient to the nearest hospital for further care and stabilization. Once stabilized, transport to a hospital with verified capacity for initial evaluation and diagnosis of Ebola will be arranged in consultation with public health as for Scenario 1.

F. Isolation and personal protective equipment (PPE) for providers while managing PUIs awaiting transfer to a hospital with verified capacity for initial evaluation and diagnosis of Ebola. Many providers will not have access to the specialized isolation room facilities and PPE recommended by CDC for management of known Ebola patients (http://www.cdc.gov/vhf/ebola/hcp/procedures-for-ppe.html).With the active monitoring program in place, it is likely that PUIs will be identified very early in the course of illness, when they are not vomiting or having diarrhea (so-called "dry" PUIs). In this situation, risk of transmission is very low, and CDC is recommending a lower level of PPE while awaiting transport of the patient to a hospital with verified capacity to test for and treat Ebola. Providers initially encountering such patients should do the following:

- Identify and designate an isolation room located in close proximity to the area where a PUI is likely to enter the facility. This could be any private room with a closed door in a location where traffic can be controlled. A room with a bathroom is preferred. A portable commode could be an alternative to a private bathroom;
- Remove clutter from the room and ensure that furniture and surfaces are easy to disinfect;
- Identify space adjacent to the isolation room where staff can don and doff PPE; clean and dirty areas should be clearly separated. This space should have hand washing facilities;
- Identify and store PPE supplies near the isolation room. Currently, some specialized PPE, e.g., body suits, PAPRS, face shields, N-95 respirators requiring fit testing, etc. are in short supply with manufacturers. However, most providers should be able to find and don the following PPE: a face shield, a surgical face mask, a gown impermeable to fluids, and two pairs of gloves. This PPE should be sufficient for dry PUIs who are early in the course of illness and awaiting transport to a higher level hospital (see CDC guidance for ambulatory care under Item B). Whatever PPE is used, staff must practice donning and doffing procedures ahead of time (see video demonstration at: http://www.medscape.com/viewarticle/833907?src=ppc_google_acq_bola_vid).

If the patient is exhibiting obvious bleeding, vomiting, copious diarrhea or a clinical condition that warrants invasive or aerosol-generating procedures (e.g., intubation, suctioning, active resuscitation), full PPE for the care of hospitalized patients as outlined in CDC guidance should be used. If the patient

requires active resuscitation, this should be done in a pre-designated negative pressure room using equipment dedicated to the patient. All equipment used in the care of these patients should not be used for the care of other patients until appropriate evaluation and decontamination is performed.

G. **Gold Cross Ebola Rapid Transport Team to transfer PUIs to a facility hospital with verified capacity to test for and treat Ebola.** ***Arrangement for transfer of a PUI to such a facility must be coordinated by the LHD and/or UDOH medical officer on-call.*** Arranging for laboratory testing to diagnose Ebola is a complex, multi-step process that requires considerable planning and training. UDOH will maintain an updated list of facilities that have demonstrated the ability to provide testing for Ebola and ensure that the PUI is transferred to one of these facilities.

An Ebola Rapid Transport Team with Gold Cross has been stood up to support transport of PUIs to a facility with the capacity to test for Ebola. This team has been specially trained on use of PPE and has the proper equipment to transfer patients safely. This service should be utilized to minimize risk of transmission and disruption of other local EMS resources, especially in rural settings. Public health will work with providers to arrange transfer of PUIs by the Gold Cross Ebola Rapid Transport Team. Some larger hospital systems may wish to use other transport methods; which is acceptable, as long as teams have been trained in use of PPE and proper cleaning of equipment after transport (see CDC guidance under Item D above).

The Gold Cross Ebola Rapid Transport Team is approved to transport PUIs across state lines for the neighboring states (ID, NV, WY) that use Utah hospitals as referral centers.

The UDOH medical officer on-call will work with the UDOH emergency medical director to coordinate air transport if this is needed.

H. **Laboratory Issues.** The Utah Public Health Laboratory (UPHL) has been approved and validated to perform the Department of Defense RT-PCR test for Ebola. To arrange for testing, hospitals must work with UPHL to ensure that they are prepared to properly collect and transport Category A specimens to UPHL. UPHL has drafted separate guidance with detailed instructions on this (http://health.utah.gov/epi/diseases/ebola/UPHL_Guidance_Submitting_Ebola_Specimens.pdf.) All positive Ebola tests performed at UPHL must undergo confirmatory testing at CDC. Therefore, two specimens (purple topped tubes) must be submitted so that one specimen can be sent to CDC. Currently, to rule out Ebola, baseline testing and follow-up testing at 72 hours must both be negative.

I. **Waste Management.** For hospitals managing Ebola patients, transport and management of waste has been a difficult-to-solve issue. UDOH Preparedness can work with facilities to address this problem and will provide separate guidance on Utah-specific procedures.

Table 1. Utah LHDs and UDOH 24/7 Contact Numbers for Person Under Investigation for Ebola Virus Disease

These are the numbers a clinician, EMS agency, hospital, dispatch or other agency would call with PUI questions or to coordinate care.

Department	Contact Numbers
Bear River Heath Department	1) 435-716-8771 – All hours 2) 1-877-229-8825 – All hours
Central Utah Public Health Department	1) 435-896-5451 – Main Office 2) 1-888-374-8824 – After hours 3) 435-201-9371 – Health Officer
Davis County Health Department	1) 801-525-5220 – All hours 2) 801-807-9418 – After hours Epi
Salt Lake County Health Department	1) 385-468-8888 – All hours 2) 385-468-4100 – Main office 3) 801-580-8697 – After hours
San Juan County Health Department	1) 435-459-1151 – Health Officer
Southeastern Utah District Health Department	1) 435-650-3550 – Health Officer 2) 435-630-1149 – EH Director
Southwest Utah Public Health Department	1) 435-817-0701 – Health Officer 2) 435-463-4321 – Nursing Director 3) 435-817-2698 – ERC
Summit County Health Department	1) 435-333-1500 – Main Office 2) 435-714-9826 – Health Officer 3) 435-513-0444 – ERC
Tooele County Health Department	1) 435-830-2014 – EH Director 2) 435-830-2013 – Health Officer 3) 801-915-3487 – ERC
TriCounty Health Department	1) 435-790-5587 – ERC 2) 435-247-1177 – Main Office 3) 435-219-6377 – Health Officer
Utah County Health Department	1) 801-602-3579 – Emergency/After hours 2) 801-960-5067 – Health Officer
Wasatch County Health Department	1) 435-657-3333 – All hours 2) 435-671-1953 – Health Officer 3) 801-557-4766 – ERC
Weber Morgan Health Department	1) 801-725-1755 – Nursing Director 2) 801-710-6636 – Surveillance Coordinator 3) 801-940-7207 – ERC
Utah Department of Health	1-888-EPI-UTAH (374-8824) – Epi on-call 801-560-6586 – Laboratory on-call 801-803-3217 – EMS Medical Consult 1-866-DOH-UTAH (364-8824) – Disaster on-call