Guidance for Collection, Transport and Submission of Specimens for Ebola Virus Testing in the United States

**NOTIFICATION & CONSULTATION**

Hospitals should follow their state and/or local health department procedures for notification and consultation for Ebola testing requests.

**WHEN SPECIMENS SHOULD BE COLLECTED FOR EBOLA TESTING**

Ebola virus is detected in blood only after the onset of symptoms, usually fever. It may take up to 3 days after symptoms appear for the virus to reach detectable levels. Virus is generally detectable by real-time RT-PCR from 3-10 days after symptoms appear.

Ideally, specimens should be taken when a symptomatic patient reports to a healthcare facility and is suspected of having an Ebola exposure. However, if the onset of symptoms is <3 days, a later specimen may be needed to completely rule-out Ebola virus, if the first specimen tests negative.

**PREFERRED SPECIMENS FOR EBOLA TESTING**

A minimum volume of 4 milliliters of whole blood preserved with EDTA is preferred for Ebola testing.

- **Specimens should be shipped** frozen on dry ice.
- **Do not submit specimens** in glass containers to CDC.
- **Do not submit specimens** preserved in heparin tubes.

**DIAGNOSTIC TESTING FOR EBOLA VIRUS**

Real-time PCR testing for Ebola virus is available at over 50 Laboratory Response Network (LRN) laboratories located throughout the United States. LRN laboratories are currently using an FDA-approved Emergency Use Authorization (EUA) assay to detect the Ebola (Zaire spp.) virus. Samples that test positive using this assay are considered presumptive positive for Ebola Zaire RNA by real time RT-PCR and should be submitted to CDC for additional evaluation.

**TRANSPORTING SPECIMENS WITHIN THE HOSPITAL / INSTITUTION**

In compliance with 29 CFR 1910.1030, specimens should be placed in a durable, leak-proof secondary container for transport within a facility. To reduce the risk of breakage or leaks, do not use any pneumatic tube system for transporting suspected Ebola virus disease specimens.

**PACKAGING & SHIPPING CLINICAL SPECIMENS**

Specimens collected for Ebola virus disease testing should be packaged and shipped without attempting to open collection tubes or aliquot specimens. **Specimens for shipment** should be packaged following the basic triple packaging system which consists of a primary container (a sealable specimen container) wrapped with absorbent material, secondary container (watertight, leak-proof), and an outer shipping package. State guidelines may differ and state or local health departments should be consulted before shipping.

Ebola virus is classified as a Category A infectious substance by the Department of Transportation (DOT). Specimens from persons under investigation (PUIs) for Ebola or patients confirmed to have Ebola virus infection should be packaged and shipped as Category A infectious substances. **Packing and shipping Category A infectious substances** must be performed by persons trained and certified in compliance withs DOT or International Air Transport Association (IATA) requirements. For guidance on packaging and shipping, refer to Guidance for Collection, Transport and Submission of Specimens for Ebola Virus Testing in the United States and the DOT Hazardous Materials Regulations (HMR).