

Collection, packaging and transport of VHF pathology specimens

3 July 2015

The NSW Health Ebola webpage (www.health.nsw.gov.au/Infectious/alerts/Pages/EVD.aspx) links to useful documents such as fact sheets, checklists, risk assessments, control guidelines and the *NSW Contingency Plan for Viral Haemorrhagic Fevers (VHF)* (the Plan) which is available at

<http://www.health.nsw.gov.au/Infectious/alerts/Documents/NSW-VHF-Plan-Web.pdf>

This Plan provides information on patient management, cleaning and disinfection, personal protective equipment, specimen collection, laboratory testing and public health actions for NSW.

As outlined in the Plan, patients are evaluated according to the *VHF Patient Risk Assessment Algorithm* through discussion with the local ID Physician (or Westmead Hospital ID Physician), public health unit (PHU), local laboratory, and the Clinical Microbiologist on-call at Centre for Infectious Diseases and Microbiology Laboratory Services (CIDMLS), Pathology West, Westmead Hospital

VHF testing

If a patient is assessed as '*Increased possibility of VHF*', and a decision is made to collect specimens for laboratory diagnosis of VHF the protocol below should be followed for specimen collection, packaging (using Packing Instruction 620), and transport (as Infectious Substances Category A, UN 2814) from the collection location to the local laboratory for final labelling/documentation for external referral for VHF testing to CIDMLS PC4 laboratory.

The protocol is in accordance with the *NPAAC Requirements for the packaging and transport of pathology specimens and associated materials (Fourth Edition 2013)* available at:

<http://www.health.gov.au/internet/main/publishing.nsf/Content/health-npaac-publication.htm>

Additional information is provided in the *Notes for laboratories for packaging and dispatch of Infectious Substances Category A, UN 2814 and urgent transport through TOLL FAST* (see NOTE below) .

Other testing

The protocol below for VHF testing should also be used for collection, packaging and transport of other specimens for routine chemistry, haematology, microbiology testing if this is indicated for patients assessed as '*Increased possibility of VHF*' or with laboratory confirmed VHF.

Protocol for specimens for VHF testing

Materials required

- 3 EDTA blood tubes (purple) 3 x 50 mL Falcon tubes (or other external tube per blood tube) containing absorbent material
- 1 Zip-lock specimen bag
- 1 Screw top Bio-bottle and accompanying specimen transport box labelled for Category A transport (initially to the local laboratory, then final labelling for referral to CIDMLS PC4 Laboratory) including:
 - Name and address of the sender
 - Name and delivery address of receiver: *local laboratory or CIDMLS PC4 Laboratory*
 - 24 hr Emergency contact: *local or CIDMLS Clinical Microbiologist on-call*
- 0.5% sodium hypochlorite solution (i.e. diluted to 5000 ppm available chlorine) (freshly made each day)
- Paper towels to disinfect blood tubes
- Routine equipment required for phlebotomy (institution specific)

Prior to entering the patient room

1. Determine the boundaries for contaminated (patient room) and clean areas (anteroom or corridor). The zip-lock specimen bag, request form, Bio-bottle and transport box must remain in the clean area.
2. In the clean room pre label the blood tubes using a ball point pen with: Patient name, MRN and DOB. Fill out a request form clearly stating that VHF (e.g. EVD) PCR is requested.
3. Appropriate personal protective equipment must be worn.

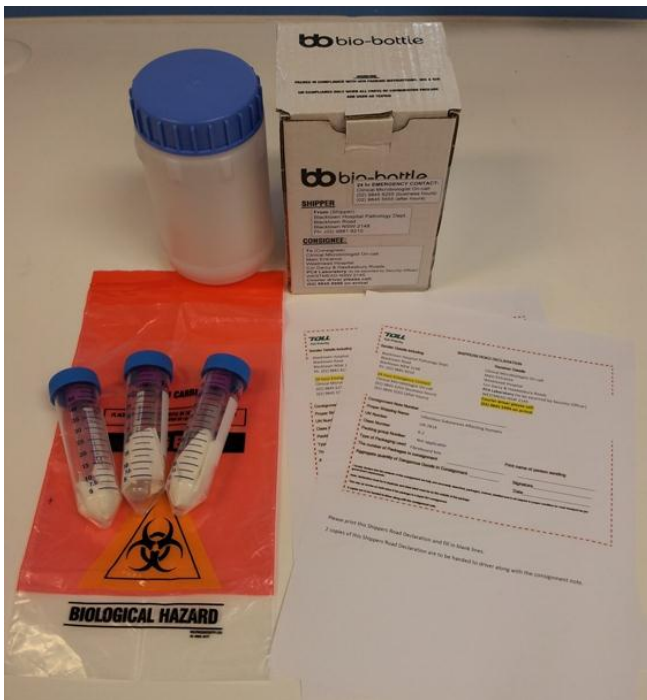
Inside the patient room

4. Specimens should be collected taking care not to contaminate the external surfaces of the blood tubes.
5. Collect at least 4 mL of blood per tube from an adult and 200 µL from a child. Place the filled tubes on a tray. Disinfect the operator's gloves with 0.5% sodium hypochlorite solution.
6. The operator then disinfects each specimen tube by gently wiping with paper towel saturated with 0.5% sodium hypochlorite solution taking care to disinfect all surfaces, and not to erase labelled patient details.
7. Place each disinfected blood tube into one 50 mL Falcon tube containing absorbent material and firmly secure the screw top lid.
8. Disinfect the Falcon tube by wiping with 0.5% sodium hypochlorite solution taking care to disinfect all surfaces.
9. Move the specimens to the boundary of the contaminated and clean areas and without touching the sides of the specimen zip-lock bag held by an assistant in the clean area, drop each of the disinfected 50 mL Falcon tubes in turn into the specimen bag.
10. The assistant in the clean area seals the zip-lock bag and places the request form into the form pouch on the bag.
11. Place the specimen bag containing the blood specimens into the screw top Bio-bottle and tighten the lid.
12. Place the Bio-bottle into the pre-labelled transport box for transport to local laboratory for final labelling/documentation for referral to CIDMLS PC4 laboratory. Note the name and address of the sender.
13. The specimens should be transported to CIDMLS at room temperature.
14. Transfer the transport box to CIDMLS PC4 Laboratory using Category A transport according to the following procedures:
 - *Procedure for referral of external specimens for VHF testing to the PC4 Laboratory, CIDMLS Westmead Hospital*
 - *TOLL FAST Urgent specimen transport for NSW public health emergency*

NOTE: the following documents have been distributed to laboratories in NSW in August 2014, and can be provided by contacting CD on Call on 02 9391 9195 or cdoncall@doh.health.nsw.gov.au :

- *Notes for laboratories for packaging and dispatch of Infectious Substances Category A, UN 2814 and urgent transport through TOLL FAST (TRIM H15/58465)*
- *Procedure for referral of external specimens for VHF testing to the PC4 Laboratory, CIDMLS Westmead Hospital (TRIM H15/58467)*
- *TOLL FAST Urgent specimen transport for NSW public health emergency (TRIM H15/58462)*

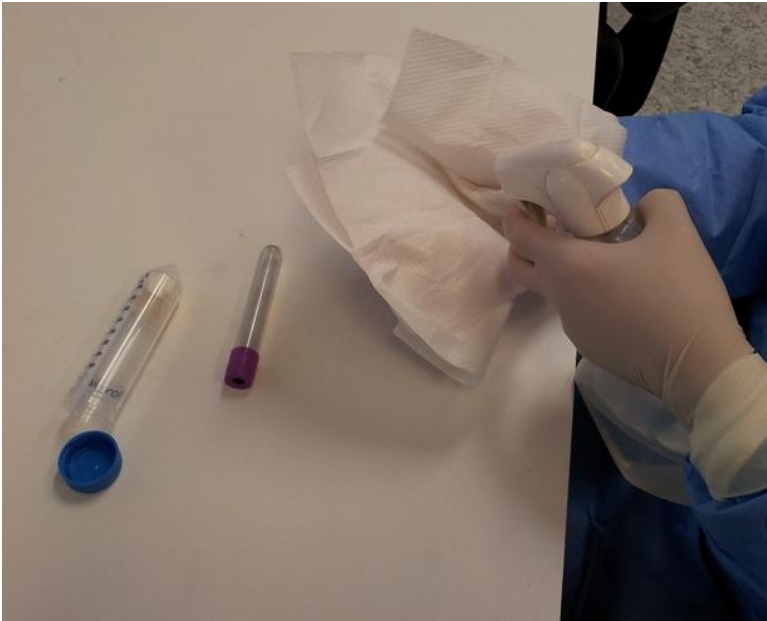
Pictograms of process



Equipment required (not including equipment for phlebotomy)



Label the blood tubes in the clean area before entering the patient's room



In the patient room, saturate the paper towels with 0.5 % sodium hypochlorite solution before collecting blood



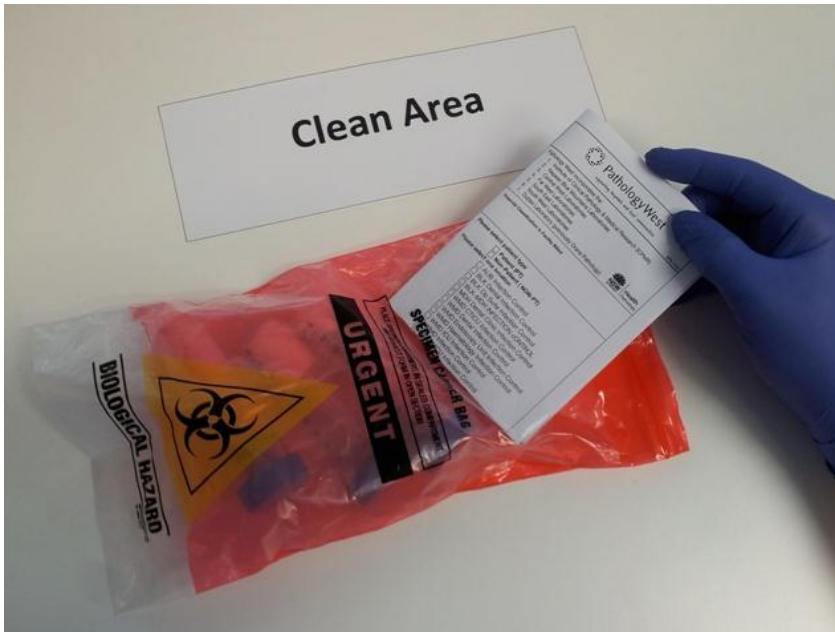
Wipe all surfaces of the collected blood tube with the disinfectant-saturated paper towels



Place the disinfected blood tube into a 50 mL Falcon tube containing absorbent material, secure the lid and then disinfect the Falcon tube



Move to the junction between the clean area and contaminated area (patient room) and drop the specimen into a zip-lock specimen bag held by an assistant in the clean area



Place the completed request form into the pouch in the specimen bag



Place the specimen bag into the Bio-bottle, secure the lid firmly and place the Bio-bottle into the appropriately labelled transport box