

Viral hemorrhagic fevers (VHFs): screening and management of a suspect patient in France

INFORMATION for the paramedics and other first line health care workers

Most VHFs are transmitted by direct contact with any contaminated body fluid, and are potentially life-threatening diseases. When a suspect patient is put into contact with the healthcare system in the setting of **endemic or epidemic VHF** in West and Central Africa (Lassa, which is the most frequently

exported VHF, but also Ebola, Marburg, Crimean-Congo hemorrhagic fever,...), **the first line healthcare workers must strictly apply protective measures, ask for guidance by local clinical and epidemiological experts, and consider likely alternative diagnoses.**

Screen – Suspect patient = Compatible Clinical Picture (< 21 days after exposure) AND Exposure

► Screen = Protect

Clinical picture: Sudden onset of fever $\geq 38^{\circ}\text{C}$ and/or following symptoms/signs:

- Asthenia, headaches, diffuse pain, sore throat, dysphagia, conjunctivitis, rash, hepatosplenomegaly, cough
- Suggestive symptoms/signs after day 5: diarrhoea, vomiting, mucocutaneous and visceral bleeding, confusion

Exposure: epidemic alert area, especially rural area; contact with any body fluid from a suspect or confirmed patient, or from a possibly infected animal.

Expertise triad: infectious diseases (ID) specialist + chief nurse + National Reference Laboratory (NRL) for VHFs

► Consider other diagnoses

To avoid delays in appropriate diagnosis and management, including empiric antimicrobial testing.

Other causes of fever in the traveller returning from Africa*:

Malaria (RDT, thick and thin smears), bacterial infection (LP/blood cultures/serology for *N. meningitidis*, *Salmonella*, *Leptospira*...), or viral infection (PCR/serology for influenza, hepatitis, yellow fever, dengue, Chikungunya, Rift Valley fever,...)

* based on clinical and epidemiologic data

► Clinico-epidemiologic analysis to estimate the diagnostic probability.

Protect – From the moment of suspicion, requirement levels are graded according to: virus type, clinical manifestations (hemorrhage – excreting form with diarrhea and/or vomiting), exposure type, and diagnostic probability

- **Patient:** isolation in pre-identified individual room, separated from the flow of other patients in the healthcare structure, hydro-alcoholic solution (HAS), surgical mask.
- **Healthcare worker:**
 - Enhanced EBR precautions: HAS, FFP2 mask, gown, non sterile gloves ;
 - If excreting form: spill-resistant FFP2 mask, single use coverall, covering waterproof or watertight protection, double pair of nitrile gloves, goggles
- **Avoid accidental blood exposure:** dedicated and trained team, work in tandem, senior doctors and nurses (no students in contact with the suspect patient).
- **Healthcare waste management:** dedicated process and incineration.
- **Early identification of contact persons at local health agency for community contacts, and at the infection prevention and control division for contacts in care setting.**

Manage

- **Search for signs of severity:** bleeding, confusion, persistent hiccups (Ebola, Marburg), sepsis; **take into account comorbidities** (eg pregnancy + Lassa).
- **Treatment as soon as possible**, in coordination with the Expertise triad:
 - At least symptomatic/supportive, consisting of appropriate hydration and resuscitation means if required – NSAIDs and anticoagulant drugs are contraindicated
 - Specific treatment: to be discussed with the ID specialist (status / availability depending on the virus).
- **Declaration and orientation:** once a VHF suspicion is validated by the NRL and the infectious diseases specialist, the local health agency needs to be contacted for notification, in order to organize a transfer if necessary.
- **In coordination with the NRL:** determination of specimen types to be collected, virologic confirmation/invalidation as soon as possible.

Name of infectious diseases specialist to be contacted:

Number:

Local health agency contact:

KEY-QUESTIONS for 1st line HEALTH CARE WORKERS

Adapted to the Ebola epidemic in DRC (August 2018)

► *The content of this document might change to adapt to the epidemiologic situation.*



1 – What is the reason for consultation?



2 – Does the patient have fever?

- ⇒ *If yes, what is the temperature?*
- ⇒ *Since when?*



3 – Is the patient coming back from the Nord Kivu province in Democratic Republic of Congo (DRC) in the previous 21 days?

- ⇒ *If yes, what are the dates of stay?*



4 – Does the patient have symptoms/signs compatible with VHF?

If yes, which ones?

- ⇒ *Fatigue, headaches, diffuse pain, sore throat, dysphagia, conjunctivitis, rash, hepatosplenomegaly*
- ⇒ *excreting form = diarrhoea, vomiting, bleeding, cough*



5 – Are protection means applied ?

- **Patient** : isolation in individual room, HAS, surgical mask
 - **Healthcare worker** : HAS, FFP2 mask, gown, non sterile gloves
- If excreting form* : spill-resistant FFP2 mask, single use overall, covering waterproof or watertight protection, double pair of nitrile gloves, goggles

👉 **SCREEN = to PROTECT YOURSELF and OTHERS**

👉 Name of infectious diseases specialist to be contacted: _____

Number: _____ Local health agency contact: _____