Ebola Virus Disease in Primary Care

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Background

The ACDP Hazard Group 4 viral haemorrhagic fever viruses

ARENAVIRIDAE

Old World arenaviruses
Lassa
Lujo

New World arenaviruses
Chapare
Guanarito
Junin
Machupo
Sabiá

FLAVIVIRIDAE

Kyasanur forest disease
Alkhurma haemorrhagic fever
Omsk haemorrhagic fever

BUNYAVIRIDAE

Nairoviruses
Crimean Congo haemorrhagic fever

FILOVIRIDAE

Ebola
Marburg
Background

- **Viral haemorrhagic fever (VHF)**
- **Ebola virus disease (EVD)**
  - Transmitted through direct or indirect contact of broken skin or mucous membranes with blood or other body fluids
  - Incubation period 2-21 days
  - Infectious from time of onset of illness (ie fever)
Background

Respect our patients and colleagues | Encourage innovation in all that we do | Provide the highest quality care | Work together for the achievement of outstanding results | Take pride in our success
Management of Hazard Group 4 viral haemorrhagic fevers and similar human infectious diseases of high consequence

Advisory Committee on Dangerous Pathogens

September 2014
**VIRAL HAEMORRHAGIC FEVERS RISK ASSESSMENT (Version 4: 10.09.2014)**

A) Does the patient have a fever (>38°C) or history of fever in past 24 hours AND has returned from (or is currently residing in) a VHF endemic country [https://www.gov.uk/viral-haemorrhagic-fevers-organic-resources/transmission-and-guidelines] or VHF in Africa [2020] within 21 days? OR

B) Does the patient have a fever (>38°C) or history of fever in past 24 hours AND has cared for/come into contact with body fluids of/handled clinical specimens (blood, urine, feces, tissues, laboratory cultures) from an individual or laboratory animal known or strongly suspected to have VHF?

**INFECTION CONTROL MEASURES**

**MINIMAL RISK**
- Standard precautions apply:
  - Hand hygiene, gloves, plastic apron
  - Eye protection and fluid repellent surgical facemask and for splash inducing procedures

**STAFF AT RISK**
- Hand hygiene, gloves, plastic apron, fluid repellent surgical facemask, eye protection, N95 respirator for aerosol generating procedures
- Patients that have extensive bruising, active bleeding, uncontrolled diarrhea, uncontrolled vomiting:
  - Hand hygiene, double gloves, fluid repellent disposable gown/suit, eye protection, FFP3 respirator

**STAFF AT HIGH RISK**
- Hand hygiene, double gloves, fluid resistant disposable gown/suit, plastic apron (over disposable gown/suit) eye protection, FFP3 respirator

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**ADDITIONAL QUESTIONS:**
- Has the patient travelled to any area where there is a current VHF outbreak? [http://www.promedmail.org/]
- Has the patient lived or worked in basic rural conditions in an area where Lassa Fever is endemic? [https://www.gov.uk/lassa-fever/advisory-panel-reservoir-transmission-and-guidelines/epidemiology]
- Has the patient visited caves or mines, or had contact with primates, antelopes or bats in a Marburg / Ebola endemic area? [https://www.gov.uk/ebola-and-marburg-haemorrhagic-fevers-outbreaks-case-locations]
- Has the patient travelled in an area where Crimean-Congo Haemorrhagic Fever is endemic [http://www.who.int/csr/disease/crimean_congo_fever/PDF/CCHFRisk_20080918.pdf] AND sustained a tick bite* or crush a tick with their bare hands OR had close involvement with animal slaughter?

**HIGH POSSIBILITY OF VHF**
- Isolate patient in a side room
- Urgent Malaria investigation
- Full blood count, U&E, LFTs, clotting screen, CRP, glucose, blood cultures
- Inform laboratory of possible VHF case (for specimen waste disposal purposes if confirmed)

**LOW POSSIBILITY OF VHF**
- Urgent Malaria investigation
- Urgent local investigations as normally appropriate, including blood cultures

Malaria Positive:
- Manage as Malaria; VHF unlikely

Malaria Negative:
- Discuss with Infection Consultant (Infectious Disease/Microbiology/Virology) Possibility of VHF, infection Consultant to consider discussion of VHF screen with Imported Fever Service (0844 7780960)

**CLINICAL QUESTION TO DETERMINE INFECTION CONTROL BEHAVIOUR AND PROTECT STAFF:** does the patient have extensive bruising or active bleeding?

**YES**
- Discuss with Infection Consultant (Infectious Disease/Microbiology/Virology)
- Infection Consultant to arrange VHF screen with Imported Fever Service (0844 7780960)
- Notify Local Health Protection Unit
- Consider empiric antimicrobials

**NO**
- Low possibility of VHF
  - Urgent Malaria investigation
  - Urgent local investigations as normally appropriate, including blood cultures

**Malaria Positive:**
- Manage as Malaria; VHF unlikely

**Malaria Negative**
- Discuss with Infection Consultant (Infectious Disease/Microbiology/Virology)
- Infection Consultant to consider discussion of VHF screen with Imported Fever Service (0844 7780960)

**Clinical concern OR continuing fever after 72 hours?**

**YES**
- Continuing fever after 72 hours?
  - Malaria Positive: Manage as Malaria; VHF unlikely
  - Malaria Negative: Alternative diagnosis confirmed?
    - Yes: VHF Unlikely; manage locally
    - No: Clinical concern OR continuing fever after 72 hours?

**NO**
- Clinical concern OR continuing fever after 72 hours?
  - VHF Unlikely; manage locally

**CLINICAL QUESTION TO DETERMINE INFECTION CONTROL BEHAVIOUR AND PROTECT STAFF:** does the patient have extensive bruising OR active bleeding OR uncontrolled diarrhea OR uncontrolled vomiting?

**YES**
- VHF Result
  - Positive: Confirm VHF
    - Contact High Level Isolation Unit for transfer (020 7794 0500: Royal Free)
    - Launch full public health actions, including categorisation and management of contacts
    - Inform lab if other lab tests are needed
  - Negative
    - Manage locally

**NO**
- The patient fit for outpatient management?
  - Yes: Inform/Update Local Health Protection Unit
  - Ensure patient contact details recorded
  - Patient self isolation
  - Follow up VHF screen result
  - Review daily

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*If an obvious alternative diagnosis has been made e.g. tick typhus, then manage locally*
Small decrease, but TB rates remain unacceptably high

The annual TB figures for 2013 are now available.
Information for Primary Care: Managing patients who require assessment for Ebola virus disease

This guidance is aimed at clinical staff undertaking direct patient care in primary care, including GP surgeries, out of hours centres and walk in centres.

There is an on-going outbreak of Ebola virus affecting countries in West Africa. This is the largest ever known outbreak of this disease prompting the World Health Organisation (WHO) to declare a Public Health Emergency of International Concern in August 2014. Countries currently affected by the disease are Guinea, Liberia, Sierra Leone and Nigeria. It remains unlikely, but not impossible, that travellers infected in Guinea, Liberia, Sierra Leone or Nigeria could arrive in the UK while incubating the disease and develop symptoms after their return.

Ebola can only be transmitted from one person to another through direct contact with blood or bodily fluids of an infected person. The incubation period of Ebola virus ranges from 2 to 21 days. Although the risk of imported cases is low, primary care professionals in the UK should remain vigilant for those who have visited areas affected by this outbreak and subsequently become unwell.

Identifying patients at risk of Ebola virus disease

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Risk assessment

Ebola should be suspected in patients presenting to primary care services who have a fever of >38°C OR have a history of fever in the past 24 hours AND have recently visited any of the affected areas (as outlined above) within the previous 21 days.

OR

Have a fever of >38°C OR have a history of fever in the past 24 hours AND have cared for / come into contact with body fluids of / handled clinical specimens (blood, urine, faeces, tissues, laboratory cultures) from an individual or laboratory animal known or strongly suspected to have VHF.
## Risk assessment

<table>
<thead>
<tr>
<th>Country</th>
<th>High risk regions within affected countries</th>
</tr>
</thead>
<tbody>
<tr>
<td>Guinea</td>
<td>Entire country, including capital (Conakry)</td>
</tr>
<tr>
<td>Liberia</td>
<td>Entire country, including capital (Monrovia)</td>
</tr>
<tr>
<td>Sierra Leone</td>
<td>Entire country, including capital (Freetown)</td>
</tr>
<tr>
<td>Nigeria</td>
<td>Lagos and Port Harcourt</td>
</tr>
<tr>
<td>Senegal</td>
<td>Dakar</td>
</tr>
</tbody>
</table>

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### Section A – Patient Details (attach patient label if available)
- **Surname:** 
- **Forename:** 
- **Gender:** Male / Female
- **Address:** 
- **Contact phone number:**
- **Date of Birth:**
- **Hospital number:**
- **Location (A&E/ward):** SMH / HH / C/CH

### Section B – assessed by
- **Name of assessor:** 
- **Date of assessment:**

### Section C – Travel history
- Has the patient returned from (or currently resident in) a VHF endemic country within 21 days? [ ] Yes [ ] No [ ] Unknown
  - [ ] Yes
  - [ ] No
  - [ ] Unknown
  - [ ] Travelled to a rural environment where contact with livestock or wildlife is possible?
  - [ ] Received a tick bite or removed a tick & or crushed a tick with their bare hands in a CCHF endemic area?
  - [ ] Visited caves or mines in a VHF endemic area?
  - [ ] Come into contact with the body fluids of, or had direct contact with, a live or dead individual or animal, known or strongly suspected to have VHF, e.g. during routine patient care, transport of patient, resuscitation, autopsy or butchering animals?
  - [ ] Handled clinical/laboratory specimens (blood, urine, faeces, tissues, laboratory cultures) from a live or dead individual or animal known or strongly suspected to have VHF?
  - [ ] Any hospital or healthcare contact abroad?
  - [ ] Had sex in the last 3 months with an individual known or strongly suspected to have VHF?
  - [ ] Been involved in the funeral preparations of an individual known or strongly suspected to have VHF?

### Section D – Signs & Symptoms
- **Fever > 38°C**
  - [ ] Yes
  - [ ] No
  - [ ] Unknown
- **History of fever in the last 24 hours**
  - [ ] Yes
  - [ ] No
  - [ ] Unknown
- **Fever >38°C persisting 72 hours after use of antimalarials or antimalarials**
  - [ ] Yes
  - [ ] No
  - [ ] Unknown

### Section E – Exposure
- **Has the patient...**
  - [ ] 1. Has the patient returned from a VHF endemic country within 21 days? (See map)
  - [ ] 2. Fever > 38°C or History of fever in the last 24 hours
    - [ ] ONLY PROCEED TO FURTHER QUESTIONS IF ANSWER TO 1 & 2 IS YES
    - [ ] 3. Travelled to a rural environment where contact with livestock or wildlife is possible?
    - [ ] Received a tick bite or removed a tick & or crushed a tick with their bare hands in a CCHF endemic area?
    - [ ] Visited caves or mines in a VHF endemic area?
    - [ ] Come into contact with the body fluids of, or had direct contact with, a live or dead individual or animal, known or strongly suspected to have VHF, e.g. during routine patient care, transport of patient, resuscitation, autopsy or butchering animals?
    - [ ] Handled clinical/laboratory specimens (blood, urine, faeces, tissues, laboratory cultures) from a live or dead individual or animal known or strongly suspected to have VHF?
    - [ ] Any hospital or healthcare contact abroad?
    - [ ] Had sex in the last 3 months with an individual known or strongly suspected to have VHF?
    - [ ] Been involved in the funeral preparations of an individual known or strongly suspected to have VHF?
    - [ ] Malaria prophylaxis taken? (Drug name, duration)
    - [ ] Travel companions? Are they well?

- [ ] Other symptoms:
  - [ ] MEWS 0 1 2 3

**Assessed category of VHF risk**

**CONTACT ID**

If unsure Contact ID service

**If YES to questions 1 & 2 complete questions 3 – 11 and contact Infectious Diseases.**

**If NO to questions 1 & 2 low risk of VHF, assess patient as usual in ED.**
Possibility of EVD

1. Isolate patient in a side room
2. Call Infectious Diseases
Possibility of EVD

1. Isolate patient in a side room
2. Call Infectious Diseases

Do not send specimens for testing
Possibility of EVD

1. Isolate patient in a side room
   - Wear PPE:
     - Gloves (double), surgical facemask, visor/goggles, plastic apron
   - Minimise number of people entering room
**PPE during patient management**

**Patients categorised as 'low possibility of VHF'**
- Standard precautions apply:
  - Hand hygiene
  - Gloves
  - Plastic apron
  - Eye protection and fluid repellent surgical facemask for splash inducing procedures
  - The guidance also applies to cases of similar infectious diseases, including new or emerging infections, which have a significant health impact and may present a serious risk to public health in the UK.
  - Eye protection and FFP3 respirator or EN certified equivalent for potential aerosol generating procedures based on risk assessment for other infections known to be transmitted by aerosol

**Patients categorised as 'high possibility of VHF'**
- **Patient does NOT have extensive bruising, active bleeding, uncontrolled diarrhoea, uncontrolled vomiting:**
  - Hand hygiene
  - Gloves
  - Plastic apron
  - Fluid repellent surgical facemask
  - Eye protection
  - (plus FFP3 respirator or EN certified equivalent for aerosol generating procedures)

- **Patient DOES have extensive bruising, active bleeding, uncontrolled diarrhoea, uncontrolled vomiting:**
  - Hand hygiene
  - Double gloves
  - Fluid repellent disposable gown or suit
  - Eye protection
  - FFP3 respirator or EN certified equivalent

**Patients with confirmed VHF**
- Hand hygiene
- Double gloves
- Fluid repellent disposable gown or suit
- Plastic apron (over the disposable gown or suit)
- Disposable visor
- FFP3 respirator or EN certified equivalent

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Possibility of EVD

1. Isolate patient in a side room

2. Call Infectious Diseases

Please call the duty Infectious Diseases Consultant (via switchboard), to discuss possible Ebola cases prior to sending blood samples.
Possibility of EVD

1. Isolate patient in a side room

2. Call Infectious Diseases

Charing Cross Hospital - 020 3311 1234
St Mary’s Hospital – 020 3312 6666
Hammersmith Hospital - 020 3313 1000
Daytime: **Duty Infectious Diseases Consultant**
Out of hours: **Trust-wide Infectious Diseases consultant on call**

For paediatric cases: 020 3312 6666 (St. Mary’s Hospital)
Daytime: **Paediatrics Infectious Diseases registrar**
Out of hours: **Paediatrics Infectious Diseases Consultant on call**

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Possibility of EVD

1. Isolate patient in a side room
2. Call Infectious Diseases

Travel history and itinerary will help inform the risk assessment discussion with the Infectious Diseases Consultant. These include rural or urban travel, regions visited, contact with animals, attendance at funerals, sexual and healthcare contacts, malaria precautions taken and travel companions.
PHE guidance

Reception staff should be made aware of these instructions.
Any patients that identify themselves to reception staff as being unwell and having visited a VHF affected area in the past 21 days should be isolated in a side room as soon as possible. They should not sit in the general waiting room once Ebola is considered a possibility.

What to do for patients on the telephone
Individuals that telephone the surgery or walk-in centre and report that they are unwell and have visited an affected area in the past 21 days AND report a fever of $>$38°C or fever within the past 24 hours should be advised not to visit the surgery or walk-in centre.
The primary care clinician is responsible for ensuring they are referred appropriately to the local acute trust for review. This will include liaising with a local microbiology, virologist or infectious disease physician as above.
HAVE YOU BEEN TO ANY OF THE PLACES LISTED BELOW IN THE PAST 21 DAYS?

IF SO CAN YOU PLEASE TELL RECEPTION STAFF AS SOON AS POSSIBLE.

<table>
<thead>
<tr>
<th>MIDDLE EAST</th>
<th>AFRICA</th>
</tr>
</thead>
<tbody>
<tr>
<td>BAHRAIN</td>
<td>ANGOLA</td>
</tr>
<tr>
<td>IRAQ</td>
<td>CONGO</td>
</tr>
<tr>
<td>IRAN</td>
<td>DEMOCRATIC REPUBLIC OF CONGO</td>
</tr>
<tr>
<td>ISRAEL</td>
<td>GABON</td>
</tr>
<tr>
<td>KUWAIT</td>
<td>GUINEA</td>
</tr>
<tr>
<td>LEBANON</td>
<td>IVORY COAST</td>
</tr>
<tr>
<td>WEST BANK/GAZA STRIP</td>
<td>KENYA</td>
</tr>
<tr>
<td>OMAN</td>
<td>LIBERIA</td>
</tr>
<tr>
<td>QATAR</td>
<td>SIERRA LEONE</td>
</tr>
<tr>
<td>SYRIA</td>
<td>SOUTH AFRICA</td>
</tr>
<tr>
<td>UNITED ARAB EMIRATES (UAE)</td>
<td>SUDAN</td>
</tr>
<tr>
<td>YEMEN</td>
<td>UGANDA</td>
</tr>
<tr>
<td></td>
<td>ZIMBABWE</td>
</tr>
</tbody>
</table>

THIS IS TO ENSURE YOU GET THE APPROPRIATE TREATMENT AS SOON AS POSSIBLE

THANK YOU

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IMPORTANT: FOR ALL RECEPTION STAFF

For all patients attending reception with the following:

- FEVER or HISTORY OF FEVER in the past 24 hours
- OR IS
- GENERALLY MEDICALLY UNWELL

PLEASE ASK: “HAVE YOU VISITED ANY OF THE FOLLOWING COUNTRIES IN THE PAST 21 DAYS?”

(USE MAP IF NEEDED – HIGHLIGHTED COUNTRIES)

MIDDLE EAST (risk of flu)

- BAHRAIN
- IRAQ
- ISRAEL
- KUWAIT
- LEBANON
- WEST BANK/GAZA STRIP
- OMAN
- QATAR
- SYRIA
- UNITED ARAB EMIRATES (UAE)
- YEMEN

AFRICA (risk of Ebola)

- ANGOLA
- CONGO
- DEMOCRATO REPUBLIC OF CONGO
- GABON
- GUINEA
- IVORY COAST
- KENYA
- LIBERIA
- SIERRA LEONE
- SOUTH AFRICA
- SUDAN
- UGANDA
- ZIMBABWE

If YES - PLEASE direct patient to streaming room 3, close the door and contact the streaming nurse IMMEDIATELY.
If NO - nothing else is needed and book in as normal.

If a PATIENT HIGHLIGHTS they are from one of these countries or recently visited one then please ask have they had a fever or are they medically unwell.
If YES then call streaming nurse and isolate in streaming room 3.

***Note that this does not apply to patients with injuries****

*ANY QUERIES CALL NURSE IN CHARGE (x 26463) OR A&E REG (bleep 1341) *
PHE guidance

How to transfer patients
In the event that the patient requires hospitalisation, primary care professionals should **dial 999 for the ambulance service** who will coordinate arrangements to transport the patient to hospital. Ambulance transport to hospital will avoid the use of public transport or the need to decontaminate a private car. The ambulance service will need to put special precautions in place to ensure the vehicle and PPE are appropriate to the condition of the patient. It is important for primary care professionals to **alert the hospital** as to the arrival of the patient, the suspected diagnosis of Ebola, the method by which they will arrive and the importance of isolating the patient in a side room upon arrival.
“Provides clear operational procedures for the transfer of VHF patients”
PHE guidance

Decontamination of rooms
Cleaning and decontamination of any rooms in which a patient has been isolated, or any facilities used by the patient, should be discussed with the local health protection team in the event of a suspected patient attending the surgery. Once the suspected case has been transferred to secondary care, other patients and staff should not use the room in which the patient has been isolated or any potentially contaminated areas until they have been decontaminated. This includes toilets and other high contact surfaces such as door handles and telephones used by the suspected case. […]

It may be necessary to quarantine the room for up to 24 hours if the patient is being tested for Ebola. […] Any decontamination and cleaning of an area occupied by a patient categorised as a high risk of Ebola should be conducted using appropriate PPE.
Waste disposal

All waste, including used cleaning equipment such as gloves, paper towels and mops, should be put into impermeable waste bags, secured and stored in a safe undisturbed place until the suspected case has been assessed by a healthcare professional. Advice on its disposal should be sought from the local Health Protection Team.
Public Health

North West London HPT

Address:
61 Colindale Avenue
London
NW9 5EQ

Tel: 020 8327 7181
Fax: 020 8327 7206

Out of hours advice
Evenings, weekends and bank holidays, please phone: 01895 238282
PHE Imported Fever Service

0844 7788990