Policy for the management of patients with Viral Haemorrhagic Fever

Document Control Sheet

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Enquiries to:	ecch.infectionprevention@nhs.net

Revision History

Revision Date	Summary of changes	Author(s)	Version Number
March 2011	Style changed	IPCT	2
February 2013	Revised HPA guidance July 2012	IPCT	3
March 2015		IPCT	4
February 2017	Minor tweaks	IPCT	5
June 2021	Minor Tweaks	IPCT	7

Approvals

This document requires the following approvals either individual(s), group(s) or board.

Name	Title	Date of Issue	Version Number
JICC		08/03/2011	2
IPACC		18/2/2013	3
IPACC		23/02/2017	5
IPACC		14/12/2018	6
IPACC		16/06/2021	7

EQUALITY AND DIVERSITY IMPACT ASSESSMENT

Impact Assessments must be conducted for:

- ❑ All ECCH policies, procedures, protocols and guidelines (clinical and non-clinical)
- ❑ Service developments
- ❑ Estates and facilities developments

Name of Policy / Procedure / Service	Policy for the management of patients with viral haemorrhagic fever
Manager Leading the Assessment	Teresa Lewis
Date of Assessment	09/01/15

STAGE ONE – INITIAL ASSESSMENT

Q1. Is this a new or existing policy / procedure / service?

√ **Existing**

Q2. Who is the policy / procedure / service aimed at?

☐ **Patients**
√ **Staff**
☐ **Visitors**

Q3. Could the policy / procedure / service affect different groups (age, disability, gender, race, ethnic origin, religion or belief, sexual orientation) adversely?

Yes Sufficient national protocols that this policy takes into consideration can be applied if relevant

No

If the answer to this question is NO please sign the form as the assessment is complete, if YES, proceed to Stage Two.

Analysis and Decision-Making

Using all of the information recorded above, please show below those groups for whom an adverse impact has been identified.

	Adverse Impact Identified?
Age	No
Disability	No
Gender	No
Race/Ethnic Origin	No
Religion/Belief	No
Sexual Orientation	No

- Can this adverse impact be justified? NA
- Can the policy/procedure be changed to remove the adverse impact? NA

If your assessment is likely to have an adverse impact, is there an alternative way of achieving the organisation's aim, objective or outcome
What changes, if any, need to be made in order to minimise unjustifiable adverse impact?

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1. Introduction

VHFs are severe and life-threatening viral diseases that have been reported in parts of Africa, South America, the Middle East and Eastern Europe. VHFs are of particular public health importance because they can spread within a hospital setting; they have a high case-fatality rate; they are difficult to recognise and detect rapidly; and there is no effective treatment.

Experts agree that there is no circumstantial or epidemiological evidence of an aerosol transmission risk from VHF patients. Following the revised risk assessment, this policy recommends control options for the isolation of VHF patients in the UK. These options now include flexibility in the isolation of a patient with a VHF infection within a specialist High Security Infectious Disease Unit (HSIDU).

IN THE UNLIKELY EVENT THAT A PATIENT IS SUSPECTED OF HAVING VHF (THIS INCLUDES EBOLA) URGENT AND IMMEDIATE ADVICE MUST BE SOUGHT FROM THE PUBLIC HEALTH ENGLAND ON 03003038537

https://www.gov.uk/government/publications/viral-haemorrhagic-fever-algorithm-and-guidance-on-management-of-patients

The algorithm on this page must be adhered to

Environmental conditions in the UK do not support the natural reservoirs or vectors of any of the haemorrhagic fever viruses, and all recorded cases of VHF in the UK have been acquired abroad, with the exception of one laboratory worker who sustained a needle-stick injury.

VHFs are of particular public health importance because:

- They can spread readily within a hospital setting;
- They have a high case-fatality rate;
- They are difficult to recognise and detect rapidly;
- There is no effective treatment.

The Advisory Committee on Dangerous Pathogens' (ACDP) Hazard Group 4 viral haemorrhagic fevers viruses

1.ARENAVIRIDAE BUNYAVIRIDAE Old World arenaviruses Lassa Lujo fever New World arenaviruses Chapare Guanarito Junín Machupo Sabiá 2. FLAVIVIRIDAE Kyasanur forest disease Alkhurma haemorrhagic fever Omsk haemorrhagic fever	3. FILOVIRIDAE Ebola Marburg 4. BUNYAVIRIDAE Nairoviruses Crimean Congo haemorrhagic

2. Scope

The purpose of this policy is to provide concise guidance for all staff and to minimize the potential risks associated with the management of a patient suffering from one of the viral haemorrhagic fevers. This document applies to all staff either employed or contracted within in-patient areas in East Coast Community Healthcare CIC (ECCH).

In the UK, only persons who have; (i) travelled to an area where VHFs occur; and/or (ii) been exposed to a patient or animal infected with VHF (including their blood, body fluids or tissues); or (iii) worked in a laboratory with the infectious agents of VHFs; are at risk of infection from VHFs.

3. Policy Statement

This policy will be implemented to ensure adherence to safe practice.

4. Roles and responsibilities

It is the responsibility of all staff to ensure that they adhere to best practice.

5. Risk assessment - https://www.gov.uk/government/publications/viral-haemorrhagic-fever-algorithm-and-guidance-on-management-of-patients

The patient risk assessment must be led by a senior member of the medical team responsible for the acute care of patients, for example the emergency care physician, emergency department consultant or admitting team consultant. The consultant microbiologist will also need to be involved. Clinicians can contact the Imported Fever Service (IFS) after discussions with their local microbiologist/virologist.

Standard precautions and good infection control are paramount to ensure staff are not put at risk whilst the initial risk assessment is carried out. It is assumed throughout this policy that staff will be using standard precautions as the norm. If these measures are not already in place, they must be introduced immediately when dealing with a patient in whom VHF is being considered.

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The patient's VHF risk category can change depending on the patient's symptoms and/or the results of diagnostic tests. It is important to note that a patient with a VHF infection can deteriorate rapidly.

Patients with a fever >37.5◦C are highly unlikely to have a VHF infection if:
They have **not** visited a VHF endemic area within 21 days of becoming ill;

They have not become unwell within 21 days of caring for or coming into contact with the bodily fluids of / handling clinical specimens from a live or dead individual or animal known or strongly suspected to have a VHF;

If their UK malaria screen is negative and they are subsequently afebrile for >24 hours;

If their UK malaria screen is positive and they respond appropriately to malaria treatment;

If they have a confirmed alternative diagnosis and are responding appropriately.

The risk of VHF in the patient should be reassessed if a patient with a relevant exposure history fails to improve or develops one of the following:

- Nosebleed;
- Bloody diarrhoea;
- Sudden rise in aspartate transaminase (AST);
- Sudden fall in platelets;
- Clinical shock;
- Rapidly increasing O2 requirements in the absence of other diagnosis.

NOTE: It is recommended that, if a patient is bruised or bleeding, the lead clinician must have an urgent discussion with the local microbiologist who will liaise with the Imported Fever Service concerning further management.

Infection control measures

1. A patient categorised as a 'high or low possibility of VHF' must be isolated in a single side room immediately to limit contact until the possibility of VHF has been ruled out. The side room should have dedicated en-suite facilities.

2. It is assumed that all staff will already be using standard precautions as appropriate. If not, these must be immediately introduced. The level of any additional staff protection is dependent on the patient's symptoms.

Infection control measures for 'possibility of VHF'	
Patient's symptoms	**Staff protection**
Bruising OR bleeding	Standard **plus** droplet precautions required: • hand hygiene • gloves • plastic apron • fluid repellent surgical facemask • disposable visor **In addition, for potential aerosol-or splash-inducing procedures:** • FFP3 respirator or EN certified equivalent
None of the above	• Standard Precautions: • hand hygiene • gloves • plastic apron

3. Potential aerosol-or splash-inducing procedures include:

- Endotracheal intubation;
- Bronchoscopy;
- Airway suctioning;
- Positive pressure ventilation via face mask;
- High frequency oscillatory ventilation;
- Central line insertion;
- Aerosolised or nebulised medication administration;
- Diagnostic sputum induction.

4. Communication with staff about potential infection risks is paramount. Staff must be informed about and understand the risks associated with a VHF patient, for example:
The severity of VHF if infection is confirmed;

That virus may be present:

- in blood;
- in body fluids, including urine;
- on contaminated instruments and equipment;
- in waste;
- on contaminated clothing;

- on contaminated surfaces.

That exposure to virus may occur:

- **directly**, through exposure (broken skin or mucous membranes) to blood and/or body fluids during invasive, aerosolising or splash procedures;
- **indirectly**, through exposure (broken skin or mucous membranes) to environments, surfaces, equipment or clothing contaminated with splashes or droplets of blood or body fluids.

6. Diagnostic investigations

All samples from patients in the 'possibility of VHF' category can be treated as high risk samples. Investigations required will include URGENT Malaria investigations. Other investigations, as locally appropriate, may include urine, stool and blood cultures, and chest x-ray (CXR). However, liaison with the local Microbiologist/Virologist is required, particularly if the patient has bruising or bleeding.

7. Management of a patient categorised as 'HIGH POSSIBILITY OF VHF'

The lead clinician who is responsible for the acute care of the patient must be a senior member of the medical team;

The patient must be isolated in a single side room immediately;

Enhanced infection control measures appropriate to the patient's symptoms and clinical care procedures must be put in place;

Carry out an urgent **VHF** and **malaria screen**, and continue local diagnostic investigations as appropriate and with additional laboratory precautions
Commence early public health actions;

If the patient's VHF screen is **positive**, arrange urgent transfer to the local HSIDU and launch full public health actions. **Tel: 03003038537**

Infection control measures

1. The patient must be isolated in a single side room immediately to limit contact. The side room should have dedicated en-suite facilities or at least a dedicated commode.
2. The number of staff in contact with the patient should be restricted.
3. The level of staff protection required is dependent on the patient's symptoms and is set out in the table below:

Infection control measures for 'high possibility of VHF' see algorithm https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/478115/VHF_Algo.pdf	
Patient's symptoms	**Staff protection**
Bruising OR bleeding OR uncontrolled diarrhoea OR uncontrolled vomiting	Enhanced precautions required (standard plus droplet plus respiratory protection): • hand hygiene • double gloves • fluid repellent disposable gown – an all-in-one disposable should be considered as an alternative; • disposable visor • Head cover • FFP3 respirator or EN certified equivalent
None of the above	Droplet precautions (standard plus droplet) required:

	• hand hygiene • gloves • plastic apron • fluid repellent surgical facemask • disposable visor. **In addition, for potential aerosol-or splash-inducing procedures:** • FFP3 respirator or EN certified equivalent

8. Other requirements

Inform the Infection Control Doctor who, in turn, will inform the CCDC. Contact the CCDC 03003038537 **directly** only in the unlikely event of failing to contact the ICD first.

9. Last Offices

If the patient dies, handling of the body must be minimal. The corpse should be placed in a sealed body bag, not embalmed, and cremated or buried promptly in a sealed casket according to Department of Health Guidelines.

NB: See ECCH Policy: Care of the Cadaver

10. References

Management of Hazard Group 4 viral haemorrhagic fevers and similar human infectious diseases of high consequence
https://www.gov.uk/government/publications/viral-haemorrhagic-fever-algorithm-and-guidance-on-management-of-patients (accessed 11/05/2021)

Information

Imported Fever Service:
Doctors can contact the IFS (after consultation with local microbiologist/virologist) on 0844 778 8990 for direct access to on call experts. See https://www.gov.uk/imported-fever-service-ifs for specific information required. (accessed 11/05/2021)

High Security Infectious Disease Unit
Royal Free Hampstead NHS Trust, London
Telephone (24 hrs, ask for infectious disease physician on call) +44 (0)20 7794 0500 or 0844 8480700 (local rate number when calling from outside London)
www.royalfree.nhs.uk

https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/534002/Management_of_VHF_A.pdf (accessed 11/05/2021)

https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/478115/VHF_Algo.pdf (accessed 11/05/2021)