Quick Guide for the Management of Viral Haemorrhagic Fevers (VHFs)

Department / Service:	Microbiology/Infection Prevention Team
Originator:	Lara Bailey – Senior Infection Prevention Nurse Advisor
Accountable Director:	Sarah Shingler – Director of Infection Prevention and Control
Approved by:	Trust Infection Prevention and Control Committee
Date of approval:	15th August 2023
First Revision Due:	15th August 2026
Target Organisation(s)	Worcestershire Acute Hospitals NHS Trust
Target Departments	All Departments
Target staff categories	All Healthcare and Laboratory Staff

Quick Guide Overview:

This quick guide gives guidance on the risk assessment and management of patients in the United Kingdom in whom infection with a viral haemorrhagic fever (VHF) is suspected or is confirmed. It should be utilised in conjunction with published National Guidance.

Key Amendments to this document:

Date	Amendment	By:
22/10/2010	Document approved	TIPCC
August 2012	Updated and rewritten from new DH guidance	C Catchpole
March 2013	Further small amendments throughout	A Dyas, H Gentry
July 2014	Amended from new PHE guidance	A Dyas
09/12/2014	Amended VHF assessment algorithm and revised PHE guidance. Updated donning and doffing procedures.	H Gentry
Nov 2016	Documents extended for 12 months as per TMC paper approved on 22nd July 2015	TMC
November 2017	Document extended for three months whilst document under review	TLG
March 2018	Document extended for 3 months as approved by TLG	TLG
June 2018	Document extended for 3 months as approved by TLG	TLG
October 2018	Document extended until end of November	Heather Gentry
April 2019	Document extended for 6 months whilst review process takes place	TIPCC
December 2019	Full amendments and re-write to previous protocol. Document name changed to Quick Guide for the Management of Viral Haemorrhagic Fevers (VHFs)	TIPCC
June 2023	Various amendments made to the quick guide: • Change of accountable director	L Bailey

	• Hyperlinks throughout document updated. • Section 1 Addition of the definition of contact • Section 2 Name changed to the UK Health Security Agency, which was formerly known as Public Health England. Thereafter referred to as UKHSA in the document. • Section 4 Updated those to whom the guidance applies to include laboratory and mortuary staff. • Section 5.3 Inserted text box highlighting those patients with a fever who are unlikely to have a VHF • Section 5.4 Information added re categorisation of patients following risk assessment and likelihood of VHF • Section 5.5 Updated details regarding UKHSA's reference laboratory. • Section 5.5 Addition of a sentence regarding IFS clinician advice on the packaging of laboratory samples • Section 5.6.3 Updated contact details of the local Health Protection Team, addition of email addresses • Section 10.3 Updated contact details and roles and responsibilities of consultation members • Appendix 1 – updated to most recent version of the algorithm	

Contents page:

Supporting Documents

Supporting Document 1	Equality Impact Assessment
Supporting Document 2	Financial Risk Assessment

1. Introduction

This quick guide provides summary guidance on the risk assessment and hyperlinks to the appropriate national guidance for advice on the management of patients in the United Kingdom (UK) in whom infection with a viral haemorrhagic fever (VHF) should be considered or is confirmed. This guidance aims to eliminate or minimise the risk of transmission to healthcare workers and others coming into contact with an infected patient. In this guidance, contact is defined as exposure to an infected person or their blood and body fluids, excretions or tissues following the onset of their fever.

2. Scope of this document

This quick guide covers the duty to report suspected or confirmed cases of VHF to the UK Health Security Agency (UKHSA) formerly known as Public Health England (PHE) by the attending clinician or by the Microbiology Laboratory.

It also covers the responsibility of clinical staff to alert the Infection Prevention Team (IPT) to any individuals who may have suspected or confirmed VHF.

3. Definitions

The registered medical practitioner (RMP) is the attending physician of the patient, responsible for notifying the highly possible case of VHF to the “proper officer”.

The proper officer (PO) is that person of the local authority in which the patient currently resides (usually the Consultant in Communicable Disease Control) to whom infections should be notified within 24 hours.

4. Responsibility and Duties

This quick guide is to be implemented by all healthcare staff in Worcestershire Acute Hospitals Trust as well as those working in laboratories that deal with specimens from patients in whom VHF is suspected or confirmed and mortuary personnel who may need to care for a patient with suspected or confirmed VHF.

All attending medical practitioners and Microbiology Departments have the legal responsibility to follow this notification policy.

All clinical Trust staff are responsible for following the policy to alert the IPT about suspected or known infectious individuals.

5. Quick Guide Detail

5.1 Epidemiology

VHFs are dependent upon their animal hosts for survival. They are usually restricted to the geographical area inhabited by those animals, or specific arthropod vector. These viruses are endemic in areas of Africa, South America, the Middle East and Eastern Europe.

Environmental conditions within the UK do not support the natural reservoirs or vectors of any of the haemorrhagic fever viruses. **All recorded cases of VHF in the UK have been acquired abroad, with one exception of a laboratory worker who sustained a needle-stick injury.** There have been no cases of person-to-person transmission of VHF in the UK to date of publication of national guidance.

5.2 ACDP Hazard 4 VHF

ARENAVIRIDAE

Old World arenaviruses:

- Lassa
- Lujo

New World arenaviruses:

- Chapare
- Guanarito
- Junín
- Machupo
- Sabiá

FLAVIVIRIDAE

Kyasanur forest disease
Alkhurma haemorrhagic fever*
Omsk haemorrhagic fever

BUNYAVIRIDAE

Nairoviruses
Crimean Congo haemorrhagic fever

FILOVIRIDAE

Ebola
Marburg

*Hazard Group 3 agent, but included in this quick guide as “similar human infectious disease of high consequence”.

Published National Guidance can be found via each hyperlink above. It is the responsibility of all healthcare professionals to ensure that the recommendations set out within the published National Guidance are adhered to. Healthcare professionals must be prepared to justify any deviation from this guidance.

5.3 Patient Risk Assessment

Risk assessment is a legal obligation

The risk assessment should be led by a senior member of the medical team responsible for the acute care of patients. The Consultant Microbiologist/Virologist may also need to be involved.

Standard precautions should be implemented whilst the initial risk assessment is carried out.

For any patient who has had a fever (>37.5ºC) or history of fever in the preceding 24 hours and a travel history or epidemiological exposure within 21 days, follow the major steps in the pathway from identification to diagnosis (Appendix 1).

The questions in the algorithm will thoroughly assess the risk of VHF infection.

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

5.4 Management of suspected or confirmed cases of VHF

Questions in the algorithm (Appendix 1) will enable categorisation of the patient as one of the following:

- Unlikely to have a VHF
- Low possibility of VHF
- High possibility of VHF
- Confirmed VHF

Management & infection control measures of the patient dependent upon the risk of VHF infection above can be found at the following link.

5.5 Laboratory Specimens

Laboratory specimens for suspected cases of VHF should not be sent via the pneumatic chute system. The laboratory should be informed when samples are on their way so that laboratory staff are ready to handle specimens appropriately and in a timely fashion.

If a VHF screen is required, it is imperative that the attending clinician (RMP) contact the Duty Consultant Microbiologist 0900-1700 Monday-Friday, OR the On-Call Consultant Microbiologist (OOH). The Duty Consultant Microbiologist will then liaise with the Imported Fever Service (IFS) and arrange transport of the VHF screen to the UKHSA's rare and imported pathogens laboratory (RIPL), known as UKHSA Porton Down.

Further advice may be found here.

The minimum samples to take are:

- Serum (4.5mL serum separation gel tube)
- EDTA Blood (4.5mL EDTA tube)
- Urine – ideal, but testing should not be delayed in order to obtain a urine sample.

Further samples may be advised depending on the exposure and presentation of the case, either in parallel with the VHF testing or dependent on the results. This advice will be given by the IFS through the Consultant Microbiologist.

The IFS clinician will advise on whether samples are to be sent as 'Category A' or 'Category B', depending on likelihood of a VHF diagnosis from exposure history. Samples must be packaged according to the relevant international guidelines.

5.6 Notification Procedure

5.6.3 Notification of Hospital Patients:

In England, VHF is a notifiable disease under Schedule 1 of the Health Protection (Notifications) Regulations 2010. Notification of VHFs is classified as urgent.

The attending clinician (RMP) should inform the PO via the local Health Protection Unit (HPU) or via Public Health England (PHE) within 24 hours of the suspected or confirmed VHF case. This oral notification should then be followed up with written notification within 3 days.

The attending clinician (RMP) should not wait for laboratory confirmation or results of other investigations in order to notify a suspected case.

Notification Certificates are available to print (Appendix 2). Completed certificates should be sent to:

West Midlands HPT

Consultant in Communicable Disease Control
West Midlands Health Protection Unit
UK Health Security Agency
23 Stephenson Street
Birmingham
B2 4BH

Telephone: 0344 225 3560 (option 2)

Out of hours advice (health professionals only): 01384 679 031

Email bat@ukhsa.gov.uk for non-clinical enquiries

Email phe.wmnoids@nhs.net for clinical notifications of infectious diseases

5.6.2 Notification of Infectious Diseases to the IPT – Notification by Nursing Staff

The Nurse in Charge (NIC) of the ward is responsible for informing the IPC Nurse of any suspected or confirmed infectious patient.

Worcestershire Royal Hospital:
Tel: 01905 733 092
Ext: 38752

Alexandra Hospital:
Tel: 01527 512 185
Ext: 44744

5.6.3 Notification by Medical Staff

In cases of serious infection, such as VHF, or in the event of an outbreak of infection, the RMP must notify the Duty Consultant Microbiologist.

The Duty Consultant Microbiologist is contactable between 0900-1700 via the Microbiology Laboratory OR the On-Call Consultant Microbiologist (OOH) is contactable via the hospital switchboard.

6. Training and Awareness

It is a mandatory requirement that all new Trust employees must attend a Trust corporate induction programme, which includes IPC training. It is the responsibility of the line manager to ensure that infection prevention and control issues are covered in all local inductions and that this is documented.

It is a mandatory requirement that all clinical and non-clinical staff update their infection control training annually, either by attendance at a formal session, or using and completing online or e-learning resources. It is the line manager's responsibility to ensure that this occurs.

Different modalities are available to facilitate compliance with mandatory training requirements. These include attendance at formal lectures, ad hoc teaching, and access to online training. Records of staff training are kept centrally on the ESR database, and locally by Directorates as required.

7. Monitoring and compliance

The local HPT monitors notifications and will inform the Trust of compliance.

8. Policy Review

This quick guide will be reviewed every three years or earlier if national regulations and recommendations change by the named individual on the front of the policy and circulated for comment prior to approval by the Trust Infection Prevention and Control Committee (TIPCC).

9. References

- Advisory Committee on Dangerous Pathogens (ACDP) (2015) *Management of Hazard Group 4 viral haemorrhagic fevers and similar human infectious diseases of high consequence.*
- Advisory Committee on Dangerous Pathogens (ACDP) (2015) *Viral haemorrhagic fevers risk assessment algorithm (Version 6: 15.11.2015)*
- Public Health England (2014 updated 2022) *Crimean-Congo haemorrhagic fever: origins, reservoirs, transmission and guidelines*.
- Public Health England (2014 updated 2023) *Ebola: overview, history, origins and transmission.*
- Public Health England (2014 updated 2022) *Lassa fever: origins, reservoirs, transmission and guidelines*.
- Public Health England (2014 updated 2023) *Marburg virus disease: origins, reservoirs, transmission and guidelines.*
- UK Health Security Agency (UKHSA) (2014 updated 2022) *Viral haemorrhagic fever (VHF) sample testing from the imported fever service (IFS)*

10. Background

10.1 Equality requirements

The equality risk assessment for this quick guide has been undertaken and meets all the required standards. (See Supporting Document 1)

10.2 Financial risk assessment

The financial risk assessment for this quick guide has been undertaken and does not require any additional resources. (See Supporting Document 2)

10.3 Consultation

This quick guide has been circulated to key stakeholders and representative of the target audience for comment prior to finalisation before being submitted for ratification by TIPCC.

Consultation List

This key document has been circulated to the following individuals for consultation - *indicates comments received

Name	Designation
Dr E Yates	CM and Infection Control Doctor
Dr E Yiannakis	CM and Infection Control Doctor
Ms J Booth	Deputy Director of Infection Prevention and Control
Ms E Fulloway	Infection Prevention Nurse Manager
Ms K Howles	Senior Infection Prevention and Control Nurse
Ms E Neale*	Senior Infection Prevention and Control Nurse

This key document has been circulated to the following CDs/Heads of Department for comments from their Directorates/Departments - * indicates comments received

Name	Directorate / Department
Dr D Raven	Divisional Medical Director (Urgent Care)
Dr R Hodson*	Emergency Department (WRH)
Dr A Jalil	Emergency Department (ALX)
Dr D Brocklebank	Medicine (WRH)
	Medicine (ALX)
	Circulated to all TIPCC Members

This key document has been circulated to the Clinical Governance Department for quality assurance checks prior to approval.

This key document will be circulated to the chair(s) of the following committee for comments;

Name	Committee
Ms S Shingler	Trust Infection Prevention and Control Committee (TIPCC)

10.4 Approval Process

The final draft will be checked to ensure it complies with the correct format and that all supporting documentation has been completed.

The quick guide will be submitted to TIPCC for approval before document code and version number are confirmed and the quick guide is released for placement on the Trust intranet.

Supporting Document 1 - Equality Impact Assessment Tool
To be completed by the key document author and attached to key document when submitted to the appropriate committee for consideration and approval.

NHS Worcestershire Acute Hospitals NHS Trust

Herefordshire & Worcestershire STP - Equality Impact Assessment (EIA) Form
Please read EIA guidelines when completing this form

Section 1 - Name of Organisation (please tick)

Herefordshire & Worcestershire STP		Herefordshire Council		Herefordshire CCG	
Worcestershire Acute Hospitals NHS Trust	x	Worcestershire County Council		Worcestershire CCGs	
Worcestershire Health and Care NHS Trust		Wye Valley NHS Trust		Other (please state)	

Name of Lead for Activity	**Julie Booth – Deputy DIPC**

Details of individuals completing this assessment	**Name**	**Job title**	**e-mail contact**
	Lara Bailey	**Senior Infection Prevention and Control Nurse Advisor**	**larabailey@nhs.net**
Date assessment completed	**24.07.2023**		

Section 2

Activity being assessed (e.g. policy/procedure, document, service redesign, policy, strategy etc.)	**Title: Quick Guide (Document)**
What is the aim, purpose	To provide guidance in conjunction with National Guidance on

and/or intended outcomes of this Activity?	actions to be taken for the management of patients in the United Kingdom (UK) in whom infection with a viral haemorrhagic fever (VHF) should be considered or is confirmed. This guidance aims to eliminate or minimise the risk of transmission to healthcare workers and others coming into contact with an infected patient.			
Who will be affected by the development & implementation of this activity?	❑ Service User ❑ Patient ❑ Carers ❑ Visitors		❑	Staff
Is this:	❑ Review of an existing activity			
What information and evidence have you reviewed to help inform this assessment? (Please name sources, eg demographic information for patients / services / staff groups affected, complaints etc.	National Guidance			
Summary of engagement or consultation undertaken (e.g. who and how have you engaged with, or why do you believe this is not required)	Key stakeholders have been engaged through the circulation of this quick guide prior to ratification being undertaken.			
Summary of relevant findings	No findings.			

Section 3

Please consider the potential impact of this activity (during development & implementation) on each of the equality groups outlined below. **Please tick one or more impact box below for each Equality Group and explain your rationale**. Please note it is possible for the potential impact to be both positive and negative within the same equality group and this should be recorded. Remember to consider the impact on e.g. staff, public, patients, carers etc. in these equality groups.

Equality Group	Potential positive impact	Potential neutral impact	Potential negative impact	Please explain your reasons for any potential positive, neutral or negative impact identified
Age		x		
Disability		x		
Gender Reassignment		x		
Marriage & Civil Partnerships		x		
Pregnancy & Maternity		x		

Equality Group	Potential positive impact	Potential neutral impact	Potential negative impact	Please explain your reasons for any potential positive, neutral or negative impact identified
Race including Traveling Communities		x		
Religion & Belief		x		
Sex		x		
Sexual Orientation		x		
Other Vulnerable and Disadvantaged Groups (e.g. carers; care leavers; homeless; Social/Economic deprivation, travelling communities etc.)		x		
Health Inequalities (any preventable, unfair & unjust differences in health status between groups, populations or individuals that arise from the unequal distribution of social, environmental & economic conditions within societies)		x		

Section 4

What actions will you take to mitigate any potential negative impacts?	Risk identified	Actions required to reduce / eliminate negative impact	Who will lead on the action?	Timeframe
How will you monitor these actions?				
When will you review this EIA? (e.g in a service redesign, this EIA should be revisited regularly	**When the quick guide requires revision in 3 years or if new guidance is published sooner.**			

throughout the design & implementation)	

Section 5 - Please read and agree to the following Equality Statement

1. Equality Statement

1.1. All public bodies have a statutory duty under the Equality Act 2010 to set out arrangements to assess and consult on how their policies and functions impact on the 9 protected characteristics: Age; Disability; Gender Reassignment; Marriage & Civil Partnership; Pregnancy & Maternity; Race; Religion & Belief; Sex; Sexual Orientation
1.2. Our Organisations will challenge discrimination, promote equality, respect human rights, and aims to design and implement services, policies and measures that meet the diverse needs of our service, and population, ensuring that none are placed at a disadvantage over others.
1.3. All staff are expected to deliver services and provide services and care in a manner which respects the individuality of service users, patients, carer's etc, and as such treat them and members of the workforce respectfully, paying due regard to the 9 protected characteristics.

Signature of person completing EIA	Lara Bailey
Date signed	24.07.23
Comments:	
Signature of person the Leader Person for this activity	
Date signed	09.08.23
Comments:	

Supporting Document 2 – Financial Impact Assessment

To be completed by the key document author and attached to key document when submitted to the appropriate committee for consideration and approval.

	Title of document:	Yes/No
1.	Does the implementation of this document require any additional Capital resources	No
2.	Does the implementation of this document require additional revenue	No
3.	Does the implementation of this document require additional manpower	No
4.	Does the implementation of this document release any manpower costs through a change in practice	No
5.	Are there additional staff training costs associated with implementing this document which cannot be delivered through current training programmes or allocated training times for staff	No
	Other comments:	NIL