Viral Haemorrhagic Fever (VHF) Infection Prevention and Control Precautions Summary for the Hospital Setting (Version 3.1)

Based on the Dept .of Health/HSE,2015 VHF guidance aligned to ACDP.

- Remember all blood and body fluids from all patients should be considered potentially infectious. Risk assess **all** patients on admission; considering symptoms and travel history then categorise as per the VHF Risk Assessment algorithm.
- Engage with Scottish Ambulance Service early if an inter-hospital transfer is planned (this will reduce delays in transfer; it can take considerable time to prepare an ambulance).

	Low Possibility of VHF	High Possibility of VHF	Confirmed VHF	Comments
Criteria	The patient **is not** bleeding / bruising and there **is no** uncontrolled vomiting or diarrhoea **(NOTE: If patient has bruising or bleeding, manage as High Possibility of VHF)**	The patient is categorised as a being a High Possibility of VHF may or may not be bleeding / have uncontrolled vomiting or diarrhoea	The patient has a positive VHF test and may or may not be bleeding / have uncontrolled vomiting or diarrhoea	VHF categories defined as per ACDP guidance: https://www.gov.uk/government/publications/viral-haemorrhagic-fever-algorithm-and-guidance-on-management-of-patients All HPS VHF guidance can be found at: http://www.hps.scot.nhs.uk/travel/viralhaemorrhagicfever.aspx
Patient placement (accommodation)	Single Room (door closed) En suite / own commode	If possible: negative pressure and ante-room within in an Infectious Diseases Unit **or** Single Room en suite / own commode (door closed)	High-Level Isolation Unit (HLIU) **or** Single Room en suite / own commode If possible: negative pressure and ante-room within in an infection diseases unit	Appendix 4 (ACDP guidance) provides advice on managing a confirmed VHF patient in a non-HLIU environment. Appendix 5 (ACDP guidance) Transfer arrangements Contact Scottish Ambulance Service early if required to ensure early transfer
Moving between wards and departments within the hospitals (including theatres)	As per standard hospital procedures	Do not transfer unless under supervision of IPCT/ID Physician		IPCT - Infection Prevention and Control Team ID - Infectious Disease
Contact with people	Limit contact with other people	Limit the number of HCWs who come into contact with the patient. Restrict non-essential personnel and visitors from the patient care area. Clinical staff only in the room, i.e. no domestics staff, HCWs to perform routine cleaning. Keep an up to date list of staff who enter the room and who have been in contact with the patient throughout their care for contact assessment		Visiting restrictions should apply for all High Possibility and Confirmed cases until VHF negative confirmed.
Precautions required	Standard Infection Control Precautions (SICPs) + Contact Precautions	SICPs + Transmission based precautions (TBPs), i.e. Contact + Droplet + Airborne Precautions		NB **there is no evidence of airborne transmission** - airborne precautions are an additional precautionary control measure
Personal Protective Equipment (PPE)	Use PPE to prevent exposure to blood and or body fluids and to prevent direct contact with the patient	PPE must establish a full barrier against contact with contaminated surfaces, splash, spray, bulk fluids and aerosol particles		All HCWs involved in the care of high possibility or confirmed VHF cases must have received training in the correct order of donning, safe removal and disposal of PPE. The HCW should be familiar with the required PPE and should have had the opportunity to ensure the PPE is of a good fit before entering the patient room.

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PPE: To protect body area including head and neck	Disposable plastic apron over role appropriate uniform	The HCW should change into scrubs. Disposable fluid repellent coverall (with hood) plus high-grade disposable plastic apron over the coverall. No personal items (jewellery, watches, phones, pens etc.) should be taken into the patient room.		Disposable means single use. See HPS Advice for Purchase of Required PPE for VHF Preparedness: http://www.hps.scot.nhs.uk/travel/resourcedetail.aspx?id=1319
PPE: Feet	As per uniform policy	Wellington style boots and disposable overboots to enter room		Wellington style boots are single healthcare worker use See HPS Advice for Purchase of Required PPE for VHF Preparedness: http://www.hps.scot.nhs.uk/travel/resourcedetail.aspx?id=1319 Agree local decontamination process and safe storage of wellington boots between use
PPE: To protect face, including mucous membranes of the eyes, mouth and respiratory tract	Disposable full face visor **or** half-face visor with integral fluid repellent surgical face mask **or** goggles and a fluid repellent surgical face mask	FFP3 respirator & compatible full length visor/faceshield to enter room		Any reusable PPE items e.g. full length visors or goggles may be used but **MUST HAVE A DECONTAMINATION SCHEDULE WITH RESPONSIBIITY ASSIGNED**. FFP3 respirators may be valved or unvalved according to preference – the full length visor/faceshield will protect against splashes and spray.
PPE: To protect hands	Non sterile nitrile/latex **or** neoprene single use gloves	Disposable surgical gloves x2 (double gloving)		Cover all cuts or abrasions with a waterproof dressing and perform hand hygiene before donning gloves. Hand protection must overlap the wrist junction of coverall and be of a tight fit (without causing discomfort).
Aerosol Generating Procedures (as listed in the National Infection Prevention and control manual). NB also for any procedure, e.g. Central Line Insertion which may generate an droplet	FFP3 respirator and compatible eye protection	Disposable fluid repellent coverall (with hood) plus high-grade disposable apron, wellington boots and overboots, FFP3 respirator, full length visor/faceshield and double surgical gloves		Wear PPE appropriate for the VHF risk category – as above
Equipment	Single patient use B/P monitor Single use wash bowl, thermometer etc. Use needle safety devices where possible			Keep stock supplies out of the room Make sure the equipment is required before placing in the room DO NOT remove equipment from the room without permission of IPCT

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Specimens required	Malaria screen urgent FBC, U&E, LFTs Glucose, CRP, coagulation studies, urine culture, stool culture and blood cultures CXR (within the X ray department)	Urgent VHF testing Urgent Malaria screen FBC, U&E, LFTs Glucose, CRP, coagulation studies, culture and blood cultures	Patient under the care of the ID physician	Do not take specimens from high possibility VHF case without prior discussion with ID physician
Process / transport of specimens	It is not necessary to notify lab in advance of sending specimens Standard transport (sealed container)	Notify lab in advance of sending specimens CL2 No vacuum transport of specimens	Notify lab in advance of sending specimens Can be CL2 with permission / additional procedures No vacuum transport of specimens	See ACDP for additional precautions: https://www.gov.uk/government/publications/viral-haemorrhagic-fever-algorithm-and-guidance-on-management-of-patients
Healthcare waste  	As per SICPs Orange bag (Category B waste)	Double Yellow bag Category A waste (autoclave/incinerate) Hold waste in patient's room until VHF status is known	Double yellow bag Category A waste (autoclave/incinerate) Hold in safe area until transport available to incinerate/ autoclave	Each NHS board should have an agreement in place for disposal of Category A waste Involve Estates early if required - see Appendix 7 (ACDP) for Lab waste procedures Establish the safest way for waste to exit: http://www.hps.scot.nhs.uk/travel/resourcedetail.aspx?id=1321 https://www.gov.uk/government/publications/carriage-of-dangerous-goods-guidance-other-than-class-7
Laundry (bed linen, towels)	As per SICPs	Disposable (Category A waste autoclave/incinerate) (if reusable treat as disposable)		http://www.hps.scot.nhs.uk/travel/resourcedetail.aspx?id=1321 https://www.gov.uk/government/publications/carriage-of-dangerous-goods-guidance-other-than-class-7
Crockery & Cutlery	No special requirements	Disposable (Category A waste)		
Toileting facilities	As per SICPs	Patient may use toilet facilities If unavailable use commode / bedpan: solidify contents – (Category A waste autoclave/incinerate)		See ACDP guidance for further information: http://www.hps.scot.nhs.uk/travel/resourcedetail.aspx?id=501
Spills of blood or body fluids	SICPs (as per National Infection Prevention and Control Manual Appendix 11) for decontamination of blood and body fluid spills Blood 10,000 ppm av cl Contact time 3 minutes Urine – solidify then discard as Category A waste. Use 10,000 ppm av cl for 3 minutes contact time to disinfect area			Wear PPE appropriate for the VHF risk category – as above http://www.nipcm.scot.nhs.uk/

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Notification	Inform ICD, ID physician& notify CPHM	Inform ICD and ID physician Notify CPHM, HPS Notify a HLIU concerning patient management and possible early transfer	Inform ICD and ID physician Notify CPHM, HPS Notify a HLIU concerning patient management and transfer HPS to notify SGHSCD and PHE for onward communication to ECDC	ICD - Infection Control Doctor ID - Infections Disease physician CPHM – Consultant in Public Health Medicine HPS – Health Protection Scotland SGHSCD – Scottish Government Health and Social Care Directorate PHE – Public Health England ECDC European Centres for Disease Control HLIU –High Level Isolation Unit
Hospital Infection Incident Assessment Tool (HIIAT)	**Amber**	**Red**	**Red**	
Form an Incident Management Team	IPCT & CPHM	Full IPCT, CPHM, HPS, Pharmacy, Management, Estates		
Ongoing patient assessments	Monitor temperature. Monitor for bleeding, bruising and for diarrhoea and or vomiting – if symptoms appear discuss with ID physician If malaria negative and patient remains pyrexial and no other diagnosis, then discuss with ID physician	If malaria negative and patient pyrexial and no other diagnosis, then discuss with ID physician/HLIU	Patient under the care of the ID physician/HLIU	
Routine cleaning of patient room	As per SICPS	Perform routine cleaning and disinfection of patient care area. 1000 ppm av cl for hard surfaces 10,000 ppm av cl for toileting facilities This should be performed by clinical staff as part of care activities.		Wear PPE appropriate for the VHF risk category – as above
Terminal clean/ decontamination	Decontaminate room with 1000 ppm av cl following discharge / transferred as per National Infection Prevention and Control Manual	Decontaminate room with 1000 ppm av cl following discharge/ transfer as per National Infection Prevention and Control Manual Full fumigation of the patient's room if VHF confirmed	Decontaminate room with 1000 ppm av cl following discharge/ transfer as per National Infection Prevention and Control Manual Full fumigation of the patient's room	Leave decontaminated equipment within the area until fumigation process complete. NB it will need to be confirmed that fumigation has been successful before the room can be reused. This may take several days. Estates services will need to be involved regarding the ventilation pre-fumigation.

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Stand Down – when precautions can be discontinued	Consultant Microbiologist / ID physician confirms safe to stand down, e.g. the patient is • VHF negative • responding to treatment for an alternative diagnosis • Apyrexial for 24 hours	Consultant Microbiologist / ID physician confirms it is safe to stand down, e.g. the patient is • VHF negative • responding to treatment for an alternative diagnosis • Apyrexial for 24 hours (discuss with Imported Fever Service for other diagnosis)	On patient discharge/death	
Staff exposure	Procedure as per SICPs Provide reassurance and confirm when stand down that exposure was not to VHF.		Procedure as per SICPs Provide full support to staff and patient family throughout incubation period.	If during patient care a partial or total breach of PPE occurs (e.g. gloves separate from sleeve exposing skin, a tear develops in the outer glove, a needlestick injury) the HCW must move immediately to the PPE removal area to assess the exposure.
Care of the deceased	As per SICPs and standard hospital procedures	Viewing of the deceased should be avoided. Do not wash or dress the deceased. Place deceased in a double sealable leak-proof body bag, with absorbent material between each bag. Seal the bags, and disinfect surface of outer bag with 1000ppm available chlorine disinfectant. Label bag as high risk of infection and place in a robust coffin with sealed joints. Keep in a separate, identified cold store unit in the mortuary to await prompt cremation or burial. Post mortem examinations should not be performed. Blood sampling can be undertaken in the mortuary by a competent person to confirm or exclude VHF diagnosis.		

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Staff support	**Prevention / Management:** • Ensure sufficient supplies of appropriately fitting PPE to the relevant specifications are available. • Ensure sufficient staff are face fit tested and FFP3 respirators are available if required for any AGP • Showers are recommended at the end of each shift for staff exposed to blood or body fluids **Staff who care for these patients must know about VHF:** • That the viruses are typically present in blood and body fluids including urine, on contaminated instruments and equipment, in waste on contaminated clothing (including PPE) and contaminated surfaces. • Mode of transmission is typically through direct contact: exposure of broken skin or mucous membranes to blood and / or other body fluids when touching or when aerosolising / splashing of blood / body fluids occur. • Indirect transmission is typically via broken skin contact with mucous membranes or broken skin and contaminated equipment / surfaces. • NB risk is typically highest during the later stages of illness when vomiting, diarrhoea and often haemorrhage may lead to splash and droplet generation.			