Viral Haemorrhagic Fever Policy
(including Ebola)

V3.0

3rd March 2015
Table of Contents

1. Introduction ............................................................................................................3
2. Purpose of the Policy................................................................................................3
3. Scope ......................................................................................................................3
4. Definitions / Glossary .............................................................................................3
5. Roles and Responsibilities.......................................................................................4
6. Standards and Practice...........................................................................................6
   6.1 Diagnosis.............................................................................................................6
   6.2 Infectivity ............................................................................................................6
   6.3 Minimum Risk Category .....................................................................................7
   6.4 Moderate Risk Category ....................................................................................7
   6.5 High Risk Category ...........................................................................................7
   6.6 Risk Assessment ................................................................................................7
   6.7 Staff Management .............................................................................................15
7. Dissemination and Implementation..........................................................................15
8. Monitoring compliance and effectiveness...............................................................16
9. Updating and Review .............................................................................................17
10. Equality and diversity ...........................................................................................17

Appendices:

Appendix 1 Governance Information ..............................................................................18
Appendix 2 Initial Equality Impact Assessment Form ....................................................20
Appendix 3 Viral Haemorrhagic Fever Risk Assessment ................................................22
Appendix 4 Putting on PPE..........................................................................................23
Appendix 5 Removing PPE ..........................................................................................24
Appendix 6 Action to be taken by individual areas on identification of a patient suspected as being moderate/high risk of VHF .........................................................27
Appendix 7 Actions for Pathology ...............................................................................30
Appendix 8 Emergency Department Reception Ebola Guidance ..................................33
Appendix 9 Emergency Department Triage Ebola Guidance .......................................34
Appendix 10 Patient Route to Wheal Prosper ..............................................................35
Appendix 11 Ambulance Route to Wheal Prosper .........................................................36
Appendix 12 Ebola pre event Telecom ........................................................................37
Appendix 13 Additional Screening questions for suspected cases ................................39
1. **Introduction**

1.1 Viral haemorrhagic fevers (VHF) are a group of viral diseases, which cause extensive haemorrhage and have a very high mortality. Most are endemic in a number of areas of the world, most notably Africa, parts of South America, rural parts of the Middle East and Eastern Europe. These viruses include Lassa fever, Crimean/Congo haemorrhagic fever (CCHF), Ebola and Marburg viruses. These four viruses are highly transmissible from person to person and therefore represent a serious risk to health care workers in contact with infected patients.

1.2 Environmental conditions in the UK do not support the natural reservoirs or vectors of any of these viruses and cases of VHF are extremely rare in the UK. The incubation period for VHF varies from between 3 - 21 days. Initial symptoms include pyrexia, malaise, headache and muscle or joint pain. Ebola and Marburg often cause a measles-like rash after 4 - 7 days. Obvious bleeding occurs at a later or terminal stage. For further guidance on the management of patients with VHF, please refer to the DOH guidelines referenced in this policy.

1.3 The current outbreak of Ebola in West Africa is the largest ever known outbreak of this disease and was declared a public health emergency of international concern by the World Health Organization in August 2014. Ebola is caused by infection with a virus which is spread by direct contact with blood and body fluids from infected people who are symptomatic. It remains unlikely, but not impossible, that travellers infected in affected countries could arrive in the UK while unknowingly carrying the virus in their body, and develop symptoms after their return. People infected with Ebola are infectious only when they have developed symptoms. These symptoms include fever, headache, diarrhoea and vomiting. Once symptomatic, all body fluids such as blood, urine, faeces, vomitus, saliva and semen are considered infectious, with blood, faeces and vomit being the most infectious.

1.4 VHF’s are of particular 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

1.5 Once a person with risk factors for Ebola becomes unwell in the UK, they will be admitted to a healthcare facility and will be tested rapidly, with a result available within 24 - 48 hours.

2. **Purpose of this Policy**

The purpose of this policy is to provide guidelines on the assessment and management of patients with suspected or confirmed hazard group 4 viral haemorrhagic fevers which includes Ebola.

This plan should be read in conjunction with the RCHT Major Incident Plan.

3. **Scope**

This policy applies to all staff working in the Royal Cornwall Hospital’s Trust.
4. Definitions / Glossary

- **Viral haemorrhagic fevers** - a group of illnesses that are caused by several distinct families of viruses eg. Ebola, Lassa fever, Crimean Congo haemorrhagic fever, Yellow fever.
- **Vector**
  An animal, usually an insect or a tick, that transmits parasitic micro-organisms – and therefore the diseases they cause – from person to person or from infected animals to human beings.
- **Endemic**
  Regularly occurring in a country or district

5. Roles and Responsibilities

In each NHS organisation the Chief Executive is responsible for ensuring that there are plans in place for emergency planning and business continuity based on the principles of risk assessment, cooperation with partners, communicating with the public and where necessary to share information.

5.1 Role of Medical Director

The Medical Director is the nominated executive director and is responsible for ensuring that:

- There are plans in place and that all staff are aware of their responsibilities
- The plan is maintained
- The trust is compliant with all the legislation and guidance relevant to managing at risk patient.
- Trust staff are familiar with the plan.

5.2 Role of the Divisional Directors

Divisional Directors are responsible for ensuring:

- Detailed planning has been undertaken for their risk areas
- There are clear pathways for management of a patient and understood roles and responsibilities
- Staff are familiar with the plans for their area.
- Staff have undertaken the relevant training to care and access an at risk patient.

5.3 Role of the Divisional Managers

Divisional Managers are responsible for ensuring:

- That plans are suitable. Business Continuity Plans are in place to mitigate the effects of managing an at risk patient.
- That in the event of any staff member or contractor is suspected of contamination/infection with a VHF virus a fully documented incident report is submitted.
5.4 Role of the Consultant Microbiologist/Infection Control Doctor
- Will advise G.P.’s and where relevant the admitting medical staff on the suitability of admission to the Trust or to a Regional Centre.
- Will inform the Trust Medical Director, Public Health England and the Director of Infection Prevention and Control of any patient who is either diagnosed / or suspected of having a viral haemorrhagic fever.
- Will lead in the initial management of any patient with suspected / diagnosed viral haemorrhagic fever.

5.5 Role of the Medical Staff
- Will alert and liaise with the consultant microbiologist / infection prevention and control doctor regarding the continuing management of a patient suspected of having a viral haemorrhagic fever.
- Will communicate with the Infection Prevention and Control Team to ensure that all relevant staff are informed regarding the infection control precautions to be undertaken.
- The Registrar (Endocrine/Renal) will be responsible for assessing the patient if they are admitted to Wheal Prosper during daytime hours. In the absence of the Registrar this responsibility will lie with the Consultant.
- The on-call Registrar will be responsible for assessing the patient if they are admitted to Wheal Prosper outside of daytime hours.

5.6 Role of the Infection Prevention & Control Team
- Will advise all relevant groups of staff on infection control precautions to be taken.
- Will work closely with the Consultant microbiologist / infection control doctor / Director of Infection Prevention and Control.

5.7 Role of Clinical Site Coordinators
- Will notify the On Call Manager if a suspected high risk case is admitted to hospital.
- Will liaise with the isolation ward staff to ensure patients in Side Rooms 10 and 11 are transferred to alternative locations.
- Will identify and move staff to the isolation ward to backfill those who need to care for the high risk patient.
- Notify the On Call Engineer from Estates of the arrival of a patient.
- If the patient needs to be moved from an admitting area to Wheal Prosper assist with the move (corridor closures, etc, not movement of a patient).
- Will set up Incident Coordination Centre if required.

5.8 Role of On Call Manager
- Will inform the on-call Executive that a suspected case has been admitted
- Will inform the Communications team that a suspected case has been admitted
- Will attend the Incident Coordination Centre.
- Will provide updates to partners as required.
- Will participate in relevant conference calls with partners.
- Will ensure appropriate staffing is in place.

5.9 Role of the Director of Infection Prevention & Control
• Will instigate an Outbreak Control Group / Major Outbreak Control Group as required and update the Executive Team as necessary.

5.10 Role of the Outbreak Control Group
- Will initiate risk assessment and agree the management of the patient / staff and contacts.
- Will implement the Major Outbreak Policy and develop a major outbreak plan where relevant.
- Will ensure that relevant reports are communicated as outlined in the Outbreak Control Policy.

5.11 Hospital Infection Prevention & Control Committee
Will be responsible for approval and overseeing the implementation of this policy.

5.12 Role of Estates Department
Secure the lifts after patient transfers as required.

5.13 Hotel Services Contract Manager
- Will liaise with the Hotel Services contractor to ensure that suitable training is provided for staff who may be required to support the movement of a suspected VHF patient and secure areas post occupation by a high risk patient until cleaning by specialist PHE appointed team.

5.14 Health and Safety Manager
- Will ensure that any confirmed VHF infection of a staff member or contractor is reported to the Health and Safety Executive in accordance with the current statutory requirements.
- Will ensure that potential or confirmed reports of the release or exposure to suspected VHF virus samples etc. are reported to the Health and Safety Executive in accordance with the current statutory requirements.

5.15 Communications Team
- Will liaise with Public Health England regarding the content and publication of any press releases.

6 Standards and Practice

6.1 Risk Assessment
The purpose of risk assessment is to enable decisions to be made about the actions needed to control the risk and prevent the spread of infection. Risk assessment therefore embraces both assessment of the patient for the possibility of VHF and assessment of associated risks to staff.

The patient risk assessment should be led by a senior member of the medical team responsible for the acute care of patients. The Consultant Microbiologist should be notified as soon as possible and preferably before the patient is admitted to assess the level of risk and determine whether admission locally is appropriate. For any patient who has had a fever $\geq 37.5^\circ C$ or history of fever in the previous 24 hours and a travel history or epidemiological exposure within 21 days, the pathway in the algorithm (Appendix 3) should be followed. This essentially categorises the patient as low possibility or high possibility for VHF.
6.2 Diagnosis
In the early stages of the illness there may be no specific clinical features and so the diagnosis must be considered in anyone who develops an unexplained fever within three weeks of returning from the areas listed in the introduction. If the possibility of VHF is raised, the clinician must consult a consultant microbiologist to discuss whether the patient can be admitted and investigated locally or whether transfer to the High Security Infectious Diseases Unit (HSIDU) at The Royal Free Hospital is required. The following information should be established from the patient:

- Has the patient travelled to any area where there is a current VHF outbreak?
- Did the visit involve living/working in rural areas where Lassa Fever is endemic?
- Did the patient have contact with/eaten primates, bats, antelopes, rats or other rodents in a Marburg/Ebola endemic area?
- Has the patient travelled in an area where Crimean-Congo Haemorrhagic Fever is endemic and sustained a tick bite or crushed a tick with their bare hands or had close involvement with animal slaughter?
- Purpose of the visit.
- Date of return to the UK.
- Date of onset of illness.
- Details of illness.

Clinical features may include: fever, headache, myalgia, pharyngitis, diarrhoea, bloody diarrhoea, vomiting, rash, bleeding, shock, lymphopaenia, thrombocytopaenia and raised AST.

6.3 Infectivity
Dependant on the virus, modes of transmission can include blood, urine, semen, vomit, faeces, tick bites. There has been no evidence of aerosol transmission from VHF patients. If there is no immediate threat to life (malaria being excluded) patients may remain at home. Patients can be managed more effectively if they are categorised according to level of infectivity and risk:

6.4 Low possibility for VHF
- Includes febrile patients that have been in an endemic area during the 21 days before the onset of illness, but have none of the additional risk factors that place them in the high risk category,

6.5 High Risk category
Includes febrile patients who have been in an endemic area within 21 days before illness and:

- Have household contact for more than four hours with people who are known or suspected of having a VHF or
- Nursed or cared for patients known or suspected of having a VHF or
- Are a laboratory worker who has had contact with body fluids or tissues of a human or animal known or strongly suspected of having VHF or
- Were previously categorised as ‘low possibility’ but who have developed organ failure and/or haemorrhage.

6.6 Management of Risk Categories
6.6.1 Low possibility of VHF
If admission is necessary, patients may be admitted to hospital locally. The following precautions must be taken:

6.6.1.1 Isolation
The patient must be admitted to a single room, with en-suite facilities on the isolation ward.

<table>
<thead>
<tr>
<th>Infection control measures for patients with a low possibility of VHF</th>
</tr>
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<tbody>
<tr>
<td><strong>Staff Protection</strong></td>
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<tr>
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<tr>
<td>Standard precautions</td>
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<tr>
<td>Additional protection for splash inducing procedures</td>
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<td></td>
</tr>
<tr>
<td>Additional protection for potential aerosol generating procedures* based on risk assessment for other infections known to be transmitted by aerosol</td>
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</tr>
</tbody>
</table>

* Aerosol generating procedures include – endotracheal intubation; bronchoscopy; airway suctioning; positive pressure ventilation via face mask; high frequency oscillatory ventilation; central line insertion; diagnostic sputum induction.

** Annual Fit Testing by a competent person is a statutory requirement and is in addition to user training in the selection, use, storage and disposal of PPE/RPE.

6.6.1.2 Infection Control Precautions
Standard infection control and source isolation precautions must be used (Please refer to Standard infection control precautions policy).

6.6.1.3 Pathology specimens
All samples from patients in this category can be treated as standard samples. Standard procedures for the transportation of specimens to be used and must be transported in a suitable sealed container. Investigations required will include URGENT Malaria investigation. If the patient has extensive bruising or active bleeding they should be regarded as ‘high possibility of VHF’ and discussed with the Microbiologist and managed accordingly (section 6.6.2)

If the malaria test is positive treatment for malaria should commence immediately. Patients, who fail to respond appropriately to antimalarial therapy particularly if there is the development of further features suggestive of VHF, should be re-evaluated for the possibility of VHF and the situation discussed with the microbiologist.

If the malaria test is negative and an alternative diagnosis made or the patient becomes afebrile, the patient can be managed locally.
If the malaria test is negative and an alternative diagnosis has not been made and the patient remains pyrexial, the case must be discussed with the microbiologist who should consider discussion of VHF screening with the Imported Fever Service.

6.6.1.4 Patient Transport
Patients may be transported using standard infection control precautions in an ambulance.

6.6.1.5 Cleaning
Standard Terminal clean of side room required on discharge wearing appropriate PPE, blood spillages must be cleaned using 10:000 ppm chlorine releasing agent.

6.6.1.6 Equipment
Single use (disposable) equipment and supplies should be used. Needle safety devices should be used where possible.

6.6.2 High possibility of VHF
Patients who have been categorised as ‘high possibility of VHF’ should be admitted either to the Department of Health designated HSIDU at the Royal Free Hospital or to intermediate isolation facilities immediately following consultation with the physician in charge and consultant microbiologist.

Patients who are high possibility of VHF must be admitted to the Department of Health designated HSIDU at the Royal Free Hospital. There may, however, be a delay in transferring these patients to the HSIDU, therefore the following measures must be taken.

6.6.2.1Patient Pathway
There are three possible pathways for patients categorised as ‘high possibility of VHF’

- Those transported from the community by ambulance after being identified as being at risk of VHF
- Those self presenting to an admitting area
- Those who have contacted 111 and have been advised to attend ED

Patients Assessed as ‘High possibility of VHF’ and Transported by SWAST

- Patients in the community should be assessed against the algorithm by SWAST or any primary care setting, community hospital or dentist surgery.
- If the patient is assessed as ‘high possibility of VHF’ SWAST will attend the patient and transport them to RCH.
- SWAST will notify the Emergency Department (ED) of the patient and inform them that the patient is to be transported into the hospital.
- ED, along with SWAST, should assess if there is a clinical requirement for the patient to be admitted via ED.
If there is not a clinical requirement, after undertaking a joint risk assessment with SWAST, the patient should be transported directly to the rear entrance of Wheal Prosper by SWAST.

ED should notify Wheal Prosper of the patient and give them an estimated time of arrival.

ED should notify the Clinical Site Coordinators of the arrival of a patient who is 'high possibility of VHF'.

ED Consultant should contact the relevant medical consultant who has the responsibility for 'high possibility of VHF' patients from Wheal Prosper.

ED, on notification of a patient, will inform microbiology.

**Patients self presenting to an admitting area.**
Where a patient self presents and has been assessed as ‘high possibility of VHF’, the departmental action plan must be implemented. See Appendix 6 for actions to be taken.

**Patients have contacted 111 and been advised to attend ED**

- 111 will contact ED to advise them of the call
- The member of ED staff who answers the phone must take details of the name of the patient and a contact number and if they are not the Consultant or Senior Doctor on duty they must pass these details to them.
- The senior doctor on duty will contact the patient directly and undertake a brief risk assessment to determine the severity of the patient’s symptoms.
- If the assessment indicates that the patient can wait until a bed on Wheal Prosper is available the patient should be advised to wait at home until further contact is made.
- The senior doctor will then inform the consultant microbiologist and the site co-ordinator who will initiate the Wheal Prosper plan.

**6.6.2.2 Infection Control Precautions**

- Patients will need to be isolated in a designated room, preferably with **en-suite facilities or at least a dedicated commode. Ideally this should be in the isolation ward.** If the patient requires critical care, the patient will be managed on the isolation ward by a team of critical care staff.
- The number of staff in contact with the patient must be restricted. Ideally staff should work in pairs with a third member of staff being available to assist as necessary. A fourth member of staff should act as a safety officer and should monitor time in PPE and the activity of the staff. A list of all staff who have cared for the patient must be kept.
- Single use disposable equipment and supplies should be used.
- The level of staff protection required is dependent on the patient’s symptoms and is set out in the table below.
- Staff who have cared for the suspected case can care for others up until 48 hours of first contact with the patient. If the case is confirmed as Ebola, staff who have had contact with the case will be excluded from work for 21 days.
Infection control measures for patients with a High possibility of VHF

<table>
<thead>
<tr>
<th>Staff Protection</th>
<th>Control Measures</th>
</tr>
</thead>
</table>
| Standard precautions plus droplet precautions. | • Hand hygiene  
• Double Gloves  
• Full length plastic apron  
• Fluid repellent disposable coverall or gown  
• Full face shield or goggles  
• FFP3 respirator or EN certified equivalent used as splash protection. If the respirator is to be used as respiratory protection when managing a patient with infections known to be transmitted by aerosol, it must be worn as per manufacturer’s recommendations.  
• Fluid repellent boot covers  
• Head cover |

It is essential that a ‘buddy’ system is used to put on and take off PPE (see Appendices 4 and 5 for the correct order to put on and take off PPE). The presence of a second appropriately trained person is essential to ensure PPE is put on correctly and removed correctly.

6.6.2.3 Pathology specimens (see appendix 7)
- An initial URGENT malaria test, essential biochemistry and haematology tests are usually required.
- Do not take any specimens until discussed with the consultant microbiologist. The specimens must be identified as ‘high risk’ and double bagged in self-sealing plastic bags.
- The request form must not under any circumstances be placed in the same bag as the specimen.
- The microbiology laboratory must be contacted before any specimens are sent.
- The pneumatic chute must not be used to transport specimens - these must be delivered by hand.
- The microbiology laboratory staff will advise on the correct method of transport and will provide a suitable sealed container to use.
- The Microbiologist will liaise with the Imported Fever Service regarding VHF testing.
- Additional diagnostic tests must be sent to the special pathology laboratory at CAMR (Centre of Applied Microbiology Research). This will be arranged by the Consultant Microbiologist.

If the malaria screen is negative and VHF is still suspected clinically, the case should be discussed promptly with the Microbiologist who will liaise with the Imported Fever Service to arrange an urgent VHF screen.

If the malaria screen if positive and the patient has returned from a country affected by the current Ebola outbreak, then dual infection should be considered and the case discussed with the microbiologist.
6.6.2.4 Action to be taken on receipt of results from Porton Down

Negative Result
The on call microbiologist will receive the results of any ebola screening from PHE at Porton Down. In the event that the result is negative they will:

- Inform the Clinical Site Coordinator with responsibility for the Tower bleep 3501.
- Inform the DIPC
- Inform the Consultant in charge of the patients care who will in turn inform the patient

The Clinical Site Coordinator will:
- Notify Wheal Prosper of the negative result and that they can reopen the segregated area of the ward.
- Redeploy any staff who were backfilling nurses working in the segregated area.
- Notify the on call manager of the negative result.
- Notify and redeploy any staff identified for future shifts on Wheal Prosper to backfill staffing.

The On Call Manager will:
- Notify the on call Executive
- Notify the on call communications officer.
- Notify the on-call Executive of the CCG.

Positive Result
The on call microbiologist will receive the results of any ebola screening from PHE at Porton Down. In the event that the result is positive they will:

- Inform the Clinical Site Coordinator with responsibility for the Tower bleep 3501
- Inform the DIPC

The Clinical Site Coordinator will:
- Inform Wheal Prosper of the Positive result
- Notify the On Call Manager
- Notify Occupational Health
- Notify Estates on call engineer
- Notify Mitie to assist with increased security presence.

On Call Manager will:
- Inform Executive on call
- Inform the on call communications officer.
- Notify and organise a telephone conference between PHE, SWAST and NHS England Area Team to discuss current situation and next steps to transport the patient to a nominated primary receiving Hospital.
- Participate in a LRF multi agency teleconference if requested as per the protocol contained in appendix 12
- Organise for the control room to be set up to manage the transfer of the patient, internal and external communications and look at the recovery issues such as cleaning, staff monitoring etc.
6.6.2.5 Notification
The consultant for communicable disease control (CCDC) must be notified by the Infection Control Doctor of a patient who has been identified as ‘high possibility for VHF’ in order that contacts can be identified and if necessary placed under surveillance.

6.6.2.6 Patient transfer
Internal transfer of patients is not recommended, however, if this is necessary it will require strict co-ordination if the patient presents on paediatrics, St Mawes or MAU. The route must be agreed by the consultant microbiologist, IPAC team and emergency planning lead, and may require the closing off of areas with follow-up cleaning. Mitie security and porters will need to be involved to assist with the moving of a patient. Estates will need to be informed to secure the lifts until diagnosis is confirmed.

If, after discussion with the physicians at the HSIDU at the Royal Free Hospital, it is agreed that the patient should be transferred to the HSIDU/nominated primary receiving hospital, transport will be arranged in liaison with the consultant microbiologist or CCDC. A category 4 ambulance from the SWAST ambulance service must be used (see appendix 12 for instructions on how this will be co-ordinated)

6.6.2.7 Cleaning
Standard Terminal clean of side room required on discharge wearing appropriate PPE (as above), blood spillages must be cleaned using 10:000 ppm chlorine releasing agent. In the event of the patient being confirmed as having VHF, a specialist company may be required to carry out fumigation. Advice to be sought from Public Health England.

6.6.2.8 Waste
- All waste from patients identified as high possibility of VHF infection must be classified as Category A infectious waste. The waste department should be contacted to arrange for separate collection.
- Where en-suite facilities are not available and a commode is in use, body fluids should be gelled and disposed of in a category A waste bag which is double bagged in the patient’s room.
- To dispose of waste from the patient’s room:
  - Ensure this has been double bagged and secured by the first person in the patient’s room.
  - A second person wearing standard PPE apron and gloves will place a category A disposal box into the ante room by the door.
  - The first person will place the double bag carefully into the box.
  - The second person will place the lid carefully onto the box and close securely. The box will then be transported to the waste hold for immediate collection.

6.6.2.9 Linen
Where a patient has a high possibility of VHF infection, disposable linen should be used. Where re-useable linen has been used, this must not be
returned to the laundry but treated and disposed of as Category A Infectious waste following the actions above.

6.6.2.10 Deceased Patients

Deceased Hospital Patients

All staff involved in the last offices and care and transfer of the deceased must wear appropriate PPE

- Mortuary Scrubs
- Disposable gown
- Disposable apron
- FFP3 facemask
- Eye protection
- Surgical cap
- Gloves (double gloves)

Known or suspected to have Ebola patients must be double bagged in leak proof cadaver bags with absorbent padding placed between the two bags. The outer bag must be disinfected with 1,000 ppm available chlorine. A Hospital Identification band detailing three unique identifiers i.e. deceased full name, CR number and DOB must be attached to the outer bag along with Bio hazard tape affixed across the outer cadaver bag notifying staff of the risk of infection. The deceased’s care record is to be fully completed and the risk of Infection recorded in the appropriate section.

Mortuary staff to be contacted in working hours on Ext 2555 or OOH via switchboard and updated with the patient details.

The deceased is to be transferred to the designated Mortuary isolation storage unit by portering staff.

Deceased to be transferred into a coffin with sealed joints and placed in the isolation unit, awaiting collection by appointed Funeral Director.

Deceased Community Patients

Funeral Directors, Ambulance Staff & Police Officers involved in the care and transfer of the deceased must wear appropriate PPE.

- Disposable apron
- FFP3 facemask
- Eye protection
- Surgical cap
- Gloves (double gloves)

Known or suspected to have Ebola patients must be double bagged in leak proof cadaver bags with absorbent padding placed between the two bags. A Police Identification band detailing three unique identifiers i.e. deceased full name, log number and DOB must be attached to the outer bar along with Bio hazard tape affixed across the outer cadaver bag notifying staff of the risk of infection. The Police Form 95 is to be fully completed and the risk of infection recorded in the appropriate section.
Mortuary staff to be contacted in working hours on 01872 252555 or OOH via RCHT Switchboard 01872 250000 and updated with the patient details.

The deceased is to be transferred to the designated Mortuary isolation storage unit by Funeral Director or Ambulance staff.

Deceased to be transferred into a coffin with sealed joints and placed in the isolation unit, awaiting collection by appointed Funeral Director.

Pertinent Information

A post-mortem examination of a person known to have died of (or with) Ebola virus disease exposes staff to unwarranted risk and should not be performed.

Bodies of those known or suspected to have died from or with Ebola or similar VHF should be cremated at the earliest opportunity if possible. If they cannot be cremated, for example if they have a pacemaker fitted, they should be buried at the earliest possible opportunity.

Contact and exposure to the deceased should be kept to an absolute minimum. While the wishes of the relatives of the deceased must be taken into consideration when arranging disposal of the body, they should not detract from the infection-control procedures in place. Exposure of relatives to the deceased including touching, washing, kissing, etc, should be avoided. Discussion around these areas with the relatives must be conducted in a sensitive manner by an appropriate individual, in appropriate setting and with the appropriate amount of time set aside for the discussion.

Articles of clothing and similar items from the deceased should be safely disposed of if obviously contaminated. Other such items should be autoclaved prior to laundry. Jewellery and similar items should be autoclaved or decontaminated with a validated disinfectant. They can then be returned to relatives of the deceased. The relatives must be warned of possible damage to the items during decontamination.

6.7 Staff Management

Any staff member returning from areas affected by outbreaks of VHF should be risk assessed and placed into the following categories:

<table>
<thead>
<tr>
<th>Category</th>
<th>What this category means</th>
</tr>
</thead>
<tbody>
<tr>
<td>Category 1</td>
<td>This person visited an Ebola affected area, but had no direct contact with an Ebola case (or body fluids) while they were there; this includes people who have had casual contact eg visited a home without direct contact with the Ebola patient or body fluids of the patient.</td>
</tr>
<tr>
<td>Category 2</td>
<td>This person had direct (close) contact with Ebola cases (or body fluids) while they were in the affected area, but wore appropriate protective equipment/clothing (PPE) and had no known breaches in PPE</td>
</tr>
<tr>
<td>Category 3</td>
<td>This person had direct (close) contact with Ebola cases (or body fluids) while they were in the affected area, wore appropriate protective equipment/clothing (PPE), but are concerned that they may have had a breach in these protective measures or have had direct contact with an Ebola patient’s blood, urine or secretions without being protected.</td>
</tr>
</tbody>
</table>

- **Category 1** – there are no restrictions on the activities of people in this category - they can return to their usual activities. There is no monitoring requirement.
- **Category 2** – they can return to live in their own/usual home with ordinary family and social contact, travel by public transport and carry out other daily activities. They will however be excluded from work until agreed by PHE. They are required to check their own temperature twice daily for 21 days after return, and to report any raised temperature (over 38°C) or other relevant symptoms to a named health protection team at PHE.
- **Category 3** – they can return to live in their own/usual home with ordinary family and social contact and can take agreed UK transport (as discussed with their monitoring team at PHE). They are required to check their own temperature twice daily for 21 days after return, and to REPORT DAILY to a named health protection team at PHE, even if they don’t have a raised temperature (over 38°C) or other suspicious symptoms. They will not be allowed to return to work until agreed by PHE.

Any staff who have cared for patients who are ‘high possibility of VHF’ will be risk assessed by PHE and placed in the categories above. PHE will liaise with the Occupational Health Department regarding these cases.

### 7 Dissemination and Implementation

This policy will be implemented via the following routes:

- Information regarding the policy will be disseminated to the Infection Prevention and Control Link Practitioners
- The policy will be included in the Trust’s Document Library
- The policy will be circulated to all Ward Sisters/Charge Nurses/Departmental Managers and Matrons.

### 8 Monitoring compliance and effectiveness

<table>
<thead>
<tr>
<th>Element 1</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Element to be monitored</td>
<td>It is highly unlikely that this situation will occur. In the event of any suspected case each case will be monitored against the policy and reported to the HICC.</td>
</tr>
<tr>
<td>Lead</td>
<td>Infection Prevention &amp; Control Team</td>
</tr>
<tr>
<td>Tool</td>
<td>Risk Assessment in this document</td>
</tr>
<tr>
<td>Frequency</td>
<td>as cases occur</td>
</tr>
<tr>
<td>Reporting arrangements</td>
<td>Information will be reported to the Hospital Infection Prevention &amp; Control Committee</td>
</tr>
<tr>
<td>Acting on recommendations and Lead(s)</td>
<td>Required actions will be identified and completed within a month.</td>
</tr>
<tr>
<td>Change in practice</td>
<td>Via the Infection Prevention &amp; Control Steering Group</td>
</tr>
</tbody>
</table>
and lessons to be shared

### Element 2

<table>
<thead>
<tr>
<th>Element to be monitored</th>
<th>Correct application and removal of PPE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lead</td>
<td>Departmental Manager of ED/Paediatrics/Maternity/MAU/SRU</td>
</tr>
<tr>
<td>Tool</td>
<td>Utilise guidance for putting on and removing PPE – Appendix 4 &amp; 5</td>
</tr>
<tr>
<td>Frequency</td>
<td>Annually</td>
</tr>
<tr>
<td>Reporting arrangements</td>
<td>Report annually on compliance to Resilience Committee</td>
</tr>
<tr>
<td>Acting on recommendations and Lead(s)</td>
<td>Required actions will be identified and completed within a month.</td>
</tr>
<tr>
<td>Change in practice and lessons to be shared</td>
<td>Via Resilience Committee</td>
</tr>
</tbody>
</table>

### 9 Updating and Review

This policy will be reviewed within three years.

### 10 Equality and Diversity

This document complies with the Royal Cornwall Hospitals NHS Trust service Equality and Diversity statement which can be found in the [Equality, Diversity & Human Rights Policy](#) or the [Equality and Diversity website](#).

#### 10.1 Equality Impact Assessment

The Initial Equality Impact Assessment Screening Form is at Appendix 2.
Appendix 1. Governance Information

<table>
<thead>
<tr>
<th>Document Title</th>
<th>Viral Haemorrhagic Fever Policy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date Issued/Approved:</td>
<td>27 Mar 15</td>
</tr>
<tr>
<td>Date Valid From:</td>
<td>27 Mar 15</td>
</tr>
<tr>
<td>Date Valid To:</td>
<td>31st October 2017</td>
</tr>
<tr>
<td>Directorate / Department responsible (author/owner):</td>
<td>Louise Dickinson, Consultant Nurse, Joint Director Infection Prevention &amp; Control</td>
</tr>
<tr>
<td>Contact details:</td>
<td>01872 25 4969</td>
</tr>
<tr>
<td>Brief summary of contents</td>
<td>The purpose of this policy is to provide guidelines on the assessment and management of patients with suspected or confirmed Hazard group 4 viral haemorrhagic fevers.</td>
</tr>
<tr>
<td>Suggested Keywords:</td>
<td>Viral Haemorrhagic Fever, Ebola, Lassa fever, Marburg.</td>
</tr>
<tr>
<td>Target Audience</td>
<td>RCHT</td>
</tr>
<tr>
<td>Executive Director responsible for Policy:</td>
<td>Medical Director</td>
</tr>
<tr>
<td>Date revised:</td>
<td>21st January 2014</td>
</tr>
<tr>
<td>This document replaces (exact title of previous version):</td>
<td>Viral Haemorrhagic Fever Policy Version 3</td>
</tr>
<tr>
<td>Approval route (names of committees)/consultation:</td>
<td>Trust Management Team - Governance</td>
</tr>
<tr>
<td>Divisional Manager confirming approval processes</td>
<td>NA</td>
</tr>
<tr>
<td>Name and Post Title of additional signatories</td>
<td>Not required</td>
</tr>
<tr>
<td>Signature of Executive Director giving approval</td>
<td>{Original Copy Signed}</td>
</tr>
<tr>
<td>Publication Location (refer to Policy on Policies – Approvals and Ratification):</td>
<td>Internet &amp; Intranet</td>
</tr>
<tr>
<td>Document Library Folder/Sub Folder</td>
<td>Clinical / Infection Prevention &amp; Control</td>
</tr>
<tr>
<td>Links to key external standards</td>
<td>CQC Outcome 8</td>
</tr>
<tr>
<td>Related Documents:</td>
<td>Advisory Committee on Dangerous Pathogens (November 2014) Management of Hazard Group 4 viral haemorrhagic fevers and similar human</td>
</tr>
</tbody>
</table>

Training Need Identified? Yes

### Version Control Table

<table>
<thead>
<tr>
<th>Date</th>
<th>Version No</th>
<th>Summary of Changes</th>
<th>Changes Made by (Name and Job Title)</th>
</tr>
</thead>
<tbody>
<tr>
<td>21.01.14</td>
<td>1.0</td>
<td>New Policy</td>
<td>Louise Dickinson Consultant Nurse Joint Director Infection Prevention and Control</td>
</tr>
<tr>
<td>14.08.14</td>
<td>2.0</td>
<td>Updated in accordance with new national guidance</td>
<td>Louise Dickinson Consultant Nurse Joint Director Infection Prevention and Control</td>
</tr>
<tr>
<td>27 Mar 15</td>
<td>3.0</td>
<td>Updated to incorporate more details on the management of high risk patients. Details on staff management included. Additional sections added on patient pathways. Terminology changed to ‘low possibility of VHF and high possibility of VHF” following updated guidance by the ACDP. (6.4, 6.5) 5.1 addition of Executive director. 5.5 made clear who is responsible for assessing the patient. 6.1 risk assessment section expanded – temp changed to 37.5°C. 6.2 changes to additional questions 6.6.1.3 actions in response to results added 6.6.1.6 equipment section added</td>
<td>Louise Dickinson Consultant Nurse Joint Director Infection Prevention and Control</td>
</tr>
</tbody>
</table>

All or part of this document can be released under the Freedom of Information Act 2000

This document is to be retained for 10 years from the date of expiry.

This document is only valid on the day of printing

Controlled Document

This document has been created following the Royal Cornwall Hospitals NHS Trust Policy on Document Production. It should not be altered in any way without the express permission of the author or their Line Manager.
Appendix 2. Initial Equality Impact Assessment Form

<table>
<thead>
<tr>
<th>Name of individual completing assessment: Louise Dickinson</th>
<th>Telephone: 01872254969</th>
</tr>
</thead>
<tbody>
<tr>
<td>Directorate and service area: Corporate, Infection Prevention and Control</td>
<td>Is this a new or existing Policy? Existing</td>
</tr>
</tbody>
</table>

**Appendix 2. Initial Equality Impact Assessment Form**

<table>
<thead>
<tr>
<th>Name of the strategy / policy / proposal / service function to be assessed (hereafter referred to as <em>policy</em>) (Provide brief description): Viral Haemorrhagic Fever Policy</th>
</tr>
</thead>
</table>

1. **Policy Aim***

Who is the strategy / policy / proposal / service function aimed at?

To ensure staff have access to appropriate information to enable them to make decisions about how to effectively manage patients suspected of having Viral Haemorrhagic Fever.

2. **Policy Objectives***

Appropriate isolation of infected patients in order to protect other patient's, staff and visitors.

3. **Policy – intended Outcomes***

All patients are risk assessed for the need for isolation & appropriate action taken.

4. **How will you measure the outcome?***

Review of each case as and when this occurs

5. **Who is intended to benefit from the policy?***

Patients and Staff

6a) **Is consultation required with the workforce, equality groups, local interest groups etc. around this policy?***

b) If yes, have these groups been consulted?

C). Please list any groups who have been consulted about this procedure.

No
Are there concerns that the policy could have differential impact on:

<table>
<thead>
<tr>
<th>Equality Strands:</th>
<th>Yes</th>
<th>No</th>
<th>Rationale for Assessment / Existing Evidence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>✓</td>
<td></td>
<td>May affect any age group.</td>
</tr>
<tr>
<td>Sex (male, female, transgender / gender reassignment)</td>
<td>✓</td>
<td></td>
<td>May affect any gender</td>
</tr>
<tr>
<td>Race / Ethnic communities / groups</td>
<td>✓</td>
<td></td>
<td>May affect any group</td>
</tr>
<tr>
<td>Disability - Learning disability, physical disability, sensory impairment and mental health problems</td>
<td>✓</td>
<td></td>
<td>May affect any one regardless of their disability</td>
</tr>
<tr>
<td>Religion / other beliefs</td>
<td>✓</td>
<td></td>
<td>May affect anyone regardless of religion</td>
</tr>
<tr>
<td>Marriage and civil partnership</td>
<td>✓</td>
<td></td>
<td>May affect anyone regardless of whether married or in a Civil partnership</td>
</tr>
<tr>
<td>Pregnancy and maternity</td>
<td>✓</td>
<td></td>
<td>May affect anyone regardless of whether pregnant or not</td>
</tr>
<tr>
<td>Sexual Orientation, Bisexual, Gay, heterosexual, Lesbian</td>
<td>✓</td>
<td></td>
<td>May affect anyone regardless of sexual orientation</td>
</tr>
</tbody>
</table>

You will need to continue to a full Equality Impact Assessment if the following have been highlighted:

- You have ticked “Yes” in any column above and
- No consultation or evidence of there being consultation - this excludes any policies which have been identified as not requiring consultation. or
- Major service redesign or development

8. Please indicate if a full equality analysis is recommended.  Yes Yes

9. If you are not recommending a Full Impact assessment please explain why.

Full impact assessment not required as does not affect any of the equality strands.

Signature of policy developer / lead manager / director  Date of completion and submission 30.12.13

Names and signatures of members carrying out the Screening Assessment

1. Louise Dickinson

Keep one copy and send a copy to the Human Rights, Equality and Inclusion Lead, c/o Royal Cornwall Hospitals NHS Trust, Human Resources Department, Knowledge Spa, Truro, Cornwall, TR1 3HD

A summary of the results will be published on the Trust’s web site.

Signed ____________________ Date ____________________
Appendix 3

VIRAL HAEMORRHAGIC FEVERS RISK ASSESSMENT (Version 5: 06.11.2014)

Viral Haemorrhagic Fever Policy
Appendix 4

Putting on PPE for use in suspected Ebola case

Gather all the necessary items of the PPE beforehand. The putting on of PPE should be supervised by another trained member of the team. Dressing should take place in a dedicated clean area which is separate to the undressing area.

Wearing scrubs that are tucked in? Jewellery removed? Hair tied up? Minor cuts covered? Hands washed?

1. Wash hands
2. Put on boot covers
3. Put on 1st pair of gloves
4. Put on waterproof gown
5. Put on face mask
6. Put on hat
7. Put on goggles/eye protection
8. Put on 2nd pair of gloves ensuring sleeve of the gown is tucked in
9. Put on long length apron
10. Buddy to check all PPE and write name and designation on apron of CW to indicate sign off

Whilst wearing PPE:
- Avoid touching or adjusting PPE.
- Replace gloves if they become torn or damaged.

Viral Haemorrhagic Fever Policy

Page 23 of 39
Appendix 5

Removal of Personal Protective Equipment PPE (Gowns) Red zone

The removal of PPE must be supervised by another trained member of the team (Safe Undressing Assistant - SUA) who will be wearing double gloves, gown and face visor to assist the Clinical Worker (CW) during the removal procedure. Removal of PPE must be carried out within dedicated zones to reduce the risk of contamination.

In isolation room: CW to remove any obvious contamination from PPE using clinical wipes

**RED ZONE**

Remove outer gloves using pinch and pull technique.

Apply gel to CWs hands

Perform hand hygiene

Carefully roll/peel down the gown and dispose of in bin.

Apply gel to own hands and perform hand hygiene. Put on replacement gloves if 2nd CW requires undressing.

Carefully roll/peel down left boot cover and dispose. As this is removed place left foot into the Amber zone.

Carefully roll/peel down right boot cover and dispose. As this is removed place right foot into the Amber zone.

**SUA in Red Zone**

**CW in Amber Zone**

Apply gel to CWs hands

Perform hand hygiene

Apply gel to CWs hands

Perform hand hygiene

Apply gel to CWs hands

Perform hand hygiene

Remove and discard Apron

Untie CW gown at the neck and waist.

Apply gel to CWs hands

Perform hand hygiene

Green boxes: Clinical Worker CW

Blue Boxes: Safe Undressing Assistant SUA
Removal of Personal Protective Equipment PPE (Gowns) Amber zone

The removal of PPE must be supervised by another trained member of the team (Safe Undressing Assistant - SUA) who will be wearing double gloves, gown and face visor to assist the Clinical Worker (CW) during the removal procedure. Removal of PPE must be carried out within dedicated zones to reduce the risk of contamination.

Blue boxes: Safe Undressing Assistant SUA

Green boxes: Clinical Worker CW

SUA in Red Zone → Remove and discard face shield → Apply gel to CWs hands → Perform hand hygiene

CW in Amber Zone → Remove and discard surgical cap → Apply gel to CWs hands → Perform hand hygiene

→ Remove inner gloves using pinch pull method → Apply gel to CWs hands → Perform hand hygiene

If no second CW requiring undressing remain in the decontamination area to assist the SUA. If second CW requires undressing and once SUA has removed PPE proceed directly to hand wash basin to wash hands with soap and water

IPAC 14.01.15
Undressing the Safe Undressing Assistant

**SUA in Red Zone**

- Clean upturned bin and alcohol gel bottle
- Apply alcohol to SUA’s gloves
- Perform hand hygiene
- Remove and discard gown
- Apply alcohol to SUA’s gloves
- Perform hand hygiene
- Carefully roll/peel down left boot cover and dispose. As this is removed place left foot into the Amber zone.
- Apply alcohol to SUA’s gloves
- Perform hand hygiene
- Carefully roll/peel down right boot cover and dispose. As this is removed place right foot into the Amber zone.
- Apply alcohol to SUA’s gloves
- Perform hand hygiene
- Apply alcohol to SUA’s hands
- Perform hand hygiene
- SUA now in Amber undressing zone
- Put on clean gloves
- Put lid on bin
- Visual check of equipment in Red Zone (bins, wipes, gel, and gloves)
- Remove gloves
- Apply alcohol to SUA’s hands
- Perform hand hygiene
- Exit undressing area
- Wash hands immediately with soap and water

**CW in Amber Zone**

- Blue Boxes: Safe Undressing Assistant SUA
- Green boxes: Clinical Worker CW
Appendix 6

Action to be taken by Individual areas on identification of a patient suspected as being moderate/high risk of VHF

Wheal Prosper

On notification of the arrival of a possible risk patient Wheal Prosper will:

- Liaise with the Clinical Site Coordinators with regard to moving any patients in Side Rooms 10 and 11.
- Identify the PPE trained staff who will manage the care of the risk patient.
- Liaise with the Clinical Site Coordinators with regard to the number of staff required to backfill the staff identified to care for the risk patient. Staff to be transferred to Wheal Prosper prior to the arrival of the patient.
- Ensure Side Rooms 10 and 11 are ready to receive the patient.
- Liaise with the Wheal Prosper consultant. Clinical responsibility sits jointly with renal and endocrine.
- Ensure the PPE trained staff put on the PPE to prepare to meet the ambulance ETA.
- On arrival of the patient liaise with ambulance crew with regard to the readiness of Side Rooms 10 and 11 to receive the patient. The patient can be held in the ambulance until the room is ready.
- Patients at high risk of VHF will be admitted to the ward via the rear fire doors adjacent to Side Rooms 10 and 11 (plan at Appendix 10).
- At time of patient transfer both beds to be screened off to create an isolation unit.
- Wheal Prosper staff to maintain Swiftplus.
- Minimum equipment only in rooms as if diagnosis is confirmed this will require disposal or cleaning by specialist team.
- Beds to be used while specimens are sent to establish definitive diagnosis of Ebola. If diagnosis is positively confirmed patient will be transferred to specialist unit by ambulance service.
- Area to be cleaned with advice from PHE.
- All waste to be double bagged and disposed of through Category A waste route.

Emergency Department (ED)

- On arrival to ED reception all patients will be screened as per the algorithm at Appendix 7.
- At triage patients will be screened as per algorithm at Appendix 8.
- Cubicle 20 is identified as the area where a risk patient would be taken via an external route and in through the fire doors.
- A screen will be placed adjacent to the cubicle to incorporate the adjacent toilet.
- Consideration should be given to moving patients out of adjacent cubicles.
- If the patient is to come to ED due to clinical need via an ambulance then the patient should be held in the ambulance until the designated area and staff are prepared.
- Two nursing staff and one medical staff will don PPE from the PPE trolley.
- ED will inform microbiology and the local PHE Health Protection Team.
- Document names of all patients/staff who may have come into physical contact with the patient or body fluids.
- Cordon off any affected area until the patient has been assessed.
- Transfer of the patient from ED to Wheal Prosper will be via the fire door of ED by Cubicle 20, towards the Princess Alexandra Maternity Wing, along Penventinnie Lane and along the path at the rear of PAMW to the rear of Wheal Prosper. (See map at Appendix 10).
- The move should be planned with security and other resources used to help clear the route.
MAU
- On arrival to MAU all patients should be screened as per algorithm.
- If a patient is deemed to be at risk of Ebola they should be put into Side Room 2 if they cannot immediately be transferred to Wheal Prosper. If not available, use Side Room 7.
- MAU must notify:
  - Microbiology
  - Clinical Site Coordinator – to decant any patients out of the side rooms.
  - Wheal Prosper
  - Infection Prevention and Control
- Side Room 3 should be used to don the PPE and Side Room 2 should be accessed via the interconnecting door.
- The PPE is stored in the cupboard outside D Bay on MAU 1.
- The movement of a risk patient off MAU must be planned to ensure corridors are closed while the patient is moved. The route will be out of MAU into the lift by Stairwell 3. On exiting the lift the patient will go along the Link Corridor and out of the doors opposite Lloyds Pharmacy. Lloyds Pharmacy should be cleared of visitors or shutters lowered with visitors inside while the patient is brought past. The doors to the Link Corridor exiting to the rear towards the Sunrise should be secured as should the fire doors prior to Lowen Ward. The patient should be taken towards the Princess Alexandra Maternity Wing (PAMW), along Penventinnie Lane and along the path at the rear of PAMW to the rear of Wheal Prosper. (See map at Appendix 10).
- A screen will be placed adjacent to the cubicle to incorporate the adjacent toilet.
- Consideration should be given to moving patients out of adjacent cubicles.
- If the patient is to come to ED due to clinical need via an ambulance then the patient should be held in the ambulance until the designated area and staff are prepared.
- Two nursing staff and one medical staff will don PPE from the PPE trolley.
- ED will inform microbiology and the local PHE Health Protection Team.
- Document names of all patients/staff who may have come into physical contact with the patient or body fluids.
- Cordon off any affected area until the patient has been assessed.
- Transfer of the patient from ED to Wheal Prosper will be via the fire door of ED by Cubicle 20, towards the Princess Alexandra Maternity Wing, along Penventinnie Lane and along the path at the rear of PAMW to the rear of Wheal Prosper. (See map at Appendix 10).
- The move should be planned with security and other resources used to help clear the route.
- Rooms to remain clear of patients until result is known.

St Mawes
- All patients will be screened against the algorithm by the Ward Clerk.
- If risk patient is identified, escalate to Surgical Matron/Clinical Site Coordinator out of hours.
- Empty St Mawes Lounge and remove all equipment and furniture from the waiting room.
- Request a mobile sink for St Mawes Lounge from Estates and one for the waiting area.
- Empty one consultation room of as much equipment as possible and transfer patient to room.
- Notify Wheal Prosper of possible patient.
- Agree process for transferring the patient to Wheal Prosper. Corridors will need to be closed while the patient is moved to Wheal Prosper.
- Route will be out of St Mawes, along the corridor to the lift by Stairwell 3. On exiting the lift the patient will go along the Link Corridor and out of the doors opposite Lloyds Pharmacy. Lloyds Pharmacy should be cleared of visitors or shutters lowered with visitors inside while the patient is brought past. The doors to the Link Corridor exiting to the rear towards the Sunrise should be secured as should the fire doors prior to Lowen Ward. The patient should be taken towards the Princess Alexandra Maternity Wing...
(PAMW), along Penventinnie Lane and along the path at the rear of PAMW to the rear of Wheal Prosper.

- Rooms to remain clear of patients until result is known.

**Maternity**

- Patients will be screened against the algorithm on entry to the relevant Unit.
- If an expected admission the patient will go direct to Wheal Prosper and paediatric/maternity staff will in reach with patient care.
- If an unexpected admission, the patient will be admitted to a single room on the antenatal or postnatal ward.
- If intrapartum allocate to single room and clear adjacent room for isolation nursing.
- Reassess if theatre needed and equipment and personnel should follow patient to Wheal Prosper.
- The route a patient would take is down to the ground floor via the lift, out of the main entrance to Princess Alexandra Maternity Wing, along Penventinnie Lane and along the path at the rear of PAMW to the rear of Wheal Prosper.
- Estates to secure lift afterwards until result is known.
- Rooms to remain clear of patients until result is known.

**Paediatrics**

- Any risk patient identified in the community will go directly to Wheal Prosper and paediatric staff will in reach to provide care.
- All patients will be screened against the algorithm.
- If a patient is identified as being at risk then Cubicle B on the Assessment Unit (Polkerris Ward) will be cleared and the patient placed in there.
- Cubicle 1 to be cleared of any patients and used as an anteroom.
- Contact to be made with Clinical Site Coordinators and Wheal Prosper and On Call Engineer for Estates to inform them of the patient.
- Plans to be made to move patient to Wheal Prosper.
- The corridors need to be secured for moving the risk patient.
- The route will be out of paediatrics to the lifts, down to the ground floor and out the exit adjacent to the Eye Clinic. The patient will then be taken outside towards the Princess Alexandra Maternity Wing (PAMW), along Penventinnie Lane and along the path at the rear of PAMW to the rear of Wheal Prosper.
- Estates to secure lift afterwards until result is known.
- Rooms to remain clear of patients until result is known.
Appendix 7

Actions for Pathology

1. **Sample collection**

When the patient is admitted into hospital the receiving clinician must perform an initial risk assessment on the patient. This assessment must include questions on recent travel and when the patient first got sick to determine the incubation period. The attending physician must involve the consultant microbiologist in the risk assessment if there is any suspicion of Ebola virus disease (Telephone - 4900).

The risk assessment may involve imported fever service in Colindale, and the patient will be categorized either low or high risk. Based on this assessment a decision will be made whether the laboratory will follow ‘Ebola Pathway’ to handle any specimen from this patient. If this patient is considered low risk and Ebola-PCR is NOT required to be sent to Portion Down, the sample will be processed as routine.

If the Clinical Microbiology Consultant decided that the patient may have potential Ebola and therefore specimens need to be taken, the BMS in CMB will send the requesting clinician 3 secondary transport containers via a porter.

The following tests are needed by the pathology department for Ebola diagnosis –

- **Haematology** – Malaria Film, Full Blood Count and Clotting screen
- **Clinical Chemistry** - U&E’s, LFT’s, CRP and glucose
- **Clinical Microbiology** - Blood cultures
- **Blood for Ebola** – EDTA and serum (to be sent to Porton Downs)

Once the Clinical Microbiology department has been informed of a potential Ebola specimen the Clinical Microbiology BMS will contact Haematology to inform them of a potential Ebola specimen (Telephone - 2507 or Haematology out of hours pager - 2321).

In the event of any other samples being received from this high risk patient, no testing outside this agreed list will be performed. (Blood transfusion - If red cells are required issue Group O (O Neg for women of child bearing potential), If Fresh Frozen Plasma (FFP) is required issue as if the patient were group AB).

2. **Sample transportation to the laboratory**

The sample must be brought back to CMB inside the category A transport containers (UN3373 complaint) and they MUST be transported by the porter or other healthcare worker and NOT be put onto the pod system. The request card must be sealed inside an appropriate separate pouch of the bag or left unattached to the specimen. The transport container must be packed with enough absorbent material to absorb all fluid in case of breakage.

3. **Sample handling on receipt into CMB including dispatch to referral laboratory**

Once the specimen has been brought to the lab it will go straight into the category 3 laboratory. The BMS from both microbiology and haematology will put on appropriate PPE. This will include:

- Full sleeve laboratory coat
- FFP3 facemask
- Eye protection
- Surgical cap
- Gloves (double gloves) 9 Newton nitrile gloves

The external surfaces of the blood culture will be disinfected using virolsolve in the CL3 class 1 safety cabinet before transferring to the blood culture instrument by a Microbiology BMS. If the specimen flags as positive the on-call BMS will discuss with Consultant Microbiologist before further processing.

The other Microbiology specimens will be locked in the Biosafety 3 Cabinet overnight. Further processing of these samples will be decided after discussion with the consultant microbiologist.

The Microbiology BMS will contact the designated courier service (PDP courier. Telephone - 01784 420466) for transporting the specimen to Porton Down. The courier company will provide the packaging material. An EDTA and serum sample will be packed, maintaining the packaging protocol by the microbiology BMS and sent to Porton Down at the address below:

The Defence Science and Technology Laboratory (Dstl)
Porton Down
Salisbury
Wiltshire
SP4 0JG
Telephone – 01980 613121

This will take approximately 4 hours for the courier to pick up and deliver and then a further 7 hours for a result.

Once the Consultant Microbiology has decided the course of action the Microbiology BMS will phone the Haematology BMS who will send another BMS over to Clinical Microbiology to deal with the haematology specimen. If the specimen is taken at night the on-call BMS in haematology will contact the stand by BMS to come into the department. Once they have arrived they will go to Clinical Microbiology to prepare the specimen.

The Haematology BMS will come to the Clinical microbiology lab with a receptacle of Methanol, empty slide container and the malarial antigen card. They will be escorted to the CL3 lab by the Microbiology BMS. Once in the CL3 lab the BMS will put on full PPE as guided by the microbiology BMS. The Haematology BMS will need to unpack the Clinical chemistry sample and centrifuge in the CL3 laboratory under the direction from the Microbiology BMS. When the samples are unpacked from the transport containers the primary sample tube(s) are decontaminated with Biosol/Virkon. This is performed by spraying on to some paper towel and the outside of the tube is wiped prior to testing.

They will then prepare and fix two thin blood films (also fix the slide used as spreader), for malaria testing and process the malarial antigen card. This will be performed inside the safety cabinet. Once this blood film has been fixed the slides and spreader will be transported back to the haematology lab in a slide container. Dispose of the malarial antigen card in the sweetie jar in the cabinet.

Once the haematology BMS has finished with the samples, they will re-package the blood samples into 2 separate secondary transport containers. One container will have the haematology samples and thin film slides in a slide carrier for haematology and the other secondary transport container will have the centrifuged blood sample for clinical chemistry for testing.

The haematology BMS will then take the clinical chemistry container to the clinical chemistry laboratory before returning to the Haematology laboratory with the Haematology samples for processing.
Once the samples arrive in the laboratory(s) all staff handling the specimen must wear full PPE. When the samples are unpacked from the transport containers the primary sample tube(s) are decontaminated with Biosol/Virkon. This is performed by spraying on to some paper towel and the outside of the tube is wiped prior to testing.

Once finished on the analyser the specimen must be double bagged and placed into a separate container for disposal. There is no need for extra decontamination of the analyser.

Once the diagnosis is available on any of the specimens it must be phoned through to the requesting clinician for treatment of the patient.

4. **Dealing with a sample spillage**

For sample spillages from patients with or at increased risk of Ebola in a healthcare setting appropriate PPE MUST be worn. Absorb as much of the spillage as possible with paper towels and use a sodium hypochlorite solution/Virkon to clean the affected area. Apply the disinfectant liberally and place any waste towels etc. in biohazard bags and send for incineration. If there is broken glass, use a dustpan to collect the material and place it into a puncture resistant container for disposal. Dispose of all cloths, gloves and used disposal equipment in a clinical waste bag.
Are you booking in a patient **UNWELL** or with a **HIGH TEMPERATURE**?

**YES**

**PLEASE ASK BUT DO NOT TOUCH**

Has the individual:

1. Travelled from one of the affected areas: Guinea, Liberia or Sierra Leone?

2. Cared for an individual with Ebola within the last 21 days?

**AND**

3. Had a fever (>38°C) or history of fever in past 24 hours?

**YES**

**INFORM NURSE IN CHARGE**

Ask the patient to walk via the outside of the building to cubicle 20

‘go back outside and turn left following the building around till reaching the fire escape stairs, wait at the bottom and a nurse will meet you here. Please wait till the nurse arrives’

You may need to accompany patient **DO NOT TOUCH**
Appendix 9

Emergency Department **Triage** Ebola Guidance

Are you triaging a patient **UNWELL** or **HIGH TEMPERATURE**?

**YES**

**PLEASE ASK BUT DO NOT TOUCH**

Has the individual:

1. Travelled from one of the affected areas: Guinea, Liberia or Sierra Leone?
2. Cared for an individual with Ebola within the last 21 days?
   **AND**
3. Had a fever (>38°C) or history of fever in past 24 hours?

**YES**

Hold the patient in your triage area & **INFORM NURSE IN CHARGE** to prepare cubicle 20.

When ready move the patient to cubicle 20 please tell the patient to ‘go back outside via the waiting room and turn left following the building around till reaching the fire escape stairs, wait at the bottom and a nurse will meet you here. Please wait till the nurse arrives’

You may need to accompany patient **DO NOT TOUCH**
Appendix 10  Patient Route to Wheal Prosper
Appendix 11  Ambulance Route to Wheal Prosper
EBOLA - Pre Event Assessment Telecom (PEAT)

Definition of pre event assessment teleconference (PEAT)

A Pre Event Assessment Teleconference (PEAT) takes place for most rising tide incidents. A PEAT is a telecommunication meeting between the nominated Chair and a small group of relevant partners appropriate to the type of incident.

In the case of Ebola, a PEAT should be convened when a suspected case is reported and there is sufficient reason to believe any tests will be proven to be positive.

Any category 1 or 2 responder may recommend a PEAT by contacting a member of the police emergency planning department or the Force Incident manager on 01392 223486. However, the final decision to implement a PEAT will be made by a relevant member of either the Police or health.

The aim of the PEAT is to assess the information available and decide if we need to escalate the response by activating a multi agency SCG or TCG.

Any PEAT must be minuted and a copy is to be distributed as soon as possible to its members. Consideration should also be given to placing a copy on resilience direct for all partners to see.

Administration
The police will set-up the conference call and all partners will call in using the number below:

Dial in number: 0844 809 0936
Pass code: 2768196#

Health will nominate a suitable chair for the meeting and provide administrative support to record the minutes and actions. If the health team is unable to provide either a chair or minute taker these roles may be undertaken by the police.

Membership

Viral Haemorrhagic Fever Policy
The following is a list of the recommended agencies that should be present at an Ebola PEAT. Additional attendees may be invited to call into the meeting by the chair depending upon the circumstances of the incident.

**Public Health England** (PHE) Centre Director  
**NHS England** Area Team Director On call or head of EPRR  
**Devon and Cornwall Police** - (Duty Gold officer or Chief of Staff along with a member of the Emergency Planning department)  
**Fire and Rescue Service** - Senior local officer  
**Top Tier Local Authority** – Emergency Planning Officer, from the area that the patient resides.

**EBOLA PEAT - AGENDA**  
The Chair should open by establishing and introducing all those present on the audio conferencing facility (if appropriate), reminding persons to speak clearly and ensure that noise from all parties is kept to a minimum to prevent interference on the microphones.

1. Introduction and Review of Attendees.  
2. Health update on the current situation.  
3. Partner agency updates.  
4. Identification of threats, mitigating actions required.  
5. Warning and informing of partners, public and national.  
8. Activation of SCG or local TCG recording the rationale behind the decision.  
9. Summary of key points and actions including timeline.  
10. Requirement for further meeting.
## List of Additional Screening questions to ask patients

<table>
<thead>
<tr>
<th>No</th>
<th>Question</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Has the patient travelled to any area where there is a current VHF outbreak?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Did the visit involve living/working in rural areas where Lassa Fever is endemic?</td>
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<tr>
<td>3</td>
<td>Did the patient have contact with/eaten primates, bats, antelopes, rats or other rodents in a Marburg/Ebola endemic area?</td>
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<tr>
<td>4</td>
<td>Has the patient travelled in an area where Crimean-Congo Haemorrhagic Fever is endemic and sustained a tick bite or crushed a tick with their bare hands or had closes involvement with animal slaughter?</td>
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<tr>
<td>5</td>
<td>Date of return to the UK.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Date of onset of illness.</td>
<td></td>
<td></td>
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<tr>
<td>7</td>
<td>Purpose of the visit.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Details of illness.</td>
<td></td>
<td></td>
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</tbody>
</table>