

# Victorian Ebola Virus Disease Plan

Version 3

May 2015

Version	Date	Changes
2	29 November 2014	
3	May 2015	<p>Update to Departmental nomenclature to Department of Health &amp; Human Services (DHHS) from Department of Health (DH).</p> <p>Addition of Infection Prevention and Control Expert Advisory Group (IPCEAG) guidance</p> <p>Update on areas where Ebola Virus Disease is active</p> <p>Guidance on transfer of accompanying parents/carers with suspected cases</p> <p>Clarification of procedures for the 'test and hold' strategy</p> <p>Guidance on release of cases from isolation</p> <p><b>Update to Personal Protective Equipment section</b></p> <p>Update to Response section on isolation of suspected cases at the airport</p> <p>Update to Further actions for Local Government section</p> <p>Update to Appendix 2A on waste management</p> <p>Inclusion of Appendix 2B – Waste classification template</p>

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Available at [www.health.vic.gov.au/emergency/ebola.htm](http://www.health.vic.gov.au/emergency/ebola.htm)

# Contents

<b>Glossary</b> .....	<b>7</b>
<b>Introduction</b> .....	<b>8</b>
<b>Background</b> .....	<b>8</b>
Guidance materials in use in Victoria .....	8
Case definitions in Victoria .....	9
Areas where EVD transmission is active.....	11
Risk of transmission from a case.....	11
<b>Governance</b> .....	<b>12</b>
<b>Patient and specimen management</b> .....	<b>13</b>
Patient transfer and destination health service .....	13
Testing for EVD .....	15
<b>Infection prevention and control</b> .....	<b>18</b>
Case handling.....	18
Personal Protective Equipment for health care workers and patient placement.....	18
Laboratory staff handling clinical specimens .....	21
<b>Environmental and waste management</b> .....	<b>21</b>
Principles and general guidance .....	21
Healthcare settings .....	22
Domestic settings .....	22
Aviation settings.....	22
Public transport and other public settings .....	22
Care of the deceased .....	22
Designated health services .....	23
Non-designated health services .....	23
Primary care .....	24
Refugee and Migrant Health Services.....	24
Diagnostic laboratories .....	25
Department of Health & Human Services .....	26
Department of Education and Training.....	26
Department of Economic Development, Jobs, Transport and Resources .....	27
Victoria Police.....	27
Commonwealth Department of Agriculture .....	27
Commonwealth Department of Immigration and Border Protection.....	27
Contracted cleaning and disinfection services .....	28
<b>Response – Immediate actions on suspicion of Ebola Virus Disease</b> .....	<b>28</b>
Medical practitioner / Health professional .....	28
Royal Melbourne Hospital Victorian Infectious Diseases Service / Royal Children’s Hospital .....	29
Nurse On Call .....	30

Ambulance Victoria.....	30
Department of Health & Human Services .....	31
Commonwealth Department of Agriculture .....	32
<b>Further actions for departments and agencies .....</b>	<b>34</b>
Designated receiving hospitals.....	34
Non-designated health services .....	34
Primary care .....	34
Ambulance Victoria.....	34
Victorian Infections Diseases Reference Laboratory (VIDRL) .....	34
Diagnostic laboratories .....	34
Department of Health & Human Services .....	35
Department of Education and Training.....	35
Department of Economic Development, Jobs, Transport and Resources .....	36
Local Government and DHHS Regions.....	37
Commonwealth Department of Health .....	37
<b>Appendices .....</b>	<b>39</b>
Appendix 1 – Sources of Guidance.....	39
Appendix 2A – Environmental Cleaning, Disinfection and Waste Management.....	41
Appendix 2B – EPAV Ebola Waste Classification Template.....	48
Appendix 3 – Care of the Deceased.....	51
Appendix 4 – Initial Management of Suspected Ebola Virus Disease .....	54
Appendix 5 – Checklist for High possibility of EVD – Transfer.....	55
Appendix 6 – Checklist for Possibility of EVD – Sample to VIDRL .....	56

# Glossary

<b>ACGP</b>	Australian Centre for Grief and Bereavement
<b>AGP</b>	Aerosol Generating Procedure
<b>AIIMS</b>	Australasian Inter-service Incident Management System
<b>AV</b>	Ambulance Victoria
<b>CALD</b>	Culturally and Linguistically Diverse
<b>CDC</b>	Centers for Disease Control and Prevention Atlanta
<b>CDNA</b>	Communicable Diseases Network Australia
<b>CDPC</b>	Communicable Disease Prevention and Control
<b>CHO</b>	Chief Health Officer
<b>CHQO</b>	Chief Human Quarantine Officer
<b>CMO</b>	Contact Monitoring Officer
<b>DoA</b>	Commonwealth Department of Agriculture
<b>DHHS</b>	Department of Health & Human Services Victoria
<b>DIBP</b>	Commonwealth Department of Immigration and Border Protection
<b>DoH</b>	Commonwealth Department of Health
<b>ELISA</b>	Enzyme Linked Immunosorbent Assay
<b>EMV</b>	Emergency Management Victoria
<b>EMC</b>	Emergency Management Commissioner
<b>EPAV</b>	Environment Protection Authority - Victoria
<b>EVD</b>	Ebola Virus Disease
<b>HCW</b>	Health care worker
<b>HHSEM</b>	Health and Human Services Emergency Management
<b>HPV</b>	Health Purchasing Victoria
<b>HQO</b>	Human Quarantine Officer
<b>NETS</b>	Neonatal Emergency Transport Service
<b>NHQSL</b>	National High Security Quarantine Laboratory
<b>NNDSS</b>	National Notifiable Diseases Surveillance System
<b>PCR</b>	Polymerase chain reaction
<b>PETS</b>	Paediatric Emergency Transport Service
<b>PHLN</b>	Public Health Laboratory Network
<b>PHO</b>	Public Health Officer
<b>PPE</b>	Personal Protective Equipment
<b>PUI</b>	Person Under Investigation
<b>RHMC</b>	Regional Health Commander Metro
<b>RCH</b>	Royal Children's Hospital
<b>RMH</b>	Royal Melbourne Hospital
<b>RMH-VIDS</b>	Royal Melbourne Hospital Victorian Infections Disease Service
<b>SHC</b>	State Health Commander
<b>SHERP</b>	State Health Emergency Response Plan
<b>SHIMT</b>	State Health Incident Management Team
<b>SMA</b>	Senior Medical Advisor
<b>SoNG</b>	Series of National Guidelines
<b>SPHO</b>	Senior Public Health Officer
<b>SEMT</b>	State Emergency Management Team
<b>TBP</b>	Transmission-based precautions
<b>VIDRL</b>	Victorian Infectious Diseases Reference Laboratory
<b>VIDS</b>	Victorian Infectious Diseases Service
<b>VTM</b>	Viral Transport Medium

# Introduction

1. The strategic objectives for Victorian Ebola Virus Disease (EVD) preparedness, response and recovery are:
  - support the health and wellbeing needs of the community;
  - protect health sector capacity and capability;
  - coordinate the system-wide response to a suspected or confirmed case of EVD, and
  - issue community, health sector, government and industry information and advice that is relevant, timely, clear, accurate, targeted, credible and consistent.
2. The *Victorian Ebola Virus Disease Plan* (this Plan) focuses on arrangements to address the last two of these strategic objectives, through:
  - provision of guidance to health services and other agencies likely to be involved in the response to a suspected or confirmed case of EVD, regarding specific scenarios that could arise;
  - outlining actions required of individuals, services and agencies in response to a suspected or confirmed case of EVD in order to prevent, contain and manage any outbreak; and
  - providing links to further information and resources to assist the response.
3. In preparing this document, every effort has been made to use the most up to date and accurate sources of information. Over time, new information may become available, and agencies should keep this in mind when using this document.

# Background

## Guidance materials in use in Victoria

4. The Victorian Government's response is based on:
  - the Communicable Disease Network Australia (CDNA) [Series of National Guidelines \(SONG\) for Ebola Virus Disease](http://www.health.gov.au/internet/main/publishing.nsf/Content/ohp-ebola.htm) (available at <http://www.health.gov.au/internet/main/publishing.nsf/Content/ohp-ebola.htm>). At the time of printing, this national guideline was last updated on the Commonwealth Department of Health website on 06 November 2014.
  - the Infection Prevention and Control Expert Advisory Group (IPCEAG) [Infection Prevention and Control Principles and Recommendations for Ebola Virus Disease including Personal Protective Equipment for clinical care of suspected or confirmed Ebola Virus Disease patients in the Australian healthcare setting](http://health.gov.au/internet/main/publishing.nsf/Content/ohp-ebola-Information-for-Health-Professionals), Version 1.1, 19 March 2015, available at <http://health.gov.au/internet/main/publishing.nsf/Content/ohp-ebola-Information-for-Health-Professionals>
5. The Department of Health and Human Services (DHHS) has established a webpage to host Victorian resources for health services, Departments, agencies and the

## Case definitions in Victoria

6. Persons under investigation (PUI) for Ebola Virus Disease (EVD), and suspected or confirmed cases of EVD, are subject to quarantine provisions and are considered to have a Group A notifiable condition requiring immediate notification under the *Public Health and Wellbeing Regulations 2009*.
7. A medical practitioner who has reasonable grounds to believe that a patient has, or may have EVD must under law notify DH immediately on **1300 651 160** to enable an assessment by the Chief Health Officer (CHO) or delegate, and to trigger other immediate public health actions.
8. Any other health professional who identifies a PUI or suspected case of EVD must also notify DHHS, unless they are sure a notification has already been made.
9. The determination of an individual as a PUI or suspected or confirmed case of EVD will be made by the CHO or delegate, in consultation with an infectious diseases expert.
10. A **higher risk exposure** is a term that will be used in Victoria to include any of the following:
  - percutaneous or mucous membrane exposure to blood or body fluid of an EVD patient;
  - direct skin contact with or exposure to blood or body fluids of an EVD patient without appropriate personal protective equipment (PPE);
  - processing blood or body fluids of a confirmed EVD patient without appropriate PPE or standard biosafety precautions;
  - direct contact with a dead body without appropriate PPE in an EVD-affected area;
  - people who had direct contact with bats or primates (alive or dead), or who had consumed 'bushmeat' in EVD endemic areas.
11. A **lower risk exposure** is a term that will be used in Victoria to encompass direct contact without evidence of visible or recalled blood or body fluid contact, and will include any of the following:
  - household contact of a confirmed case of EVD;
  - other close contact with a confirmed case of EVD in health care facilities or community settings, with 'close contact' defined as:
    - i. being in the same room as a patient with active vomiting or diarrhoea or coughing while not wearing appropriate PPE (i.e. as per standard, contact and droplet precautions), or
    - ii. being within the same room as a patient where there is an aerosol generating procedure being undertaken while not wearing appropriate PPE (i.e. standard, contact, droplet and airborne precautions), or
    - iii. having direct brief skin contact (e.g. shaking hands) with an EVD patient while not wearing appropriate PPE in the absence of any recognised body fluid or blood exposure.

12. A **casual exposure** is a term that will be used in Victoria to cover:
- being in the near vicinity of a case with possible contact with a shared surface without appropriate PPE.
13. **Clinical evidence** means any of the following:
- fever  $\geq 38^{\circ}\text{C}$  or history of fever in the last 24 hours **OR**
  - unexplained haemorrhage or bruising **OR**
  - any one of severe headache, muscle pain, vomiting, diarrhoea or abdominal pain **IF** there is agreed evidence of a higher or lower risk exposure.
14. **Limited epidemiological evidence** means:
- residence in, or travel to, an EVD affected area or a casual exposure in the past 21 days or in the 21 days prior to disease onset.
15. **Epidemiological evidence** means:
- a higher risk exposure or a lower risk exposure in the past 21 days or in the 21 days prior to disease onset.
16. **Laboratory suggestive evidence** means at the Victorian Infectious Diseases Reference Laboratory (VIDRL):
- detection of Ebola virus by Polymerase chain reaction (PCR), Enzyme Linked Immunosorbent Assay (ELISA) or electron microscopy **OR**
  - virus isolation **OR**
  - IgG seroconversion or a four-fold or greater rise in titre to Ebola virus **OR**
  - IgM detected against Ebola virus antigen.
17. **Laboratory definitive evidence** means at the Centre for Disease Control (CDC) Special Pathogens Laboratory Atlanta, or National Institute of Virology (NIV) Johannesburg:
- detection of Ebola virus by PCR, ELISA **OR**
  - virus isolation **OR**
  - IgG seroconversion or a four-fold or greater rise in titre to Ebola virus.
18. A **person under investigation** (PUI) is a case with clinical evidence **AND** limited epidemiological evidence only.
- This is a category that is designed to indicate a substantially lower likelihood of EVD and an agreement may be reached not to test such a case for EVD if there is compelling evidence of an alternative diagnosis, and agreement between an infectious diseases expert and the CHO that the alternative diagnosis is the cause of illness.
  - The CHO may determine that testing for EVD is appropriate for a PUI. Once the CHO has determined that a PUI should be tested for EVD, that case will be managed in exactly the same way as a suspected case, and will from that point forward be referred to as a 'suspected case of EVD' until testing is undertaken when there will be a further assessment of the case status of the individual.
19. A **suspected case of EVD** is a case with clinical evidence **AND** epidemiological evidence.
20. A **confirmed case by Victorian Infectious Diseases Reference Laboratory (VIDRL)** of EVD requires laboratory suggestive evidence only [note this is defined as

a 'Probable case' in the CDNA guidelines].

21. A **confirmed case by CDC Atlanta or National Institute of Virology in Johannesburg** of EVD requires laboratory definitive evidence only.
22. A case is considered rejected on the determination of the CHO, and may be based on advice from an infectious diseases physician. In some circumstances, a case could remain a suspected case despite an initial negative PCR on blood if the onset of illness was within 72 hours of the initial test **AND**
  - there is no likely alternative diagnosis **OR**
  - clinical suspicion of EVD is high **OR**
  - the CHO remains concerned that EVD is not excluded.
23. For the rest of this document, a 'confirmed case' refers to a confirmed case at VIDRL or a confirmed case at CDC Atlanta or in Johannesburg.
24. As recommended by CDC Atlanta, brief interactions (such as walking by a person or moving through a hospital where a confirmed case of EVD is admitted) do not constitute contact with a case.

### Areas where EVD transmission is active

25. Current epidemiological data on EVD affected areas is available at the European Centre for Disease Prevention and Control website:  
[http://ecdc.europa.eu/en/healthtopics/ebola\\_marburg\\_fevers/EVDcasedefinition/Pages/Ebola-affected-areas.aspx](http://ecdc.europa.eu/en/healthtopics/ebola_marburg_fevers/EVDcasedefinition/Pages/Ebola-affected-areas.aspx)
26. Not all parts of a country where there is active transmission of EVD carry risk. For currently affected areas, see the above website.

### Risk of transmission from a case

27. Although evidence is limited, factors associated with a higher risk of transmission appear to be:
  - Higher viral load in blood or body fluids:
    - i. increased time since onset;
    - ii. the case is deceased;
  - Higher risk of exposure to blood or body fluids:
    - i. the case has 'wet symptoms', i.e. copious secretions such as vomiting, diarrhoea, or bleeding;
    - ii. the case requires more complex medical interventions and is receiving inpatient level medical care;
    - iii. healthcare is being provided without appropriate PPE being available;
    - iv. meticulous donning and doffing of appropriate PPE is not undertaken.

## Governance

28. If a suspected or confirmed Ebola event has been identified to be an emergency in Victoria, under Victoria's *Emergency Management Act 2013*, that event would be classified as a Class 2 emergency. Under that legislation, Victoria's Emergency Management Commissioner would:
  - be responsible for coordinating the activities of agencies with roles or responsibilities in relation to the response to Class 2 emergencies;
  - ensure that control arrangements are in place during a Class 2 emergency;
  - be responsible for consequence management for a major emergency;
  - be responsible for coordinating recovery; and
  - coordinate data collection and impact assessment processes.
29. Victoria's Chief Health Officer (DHHS) is the Incident Controller for EVD preparedness and response in Victoria. The Department of Health & Human Services has a lead responsibility for recovery arrangements.
30. A State Health Incident Management Team (SHIMT) will be formed under both the State Health Emergency Response Plan (SHERP) and Department of Health's Public Health Control Plan.
31. In the event of a confirmed case of EVD, the membership of the SHIMT will be augmented by representatives of any health service that has admitted the case, aiming for a representative of the executive of the health service, a lead for infectious diseases, and a lead for infection control.
32. In the event of a confirmed case of EVD, the CHO will request the Emergency Management Commissioner to convene a State Emergency Management Team (SEMT) meeting, comprising representatives of response and support agencies.
33. Under SHERP, it is expected that a health service where a patient is admitted with confirmed EVD would convene a health service Incident Management Team (IMT). In order to maintain high quality liaison with the State response, DHHS may provide a DHHS Liaison Officer to attend meetings of any health service IMT that is formed in response to a suspected or confirmed case of EVD.
34. The *Victorian Ebola Virus Disease Plan* will be reviewed and exercised annually and debriefs conducted to improve practice and adjust the Plan following relevant incidents, or suspected and confirmed cases.

# Patient and specimen management

## Patient transfer and destination health service

### Designated adult hospital for suspected and confirmed EVD cases

35. The designated hospital for receiving any adult suspected or confirmed case of EVD is the Royal Melbourne Hospital Victorian Infectious Diseases Service (RMH-VIDS).
36. In the highly unlikely event of multiple suspected or confirmed EVD cases that exceed the normal capacity of RMH-VIDS, an urgent meeting will take place with the DHHS State Health and Medical Commander or delegate to determine case management options.
37. There is a strong preference for all cases of EVD in Victoria to be managed at RMH-VIDS or The Royal Children's Hospital (RCH), and for other services to be scaled back to accommodate this, rather than placing EVD cases across the hospital system in Victoria.
38. A suspected or confirmed case of EVD in a pregnant woman, including a woman in labour, will be directed to RMH-VIDS. RMH-VIDS will activate a request to the Royal Women's Hospital to provide assistance as needed, including obstetric and midwifery expertise, so that all required care can be provided at RMH-VIDS.

### Designated paediatric hospital for suspected and confirmed EVD cases

39. A person who is under 16 years of age and who is a suspected or confirmed case of EVD will be admitted to the Royal Children's Hospital (RCH) for assessment and testing, after a discussion between the CHO or delegate and the duty emergency department consultant at RCH.

### Framework for assessing need for patient transfer to a designated hospital

40. The most likely places where a suspected case of EVD could present are Melbourne Airport or a hospital emergency department.
41. The likelihood of EVD in a returned traveller without lower or higher exposures from areas with EVD transmission is generally very low, compared to other potential causes of febrile illness.
42. A framework is described below for decision-making on transfer to RMH-VIDS / RCH of a suspected case.
43. The following cases will generally be transferred to RMH-VIDS / RCH as a matter of urgency:
  - a confirmed case;
  - a suspected case with higher risk exposures and a highly consistent clinical picture.

44. The presence of any of the following factors will favour transfer to RMH-VIDS / RCH before confirmation of EVD. These factors will be considered in a discussion between DHHS, RMH-VIDS / RCH and the referring health service:
- Higher likelihood of EVD:
    - i. clinical features highly consistent with EVD in view of an infectious diseases specialist;
    - ii. an agreed higher or lower risk exposure;
  - Criticality of patient allied to need for urgent pathology:
    - i. patient is critical or requires intensive care;
    - ii. urgent need for general pathology;
  - Lower negative predictive value of initial testing to exclude EVD:
    - i. indeterminate result on initial VIDRL testing;
  - Lower capability of health service to handle a suspected case:
    - i. health service does not have appropriate infection prevention and control capability;
    - ii. health service does not have access to infectious diseases expertise.
45. The Chief Health Officer or their delegate will decide on whether transfer will occur, and to where.
46. A case that is to be transferred to RMH-VIDS or RCH after consideration of the above factors will have all testing done at the receiving hospital, including for EVD and routine pathology.
47. A patient who remains at the presenting health service after assessment against this framework will have any clinical specimens collected at that health service for transport to VIDRL for EVD testing ('Test and Hold' strategy), and routine pathology should be avoided until EVD is excluded.

### **Ambulance transfer arrangements**

48. Ambulance Victoria (AV) is equipped to transfer suspected or confirmed cases of EVD in Victoria.
49. AV will use infection prevention and control precautions as recommended for clinical care in this guidance for the transfer of suspected cases. Where there are copious amounts of blood or body fluid, additional PPE could be required as described in the section on infection prevention and control (*see points 84 to 100*).
50. Whenever possible, DHHS will activate a transfer of a suspected case by calling AV directly on an agreed number.
51. A medical practitioner at a sending hospital, or at a primary care setting, should not generally activate a transfer by AV unless the situation is critical, and the practitioner has been unable to contact DHHS for any reason.
52. For a paediatric patient requiring specialised retrieval, RCH will coordinate retrieval through either the Paediatric Emergency Transport Service (PETS) or the Neonate Emergency Transport Service (NETS).

## **Transfer of accompanying parents or carers with minors**

53. If a suspected case is a young child, well parents or carers may request to transfer to the receiving health service with them. This will require a risk assessment regarding the level of suspicion for EVD and potential infectivity of the case. As a general rule:
- If the case only has 'dry' symptoms (such as fever, myalgia or headache), then a single parent or carer at the discretion of DHHS may be permitted to accompany the child during transfer if the parent or carer is wearing appropriate PPE and remains at least 1 metre away from the case if possible, avoiding physical contact;
  - If the case has any 'wet' symptoms (i.e. vomiting, diarrhoea or bleeding), then the parent or carer will not be able to transfer with the case and alternative arrangements for travelling to the receiving health service should be arranged.

## **International repatriation of a confirmed case**

54. If there is a need to repatriate a confirmed EVD case back to Victoria from an affected country, the handling and responsibility will rest with the Commonwealth Department of Health, in consultation with the Chief Health Officer.

## **Testing for EVD**

### **Role of VIDRL and result reporting**

55. The Victorian Infectious Diseases Reference Laboratory (VIDRL) maintains the National High Security Quarantine Laboratory (NHSQL) which is Victoria's designated centre for testing for EVD.
56. VIDRL will not conduct other routine pathology, and its role in EVD diagnosis and management is specific testing for EVD only.
57. VIDRL will phone an agreed lead officer from DHHS with the result once available, and will then call the health service and produce a result according to normal arrangements, for dissemination to the health service (with a copy to DHHS).

### **Testing for EVD**

58. In Victoria there is a presumption in favour of testing all suspected cases of EVD, including those patients whose clinical evidence only includes a fever. Testing of all suspected cases should be expedited.
59. Testing should also occur for cases with no recognised fever but who have compatible symptoms and abnormal (or unknown) blood findings AND a higher or lower risk exposure.
60. A single blood PCR that is negative at 72 hours or more post onset of illness is considered to exclude EVD, subject to agreement by DHHS and the involved infectious disease specialist.

61. If the first blood test is taken within 72 hours of the onset of illness, and is negative on PCR for EVD, DHHS will conduct a risk assessment to determine if the case should remain a suspected case of EVD until a further test is done at 72 hours post onset of illness.
62. For example, re-testing might not be required if the following factors are all present:
- there are no known higher or lower risk exposures; and
  - there is a very low clinical suspicion of EVD; and
  - an infectious diseases specialist has clinical confidence in an alternative diagnosis.

### **Authorisation and choice of tests for EVD**

63. A treating medical practitioner must immediately notify DHHS on suspicion of EVD.
64. Only DHHS can authorise EVD testing, and will make the initial contact with VIDRL; liaison between the treating clinician and VIDRL will be important once testing is authorised.
65. A discussion between DHHS and VIDRL will identify what initial tests are required, and is likely include the following:
- venous blood in an EDTA tube for PCR and acute serology; and
  - throat swab for PCR in viral transport medium (VTM), or dry if VTM is unavailable.
66. It is an option to take urine for PCR, and this could occur after discussion with VIDRL.

### **Collection of specimens and PPE**

67. Testing should not take place in primary care, and specimens from a suspected case should not enter the public or private laboratory network for general pathology, except at designated hospital pathology services or after agreement from DHHS. Other laboratories receiving such a request should immediately cease handling the specimen and contact the referring practitioner. Suspected cases should be reported to DHHS immediately (see *Diagnostic Laboratories* below).
68. If the patient does not require urgent transfer to RMH-VIDS / RCH (see *Framework in point 44*), and the presenting health service has appropriate capability, venepuncture for blood for EVD testing should be conducted at the hospital where the patient is initially admitted. This should be done by an experienced clinician using appropriate precautions, to avoid delay in exclusion / confirmation of a diagnosis of EVD. Samples should be couriered directly to VIDRL (see below).
69. There is information in Public Health Laboratory Network (PHLN) online guidelines for designated and non-designated laboratories concerning specimen collection, PPE and initial specimen handling, available at <http://www.health.gov.au/internet/main/publishing.nsf/Content/cda-pubs-other-vhf.htm>
70. The clinician collecting blood, throat swab or urine should use transmission-based precautions at least equivalent to minimum PPE recommended for clinical care in this plan. PPE should include airborne precautions for any throat swab (such as a P2

respirator).

71. Processing of other routine pathology at non-designated hospitals should be delayed until EVD is excluded by testing at VIDRL. Should there be a more urgent need for routine pathology, there may be a need to expedite transfer of the patient to RMH-VIDS / RCH for all pathology testing (See *Framework in point 44*).

## **Transport of specimens to VIDRL**

72. As part of planning, health services should have an arrangement to courier specimens to VIDRL. In order to set up this arrangement, health services are recommended to review the steps required in taking blood (Appendix 6), contact their normal pathology courier service to check they will transport a specimen from a suspected case of Ebola, and either obtain the required packaging in advance or have an arrangement to have this packaging made available upon need through their agreed pathology provider. If the pathology provider is unable or unwilling to transport specimens after discussion, DHHS can provide the name(s) of pathology courier services that are able to transport such specimens, to allow the health service to rehearse the steps involved in advance of dealing with a case.
73. It is recommended that clinicians download and follow national guidelines when collecting and transporting specimens. Clinical specimens should be taken in line with *National High Security Quarantine Laboratory Guideline for Management of Quarantinable Viral Haemorrhagic Fevers*, available at <http://www.health.gov.au/internet/main/publishing.nsf/Content/ohp-nhsq-l-gvhf.htm>
74. Appropriately labelled and packaged specimens of suspected cases of EVD must be transported to VIDRL for EVD testing.
75. In the event that EVD testing is required and no pathology transport arrangements have been established, DHHS can assist in activating a courier to provide packaging and required forms, and transport specimens to VIDRL.
76. Under the National Pathology Accreditation Advisory Council's Requirements for the Packaging and Transport of Pathology Specimens and Associated Materials 4<sup>th</sup> Edition 2013 available at <http://www.health.gov.au/internet/main/publishing.nsf/Content/health-npaac-docs-PackTransPathSpecimens.htm>, all specimens from suspected cases of EVD in Victoria should be transported as substance Category A - UN 2814.

## **Other clinical sampling including pathology**

77. In general, routine pathology and other tests should be avoided while the possibility of EVD is being evaluated. This may not apply at designated hospitals (RMH-VIDS / RCH), where routine pathology tests may be indicated to exclude differential diagnoses.
78. Where a case is confirmed, or where other pathology is urgently required prior to exclusion of EVD, a health service laboratory must follow appropriate national guidance provided by PHLN.
79. In Victoria, this means that these patients should be transferred to RMH-VIDS / RCH so that all testing occurs in a designated laboratory according to PHLN guidance.

The relevant guidance is Part B of the PHLN Laboratory Precautions for Samples Collected from Patients with Suspected Viral Haemorrhagic Fevers, available at <http://www.health.gov.au/internet/main/publishing.nsf/Content/cda-pubs-other-vhf.htm>

80. If a non-designated laboratory performs pathology or other testing on specimens from a suspected or confirmed case of EVD for any reason, the laboratory must follow Part A of the PHLN Laboratory Precautions for Samples Collected from Patients with Suspected Viral Haemorrhagic Fevers, available at <http://www.health.gov.au/internet/main/publishing.nsf/Content/cda-pubs-other-vhf.htm>

## Release of cases from isolation

81. A PUI or a suspected case may be released from isolation and discharged if the medical condition allows after testing negative for EVD, unless a high index of suspicion remains (such as in the absence of an alternative diagnosis), in consultation with DHHS and the involved infectious diseases specialist. They should be given a fact-sheet and DHHS contact details.
82. Probable and confirmed cases may be released from isolation after consultation with an infectious diseases physician and DHHS, and allowed home if considered sufficiently recovered from the illness. Convalescent patients must be meticulous about personal hygiene due to the possibility of the presence of virus in bodily fluids, particularly semen. Current US CDC recommendations are that male Ebola survivors abstain from sexual intercourse or use a condom indefinitely until more is known about the duration of shedding and infectivity.

# Infection prevention and control

## Case handling

83. The following arrangements are required for any suspected or confirmed case of EVD while they are deemed potentially infectious by the CHO in Victoria:
- isolate in a hospital in a single room, ideally with its own bathroom and an anteroom, and the door closed;
  - minimise visitors, post personnel at the patient's door, log all visitors and staff providing care and have scrupulous hand hygiene and PPE worn as per this guidance;
  - minimise procedures and handling of sharps;
  - only trained staff to provide care for cases, and use trained observers / buddies; and
  - undertake environmental cleaning and disinfection as per this Plan.

## Personal Protective Equipment for health care workers and patient placement

84. Health services that are providing healthcare to a patient hospitalised with EVD should apply the principles outlined in:

- *Guidance on Personal Protective Equipment To Be Used by Healthcare Workers During Management of Patients with Ebola Virus Disease in U.S. Hospitals, Including Procedures for Putting On (Donning) and Removing (Doffing)*, as provided at [www.cdc.gov](http://www.cdc.gov) (accessed 31 March 2015). Other useful resources include:
- those developed by the Victorian Regional Health Service E-learning Network (ReHSeN) provided at <http://www.grhc.org.au/infection-control/ebola-ppe>, and
- the Australian Commonwealth Infection Prevention and Control Expert Advisory Group (IPCEAG) PPE recommendations for clinical care of suspected or confirmed EVD patients in Australian healthcare settings, provided at <http://health.gov.au/internet/main/publishing.nsf/Content/ohp-ebola-Information-for-Health-Professionals> (accessed 31 March 2015)

85. Guidance from US CDC as described above includes the following:

- recommended administrative and environmental controls for healthcare facilities;
- principles of PPE
- training on correct use of PPE
- use of a trained observer or 'buddy'
- designating areas for PPE donning and doffing
- selection of PPE for healthcare workers during management of Ebola patients
- recommended PPE
- recommended PPE for trained observer during observations of PPE doffing
- preparation for doffing.

86. Specific and repeated training for health care workers is desirable, and all staff who treat patients with suspected or confirmed EVD should be confident in the use of PPE. This may be achieved with close supervision from a trained observer. Training should include:

- How to put on and take off PPE
- Correct order to avoid cross-contamination
- How to check correct fit of PPE including respirators
- Disposal of used PPE and decontamination
- Maintenance and storage of PPE
- Hand hygiene

87. All healthcare facilities must ensure that a site-specific step-by-step process for the donning and doffing of PPE is developed and documented. Not only should PPE be put on appropriately, but removal of used PPE is a high risk process that requires a structured and systematic procedure.

88. A person under investigation, or a suspected or confirmed case of EVD should be isolated in a single room, ideally with its own bathroom and an anteroom, and the door closed.

89. Dedicated zones should be set aside for the donning of PPE (GREEN ZONE – and all other areas not designated red or orange), patient care (RED ZONE – patient room and bathroom), and doffing area immediately adjacent to patient's room (ORANGE ZONE – potentially contaminated area clearly demarcated with tape).

90. All health professionals providing direct personal or clinical care to a person under investigation or a suspected or confirmed case, must wear appropriate PPE as **per**

**contact, droplet and airborne transmission-based precautions, and aim to have all skin covered**, which means at a minimum:

- single use gloves (two pairs to be worn);
- fluid-resistant or impermeable gown and surgical hood, or a coverall (gowns ideally to mid-calf);
- eye protection (e.g. goggles or face shield);
- leg and shoe covers;
- a P2 respirator.

91. When there are copious blood or body fluids present or during performance of an aerosol generating procedure (AGP), additional PPE that should be worn (unless a suitable coverall is in place) includes:
- a fluid-resistant or impermeable apron.
92. AGPs should be avoided in an EVD patient, but if essential, the following precautions should be applied:
- patient should be placed in a negative pressure room meeting the standards specified in Guidelines for the classification and design of isolation rooms in health care facilities; Victorian Advisory Committee on Infection Control 2007, available from:  
[http://docs.health.vic.gov.au/docs/doc/4AAF777BF1B3C40BCA257D2400820414/\\$FILE/070303\\_DHS\\_ISO%20RoomGuide\\_web.pdf](http://docs.health.vic.gov.au/docs/doc/4AAF777BF1B3C40BCA257D2400820414/$FILE/070303_DHS_ISO%20RoomGuide_web.pdf)
  - the number of health care workers involved in the performance of the AGP should be minimised;
  - all staff should wear at least a P2 respirator in addition to other PPE, and perform fit checking each time they don a respiratory protection device as per the *Australian Standards 1716/1715*.
93. The use of higher levels of PPE, such as a Powered Air Purifying Respirators, may be of benefit in some circumstances, for instance for performing AGPs or for very prolonged care of a patient or when a staff member cannot wear a P2 respirator (for example, if they have a beard).
94. If a health service decides to use precautions in excess of those specified in point 90, the health service should ensure staff are informed and educated, trained and practiced, and ready and confident in the use of the PPE being recommended by the health service.
95. Changing to unfamiliar equipment may lead to breaches in safe practices and may increase a person's risk of contaminating their clothes, mouth or eyes, especially when removing equipment.
96. A trained observer or buddy experienced in a health service's PPE protocols must be used to assist in the donning and doffing of PPE in a correct and safe manner to avoid inadvertent breaches of PPE or exposure of the health care worker to contaminated PPE during its removal. During the donning or doffing of PPE a trained observer should:
- Ensure adherence by a healthcare worker of the correct procedures;
  - Read aloud from a checklist each direction in a step-by-step fashion;
  - Visually confirm and check off each step;
  - Ensure correct disposal of used PPE;
  - Be able to provide immediate corrective guidance and technique recommendations;

- Observe the healthcare worker in the patient's room (via window or monitor), checking for breaches in PPE;
  - Be familiar with the management plan in the event of an unintentional breach in PPE;
  - Also wear appropriate PPE including P2 or fluid-resistant surgical mask, face shield, double gloves and long sleeved fluid resistant gown;
  - Restrict unnecessary staff entry into the room.
97. Adequate hand hygiene is required at all times including before, during and after the removal of PPE in the care of EVD patients. CDC guidance recommends the use of an alcohol based hand rub while wearing gloves throughout the donning and doffing of PPE as well as in the care of the patient. This has been advised in the case of EVD to reduce the viral burden on gloves in an effort to further reduce the likelihood of self-contamination when doffing PPE and is especially relevant after handling body fluids. [Hand Hygiene Australia](http://www.hha.org.au/About/GloveUsePolicy/ebola-commentary.aspx) provides further recommendations (website at: <http://www.hha.org.au/About/GloveUsePolicy/ebola-commentary.aspx>). Always ensure alcohol based hand rub has dried prior to moving onto the next step.
98. All primary care staff should isolate a patient who is a suspected case of EVD and avoid direct contact, maintaining a distance of at least one metre where possible.
99. Primary care staff should avoid providing direct medical care unless:
- PPE for clinical care described above is available; and
  - they are suitably trained and prepared; and
  - there is an urgent need to provide medical care.
100. If any ongoing interaction including direct contact with a patient is required in a primary care setting, primary care staff should wear at least:
- single use gloves (two pairs to be worn);
  - fluid-resistant or impermeable gown (gowns ideally to mid-calf);
  - eye protection (e.g. goggles or face shield);
  - a fluid-resistant, sub-micron single-use face mask.

## Laboratory staff handling clinical specimens

101. Laboratory staff must follow guidance on PPE and other safety measures as described in PHLN guidance detailed above.

# Environmental and waste management

## Principles and general guidance

102. Environmental cleaning and disinfection is a key component of preventing transmission of EVD.
103. A summary of environmental cleaning and disinfection, waste and human waste disposal is provided in Appendix 2A.
104. The principles include:

- avoidance of environmental cleaning of a case's residence until results of EVD testing are known;
- cleaning staff to wear appropriate PPE as outlined for clinical care;
- clean first then use an appropriate disinfectant;
- avoiding placing a patient on or near porous surfaces (e.g. carpet); and
- discarding potentially contaminated textiles as Ebola waste.

## Healthcare settings

105. In management of human waste from a suspected or confirmed case of EVD, a precautionary approach is recommended and is detailed in Appendix 2A.
106. It is important for staff involved with management of human waste to use appropriate PPE.

## Domestic settings

107. A person's residence could require environmental cleaning and disinfection if a confirmed case of EVD has spent any time there with wet symptoms (such as vomiting, diarrhoea or bleeding).

## Aviation settings

108. Guidance related to cleaning and disinfection of aeroplanes can be found at Appendix 10 of the CDNA Series of National Guidelines (SoNG).

## Public transport and other public settings

109. Other settings such as trains, trams, buses, taxis and other public settings could require environmental cleaning and disinfection if a confirmed case of EVD has spent any time there with symptoms. Guidance on this can be drawn from Appendix 10 of the CDNA Series of National Guidelines on the cleaning and disinfection of aeroplanes, adapted as necessary. In addition see relevant 'Preparedness' (points 136 to 137) and 'Further actions' (points 183 to 186) sections of this plan.

## Care of the deceased

110. The care of deceased persons with suspected or confirmed EVD will require the involvement of several agencies and requires sensitivity at all times.
111. A summary of the roles and responsibilities in the care of the deceased as well as guidance for the safe handling of human remains is available at **Appendix 3**.

# Preparedness - Stakeholder actions to prepare for Ebola Virus Disease

## Designated health services

112. The designated health services should:
- have systems to identify and notify suspected cases of EVD;
  - have a plan detailing all arrangements;
  - have facilities in place to manage all clinical needs of suspected and confirmed cases of EVD;
  - ensure relevant staff are informed and educated, trained and practiced, and ready and confident in the use of required PPE including having participating in regular training exercises;
  - have arrangements in place for all required cleaning, disinfection and waste disposal relating to any case of EVD (see **Appendix 2A**); and
  - have arrangements for assisting with public health assessment, including being able to identify staff, patient and visitor contacts of a case to the CHO.

## Non-designated health services

113. DHHS expect that health services with sufficiently senior staff and the capacity to hold and test a low possibility suspected case of EVD will do so if requested by DHHS, in accordance with the principles outlined in the Framework for assessing need for transfer above (see point 44).
114. Non-designated health services should:
- have systems to identify and notify suspected cases of EVD;
  - have a plan detailing all arrangements;
  - have facilities in place to manage a suspected case of EVD if required;
  - ensure relevant staff are informed and educated, trained and practiced, and ready and confident in the use of required PPE;
  - have arrangements in place for all required cleaning, disinfection and waste disposal relating to any case of EVD (see **Appendix 2A**); and
  - have arrangements for assisting with public health assessment, including being able to identify staff, patient and visitor contacts of a case to the CHO.
115. All health service Emergency Departments and Urgent Care Centres should ensure that in relation to EVD preparedness and response that they:
- Have signs or alerts for patients in place;
  - Have alerts for any triage staff in place and arrangements to ensure identification of a suspected case of EVD;
  - Have identified an appropriate room for placement of a suspected case of EVD;
  - Have identified how a suspected case will be moved from triage to the designated room;
  - Have identified appropriately senior staff that will assess, manage and test a suspected case of EVD if agreed with DHHS at the time;
  - Have PPE available as per this Plan for all staff undertaking clinical management;

- Have ensured that involved staff are informed and educated, trained and practiced, and ready and confident in the use of required PPE;
- Have ensured that staff have access to current health service guidelines, Victorian guidelines (this Plan) and national guidelines as appropriate;
- Have ensured staff have access to the contact number for the DHHS which is 1300 651 160 and to a source of infectious diseases expertise if required;
- Have undertaken a self-assessment of the capacity of their service to hold and test a patient in the situation where there is a low possibility of EVD.

## Primary care

116. Primary care services should:
- have systems to identify and notify suspected cases of EVD;
  - have a plan to safely manage a suspected case of EVD if required, with a focus on isolation of the patient, avoidance of direct contact and transfer of the patient if agreed with DHHS;
  - be aware of requirements detailed below if the primary care service provides migrant health services relating to people from EVD-affected areas.

## Refugee and Migrant Health Services

117. In this section, new arrival refers to any person entering Victoria after being in an EVD-affected area in the previous 21 days and who is a refugee or new migrant to Australia.
118. The health care provider should make contact with DHHS on 1300 651 160 if undertaking an assessment of a new arrival from an affected area, without having received prior notification from DHHS.
119. Otherwise the health care provider should carry out a routine assessment and interview with any new arrival to Victoria that should cover:
- an assessment of whether the patient had any contact with any known EVD patients;
  - an explanation of the current EVD outbreak;
  - a description of how EVD is spread, the incubation period of the illness, the symptoms (including fever) of EVD;
  - the need for each new arrival to self-monitor their temperature twice daily for fever and instructions on how to use the thermometer and directions to call 1300 651 160 if a fever develops or there are symptoms of concern;
  - an explanation of why it is important to withdraw immediately from a public or social setting if the new arrival becomes unwell within 21 days of leaving an EVD-affected area;
  - an explanation of why it is important to contact health services before presenting or alert them immediately on arrival of recent time in EVD-affected areas;
  - instructions to call 000 in the case of a personal health emergency and state they are worried about Ebola; and

- a plan to call 1300 651 160 so that an ambulance and emergency department assessment can be arranged, if required;
  - reassurance that in the event of illness, health care will be provided without risk of revocation of a visa or other adverse outcomes relating to immigration status.
120. As part of the assessment a customised plan should be made which recognises the new arrival's individual circumstances as they may differ according to the location, level of English spoken and understanding of Victoria's health services.
121. It is important that a new arrival has an awareness of this and a way of contacting a health service (or ambulance if required) in advance of presenting unwell. This communication could be facilitated by the case worker, or sponsor or perhaps another friend or family if language and cultural barriers are present.
122. If through the assessment the client is identified as having had contact with a known EVD patient or very unwell person of an unknown cause in an EVD-affected area, the health care provider should liaise with the Department of Health on 1300 650 160 to develop a contact management plan.
123. If through the assessment a client is identified as having symptoms they should be assessed against the case definition and managed as a suspected case accordingly. See Immediate actions on suspicion of Ebola Virus Disease Medical Practitioner / Health Professional section.
124. If a patient is asymptomatic there is no evidence of any risk of infection from EVD from venepuncture.
125. Elective investigations could be deferred after a risk assessment on a case-by-case basis noting that current evidence indicates there is no risk of transmission of EVD prior to onset of symptoms.
126. Vaccines, where not immediately required, should be delayed until after the 21 day period has passed to ensure any adverse event following immunisation such as a resulting fever does not confuse the clinical picture.

## Diagnostic laboratories

127. Diagnostic laboratories associated with RMH-VIDS and RCH should be familiar with PHLN guidelines (Part B).
128. Diagnostic laboratories associated with any other health services, including private pathology service providers, should be familiar with PHLN guidelines (Part A) and have plans relating to:
- avoiding testing blood or specimens of a suspected or confirmed case of EVD;
  - business continuity arrangements should the laboratory process a sample from a person who is subsequently diagnosed with EVD;
  - requirements in manufacturer guidelines for decontamination of equipment and other requirements outlined under existing PHLN guidelines.

129. Diagnostic laboratories that have clinical specimens from a confirmed case of EVD should contact VIDRL for advice on the need for and method of destruction of those specimens.

## **Department of Health & Human Services**

130. The Department of Health & Human Services will undertake the following:
- Lead and coordinate planning for preparedness, response and recovery for one or more suspected or confirmed cases of EVD;
  - Provide guidance to health services, departments and other stakeholders regarding preparedness, response and recovery requirements relating to the identification and management of one or more cases of EVD, including the management of settings affected and contacts of cases;
  - Develop protocols and plans for response to one or more suspected cases or confirmed cases of EVD.
131. DHHS will work with relevant municipal councils to:
- arrange culturally appropriate support for affected individuals, their families and their community;
  - arrange personal support for affected individuals, their families and their community;
  - arrange for alternative accommodation if necessary;
  - organise outreach support for an impacted community;
  - provide details for telephone counselling, bereavement and grief support, and interpreter services.

## **Department of Education and Training**

132. DHHS will provide relevant data to the Principal Medical Advisor (PMA) of the Department of Education and Training (DET) within 24 hours of assessing that a child should be excluded from attending a preschool or school setting.
133. Schools should follow current advice on Smart Traveller. As at 5 May 2015, the Australian Government advises Australians to reconsider their need to travel to EVD-affected areas. This applies to school trips and short-term exchanges of students.
134. After an individual risk assessment by DHHS, children returning from EVD-affected areas or children who may have been exposed to Ebola virus could be required to limit activity and, while undertaking monitoring, could be excluded from all children's services centres and school settings (and their equivalent) until 21 days after they left their last EVD-affected area.
135. Maternal and child health nurses, nurses operating the Maternal and Child Health Line and primary and secondary school nurses should:
- provide general advice only based on information available on DHHS website; and
  - refer any matters of concern including concerns about individual students to the DHHS phone line on 1300 651 160.

## Department of Economic Development, Jobs, Transport and Resources

136. Public Transport Victoria (PTV) – an agency within the Department of Economic Development, Jobs, Transport and Resources (DEDJTR) – manages Victoria's train, tram and bus services. DEDJTR and PTV will:
- ensure public transport operators have appropriate arrangements to enhance cleaning contracts, including the general management of spilled body fluids on public transport under normal circumstances;
  - ensure public transport operators have sufficient stockpiles of PPE for general use under normal circumstances;
  - have protocols in place for escalation and liaison with DHHS to manage clean-up in the unlikely scenario of spilled body fluids from a suspected or confirmed Ebola patient;
  - request the Taxi Services Commission to undertake a taxi industry review of procedures including the options to:
    - i. decline transport to someone who is visibly ill;
    - ii. decline the service for someone who is visibly ill and to advise the customer to attend a hospital;
    - iii. ring 000 if required.
137. Provide communications to the public about any service changes via existing public information sources such as existing timetables, e-displays at stations/platforms, announcements, and posters.

## Victoria Police

138. Victoria Police may:
- assist DHHS to locate individuals if requested at very short notice – e.g. a person who might be a contact or family member of a case of EVD; and
  - assist DHHS with the enforcement of a public health order if necessary;
  - take actions relating to reportable or notifiable attendances, as indicated in Appendix 3.

## Commonwealth Department of Agriculture

139. Maintain plans to deliver on agreed border health obligations.
140. Maintain plans and arrangements to provide for actions in event of a suspected or confirmed case of EVD at a border.

## Commonwealth Department of Immigration and Border Protection

141. The Commonwealth Department of Immigration and Border Protection (DIBP) coordinates refugee and migrant arrangements, including exit screening in EVD-affected areas prior to departure for Australia.
142. DIBP will provide relevant information to support the activities of the Chief Human Quarantine Officer (CHQO) in Victoria.

## Contracted cleaning and disinfection services

143. A contractor will be engaged under a specified arrangement to undertake cleaning, disinfection and waste removal.
144. This arrangement will only apply to premises where DHHS has authorised the use of the contractor.
145. At the discretion of DHHS, this could include private domestic residences and selected public premises.
146. Health services and diagnostic laboratories are two examples of facilities that should have their own plans and/or arrangements for cleaning, disinfection and waste removal.

## Response – Immediate actions on suspicion of Ebola Virus Disease

147. Note that the Incident Controller for the response to a suspected or confirmed case of EVD is Victoria's Chief Health Officer (DHHS), and DHHS will co-ordinate the Whole of Government Communications strategy (see point 153).

## Medical practitioner / Health professional

148. The following actions should be taken by a medical practitioner / health professional who suspects EVD:
  - Isolate the patient in a single room immediately;
  - Inform the patient of what is happening, the need to be isolated and for staff to wear PPE, acknowledging that such actions can be distressing for the patient;
  - Minimise unnecessary staff and family contact, and withdraw from providing any unnecessary clinical care;
  - If clinical care is necessary, wear appropriate PPE as per contact, droplet and airborne transmission-based precautions, with maximal skin coverage (*see points 84 to 100*). This means at a minimum:
    - i. single use gloves (two pairs to be worn);
    - ii. fluid-resistant or impermeable gown and surgical hood, or a coverall (gowns ideally to mid-calf);
    - iii. eye protection (e.g. goggles or face shield);
    - iv. leg and shoe covers; and
    - v. a P2 respirator.
  - If any ongoing interaction with a patient is required but not clinical care, staff in the same room should maintain a safe distance (over one metre) and should wear at least:
    - i. single use gloves (two pairs to be worn);
    - ii. fluid-resistant or impermeable gown (gowns ideally to mid-calf);
    - iii. eye protection (e.g. goggles or face shield);
    - iv. a fluid-resistant, sub-micron single use face mask.
  - Notify DHHS without delay on **1300 651 160**. Note that during business hours, a suspected EVD case notification will be put through

- to a senior medical practitioner, while after hours the call will be taken by the on-call DHHS Officer;
- Where available within a health service, notify the Infectious Diseases and Infection Control Units;
  - Ask about fever and compatible EVD symptoms and confirm the date of onset of illness;
  - Ask about higher and lower risk exposures and confirm the dates and places travelled in an EVD-affected area;
  - Identify a clinical lead within the health service concerned who will undertake all liaison with DHHS;
  - Provide clinical and exposure information to DHHS so that DHHS can make an initial risk assessment and determine whether the case is a PUI or suspected case of EVD. The DHHS officer may ask the practitioner a number of questions regarding symptoms or exposures which may need to be relayed to the patient;
  - Note that at the conclusion of the initial telephone assessment, DHHS will contact a designated receiving hospital, which in Victoria is RMH-VIDS or RCH to discuss the case and whether to transfer the patient;
  - Avoid taking a throat swab or undertaking any aerosol generating procedure or venepuncture unless immediately essential for clinical care;
  - Avoid calling AV to organise transport to another health service such as RMH-VIDS unless advised by DHHS or immediately essential for life-saving care. Transport activation for suspected EVD patients will be through a direct conversation between DHHS and AV;
  - Compile a list of patients and staff who dealt with the patient or were in the immediate vicinity of the patient, including their contact information including mobile phone numbers, in order to assist DHHS to undertake contact tracing if the case is confirmed. All contacts including staff and patients will be assessed by an officer from DHHS and categorised according to exposure risk and followed up as per the Public Health Response detailed below;
  - After a patient has been transferred from a presenting facility ensure environmental cleaning, disinfection and waste management as detailed in **Appendix 2A**;
  - Take any other actions advised by DHHS, relating to risk management or risk communication to staff and patients;
  - A flowchart and checklist to assist the risk assessment process is available in **Appendix 4** and **Appendix 5**.

## Royal Melbourne Hospital Victorian Infectious Diseases Service / Royal Children's Hospital

149. The **RMH-VIDS / RCH Emergency Department consultant** should take the following actions when informed of suspicion of EVD by a medical practitioner or health professional:
- Undertake an initial assessment, including clinical and epidemiological evidence from the medical practitioner or other person;
  - Contact DHHS to discuss the assessment, and to agree the case status with the CHO or delegate (suspected EVD, or rejected as EVD);

- Arrange acceptance of a patient at RMH-VIDS / RCH for assessment and admission, if requested by DHHS;
- Ensure appropriate infection prevention and control precautions are taken, and maintain the patient in isolation in a single room with precautions for a suspected case until such time as the CHO has advised the case has been rejected as EVD;
- Take samples for EVD testing as agreed with DHHS;
- Transport specimens directly to VIDRL for EVD testing if testing is authorised by DHHS;
- Undertake other clinical management as necessary;
- Facilitate access of a DHHS officer to interview the case or next of kin to complete an EVD questionnaire;
- Activate health service incident management arrangements as necessary;
- Refer all media enquiries to the DHHS Media Unit.

## Nurse on Call

150. Nurse On Call will follow protocols agreed with DHHS.

## Ambulance Victoria

151. The following actions should be taken by the State Health Commander (AV) when informed by a medical practitioner, agriculture officer or human quarantine officer (HQO) of the need to transport a patient suspected to have EVD:
- Obtain information on identity, clinical status and travel history of the case;
  - Confirm the status of the case by calling DHHS on 1300 651 160 if informed by a party other than the HQO or DHHS;
  - Mobilise transport for the suspected case to the agreed location, with appropriate PPE for ambulance staff;
  - Liaise with the DoA Team Leader and the airport authority on access if relevant;
  - Transport the patient to the agreed destination (likely to be RMH-VIDS / RCH);
  - Advise the HQO/DHHS of likely time of arrival at RMH-VIDS, and update on this on a frequent basis;
  - Compile a list of all AV staff who had close contact as defined above with a suspected EVD case and provide this DHHS;
  - Undertake environmental cleaning and disinfection;
  - Follow-up with DHHS to determine the outcome of testing for EVD in order to debrief staff involved in a timely manner; and
  - Provide debriefing and lessons to the CHO at the completion of involvement.
152. The following actions should be taken by **Fire Services providing Medical First Response** to Priority 0 cases:
- Always take appropriate standard precautions in terms of personal protection from blood and body fluid exposure;

- If on attending a responder identifies the possibility of EVD, based on clinical status and travel history, the responder should withdraw from the scene and should:
  - i. advise the attending ambulance crew who will then escalate the AV Emergency Response Plan;
  - ii. hand over to the attending ambulance and take advice from the Incident Health Commander on their arrival.

## Department of Health & Human Services

153. The following actions will be taken by DHHS in the event of notification of a potential suspected or confirmed case of EVD in Victoria:
- Receive a notification via the 24 hour number **1300 651 160** of a potential suspected case of EVD from a registered medical practitioner as required under the Public Health and Wellbeing Act 2008 and associated Regulations;
  - **Coordinate the incident response** to a suspected or confirmed case of EVD;
  - Undertake a risk assessment involving clinical, epidemiological and virological assessment, including determining whether a person in Victoria is a suspected, confirmed or rejected case of EVD;
  - Coordinate transfer of any suspected case of EVD to health services in Victoria;
  - Undertake all liaison with VIDRL and authorise testing for EVD;
  - Discharge the required responsibilities of the Chief Human Quarantine Officer / Chief Health Officer as per legislation;
  - Advise services on environmental cleaning and disinfection if requested;
  - Undertake all contact tracing regardless of the setting for potential contacts of a case of suspected or confirmed EVD;
  - Activate the Whole of Victorian Government Ebola Virus Disease Communications Strategy, in conjunction with the following structures and units:
    - i. DHHS Public Health Communication Team;
    - ii. Health and Human Services Emergency Management;
    - iii. Emergency Management Joint Public Information Committee;
    - iv. Public Information and Media Units within the State Control Centre;
  - Notify the National Incident Room and Commonwealth Department of Health of all suspected and confirmed cases of EVD;
  - Undertake all risk and media communication in relation to a suspected or confirmed case of EVD.
154. The Director of Health and Human Services Emergency Management (HHSEM) will, after discussion with the Incident Controller, activate the State Emergency Management Centre (SEMC) at 50 Lonsdale Street, Melbourne, as a base of operations for the response, for contact tracing and for public communications.
155. The objective of moving the base of operations to the SEMC will be to provide a dedicated contact tracing function to detect any secondary case of EVD.

156. A secondary objective will be for the SEMC to function as a call centre to receive calls from involved health services, including health professionals.

## Commonwealth Department of Agriculture

157. The **Commonwealth Department of Agriculture (DoA) Team Leader** will take the following actions on positive findings on any questionnaire suggesting potential for EVD or upon suspicion of EVD at Melbourne Airport or advice of illness in flight of a person who is returning from an affected country:
- Obtain name, seat details and country of travel details for the person identified as ill on the flight from the airline, if prior to landing and relevant;
  - Notify the HQO immediately on 1300 651 160;
  - Provide information on clinical status, travel exposures and any known higher or lower risk exposures to inform a risk assessment by the HQO;
  - Provide information to the HQO on the status of pratique for the aircraft concerned;
  - Agree whether pratique should be granted with the HQO;
  - Isolate the ill person in a closed room away from foot traffic if possible, and allow access to a dedicated toilet for their exclusive use, which is closed off to use by staff and the public. Ensure there is adequate provision of food and water for those isolated;
  - Staff in the same room should maintain a safe distance (over one metre) and should wear at least:
    - i. single use gloves (two pairs to be worn);
    - ii. fluid-resistant or impermeable gown (gowns ideally to mid-calf);
    - iii. eye protection (e.g. goggles or face shield);
    - iv. a fluid-resistant, sub-micron single use face mask;
  - Provide the precise location of the suspected case to the HQO;
  - Consider any request from the HQO for special arrangements to hold Incoming Passenger Cards at Melbourne Airport customs for all passengers and crew on the same flight as a suspected case, if feasible;
  - Check that the HQO will activate AV for transport as agreed and do not call AV to activate transport unless directly requested by the HQO;
  - Liaise with the airport authority and Ambulance Victoria to ensure access for AV to the patient for transfer to hospital;
  - Compile a list of Agriculture, Immigration and Border Protection staff who may have had any exposure with a suspected case of EVD;
  - Oversee environmental cleaning and disinfection of any site or room including an aeroplane where a suspected case was held according to Appendix 10 of the Communicable Disease Network Australia (CDNA) Series of National Guidelines (SoNG);
  - Liaise with senior staff in DoA to determine the outcome of the assessment, in order to provide information and/or reassurance if relevant to DoA and other staff;
  - Provide debriefing and lessons to the CHQO at the completion of involvement.

158. The following actions should be taken by the **Department of Agriculture Team Leader** upon positive findings on any questionnaire suggesting potential for EVD or upon suspicion of EVD at any seaport in Victoria:
- As above, and in addition collect all crew and passenger details for provision to the HQO if requested.
159. The principles of handling a suspected case of EVD presenting at a seaport in Victoria are:
- Information materials such as Ebola advice card are available;
  - A screening process is in place for international arrivals from affected countries in line with airport arrangements;
  - There is PPE as per the airport available for staff should it be required;
  - Staff are clear on the need to call the HQO for a case and are able to, and then to take actions as in the Plan.

# Further actions for departments and agencies

## Designated receiving hospitals

160. In addition to ongoing clinical care actions, provide data to DHHS to allow contact monitoring of staff / others.

## Non-designated health services

161. Provide data to DHHS to allow contact monitoring of staff / others if relevant.
162. Undertake cleaning, disinfection and waste removal if relevant where there was a confirmed case of EVD (see **Appendix 2A**).

## Primary care

163. Provide data to DHHS to allow contact monitoring of staff / others if relevant.
164. Undertake cleaning, disinfection and waste removal if relevant where there was a confirmed case of EVD (see **Appendix 2A**).

## Ambulance Victoria

165. Provide data to DHHS to allow contact monitoring of staff / others if relevant.
166. Undertake cleaning, disinfection and waste removal if relevant where there was a confirmed case of EVD (see **Appendix 2A**).

## Victorian Infections Diseases Reference Laboratory (VIDRL)

167. Conduct further testing as required, including additional specialist testing as needed.

## Diagnostic laboratories

168. In the event of handling of clinical specimens of a case of confirmed EVD, the laboratory must:
  - Provide information to DHHS regarding potentially exposed staff as requested;
  - Undertake cleaning, disinfection and waste removal if relevant in relation to a clinical facility where there was a confirmed case of EVD, according to plans and PHLN guidelines.

## Department of Health & Human Services

### Provision of psychosocial support

169. HHSEM will assess, in consultation with the Incident Controller, the psychosocial needs of the patient, their family and community. Depending on the outcome of the assessment the following actions will be taken with the patient's consent:
- If the patient is from a culturally and linguistically diverse (CALD) background, contact the relevant CALD support service to facilitate culturally appropriate support to the patient, their family and community;
  - Consider whether to utilise existing partners to provide outreach support to the impacted community and to provide personal support to the patient, their family and community;
  - Provide the patient and their family with the details for telephone counselling and interpreter services;
  - Contact the relevant municipal council to coordinate any additional psychosocial supports required by the patient, their family and community, including referral to local services;
  - Brief psychosocial agency support personnel prior to deployment;
  - Engage HHSEM expert psychologist advisers to develop information to assist the community to manage the psychological impacts of the incident, and to facilitate community psychosocial recovery information sessions as required.
170. In the event of a confirmed death of a patient from EVD, HHSEM will provide the deceased patient's family and community with contact details for the Australian Centre for Grief and Bereavement (ACGB). The ACGB also take referrals direct from the Coroners Court and service providers on behalf of clients, with their consent.
171. It is important that the health service concerned makes sure that inpatient mental health teams are aware, in order to provide support to the patient and their family, and to staff at the health service where the patient is admitted.
172. Employers of personnel who have responded directly to a suspected or confirmed case of EVD should assess and provide any counselling or other psychosocial support required.

### Relief and recovery

173. DHHS will lead relief and recovery efforts in support of individuals, families and the community as required.

## Department of Education and Training

174. Children who come into contact with confirmed EVD will be required to limit their activity and, while undertaking monitoring, will be excluded from all children's services centres and school settings (and their equivalent) for up to 21 days.

175. In the event of a suspected case of EVD, there may be consideration of the need for temporary closure of a school or part thereof (i.e. class) or children's service centre or facility. This will be undertaken on the basis of a risk assessment and in consultation with DET.
176. In the event of a confirmed case of EVD, a children's services centre or school will be temporarily closed until any required public health management of the setting and any contacts is achieved.

### **Case Management**

177. Suspected or confirmed cases that are children will be managed according to this plan.

### **Contact Management**

178. Following a risk assessment by DHHS, contacts of confirmed cases could be placed under monitoring and requested to limit their activity.
179. Children who fit this definition, who are of school age or who normally attend child care services, could be excluded during the period under monitoring (up to 21 days from last contact with a confirmed case).
180. To assist these processes, DHHS will:
  - advise families of this requirement;
  - whenever contact tracing identifies a child, provide advice and details of children within this category to the Principal Medical Adviser (PMA) at DET, who will advise as appropriate the school principal or child care service manager.
181. After the 21 day exclusion period, DHHS will contact the PMA to confirm:
  - the exclusion period has been completed; and
  - that the child is able to return to school or children's service.
182. The PMA will advise the school principal or children's service manager.

### **Department of Economic Development, Jobs, Transport and Resources**

183. A risk assessment will be undertaken to determine actions required. If the case interview identifies use of public transport while infectious (i.e. from first onset of symptoms) DEDJTR should establish:
  - the details of type of transport e.g. bus, tram, train or taxi;
  - the details of travel, where boarded, where alighted, where seated;
  - the frequency of travel if more than once or multiple journeys.
184. Establish current cleaning protocols used to determine if routine cleaning undertaken is of a standard that would negate risk.
185. If a transport asset such as a tram is identified as potentially affected by DHHS in consultation with DEDJTR, or has been soiled with blood or body fluid, on the advice of the CHO withdraw the asset from service and ensure appropriate

cleaning and disinfection.

186. DHHS may initiate contact tracing for other passengers if able to be identified to assess and provide advice as appropriate to the risk.

## Local Government and DHHS Regions

187. In the event of a confirmed case of EVD in Victoria, any Local Government Area (LGA) may be impacted by:
- a confirmed case of EVD within its LGA boundaries, or
  - contacts of a confirmed case of EVD within its LGA boundaries, or
  - local community members concerned about EVD.
188. The DHHS Regional Environmental Health Officer will be the point of contact with an LGA in the event of a confirmed case of EVD in Victoria.
189. In the event of a confirmed case of EVD in Victoria, DHHS will provide a hotline for members of the public to access.
190. LGAs who have a confirmed case of EVD within its LGA boundaries and/or have known contacts of a confirmed case of EVD within its LGA boundaries will refer public queries to the DHHS hotline.
191. LGAs who do not have a confirmed case of EVD nor known contacts of confirmed case/s of EVD within its LGA boundaries, can assist DHHS by directly distributing public health messages regarding EVD as provided by DHHS.
192. In summary, in the event of a confirmed case of EVD in Victoria, LGAs may be asked to undertake the following actions:
- Work closely with DHHS regions to understand how its LGA is impacted;
  - Relay appropriate communications to its residents – either:
    - i. referral to the DHHS hotline (impacted municipalities), or
    - ii. distribution of DHHS provided information as general information because its municipality has not been impacted;
  - Distribute information for dissemination to any other relevant stakeholders within its municipality, as provided by DHHS;
  - If requested by DHHS, assist with resourcing for telephone contact management;
  - Note that DHHS will engage specialist contract cleaners to disinfect premises that have accommodated confirmed case/s of EVD, and assist DHHS in any communications to the public in this regard;
  - As required, the Municipal Emergency Management Coordinator (or designated senior LGA staff) to be available to discuss with DHHS specific tasks that might need to be undertaken.

## Commonwealth Department of Health

193. The Commonwealth Department of Health could be asked to provide national support to Victoria, relating to case management (for example accessing experimental therapies), contact management (for example resources if these are requested and negotiated), expert advice (for example an Expert Panel to

assist in technical deliberations) and situation awareness for stakeholders at the Commonwealth and international level.

194. The Commonwealth will inform World Health Organisation (WHO) under International Health Regulations 2005 of any confirmed case of EVD.

# Appendices

## Appendix 1 – Sources of Guidance

Title	Source	Last Updated	Link
Series of National Guidelines - Ebola Virus Disease	Communicable Diseases Network Australia	6 November 2014	<a href="http://www.health.gov.au/internet/main/publishing.nsf/Content/ohp-ebola.htm">http://www.health.gov.au/internet/main/publishing.nsf/Content/ohp-ebola.htm</a>
Infection Prevention and Control Principles and Recommendations for Ebola Virus Disease – Including Personal Protective Equipment for clinical care of suspected or confirmed Ebola Virus Disease patients in the Australian healthcare setting	Infection Prevention and Control Expert Advisory Group (IPCEAG), Australian Health Protection Principal Committee (AHPPC), Commonwealth of Australia	19 March 2015	<a href="http://health.gov.au/internet/main/publishing.nsf/Content/ohp-ebola-Information-for-Health-Professionals">http://health.gov.au/internet/main/publishing.nsf/Content/ohp-ebola-Information-for-Health-Professionals</a>
Latest CDC Information	Centers for Disease Control and Prevention, Atlanta	04 March 2015	<a href="http://www.cdc.gov/vhf/ebola/index.html">http://www.cdc.gov/vhf/ebola/index.html</a>
Information for Travellers, Patients and Consumers	Department of Health (Commonwealth)	12 December 2014	<a href="http://www.health.gov.au/internet/main/publishing.nsf/Content/ohp-ebola.htm">http://www.health.gov.au/internet/main/publishing.nsf/Content/ohp-ebola.htm</a>
Information for Clinicians in Secondary or Tertiary Care	Department of Health (Commonwealth)	12 December 2014	<a href="http://www.health.gov.au/internet/main/publishing.nsf/Content/ohp-ebola.htm">http://www.health.gov.au/internet/main/publishing.nsf/Content/ohp-ebola.htm</a>
Information for General Practitioners	Department of Health (Commonwealth)	12 December 2014	<a href="http://www.health.gov.au/internet/main/publishing.nsf/Content/ohp-ebola.htm">http://www.health.gov.au/internet/main/publishing.nsf/Content/ohp-ebola.htm</a>
Information for Laboratories	Department of Health (Commonwealth)	12 December 2014	<a href="http://www.health.gov.au/internet/main/publishing.nsf/Content/ohp-ebola.htm">http://www.health.gov.au/internet/main/publishing.nsf/Content/ohp-ebola.htm</a>

<b>Title</b>	<b>Source</b>	<b>Last Updated</b>	<b>Link</b>
Better Health Channel	Department of Health (Victoria)	November 2014	<a href="http://www.betterhealth.vic.gov.au/bhcv2/bhcarticles.nsf/pages/Ebola_virus_disease">http://www.betterhealth.vic.gov.au/bhcv2/bhcarticles.nsf/pages/Ebola_virus_disease</a>
Laboratory precautions - Non-designated hospitals	Public Health Laboratory Network	13 November 2014	<a href="http://www.health.gov.au/internet/main/publishing.nsf/content/cda-pubs-other-vhf.htm">http://www.health.gov.au/internet/main/publishing.nsf/content/cda-pubs-other-vhf.htm</a>
Laboratory precautions - Designated hospitals	Public Health Laboratory Network	13 November 2014	<a href="http://www.health.gov.au/internet/main/publishing.nsf/content/cda-pubs-other-vhf.htm">http://www.health.gov.au/internet/main/publishing.nsf/content/cda-pubs-other-vhf.htm</a>
Guideline for Quarantinable Viral Haemorrhagic Fevers	National High Security Quarantinable Laboratory	14 August 2014	<a href="http://www.health.gov.au/internet/main/publishing.nsf/content/ohp-nhsq-qvhf.htm">http://www.health.gov.au/internet/main/publishing.nsf/content/ohp-nhsq-qvhf.htm</a>
Requirements for the Packaging and Transport of Pathology Specimens and Associated Materials	National Pathology Accreditation Advisory Council	06 January 2014	<a href="http://www.health.gov.au/internet/main/publishing.nsf/content/health-npaac-docs-PackTransPathSpecimens.htm">http://www.health.gov.au/internet/main/publishing.nsf/content/health-npaac-docs-PackTransPathSpecimens.htm</a>
Classification by Hazard for Ebola waste	Environment Protection Authority Victoria	05 May 2015	See Appendix 2B

## Appendix 2A – Environmental Cleaning, Disinfection and Waste Management

### 1. General

- For **suspected cases of Ebola virus disease (EVD) not producing secretions/wet symptoms** (vomiting, diarrhoea, bleeding), whilst awaiting laboratory results, standard precautions, routine cleaning and disinfection practices including the management of linen and waste should be used. The Infection Prevention and Control Expert Advisory Group (IPCEAG) advises that if a person with suspected EVD is later shown to have EVD, but was in the non-secretory phase, there is negligible risk that items they have used would be contaminated with Ebola virus.
- For a **confirmed case of EVD or in a suspected case of EVD producing secretions**, follow the directions outlined in this Appendix.
- All staff carrying out cleaning and disinfection must be trained in the use of appropriate PPE including at a minimum single use gloves (two pairs to be worn), fluid-resistant or impermeable gown and surgical hood or a coverall, eye protection (e.g. goggles or face shield), leg and shoe covers; and a P2 respirator.
- In Victoria, the responsible body for the regulation of packaging, transport and disposal of waste is the Environment Protection Authority - Victoria (EPAV). EPAV has created a special waste classification (2015/165, see **Appendix 2B**) that directs the handling of clinical waste generated in the care of an EVD patient (“Ebola waste”). This classification is issued directly to individual hospitals and applies to objects or materials that may be contaminated or soiled with body fluids from patients confirmed as having Ebola virus, and human tissue, anatomical waste and diagnostic specimens arising from patients confirmed as having Ebola virus.

### 2. Disinfectants

- EVD is inactivated by many common hospital-grade disinfectants including agents that are active against other viruses such as norovirus, rotavirus and adenovirus.
- The recommended disinfectant is freshly prepared sodium hypochlorite (bleach - NaOCl) solution using powder sachets or as tablets, granules or gels.
- In some instances the use of tablets is preferred to a solution to reduce the possibility of aerosols (refer to the human waste management in section 10 of this Appendix). Tablets and granules are sold as sodium dichloroisocyanurate (various brands - NaDCC) with different chlorine concentrations – refer to the manufacturer’s instructions for achieving appropriate concentrations of solution. The concentrations are expressed as a percentage or parts per million (ppm) of available chlorine.
- Once diluted, chlorine solutions lose potency rapidly, so must be prepared in small volumes on a daily basis as required.
- 0.5% phenolic (with detergent) solution may also be used in a similar way to sodium hypochlorite as above.

### 3. Routine cleaning

- Routine environmental cleaning should be undertaken using either:
  - a two-step detergent clean (physical clean with two-step detergent followed by a chemical disinfectant), or
  - by using a combined 2-in-1 detergent/disinfectant clean (physical clean using a combined detergent/disinfectant wipe/solution).
- Daily cleaning of all hard, non-porous surfaces such as floors, toilets, counters and high-touch surfaces (e.g. door handles, bed rails and call bells, telephones and tables) should be carried out with a neutral detergent, rinsed and dried.
- Visibly soiled surfaces should be wiped clean with single use cleaning cloths, warm water and detergent until visibly clean, rinsed and dried.
- All cleaned surfaces should then be disinfected with freshly prepared sodium hypochlorite (bleach) solution as described above in a concentration of 1,000 ppm (0.1%) (2-step approach).
- Toilets and surfaces that have been visibly soiled should be disinfected with a higher concentration solution of 5,000ppm (0.5%) solution.

### **Spot Cleaning**

- As above or as per spills management (below).

## **4. Terminal Cleaning**

### **4.1 Cleaning**

- Terminal cleaning should be carried out as above.
- A higher concentration of sodium hypochlorite (5000ppm) should be used.
- All textiles contaminated with body fluids including curtains should be disposed of as Ebola waste.
- If applicable, maintain negative pressure during terminal cleaning and for 30 minutes afterwards before another patient is admitted to the room.

### **4.2 Fumigation**

- As EVD is not airborne fumigation of rooms is not required.

## **5. Cleaning equipment**

- All single use cleaning cloths and the mop head should be disposed of as Ebola waste after each routine clean.
- All cleaning equipment (mop handles, buckets if used) should remain in the room until terminal cleaning has been completed.
- Mop handles should be cleaned after each use.
- Remaining cleaning solution should be disposed of using absorbent granules/gel, which is then disposed of as Ebola waste.
- Cleaning gloves should be disposed of as Ebola waste. Chemical resistant or household type gloves should be used.
- Buckets, if used, should be cleaned and dried and kept inside the room.

## **6. Spills Management**

- Spills of body fluids/substances should be contained.
- Large spills (greater than 10 cm) may require increased PPE such as single use, impermeable leg covers and shoe covers.
- Absorbent sodium hypochlorite granules or gels (5000ppm) should be placed on the spill and the spill covered with paper towel to limit spread of the spill. This should be left for a minimum of 30 minutes before removing and disposing of the absorbed spill and paper towel.
- The area of the spill should be cleaned with warm water and detergent, dried and wiped over with 5000ppm of sodium hypochlorite solution left for 30 minutes, rinsed and dried.

## **7. Medical Equipment**

The use of patient dedicated equipment is recommended where reusable equipment is available.

### **7.1 Single use**

- Single use equipment should be used where available and appropriate, and be disposed of as Ebola waste when no longer required.

### **7.2 Reusable**

- Reusable semi-critical and critical equipment should be cleaned and disinfected in the room as appropriate prior to transport to the reprocessing area.
- Any visible contamination should first be cleaned using single use hospital-grade disinfection wipes (e.g. strong chlorine disinfectant).
- The items should then be cleaned in a two-step process, first with a neutral detergent, and then with a strong sodium hypochlorite solution (i.e. 5000-10,000 ppm available chlorine equivalent to 0.5% to 1%). Manufacturers' instructions should be followed.

- Once in the reprocessing area routine cleaning and disinfection or sterilisation should be undertaken.

## 8. Crockery and Cutlery

- Single use items should be used where possible.
- Reusable items should be cleaned and disinfected prior to leaving the room and should then be treated routinely.

## 9. Linen

### 9.1 Single use

- Where possible, use disposable linen and clothing. Linen includes sheets, pillowcases, blankets, towels and face washers.
- Bed clothing should also be single use where possible and appropriate.

### 9.2 Reusable

- Where reusable linen is used it should be disposed of as Ebola waste.

### 9.3 Bedding

- Plastic covered mattresses and pillows (if not already in use) should be used for all suspected, probable and confirmed cases of EVD.
- Single use plastic sheeting should be used where necessary and disposed of as Ebola waste.

## 10. Waste management

### 10.1 Overview

- In Victoria, the EPAV is the responsible body for the regulation of packaging, transport and disposal of waste. EPAV has created a special waste classification that directs the handling of clinical waste generated in the care of an EVD patient ("Ebola waste").
- Health Purchasing Victoria (HPV) is running a state-wide procurement process on behalf of health services for the transport and removal of Ebola waste, and can be contacted to obtain the details of which waste contractor(s) can be used.
- In Victoria, most health services do not have the capacity to treat Ebola waste on site (e.g. steam sterilisation or incineration) therefore it is highly likely that waste will need to be transported, and if so, must be packaged and transported according to the following requirements.
- Ebola waste should be considered infectious and disposal must adhere to the EPA standards.
- The arrangements below apply for the handling of any waste from a confirmed case of Ebola, or a suspected case who is producing secretions (wet symptoms such as vomiting, diarrhoea or bleeding). In practice, this means that waste generated from the care of a suspected case with secretions should be packaged and stored until Ebola is excluded in the patient, and then the waste can be managed as per normal protocols. Waste generated from suspected cases while they are not producing secretions (dry symptoms only) can be treated using normal waste disposal processes.
- All personnel involved in Ebola waste packaging, transport and disposal must wear PPE appropriate to the clinical setting and relevant patient zone.

### 10.2 Responsibilities of a waste generator and waster contractor

- A **waste generator** (i.e. a health service or cleaning contractor) should at a minimum undertake the following actions:
  - have a plan for the safe handling of Ebola waste, its transfer into appropriate packaging and secure storage;
  - ensure that the minimum packaging requirements for transport are met;
  - Designated health services (RMH-VIDS/RCH) should:
    - ensure they are issued with the EPAV Ebola waste classification for Ebola waste (2015/165, **Appendix 2B**);

- ensure agreement with an approved waste contractor in advance that confirms they are satisfied with the packaging requirements and have approval from EPAV for the transport and treatment of the Ebola waste;
  - Non-designated health services should:
    - have the appropriate Ebola plans in place;
    - should they receive a suspected or confirmed Ebola case, inform DHHS who will obtain the Ebola waste classification for the health service from EPAV (**Appendix 2B**), and facilitate entry into the state-wide Ebola waste contract via HPV.
- A **waste contractor** should at a minimum undertake the following actions:
  - confirm the packaging requirements for Ebola waste with the waste generator;
  - obtain the required permit from the EPAV for vehicles intended for transport of Ebola waste (R100);
  - ensure the destination waste facility is licensed by EPAV for the treatment of Ebola waste;
  - comply with all other regulations required by the EPAV including completion of necessary transport certificates.
- In order to be able to receive waste for treatment, a waste treatment facility must ensure that it meets licensing requirements set by EPAV for the safe incineration of Ebola waste.

### 10.3 Waste disposal

- Following a risk assessment by the health service concerned, some waste generated in the course of providing care to a suspected case of Ebola could be considered not to be contaminated with Ebola virus, and so could be managed as clinical waste according to normal protocols. The risk assessment centres around whether the patient with suspected EVD is producing secretions (vomiting, diarrhoea, bleeding) or not. The Communicable Diseases Network Australia and Infection Prevention and Control Expert Advisory Group recommend that if a suspected patient is not producing secretions, there is negligible risk that items they have used in the home, community or ambulatory care settings would be contaminated with Ebola virus. These items should be cleaned and reused in the normal way, unless there is another reason to discard them, and waste can be disposed of as normal clinical waste or general rubbish.
- Ebola waste generated in caring for a confirmed case of EVD or a suspected case producing wet symptoms must be packaged and handled according to the following requirements:
  - double bagged and sealed with a knot or other equally effective positive means of closure in biohazard (yellow) bags that are leak proof and tear resistant, or any other clinical waste bags that adhere to relevant Australian standards, i.e. be at least 50µm thick and leak proof;
  - absorbent material should be added to the primary and secondary bag, or the space between them in order to contain any residual liquids. Suitable absorbent materials may include, for example, Sphag sorb, Zeomed, Vernagel or Clinisorb.
  - sharps waste must be placed in a sharps container certified to AS 4031:1992 which must then be placed in an outer bag containing absorbent material before being placed in a secure rigid outer container;
  - the double bagging process should either involve keeping the first clinical waste bags inside the patient room and then placing these bags inside a second clinical waste bag kept outside the patient room or some other process to render the outer bag free from contamination (eg. disinfected with 1,000 ppm chlorine wipes); A “buddy” system must be used for this procedure;
  - bags should not be filled to capacity as this will prevent them from being adequately sealed and no individual bag should weigh more than 10kg;
  - Bags should never be slung over a shoulder or carried in a manner that permits contact the carrier’s body or legs;
  - the double-bagged waste must be placed in a secure rigid outer container that carries labelling consistent with UN2814/ADG Class 6.2 for transport; the outer container should contain absorbent material sufficient to contain any residual liquids. The secure rigid

outer container should not be inverted at any point in the transport process whilst it contains Ebola waste;

- the secure rigid outer container should be of sufficient dimensions to deposit and accommodate waste items likely to be generated in the routine care of the patient, e.g. items of personal protective equipment;
- the outer surface of the secure rigid outer container should be disinfected with virocidal disinfectant, such as 1,000 ppm chlorine wipes;
- the secure rigid outer container must carry outer labelling consistent with UN2814/ADG Class 6.2 for transport and carry the text “In the case of damage or leakage immediately notify Public Health Authority”;
- the Ebola waste should be stored in a safe and secure locked environment to prevent accidental or unauthorised access.

#### **10.4 Waste transport**

- Ebola waste must be transported according to the following requirements:
  - the secure rigid outer container should be accompanied by a Transport Certificate setting out the prescribed waste as Hazard Category A waste/ UN Number 2814; this includes the requirement for the waste generator to ensure that the waste transporter is aware of the transportation of Ebola waste;
  - in permitted vehicles compliant with the EPAV special waste classification for Ebola waste (R100).

#### **10.5 Waste treatment**

- Ebola waste is to be treated through:
  - incineration in a waste disposal facility licensed by the EPAV in the destruction of Ebola waste (this is the common practice in Victoria), **or**
  - steam sterilisation prior to disposal as normal category B clinical and related waste (UN3291) using a method validated for the treatment of category A pathogens to the satisfaction of existing regulators.

#### **10.6 Handling of bulk items**

- Bulk items (i.e. mattresses or items too large to be secured as per the packaging instructions described above) that cannot be cleaned and disinfected and as such require transport and treatment as Ebola waste will require prior discussion with a waste contractor. Such waste should be handled as follows:
  - disinfection of the entire surface of the article should occur (e.g. using strong sodium hypochlorite solution at 5000-10000 ppm);
  - subsequent enclosure in tear and impact resistant plastic sheeting and then sealed closed with tape as to prevent leakage; ends may need to be twisted closed and secured with at least two wraps of tape or two zip-ties to prevent excess fluid from leaking; this surface should again be disinfected;
  - a second layer of the same plastic sheeting should be applied and again sealed and disinfected;
  - finally the item should be wrapped in 6mm polyethylene sheet (HDPE or equivalent material) and sealed with tape as to prevent leakage followed by surface disinfection;
  - some items may need to be broken down in size prior to packaging to ensure it can be safely secured for transport and placed in incinerators at waste treatment facilities;
  - some larger bulk items may need further discussion with the Department of Health & Human Services and EPAV as a suitable method might be agreed that completely disinfects the item at source, rendering it free of Ebola virus and meaning it would no longer be classified as Ebola waste.

## 10.7 Faeces and urine

### General

- Patients with suspected/ confirmed EVD should be isolated in a single room, ideally with ensuite toilet facilities.
- If no ensuite toilet facility is available, a dedicated commode should be provided. Single use bedpans/urinals should be used.
- Toilet waste from patients with EVD can be safely flushed into the sewerage system. As an enveloped virus, Ebola virus is more susceptible to environmental stresses and chemical germicides than most enteric viruses. However, as a precautionary measure, toilet waste should be treated before disposal through the sewage system or as Ebola waste. Suggested regimes are as follows:

### If using a standard toilet:

- The patient should be instructed to not flush the toilet.
- Staff should add five bleach tablets (e.g. Chlortabs™ / Chlorclean™) to the toilet bowl (i.e. 5x1000 ppm strength). This is preferred to adding sodium hypochlorite solution to the toilet bowl which increases the risk of splashing/aerosol creation.
- Leave for 30 minutes before flushing.
- Ensure the toilet lid is down and that staff are wearing a P2/N95 respiratory protection device (RPD) in addition to other PPE in case of aerosols when the toilet is flushed.

### If using a commode:

- Disposable pans/urinals should be used.
- The contents of the pan/urinal must be solidified with high-absorbency granules or gel.
- Both the pan/urinal and contents should be placed into a biohazard bag as Ebola waste.
- A bedpan/urinal can be used and emptied into a pan sanitiser if available within the ward area.
- The bed pan should be filled with 200 ml of 5000 ppm sodium hypochlorite and left for 30 mins before emptying and being placed in the pan sanitiser. The sanitiser should be run on a hypochlorite cycle.

## 10.8 Cleaning equipment

- Cleaning equipment such as mop heads and cloths should be disposed of as Ebola waste after each clean.
- All cleaning equipment should be disposed of as Ebola waste during terminal cleaning.

## 10.9 Furnishings – carpet, curtains etc

- If a porous material such as linen, mattress or carpet is obviously soiled with body fluids or substances it should be discarded as Ebola waste.
- Non-soiled surfaces should be cleaned or laundered as normal using detergent and/or disinfectant.
- Otherwise, plastic covered equipment should be cleaned and disinfected as above.

## 10.10 Removing waste from the room

- A staff member must be available to assist with double bagging Ebola waste ('Buddy' system) as directed above.

## 10.11 Storage of waste until collected

- Prior to collection by the contractor, Ebola waste must be stored securely and access restricted to authorised and trained personnel.

## 11. Removing PPE

- A second staff member ('Buddy' system) must be available to assist and ensure breaches in technique do not occur exposing the staff member to unnecessary risk as detailed above (also see point 96 in the main body of this Plan).
- PPE should be treated as Ebola waste and disposed of in a biohazard (yellow) bag and double bagged as above (point 10.3).
- Hands should be washed with warm water and liquid soap, rinsed and pat dried.

## Appendix 2B – EPAV Ebola Waste Classification Template

This classification is to be issued directly to designated Ebola treatment hospitals (RMH-VIDS/RCH). Other non-designated hospitals may have the classification issued on an as needed basis by the EPAV should an Ebola patient present for treatment.

# Classification

Environment Protection Act 1970

Act No. 8056/1970

Environment Protection (Industrial Waste Resource) Regulations 2009

**Prescribed Industrial Waste – Classification by Hazard for Ebola waste**

Pursuant to regulation 11(1)(a) of the *Environment Protection (Industrial Waste Resource) Regulations 2009*, the Environment Protection Authority Victoria (“EPA”) hereby classifies the industrial waste specified in this classification as Category A prescribed industrial waste.

### 1. CLASSIFICATION NUMBER

2015/165

### 2. WASTE TO WHICH THIS CLASSIFICATION APPLIES

2.1 This classification applies to the objects and materials, including but not limited to bedding, sanitary napkins, personal protective equipment and any other material that is or, in the opinion of the waste generator, may be contaminated or soiled with body fluids from patients confirmed as having Ebola virus; and

2.2 human tissue, anatomical waste and diagnostic specimens arising from patients confirmed as having Ebola virus (“waste”).

### 3. TO WHOM THIS CLASSIFICATION APPLIES

This classification applies to < name of the hospital, address, ACN > (“the waste generator”).

### 4. PERIOD OF VALIDITY

This classification commences on < date/Month/year > and is effective unless it is revoked or varied by the EPA.

### 5. MANAGEMENT OPTIONS

5.1 The waste referred to in Section 2 of this classification must be packaged in accordance with the following conditions before being transported to an EPA licensed premises.

- 5.1.1 Place the waste into the first plastic film bag as per Schedule 1.
  - 5.1.2 Close the bag by tying the bag with a knot or other equally effective positive means of closure that will ensure any liquid contents will not leak from the packaging.
  - 5.1.3 Place the first plastic bag, with the knot facing upward, into a second plastic film bag.
  - 5.1.4 Securely tie the outer bag.
  - 5.1.5 Place the second (double bagged) package into outer container as per Schedule 1.
  - 5.1.6 Securely close the outer container.
  - 5.1.7 Repeat steps 5.1.1 to 5.1.6 as necessary until the outer container is sufficiently full to the extent that the outer container can be safely closed, handled, transported and incinerated in accordance with this classification.
  - 5.1.8 Disinfect the exterior surface of the outer container with virocidal disinfectant that is recommended by the Health Department for use as a disinfectant for the Ebola virus.
  - 5.1.9 Transfer the outer container to a secure, isolated area with limited access, so that waste can be stored separately from other clinical waste until it can be transported for destruction.
- 5.2 Waste which is not in compliance with Section 5.1 of this classification must not be transferred to a treatment facility.
- 5.3 The waste producer referred to in Section 3 of this classification must ensure, in obtaining transportation for the classified waste, that:
- 5.3.1 Waste is transported as quickly as practicable directly to a licensed treatment facility for incineration. This means that vehicles are not to pick up other cargo after collecting the waste referred to in Section 2, nor make unnecessary stops, but instead must proceed directly to the treatment facility.
  - 5.3.2 Each vehicle that transports the waste:
    - 5.3.2.1 has an EPA-issued Vehicle Permit to transport *R100 Clinical Waste*; and
    - 5.3.2.2 is fully enclosed, and the driver compartment is separated from the load area; and
    - 5.3.2.3 is fitted with load securing devices and a totally leak-proof load compartment, with seamless floor, which is drainable to a spill collection sump.
  - 5.3.3 the outer container is secured to prevent the container moving while the vehicle is in motion.
  - 5.3.4 the waste transporter provides a specifically prepared Emergency Procedure Guide (EPG) to the driver outlining reporting mechanisms to deal with emergency situations. The EPG must be readily accessible, relevant and easily interpreted.
  - 5.3.5 a copy of this Classification is present at all times in the vehicles transporting the waste.
- 5.4 The waste producer referred to in Section 3 of this classification must ensure, in obtaining destruction of the classified waste, that:
- 5.4.1 at the waste receiver's premises, the packaged waste is unloaded, loaded, handled, treated and stored in secure bunded areas constructed, sized, operated and maintained in accordance with the EPA Publication No 347 "*Bundling Guidelines*".
  - 5.4.2 the waste containers are stored separately from other waste in a secure, isolated area with limited access.



- 5.4.3 waste that has been managed in accordance with this Classification is incinerated as quickly as practicable at the incineration facility.

## 6. NOTES

This classification may be amended or revoked by the EPA by way of written notice.

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TIMOTHY DAVID FARAGHER

Delegate to the Environment Protection Authority Victoria

### Schedule 1 - Packaging requirements

- I. Individual plastic film bags may weigh no more than 10 kg when filled. An outer packaging (rigid container) may contain more than one set of double bagged waste.
- II. Where appropriate, wrap objects with sharp edges to prevent the tearing or puncture of the plastic bags.
- III. All outer containers used for the waste must be of a rigid design with a lid that is able to be secured and prevent spillage of the contents during transport under normal operating conditions.
- IV. All containers and plastic bags must be marked in accordance with Part C of *Environment Protection (Industrial Waste Resource) Regulations 2009*.
- V. The rigid outer layer should display labeling consistent with Australian Dangerous Goods Code 6.2.



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## Appendix 3 – Care of the Deceased

### Safe Handling of Human Remains of a Patient with Ebola Virus Disease

These recommendations give guidance on the safe handling of human remains that may contain Ebola virus and are for use by personnel who perform care of the deceased in hospitals and mortuaries. In patients who die with Ebola virus infection, virus can be detected throughout the body. Ebola virus can be transmitted by laceration and puncture with contaminated instruments used during postmortem care, through direct handling of human remains without appropriate personal protective equipment, and through splashes of blood or other body fluids (e.g. urine, saliva, faeces) to unprotected mucosa (e.g. eyes, nose, or mouth) which occur during care of the deceased.

The following are important principles of care in these circumstances:

- Only personnel trained in handling infected human remains, and wearing PPE, should touch, or move, any Ebola-infected remains or suspected Ebola-infected remains;
- Handling of human remains should be kept to a minimum;
- **Autopsies should not be performed on patients who die with Ebola virus disease.** If an autopsy is requested, the DHHS Communicable Disease Prevention and Control section and the Victorian Institute of Forensic Medicine should be consulted.

### Definitions for Terms Used in this Appendix

*Cremation:* The act of reducing human remains to ash by intense heat.

*Leakproof bag:* A body bag that is puncture-resistant and sealed in a manner so as to contain all contents and prevent leakage of fluids during handling, transport, or shipping.

### Roles and responsibilities in the care of the deceased

The completion of a death certificate by a medical practitioner is a vital part of the notification process of a death to the Registrar of Births, Deaths and Marriages and enables an authority to be provided to the funeral director to arrange disposal of the deceased. Completing a death certificate and reporting a death to the Coroner are mutually exclusive exercises. Doctors should be familiar with the criteria for reporting deaths to the Coroner. A death as a result of Ebola virus disease would not ordinarily be reported to a Coroner. If a diagnosis of Ebola virus disease has been made prior to death and there are no other criteria for reporting the death, a death certificate could be completed.

Health services care for the remains of those who have died in their care. Where the cause of death is understood and does not meet the criteria for reportable deaths, a death certificate is completed and the deceased is transferred to a funeral director chosen by the next of kin.

If the death is reported to the Coroner, Victoria Police will assist to investigate the circumstances surrounding the cause of death. Victoria Police attend the place where a reportable death has occurred and work closely with the Victorian Institute of Forensic Medicine.

The Victorian Institute of Forensic Medicine (VIFM) forensic pathologists assist the State Coroner, police and courts to resolve causes of death and how injuries might have occurred. Only those people whose death is reported to the State Coroner are brought to mortuaries like VIFM.

Funeral Directors prepare human remains for interment or cremation. This includes making arrangements with a Cemeteries Trust for disposition of the deceased.

Cemeteries Trusts operate cemeteries and crematoria. DHHS administers the *Cemeteries and Crematoria Act 2003*. As independent entities, trusts are the decision makers in relation to the provision of their services provided these decisions are lawful.

### Personal protective equipment for care of the deceased

- **Personal protective equipment (PPE):** Prior to contact with the deceased, postmortem care personnel must wear at a minimum single use gloves (two pairs to be worn), fluid-resistant or impermeable gown and surgical hood or a coverall, eye protection (e.g. goggles or face shield), and leg and shoe covers.
- **Putting on, wearing, removing, and disposing of protective equipment:** PPE should be in place **BEFORE** entering the room, contact with the deceased, worn during the process of collection and placement in body bags, and should be removed immediately after and discarded as regulated medical waste. Use caution when removing PPE as to avoid contaminating the wearer. Hand hygiene (washing your hands thoroughly with soap and water) should be performed immediately following the removal of PPE.

## Preparation of the deceased

- **Preparation of the deceased:** All contact with the deceased should be minimized. At the site of death, the deceased should be placed in leak-proof body bag not less than 150 µm thick and zippered closed. Change your gown or gloves after placing the deceased in the bag. Leave any intravenous lines or endotracheal tubes that may be present in place. Avoid washing or cleaning the deceased. The bagged remains should then be placed in another leak-proof plastic body bag not less than 150µm thick and zippered closed before being transported to the morgue.
- **Surface decontamination:** Prior to transport to the mortuary, perform surface decontamination of the outer body bag by first removing visible surface contamination on bag surfaces with recommended disinfectants which can kill a wide range of viruses. An example of an effective disinfectant is sodium hypochlorite (refer to **Appendix 2A**). Follow the product's label instructions. After any visible contamination has been removed, reapply the disinfectant to the entire bag surface and allow to air dry. Following the removal of the body, the patient room should be cleaned and disinfected. Reusable equipment should be cleaned and disinfected according to standard procedures. For more information on environmental infection control, please refer to "[Interim Guidance for Environmental Infection Control in Hospitals for Ebola Virus](http://www.cdc.gov/vhf/ebola/hcp/environmental-infection-control-in-hospitals.html)" (<http://www.cdc.gov/vhf/ebola/hcp/environmental-infection-control-in-hospitals.html>).
- **Individuals driving or riding in a vehicle carrying deceased persons:** PPE is not required for individuals driving or riding in a vehicle carrying deceased persons, provided that drivers or riders will not be handling the body and the body is safely contained in a disinfected body bag as described above.

## Mortuary Care

- Do not open the body bags and do not remove remains from the body bags. Bagged remains should be placed directly into a sealed casket.
- Do not perform embalming. The risks of occupational exposure to Ebola virus while embalming outweighs its advantages; therefore, bodies infected with Ebola virus should not be embalmed.
- Mortuary care personnel should wear at a minimum single use gloves (two pairs to be worn), fluid-resistant or impermeable gown and surgical hood or a coverall, eye protection (e.g. goggles or face shield), and leg and shoe covers when handling the bagged remains.
- In the event of leakage of fluids from the body bag, thoroughly clean and decontaminate areas of the environment with recommended disinfectants (refer **Appendix 2A**). Reusable equipment should be cleaned and disinfected according to standard procedures. For more information on environmental infection control, please refer to "[Interim Guidance for Environmental Infection Control in Hospitals for Ebola Virus](http://www.cdc.gov/vhf/ebola/hcp/environmental-infection-control-in-hospitals.html)" (<http://www.cdc.gov/vhf/ebola/hcp/environmental-infection-control-in-hospitals.html>).

## Disposition of Remains

- There should be no viewing of the deceased by family members. The body bags and casket should remain sealed.
- Remains should be cremated or buried promptly in a sealed casket.
- Once the bagged body is placed in the sealed casket, no additional cleaning is needed unless leakage has occurred.
- As an additional precaution gloves should be worn when handling the sealed casket.
- No PPE is needed when handling the cremated remains.

The Australian Funeral Directors Association, *Funeral Industry Infection Control Guidelines*, 2008 can be obtained from: <http://afda.org.au/media/member/ICG.pdf>

## Transportation of human remains

Transportation of remains that contain Ebola virus should be minimized.

## Reported deaths

The Victorian Institute of Forensic Medicine (VIFM) will be alerted if Police who attend a reported death suspect that a deceased person may have Ebola virus disease. If the deceased was reported to have flu like symptoms immediately prior to death and has recently travelled to an affected area in Africa, the VIFM on-call pathologist is to be notified. VIFM will advise Police to secure the scene and await further advice.

The on-call pathologist, in consultation with Director VIFM will make the decision to either treat the deceased as "suspected Ebola" or a normal case. The Director of VIFM will also notify the Chief Health Officer and the State Coroner immediately.

If the decision is made to treat the deceased as "suspected Ebola" the deceased is to remain in situ and the police Disaster Victim Identification/CBR unit will attend to provide advice and assist in the process. A VIFM Forensic Pathologist with appropriate PPE described above will attend the scene and collect a blood sample for testing at VIDRL. Only DHHS can authorise EVD testing and will make the initial contact with VIDRL. The Forensic Pathologist will notify DH by calling **1300 651 160** to obtain authorisation for EVD testing.

If the test is positive, the Police DVI-CBR unit will attend to manage the deceased. A risk assessment will take place in conjunction with the forensic pathologist to determine the level of PPE.

VIFM maintains protocols for:

- Determining appropriate levels of PPE;
- Admission of the deceased;
- Examination of the deceased;
- Sample collection;
- Storage of the deceased;
- Environmental cleaning of examination area;
- Transfer of the deceased to a nominated funeral director;
- Management of communications with families and stakeholders.

As a government facility, VIFM also is sometimes requested to manage bodies when other mortuaries are unable to or not prepared to store or transport the bodies. This situation could occur in cases of Ebola virus disease infection.

### **Further information**

For advice in relation to the care of deceased persons with EVD please contact DHHS Communicable Disease Prevention and Control Unit on **1300 651 160**.

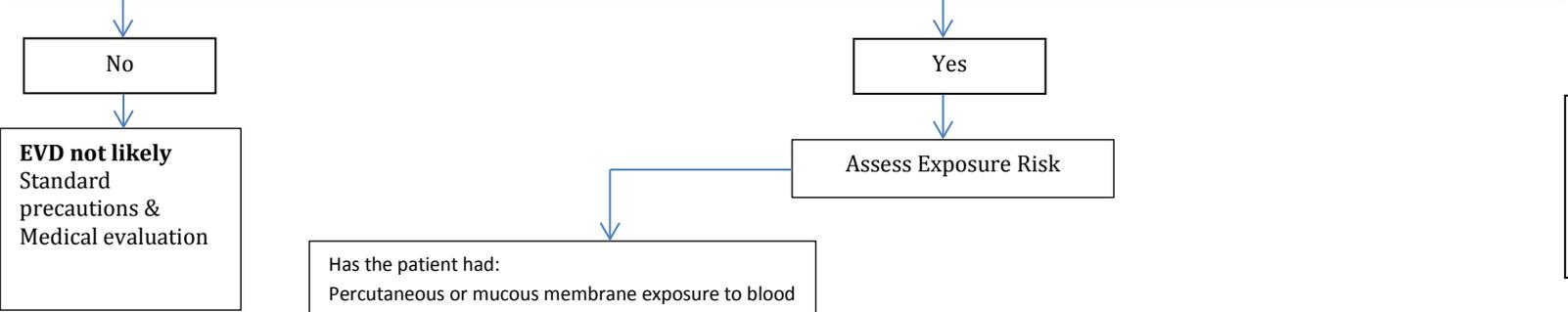
### **References**

Centers for Disease Control and Prevention, Guidance for Safe Handling of Human Remains of Ebola Patients in Hospitals and Mortuaries. Available from: <http://www.cdc.gov/vhf/ebola/hcp/guidance-safe-handling-human-remains-ebola-patients-us-hospitals-mortuaries.html> Accessed on 09 September 2014

## Appendix 4 – Initial Management of Suspected Ebola Virus Disease

# Current EVD outbreak refer to:  
[http://www.ecdc.europa.eu/en/health-topics/ebola\\_marburg\\_fevers/EVDca\\_sedefinition/Pages/Ebola-affected-areas.aspx](http://www.ecdc.europa.eu/en/health-topics/ebola_marburg_fevers/EVDca_sedefinition/Pages/Ebola-affected-areas.aspx)

- 1. Does the patient:**
- Have a fever [ $\geq 38^{\circ}\text{C}$ ] or history of fever in the past 24 hours **OR** unexplained haemorrhage
- AND**
- Report returning from an area where there is a current EVD outbreak# in the 21 days prior to illness onset?
- OR**
- Fever [ $\geq 38^{\circ}\text{C}$ ] or history of fever **OR** severe headache **OR** muscle pain **OR** vomiting **OR** diarrhoea **OR** abdominal pain
- AND**
- contact with a patient known to have EVD **OR** contact with the blood or body fluids of a patient known to have EVD **OR** prepared or ate “bushmeat” in an EVD endemic area?



Has the patient had:

- Percutaneous or mucous membrane exposure to blood or body fluid of an EVD patient; **OR**
- Direct contact with blood or body fluids of an EVD patient without PPE; **OR**
- Processed blood or body fluids of a confirmed EVD patient without PPE or precautions; **OR**
- Direct contact with a dead body without appropriate PPE in an affected area; **OR**
- Direct contact with sick or dead bats or primates or consumed “bushmeat” in EVD endemic areas; **OR**
- Household contact with a confirmed case of EVD; **OR**
- Other close contact with a confirmed case of EVD in health care facilities or community settings (such as being within the same room as a confirmed case with active vomiting or diarrhoea or coughing while not wearing appropriate PPE or direct brief skin contact)?

NO  
to  
ALL

**PERSON UNDER INVESTIGATION**

**Assess Clinical Syndrome**  
**Call DH 1300 651 160**  
In discussion with infectious diseases expert & DHHS does the patient have a clinically compatible syndrome (i.e. severe headache, muscle pain, vomiting, diarrhoea, abdominal pain or unexplained haemorrhage) and no alternate diagnosis?

Yes

**SUSPECTED EVD: POSSIBILITY OF EVD: FOR TESTING**  
**Isolate** in single room  
**Standard + contact + droplet + airborne** precautions  
**PPE** as listed  
**Notify** Department of Health & Human Services (DHHS) – **1300 651 160**  
If **facility not capable** of isolation and appropriate PPE, **transfer to RMH-VIDS / RCH**  
**Hold off local pathology** (e.g. malaria test) until EVD samples return negative. If not clinically appropriate to wait, transfer to RMH-VIDS / RCH  
Arrange for **EVD testing** of samples at **VIDRL**  
If **EVD** is subsequently **confirmed** or unable to be excluded, patient will need to be **transferred** to RMH-VIDS.  
**SEE SUSPECTED EVD: LOWER POSSIBILITY OF EVD: CHECKLIST**

No

**EVD not likely**  
Standard precautions & Medical evaluation

YES to ANY

**SUSPECTED EVD: HIGH POSSIBILITY OF EVD: FOR TRANSFER**  
**Isolate** in single room  
**Standard + contact + droplet + airborne** precautions  
**PPE** as listed  
**Notify** Department of Health & Human Services (DHHS) – **1300 651 160**  
After discussion with DHHS, arrange **transfer to RMH-VIDS / RCH** for testing for EVD & other required pathology  
Identify known contacts and provide to DHHS  
**SEE SUSPECTED EVD: HIGH POSSIBILITY OF EVD CHECKLIST**

**Personal Protective Equipment (PPE)**  
**Hand hygiene is critical**  
Pay particular attention to remove PPE without contaminating eyes, mucous membranes, or clothing with potentially infectious materials

**Contact + Droplet + Airborne Precautions:**

- single use gloves (two pairs to be worn);
- fluid-resistant or impermeable gown and surgical hood, or a coverall (gowns ideally to mid-calf);
- Eye protection (goggles or face shield);
- P2/N95 respirator;
- leg and shoe covers.

**Further precautions** including a **P2/N95 respirator** and apron are required if performing **aerosol generating procedures (AGP)**. Remember to avoid AGPs if possible.

## Appendix 5 – Checklist for High possibility of EVD – Transfer

<input type="checkbox"/>	<b>Isolate patient</b> in a single room
<input type="checkbox"/>	<b>Use standard + contact + droplet + airborne</b> precautions (see PPE requirements listed on previous page)
<input type="checkbox"/>	<b>Restrict</b> entry to the room to necessary staff only.
<input type="checkbox"/>	<b>Notify</b> Department of Health & Human Services (DHHS) – call <b>1300 651 160, 24 hours, seven days</b>
<input type="checkbox"/>	<b>Notify</b> Infectious Diseases and Infection Control Unit (where available)
<input type="checkbox"/>	<b>DO NOT</b> collect pathology (unless immediately essential for care, in which case samples <b>MUST</b> be processed according to Part A of the <i>PHLN Laboratory Precautions for Samples Collected from Patients with Suspected Viral Haemorrhagic Fevers</i> )
<input type="checkbox"/>	<b>Transfer</b> to Designated Hospital (RMH-VIDS / RCH) after discussion with DHHS: DH will liaise with the Designated Hospital and Ambulance Victoria to arrange urgent transfer
<input type="checkbox"/>	<b>Complete</b> a list of list of potential <b>contacts</b> in consultation with DHHS
<input type="checkbox"/>	<b>Complete environmental cleaning, disinfection and waste management</b> of any area where patient has been cared for (see <b>Appendix 2A</b> )

## Appendix 6 – Checklist for Possibility of EVD – Sample to VIDRL

<input type="checkbox"/>	<b>Isolate patient</b> in a single room
<input type="checkbox"/>	<b>Use standard + contact + droplet + airborne</b> precautions (see PPE requirements listed for clinical care in this Plan)
<input type="checkbox"/>	<b>Restrict</b> entry to the room to necessary staff only.
<input type="checkbox"/>	<b>Notify</b> Department of Health & Human Services (DHHS) – call <b>1300 651 160 24 hours, seven days</b>
<input type="checkbox"/>	<b>Notify</b> Infectious Diseases and Infection Control Unit (where available)
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<p><b>DO ANY OF THE FOLLOWING APPLY:</b></p> <p><b>Patient is critical or requires Intensive Care;</b></p> <p><b>Urgent need for general pathology;</b></p> <p><b>Health service does not have appropriate infection prevention and control capability;</b></p> <p><b>Health service does not have infectious diseases expertise;</b></p> <p><b>Timeframe since onset of illness is less than 72 hours;</b></p> <p><b>IF ANY APPLY, DISCUSS WITH DH AND CONSIDER IMMEDIATE TRANSFER TO DESIGNATED HOSPITAL (RMH-VIDS / RCH) (See Appendix 5). Otherwise, if patient remains at the current health care facility, continue to the next page.</b></p>

<input type="checkbox"/>	<p><b>Arrange collection of EVD samples. Other routine pathology should NOT be performed until EVD is excluded.</b> DH will liaise with <b>VIDRL</b> to authorise EVD testing and ensure readiness to receive sample. VIDRL can be contacted on 0438 599 437.</p>
<input type="checkbox"/>	<p><b>Ensure</b> a courier has been engaged and an arrival time for specimen pick up has been agreed on. DHHS can organise a courier where a health service does not have an available courier. Before proceeding, verify packaging requirements with the agreed courier.</p>
<input type="checkbox"/>	<p><b>Collect samples for EVD testing in a safe and prescribed manner as detailed below:</b> <b>VIDRL provide advice at <a href="http://www.health.gov.au/internet/main/publishing.nsf/Content/ohp-nhsq1-qvfh.htm">http://www.health.gov.au/internet/main/publishing.nsf/Content/ohp-nhsq1-qvfh.htm</a></b> Venous blood samples must be collected with extreme care to avoid self-inoculation. Needles should not be recapped, bent, broken, removed from disposable syringes or otherwise handled. Blood-taking equipment should be placed into a puncture-proof approved sharps container.</p> <ol style="list-style-type: none"> <li><b>1. Prepare:</b> <ul style="list-style-type: none"> <li>• Standard biohazard bags x2 and wipes</li> <li>• Specimen transport container x1 (e.g. Biobottle™ Australia category number Am2i)</li> <li>• Sodium hypochlorite solution 0.5% (5000ppm)</li> </ul> </li> <li><b>2. Prepare and pre-label tubes</b> <ul style="list-style-type: none"> <li>• EDTA tube x 1</li> <li>• Viral Swab x 1 (in viral transport media e.g. Copan e-swab; a dry swab is preferable if no VTM is available)</li> </ul> </li> <li><b>3. Put on Personal Protective Equipment (PPE) as described, at a minimum:</b> <ul style="list-style-type: none"> <li>• Disposable scrubs, gown and double gloves</li> <li>• Goggles or face shield, fluid impermeable single use face mask (or P2 respirator if throat swab being collected).</li> </ul> </li> <li><b>4. Perform venepuncture and collect throat swab.</b> Place specimens in biohazard bag 1.</li> <li><b>5. Clean outside</b> of biohazard bag 1 with 0.5% hypochlorite solution.</li> <li><b>6. Remove one pair of gloves</b> and take specimen in biohazard bag to patient ante-room.</li> <li><b>7. Place biohazard bag 1 into a separate specimen biohazard bag 2 lined with enough absorbent material to contain a potential spill</b>, held open by an assistant (also wearing PPE), ensuring you do not touch the exterior of second bag. Clean outside of second bag with 0.5% hypochlorite solution.</li> <li><b>8. Place double-bagged specimen in the specimen transport container.</b> The outside of the specimen transport containers must be wiped down with 0.5% hypochlorite solution.</li> <li><b>9. The specimen transport container</b> is then placed in appropriately labelled transport boxes, without touching the outside of the box.</li> <li><b>10. Remove PPE</b>, put on clean gloves, and leave anteroom with transport box.</li> </ol>
<input type="checkbox"/>	<p><b>Ensure sample is packaged</b> in suitable specimen transport container. This should be discussed directly with the courier, as specimen containers can be provided by the courier used by DHHS.</p>
<input type="checkbox"/>	<p><b>Liaise with VIDRL, couriers and DHHS</b> to ensure all <b>timeframes</b> for collection, delivery and receipt of results are clear</p>
<input type="checkbox"/>	<p><b>Delivery of the specimen to VIDRL via courier</b></p>
<input type="checkbox"/>	<p><b>Ensure a list of all potential contacts</b> is maintained in consultation with DHHS</p>
<input type="checkbox"/>	<p>Obtain <b>EVD testing results</b> from VIDRL (contact 0438 599 437) or DHHS (contact 1300 651 160)</p> <ul style="list-style-type: none"> <li>- <b>If EVD test is negative</b> and DHHS agree EVD is excluded, treat patient as per usual precautions and medical evaluation</li> <li>- <b>If EVD test is positive or EVD not excluded</b>, arrange for transfer to Designated Hospital as per Appendix 5 (above)</li> </ul>
<input type="checkbox"/>	<p><b>Complete environmental cleaning, disinfection and waste management</b> of area where patient has been cared for (see <b>Appendix 2A</b>)</p>