Ebola Disease (EBOD)- Interim Protocol

Manitoba
Public Health Branch

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1. Etiology and Background

Ebola disease (EBOD) is a severe, potentially fatal illness caused by negative-stranded RNA filoviruses of the genus *Orthoebolavirus*. Six species of *Orthoebolavirus* have been identified to date of which four species are known to cause human disease:

- Ebola virus or EBOV (species *Orthoebolavirus zairense*),
- Sudan virus or SUDV (species *Orthoebolavirus sudanense*),
- Bundibugyo virus or BDBV (species *Orthoebolavirus bundibugyoense*), and
- Taï Forest virus or TAFV (species *Orthoebolavirus taiense*).

Speciation is important because treatments and vaccines developed against one species may not have similar effectiveness against others. EBOV, causing Ebola virus disease (EVD), SUDV, causing Sudan virus disease (SVD), and BDBV, causing Bundibugyo virus disease (BVD), are most commonly implicated in outbreaks.

This guidance includes recommendations for managing cases and contacts of Ebola disease (EBOD) caused by the four species identified above. This document assumes that, while most of the current available scientific evidence comes from experience with EBOV, all orthoebolaviruses (EBOV, SUDV, BDBV, TAFV) likely behave similarly and therefore share the same recommendations for Ebola disease case and contact management.

This interim statement is adapted from PHAC's national guidance (https://www.canada.ca/en/public-health/services/diseases/ebola/health-professionals-ebola/interim-guidance-public-health-management-cases-contacts-ebola-community-setting-canada.html), and supports rapid case and contact management to ensure timely assessment of contacts in order to reduce opportunities for transmission, with the objective of containment of the virus. The guidance is informed by currently available scientific evidence, expert opinion and guidance developed by other countries and agencies, such as the World Health Organization (WHO), European Centre for Disease Prevention and Control (ECDC), United Kingdom (UK) Health Security Agency, and United States Centers for Disease Control and Prevention (CDC), and is subject to change as new information becomes available (1).

Recommendations for health care workers caring for patients with suspected or confirmed EBOD or with occupational exposure in Canada are beyond the scope of this document. Health care workers with occupational exposure should be managed as per Shared Health Manitoba policy (https://healthproviders.sharedhealthmb.ca/services/ers/ecm/), and with consultation with public health as required. The following national guidance documents can be used as resources:

- Ebola disease: For health professionals and humanitarian aid workers https://www.canada.ca/en/public-health/services/diseases/ebola/health-professionals-ebola.html
- Infection Prevention and Control measures for Ebola disease in acute care settings https://www.canada.ca/en/public-health/services/diseases/ebola/health-professionals-ebola/infection-prevention-control-measures-healthcare-settings.html

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- Routine practices and additional precautions for preventing the transmission of infection in healthcare settings https://www.canada.ca/en/public-health/services/publications/diseases-conditions/routine-practices-precautions-healthcare-associated-infections.html

2. Case Definitions

2.1 Laboratory-Confirmed Case

A person with laboratory confirmation* of *Orthoebolavirus* infection using at least one of the methods below:

- Isolation and identification of virus from an appropriate clinical specimen (e.g., blood, serum, tissue, urine specimens, throat secretions or other body fluids) (performed at the National Microbiology Laboratory (NML));
  OR
- Detection of virus-specific RNA by reverse-transcriptase PCR from an appropriate clinical specimen (e.g., blood, serum, tissue, other body fluids) using two independent gene targets **AND** confirmed by the NML;
  OR
- Demonstration of virus antigen in tissue (e.g., skin, liver or spleen) by immunohistochemical or immunofluorescent techniques **AND** another test (e.g., PCR);
  OR
- Demonstration of specific IgM **OR** IgG antibody by EIA, immunofluorescent assay or Western Blot by the NML or an approved WHO collaboration centre;
  OR
- Demonstration of a fourfold rise in IgG titre by EIA, immunofluorescent assay from an acute vs. a convalescent serum sample (performed at the NML).

*Note: Diagnostic testing and possible impacts of vaccination:

- Diagnostic testing for filoviruses (such as Ebola, Sudan and Marburg viruses) using the molecular testing approaches of the NML may be impacted by recent vaccination. For this reason, it is important to inform the NML of the vaccine status of the person under investigation (PUI).
- The main vaccine component that is reactive in filovirus vaccine platforms usually contains the GP gene (e.g. the approved rVSV-EBOV vaccine – Ervebo has the Ebola GP gene). As such, a recently vaccinated person may test positive for the GP gene target.
  - Although the gold standard for confirmatory testing is the detection of virus-specific RNA by PCR using 2 independent molecular targets (NP, L or GP gene), if the history of vaccination was not readily available, a diagnostic result of singularly the GP gene would warrant repeat testing and other investigations. This would include re-testing and confirmation at the NML. Similarly, testing using the GeneXpert platform which uses the NP and GP genes for Ebola virus as targets may also be affected.
  - Serologic testing cannot currently distinguish between vaccinations and naturally acquired infections and would also have to be interpreted in context of vaccination.

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Note that the Ervebo vaccine is only effective against EBOV (formerly Zaire ebolavirus) and is not effective against SUDV, Marburg virus (MARV) or other known filoviruses (2).

2.2 Suspect Case

A person with EBOD-compatible symptoms** with or without pending laboratory results for EBOD **AND**

- A travel history to an EBOD affected area within 21 days of symptom onset

OR

- exposure to one or more of the epidemiological risk factors[+] within 21 days of symptom onset.

**A person with EBOD-compatible symptoms is defined as:
An individual presenting with fever (temperature ≥ 38.0 degrees Celsius) **OR** at least one of the following symptoms/signs:

- subjective fever
- malaise
- myalgia
- headache
- arthralgia
- fatigue
- loss of appetite
- conjunctival redness
- sore throat
- chest pain
- abdominal pain
- nausea
- vomiting
- diarrhoea that can be bloody
- haemorrhage
- erythematous maculopapular rash on the trunk

[+]Epidemiological Risk Factors are defined as:

- Individual who cared for a case of EBOD
- Laboratory worker handling ebolavirus or processing body fluids from a case of EBOD
- Individual who spent time in a healthcare facility in an EBOD affected area where cases of EBOD are being treated
- Sexual contact with an EBOD case
- Close contact in households, healthcare facilities, or community settings with a person with EBOD while the person was symptomatic - close contact is defined as being for a prolonged period of time within approximately 2 meters (6 feet) of a person with EBOD
- Contact with any human remains of a case of EBOD **OR** contact with human remains in an EBOD affected area
- Contact with bats, primates or wild animal bush meat from EBOD affected areas
- A travel history to an EBOD affected area within 21 days (2)

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3. Reporting and Other Requirements

3.1 Reporting to Manitoba Health

Laboratory:

All specimens for *Orthoebolavirus* testing must be directed through Cadham Provincial Laboratory (CPL) to the NML and must follow the appropriate collection, submission and transport protocols. All *Orthoebolavirus* testing should be coordinated by the High Consequence Pathogen Infectious Diseases (HCP ID) Physician on call in consultation with the CPL Microbiologist on call.

All positive laboratory results are immediately reportable by telephone to the Medical Officer of Health on call (204-788-8666) and to the Public Health Surveillance Unit by secure fax (204-948- 3044).

Health Care Professional:

All confirmed cases and suspect cases (persons under investigation) of EBOD **should be immediately reported** to the Medical Officer of Health (MOH) On-Call at 204-788-8666.

The MOH will notify the Chief Provincial Public Health Officer (CPPHO) or designate, who will notify the Public Health Agency of Canada (PHAC) Health Portfolio Operations Centre (HPOC) at 1-800-545-7661 of all suspect cases requiring *Orthoebolavirus* testing within 24 hours of ordering the test.

The PHAC's EBOD Case Report Form (https://www.canada.ca/en/public-health/services/diseases/ebola/health-professionals-ebola/case-report-form.html) should be completed for all confirmed cases and suspect cases by Public Health with assistance from the attending health care professional as needed. The form should be sent to the Manitoba Health Public Health Surveillance Unit (secure fax: 204-948-3044) or uploaded into PHIMS, and will be forwarded to PHAC.

PHAC is required to report confirmed cases to the WHO, as part of Canada's commitments under the International Health Regulations (2005).

4. Epidemiology

4.1 Reservoir

The animal reservoir of EBOV is unknown, but current evidence suggests that fruit bats (Pteropodidae) may be a natural host. Other animals may become infected (3).

4.2 Transmission

Person-to-person transmission can occur:

- through direct physical contact with blood and/or other body fluids (such as feces, urine, vomitus, saliva, sweat, amniotic fluid, breast milk, semen) from an infected symptomatic person or dead body

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- indirectly through physical contact with surfaces and fomites (such as needles, medical equipment, clothes, bedding) that are contaminated with these fluids. *Orthoebolavirus* may remain viable on surfaces and in liquids for several days dependent on environmental factors.
- through vertical transmission
- during pregnancy and/or delivery
- during breastfeeding/chestfeeding (including during convalescence)
- through sexual transmission during the acute phase. Additionally, semen from an individual who recently recovered from EBOD can be infectious during convalescence (see below Section 5.3 Communicability).

Orthoebolaviruses are not transmitted between humans through airborne transmission. However, certain medical procedures, such as intubation, may generate small particle aerosols that have the potential to transmit the virus.

Animal-to-human transmission can occur through direct contact with infected live or dead animals from endemic areas (such as fruit bats and non-human primates). Human-to-animal transmission is also theoretically possible and therefore precautions, such as avoiding contact with animals, are recommended. For further guidance, please refer to Guidance Regarding Animal Ownership and Contact by Individuals with Potential Ebolavirus Exposure (https://www.canadianveterinarians.net/media/rz2d5p0n/guidance-regarding-animal-ownership-and-contact-by-individuals-with-potential-ebola-virus-exposure.pdf?s=influenza) and Guidance for Management of Companion Animals that have been Exposed to a Human with Ebola virus Disease (https://www.canadianveterinarians.net/media/sw2leufa/guidance-for-management-of-companion-animals-that-have-been-exposed-to-a-human-with-ebola-virus-disease.pdf)(1).

4.3 Occurrence

EBOD was first recognized in 1976 with two simultaneous outbreaks; one caused by the SUDV in what is now South Sudan and the other caused by EBOV in what is now the Democratic Republic of Congo (3).

To date, there have been no cases of EBOD in Canada. PHAC works closely with its national and international partners to track and to monitor EBOD activity around the world and assesses the risk of Ebola disease in Canada on an ongoing basis.

Although the risk of exposure to orthoebolaviruses in Canada is considered to be very low, a case or contact connected to an outbreak in an EBOD-affected area could be identified in Canada.

- An EBOD-affected area is defined as a region where there has been a confirmed locally acquired case of EBOD or where an individual with an infectious case of EBOD has resided.
- Information on affected areas can be found through the WHO Disease Outbreak News webpage (see below Definition of EBOD-affected areas).
- For more information see Committee to Advise on Tropical Medicine and Travel (CATMAT): Ebola Disease Prevention, Monitoring and Surveillance Recommendations (https://www.canada.ca/en/public-health/services/catmat/ebola-virus-disease-preventive-measures-monitoring-surveillance-travellers.html).

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Definition of EBOD-affected areas: During an EBOD outbreak, the WHO considers areas to be affected in regions where there has been a confirmed locally acquired case of EBOD or where an individual with an infectious case of EBOD has resided. Up-to-date information on affected areas can be found through WHO Disease Outbreak News webpage: https://www.who.int/emergencies/disease-outbreak-news(1).

5. Clinical Presentation and Natural History

5.1 Incubation Period

EBOD has an incubation period between two and 21 days. Symptoms typically begin six to 10 days after exposure (1).

5.2 Clinical Presentation

There is usually a sudden onset of non-specific symptoms, such as fever, myalgia, severe headache, fatigue, sore throat and malaise. Gastrointestinal symptoms, such as vomiting and diarrhea (that may contain blood), occur four or five days later. A rash can also develop at that stage. Diarrhea and vomiting are often profuse in later stages of the illness, and can lead to severe volume depletion, electrolyte abnormalities, wasting and shock, as well as symptoms of impaired kidney and liver function. Other serious late manifestations include chest pain, shortness of breath, confusion, seizures, and hemorrhagic manifestations (bruising, bleeding from the gastrointestinal tract, venipunctures, and intravenous sites, or from other mucosae such as gums or nose). The course of the disease can be further complicated by secondary bacterial infections.

In non-fatal cases, people with EBOD are often febrile for several days and typically begin improving around day six to 11. Full recovery occurs over a long period of time, and is often associated with sequelae such as myelitis, arthritis, recurrent hepatitis, uveitis, and mental health issues.

The average EBOD case fatality rate is around 50%. Case fatality rates (CFR) have varied from 25 - 90% in past outbreaks, depending on the *Orthoebolavirus* species implicated. Treatment can decrease the CFR; however, death still occurs commonly, usually seven to 12 days after symptom onset (1).

A person with suspected or confirmed Ebola disease may have a concurrent infection with other diseases endemic to sub-Saharan Africa such as: malaria, typhoid, yellow fever, and/or leptospirosis (4).

5.3 Communicability

A person with EBOD is considered to be infectious at the time of onset of the first symptom. Prior to becoming symptomatic, they are not considered to be infectious. The risk of transmission is highest when viral load is greatest, such as when a person is acutely symptomatic with diarrhea, vomiting and/or bleeding.

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A person with EBOD is considered to be infectious for as long as their blood and body fluids contain the virus.

- This includes the post-mortem period; the body of a person who died from EBOD is highly infectious.
- During recovery, EBOV can persist for weeks to months in some body fluids (such as semen, cerebrospinal fluid, and breast milk). It is likely that SUDV and other orthoebolaviruses have similar viral kinetics (see Section 7.1.3 Convalescent Cases)(1).

6. Testing and Diagnosis

For any individual with suspected EBOD a clinical risk assessment should be conducted by the HCP ID Physician on call in coordination with the MOH on call to assess the likelihood of an *Orthoebolavirus* infection prior to any initiation of testing. The clinical risk assessment will inform subsequent coordination calls with provincial health system partners and will support decision-making on testing in accordance with the High Consequence Pathogen (HCP) Clinical Process Algorithm. See Section 7.1.1 Management of Suspect Cases for further information.

If an individual is suspected to have EBOD, the HCP ID Physician on call, in consultation with the facility MD or the MOH, will determine if escalation for testing is required. The Health Science Centre Winnipeg (HSC) is the designated site for testing and providing continuity of care for a suspected or confirmed EBOD patient.

Orthoebolaviruses are Risk Group 4 pathogens and handling and shipping of any clinical specimens suspected of a Risk Group 4 pathogen require specific packaging and management. Once testing is determined to be necessary, involvement of the CPL Microbiologist on call and NML is crucial.

The gold standard for confirmatory testing is the detection of virus-specific RNA by PCR in a clinical specimen (e.g., blood, serum, tissue, or other body fluids) using 2 independent molecular targets. Other laboratory methods include:

- immunohistochemistry for viral antigens,
- detection of *Orthoebolavirus*-specific antibodies in serum, and
- isolation of the virus from a clinical specimen (e.g., blood, serum, tissue, urine specimens, throat secretions or other body fluids).

Diagnostic testing for filoviruses using the molecular testing approaches of the NML may be impacted by recent vaccination. For this reason, it is important to inform the NML of the vaccine status of suspect cases. See notes in Section 2.1 Laboratory-Confirmed Case for more information.

A person with suspected or confirmed Ebola disease may have a concurrent infection with other diseases endemic to sub-Saharan Africa such as: malaria, typhoid, yellow fever, and/or leptospirosis. Testing for these or other tropical diseases diseases should be considered (4).

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7. Control

7.1 Management of Cases

The role of public health in EBOD detection and management is multifaceted and includes the early identification of cases and contacts through surveillance; case and contact management; providing information and educational resources to the public and health care professionals; and effective communication to support timely, accurate and coordinated response efforts.

7.1.1 Management of Suspect Cases

When notified of a person meeting the Suspect Case definition, public health should:

- direct the individual to take immediate measures to prevent transmission to others, if these are not already in place (refer to Section 7.2.4 Recommendations for Symptomatic Contacts) and
- if clinically indicated, arrange for the individual to undergo a medical assessment to confirm or to rule out EBOD with the following steps:
    - In Manitoba, refer to the Shared Health website for HCP Documents and Resources at https://healthproviders.sharedhealthmb.ca/services/ers/ecm/
        - If a HCP (e.g. Ebola) is suspected, notify the HCP ID physician on call through HSC paging at 204-787-2071 and state that the call is HCP-related.
        - The HCP ID physician on call, in consultation with the facility MD or a Medical Officer of Health, will determine if escalation for testing is required. If escalation is required, the HCP ID physician on call contacts the Virtual Emergency Care and Transfer Resource Service (VECTRS). VECTRS will initiate a conference call with HCP experts to determine if the risk warrants High Consequence Pathogen Unit (HCPU) activation.
            - See DRAFT Suspect or Confirmed HCP Patient to HCPU Algorithm https://healthproviders.sharedhealthmb.ca/wp-content/uploads/provincial-hcp-suspect-or-confirmed-pathway-algorithm.pdf
            - HSC Winnipeg is the designated site for testing and providing continuity of care for a suspected or confirmed HCP patient. The designated HCPU at HSC Winnipeg requires approximately four hours to set up and prepare to accept the transfer of a patient. HSC Winnipeg has identified a HCP patient staging area while the HCPU is being decanted / prepared (e.g. direct from NML or airport).
    - If an individual has presented for care in another facility, follow the Emergency Department/Urgent Care High Consequence Pathogen Clinical Process Algorithm https://healthproviders.sharedhealthmb.ca/wp-content/uploads/ed-and-uc-hcp-clinical-process-algorithm.pdf. The HCP ID physician on call should be consulted.
    - Public health should notify the PHAC HPOC at 1-800-545-7661 concurrently of all Suspect Cases requiring *Orthoebolavirus* testing within 24 hours of ordering the test, using the Ebola Disease Case Report Form https://www.canada.ca/en/public-health/services/diseases/ebola/health-professionals-ebola/case-report-form.html and

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information available at the time of the initial report. The case report form can be updated as additional information becomes available.

It should be noted that testing negative for EBOD within 72 hours of symptom onset does not rule out EBOD and in this case, testing should be repeated. Until EBOD has been ruled out by a negative test 72 hours or more after symptom onset, the Suspect Case should be managed with appropriate infection prevention and control precautions as per an EBOD case. Even if EBOD has been appropriately ruled out, the appropriate level of contact precautions should be maintained for 21 days from the last exposure (1).

7.1.2 Management of Laboratory-Confirmed Cases

Laboratory-confirmed cases of EBOD in Canada should be hospitalized in specialized EBOD treatment centres (i.e. HSC Winnipeg) with the capacity to provide appropriate treatment and effective isolation.

Public health should liaise regularly with appointed hospital staff for the duration of the patient's hospitalization, to monitor progress and to be actively involved with discharge planning.

Public health authorities must report all confirmed cases immediately to PHAC HPOC at 1-800-545-7661. The Ebola Disease Case Report Form https://www.canada.ca/en/public-health/services/diseases/ebola/health-professionals-ebola/case-report-form.html should be completed using the information available at the time of reporting, and updated as further information becomes available (1).

Treatment of EBOD is predominantly supportive care. A number of investigational therapeutics, namely antivirals and monoclonal antibodies, are being developed or studied. The efficacy of treatments targeted at EBOV (such as Inmazeb or Ebanga) has not been established against other species such as SUDV.

There is currently no Health Canada-approved treatment for EBOD. However, in outbreak situations, investigational therapeutics have been used under an ethical framework developed by the WHO called the Monitored Emergency Use of Unregistered and Investigational Interventions. The framework is not designed to evaluate the drugs but to provide treatment on compassionate grounds. In the event of a confirmed case of EBOD occurring in Manitoba, PHAC would work with Manitoba Health to facilitate access to appropriate treatment (4).

7.1.3 Management of Convalescent Cases

The decision to discharge convalescent cases should be made jointly, in consultation with infectious disease specialists and public health. Discharge is determined on a case-by-case basis when the patient is physically well enough to leave the hospital and their infectious risk is minimal (1). Refer to https://caep.ca/wp-content/uploads/2016/03/ebola_clinical_care_guideline_english_201505.pdf.

Discharge may be considered if:

- the patient has been symptom free for greater than 72 hours, and

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- two consecutive blood samples, obtained at least 24 hours apart, have been negative for the orthoebolaviruses by PCR

Upon discharge, the convalescent case must receive education and counselling to address the associated disease sequelae and prevent transmission to others during their convalescence, since orthoebolaviruses can persist in certain body fluids and organs for weeks to months (such as semen, inner eye, cerebrospinal fluid, breast milk).

Counseling of the convalescent case should include:

- instructions regarding any medical follow-up that may be required, and
- information regarding possible transmission of EBOD and ways to prevent transmission

With respect to sexual transmission, for male convalescent cases it is recommended that until their semen is determined to be *Orthoebolavirus* free through testing, the individual should be advised to either abstain from sexual contact or use safer sex practices including correct and consistent condom use. In addition, they should also practice good hand and personal hygiene, by immediately and thoroughly washing with soap and water after any physical contact with semen, including after masturbation.

The semen of EBOD survivors is assumed to contain *Orthoebolavirus* for the first 3 months after disease onset. Testing of the semen by RT-PCR should be performed at 3 months, and if still positive then every month thereafter, until two consecutive samples test negative (with an interval of at least one week between tests).

If semen testing is not done, it is recommended that abstinence or safer sex practices including correct and consistent condom use be continued for at least 12 months after onset of symptoms. This interval may be adjusted as additional information becomes available on the prevalence of orthoebolaviruses in the semen of survivors over time.

Individuals who have discontinued breastfeeding/chestfeeding during their acute illness should not resume breastfeeding/chestfeeding upon discharge home, unless two consecutive samples of breastmilk/chestmilk, obtained with an interval of at least 24 hours, test negative by *Orthoebolavirus* RT-PCR. Practice good hand hygiene and personal hygiene when taking breastmilk/chestmilk samples by immediately and thoroughly washing with soap and water after any physical contact with breastmilk/chestmilk (1).

7.2 Management of Contacts

For the purposes of this document, a contact is a person who has been or may have been exposed to an *Orthoebolavirus* in the past 21 days. Exposure could occur in Canada if there is a case of EBOD in Canada, or could have occurred in another country, particularly in a country with an EBOD-affected area.

Exposure can occur through:

- direct physical contact with body fluids of an infected symptomatic person or dead body

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- through sexual contact during the acute phase or during the convalescent period (to date, transmission from convalescent patients has only been described from sexual contact with males)
- indirectly from an *Orthoebolavirus* contaminated surface or fomite
- through vertical transmission
- during pregnancy and/or delivery
- during breastfeeding/chestfeeding
- through direct contact with infected animals (1)

7.2.1 Contact Tracing

The goal of contact management is to monitor an individual at risk of developing EBOD symptoms in order to minimize the risk of transmission to others and ensure they receive timely and appropriate care if symptoms develop. A supporting summary table can be found at the end of this document (see Appendix A).

Contact tracing identifies all individuals who may potentially have been exposed to an *Orthoebolavirus*, in order to:

- Implement measures to reduce the risk of transmission to others should the contact become infected with EBOD by:
  - ensuring contacts are aware of their potential exposure
  - discussing any symptom monitoring expectations
  - implementing risk mitigation measures
  - informing contacts of what to do if they develop EBOD symptoms; and
- Ensure the contact receives the earliest and most appropriate care by:
  - identifying symptoms as early as possible
  - facilitating prompt clinical assessment by the HCP ID physician, in consultation with the MOH on call
  - referring the contact, as indicated by the assessment, to the designated health care facility (i.e. HSC Winnipeg), while ensuring appropriate infection prevention and control practices are followed
- Contact tracing of a confirmed case should begin immediately.
- If there is a high index of suspicion that a symptomatic contact likely has EBOD given the exposure history and clinical information provided, contact tracing should begin immediately.
- If there is a low index of suspicion (for example, another diagnosis is considered more likely, but *Orthoebolavirus* testing was ordered), at a minimum, the names and information to reach potential contacts should be collected from a symptomatic contact (1).

7.2.2 Risk assessment of contacts

The following factors related to communicability, incubation period and exposure provide the foundation for the risk assessment and management of contacts.

- Someone with EBOD becomes infectious at the time of onset of the first symptom(s).

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- The risk of transmission from someone with EBOD is lower in the early stages of disease, when the viral load is lower. The risk of transmission increases over time, as the viral load rises and the person with EBOD develops later stage symptoms such as diarrhea, vomiting or bleeding. For more information, see Section 5.3 Communicability.
- The upper end of the incubation period range (21 days after an exposure) determines the length of time contact monitoring and precautions are recommended to minimize the risk of transmission.
- Due to the limitations of available evidence, uncertainties remain regarding the level, duration and type of protection provided by vaccinations. It is important to note that the individual risk assessment of contacts should not change based on vaccination status.
- All contacts of a laboratory-confirmed case should be rapidly identified and assessed by public health, to determine their risk of exposure and to implement the appropriate public health recommendations. As noted above, contact tracing may also be initiated for symptomatic contact depending on the level of suspicion that they have EBOD.

To identify potential contacts, public health should consider the laboratory-confirmed case or suspect case's:

- living environment/household contacts and sexual contacts
- workplace, school, or childcare centre attendance
- travel history
- recreational, religious, and social activities
- health care visits
- methods of transportation
- animal contact, including pets and livestock

To facilitate determining the most appropriate public health recommendations, contacts are classified according to their risk of exposure as follows: high risk exposure, low risk exposure or no risk (refer to Table 1).

The start of the exposure period (communicable period) is determined by the onset of the first symptoms in the laboratory-confirmed case or suspect case.

Note: Animal contacts should be reported to Manitoba Agriculture for further risk assessment. For further guidance, please refer Guidance regarding animal ownership and contact by individuals with potential ebolavirus exposure and Guidance for management of companion animals that have been exposed to a human with Ebola virus disease.

Clinical judgement remains essential for risk assessment and may result in decisions that differ from recommendations provided in this document.
It is recognized that there may be instances where a person was in close proximity to someone with EBOD, without known physical contact with the individual, their bodily fluids, or with contaminated objects or surfaces in their environment. The exposure risk categorizations (in other words, high risk, low risk, or no risk) and subsequent contact management in these circumstances require a careful risk assessment which should consider:

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- the length and number of interaction(s) (longer and multiple exposures potentially increasing the risk)
- the kind of symptoms the individual with EBOD was exhibiting at the time (such as coughing, vomiting, external bleeding and/or diarrhea, which may generate infectious droplets and/or contaminate the environment more heavily)
- the distance between the individual with EBOD and the contact (the risk being inversely proportional to the distance)
- the use of appropriate infection prevention and control measures, including personal protective equipment, when applicable (1)

Table 1. Exposure Risk Categories During the Communicable Period

HIGH RISK	• All household and sexual contacts of a case
	• Physical contact, without adhering to recommended infection prevention and control measures or due to a breach in infection prevention and control measures, with:
	  ○ the body surface/mucous membranes of someone with symptomatic EBOD, the individual's body fluids, or dead body;
	  ○ objects or surfaces that may be contaminated with orthoebolaviruses from the body fluids of someone with EBOD, including bedding, clothing, medical instruments, and laboratory specimens;
	  ○ an infected animal (dead or alive).
	• Unprotected contact with semen from an individual recently recovered from EBOD (see Section 7.1.3 Management of Convalescent Cases for key counseling points).
	• A child exposed to breastmilk/chestmilk of an individual with EBOD.

LOW RISK	Not a household or sexual contact of a case but had:
	• Physical contact, while adhering to recommended infection prevention and control measures and without known breach with:
	  ○ the body surface/mucous membranes of someone with symptomatic EBOD, the individual's body fluids, or dead body;
	  ○ objects or surfaces that may be contaminated with orthoebolaviruses from the body fluids of someone with EBOD, including bedding, clothing, medical instruments, and laboratory specimens;
	  ○ an infected animal (dead or alive).
	• Stayed in an EBOD -affected area but does not meet any of the criteria for a high-risk exposure.

NO RISK	• They do not meet any of the criteria above for high-risk or low-risk exposures (in other words, they are not a household or sexual contact; did not have any physical contact with someone with EBOD,

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	their body fluids or dead body, or with objects or surfaces that could be contaminated by body fluids from someone with EBOD, or with an infected animal; and they did not stay in an EBOD -affected area. • The exposure occurred more than 21 days ago and therefore the incubation period for EBOD has passed.

7.2.3 Recommendations for asymptomatic contacts

7.2.3.1 Recommendations for all asymptomatic EBOD contacts (low-risk and high-risk)

During the 21-day period following the last potential exposure to an *Orthoebolavirus*, all contacts, both with low-risk and high-risk exposures, should:

- Receive active public health monitoring for symptoms and counselling. Following an initial assessment, the frequency and method of this follow-up may vary depending on the risk level of the contact and other factors. The contact should be provided with information on how to reach public health officials at any time of the day or night through Health Links-Info Sante at 204-788-8200 (or 1-888-315-9257), or as otherwise organized by public health.
- Self-monitor for symptoms of EBOD, including checking and documenting oral temperature twice daily (AM and PM), and immediately if they start feeling chills/feverish (Temperature Recording Form for Contacts of Ebolaviruses: https://www.canada.ca/content/dam/canada/health-canada/migration/healthy-canadians/diseases-conditions-maladies-affections/disease-maladie/ebola/professionals-professionnels/alt/temperature-eng.pdf).
- Develop a plan to isolate from others and notify public health or Health Links-Info Sante if symptoms occur.
- Try to avoid medications that are known to lower fever (such as acetaminophen, ibuprofen, acetylsalicylic acid) as these medications could mask an early symptom of EBOD. If these medications must be taken due to symptoms that could be consistent with EBOD, the contact should inform public health or Health Links-Info Sante.
- Advise all health care providers that they encounter, including paramedical services, of their potential EBOD exposure. Assessments should be coordinated with the MOH on-call.
- Postpone elective medical visits and other elective procedures (such as elective dental visits, elective blood tests).
- Refrain from donating blood, sperm and any other body fluids, organs or tissue.
- Maintain good infection prevention and control measures with regards to body fluids, regular cleaning and disinfection of high-touch surfaces (particularly in the washrooms) and good hand hygiene practices.
- Report any travel intentions to the public health authority. Travel during the 21-day monitoring period requires careful consideration of risk and should not occur without prior discussion with, and agreement of public health authorities at the point of origin and the destination (1).

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Should symptoms compatible with EBOD develop, symptomatic contacts should immediately isolate from others, including household members (in other words, physically separate and ensure a 2-metre distance from other people and animals), and notify public health or Health Links-Info Sante (see Section 7.2.4 Recommendations for Symptomatic Contacts)(1).

7.2.3.2 Additional recommendations specific for asymptomatic EBOD contacts with a high-risk exposure

During the 21-day period following the last potential exposure to *Orthoebolavirus*, in addition to the recommendations for all EBOD contacts, contacts with a high-risk exposure should:

- Not have interactions with others outside of the household, including:
  - not attending public places (for example, do not attend workplace, school, childcare centres, stores, funerals, religious gatherings, social events) except for seeking essential, non-elective medical care.
  - not travelling on public/commercial conveyances (such as a bus, train, taxi, airplane).
  - not having visitors into the house.
- Minimize or avoid direct contact, where possible, with those in their household, including abstaining from sexual contact and breastfeeding/chestfeeding, for the duration of the 21-day period (e.g., separate bedrooms, separate bathrooms, activities of daily living, such as dishes and laundry, done separately).
- Avoid all animal contact, if possible. If animal contact cannot be avoided, measures should be taken to reduce the chance that an animal would be considered exposed if the person develops symptoms. Consult with appropriate public health and animal health officials as necessary. For further guidance, please refer to Guidance regarding animal ownership and contact by individuals with potential ebolavirus exposure and Guidance for management of companion animals that have been exposed to a human with Ebola virus disease(1).

7.2.3.3. Additional recommendations specific for asymptomatic EBOD contacts with only low-risk exposure

During the 21-day period following the last potential exposure to *Orthoebolavirus*, in addition to the recommendations for all Ebola disease contacts, the following is recommended for contacts with only low-risk of exposure:

- Strict isolation is not required. Essential daily activities can be maintained. However direct contact with others and/or time in highly populated environments should be avoided.
- Exclusion from high risk environments or workplaces may be considered at the discretion of the MOH based on a risk assessment (1).

7.2.4. Breastfeeding/chestfeeding

EBOD contacts who are breastfeeding/chestfeeding should be provided with clear information regarding the relative risks and benefits for their child and themselves of continued breastfeeding/chestfeeding during the 21-day post exposure period. Abstinence from breastfeeding/chestfeeding for the duration of the 21-day post-exposure period is recommended for

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high-risk contacts. Contacts may elect to express breastmilk/chestmilk throughout the 21-day post exposure period to increase chance of successfully resuming breastfeeding/chestfeeding if they do not become infected. Contacts should perform good hand hygiene and personal hygiene by immediately and thoroughly washing with soap and water after any physical contact with breastmilk/chestmilk. Public health implications should be considered, and clinical judgement used to support breastfeeding/chestfeeding contacts in their decision-making.

Breastfeeding/chestfeeding should be stopped if EBOD is suspected or confirmed in a lactating individual or in a breastfeeding/chestfeeding child. The child should be separated from the breastfeeding/chestfeeding person and provided a breastmilk/chestmilk substitute as needed. Given the risk associated with manipulation of infectious body fluids, it is not recommended to attempt to maintain lactation by pumping and discarding breastmilk/chestmilk during an EBOD episode.

A child exposed to breastmilk/chestmilk from an individual with suspected or confirmed EBOD should undergo close monitoring for signs and symptoms of EBOD for 21 days. In the case of EBOV, post-exposure prophylaxis for the child can be considered on a case-by-case basis and in accordance with existing research protocols (1).

7.2.5. Travellers

Under the Quarantine Act, travellers must self-identify to a Canada Border Services Agent on arrival in Canada if they have:

- reasonable grounds to suspect that they have or might have EBOD
- recently been in close proximity to a person who has, or is reasonably likely to have EBOD

Travellers with any risk of exposure are recommended to call their local public health office during the first business day following arrival in Canada to self-identify. Upon notification, public health should promptly notify the regional MOH. If a quarantine order (QO) is issued, should phone contact not be made within 24 hours, local public health will make additional attempts using contact information provided by the QO, including the potential of a home visit. The MOH is to immediately notify a QO if the traveler fails in their duty to report to the regional PH unit.

Public health authorities assessing the risk of exposure in travellers returning from an EBOD -affected area should apply the risk criteria above. It should be noted that some countries have low testing capacity, so people with EBOD may not have received laboratory confirmation. Therefore, exposure categorization of contacts should be applied as listed above if exposure occurred to someone who was considered to likely have EBOD (based on symptoms and local epidemiologic risk), even if it could not be confirmed due to the absence of testing. Additional information is available in the CATMAT statement "Ebola disease prevention, monitoring and surveillance recommendations": https://www.canada.ca/en/public-health/services/catmat/ebola-virus-disease-preventive-measures-monitoring-surveillance-travellers.html(1).

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7.2.6. Recommendations for Symptomatic Contacts

Contacts who develop symptoms compatible with EBOD, should be advised to:

- **Immediately isolate** (in other words, stay home until they seek health care and maintain a 2-metre distance, with no physical contact with people or pets/animals) if not already isolated from others;
- Ensure that others do not come into contact with their blood or body fluids (including urine, feces, blood, vomit, saliva, sweat, breastmilk/chestmilk and semen) or anything that may have come in contact with their blood or body fluid (such as linens, clothing, toilet, toiletries), including using a separate bathroom if possible; wash hands after vomiting, any bleeding or using the bathroom;
    - Urine, stool and vomit may be disposed of through the normal sanitary sewer system, or in accordance with municipal/regional regulations (1).
- Notify public health or Health Links- Info Sante. In case of an emergency and public health/HL-IS is not notified, the contact/household members should notify EMS that the individual is an EBOD contact and is symptomatic.
- The MOH in consultation with the HCP ID physician on call should arrange for the individual to have a medical assessment to confirm or to rule out EBOD. Follow steps listed in Section 7.1.1 Management of Suspect Cases.

If the HCP ID physician on call recommends escalation for assessment, they will coordinate further steps for assessment, including activation of the HCP Unit and transportation. The individual should not take public conveyances (i.e., do not take a bus, train, taxi, rideshare). Depending on the nature/severity of symptoms and proximity to the facility, the individual may be able to take a private vehicle to the hospital while avoiding direct contact with others, or may need to take an ambulance to the hospital. Coordination with EMS (if involved) is required to ensure that appropriate infection prevention and control measures are in place during transport and upon their arrival at the acute care facility.

For infection prevention and control guidance for safe prehospital care and ground transport of suspected or laboratory-confirmed EBOD cases, refer to *Infection Prevention and Control Measures for Prehospital Care and Ground Transport of Persons Under Investigation for Ebola Disease or with Confirmed Ebola Disease*: https://www.canada.ca/en/public-health/services/diseases/ebola/health-professionals-ebola/ebola-guidance-patient-transport.html.

A contact who develops symptoms meets the definition of a Suspect Case. For management of contacts of Suspect Cases, see Section 7.2.1 Contact Tracing.

Notifications are required to the CPPHO and to the Public Health Agency of Canada should a suspect or a laboratory-confirmed case be identified. The timing and mechanism of public communication should also be planned for (1).

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7.3 Communicable Disease Orders

EBOD cases and contacts may represent a significant risk to public health. If a case or contact is unable or unwilling to follow EBOD assessment, treatment and/or isolation recommendations, in order to prevent, reduce or eliminate the risk posed to public health, a Medical Officer of Health may issue a Communicable Disease (CD) Order by virtue of Sec. 43 of the PHA. Further non-adherence may warrant further measures under the PHA to enforce quarantine or isolation recommendations.

These legislated measures are only undertaken as a last resort when all reasonable, less intrusive supportive measures have failed. Public health interventions must balance the rights of the individual with the duty to protect the public.

7.4 Recommended Management of EBOD-associated Waste in the Home Setting

Laboratory-confirmed cases of EBOD will require hospitalization and involvement of public health for follow-up with waste management and environmental cleaning in the home setting. This follow-up may also be required for some symptomatic contacts, particularly if there is a high index of suspicion that they have EBOD. An assessment of the home setting should be done to determine which specific areas/room(s) are visibly or potentially contaminated, and arrangements made for a company with appropriate expertise in infection prevention and control to provide management of EBOD-associated waste and for environmental cleaning.

The handling of EBOD -associated waste and environmental cleaning in the home setting should not be done by family/other household members or friends (1).

Refer to *Measures for the Management of Ebola Virus Disease-associated waste and linen in home settings* for detailed recommendations: https://www.canada.ca/en/public-health/services/diseases/ebola/health-professionals-ebola/measures-management-ebola-associated-waste-linen-home-settings.html.

8. Key Investigation Components for Public Health Response

8.1 Key Components of the Case Investigation

- Assessment and testing of persons under investigation should be done in consultation with the HCP ID physician on call.
- Initiate and complete case management for any suspect, laboratory-confirmed, convalescent, or deceased cases.
  Note: Contact identification for suspect cases or symptomatic contacts should proceed after discussion with the MOH and Office of the CPPHO, and consultation with attending physician to ensure a high index of suspicion.
- Enter suspect cases, laboratory-confirmed cases, and outbreaks in the Public Health Information Management System (PHIMS) within 24 hours of notification.
- PHAC's EBOD Case Report Form (https://www.canada.ca/en/public-health/services/diseases/ebola/health-professionals-ebola/case-report-form.html) should be

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completed for all laboratory-confirmed cases and suspect cases by Public Health with assistance from the attending health care professional as needed.
- Assist with discharge coordination and education of cases to avoid further transmission.
- Ensure appropriate handling of EBOD-associated waste and environmental cleaning in the home setting.

8.2 Key Components of the Contact Investigation

- Receive and investigate reports of returning travellers under a Quarantine Order from PHAC based on the traveller's base location (e.g., home address).
- Investigate identified contacts of a confirmed case of EBOD.
- Assess all reports for risk of exposure and manage each individual based on their risk level: no risk, low risk, or high risk.
  Note: Frequency of follow up with returned travellers and contacts may be dependent on risk level, type of exposure and/or the issued Quarantine Order.
- Engage Manitoba Agriculture Veterinarians for assessment in case of exposure to animals.

9. Documentation Guidelines and Resources

The PHAC's EBOD Case Report Form (https://www.canada.ca/en/public-health/services/diseases/ebola/health-professionals-ebola/case-report-form.html) should be completed for all confirmed cases and suspect cases by Public Health with assistance from the attending health care professional as needed. The form should be sent to the Manitoba Health Public Health Surveillance Unit (secure fax: 204-948-3044) or uploaded into PHIMS, and will be forwarded to PHAC.

All EBOD case and contact investigations are to be completed in PHIMS. PHIMS Quick Reference and User Guides are available at https://phimsmb.ca.

The following information in Table 2 and 3 is intended to provide broad regional public health guidance and timelines for the majority of EBOD case and contact investigations, but may not align with the chronology or flow of some investigation.

Table 2. Timelines for Documenting EBOD Cases in PHIMS

Investigation Component	PHIMS Data Entry/Public Health Response	Timeline from Public Health Report Date[1]
Region receives clinical notification of new investigation from MOH, quarantine officer, MHSU or other source. Responsible Org and Workgroup assigned by region (if directly notified) or MHSU.	Create investigation. Assign Primary Investigator or CD Coordinator. Immediately notify MOH of all referrals.	1 day

[1] Days refer to working days

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Investigation Component	PHIMS Data Entry/Public Health Response	Timeline from Public Health Report Date[1]
Primary investigator/CD Coordinators reviews investigation and lab results	Update Classification and classification date. Update Disposition from Pending (e.g., Follow up in Progress).	1 day
Notify PHAC Complete the Public Health Agency of Canada's Ebola Virus Disease (EVD) Case Report Form: https://www.canada.ca/en/public-health/services/diseases/ebola/health-professionals-ebola/case-report-form.html	The MOH will notify the CPPHO/designate of all suspect cases requiring testing, who will notify the Public Health Agency of Canada (PHAC) Health Portfolio Operations Centre (HPOC) at 1-800-545-7661 within 24 hours of ordering the test. Document notification in PHIMS. The form should be completed for all confirmed cases and suspect cases by Public Health with assistance from the attending health care professional as needed. Complete as much detail as possible on this form at the time of the initial report, upload as context document and request MHSU to submit to PHAC. *It is not expected that all fields will be completed during the initial report, but that updates will be made when information becomes available.*	
Contact testing practitioner for necessary information. Interview case if possible or household members to identify contacts.	Update PHIMS data with information available as per above case report form. Enter contact investigations (identified either by testing	1-2 days

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Investigation Component	PHIMS Data Entry/Public Health Response	Timeline from Public Health Report Date[1]
	practitioner, client, or household). Author note(s). Upload relevant context documents per QRC 7.16 as required (e.g., case forms sent to PHAC, personal health information/correspondence sent to public health from an outside care provider, personalized letters).	
Update classification	Update classification when laboratory results received.	2-3 days
Management of EBOD-associated waste in home setting	Assessment of home setting to determine areas/room(s) potentially contaminated. Arrange for environmental cleaning and management of EBOD -associated waste. Author note and document intervention.	Weeks
Monitor status and assist with discharge planning	Ongoing communication with facility. Ensure involvement in discharge planning. Author notes.	Weeks
Follow up to complete data elements listed on Case Form	Complete PHIMS documentation Upload form as context document and request MHSU to submit to PHAC.	Weeks
Discharge planning and education	Upon discharge, document education and counselling to address the associated disease sequelae and	Upon discharge from hospital

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Investigation Component	PHIMS Data Entry/Public Health Response	Timeline from Public Health Report Date[1]
	prevent transmission to others during convalescence.	
Close investigation: when investigation complete.	Disposition: Follow up Complete Investigation Status: Closed.	Weeks to months
Quality Assurance	Each region employs a Quality Assurance process	6 weeks post investigation closure

Table 3. Timelines for Documenting EBOD Contacts in PHIMS

Investigation Component	PHIMS Data Entry/Public Health Response	Timeline from Public Health Report Date[2]
Region receives or creates a new Investigation	Assign Primary Investigator, Responsible Organization, and Workgroup	1 day
Primary investigator attempts to locate and contact client for notification of exposure	Update Disposition: Follow up in Progress	1 day
Perform risk assessment and assign interventions	Update PHIMS data. Enter interventions: - Education - Active monitoring of symptoms – organize follow-up - Quarantine measures – based on risk assessment. Author note(s).	1-2 days
Identify animal contacts	Consult Manitoba Agriculture veterinarian as required.	

[2] Days refer to working days

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Investigation Component	PHIMS Data Entry/Public Health Response	Timeline from Public Health Report Date[2]
Critical data elements listed on form	Complete PHIMS documentation as soon as available. Enter active monitoring results in PHIMS as performed. If contact becomes symptomatic, notify MOH. Close contact investigation. Continue documentation in Case Investigation. If unable to locate client– keep open for at least 21 days with ongoing attempts to locate. Notify PHAC if under a quarantine order. • Disposition: Unable to Locate, OR Lost to Follow up. • Status open for 21 days.	3 weeks
Close investigation when investigation complete (contact notified, education provided, active monitoring completed after 21 days.) Close if unable to complete after 21 days (e.g., lost to follow up)	Disposition: Follow up Complete, OR, Lost to Follow Up/Unable to Locate. Status Closed.	3 weeks
Quality Assurance	CD Coordinator Review by Quality Assurance Report level for minimal data elements only (Disposition, Interventions)	6 weeks post closure of investigation

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10. References

1) Public Health Agency of Canada. Public health management of cases and contacts of Ebola disease in the community setting in Canada (2024), August 28, 2024. Available at: https://www.canada.ca/en/public-health/services/diseases/ebola/health-professionals-ebola/interim-guidance-public-health-management-cases-contacts-ebola-community-setting-canada.html

2) Public Health Agency of Canada. Case Definition: Ebola disease outbreak, June 12, 2023. Available at: https://www.canada.ca/en/public-health/services/diseases/ebola/health-professionals-ebola/national-case-definition.html

3) World Health Organization. Ebola Disease, April 24, 2025. Available at: https://www.who.int/news-room/fact-sheets/detail/ebola-disease

4) Public Health Agency of Canada. Ebola disease: For health professionals and humanitarian aid workers, May 22, 2026. Available at : https://www.canada.ca/en/public-health/services/diseases/ebola/health-professionals-ebola.html

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11. Appendices

Appendix A: Summary of recommendations for asymptomatic contacts, according to exposure risk to a case during the period of communicability

Note: *Clinical judgement remains essential for risk assessment and may, along with jurisdictional policies, result in decisions that differ from recommendations provided in this document. See Clinical judgement required to determine risk in Section 7.2.2. Risk assessment of contacts*

Note: *In the case of EBOD caused by EBOV, also consult Ebola virus vaccine: Canadian Immunization Guide on the use of rVSV-ΔG-ZEBOV-GP (Ervebo) vaccine.*

No risk
Exposures Not meeting any of the criteria for high-risk or low-risk exposures, or the exposure occurred > 21 days ago and therefore the incubation period for Ebola has passed. **General recommendations for no risk contacts** • Reassurance • Education **Specific recommendations for no risk contacts** Nil
Low risk
Exposures Not a household or sexual contact of a case but had **one** of the following: • Physical contact[3], while adhering (with no known breach) to recommended infection prevention and control measures, with:

[3] Physical contact includes being in close proximity of an Ebola disease case, especially if the case is coughing, vomiting, bleeding externally or has diarrhea, based on a risk assessment. See Clinical judgement required to determine risk in Section 7.2.2. Risk assessment of contacts

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  - the body surface/mucous membranes of a symptomatic EBOD case, the individual's body fluids, or dead body,
  - objects or surfaces potentially contaminated with orthoebolaviruses (such as bedding, clothing, medical instruments, laboratory specimens)
  - an infected animal (dead or alive)
- Stayed in an EBOD-affected area, but does not meet any high-risk criteria

General recommendations for low risk and high risk contacts

Provide information to the contact on how to reach public health officials at any time of the day or night.

For 21 days following the last exposure to an *Orthoebolavirus*:

- Receive active public health monitoring for symptoms and counselling. The frequency and method of follow-up to be determined on a case-by-case basis following an initial assessment.
- Self-monitor for symptoms of EBOD, including the documentation of oral temperature twice daily (AM and PM) and immediately if feeling chills/feverish.
- Develop a plan to isolate and access healthcare if symptoms occur.
- Avoid medications that lower fever (for example, acetaminophen, nonsteroidal anti-inflammatory medications) as they could mask early symptoms of EBOD.
- Advise all healthcare providers, including paramedical services, of the potential EBOD exposure.
- Postpone elective medical visits and procedures.
- Do not donate blood, sperm and other body fluids, organs or tissue.
- Maintain good infection prevention and control measures with regards to body fluids, regular cleaning of washrooms and good hand hygiene
- Report any travel intentions. Travel during the 21-day monitoring period requires careful consideration of risk and should not occur without prior discussion with, and agreement of public health at the point of origin and the destination.

If symptoms compatible with EBOD develop, immediately isolate and notify public health officials.

Specific recommendations for low risk contacts

Essential activities can be maintained but direct contact and populated environments should be avoided.

High risk

Exposures

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- Household and/or sexual contact of a case
- Had physical contact[a], without adhering to recommended infection prevention and control measures or following a breach in infection prevention and control measures, with:
    - the body surface/mucous membranes of a symptomatic EBOD case, the individual's body fluids, or dead body
    - objects or surfaces potentially contaminated with *Orthoebolavirus* (such as bedding, clothing, medical instruments, laboratory specimens)
    - an infected animal (dead or alive)
- Unprotected contact with semen from an individual recently recovered from EBOD.
- A child exposed to breastmilk/chestmilk of an individual with EBOD.

General recommendations for low risk and high risk contacts

Provide information to the contact on how to reach public health officials at any time of the day or night.

For 21 days following the last exposure to an *Orthoebolavirus*:

- Receive active public health monitoring for symptoms and counselling. The frequency and method of follow-up to be determined on a case-by-case basis following an initial assessment.
- Self-monitor for symptoms of EBOD, including the documentation of oral temperature twice daily (AM and PM) and immediately if feeling chills/feverish.
- Develop a plan to isolate and access healthcare if symptoms occur.
- Avoid medications that lower fever (for example, acetaminophen, nonsteroidal anti-inflammatory medications) as they could mask early symptoms of EBOD.
- Advise all healthcare providers, including paramedical services, of the potential EBOD exposure.
- Postpone elective medical visits and procedures.
- Do not donate blood, sperm and other body fluids, organs or tissue.
- Maintain good infection prevention and control measures with regards to body fluids, regular cleaning of washrooms and good hand hygiene
- Report any travel intentions. Travel during the 21-day monitoring period requires careful consideration of risk and should not occur without prior discussion with, and agreement of public health authorities at the point of origin and the destination

If symptoms compatible with EBOD develop, immediately isolate and notify public health officials.

Specific recommendations for high risk contacts

- **Do not have direct contact with others outside of the household**, including:

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  - **Do not** attend public places (for example, do not attend workplace, school, childcare centres, stores, funerals, religious gatherings, social events) except for seeking essential, non-elective medical care.
  - **Do not** travel on public/commercial conveyances (such as a bus, train, taxi, airplane)
  - **Do not** have visitors into the house.
- **Minimize or avoid direct contact where possible with those in their household**, including abstaining from sexual contact and breastfeeding/chestfeeding for the duration of the 21-day period (e.g., separate bedrooms, separate bathrooms, activities of daily living, such as dishes and laundry, done separately).
- Avoid all animal contact, if possible. If animal contact can not be avoided, measures should be taken to reduce the chance that an animal would be considered exposed if the person develops symptoms. Consult with appropriate public health and animal health officials as necessary.

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Appendix B: Sample Scenarios

1)Traveller – Symptomatic on arrival at Port of Entry under Quarantine Order to report for health assessment

- PHAC will send Quarantine Order to MHSU.
- PHAC will notify the regional MOH or MOH on-call, who will coordinate a call with affected regional public health, CD MOH, HCP ID Physician on-call, and other applicable partners.
- Individual will be transported to appropriate hospital by EMS for assessment.
- Transfer will be coordinated by the HCP ID physician on-call.
- Quarantine Order is lifted once health assessment is complete and attending physician signs back Quarantine Order form indicated no communicable disease of quarantine concern (CDQC).
- The region where the person resides is responsible for case and contact management, including requesting a flight manifest from PHAC if the index of suspicion is high.
- Contact identification should proceed after discussion with HCP ID physician on-call, CD MOH, OCPPHO regarding index of suspicion.
- This may include a request for the flight manifest.
- Risk assessment for contact follow up may also include airport partners.

2)Traveler – Not identified at port of entry, notifies public health or presents to hospital with symptoms

If the symptomatic traveler notified public health or Health Links-Info Sante:

- Notify the regional MOH who will assess risk of exposure and symptoms. Consult CD MOHs/OCPPHO as necessary.
- Traveler should isolate from others in home.
- If meets definition of Suspect Case, contact HCP ID physician on call. If assessment and testing recommended, HCP ID physician on call will activate HCPU algorithm and arrange testing and transportation to HSC Winnipeg as required.
- If the assessing physician determines there is a low risk for EBOD and the traveler can be discharged without testing for EBOD, no further action is necessary. Public health may follow-up as necessary.

If the symptomatic traveler presents to hospital:

- The assessing physician should follow the Emergency Department/Urgent Care High Consequence Pathogen Clinical Process Algorithm https://healthproviders.sharedhealthmb.ca/files/ed-and-uc-hcp-clinical-process-algorithm.pdf
- If the assessing physician determines there is a low risk for EBOD and the patient can be discharged without testing for EBOD, no further action is necessary.
- If the assessing physician suspects EBOD and wants to discuss testing or wants to initiate testing for EBOD, the hospital should first call the HCP ID physician on call to initiate a coordinating call to assess the risk and exposures of the patient and the need for testing.

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- If assessment and testing required, the HCP ID physician on call will arrange coordinating a call with appropriate hospital, Medical Leads, and OCPPHO/MOH on call.
- Regional public health (based on home address) is responsible for case and contact management.
- Contact identification should proceed after discussion with HCP ID physician on-call, CD MOH and OCPPHO regarding index of suspicion.
- This may include a request for the flight manifest.
- Risk assessment for contact follow up may also include airport partners.

If symptomatic traveler presents to non-acute care settings (e.g. primary care clinic):

- Immediately place the individual with suspect or confirmed EBOD infection in a single patient room, with the door closed.
- Call the HCP ID Physician on-call or MOH on-call to initiate a coordinating call to assess the risk and exposures of the patient and the need for testing.
- Continue to follow the steps listed under patients presenting to hospital.