



Office of the
Provincial Health Officer

B.C. Ebola Virus Disease Transportation Policy

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BCEHS | BC Emergency
Health Services

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A. Purpose

The purpose of this policy is to describe the approach to the transportation of a person under investigation for or a confirmed Ebola Virus Disease (EVD) patient within British Columbia. Due to the size and geographic complexity of the province and the inherent challenges associated with planning for the management and transportation of an EVD case, it is necessary to ensure that any transportation plan can safely and effectively manage the movement of EVD patients from anywhere within the province.

B. Guiding Principles

1. Along with the safety and care of patients, the safety of health care workers is of paramount importance.
2. All EVD patient movement is to be co-ordinated and managed by the BC Patient Transport Network and BC Emergency Health Services (BCEHS). Due to enhanced safety precautions, it is expected that transporting EVD patients will take longer than would be required for a non-Ebola patient. Early notification of BCEHS about the potential need for transportation will assist in decreasing any delays.
3. If transportation of a person under investigation for or confirmed to have EVD will be delayed, the Ministry of Health duty officer will co-ordinate with the sending health authority to facilitate the movement of necessary supplies (such as personal protective equipment), and/or trained personnel to the sending facility to support care until the patient can be transported.
4. It is the sending health authority's responsibility to co-ordinate patient transfers through facilities, and the transitions of care between the ambulance staff and the receiving facility.

C. Roles and Responsibilities

Recognizing the robust patient transportation network available in the province, every effort will be made to use existing procedures and resources as much as possible, with additional precautions to ensure staff and patient safety. The following includes the roles and responsibilities for organizations/entities transporting an EVD patient.

BC Emergency Health Services (BCEHS): BCEHS provides emergency and inter-facility transportation in BC through two operating entities: the BC Patient Transfer Network and the BC Ambulance Service. BCEHS has primary responsibility for the transportation of patients by land or air.

BC Patient Transfer Network (BCPTN): BCPTN provides clinical oversight and co-ordination for inter-facility transfers and communication between sending/receiving hospital sites for the province. All inter-facility transfers of potential or confirmed EVD cases must be co-ordinated through the network.

BC Ambulance Service (BCAS): BCAS is responsible for the transportation of patients using their network of ground ambulances, helicopters and fixed-wing aircraft. An EVD Infectious Disease Care Team has 24 paramedics specially trained in safely donning and doffing PPE, and management of EVD patients. Members of this team may be deployed to other parts of the province to assist local BCAS crews as needed. Two ambulances in the Lower Mainland have been modified to transport potential or confirmed EVD cases. These ambulances have been stripped down to facilitate safe decontamination after use.

Health authorities: Designated sites¹ within B.C.'s health authorities are responsible for pre-identifying routes for moving potential EVD patients into and through the facility to patient care areas. Health authorities should work with BCEHS directly to practice notification and transition of care between agencies.

Public Health Agency of Canada: The federal Health Portfolio Operations Centre is available 24/7 to provide support and assistance to provinces. In the event that air transportation is required and cannot be managed with available provincial resources, the BC Ministry of Health Duty Officer will request that the centre activate the arrangements with the United States and Phoenix Air to provide air transportation.

D. Transportation of a Patient by Land

Transportation of a patient to a facility

In all likelihood, a patient requiring transport will be identified through public health monitoring to the medical health officer (MHO). In this scenario, the MHO will contact BCEHS and a local ambulance crew will work with the Emergency Physician and Online Support and Technical Advisor program for further direction. In all cases, the initial management and transportation of a patient is a collaborative effort with decisions being made based on the particular circumstances.

In the event that an individual calls 911 for a potential EVD patient:

1. A local ambulance crew is sent to the patient's location to assess the patient.
 - ▶ First responders (ex: fire, police) are not sent or are cancelled.
 - ▶ Local crew wears standard PPE and stays at a distance from the patient.
2. The ambulance crew calls Emergency Physician Online Support and Technical Advisor program from the patient's location for further direction.

¹ Roles of Provincial Facilities for Care of Potential or Confirmed Ebola Virus Disease Patient. Available from: www.health.gov.bc.ca/pho/pdf/hospital-designation-evd-patients.pdf.

3. The Emergency Physician Online Support links the ambulance crew to the appropriate medical health officer.
4. Dispatch notifies the nearest identified facility of a potential EVD patient.

If initial call assessment screening **does not indicate potential** for a high transmission risk presentation, the ambulance crew transports the patient to the nearest identified facility.

If call assessment screening **indicates potential** for high transmission risk presentation (i.e. patient is losing copious bodily fluids²):

- a. The BCEHS Infectious Disease Care Team is sent to the patient's location.
 - ▶ The infectious disease care team will fly directly to a community if appropriate – estimated time is 6-8 hours, weather permitting, if remote.
- b. Initial crew remains on scene until they arrive, following any medical health officer instructions.
- c. The Infectious Disease Care Team transports patient to nearest Type 3 facility.

For more information, please see Appendix A: BCEHS EVD Prehospital Call Algorithm & Inter-facility Transfer Call Algorithm.

Transfer between facilities

The BC Patient Transfer Network (BCPTN) is responsible for co-ordinating inter-facility transfer of persons under investigation (PUI)³ or confirmed⁴ EVD patients. In the event that a hospital in B.C. needs to request patient transfer, BCPTN must be called (1 866 233-2337). This call will initiate BCPTN to establish the expert risk assessment team teleconference chaired by the medical health officer (refer to MHO algorithm for more detail).

If land transport is deemed the best option:

- BCEHS will arrange specifics using their Infectious Disease Care Team and ambulances modified for Ebola patient transportation.
 - ▶ See *Transportation in Remote Areas* for information in the event of any delay in transportation.

For more information, please refer to Appendix A: BCEHS EVD Inter-facility Transfer Call Algorithm and Appendix B: BCPTN Inter-Facility Call Screening Process.

Use of self-transportation

It should be recognized that some individuals may be well enough to drive themselves to a care facility. This option should be considered when feasible to prevent the exposure of ambulance personnel and vehicles.

² Body fluids include stool, blood, emesis, urine, saliva, semen and sweat.

³ Defined as anyone with a potential exposure to the Ebola virus, any symptoms compatible with EVD, and laboratory result pending.

⁴ Defined as anyone with laboratory confirmation of EVD infection.

E. Transportation of a Patient by Air

Air transportation of patients with EVD requires additional precautions including specialized equipment.

BCEHS contracts private air carriers for the purpose of air transportation and is responsible for establishing procedures and the necessary legal and regulatory requirements to allow for the transport of Ebola patients by these companies.

When transferring a patient between facilities, follow the procedure as above. If air transport is deemed the best option:

- BCEHS will arrange specifics with their Infectious Disease Care Team and one of the BCEHS's contracted air carriers.
 - ▶ Should operational issues preclude BCEHS being able to provide timely transport with equipment available in its contracted fleet:
 - BCEHS will contact the Ministry of Health duty officer (250-686-6061).
 - The Ministry of Health duty officer will request federal assistance through the Health Portfolio Operations Centre to deploy Phoenix Air, a US-based organization with experience transporting EVD patients by air. The aircraft are able to land at airports that meet specific runway specifications (Appendix C).
 - ▶ See *Transportation in Remote Areas* for information in the event of any delay in transportation.

ISOPODs

ISOPODs are devices used in the transportation of a potentially infectious patient. They are designed to provide medical staff and first responders a safe means to isolate and transport patients with infectious diseases. ISOPODS consist of an isolation module and a filtration blower system. BCEHS has two operating ISOPODs (one for adults and one for pediatric cases) and staff trained in their use. In addition, additional ISOPODs can be accessed through the Public Health Agency of Canada, if required.

Once used, an ISOPOD must be decontaminated prior to additional usage. Depending on the presentation of the patient, it can take three to six hours to decontaminate an ISOPOD.

F. Transportation of a Patient by Water

B.C.'s coastal geography necessitates the movement of patients over water when air transportation is not available.

In the event that a potential or confirmed Ebola patient requires transportation via ferry crossing:

- BCEHS will contact the BC Ferries control/operations room advising of the need to transport the patient via ferry.
- BC Ferries will contact the vessel and applicable ferry terminals of the pending patient transportation and relay any requirements back to BCEHS.

G. Transportation in Remote Areas

Policies related to EVD developed thus far in B.C. will significantly limit the potential for an EVD case to appear in rural and remote communities. This includes the close screening, assessment and monitoring of health care workers returning to BC from West Africa, as well as a requirement for those at risk for infection, to remain within two hours of a Type 2 or 3 facility for the duration of the 21 day monitoring period.⁵ However, it is critical to ensure that if someone develops EVD in a more remote community in B.C., they can be safely cared for and transported to a designated facility.

Some regions in the province are remote and at a distance from a Type 2 or 3 facility. Weather is sometimes a factor in transportation of patients. Therefore, in some more remote communities, additional planning is required to address patient care and transfer if a possible EVD patient is identified. Transport times for persons under investigation/confirmed EVD patients will be longer than normal, due to the need to bring in a special team of paramedics from Vancouver to transport the patient. Therefore, transport decisions should be made as early as possible.

In situations where small facilities must manage a patient while waiting for transport, they may require phone support from clinical experts, including an intensivist or a pediatric intensivist. Health authorities should notify remote facilities that clinical advice is available on a 24/7 basis. The regional medical health officer will co-ordinate the team. Further, intensivists and pediatric intensivists can be contacted for advice at any time through the BC Patient Transfer Network (1-866-233-2337).

Local facilities should make the transfer decision in consultation with the medical health officer and the 24/7 clinical advisory team, and begin organizing transfer in conjunction with BCEHS as early as possible (as other possible diagnoses are ruled out) rather than wait until the patient's condition deteriorates.

⁵ British Columbia Ebola Virus Disease (EVD) Contact Investigation and Management Guideline:
www.health.gov.bc.ca/pho/pdf/british-columbia-ebola-virus-disease-evd-contact-investigation-and-management-guideline.pdf

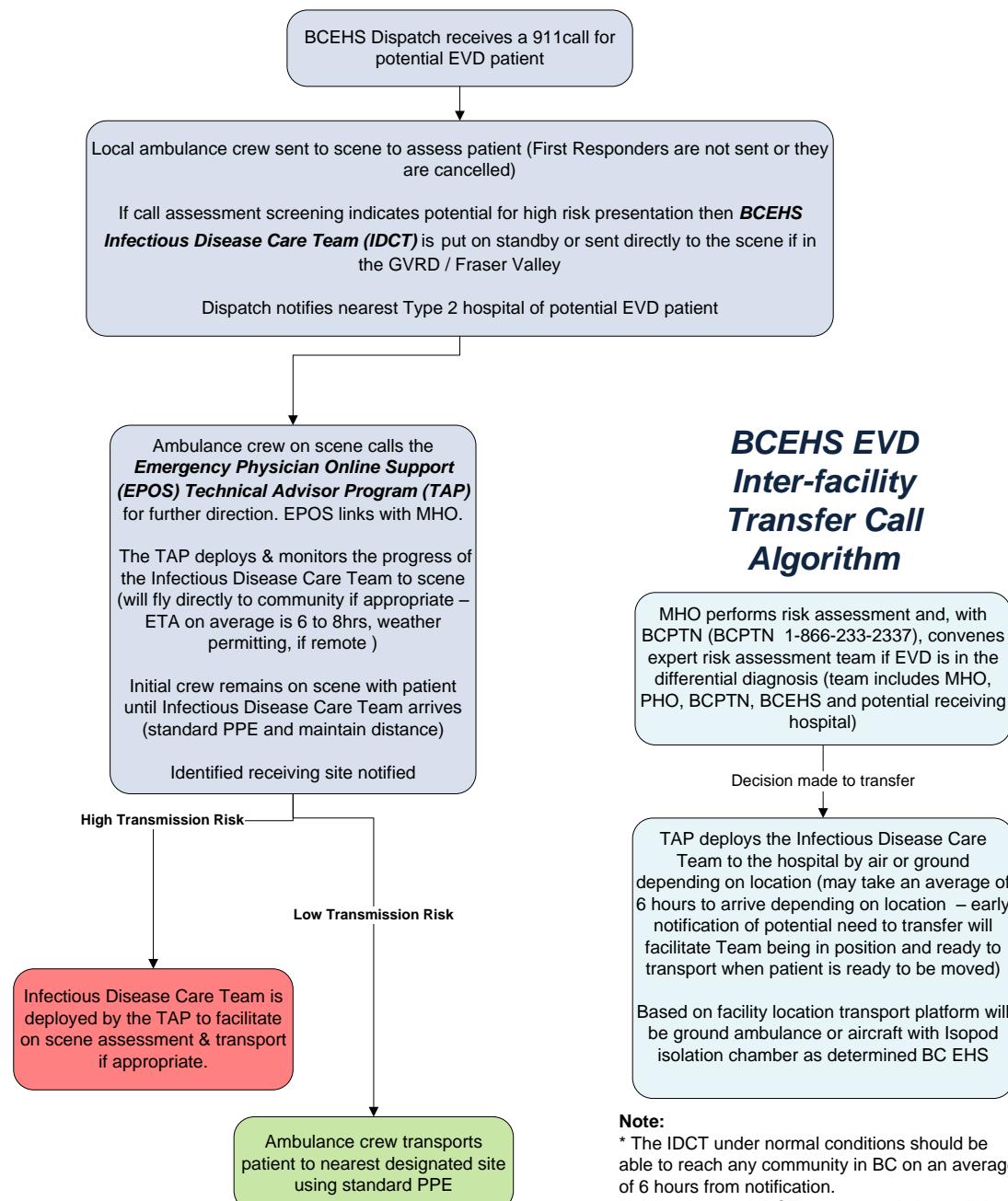
Rural and remote facilities that might need to manage a possible EVD patient will require an appropriate supply of PPE (as set out in the provincial PPE guidelines⁶) to manage during the expected number of days they will hold the patient, as well as the training for personnel to safely don and doff the PPE. Health authorities should identify these facilities to ensure they have the needed supply of PPE and PPE training for their facilities.

H. Transporting Parents of Children

Health authorities should work with BCEHS to determine in advance whether parents would be transported to accompany a child who is being transferred to a designated facility. In almost all cases, one of the child's parents would be able to accompany the patient during the transfer when the transfer occurs by ground transport. For air transfers, this decision will be made on a case-by-case basis, depending on the weight, space, size etc. of the aircraft doing the transport. In all cases, the final decision will be made by the medical health officer during the BC Patient Transfer Network scheduled teleconference.

⁶ B.C. Ebola Virus Disease Personal Protective Equipment Guidelines:www.health.gov.bc.ca/pho/pdf/ebola-ppe-guidelines-2014-11-17.pdf

Appendix A: BCEHS EVD Prehospital Call Algorithm & Inter-facility Transfer Call Algorithm



BCEHS EVD Inter-facility Transfer Call Algorithm

MHO performs risk assessment and, with BCPTN (BCPTN 1-866-233-2337), convenes expert risk assessment team if EVD is in the differential diagnosis (team includes MHO, PHO, BCPTN, BCEHS and potential receiving hospital)

*Review MHO Risk Assessment Algorithm for more detail

Decision made to transfer

TAP deploys the Infectious Disease Care Team to the hospital by air or ground depending on location (may take an average of 6 hours to arrive depending on location – early notification of potential need to transfer will facilitate Team being in position and ready to transport when patient is ready to be moved)

Based on facility location transport platform will be ground ambulance or aircraft with Isopod isolation chamber as determined BC EHS

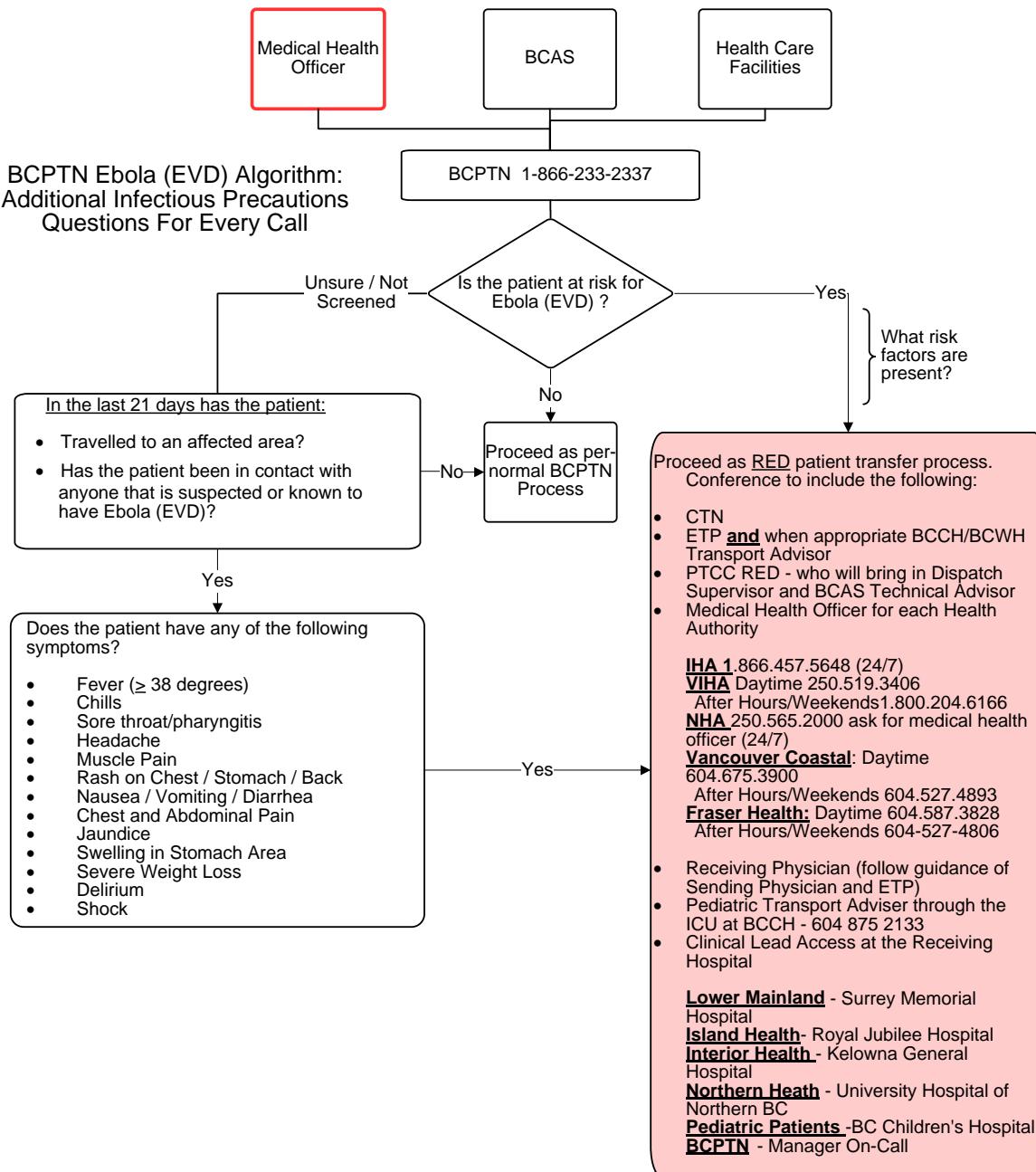
Note:

* The IDCT under normal conditions should be able to reach any community in BC on an average of 6 hours from notification.

** All patient and IDCT movement timings will be weather and road condition dependent and numerous factors will need to be considered when determining which will be the best transportation method.

*** All IDCT patient movements will be completed using high risk PPE protection regardless of patient risk level due to the closeness of the ambulance and aircraft environments

Appendix B: BC Patient Transfer Network Inter-Facility Call Screening Process



Appendix C: Phoenix Air Capable Airports in B.C.

Airport		G3	Learjet
ABBOTSFORD	CYXX	Yes	Yes
CAMPBELL RIVER	CYBL	Yes	Yes
CASTLEGAR	CYCG	Yes	No
COMOX	CYQQ	Yes	Yes
CRANBROOK	CYXC	Yes	Yes
DAWSON CREEK	CYDQ	Yes	No
DEASE LAKE	CYDL	Yes	No
FAIRMONT HOT SPRINGS	CYCZ	Yes	No
FORT NELSON	CYYE	Yes	Yes
FORT ST JOHN	CYXJ	Yes	Yes
HUDSON'S HOPE	CYNH	Yes	No
KAMLOOPS	CYKA	Yes	Yes
KELOWNA	CYLW	Yes	Yes
MACKENZIE	CYZY	Yes	No
NANAIMO	CYCD	Yes	Yes
PENTICTON	CYYF	Yes	No
PRINCE GEORGE	CYXS	Yes	Yes
PRINCE RUPERT	CYPR	Yes	Yes
PUNTZI MOUNTAIN	CYPU	Yes	Yes
QUESNEL	CYQZ	Yes	No
SANDSPIT	CYZP	Yes	No
SMITHERS	CYYD	Yes	Yes
TERRACE	CYXT	Yes	Yes
VANCOUVER	CZBB	Yes	No
VANCOUVER	CYVR	Yes	Yes
VICTORIA	CYYJ	Yes	Yes
WILLIAMS LAKE	CYWL	Yes	Yes