Ebola Virus Disease

Directive # 2 – November 7, 2014

Issued under Section 77.7 of the Health Protection and Promotion Act, R.S.O. 1990, c. H.7 ("HPPA")

WHEREAS under section 77.7 of the HPPA, if the Chief Medical Officer of Health ("CMOH") is of the opinion that there exists or there may exist an immediate risk to the health of persons anywhere in Ontario, he or she may issue a directive to any health care provider or health care entity respecting precautions and procedures to be followed to protect the health of persons anywhere in Ontario;

AND WHEREAS, under section 77.7(2) of the HPPA, for the purposes of section 77.7(1), the CMOH must consider the precautionary principle where in the opinion of the CMOH there exists or there may exist an outbreak of an infectious or communicable disease and the proposed directive relates to worker health and safety in the use of any protective clothing, equipment or device.

AND HAVING REGARD TO Ebola Virus Disease (EVD), which is associated with high fatality rate, and is currently spreading in three countries in West Africa and is at risk of spreading to Canada and to Ontario – paramedics in pre-hospital settings being particularly at risk.

I AM THEREFORE OF THE OPINION that there exists or may exist an immediate risk to the health of persons anywhere in Ontario from EVD;

AND DIRECT pursuant to the provisions of section 77.7 of the HPPA that:

Paramedic Services Land and Air Ambulance and First Responder Practices and Procedures

Date of Issuance: November 7, 2014

Effective Date of Implementation: November 7, 2014

Issued To*:

- ❑ Public Health Units
- X Paramedic Services (pre-hospital care)
- ❑ Laboratories

All facilities/personnel providing care in:

- ❑ Acute Care Institutions
- ❑ Long-Term Care and Complex Continuing Care Settings
- ❑ Mental Health Institutions
- ❑ Community Settings (offices, clinics, pharmacies, home settings, community-based mental health and addiction programs, Community Health Centres, Community Care Access Centres)

X Specific sector(s): All Paramedic Services Land and Air Ambulance

* Please ensure that a copy of this directive is provided to the Co-chairs of the Joint Health and Safety Committee and Health and Safety Representative (if any) within your organization

Affected Local Health Integration Networks:

X All

- ❑ Erie St. Clair
- ❑ South West
- ❑ Waterloo Wellington
- ❑ Hamilton Niagara Haldimand Brant
- ❑ Central West
- ❑ Mississauga Halton
- ❑ Toronto Central
- ❑ Central
- ❑ Central East
- ❑ South East
- ❑ Champlain
- ❑ North Simcoe Muskoka
- ❑ North East
- ❑ North West

Summary

Ebola Virus Disease (EVD) is associated with a high fatality rate, and is currently spreading in some countries in West Africa. Although the risk in this country is low, we must be prepared for persons with the disease, or incubating the disease, entering Canada.

In Ontario, those most at risk are health care workers, including paramedics. Therefore, the purpose of this Directive is to provide instructions to all paramedic service providers, and their management and employees, concerning precautions and procedures necessary to protect the health of paramedics or other pre-hospital health care workers and minimize the risk of spreading the disease. Where applicable, this directive also provides instructions to first responders such as fire and police or other first responder agencies.

This directive covers personal protective equipment (PPE) and procedures related to EVD for paramedics and first responders. Directives for other settings, including acute care settings, primary care and laboratories, and concerning training[1], testing, transportation of specimens, waste disposal and other matters are, or will be, established.

This directive, in some cases, uses definitions that are specific to the pre-hospital environment to ensure the practices of paramedics (or first responders) are appropriately identified. Some definitions that are used in an acute care or other hospital settings are not provided or used in this directive.

Designated Land and Air Ambulances

Designated paramedic service providers shall have and prepare dedicated ambulances that shall be used solely for the purpose of transporting confirmed EVD cases to designated hospitals (designated for referral or treatment of confirmed EVD patients), and EVD patient transfers between hospitals and designated hospitals, and will not be dispatched for any other ambulance response.

Exception: Designated ambulances will be used to transport a suspect EVD case only when the patient arrives on an international flight at Pearson International Airport and is identified as suspect EVD case through the use of the EVD screening tool by a paramedic during the point-of-risk assessment.

Designated paramedic service providers at the time of the release of this directive are:

1. City of Greater Sudbury Paramedic Services
2. Frontenac Paramedic Services
3. Hamilton Paramedic Services
4. Middlesex-London EMS
5. Ottawa Paramedic Services
6. Peel Regional Paramedic Services

[1] Appendix 1: Training contains an overview of training developed for paramedics for release with this directive.

7. Superior North EMS
8. Toronto Paramedic Services
9. Ornge

Designated ambulances shall only transport EVD patients that are picked up at a hospital or Pearson International Airport. They shall contain the minimum necessary equipment and shall be outfitted at the time of each service request with only with sufficient equipment to perform the requested transfer. Equipment that may be required during such a transfer shall be available in the ambulance but as much as possible, will be stored in a manner that minimizes the risk of contamination.

Designated ambulances will transport an EVD patient in the following manner:

1. In a manner as directed by the attending physician in consultation with infectious disease specialists, the receiving designated facility and the paramedic service provider, that considers the potential for contamination, acuity of the patient and safest approach for the patient, attending paramedics, support staff and hospital staff involved in preparing the patient, transfer of care and transportation. This must include full-body covering of the patient, with no exposed skin or clothing. Draping of the interior of the back of the ambulance as operationally feasible and using an impermeable material should be performed to reduce contamination, or

2. In a designated negative air pressure containment vessel[2] (vessel) that is secured to the ambulance stretcher and that provides filtration of any air exchange, is supported by both AC power and battery backup power sources, and has been supplied or accepted by the Ministry of Health and Long Term Care as appropriate for the designated purpose

Ornge will designate a specific air ambulance as a designated air ambulance if the need arises, and when an air ambulance is designated, it shall be reserved solely for transportation of an EVD case similar to a designated land ambulance, and will be prepared and utilized similarly except that the approach should be modified for the special environment of aircraft.

For port of entry service at Pearson International Airport[3] with transport by designated ambulance provider for confirmed EVD patients, two paramedics are required to provide patient care at all times and a third paramedic service designated driver will be assigned.

Only those paramedics and the designated driver fully trained, tested, and drilled (i.e. ability to demonstrate knowledge and understanding of the practical training received)

---

[2] Negative pressure containment vessels would be supplied centrally by the ministry to designated paramedic service providers along with supporting documentation and training materials regarding the preparation, use and cleaning of the equipment. Paramedics designated to work in designated ambulances will receive training on the supplied vessels and will be assessed for competency in their use prior to being assigned to any call where a vessel will be used during patient movement.

[3] Pearson International Airport is currently the only designated port of entry to Ontario for repatriated EVD patients.

on the hazards of EVD, engineering, administrative protections, the use of PPE and other equipment (and provided with the knowledge of the limitations of the PPE), and proper PPE donning and doffing protocols and techniques, shall provide patient care and should monitor each other's adherence to procedures at all times, including donning and doffing of PPE.

For port of entry service at land or water international border crossings, designated ambulances will not be dispatched; non-designated ambulances will be assigned to the ambulance request. These patients will not be confirmed EVD patients, and will be screened by the ambulance dispatch centre at the time of the ambulance service request, and will also be screened during the point-of-risk assessment by paramedics upon contact with the traveler. When a determination is made that the patient is a suspect EVD case, the provisions for paramedic response, treatment and transport of a suspect EVD case in this directive will apply.

For inter-facility transport with a designated ambulance for suspect or confirmed EVD patients, two paramedics are required for patient care and a third transport team member is required to drive a land ambulance. A hospital clinician may be required, depending on patient acuity, and shall provide clinical care (using hospital equipment) during transport.

Only those paramedics fully trained, tested, and drilled (i.e. ability to demonstrate knowledge and understanding of the practical training received) on the hazards of EVD, PPE and other equipment such as the vessel, (and provided with the knowledge of the limitations of the PPE), and proper PPE donning and doffing protocols and techniques, shall form part of the transport team and all members of the team shall at all times monitor each other's adherence to procedures, particularly donning and doffing of PPE.

Further guidance on the transfer of patients to designated hospitals will be provided by the Ministry of Health and Long-Term Care or the Local Health Integration Network.

Non-Designated Ambulances

Non-designated ambulances are land or air ambulances deployed by paramedic service providers and Ornge to respond to all ambulance requests (excluding those outlined above for designated ambulances) as assigned by an ambulance communication centre.

Inter-facility transfers and port of entry service at Pearson International Airport for suspect or confirmed EVD cases will not be done by non-designated ambulances.

Non-designated ambulances will respond to all other ambulance requests, including those where there is a suspect EVD patient as identified by the ambulance communication centre or Ornge Communication Centre through screening protocols based on the current EVD screening tool (see Appendix 2) with the use of PPE based on the risk assessment.

Responding paramedics in a non-designated resource and any other persons that may be responding to the request will always follow Routine Practices and Additional Precautions (RPAP) as recommended by the Provincial Infectious Diseases Advisory

Committee (PIDAC)[4]. RPAP includes the use of hand hygiene, cleaning and disinfection of all shared equipment, regular environmental cleaning using an approved hospital grade disinfectant, meticulous attention to safety around the use of needles and sharps, and a complete and careful risk assessment during the initial patient encounter with the use of PPE based on the risk assessment.

Where EVD is suspected, paramedics will follow further enhanced precautions as identified below. Where other first responders are responding to the call, the same precautions apply.

Point of Care Risk Assessments

Transmission of EVD can occur:

- directly through contact with blood and/or body fluids or droplets,
- indirectly through contact with patient care equipment or surfaces contaminated with blood and/or body fluids (secretions and excretions: blood, vomit, urine, feces, sweat, semen, saliva, other fluids), and
- possibly when performing aerosol-generating procedures.

Paramedics should conduct a point of care risk assessment at a minimum of two (2) metres from a patient before **each interaction** with a patient and/or the patient's environment to evaluate the likelihood of exposure to an infectious agent/infected source and to choose the appropriate safe work practices, including appropriate PPE. Ambulance services shall ensure that paramedics are incorporating the latest in occupational health & safety and infection prevention & control recommendations from the Chief Medical Officer of Health for EVD into their point of care risk assessments, including any enhancements or modifications to PPE.

Patients presenting in pre-hospital environments shall be screened by the ambulance communication centre according to the most current version of the EVD screening tool, as well as by the paramedics at the scene (as outlined above).

Patients screened by the ambulance communication centre and identified as potentially a suspect EVD patient shall be screened again using the EVD screening tool by a paramedic, upon arrival of the ambulance. The assessment should be conducted by one paramedic immediately upon arrival, and prior to another paramedic entering the scene.

The second screening that is conducted at the scene will result in the paramedic making a determination as to whether the patient is a suspect EVD patient (and the provisions of the directive will apply) or that the patient is not a suspect EVD patient (and standard operating procedures of the paramedic service will apply).

Based on the paramedic-conducted screening at the scene, if the determination is made that the patient is a suspect EVD case, and if a consultation protocol is established by the ministry, the paramedic shall contact a designated infectious disease (ID) specialist

[4] See PIDAC's Routine Practices and Additional Precautions in All Health Care Settings for more information.

using the protocols established by the Emergency Health Services Branch to receive advice and assistance in making the on-scene determination.

1. This consultation will result in a determination that the patient is a suspect EVD case and the provisions of the directive will apply; or
2. The consultation will result in a determination that the patient is not a suspect EVD case and the paramedic will resume normal practices.
3. If a consultation protocol is not established by the ministry or is not possible for operational reasons (such as no patch service) then the results of the point-of-risk assessment conducted by the paramedic shall define the patient as a suspect EVD case or not until the patient is transferred to the ED.

A suspect EVD patient will be transported to the closest appropriate[5] emergency department (ED) following the precautions prescribed below for suspect EVD cases and any other precautions that may be prescribed by the CMOH in other documentation or other directives. Where specific local deployment plans of paramedic services have included prescribed local bypass provisions or local patient destination selection processes that have been approved by the ministry for suspect EVD cases, then the patient will be transported to the ED identified in the relevant and approved local operating practices of the ambulance communication centre or Ornge Communication Centre.

Suspect EVD Patients

A suspect patient is a patient who has failed the current EVD screening tool (see Appendix 2). For patients who have failed the EVD screening tool, paramedics shall employ enhanced PPE practices and revised medical treatment approaches and the patient should be treated and transported with the precautions prescribed below.

For suspect EVD cases in the community, paramedics will remove the patient from the scene and into the back of the ambulance, and transport to the ED in an expeditious manner.

Confirmed EVD Patients

Confirmed EVD patients are repatriated EVD patients arriving at Pearson International Airport or are diagnosed EVD patients with confirmed blood samples results. These patients will be transported by designated ambulances.

Ambulance Communication Centre Screening

When ambulance communication centres and the Ornge Communication Centre receive a request for an emergency land or air ambulance response, they shall employ the EVD screening tool.

[5] In the context of ambulance destinations, the term “appropriate” takes into consideration the requirement to recognize specific destinations for particular medical conditions such as stroke and STEMI.

When the screening indicates a suspect EVD case the ambulance communication centre or the Ornge Communication Centre shall immediately advise the responding paramedics that the patient **has failed EVD screening**. Additional medical information will be provided as soon as available/possible.

To implement EVD screening, ambulance communication centres using the DPCI II call taking protocols will use the EVD screening tool for EMS published and maintained by the Ministry of Health and Long-Term Care (see Appendix 2).

To implement EVD screening, ambulance communication centres using MPDS call taking protocols (Toronto and Niagara) will implement the Emerging Infectious Disease Surveillance Tool (SRI/MERS/EBOLA).

Tiered Agency Responses and Co-Responders

Tiered response agreements are established between paramedic services and allied agencies such as fire departments and/or police services. Municipalities are responsible for tiered response agreement provisions and the participation of agencies in tiered response agreements.

For suspect EVD cases as identified by the ambulance communications centre, the allied responders that participate in medical tiered response shall be immediately notified by the dispatch centre that the patient **has failed EVD screening**. Unless fire and police services are required to attend to a suspect EVD case for a specific purpose (e.g. for extrication or for the restraint of a combative patient), all measures should be taken to avoid a tiered response. If police or fire are needed for a suspect EVD case, paramedic service providers should consult with the allied agency to establish the appropriate response procedures.

Procedures

Patient Transportation from Pre-Hospital Setting to ED

When a suspect EVD patient in Ontario is identified by an ambulance communication centre, the anticipated destination or receiving ED will be notified by the ambulance communication centre.

When a suspected case of EVD is initially identified by a paramedic after patient assessment at the scene of any emergency land or air ambulance service request, the receiving ED must be notified immediately by the paramedic or ambulance communication centre to allow appropriate receiving preparations by the hospital through the ambulance communication centres.

The initial assessment and triage by ED staff, and transfer of care to ED staff of patients with suspected EVD will occur in the ED ambulance bay.

Following initial assessment and triage by the ED staff, and if the patient is **cleared** of EVD suspicion, the paramedics may discontinue enhanced precautions.

If the initial assessment and triage by ED staff indicates that EVD is suspected, the paramedics shall continue enhanced precautions until deep environmental cleaning and decontamination of the ambulance has been completed. These deep environmental

cleaning and decontamination processes will be conducted per local paramedic service and first responder service policies.

Restricting Access to Patient(s)

For designated ambulance transport of confirmed EVD patients, no persons other than the two paramedics and/or other essential health care providers (appropriately trained as noted previously in this Directive) shall be allowed in the back of the ambulance.

For non-designated paramedic service transport of suspected EVD patients, no persons other than the paramedic(s) (appropriately trained as noted previously in this Directive), and if required, a care-giver, shall be allowed in the back of the ambulance.

While in the ambulance bay, ED triage area, or ED proper, paramedics attending to an EVD patient while wearing PPE shall avoid contact with hospital surfaces, walls, and equipment, and maintain a distance of at least one metre from staff and visitors. Any breach must be reported to hospital staff and the paramedic's supervisor.

Transport To Designated Hospitals

For land or air ambulance transportation between hospitals and designated hospitals within Ontario, the designated land or air ambulance should be prepared in a manner so that only necessary equipment for transport is present. All normal transfer protocols and procedures (including use of Patient Transfer Authorization Centre {PTAC} numbers) will continue to be followed. The patient must be transported in the manner indicated in the Designated Land and Air Ambulances section above.

The following is the current list of designated hospitals[6] in Ontario: The ambulance communication centre or Ornge Communication Centre will direct the land or air ambulance destination in accordance with the specific campus information as provided by the hospitals, when identified:

1. Children's Hospital of Eastern Ontario
2. Hamilton Health Sciences Centre
3. Health Sciences North
4. Hospital for Sick Children
5. Kingston General Hospital
6. London Health Sciences Centre
7. St Michael's Hospital
8. Sunnybrook Hospital
9. The Ottawa Hospital
10. Thunder Bay Regional Health Sciences Centre
11. University Health Network's Toronto Western Hospital

When treating and transporting a confirmed EVD patient, there should be two paramedics with the patient at all times and no more than two unless required for clinical support during transfer or transportation. The paramedics providing care shall

[6] The specific campus of each designated hospital organization that will be a designated receiving facility will be identified by the respective organization and communicated to the ambulance communication centres and the designated paramedic service providers.

have no other duties and should monitor each other's adherence to procedures, in particular the donning and doffing of PPE. A third person, who is responsible to drive the land ambulance, shall be part of the designated transport team and be protected by PPE as below. PPE not initially selected shall be available in the driver compartment for the duration of the transfer to be accessed by the driver if needed.

PPE requirements for the land ambulance driver or air ambulance flight crew shall be developed by the paramedic service provider or air ambulance service provider, considering the operational requirements for operation of the ambulance or aircraft; and considering the practical and safety aspects of donning and doffing in adverse conditions when responsible for the land or air ambulance operation. Practical testing of PPE for drivers and flight crews must be conducted by the service provider during development of the service specific protocols for the operation of land and air ambulances.

In the case of an air ambulance, the designated team includes the flight crew who are also required to be properly protected with PPE unless isolation to the flight deck area can be provided. Any other members of the transport team should be similarly observed during the donning and doffing of PPE.

The driver compartment of a land ambulance or flight deck area of an aircraft shall be isolated as much as possible from the patient care area. Designated patient care personnel shall not at any time enter a driver compartment or flight deck area as the case may be, at any time after donning PPE, until the conclusion of any patient transport activity and until a complete deep environmental cleaning and decontamination of the designated land or air ambulance and all members of the transportation team.

Patient Care (for all ambulance services)

Only essential equipment shall be used while caring for a suspect or confirmed EVD patient. Medical devices and equipment should be disposable whenever possible. Non-disposable equipment shall be dedicated to the patient until the diagnosis of EVD is excluded, the patient care has been transferred to the ED, or the designated hospital and all precautions are discontinued. All re-usable equipment must be **cleaned and disinfected** using a hospital grade disinfectant and according to the manufacturer's instructions prior to re-use on a subsequent patient by personnel using appropriate PPE.

Extreme caution should be exercised when performing procedures which utilize sharps, such as starting lines or performing injections (which must only occur in a non-moving ambulance). Use of needles and sharps should be kept to a minimum and used for medically essential procedures only. A needleless system and safety-engineered medical devices **must** be used in accordance with the regulation O. Reg. 474/07 Needle Safety made under the *Occupational Health and Safety Act*. Extreme care should be used when handling all sharps. A puncture resistant sharps container must be available at point-of-use.

Paramedics will follow the advice of the Medical Advisory Committee (MAC) provided as guidance for paramedics regarding the treatment of patients, changes in clinical practice, or modified medical procedures for suspect or confirmed EVD patients. This advice will be provided to paramedic services and paramedics by the Emergency Health Services Branch, who receive the advice from MAC, and will be published in the form of Training Bulletins as updated advice is developed by MAC.

Personal Protective Equipment

In some cases, patients with EVD may not be recognized immediately. The consistent and appropriate use of RPAP remains the best defense against the transmission of EVD and other infections. RPAP includes the use of hand hygiene, cleaning and disinfection of all shared equipment, regular environmental cleaning using an approved hospital grade disinfectant, meticulous attention to safety around the use of needles and sharps, and a complete and careful risk assessment during the initial patient encounter.

RPAP, including the use of appropriate PPE, should always be followed by paramedics and first responders. Sufficient quantities of PPE in a variety of sizes shall be provided by the ambulance service or first responder agency to ensure that the PPE is the correct size for the paramedic and first responder required to use it.

Suspect or Confirmed EVD Cases

For confirmed or suspect EVD cases (as identified by the communications centre or on scene by the paramedic), the following PPE is required:

- fit-tested, seal-checked N95 respirator
- full face shield and safety eyewear
- double gloves, one under and one longer glove over the cuff
- impermeable full body barrier protection - the aim should be no exposure of skin, which for example can be achieved by the use of the following components:
  - full head protection to cover the head and neck, gown, and foot coverings (foot coverings to provide at least mid-calf protection); or
  - one piece full body protective suit (coverall) with integrated or separate hood and covered seams, and foot coverings providing at least mid-calf protection

Training provided to users for the chosen protective equipment must follow the component manufacturer's advice, and any other training regimen developed by the employer for the specific components expected to be used by the paramedics or first responders.

When removing PPE, first use alcohol-based hand sanitizers (as described above) on gloves. Paramedics must avoid contact between contaminated gloves/hands and equipment and the face skin or clothing. Hands must be cleaned before contact with the face. If there is any doubt, clean hands again to ensure mucous membranes (eyes, nose, mouth) are not contaminated.

Paramedics should observe each other's doffing of PPE to ensure that inadvertent contamination of eyes, mucous membranes, skin or clothing does not occur. This is of particular importance if the PPE being worn is new or different from what paramedics normally wear. If unfamiliar PPE is being worn, practical refresher training is

recommended prior to application and during removal until the paramedic is comfortable with the PPE and donning and doffing protocols and techniques. Doffing must be observed by an individual trained in PPE. When doffing, use alcohol-based hand sanitizers on gloves to reduce the risk of self-contamination during the PPE removal procedure.

Cleaning and Decontamination

- **Blood and all body fluids from EVD patients are highly infectious.**
- **Safe handling of potentially infectious materials and the cleaning and disinfection of the land or air ambulance and equipment is paramount.[7] Waste management[8] is also critical.**

Use hospital-grade disinfectants[9] to clean the ambulance and follow the manufacturer's recommendations.

Any impermeable draping material used in an ambulance and any containment material used to isolate equipment should be collected by ensuring external surfaces are folded inwards, minimizing contamination risk.

All used cleaning wipes/cloths should be disposed of in a leak-proof waste bag. To minimize contamination of the exterior of the waste bag, place this bag in a second bag or in a rigid waste receptacle designed for this use and wipe it down with an approved hospital-grade disinfectant before removal from the decontamination area. Removal from the decontamination area should be in accordance with Ontario Ministry of the Environment and Climate Change guidelines.

Upon transfer of care of the patient to the ED, paramedics will doff PPE and don fresh PPE prior to commencing deep environmental cleaning and decontamination of the land or air ambulance. Deep environmental cleaning includes, but is not limited to:

- the removal of all dirty/used items (e.g.,. suction container, disposable items)
- the removal of any draping before starting to clean the ambulance
  - if draping is used, what is covered by drapes does not need to be disposed of
- the disposal of anything in the ambulance that was not protected by an impermeable barrier or cannot be cleaned as noted above and in accordance with Ontario Ministry of the Environment and Climate Change guidelines
- the use of hospital-grade single-use wipes (preferred) or microfibre fresh cloths, microfiber mop, supplies and solutions to clean the ambulance
- use of as many wipes/cloths as necessary to clean an ambulance. Use each wipe/cloth one time only.

---

[7] Refer to PIDAC's Best Practices for Environmental Cleaning for Prevention and Control of Infections in all Healthcare Settings for more information.

[8] Waste management and other environmental concerns with respect to management of EVD-related materials will be addressed in a future directive and specific information and direction that supplements or supersedes information on waste management in this directive may be provided.

[9] All hospital-grade disinfectants must have a DIN number.

During the cleaning process:

- do not dip a cloth back into disinfectant solution after use
- do not re-use clothes
- clean and disinfect all surfaces
- allow for the appropriate surface contact time with the disinfectant
- discard all contaminated linens and cloths used during cleaning process
- all other equipment used to clean the ambulance must be cleaned and disinfected before being put back into general use or disposed of
- fluid contaminants must be controlled during the cleaning process to ensure contamination of the cleaning area does not occur (i.e., body fluids such as vomit are not 'hosed out')
- all local processes to control the decontamination process must be followed along with all current environmental policies as well as any guidance that is issued for waste management and disposal.

Cleaning of any vessels used for transport of confirmed EVD patients will be done only by staff who have received training on the equipment and on the cleaning procedures recommended by the manufacturer. In instances where vessels are used, the ambulance must be cleaned and decontaminated as per the above procedures.

Duration of Precautions

For patients with suspected EVD, precautions taken by paramedics shall remain in effect until the suspicion is resolved.

For patients where EVD is still being considered (the patient is still a suspect case) or for confirmed EVD cases, the precautions taken by paramedics shall remain in effect until the land or air ambulance or designated ambulance and personnel have been decontaminated in accordance with the directive and all local policies.

Management of Potentially-Exposed or Exposed Paramedics

Paramedic service providers and first responder service providers shall develop policies for monitoring and management of paramedics or first responders who have had contact with suspect or confirmed EVD patients. Follow-up of paramedics or first responders who have been potentially exposed is the role of the employer and local public health units. The employer shall ensure that the local public health unit is notified of any paramedic involved in the management of a patient with suspected or confirmed EVD.

The notice of occupational illness requirements of Section 52 (2) of the *Occupational Health and Safety Act* are to be adhered to by employers if the employer is advised by or on behalf of a worker that the worker has an occupational illness or that a claim in respect of an occupational illness has been filed with the Workplace Safety and Insurance Board by or on behalf of the worker.

Accidental exposures shall also be reported to the Joint Health and Safety Committee (JHSC).

Persons with percutaneous or mucocutaneous exposures to blood, body fluids, secretions, or excretions from a patient with suspected EVD shall:

1. Stop working.
2. Immediately wash the affected skin surfaces with soap and water (if not possible, use alcohol based hand rub). For mucous membrane splashes (e.g., conjunctiva) irrigate with copious amounts of water or eyewash solution.
3. Immediately notify the ambulance communication centre or Ornge Communication Centre for a second response.
4. Contact the employer.
5. Comply with employer-provided arrangements for transportation to decontamination area.
6. Address the exposure (for example, if the exposure was a result of a breach of the PPE, the breach should be addressed).
7. Follow up with the employer and an appropriate health care provider for post-exposure management for assessment and post-exposure management for blood-borne pathogens as per usual organizational policy.

Note that the sequence of steps may require adjustment depending on the circumstances at the time of exposure.

Paramedics who have been caring for or exposed to an EVD patient, and subsequently develop fever (greater than 38 degrees Celsius) or other symptoms consistent with EVD and within 21 days of last known exposure, shall:

1. Not report to work or immediately stop working and isolate self from others.
2. Notify their employer and local public health unit for further direction.
3. Seek prompt medical evaluation and testing as clinically indicated.
4. Comply with work exclusion as per their local public health unit (PHU) until they are deemed no longer infectious to others.

For asymptomatic paramedics who had an unprotected exposure (e.g., not wearing recommended PPE at the time of patient contact or through direct contact to blood or body fluids) to a patient with EVD:

1. They should receive medical assessment and follow-up care including fever monitoring and monitoring for other symptoms compatible with EVD twice daily for 21 days after the last known exposure.
2. The PHU will conduct daily monitoring for 21 days from the last exposure.
3. They shall not have any patient contact for 21 days following the unprotected exposure. Other proposed activities (which cannot consist of patient care) will be reviewed by public health;

For asymptomatic paramedics with no unprotected exposure but who have cared for a patient with suspected or confirmed EVD (e.g., wearing recommended PPE and with no breach):

1. They should be referred to the PHU for individualized assessment and support.

Communications

EVD can generate extreme media interest. A strategy for internal communications within the organization to reach all staff is important. Easy access to updated policies, procedures, fact sheets and Q and A's geared to varied educational and language levels are examples. Maintaining patient confidentiality in the face of media interest is a challenge. Paramedics should be reminded of their legal responsibilities under the *Personal Health Information Protection Act*, 2004t.

Note that the Ministry of Health and Long-Term Care may activate the Ministry Emergency Operations Centre to coordinate and direct the health system's response in the event of a confirmed case of EVD in Ontario. As part of this coordination, the MEOC will support health system partners, including paramedic service providers, to implement a coordinated communications strategy.

Note: You are also required to comply with applicable provisions of the Occupational Health and Safety Act and its Regulations.

David L. Mowat, MBChB, MPH, FRCPC

Interim Chief Medical Officer of Health

Appendix 1: Training

Employers must ensure that paramedics receive adequate training on the appropriate use and limitations of personal protective equipment (PPE) and other protective measures necessary to protect both paramedics and patients from the risk of Ebola virus disease (EVD). This includes ensuring paramedics who may be exposed to patients with infectious diseases or, their body fluids or materials that may be contaminated are trained and competent in the use of PPE (including donning and doffing in a systematic way consistent with best practices to prevent self-contamination). Employers are responsible for arranging and delivering training within their organizations and may access resources identified below.

The *Occupational Health and Safety Act* (OHSA) has an overall requirement for employers to provide information, instruction, and supervision to a worker to protect the health or safety of the worker. This provision, and the requirement for the employer to take every precaution reasonable in the circumstances for the protection of a worker, applies to all workplaces. Requirements with respect to PPE for paramedics and paramedic services are outlined in the *Basic Life Support Patient Care Standards* (BLSPCS), and other applicable standards, as incorporated by reference in Reg. 257/00 under the *Ambulance Act*.

Training must address the unique needs of paramedics and focus on specific areas of risk associated with various employee groups and job functions. All paramedic staff should be trained, tested and drilled on the use of PPE, including enhanced precautions as described in the directive.

Paramedic services using specialized equipment must be trained, tested and drilled on that equipment.

The employer shall work in collaboration with the Joint Health & Safety Committee (JHSC) and Health & Safety Representative (HSR) (if any), to determine the appropriate measures required to control the risk of infection with EVD, including initial and ongoing training, education and practice.

Types of Training

Training must include the following core areas:

General Awareness training

- Knowledge of EVD (symptoms, mode of transmission, etc.)
- Knowledge of the pre-hospital care setting's emergency preparedness and response plans for EVD (including any hazard-specific plans for EVD)
- Knowledge of health and safety measures and procedures identified in Directive #2 Paramedic Services, as related to individual's work groups and job functions.
- Knowledge of workplace measures and procedures for management of suspected or confirmed EVD cases.

Specific training and demonstrated competency in appropriate and safe use of PPE

- Use of Routine Practices in infection prevention and control (i.e., RPAP as noted previously).

- The selection of appropriate additional precautions, including PPE based on a point of care risk assessment.
- Confidence and proficiency in donning and doffing of PPE (appropriately sized to the individual using it) consistent with organization's protocols.
- Understanding of the strengths and limitations of different pieces of PPE.
- Proper fit and inspection of PPE for damage or deterioration.
- Appropriate disposal of PPE after use.

Hands-On PPE Training, Testing and Frequent Practice

All organizations must ensure that hands-on practical training, testing, and frequent practice on donning and doffing PPE is provided for identified work group or job functions. This training should include best practices for the use of unfamiliar PPE (e.g., observation, refresher training, etc.). Training on PPE must be consistent with both Directive #2 for Paramedic Services and the PPE selected for use by each organization.

All paramedics identified for hands-on practical training must demonstrate competency in performing Ebola-related infection control practices and procedures (as required by their function) and specifically in using the appropriate sequence for donning and doffing of PPE. This competency must be verified by a trained observer/coach and documented as per the procedures below.

Training should be repeated and practiced frequently, with just-in-time refresher training provided in instances of increased risk of exposure to a patient with suspect or confirmed EVD, or that patient's environment, waste, or specimens.

Documentation and Verification of Competency

General Awareness Training for Paramedics:

Organizations must document all training completed by paramedics clearly identifying:

- Type of training
- Employee group or job function
- Name of trainee

Hands-On PPE Training for Identified Work Groups or Job Functions:

Additional documentation is required for paramedics that participate in hands-on PPE training, drills and testing to verify proficiency and competency in donning and doffing PPE.

The first hands-on Ebola PPE training sessions completed by identified paramedics should be documented using a step-by-step checklist, in which core competencies are assessed, verified, and documented for each trainee, by a trained observer/coach.

Follow-up refresher sessions and just-in-time training may also be documented using step-by-step checklists, at the discretion of individual organizations.

Checklists used for training and documentation must be consistent with the PPE recommended in Directive #2 for Paramedic Services and the organization's PPE selected by the individual organizations. A sample checklist will be developed by the Public Service Health and Safety Association (PSHSA) as soon as possible and will be

posted on the Ministry's Ebola website. This checklist may be used and adapted by organizations (while maintaining consistency with Directive #2) to meet their individual needs. Organizations may also develop and use their own tools and checklists.

Reporting

Organizations are responsible for documenting and reporting on the status of all training completed at each Paramedic Service, including:

- Total number staff requiring training (identify specific employee group and type of training)
- Total number of staff received training (identify specific employee group and type of training)
- Total number of outstanding training (identify specific employee group and type of training)

Organizations are responsible for reporting the status of this training on request to the Ministry of Labour and/or the Ministry of Health and Long-Term Care.

Supporting Resources

Organizations may access resources from the following organizations to support their development and delivery of training for paramedics:

- Ministry of Health and Long-Term Care
- Public Service Health & Safety Association
- Infection Prevention and Control Canada

These organizations continue to develop additional resources – please check their websites regularly.

Appendix 2: EVD Screening Tool for Paramedic Services

Initial assessment and management by Paramedic Services of patients recently arrived in Canada from countries/areas affected by Ebola virus disease or with close contact to a case of Ebola virus disease

November 5, 2014

This document is intended to assist in the initial assessment and management of both symptomatic and asymptomatic returning travelers from countries/areas affected by Ebola virus disease (EVD) or those who may have had close contact with a case of EVD. The risk of Ebola virus disease in Ontario is currently very low. Screening practices consist of obtaining a travel and exposure history and assessing for signs and symptoms. Patients should be asked about travel to countries/areas affected by Ebola virus disease in the 21 days before onset of symptoms if symptoms are present, and within the past 21 days if symptoms are not present. Paramedics and first responders dispatched to a suspect EVD case shall follow this advice.

ASSESSMENT

HISTORY QUESTIONS

1. **Travel**: In the past 21 days or within 21 days before symptoms started (if symptoms are present) have you been to any of the following countries/areas?
   - Guinea
   - Sierra Leone
   - Liberia
   - Democratic Republic of the Congo (Equateur Province) .

   YES ☐ **NO ☐**

Note: These countries/areas are current as of October 31, 2014. Please visit the Ministry of Health and Long-Term Care website for updated geographic and other information.

Travel History	Action for Ambulance Communication Centres and Paramedic Services
Yes	Continue to Symptom Questions
No	**Patient is not Suspect EVD** Follow usual paramedic service protocols based on presentation

FEVER OR OTHER SYMPTOMS

2. Symptoms: Are you feeling unwell with symptoms such as:

- Fever of 38°C (101°F) or greater Yes ☐ No ☐
- Feeling feverish Yes ☐ No ☐
- Severe headache Yes ☐ No ☐
- Muscle pain Yes ☐ No ☐
- Unexplained bleeding Yes ☐ No ☐
- Diarrhea Yes ☐ No ☐
- Vomiting Yes ☐ No ☐
- Sore throat Yes ☐ No ☐
- Stomach pain Yes ☐ No ☐

YES to ANY of the above ☐ **NO** to ALL of the above ☐

Travel History	Fever or other symptoms	Action for Ambulance Communication Centres and Paramedic Services
No	No	**Patient is not Suspect EVD** Follow usual paramedic service protocols based on presentation
Yes*	No	**Patient is not Suspect EVD*** Follow usual paramedic service protocols based on presentation
No	Yes**	**Patient is not Suspect EVD**** Follow usual paramedic service protocols based on presentation
Yes	**Yes**	**Patient is referred to as Suspect EVD and as having failed the EVD screening tool** **Proceed to Actions for Ambulance Communication Centres and Paramedic Services Suspect EVD on the following page**

***If a patient has a positive travel history and no symptoms, the information shall be given to responding paramedics by the ambulance communication centre and to the hospital by paramedics and/or the communication centre. The patient will require reassessment by the paramedic on the scene to check for symptoms and reassessment and ongoing monitoring by the hospital and/or public health.**

****** **Ambulance communication centre shall advise responding paramedics of the symptoms**

Travel	Fever or other symptoms	Action for Ambulance Communication Centres and Paramedic Services **Suspect EVD**
Yes	**Yes**	• Communication centres and paramedics shall follow guidance for suspect EVD cases detailed in Directive #2 for Paramedic Services including proactive notification to the anticipated receiving ED • Paramedics shall follow the guidance for suspect EVD cases detailed in Directive #2 for Paramedic services including notification to the anticipated receiving ED following the point of risk assessment. • Isolate the patient from any further direct contact with persons not wearing enhanced PPE. Wrap patient in linen as much as possible to avoid environmental contamination. Transfer patient to the ambulance as soon as possible Paramedics shall follow the revised medical procedures detailed in the most current issue of the Training Bulletin Ebola Virus Disease issued to Paramedic Services by the Emergency Health Services Branch, Ministry of Health and Long Term Care