





Kitsap County EMS and Trauma Care Guidelines for responding to High Risk Infectious Diseases

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The following are guidelines for EMS providers in the event of a Highly Infectious Disease Outbreak and to prepare for the possibility of encountering patients with a High Risk of Infectious Disease (HRID) who have recently traveled outside the United States. In most cases the likelihood of contracting a HRID is extremely low unless a person has direct unprotected contact with the body fluids (*like blood, urine, saliva, feces, vomit, sweat and semen*) of another person infected with HRID. However, precautions should always be taken if there are clinical indications that warrant something other than standard level PPE.

Initial signs and symptoms of HRID could include fever, chills, sore throat, and muscle aches. Diarrhea, nausea, vomiting, and abdominal pain could occur after a few days. Patients are considered most infectious during the later stage of the illness. Other symptoms may include chest pain, shortness of breath, headache. Symptoms often become increasingly severe as the disease progresses, and include confusion, bleeding, shock, and multi-organ failure.

This guidance is appropriate for infectious diseases acquired outside of North American including Middle Eastern respiratory syndrome (MERS), severe acute respiratory syndrome (SARS), other hemorrhagic fevers (i.e. Lhasa fever) and measles; but the focus of this document is on identifying and protecting providers in the case of HRID infections such as Ebola.

Whenever patients present with signs and symptoms of an infectious disease, KITSAP 911 and EMS Personnel should ask about travel history outside of the United States within the previous 30 days. Extra caution, as outlined in the plan that follows, shall be exercised when patient symptoms and a travel history suggest HRID.



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Patient Assessment

KITSAP 911

KITSAP 911 call receivers and EMS personnel should be alert for patients with any of the following symptoms during the interview:

- Fever > 100.4 F
- Headache
- Sore throat
- Muscle aches
- Vomiting
- Diarrhea
- Abdominal pain
- Unexplained (non-traumatic) bleeding

To determine the risk of HRID, KITSAP 911 call receivers shall question callers complaining of any of the above symptoms about their travel history by asking “Have you traveled outside the United States in the past 30 days?” If the caller answers “yes” to this question, they then shall be asked “Where have you traveled in the last 30 days, or have your travel to a foreign country with a known Highly Infectious Disease outbreak in the last 30 days?”

If the patient has any of the above symptoms and a travel history to a known Highly Infectious Disease outbreak region/country in the last 30 days, KITSAP 911 dispatchers shall notify the responding crew of a potential HRID case by sending a message of “Infectious Disease-Travel History.” The responding EMS personnel shall then don the level of PPE indicated by the guidelines below prior to assessing the patient or entering the immediate area of the patient.

Responders

The appropriate level of PPE depends on the risk of exposure:

Degree of Risk	Recommended PPE
No infectious symptoms	Routine PPE: Gloves, eyewear
Infectious Symptoms AND either no travel history OR travel history to a Highly Infectious Disease outbreak in a foreign country but NO high risk of blood/body fluid exposure (e.g. vomiting, diarrhea, bleeding, trauma).	Routine ID PPE: Gown, gloves, eyewear, N95 mask
Infectious symptoms AND travel history to a known Highly Infectious Disease outbreak in a foreign country AND high risk of blood/body	High Risk (High Containment) PPE: Impermeable (TyChem™) Gown, double gloves, eyewear/faceshield, N 95 mask, surgical hood covering head/neck



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fluid exposure (e.g. vomiting, diarrhea, bleeding, trauma)	
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HIGH-RISK - HRID Exposure/Symptoms:

Patient assessment and transport should be provided by those crews who have completed training in the High-Risk PPE HRID infection control procedures whenever possible.

When notified by Kitsap County Public Health of a known patient with exposure to HRID and infectious symptoms that include vomiting, diarrhea, and/or bleeding, the HRID transport vehicle shall be prepared and responding EMS personnel shall don High Risk PPE:

- Gloves
- Impermeable boot covers
- Impermeable suit/gown (i.e. TyChem™)
- N95 or N100 mask
- Eye protection/shield
- Second pair of gloves
- Surgical hood/head covering

Prior to donning High Risk PPE the provider(s) shall remove any jewelry, their uniforms, and don coveralls. Clothing/jewelry, outside of glasses and contact lenses, that are worn while providing patient care in High Risk PPE shall be discarded and destroyed during the doffing/decontamination process. Once the High-Risk PPE has been donned, the PPE shall be checked prior to patient contact to ensure no skin is exposed.

Responding crew will then follow standard infection control procedures. The number of personnel that enter the "Hot Zone" shall be limited to those necessary to provide appropriate patient care (1-2 providers). In general, one member in Routine Infectious Disease PPE should remain outside the "Hot Zone" to be able to monitor for any on scene contamination. If all members of a crew are necessary for patient care, an additional crew should be requested to provide safe decontamination.

REQUEST FOR EMS TRANSPORT FROM A HEALTH CARE FACILITY:

When notified by KITSAP 911 of a patient who has presented to a clinic or urgent care center who has been exposed to a HRID, is symptomatic, who then requires EMS transport, a graded approach may be taken:

- If the patient is at a Harrison Hospital affiliated clinic or Urgent Care Center, or at the Harrison Silverdale ED, a HRID transport vehicle shall be summoned for transport of said patient (currently North Kitsap Fire & Rescue or Olympic Ambulance). Responding EMS providers shall don Routine Infectious Disease PPE and perform a brief initial assessment from a distance of 6 feet from the patient.



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- Urgent Care or Silverdale ED staff already in High Risk PPE shall transport the patient to the Harrison Bremerton ED in the HRID transport vehicle. Kitsap EMS personnel with only become involved in-patient care at the request of the Harrison staff.
- If the patient is at a non-Harrison affiliated clinic, one crew member in Routine ID PPE shall perform an initial assessment from a distance of 6 feet from the patient to acquire travel, exposure history and degree of infectious symptoms.
 - If the patient reports infectious symptoms and a travel history to a known Highly Infectious Disease outbreak country HRID, and vomiting, diarrhea,
 - and/or bleeding, the responding crew member shall back out, summon a prepared HRID transport vehicle and don High Risk PPE.
 - If the patient does not have travel or exposure history, EMS may transport the patient according to routine infection control procedures.

LOW TO MODERATE RISK: Infectious Symptoms- Travel History

When notified by KITSAP 911 dispatchers of a patient with “*Infectious Symptoms-Travel History*” or when responding to a patient dispatched as “*unknown medical*” or a patient with infectious symptoms but an unknown travel history, responders should adopt a cautious assessment approach.

- One crew member in Routine Infectious Disease PPE shall perform an initial assessment from a distance of 6 feet from the patient to acquire travel history and conduct known exposure questioning.
- If the patient reports any of the above symptoms and a travel history to a known Highly Infectious Disease outbreak country known exposure to HRID and vomiting, diarrhea, and/or bleeding, to responding EMS personnel, the responding EMS personnel are to back out, summon a prepared HRID transport vehicle and don High Risk PPE prior to further patient assessment and care
- If the patient does not have a travel or exposure history, EMS may transport the patient according to routine infection control procedures.

Transport/Reporting

A vehicle shall be prepared for the transport of a known/suspected HRID patient. The vehicle will have a cache of High-Risk PPE, and will have their cabins and patient care areas prepared for the care of an HRID patient as well as for decontamination after care.

After on scene assessment is complete, the Duty Chief shall summon the vehicle designated by their agency for transport of a known/suspected HRID patient. This will be done via a phone call to KITSAP 911. All communications at this point between the on-scene personnel, KITSAP 911, the HRID transport vehicle, and the receiving hospital, will be conducted by phone to minimize radio traffic. Once the HRID transport vehicle is on scene, responding EMS providers shall don the High-Risk PPE.

The on-duty Battalion Chief is to contact Kitsap County Public Health at (360) 337-5235 and convey any special handling or transfer of care instructions to the EMS crew.



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EMS providers shall notify Base Station medical control at Harrison Medical Center as early as possible, prior to transport, to provide the maximum time to prepare for the arrival of the patient.

Treatment

For a patient with high risk of HRID, pre-hospital care should be limited to assessment and transport whenever possible.

- ALS indicators include: altered mental status; RR>30/min; signs and symptoms of shock (e.g. HR>120, SBP<90). ALS interventions are to be limited to administration of oral/sublingual medications (e.g. anti-emetics). IVs are only to be placed in the patient with signs of shock and transport time over 20 minutes.
- Patients with severe symptoms are to be considered DNR/DNI

Routine Infectious Disease – Infectious symptoms but either NO travel or known exposure OR travel history but NO vomiting, diarrhea, and/or bleeding:

If the patient has infectious symptoms but does NOT have a history of travel to a known Highly Infectious Disease outbreak country within the last 30 days, or any other known HRID exposure, OR has a travel history but NO vomiting, diarrhea and/or bleeding, responding EMS personnel are to follow routing infectious control procedures and don routine ID PPE:

- 2 pairs of gloves
- N95 or N100 mask
- Gown
- Eye protection/face mask

Decontamination

The risk of contracting HRID for EMS providers appears to be the highest when removing (doffing) PPE. Special decontamination procedures shall be initiated when EMS responders have had contact with a high risk HRID patient. Decontamination of EMS personnel should be completed at the receiving hospital following their specific decontamination procedures. All PPE and medical waste from the incident shall be disposed of at the receiving hospital according to their specific protocol.

Decontamination procedures are similar to procedures used when removing Hazmat suits. Additional personnel may be needed to perform appropriate decontamination. Decontamination procedures shall be completed prior to returning to service.

The vehicle used in the transport of suspected HRID patients shall be decontaminated using a viricidal agent according to CDC guidelines.



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Contact/Exposure

All involved EMS crew members shall document “contact” with a suspected HRID patient. It is recommended that crew members involved in the care of a suspected HRID patient wait in a designated area at the receiving hospital until test results return. If the suspected patient is confirmed positive for HRID, the MSO/infection control officer shall create a roster of all members with contact and share this with Kitsap County Public Health. All members of this roster shall be monitored for fever for 21 days post patient contact.

High risk exposure is defined as direct contact with blood, body fluids, secretions or excretions of a person with HRID to mucous membranes, non-intact skin or through needle stick.

- If an exposure occurs, stop working immediately and wash the affected skin surface with soap and water or any available disinfectant
- Irrigate any exposed mucous membranes copiously
- Immediately notify supervisor
- Complete the full decontamination procedure

EMS Personnel who are exposed to HRID shall be transported to the designated receiving hospital for evaluation and follow up care. Follow up care can include monitoring for 21 days, with twice daily checks for fever and infectious symptoms. They are not considered contagious unless fever develops during the monitoring period. Guidelines for monitoring will be followed as directed by each agency’s MSO/infection control officer who shall follow the advisement of the Department of Health and the CDC.

Providers who have been involved in the transport of a confirmed HRID patient, but who have not suffered any exposure to that patient’s blood or bodily fluids, may be considered low risk and may return to normal duty

Providers who have been involved in the transport of a confirmed HRID patient and who have suffered a potential/actual exposure should be restricted from patient care activities until they have completed the required 21-day monitoring period.

I. Procedure:

A. Once a person in crisis has been identified and there is intent to transport that patient to an alternate destination, a detailed history and physical exam will be performed. The elements of that history and physical will be documented on the patient care report (PCR).

B. The patient will need to meet the inclusion and exclusion criteria for an alternate destination.

1. Inclusion

- a. Age less than or at 55 years old
- b. No serious chronic medical conditions
- c. Not taking medications that require laboratory monitoring



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- d. Blood pressure less than 210/120

2. Exclusion

- a. Overdose in last 12 hours
 - b. Current withdrawal from drugs or alcohol
 - c. First time delirium or psychosis
- C.** Contact intended center early to determine if the facility can accept the patient.
- 1. If the intended facility cannot accept the patient, transport to nearest appropriate
 - a. Emergency Department
- D.** Complete PCR for the patient and provide it to the center within 24 hours.