

Viral Hemorrhagic Fever (VHF) Clinical Risk Assessment Tool

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Patient Information Label (if used)

Last Name:

First Name:

Health Card No.: Date of Birth
(yyyy-mm-dd):

Background on VHF

- Viral Hemorrhagic Fever (VHF) is a serious disease caused by viruses (e.g., Ebola, Marburg, and Lassa) that can damage blood vessels, leading to unexplained bruising and bleeding and, in some instances, severe life-threatening illness due to internal hemorrhage, organ failure, and death.
- Viruses that cause VHFs are primarily transmitted through direct contact with blood, body fluids, or waste (e.g., saliva, vomit, urine, or feces) of an infected person. They can also spread through contact with contaminated objects (e.g., medical equipment) or direct or indirect exposure to infected animals (e.g., rodents, primates, including handling or consuming bushmeat)
- Ebola, Marburg, and Lassa viruses circulate in defined endemic regions in West and Central Africa.

Purpose of this tool

The purpose of this tool is to support clinicians in conducting a **detailed risk assessment** for VHF, including assessment of a compatible clinical presentation, travel history to areas with known endemic VHF or suspected/confirmed outbreaks, and relevant potential exposures to a VHF agent within the 21-day incubation period prior to symptom onset.

Clinicians should use this tool to support risk-informed decision making regarding VHF suspicion integrating the clinical, travel history, and exposure risk assessments.

Immediate actions if you suspect your patient may have a VHF

- Immediately implement Public Health Ontario's [recommended IPAC measures](#) for patients with a suspect or confirmed VHF, including routine practices plus droplet and contact precautions with additional personal protective equipment (PPE) (as outlined on [page 5](#)), dedicated patient placement, dedicated care equipment, essential/dedicated staffing considerations, environmental cleaning, and Category A waste management.
- Defer drawing blood for VHF or any other testing until after discussion with the Ministry of Health (see below), as additional precautions are required for specimen collection, laboratory processing, and transport, unless appropriate VHF protocols are already established and in place at the institution. If blood work has already been collected or sent prior to VHF being considered, notify the laboratory immediately that VHF is on the differential diagnosis so that appropriate biosafety precautions can be implemented without delay.
- Consult your hospital or local Infection Prevention and Control (IPAC) team/hub, where available.
- Consult an Infectious Diseases physician for a secondary assessment, if required and where available.
- **If suspicion for VHF remains after completion of the detailed VHF risk assessment, proceed with the following next steps:**
 - Notify, by telephone the Ministry of Health's Health Systems Emergency Management Branch (HSEMB) via the 24/7 Health Care Provider Hotline (1-866-212-2272 ext. 1). HSEMB will review the completed risk assessment and support decision-making regarding testing
 - Notify, by telephone your local public health unit (PHU) using the [PHU locations website](#).
 - Review the Ministry of Health's [Notification Pathway for Special Pathogens \(SPs\)](#) for more information.

VHF Symptom Risk Assessment

1 - Does the patient currently have, or have they had at least one main sign or symptom consistent with a VHF? (check all that apply)

Documented Temperature
≥ 38.0°C

Subjective fever or chills

Any hemorrhagic manifestation

petechial or purpurral rash, ecchymoses (easy bruising), conjunctival injection or bleeding (eye redness or hemorrhage)

epistaxis (nosebleeds), gingival bleeding (bleeding gums), hemoptysis (coughing up blood)

hematemesis (vomiting blood), melena or hematochezia (dark, tarry, or bloody stools)

Other Specify:

Chest pain

Headache

Conjunctivitis

Nausea

Cough

Intense fatigue

Abdominal pain

Vomiting

Sore throat

Myalgia (body aches)

Weakness

Diarrhea

What is the patient's current clinical condition?

Stable

Unstable

Deceased

What is the patient's current clinical course?

Improving

No change

Deteriorating

Has an alternative diagnosis been confirmed to explain the patient's clinical presentation?

Yes If yes, specify:

No

Unsure

Has routine bloodwork already been performed?

Yes

If yes, specify:

Abnormal

No

Normal

Note: If blood work has not already been performed, defer specimen collection for VHF or any other testing until suspicion for VHF has been ruled out.

VHF Travel History Assessment

Refer to Public Health Ontario's [VHF Landing Page](#) for a list of areas with confirmed outbreaks or activity in VHF-endemic regions that exceeds expected seasonal and historical ranges.

Note: Consider use of aids to improve accuracy of the travel history assessment, including professional interpreters (if required and available) and maps to help patients identify exact locations visited.

2 - In the 21 days prior to symptom onset, did the patient travel to an area of a country:

- | | | | |
|--|-----|----|--------|
| • Known to be endemic for a VHF agent, or | Yes | No | Unsure |
| • With a suspected or confirmed VHF outbreak | | | |

If Yes or Unsure:

Type of travel
(select all that apply)

Worked	Visited	Other	Specify:
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Setting
(select all that apply)

Urban	Rural	Remote
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Locations of travel:

Dates of travel:

Start date:	Return date:	Country:	Province / State / Region / District	City / Town / Village / Community
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Other relevant travel information:

VHF Exposure Risk Assessment

3 - In the 21 days prior to symptom onset, did the patient have any of the following potential exposures to a VHF agent? (Check all that apply in Sections 1 and 2)

Section 1 - Patient had any of these general VHF exposure risks:

Close, direct contact with the blood or other body fluids of a person confirmed or suspected to have a VHF including:

- Household contacts (including breastfed infants)
- Sexual contacts
- Healthcare or laboratory workers
- Persons handling the bodies of the deceased such as funeral director / attendees and morgue workers

Close, direct contact with a person who has signs or symptoms of a VHF?

Was a patient, healthcare provider or volunteer in a hospital or medical clinic in an area known to be endemic for a VHF agent or with a suspected or confirmed VHF outbreak?

Other exposure Specify risk:
(e.g., attended funeral / burial,
attended large / mass gatherings)

AND/OR

Section 2 - Patient had any of these animal associated VHF exposure risks in endemic areas

Contact with an animal during a slaughtering practice?

Consumption and/or handling of bushmeat? [Ebola, Marburg]

Contact with a non-human primate (e.g., monkeys and apes)? [Ebola, Marburg]

Contact with a bat or visiting a cave / mine where cave-dwelling bats reside? [Ebola, Marburg]

Contact with a rodent or rodent excrement (e.g., inhaled particles while cleaning rodent excrement, consumption of potentially contaminated food and water)? [Lassa]

Other direct or Specify risk:
indirect animal
exposure

Actions: Patient is suspected of having a VHF

In assessing a patient with compatible symptoms, relevant travel history, and potential exposure(s), if you suspect that your patient has a VHF it is strongly recommended that you take the following actions:

1. Immediately implement [Public Health Ontario's IPAC Management of VHF in Acute Care](#) recommended measures, for patients with a suspect or confirmed VHF including:
 - Place patient in a single room (door to remain closed) with a dedicated washroom. Consider using Airborne Infection Isolation Room (AIIR) if the patient symptoms are worsening
 - Implement routine practices plus droplet and contact precautions with additional PPE as outlined below based on patient clinical status. Recommend using Airborne Precautions if patient requires invasive or aerosol generating procedures (e.g., intubation, suctioning, active resuscitation) or exhibiting signs of VHF pneumonia or has a differential diagnosis of tuberculosis, varicella or measles
 - Dedicated patient care equipment to the room or use of disposable equipment (where possible),
 - Essential/dedicated staffing considerations
 - All staff entering the room must wear appropriate PPE, with requirements based on patient clinical status, as outlined below:
 - **Stable suspect cases (e.g. stable vital signs, contained body fluids):**
 - A well-fitting fluid-resistant medical mask ([ASTM level 2 and level 3](#))
 - Disposable full-face shield
 - Disposable fluid-resistant cuffed-sleeve gown that covers to mid-calf ([CSA or AAMI level 2 or 3 standards](#))
 - Gloves with extended cuffs to pull over gown cuffs.
 - **Unstable suspect cases (e.g. abnormal vital signs, uncontained fluids) or confirmed cases both require enhanced PPE:**
 - A fit-tested, seal-checked N95 respirator or powered air purifying respirator (PAPR)
 - Disposable full-face shield
 - Fluid-resistant or impermeable hair/head/neck covering
 - Either an impermeable long-sleeved, cuffed gown that covers to mid-calf and fluid resistant/ impermeable shoe cover with/plus gaiters that come up to the knee **OR** an impermeable coverall and fluid resistant/ impermeable shoe covers/integrated sock (apron can be worn if coverall has zipper on the front) ([CSA or AAMI level 4 standard](#))
 - Double gloves (outer gloves with extended cuffs to pull over gown cuffs)

*Staff must be trained in donning and doffing PPE for VHF. A trained observer should monitor compliance with PPE donning and doffing, and actively observe for and promptly address any breaches in PPE use.
2. Defer drawing blood for VHF or any other testing until after discussion with the Ministry of Health (see below), as additional precautions are required for specimen collection, laboratory processing, and transport, unless appropriate VHF protocols are already established and in place at the institution. If blood work has already been collected or sent prior to VHF being considered, notify the laboratory immediately that VHF is on the differential diagnosis so that appropriate biosafety precautions can be implemented without delay.

3. Consult your hospital or local IPAC team/hub, where available.
4. Consult an Infectious Diseases physician for a secondary assessment, if required and where available.
5. If suspicion for VHF remains after completion of the detailed VHF risk assessment, proceed with the following next steps:
 - Notify, by telephone the Ministry of Health's Health Systems Emergency Management Branch (HSEMB) via the 24/7 Health Care Provider Hotline (1-866-212-2272 ext. 1). HSEMB will review the completed risk assessment and support decision-making regarding testing
 - Notify, by telephone your local public health unit (PHU) using the PHU locations website..
 - Review the Ministry of Health's [Notification Pathway for Special Pathogens \(SPs\)](#) for more information

Before notifying the Ministry of Health and your local public health unit, please collect as much of the following patient information (as below) to help inform decision making. Note that information can be collected remotely (e.g., via phone or video call with patient)

- **Patient status**

- Current location of the patient
- Clinical condition and stability (e.g., stable/unstable, deteriorating, hospitalized, deceased)

- **Clinical information**

- Clinical presentation (symptoms, onset, progression, severity)
- Differential diagnoses
- Relevant medical history
- Immunocompromised status
- Travel-related prophylaxis (e.g., Hepatitis A and B vaccination status, Malaria prophylaxis)

- **Travel history**

- Country(ies) visited and specific locations (e.g., province / state / region / district, city / town / village)
- Dates of travel

- **Contact and exposure history**

- **Associated persons (if known)**

- Number and status of other travelers, household members, or close contacts
- Any symptoms or diagnoses among contacts

DO NOT include personal identifiers or personal health information during notification (e.g., name, date of birth, health card number)

Actions: Patient is not suspected of having a VHF

After completing the full risk assessment, VHF is not suspected in situations such as:

- There is no relevant exposure to a VHF agent, including:
 - No contact with a known or probable VHF case
 - No contact with a symptomatic individual with a compatible illness and epidemiologic risk
 - No exposure to high-risk settings (e.g., healthcare settings, laboratories, or funeral practices involving a suspected VHF case)
- There is no relevant travel history, including:
 - No travel to an affected outbreak area within the past 21 days
 - Travel to a country with VHF activity but not to an affected region

Next Steps

1. Manage according to the most likely diagnosis, using Routine Practices and any additional precautions as indicated.
2. Notification to the Ministry of Health's Health Systems Emergency Management Branch (HSEMB) is **NOT REQUIRED**.
3. If another disease of public health significance is suspected or confirmed, please notify your local public health unit as per the [Health Protection and Promotion Act, R.S.O. 1990, c. H.7, s. 25 \(1\)](#).
4. If the patient's clinical presentation changes or if new information becomes available that identifies a potential risk for VHF (e.g., updated travel history or exposure risk), repeat the VHF risk assessment as clinically indicated.

Additional clinical notes:

Clinician Full name (printed):

Clinician's Signature:

Date signed (yyyy-mm-dd):

Resources:

Public Health Ontario monitors VHF activity worldwide and lists unexpected activity in VHF endemic areas and on VHF outbreaks declared by the World Health Organization on its [VHF Landing Page](#).

Additional information on current VHF outbreaks and endemic VHF-agent areas may be found at:

1. World Health Organization (WHO). Disease outbreak news (DONs) [Internet]. Geneva: WHO; 2025 [cited 2025 Jun 11]. Available from: <https://www.who.int/emergencies/disease-outbreak-news>
2. Government of Canada. Travel health notices [Internet]. Ottawa, ON: Government of Canada; 2024 [modified 2024 Aug 22; cited 2025 Jun 11]. Available from: <https://travel.gc.ca/travelling/health-safety/travel-health-notice>

Additional information regarding VHF:

3. Ontario Agency for Health Protection and Promotion (Public Health Ontario). Viral hemorrhagic fevers (VHFs) - test information [Internet]. Toronto, ON: King's Printer for Ontario; 2026 [cited 2026 Apr 9]. Available from: <https://www.publichealthontario.ca/en/laboratory-services/test-information-index/vhf-diagnostic-serology>
4. Ontario Agency for Health Protection and Promotion (Public Health Ontario). Diagnostic testing for viruses that cause hemorrhagic fevers [Internet]. Toronto, ON: King's Printer for Ontario; 2026 [cited 2026 Apr 9]. Available from: https://www.publichealthontario.ca/-/media/Documents/Lab/vhf-diagnostic-testing.pdf?sc_lang=en
5. Ontario Agency for Health Protection and Promotion (Public Health Ontario). Infection prevention and control management of viral hemorrhagic fever in acute care Toronto, ON: King's Printer for Ontario; 2025 [cited 2026 Apr 09]. Available from: <https://www.publichealthontario.ca/-/media/Documents/V/26/vhf-ipac-acute-care.pdf?>

Other resources:

6. Ontario. Ministry of Health. Notification pathway for special pathogens (sps) [Internet]. Toronto, ON: King's Printer for Ontario; 2025 [cited 2026 May 21]. Available from: <https://www.ontario.ca/page/ministry-health-emergency-management-plans-and-strategies#section-4>
7. Ontario. Ministry of Health. Infectious disease protocol. Appendix 1: case definitions and disease specific information. Disease: viral hemorrhagic fevers caused by i) Ebola virus, ii) Marburg virus, iii) Lassa virus, or (iv) other viral agents including arenaviruses, bunyaviruses, filoviruses, and flaviviruses. Effective: September 2025 [Internet]. Toronto, ON: King's Printer for Ontario; 2025. Available from: <https://www.ontario.ca/files/2025-09/moh-ophs-viral-hemorrhagic-fevers-en-2025-09-09.pdf>
8. Ontario. Ministry of Health. Public health unit locations [Internet]. Toronto, ON: King's Printer for Ontario; 2023 [updated 2026 May 20; cited 2026 May 21]. Available from: <https://www.ontario.ca/page/public-health-unit-locations>

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