Viral Hemorrhagic Fever (VHF) Clinical Risk Assessment Tool

Public Health Ontario | Santé publique Ontario

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Background on VHF

- Viral Hemorrhagic Fever (VHF) is a serious disease caused by viruses (e.g., orthoebolaviruses, Marburg virus, and Lassa virus) 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.
- Orthoebolaviruses, Marburg virus, and Lassa virus are endemic to defined regions in West and Central Africa.
- 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).

Purpose of This Tool

This tool is not intended for screening.

The purpose of this tool is to support clinicians in conducting a **comprehensive clinical risk assessment** for VHF including evaluation of the patient's clinical presentation, travel to areas with endemic VHF or suspected / confirmed outbreaks, and relevant exposures within 21 days of symptom onset. A positive response in a single section should not be used on its own to indicate VHF suspicion. Clinicians should base decisions regarding VHF suspicion on the overall clinical risk assessment.

Immediate Actions if You Suspect Your Patient May Have a VHF

The following is a summary of immediate actions to take if a clinician suspects a patient may have a VHF. More detailed instructions on these immediate actions are available on pages 6-8.

- Immediately implement Public Health Ontario's Infection Prevention and Control (IPAC) Recommendations for Preventing VHF Transmission in Acute Care. These measures include Routine Practices plus Droplet and Contact Precautions with additional personal protective equipment (PPE) (as outlined on page 6), dedicated patient placement, dedicated care equipment, essential/dedicated staffing considerations, environmental cleaning, and Category A waste management.
- Consult your hospital or local IPAC team/hub, where available.
- Bloodwork for VHF and other laboratory testing should be carefully considered, and where appropriate, deferred until consultation has occurred.
    - Additional measures are required for specimen collection, laboratory processing, and transport.
    - If blood work for routine diagnostic testing has already been collected or sent prior to VHF being considered, notify the laboratory that provides routine diagnostic services to your institution **immediately** that VHF is on the differential diagnosis so that appropriate biosafety precautions can be implemented without delay.
- Complete a comprehensive clinical risk assessment for VHF using this tool and gather as much information as possible from the patient and/or their family, friend(s), or caregiver(s) where appropriate.
- Consult an Infectious Diseases (ID) physician for a secondary assessment, if required and where available.
- **If suspicion for VHF remains after completion of the comprehensive clinical risk assessment and following consultation with an ID physician (if available), 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.

Patient Information Label (if used)

Last Name: _____ Health Card No.: _____

First Name: _____ Date of Birth (yyyy-mm-dd): _____

VHF Clinical Presentation Assessment

Date of first symptom onset (yyyy-mm-dd): _____

Does the patient currently have, or have they had at any time since their symptoms began at least one sign or symptom consistent with a VHF? (check all that apply)

- ☐ Fever: Temperature ≥38.0°C / ≥100.4°F
  - ☐ Documented in a clinical setting
  - ☐ Measured by patient
- ☐ Subjective fever or chills (patient reported)
- ☐ Any hemorrhagic manifestation
  - ☐ Petechial or purpuric rash
  - ☐ Ecchymoses (easy bruising)
  - ☐ Gingival bleeding (bleeding gums)
  - ☐ Hematemesis (vomiting blood)
  - ☐ Conjunctival injection or bleeding (eye redness)
  - ☐ Epistaxis (nosebleeds)
  - ☐ Hemoptysis (coughing up blood)
  - ☐ Melena or hematochezia (dark, tarry, or bloody stools)
  - ☐ Other unexplained hemorrhage / bleeding — Specify: _____

☐ Chest pain	☐ Headache	☐ Conjunctivitis	☐ Nausea
☐ Cough	☐ Fatigue, Malaise, Lethargy	☐ 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 ☐ No ☐ Unsure

If yes, specify: _____

Has routine bloodwork already been performed? ☐ Yes ☐ No

If yes, specify: ☐ Abnormal ☐ Normal

Notes:

- Bloodwork for VHF and other laboratory testing should be carefully considered, and where appropriate, deferred until consultation has occurred.
- If blood work routine diagnostic testing has already been collected or sent prior to VHF being considered, notify the laboratory that provides routine diagnostic services to your institution **immediately** that VHF is on the differential diagnosis so that appropriate biosafety precautions can be implemented without delay.

Additional questions on next page →

VHF Travel History Assessment

It is essential to obtain a detailed and precise travel history, including specific locations (e.g., city/town and region/province), as country-level travel alone does not adequately capture exposure risk. Granular geographic information is necessary to assess proximity to known endemic or outbreak areas and to support a comprehensive risk 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.

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 ☐ Yes ☐ No ☐ Unsure

or

With a suspected or confirmed VHF outbreak ☐ Yes ☐ No ☐ Unsure

If Yes or Unsure:

Type of travel
(select all that apply) ☐ Worked ☐ Visited ☐ Other Specify:

Setting
(select all that apply) ☐ Urban ☐ Rural ☐ Remote

2026 Ebola outbreak in the Democratic Republic of Congo (DRC) and Uganda

In May 2026, an Ebola disease outbreak caused by Bundibugyo ebolavirus was declared in the DRC and Uganda.

Refer to the **Appendix** of this tool (see page 11) for a list of outbreak affected areas/regions in the DRC and Uganda. Consider using the map in the Appendix to improve accuracy of the travel history assessment by having the patient identify exact locations visited.

Note: Effective May 31 to August 29, 2026, the Government of Canada requires all asymptomatic individuals who have been in the DRC, Uganda, or South Sudan within the previous 21 days to quarantine for 21 days upon arrival in Canada. While this applies to travellers from South Sudan, no suspected or confirmed Ebola disease cases have been reported there as of the date of publication (see page 1).

Did the patient report that they are currently under a federal quarantine requirement due to recent travel to the Democratic Republic of the Congo (DRC), Uganda, or South Sudan? ☐ Yes ☐ No ☐ Unsure

If yes, country of travel in the past 21 days
(check all that apply): ☐ DRC ☐ Uganda ☐ South Sudan

Additional questions on next page →

Dates of travel:

Start date:	Return date:	Country:	Province / State / Region / District	City / Town / Village / Community

Other relevant travel information:

Additional questions on next page →

VHF Exposure Risk Assessment

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

Section 1 - General VHF exposure risks:

☐ Patient had 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

☐ Patient had close, direct contact with a person who has signs or symptoms of a VHF

☐ Patient 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

☐ Patient had another relevant exposure

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

AND/OR

Section 2 - Animal associated VHF exposure risks in endemic areas

☐ Patient had contact with an animal during a slaughtering practice

☐ Patient consumed and/or handled bushmeat [Orthoebolaviruses, Marburg virus]

☐ Patient had contact with a non-human primate (e.g., monkeys and apes) [Orthoebolaviruses, Marburg]

☐ Patient had contact with a bat or visited a cave / mine where cave-dwelling bats reside [Orthoebolaviruses, Marburg]

☐ Patient had contact with a rodent or rodent excrement (e.g., inhaled particles while cleaning rodent excrement, consumption of potentially contaminated food and water) [Lassa virus]

☐ Patient had another direct or indirect animal exposure

Specify risk:

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 an Airborne Infection Isolation Room (AIIR) to accommodate potential clinical changes.
   - Implement Routine Practices plus Droplet and Contact Precautions with additional PPE as outlined below based on patient clinical status. Recommend using Airborne (in addition to Droplet and Contact Precautions) if patient requires invasive or aerosol generating procedures (e.g., intubation, suctioning, active resuscitation) or is exhibiting signs of VHF pneumonia or has a differential diagnosis of tuberculosis, varicella or measles.
   - Dedicate patient care equipment to the room or use 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. **Consult your hospital or local IPAC team/hub, where available.**
3. **Bloodwork for VHF and other laboratory testing should be carefully considered, and where appropriate, deferred until consultation has occurred**
    - Additional measures are required for specimen collection, laboratory processing, and transport.
    - If blood work for routine diagnostic testing has already been collected or sent prior to VHF being considered, notify the laboratory that provides routine diagnostic services to your institution immediately that VHF is on the differential diagnosis so that appropriate biosafety precautions can be implemented without delay.
4. **Complete a comprehensive VHF risk assessment and gather as much information as possible. Key considerations when completing the assessment include:**
    - Complete the assessment before Ministry notification: Complete this comprehensive risk assessment tool in full and gather as much relevant history as possible before notifying the Ministry of a patient with suspect VHF.
    - Obtain information from multiple sources: Collect details from the patient and, if needed, from family members, friend(s), or other caregiver(s), where appropriate.
    - Obtain a detailed, granular travel history: Document specific locations (e.g., city, region, health facility, or setting visited), dates, and activities, as country-level travel alone is not specific enough to accurately assess risk. Use the map provided in the appendix of this tool to pinpoint the location of travel.
    - Facilitate patient communication: If feasible, provide the patient with a communication device (e.g., their own cell phone, phone in the room, video-based communication) to support information gathering.
    - Use clear, simple language: Ask questions in plain language to ensure they are easily understood.
    - Account for language barriers: Arrange interpretation or translation support where needed to ensure accurate history-taking.
    - Be mindful of cultural context: Recognize that cultural norms and expectations may influence responses.
    - Ask questions in different ways: Rephrase or revisit questions to clarify responses and improve accuracy.
5. **Consult an Infectious Diseases (ID) physician for a secondary assessment, if required and where available.**
6. **If suspicion for VHF remains after completion of the comprehensive clinical risk assessment and following consultation with the ID physician (if available), 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: Patient information can be collected remotely (e.g., via phone or video call with patient) to reduce potential exposure risks to health care workers.

- **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

Note: When reporting a suspicion for VHF in a patient to the Ministry of Health, DO NOT include personal identifiers or personal health information during notification (e.g., name, date of birth, health card number)

Additional questions on next page →

Actions: Patient is not suspected of having a VHF

After completing the full detailed risk assessment, a clinician may determine that VHF is not suspected in situations such as:

- **No relevant exposure to a VHF agent,** including:
  - No contact with a probable or confirmed 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 or confirmed VHF case)
- **No relevant travel history**, including:
  - No travel to an affected outbreak area in the 21 days prior to symptom onset
  - Travel to a country with VHF activity but not to a region with known or active transmission

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-notices

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

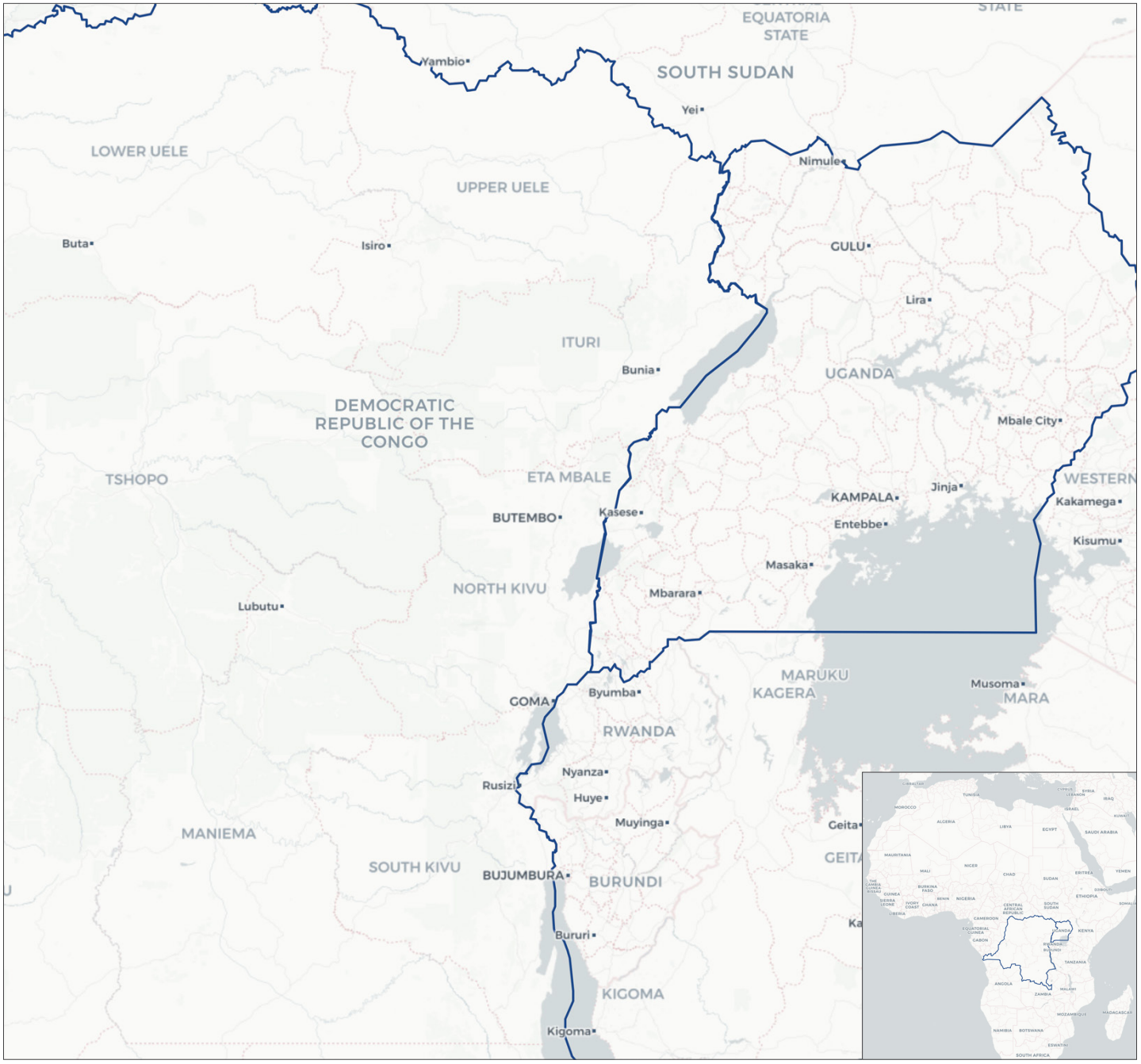
Citation: Ontario Agency for Health Protection and Promotion (Public Health Ontario). Viral hemorrhagic fever (VHF) symptom and exposure risk assessment for clinician use. Toronto, ON: King's Printer for Ontario; 2026.

For more information, visit publichealthontario.ca.

Ontario

Appendix: 2026 Ebola outbreak in the Democratic Republic of the Congo (DRC) and Uganda

- The World Health Organization has confirmed an Ebola disease outbreak in the following locations:
  - **DRC:** Ituri, North Kivu, and South Kivu Provinces (*evidence of local transmission*). Within these provinces, certain health zones are more affected than others.
  - **Uganda:** Kampala District (*evidence of limited local transmission*).
- No suspected or confirmed Ebola disease cases have been reported in South Sudan at the date of publication (see page 1).
- From May 31 to August 29, 2026, the Government of Canada requires all asymptomatic individuals who have been in the DRC, Uganda, or South Sudan within the previous 21 days to quarantine for 21 days upon arrival in Canada.



Source: World Health Organization (WHO), Regional Office in Africa (AFRO). Geocollaborative Health Emergency Management (Geo-HEM) platform: data surveillance map [Internet]. Brazzaville: WHO AFRO; 2026 [extracted 2026 June 5; cited 2026 May 28]. Available from: https://geohemp.afro.who.int/ebola#