ASEAN BIODIASPORA VIRTUAL CENTER | DISEASE ALERT

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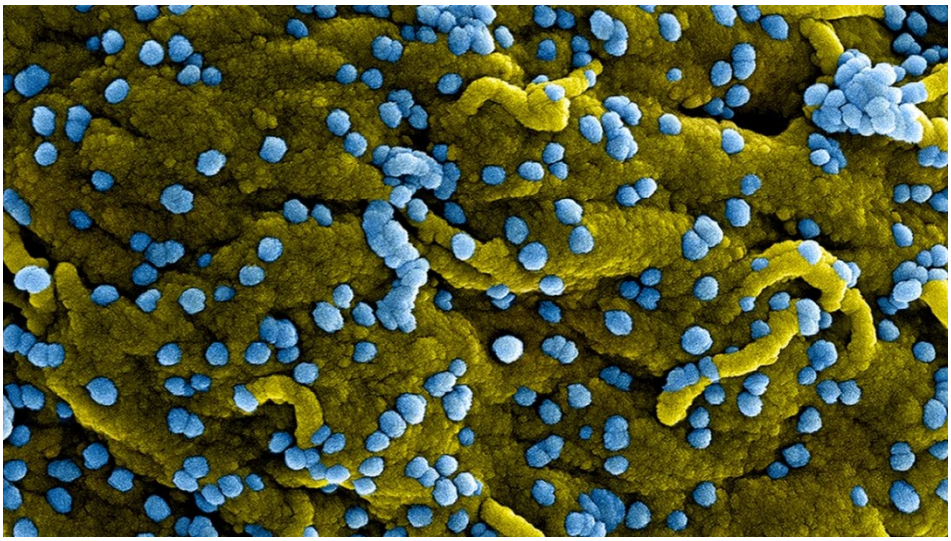
Third alert: 23 October 2024 | # Marburg Virus Disease in Rwanda

SUB-LOCATIONS AFFECTED

Eastern Province (Gatsibo District, Nyagatare District), Kigali Province (Gasabo District, Kicukiro District, Nyarugenge District), Southern Province (Kamonyi District), Western Province (Rubavu District)



Source: https://www.cnn.com/2024/09/30/health/marburg-virus-rwanda-outbreak-disease/index.html

Event Description

The Rwanda Marburg virus outbreak has affected 62 people as of October 17, 2024, with 15 fatalities, representing a 24.2% case fatality rate. Forty-three patients have recovered from the disease. Health authorities are actively monitoring over 800 potential contacts as of October 14. To assist with the outbreak response, WHO dispatched a specialized team in October to provide comprehensive support, including expertise in outbreak management, disease surveillance, healthcare operations, patient care, logistics, vaccine research, coordination between partners, and infection control measures.

Epidemiological Information

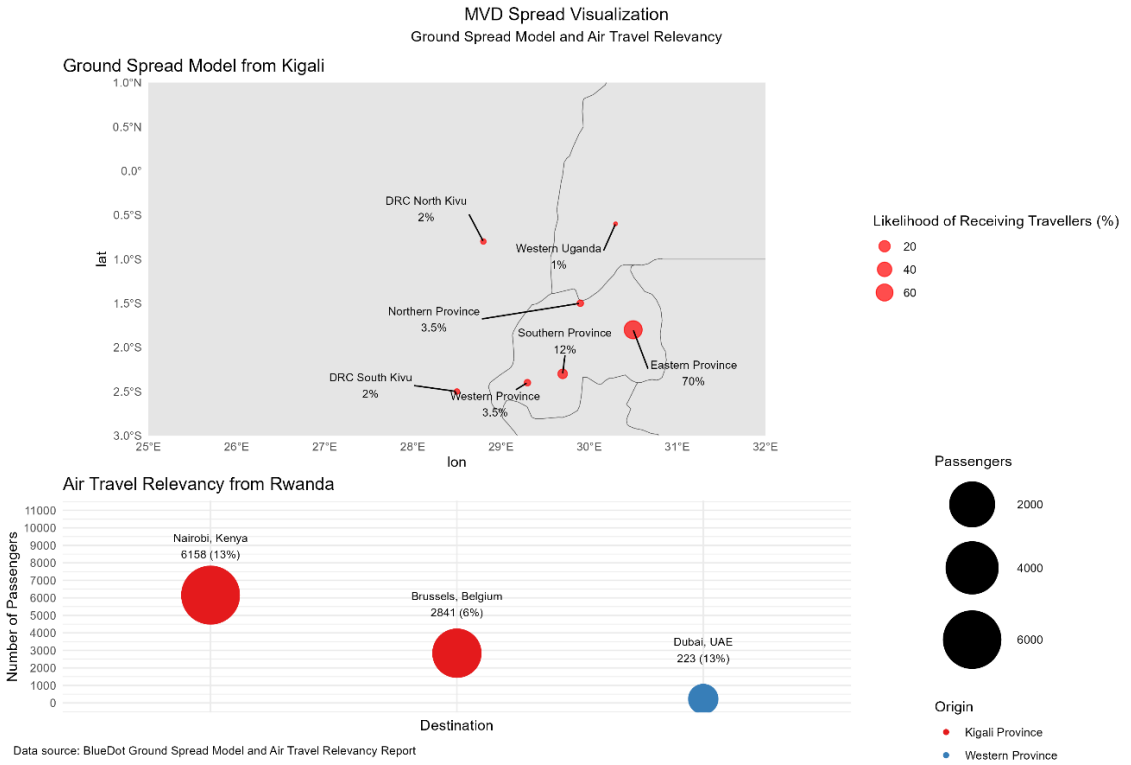


Figure 1. Marburg Virus Disease Spread Visualization

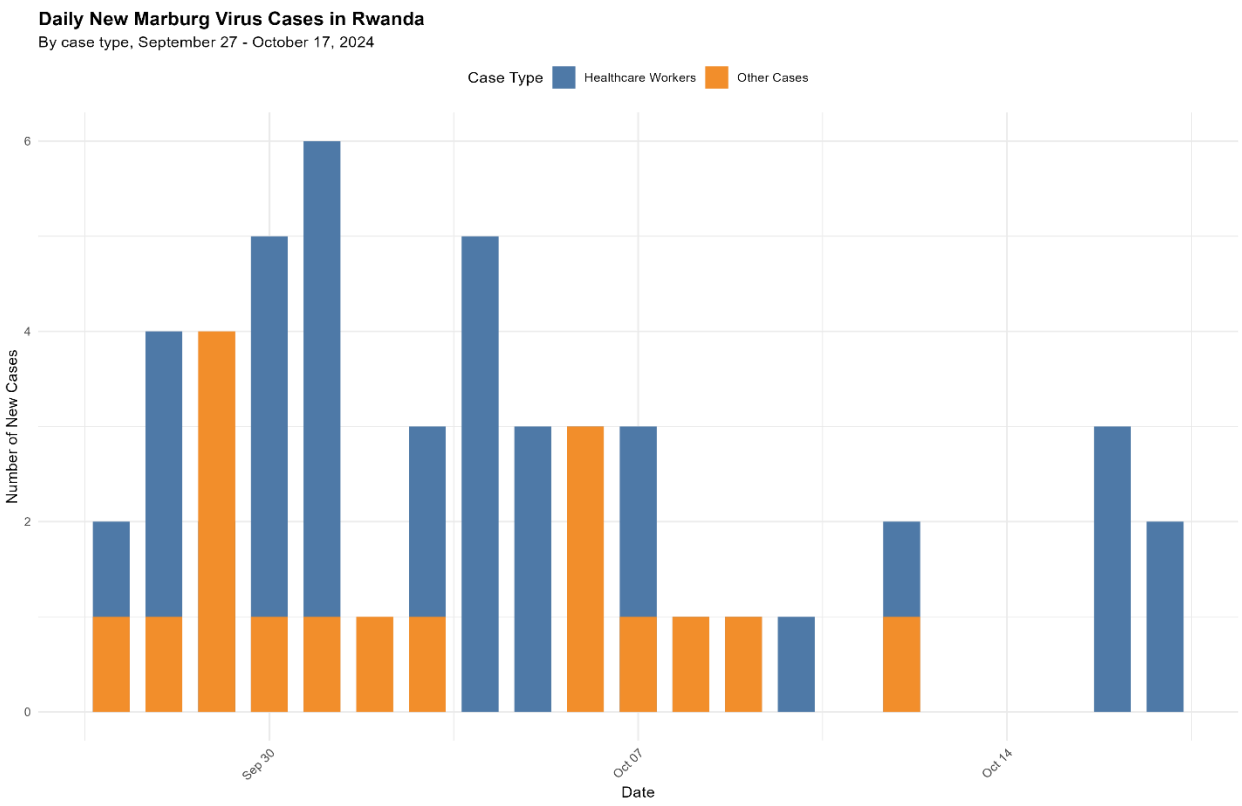


Figure 2. Marburg Virus Cases Type in Rwanda

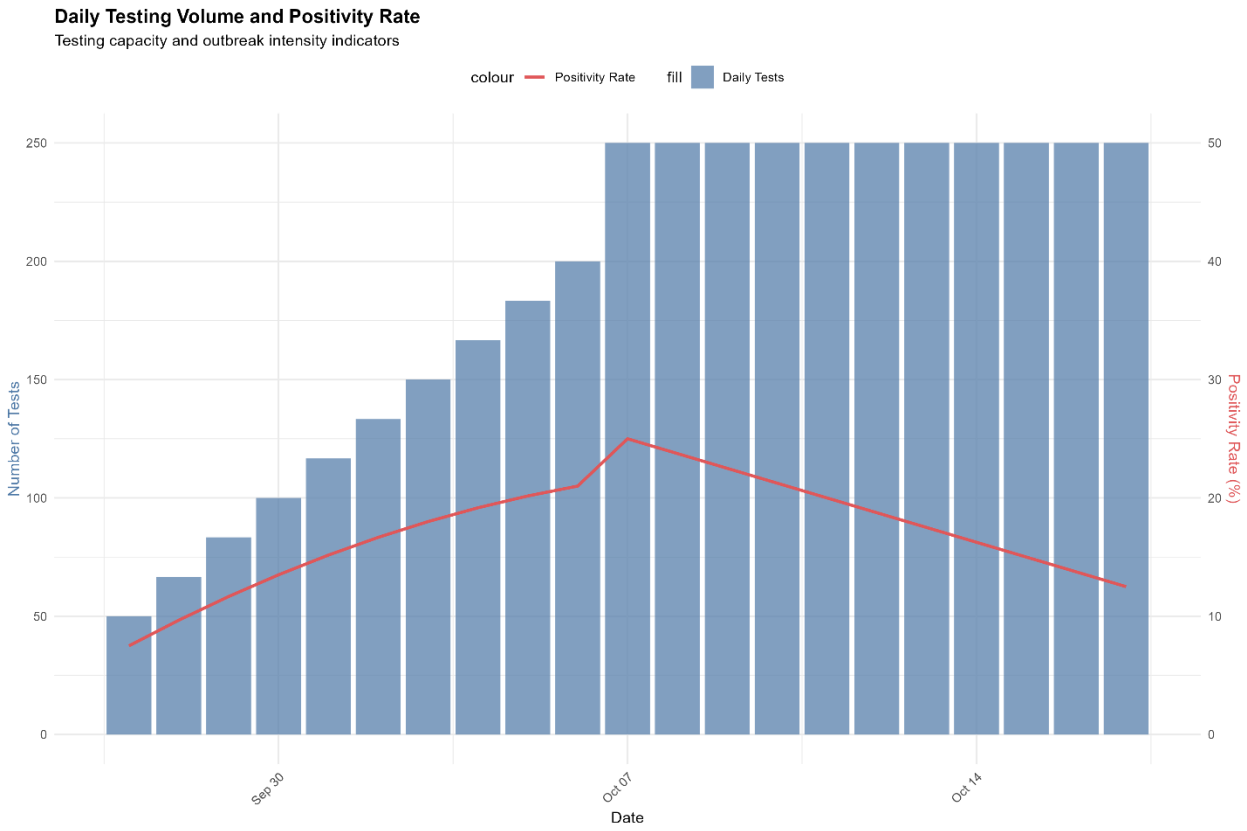


Figure 3. Testing Volume and Positivity Rate

- Rwanda's health authorities reported the country's first-ever cases of Marburg virus disease (MVD) on September 27, 2024. The exact number of infections wasn't specified in the initial announcement. This outbreak is significant not only for Rwanda but also for the wider region, as it represents the fourth recorded instance of MVD in West Africa throughout its known history.
- On September 28, 2024, the Rwandan Ministry of Health reported multiple cases and fatalities in the Marburg virus outbreak, including healthcare workers, underscoring its severity and the heightened risk to frontline staff.
- On September 29, 2024, the WHO African Region Office reported that the Marburg virus outbreak in Rwanda had spread to at least seven of the country's 30 districts, though the specific districts were not disclosed. On the same day, Rwanda's Ministry of Health confirmed two additional fatalities linked to the outbreak.
- On September 30, 2024, the WHO noted 27 laboratory-confirmed cases of MVD, including 9 fatalities, with over 70% of the cases being healthcare workers from two facilities in Kigali. Cases have been recorded in four provinces: Kigali (Gasabo, Kicukiro, Nyarugenge), Eastern (Gatsibo, Nyagatare), Southern (Kamonyi), and Western (Rubavu). Of the 300 identified close contacts, one had traveled abroad but completed the observation period symptom-free.
- As October 7, 2024, contact tracing is ongoing, with approximately 400 contacts under follow-up. WHO assesses the outbreak risk as very high nationally, high regionally, and low globally. The outbreak's geographic spread and complexity demand a coordinated national response, supported by WHO and international partners.
- As of October 20, 2024, Rwanda's Ministry of Health reports 62 MVD cases with 15 deaths (24.2% case fatality rate), marking an increase of 6 cases and 3 deaths since October 8. While this

represents the third-largest MVD outbreak globally, it has the lowest CFR among major outbreaks. Of the total cases, 44 patients have fully recovered, three remain under treatment, and notably, two patients were successfully extubated a first in African MVD treatment history. The outbreak predominantly affects males (70%) and individuals aged 30-39 years, with all cases traced to a single hospital in Kigali city, forming one major cluster with three branches. Health authorities are monitoring 1,146 close contacts, and with no community transmission detected and no new cases reported for six consecutive days, the outbreak appears to be contained.

Response Measures

The Government of Rwanda is leading the outbreak response with substantial support from WHO and partners, including the deployment of a WHO surge team providing expertise across multiple domains such as incident management, epidemiology, health operations, case management, infection prevention and control, health logistics, therapeutics and vaccines research, and partner coordination. WHO has assisted in validating testing procedures through its collaborating centers and reference laboratories, while also supporting the establishment of a survivor support program and launching clinical trials for Marburg therapeutics. Additionally, WHO and partners have collaborated with the Ministry of Health to develop comprehensive national Infection Prevention and Control (IPC) operational guidance, supplied 12,000 units of personal protective equipment, and trained 520 healthcare workers on IPC measures.

WHO has taken a proactive approach to regional preparedness by providing technical guidance to Rwanda and neighboring countries regarding evidence-based public health measures, border health management, and surveillance capabilities. The organization has published interim guidance on border health considerations for filovirus outbreaks and explicitly advised against implementing travel or trade restrictions with Rwanda. WHO is also working with surrounding countries to evaluate healthcare facility readiness, assess points of entry, and conduct risk mapping in areas bordering Rwanda, ensuring a comprehensive regional approach to outbreak containment.

Disease Information

- **Pathogen:**
  The Marburg virus is a zoonotic pathogen from the *Filoviridae* family, which also includes the Ebola virus.
- **Host:**
  The African fruit bat (*Rousettus aegyptiacus*) is the main natural reservoir. It can transmit the virus to both animals and humans, either directly or indirectly, such as through contact with contaminated fruits like figs, mangoes, or dates.
- **Transmission:**
  Once the virus crosses from animals to humans, it spreads through direct contact with the bodily fluids of infected individuals or through contact with contaminated surfaces and materials.
- **Symptoms:**
  Common symptoms include fever, headache, vomiting, nausea, and severe cases may result in hemorrhagic symptoms.

- **Fatality Rate:**
  The Marburg virus is extremely infectious, with a fatality rate that varies between 24% and 88%, depending on the strain and how quickly cases are diagnosed and treated.

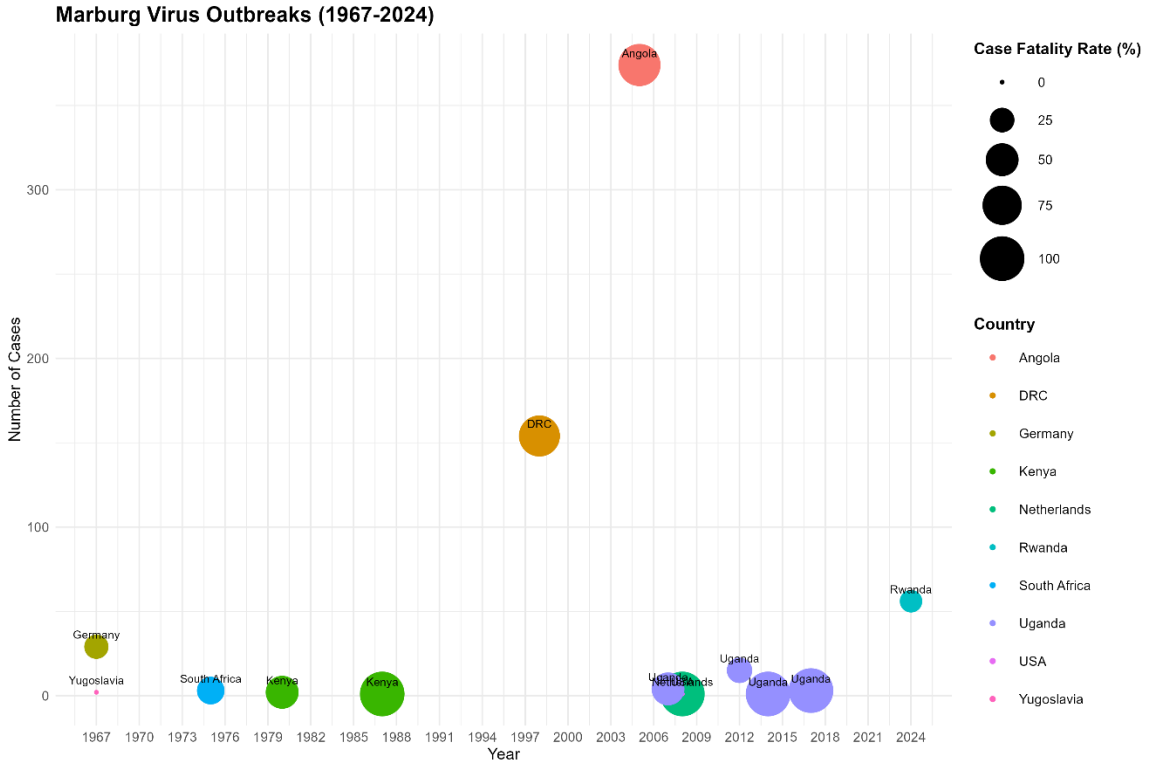


Figure 4. Marburg Virus Notable Outbreaks

Sources:

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3. **Ministry of Health of Rwanda.** (2024, October 8). Marburg Virus Update. Retrieved from https://x.com/RwandaHealth/status/1843706851038568587
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