Ebolan Sudan virus - 2022 outbreak
Factsheet and news

UPDATE OF 27 OCTOBER 2022

This document is composed of 3 different tabs: General information, Relevant news, and Scientific articles

The content and presentation of this document are subject to change as the situation evolves.

Every information presented comes from a valid and credible source.

The redaction of this document is coordinated by:

Erica Telford, Nicolas Pulik, Inmaculada Ortega-Perez (ANRS | Emerging Infectious Diseases)

The "General information" tab presents an overview, case definitions, guidelines, reported cases

Overview
Source: https://www.who.int/news-room/fact-sheets/detail/ebola-virus-disease

- The first EVD outbreaks occurred in remote villages in Central Africa, near tropical rainforests. The 2014–2016 outbreak in West Africa was the largest and most complex Ebola outbreak since the virus was first discovered in 1976. There were more cases and deaths in this outbreak than all others combined. It also spread between countries, starting in Guinea then moving across land borders to Sierra Leone and Liberia.

- On 20 September 2022, Uganda health authorities declared an outbreak of Ebola disease, caused by Sudan virus, following laboratory confirmation of a patient from a village in Madudu sub-county, Mubende district, central Uganda. As of 25 September 2022, a cumulative number of 18 confirmed and 18 probable cases have been reported from Mubende, Kyegegwa and Kassanda districts, including 23 deaths, of which five were among confirmed cases (CFR among confirmed cases 28%). This is the first Ebola disease outbreak caused by Sudan virus (SUDV) in Uganda since 2012.

Timeline

- The first EVD outbreaks occurred in remote villages in Central Africa, near tropical rainforests. The 2014–2016 outbreak in West Africa was the largest and most complex Ebola outbreak since the virus was first discovered in 1976. There were more cases and deaths in this outbreak than all others combined. It also spread between countries, starting in Guinea then moving across land borders to Sierra Leone and Liberia.

- On 20 September 2022, Uganda health authorities declared an outbreak of Ebola disease, caused by Sudan virus, following laboratory confirmation of a patient from a village in Madudu sub-county, Mubende district, central Uganda. As of 25 September 2022, a cumulative number of 18 confirmed and 18 probable cases have been reported from Mubende, Kyegegwa and Kassanda districts, including 23 deaths, of which five were among confirmed cases (CFR among confirmed cases 28%). This is the first Ebola disease outbreak caused by Sudan virus (SUDV) in Uganda since 2012.
Ebola virus disease (EVD), formerly known as Ebola haemorrhagic fever, is a severe, often fatal illness affecting humans and other primates. The virus is transmitted to people from wild animals (such as fruit bats, porcupines and non-human primates) and then spreads in the human population through direct contact with the blood, secretions, organs or other bodily fluids of infected people, and with surfaces and materials (e.g. bedding, clothing) contaminated with these fluids. The incubation period is from 2 to 21 days. A person infected with Ebola cannot spread the disease until they develop symptoms.

Laboratory findings include low white blood cell and platelet counts and elevated liver enzymes. It can be difficult to clinically distinguish EVD from other infectious diseases such as malaria, typhoid fever and meningitis. A range of diagnostic tests have been developed to confirm the presence of the virus.

WHO surveillance case definitions for Ebola outbreaks

Source: https://apps.who.int/iris/handle/10665/146397

<table>
<thead>
<tr>
<th>Laboratory confirmed</th>
<th>Any suspected or probably cases with a positive laboratory result. Laboratory confirmed cases must test positive for the virus antigen, either by detection of virus RNA by reverse transcriptase-polymerase chain reaction (RT- PCR), or by detection of IgM antibodies directed against Marburg or Ebola.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Probable</td>
<td>a. Any suspected case evaluated by a clinician; OR b. Any deceased suspected case (where it has not been possible to collect specimens for laboratory confirmation) having an epidemiological link with a confirmed case</td>
</tr>
</tbody>
</table>
### Suspected

a. Any person, alive or dead, suffering or having suffered from a sudden onset of high fever and having had contact with:
   - a suspected, probable or confirmed Ebola or Marburg case;
   - a dead or sick animal (for Ebola)
   - a mine (for Marburg);

**OR**

b. Any person with sudden onset of high fever and at least three of the following symptoms:
   - headaches - lethargy
   - anorexia / loss of appetite - aching muscles or joints
   - stomach pain - difficulty swallowing
   - vomiting - difficulty breathing
   - diarrhea - hiccups;

**OR**

c. Any person with inexplicable bleeding;

**OR**

d. Any sudden, inexplicable death

### Non-case

Any suspected or probable case with a negative laboratory result. “Non-case” showed no specific antibodies, RNA or specific detectable antigens.

### Background information on Ebola

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>WHO</td>
<td>Ebola Virus Disease Q&amp;A</td>
<td><a href="https://www.who.int/news-room/questions-and-answers/item/ebola-virus-disease">https://www.who.int/news-room/questions-and-answers/item/ebola-virus-disease</a></td>
</tr>
<tr>
<td>WHO</td>
<td>Ebola Virus Vaccine Q&amp;A</td>
<td><a href="https://www.who.int/news-room/questions-and-answers/item/ebola-vaccines">https://www.who.int/news-room/questions-and-answers/item/ebola-vaccines</a></td>
</tr>
<tr>
<td>WHO</td>
<td>Safety of two Ebola virus vaccines</td>
<td><a href="https://www.who.int/groups/global-advisory-committee-on-vaccine-safety/topics/ebola-virus-vaccines">https://www.who.int/groups/global-advisory-committee-on-vaccine-safety/topics/ebola-virus-vaccines</a></td>
</tr>
<tr>
<td>WHO</td>
<td>Repository for Ebola publications at WHO</td>
<td><a href="https://www.who.int/publications/i?healthtopics=p57416ee-a885-403f-a50d-59ca9d5bb707">https://www.who.int/publications/i?healthtopics=p57416ee-a885-403f-a50d-59ca9d5bb707</a></td>
</tr>
<tr>
<td>CDC</td>
<td>What is Ebola Virus Disease?</td>
<td><a href="https://www.cdc.gov/vhf/ebola/about.html">https://www.cdc.gov/vhf/ebola/about.html</a></td>
</tr>
</tbody>
</table>

### Guidelines and practical information from French authorities, ECDC, and WHO

<table>
<thead>
<tr>
<th>WHO</th>
<th>Ebola/Marburg Research and Development (R&amp;D) Roadmap</th>
<th><a href="https://www.who.int/publications/m/item/ebola-marburg-draft-r-d-roadmap">https://www.who.int/publications/m/item/ebola-marburg-draft-r-d-roadmap</a></th>
</tr>
</thead>
<tbody>
<tr>
<td>WHO</td>
<td>Sudan Virus Vaccine Tracker - List of vaccine candidates in research &amp; development</td>
<td><a href="https://www.who.int/publications/m/item/sudan-virus-vaccine-tracker--list-of-vaccine-candidates-in-research--development">https://www.who.int/publications/m/item/sudan-virus-vaccine-tracker--list-of-vaccine-candidates-in-research--development</a></td>
</tr>
<tr>
<td>WHO</td>
<td>Therapeutics for Ebola virus disease</td>
<td><a href="https://www.who.int/publications/i?item=9789240055742">https://www.who.int/publications/i?item=9789240055742</a></td>
</tr>
<tr>
<td>WHO</td>
<td>Interim infection prevention and control guidance for care of patients with suspected or confirmed filovirus haemorrhagic fever in health-care settings, with focus on Ebola</td>
<td><a href="https://www.who.int/publications/i?item=WHO-HIS-SDS-2014.4-Rev.1">https://www.who.int/publications/i?item=WHO-HIS-SDS-2014.4-Rev.1</a></td>
</tr>
</tbody>
</table>
**WHO**
Interim advice on the sexual transmission of the Ebola virus disease
https://www.who.int/publications/m/item/interim-advice-on-the-sexual-transmission-of-the-ebola-virus-disease

**WHO**
Guidelines for the management of pregnant and breastfeeding women in the context of Ebola virus disease
https://www.who.int/publications/i/item/9789240001381

**WHO**
Clinical care for survivors of Ebola virus disease
https://www.who.int/publications/i/item/WHO-EVD-OHE-PED-16.1

**WHO**
Roadmap for introduction and roll-out of Merck rVSV-ZEBOV Ebola Virus Disease vaccine in African countries
https://www.who.int/publications/i/item/merck-EVD-vax-intro-roadmap

**WHO**
Optimized supportive care for Ebola virus disease: clinical management standard operating procedures
https://apps.who.int/iris/handle/10665/325000

**WHO**
Personal protective equipment for use in a filovirus disease outbreak: rapid advice guideline
https://apps.who.int/iris/handle/10665/251426

**WHO**
Framework and toolkit for infection prevention and control in outbreak preparedness, readiness and response at the health care facility level

**HAS**
ERVEBO (vaccin contre Ebola Zaïre, vivant atténué)
https://www.has-sante.fr/cms/p_3159838/fr/ervebo-vaccin-contre-ebola-zaire-vivant-attenué

**HAS**
Utilisation du vaccin contre la maladie à virus Ebola ERVEBO
https://www.has-sante.fr/cms/p_3159895/fr/utilisation-du-vaccin-contre-la-maladie-a-virus-ebola-ervebo

**EMA**
Zabdeno

---

**Confirmed cases and deaths (24/10)**

Source: https://twitter.com/MinofHealthUG

<table>
<thead>
<tr>
<th>Country</th>
<th>Cases confirmed</th>
<th>Deaths confirmed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Uganda</td>
<td>95</td>
<td>28</td>
</tr>
</tbody>
</table>
### Relevant News for the Ebola Sudan virus - 2022 outbreak

**UPDATE OF 27 OCTOBER 2022**

This document is composed of 3 different tabs: General information, Relevant news, and Scientific articles. The content and presentation of this document are subject to change as the situation evolves. Every information presented comes from a valid and credible source.

The "Relevant news" tab presents official reports from health agencies and rapidly reported information from reliable news sources.

The redaction of this document is coordinated by: Erica Telford, Nicolas Pulik, Inmaculada Ortega-Perez (ANRS | Emerging Infectious Diseases)

Every information presented comes from a valid and credible source.

<table>
<thead>
<tr>
<th>Date</th>
<th>Source</th>
<th>Type of publication</th>
<th>Title</th>
<th>Key facts</th>
<th>Link</th>
</tr>
</thead>
<tbody>
<tr>
<td>27/10/2022</td>
<td>WHO</td>
<td>News</td>
<td>Contact tracers and village health teams take on Ebola in Uganda</td>
<td>WHO has provided four Ebola kits to Mubende Regional Hospital and redeployed 108 technical staff to assist with case management, risk communication, community engagement and laboratory testing.</td>
<td><a href="https://www.afro.who.int/countries/uganda/news/contact-tracers-and-village-health-teams-take-ebola-uganda">https://www.afro.who.int/countries/uganda/news/contact-tracers-and-village-health-teams-take-ebola-uganda</a></td>
</tr>
<tr>
<td>26/10/2022</td>
<td>IAVI</td>
<td>News</td>
<td>IAVI to accelerate promising investigational Sudan ebolavirus vaccine development for potential outbreak research and response</td>
<td>IAVI and Merck (MSD) intend to enter into an agreement to enable IAVI to accelerate the entry of a promising Sudan ebolavirus (SUDV) vaccine candidate that IAVI is developing into clinical evaluation. Merck hopes to be able to deliver approximately 50,000 doses by the end of the year.</td>
<td><a href="https://www.iavi.org/news-resources/press-releases/2022/iavi-to-accelerate-promising-investigational-sudan-ebolavirus-vaccine-development-for-potential-outbreak-research-and-response">https://www.iavi.org/news-resources/press-releases/2022/iavi-to-accelerate-promising-investigational-sudan-ebolavirus-vaccine-development-for-potential-outbreak-research-and-response</a></td>
</tr>
<tr>
<td>24/10/2022</td>
<td>CIDRAP</td>
<td>News</td>
<td>As Uganda's Ebola outbreak intensifies, cases expand in Kampala</td>
<td>Uganda over the past few days reported a surge in new Sudan Ebola cases, with lab-confirmed cases rising to 90, including 9 more in Kampala, the country's capital and most populated city.</td>
<td><a href="https://www.cidrap.umn.edu/news-perspective/2022/10/ugandas-ebola-outbreak-intensifies-cases-expand-kampala">https://www.cidrap.umn.edu/news-perspective/2022/10/ugandas-ebola-outbreak-intensifies-cases-expand-kampala</a></td>
</tr>
<tr>
<td>24/10/2022</td>
<td>Reuters</td>
<td>News</td>
<td>Uganda says 9 more Ebola cases confirmed in Kampala, urges vigilance</td>
<td>Uganda has reported nine more Ebola cases in the capital Kampala, bringing the total number of known infections to 14 in the last two days, the health minister said on Monday.</td>
<td><a href="https://www.reuters.com/business/healthcare-pharmaceuticals/uganda-says-9-more-ebola-cases-confirmed-kampala-toll-rises-14-2022-10-24/">https://www.reuters.com/business/healthcare-pharmaceuticals/uganda-says-9-more-ebola-cases-confirmed-kampala-toll-rises-14-2022-10-24/</a></td>
</tr>
<tr>
<td>21/10/2022</td>
<td>ECDC</td>
<td>Report</td>
<td>Ebola outbreak in Uganda, as of 21 October 2022</td>
<td>According to the World Health Organization (WHO), as of 19 October 2022, there have been 64 confirmed cases of Ebola virus disease (EVD), including 25 deaths (Case fatality rate: 39%; including probable deaths: 54%).</td>
<td><a href="https://www.ecdc.europa.eu/en/news-events/ebola-outbreak-uganda">https://www.ecdc.europa.eu/en/news-events/ebola-outbreak-uganda</a></td>
</tr>
<tr>
<td>20/10/2022</td>
<td>CIDRAP</td>
<td>News</td>
<td>Uganda's Ebola cases rise amid concern over undetected spread</td>
<td>On Twitter, the health ministry said there are now 64 lab-confirmed cases. Also, it reported 25 deaths among confirmed patients, 1 more than yesterday.</td>
<td><a href="https://www.cidrap.umn.edu/news-perspective/2022/10/ugandas-ebola-cases-rise-amid-concern-over-undetected-spread">https://www.cidrap.umn.edu/news-perspective/2022/10/ugandas-ebola-cases-rise-amid-concern-over-undetected-spread</a></td>
</tr>
<tr>
<td>20/10/2022</td>
<td>WHO</td>
<td>News</td>
<td>WHO: ‘Concerned’ about Ebola spread as latest eight cases not contacts of others infected</td>
<td>The eight most recent Ebola cases reported during the outbreak in Uganda have no known links with current patients, raising concerns over the spread of the disease.</td>
<td><a href="https://www.reuters.com/business/healthcare-pharmaceuticals/who-concerned-about-ebola-spread-latest-eight-cases-not-contacts-others-infected-2022-10-19/">https://www.reuters.com/business/healthcare-pharmaceuticals/who-concerned-about-ebola-spread-latest-eight-cases-not-contacts-others-infected-2022-10-19/</a></td>
</tr>
<tr>
<td>18/10/2022</td>
<td>US CDC</td>
<td>News</td>
<td>The U.S. Response to Ebola Outbreaks in Uganda</td>
<td>Measures implemented by the U.S. to address the outbreak with the international community. The U.S. CDC and the USAID are working closely with public health departments, public health laboratories, and healthcare workers throughout the U.S., Uganda, and neighboring countries to raise awareness and address this outbreak.</td>
<td><a href="https://www.cdc.gov/media/releases/2022/s10-18-ebola-outbreaks-uganda.html">https://www.cdc.gov/media/releases/2022/s10-18-ebola-outbreaks-uganda.html</a></td>
</tr>
</tbody>
</table>
News

63 confirmed and probable cases have been reported, Uganda also has 20 suspected cases from earlier in the outbreak, all of them fatal.

Guidelines

Report

Uganda to trial two vaccines for Ebola outbreak in Uganda.

Report

Communicable disease threats report, 9-15 October 2022, week 41

According to World Health Organisation (WHO) and the Ugandan officials, as of 12 October 2022, there have been 54 confirmed cases of Ebola virus disease (EVD), including 19 deaths. Among these, 11 healthcare workers were infected and four died.

News

UK announces support to help Uganda manage Ebola outbreak

The support includes £2.2m - UGX9.3bn - for UN agencies working with the Government of Uganda in the Ebola response.

Report

OUTBREAK

VIRUS DISEASE (EVD)

TRAVEL ADVISORY ON EBOLA

The outbreak is still relatively limited in size (48 cases). More importantly, transmission has not been documented in densely populated areas. The spread of the ongoing outbreak to other areas within Uganda and/or in neighbouring countries cannot be excluded.

Guidelines

TRAVEL ADVISORY ON EBOLA VIRUS DISEASE (EVD)

OUTBREAK

Mudembe district is the epicenter of the outbreak with sporadic cases in Kassanda, Kyegewa, Kagadi and Busayagaba districts. All these districts are more than 100km away from the capital city, Kampala. The rest of the country is free from Ebola virus, and there are no travel restrictions. The country is safe for all national and international travelers within the country.

Guidelines

Public health message to all NHS service providers regarding Ebola virus outbreak in Uganda (Sudan ebolavirus)

Recommendations to public health service providers in response to the Ebola outbreak (SUDV) in Uganda.

Guidelines

Public health message to all NHS service providers regarding Ebola virus outbreak in Uganda (Sudan ebolavirus)

Recommendations to public health service providers in response to the Ebola outbreak (SUDV) in Uganda.

News

UKHSA monitoring Ebola outbreak in East Africa

The UK Health Security Agency (UKHSA) is currently monitoring an outbreak of Ebola virus disease cases in Uganda.

Guidelines

HAN - Outbreak of Ebola virus disease (Sudan ebolavirus) in Central Uganda

CDC is issuing this Health Alert Network (HAN) Health Advisory to summarize CDC’s recommendations for U.S. public health departments and clinicians, case identification and testing, and clinical laboratory biosafety considerations.

News

Ebola kills another health worker in Uganda outbreak

63 confirmed and probable cases have been reported, including 29 deaths.

Guidelines

HAN - Outbreak of Ebola virus disease (Sudan ebolavirus) in Central Uganda

HAN - Outbreak of Ebola virus disease (Sudan ebolavirus) in Central Uganda

The Administration for Strategic Preparedness and Response (ASPR) today announced a $109.8 million contract with Mapp Biopharmaceutical Inc., for the advanced development and potential purchase of MBP134, a monoclonal antibody therapeutic to treat Sudan ebolavirus (SUDV).

September 2022 Uganda, Mubende

Uganda Reported an Outbreak of Ebola Virus Disease

The EU has mobilised an initial €200,000 in emergency funding to support the Uganda Red Cross. The actions focus on coordination, surveillance with contact tracing, risk communication, community engagement, and safe and dignified burials.


04/10/2022 NCDC

NCDC on Alert Mode Following the Outbreak of Ebola Virus Disease (EVD) Detected in Uganda

Based on available data, the overall risk of importation of the Ebola virus and the impact on the health of Nigerians has been assessed as high. Despite this risk assessment, Nigeria has the capacity -- technical, human (health workforce), and diagnostic -- to respond effectively in the event of an outbreak.


04/10/2022 US CDC

Eboa in Uganda - Traveler notice

The Ministry of Health of Uganda has declared an Ebola outbreak in several districts in Uganda. Avoid non-essential travel to these regions.


03/10/2022 UKHSA

Eboa: returning workers scheme (RWS)

Advice for people returning to the UK after working in an Ebola affected area.

https://www.gov.uk/guidance/ebola-returning-workers-scheme

03/10/2022 CIDRAP

Eboa sickness 8 more in Uganda; doctor among latest deaths

Over the past 3 days, Uganda’s health ministry has reported 8 more Ebola Sudan cases, along with 2 more deaths, with officials also announcing that a doctor is among the fatal cases.


01/10/2022 WHO Africa

Uganda Defines Priorities and Needs in Its Ebola Response Plan

The Ministry of Health and health development partners in Uganda, including the World Health Organization (WHO), have launched the country’s Ebola response plan highlighting planned activities, priority needs and gaps.


30/09/2022 UKHSA

Eboa and Marburg haemorrhagic fevers: outbreaks and case locations

Information about incidents and outbreaks of Ebola and Marburg, both viral haemorrhagic fevers (VHF).


30/09/2022 ECDC

Communicable disease threats report, 25 September - 1 October 2022, week 39

The ECDC Communicable Disease Threats Report (CDTR) is a weekly bulletin for epidemiologists and health professionals on active public health threats. This issue covers the period 25 September - 1 October 2022 and includes updates on COVID-19, Ebola, West Nile Virus, Chikungunya and dengue, influenza A, swine flu, and hepatitis.


30/09/2022 CIDRAP

Uganda Ebola cases jump to 50, with 1 more death

The number of people infected in Uganda’s Ebola Sudan outbreak jumped to 50 today, with 14 more cases added to the total. One more person died, raising the fatality count to 24.


29/09/2022 STAT NEWS

Ebola experimental vaccine trial may begin soon in Uganda

There are two licensed vaccines that protect against the Ebola Zaire species, but the Zaire and Sudan versions of these viruses are different enough from one another that those two vaccines will not work against this virus. There are six candidate vaccines, as experimental vaccines are called, that target Ebola Sudan. But only three have advanced to the stage where human clinical trials have begun.


29/09/2022 CIDRAP

Uganda Ebola cases jump to 50, with 1 more death

The number of people infected in Uganda's Ebola Sudan outbreak jumped to 50 today, with 14 more cases added to the total, the World Health Organization (WHO) African region said today on Twitter.


26/09/2022 WHO

Sudan Virus Vaccine Tracker - List of vaccine candidates in research & development

The WHO is tracking advances and ongoing progress from research and development to clinical trials of vaccines for Sudan virus (SUDV).

https://www.who.int/publications/m/item/sudan-virus-vaccine-tracker---list-of-vaccine-candidates-in-research---development

26/09/2022 US CDC

September 2022 Uganda, Mubende District

On September 20, 2022, the Ugandan Ministry of Health confirmed an outbreak of Ebola virus disease (EVD) (Sudan virus) in Mubende District, in western Uganda.


26/09/2022 WHO

Ebola Disease caused by Sudan virus - Uganda

On 20 September 2022, Uganda health authorities declared an outbreak of Ebola disease, caused by Sudan virus, following laboratory confirmation of a patient from a village in Madudu sub-county, Mubende district, central Uganda. As of 25 September 2022, a cumulative number of 18 confirmed and 18 probable cases have been reported from Mubende, Kyeggewa and Kassanda districts, including 23 deaths, of which five were among confirmed cases (CFR among confirmed cases 28%).

https://www.who.int/emergencies/disease-outbreaks/news/item/2022-DON410

20/09/2022 Africa CDC

Uganda Reported an Outbreak of Ebola Virus Disease

Announcement of first ebola case of the Uganda 2022 outbreak by the Africa CDC

https://africacdc.org/news-item/uganda-reported-an-outbreak-of-ebola-virus-disease/

21/12/2020 FDA

FDA approves treatment for ebola virus

Ebanga (Ansuvimab-zytk), a human monoclonal antibody, for the treatment for Zaire ebolavirus (Ebolavirus) infection in adults and children. Ebanga blocks binding of the virus to the cell receptor, preventing its entry into the cell.

<table>
<thead>
<tr>
<th>Date</th>
<th>Agency</th>
<th>Type</th>
<th>Title</th>
<th>Description</th>
<th>Link</th>
</tr>
</thead>
<tbody>
<tr>
<td>14/10/2020</td>
<td>FDA</td>
<td>News</td>
<td>FDA Approves First Treatment for Ebola Virus</td>
<td>Inmazeb (atoltivimab, maftivimab, and odesivimab-ebgn), a mixture of three monoclonal antibodies, as the first FDA-approved treatment for Zaire ebolavirus (Ebola virus) infection in adult and pediatric patients. Inmazeb targets the glycoprotein that is on the surface of Ebola virus and block the entry into the cell.</td>
<td><a href="https://www.fda.gov/news-events/press-announcements/fda-approves-first-treatment-ebola-virus">https://www.fda.gov/news-events/press-announcements/fda-approves-first-treatment-ebola-virus</a></td>
</tr>
</tbody>
</table>
Ebola - Factsheet and news

UPDATE OF 27 OCTOBER 2022

This document is composed of 3 different tabs: General information, Relevant news, and Scientific articles.

The content and presentation of this document are subject to change as the situation evolves.

Every information presented comes from a valid and credible source.

The “Scientific articles” tab presents relevant articles published on peer-reviewed scientific journals or pre-print platforms since May 2022.

<table>
<thead>
<tr>
<th>Date</th>
<th>Source</th>
<th>Type of publication</th>
<th>Title</th>
<th>Key facts</th>
<th>Link</th>
</tr>
</thead>
<tbody>
<tr>
<td>27/10/2022</td>
<td>Emerg Infects</td>
<td>Research article</td>
<td>Natural history of Sudan ebolavirus infection in rhesus and cynomolgus macaques</td>
<td>Infected macaques exhibited hallmark features of human EVD. The early stage was typified by viremia, granulocytosis, lymphopenia, albuminemia, thrombocytopenia, and decreased expression of HLA-class transcripts. At mid-to-late disease, animals developed fever and petechial rashes, and expressed high levels of pro-inflammatory mediators, pro-thrombotic factors, and markers indicative of liver and kidney injury. End-stage disease was characterized by shock and multi-organ failure. In summary, macaques recapitulate human SUDV disease, supporting these models for use in the development of vaccines and therapeutics.</td>
<td><a href="https://doi.org/10.1016/j.cmi.2022.09.002">https://doi.org/10.1016/j.cmi.2022.09.002</a></td>
</tr>
<tr>
<td>26/10/2022</td>
<td>Science</td>
<td>News</td>
<td>Merck locates frozen batch of undisclosed ebola vaccine, will donate for testing in Uganda’s outbreak</td>
<td>Merck locates frozen batch of undisclosed ebola vaccine, will donate for testing in Uganda’s outbreak</td>
<td><a href="https://www.science.org/content/article/uganda-may-use-destroyed-ebola-vaccine-merck-fqht-its-growing-outbreak">https://www.science.org/content/article/uganda-may-use-destroyed-ebola-vaccine-merck-fqht-its-growing-outbreak</a></td>
</tr>
<tr>
<td>02/11/2022</td>
<td>Vaccine</td>
<td>Research article</td>
<td>Immunoegenicity of rSVΔG-ZEBOV-GP Ebola vaccine (ERVEBO®) in African clinical trial participants by age, sex, and baseline GP-ELISA titer: A post hoc analysis of three Phase 2/3 trials</td>
<td>These data demonstrate that rSVΔG-ZEBOV-GP elicits a robust and durable immune response through 12 months postvaccination in participants regardless of age, sex, or BL GP-ELISA titer. The higher immune responses observed in women and participants with pre-existing immunity are consistent with those described previously and for other vaccines.</td>
<td><a href="https://doi.org/10.1016/j.vaccine.2022.09.037">https://doi.org/10.1016/j.vaccine.2022.09.037</a></td>
</tr>
<tr>
<td>20/10/2022</td>
<td>Lancet Infect Dis</td>
<td>Research article</td>
<td>Safety and immunogenicity of an Ad26.ZEBOV booster dose in children previously vaccinated with the two-dose heterologous Ad26.ZEBOV and MVA-BN-Filo Ebola vaccine regimen: an open-label, non-randomised, phase 2 trial</td>
<td>A booster dose of Ad26 ZEBOV in children who had received the two-dose Ad26 ZEBOV and MVA-BN-Filo vaccine regimen more than 3 years earlier was well tolerated and induced a rapid and robust increase in binding antibodies against Ebola virus. These findings could inform Ebola vaccination strategies in paediatric populations.</td>
<td><a href="https://doi.org/10.1016/s1473-3099(22)00594-1">https://doi.org/10.1016/s1473-3099(22)00594-1</a></td>
</tr>
<tr>
<td>10/10/2022</td>
<td>BMJ</td>
<td>News</td>
<td>Ebola: Uganda battles fresh epidemic as infections threaten to spread</td>
<td>The outbreak has so far claimed the lives of 10 people, including a doctor and three other health workers, out of the total number of 43 confirmed cases. The health ministry tweeted on 6 October that four patients had been discharged from Mubende Hospital, with 39 continuing to receive treatment.</td>
<td><a href="https://doi.org/10.1136/bmj.o2420">https://doi.org/10.1136/bmj.o2420</a></td>
</tr>
<tr>
<td>08/10/2022</td>
<td>Lancet</td>
<td>Report</td>
<td>Experts hope fullEbola control in Uganda</td>
<td>Although there is no vaccine for the Sudan strain of Ebola virus, understanding of how best to prevent and manage Ebola virus infections has improved in the past decade.</td>
<td><a href="https://doi.org/10.1016/S1448-854X(22)01924-9">https://doi.org/10.1016/S1448-854X(22)01924-9</a></td>
</tr>
<tr>
<td>07/10/2022</td>
<td>medRxiv</td>
<td>Preprint</td>
<td>Predicting the combined effects of case isolation, safe funeral practices, and contact tracing during Ebola virus disease outbreaks</td>
<td>In the absence of an approved vaccine and treatment, EVD management by proper and fast diagnostics in combination with epidemic awareness are fundamental. Awareness will particularly facilitate contact tracing and safe funeral practices. Moreover, proper and fast diagnostics are a major determinant of case isolation.</td>
<td><a href="https://www.medRxiv.org/content/10.1101/2022.10.06.22280767v1">https://www.medRxiv.org/content/10.1101/2022.10.06.22280767v1</a></td>
</tr>
<tr>
<td>07/10/2022</td>
<td>Nature</td>
<td>News</td>
<td>Ebola outbreak in Uganda: how worried are researchers?</td>
<td>The rapid rise and spread of the lethal virus across five districts in Uganda have alarmed scientists, and raised fears that the outbreak will not be easy to contain.</td>
<td><a href="https://www.nature.com/articles/d41586-022-03192-8">https://www.nature.com/articles/d41586-022-03192-8</a></td>
</tr>
<tr>
<td>29/09/2022</td>
<td>Science</td>
<td>Editorial</td>
<td>Scientists race to test vaccines for Uganda’s Ebola outbreak</td>
<td>An editorial on the prompt launch of clinical trial in Uganda to test the Sudan virus vaccines available in clinical phases through a ring-vaccination strategy.</td>
<td><a href="https://www.science.org/content/article/scientists-race-test-vaccines-uganda-s-ebola-outbreak">https://www.science.org/content/article/scientists-race-test-vaccines-uganda-s-ebola-outbreak</a></td>
</tr>
<tr>
<td>29/09/2022</td>
<td>Lancet Infect Dis</td>
<td>News</td>
<td>New guidelines for treatment of Ebola virus disease</td>
<td>New guidelines recommend mAb114 and REGN-EB3 for the treatment of Ebola virus disease, but countries endemic for the disease may have trouble accessing them.</td>
<td><a href="https://doi.org/10.1016/s1473-3099(22)00607-7">https://doi.org/10.1016/s1473-3099(22)00607-7</a></td>
</tr>
<tr>
<td>23/09/2022</td>
<td>Clin Microbiol</td>
<td>Review</td>
<td>The Diagnostic Accuracy of Rapid Diagnostic Tests for Ebola Virus Disease: a Systematic Review</td>
<td>RDTs possess both a high sensitivity and specificity compared to RT-PCR amongst symptomatic patients presenting to Ebola Treatment Units. Our findings support the use of RDTs as a ‘rule in’ test to expedite treatment and vaccination.</td>
<td><a href="https://doi.org/10.1016/j.cmi.2022.09.014">https://doi.org/10.1016/j.cmi.2022.09.014</a></td>
</tr>
<tr>
<td>Date</td>
<td>Journal</td>
<td>Section</td>
<td>Title</td>
<td>Abstract</td>
<td>DOI</td>
</tr>
<tr>
<td>------------</td>
<td>-----------------</td>
<td>---------</td>
<td>----------------------------------------------------------------------</td>
<td>-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>----------------------------------------------------------------------</td>
</tr>
<tr>
<td>03/09/2022</td>
<td>Lancet Microbe</td>
<td>Review</td>
<td>Effects of therapies for Ebola virus disease: a systematic review and network meta-analysis</td>
<td>REGN-EB3 and mAb114 separately reduce mortality compared with ZMapp, remdesivir, or standard care in patients with Ebola virus disease. These findings suggest that health-care workers should prioritise the use of REGN-EB3 and mAb114 for patients with Ebola virus disease during future outbreaks.</td>
<td><a href="https://doi.org/10.1016/s2666-5247(22)00123-8">https://doi.org/10.1016/s2666-5247(22)00123-8</a></td>
</tr>
<tr>
<td>01/09/2022</td>
<td>Vaccines</td>
<td>Review</td>
<td>Lessons Learned from the Development and Roll-Out of the rSVΔG-ZEBOV-GP Zaire ebolavirus Vaccine to Inform Marburg Virus and Sudan ebolavirus Vaccines</td>
<td>This article provides insights into how the example of rSVΔG-ZEBOV-GP can inform the development of vaccines for Sudan ebolavirus, Marburg virus, and other emerging epidemic diseases in terms of the types of approaches and data needed to support product registration, availability, and the use of a filovirus vaccine.</td>
<td><a href="https://doi.org/10.3390/vaccines10091446">https://doi.org/10.3390/vaccines10091446</a></td>
</tr>
<tr>
<td>01/07/2022</td>
<td>Bull WHO</td>
<td>Review</td>
<td>Rapid diagnostic tests versus RT-PCR for Ebola virus infections: a systematic review and meta-analysis</td>
<td>The included rapid diagnostic tests did not detect all the Ebola virus disease cases. While the sensitivity and specificity of these tests are moderate, they are still valuable tools, especially useful for triage and detecting Ebola virus in remote areas.</td>
<td><a href="https://doi.org/10.2471/blt.21.287496">https://doi.org/10.2471/blt.21.287496</a></td>
</tr>
<tr>
<td>01/03/2022</td>
<td>J Infect Public Health</td>
<td>Review</td>
<td>A systematic review of Ebola virus disease outbreaks and an analysis of the efficacy and safety of newer drugs approved for the treatment of Ebola virus disease by the US Food and Drug Administration from 2016 to 2020</td>
<td>Overall, Inmazeb is the preferred drug of choice over ZMapp or other drugs for the treatment of EVD, and Ebanga is a choice in patients with cardiovascular complications. In addition to that, supportive care is very essential to control the mortality rate.</td>
<td><a href="https://doi.org/10.1016/j.jiph.2022.01.005">https://doi.org/10.1016/j.jiph.2022.01.005</a></td>
</tr>
<tr>
<td>30/08/2021</td>
<td>Front Immunol</td>
<td>Research article</td>
<td>Review: Insights on Current FDA-Approved Monoclonal Antibodies Against Ebola Virus Infection</td>
<td>In this review, we summarize the efficacy and safety results of the PALM study and review current research questions for the further development of mAbs in pre-exposure or emergency post-exposure use.</td>
<td><a href="https://doi.org/10.3389/fimmu.2021.721328">https://doi.org/10.3389/fimmu.2021.721328</a></td>
</tr>
<tr>
<td>16/07/2021</td>
<td>Hum Vaccin Immunother</td>
<td>Review</td>
<td>Immunogenicity and safety of Ebola virus vaccines in healthy adults: a systematic review and network meta-analysis</td>
<td>A total of 21 randomized controlled trial, evaluating seven different vaccines with different doses, and 5,275 participants were analyzed. The best vaccine to be used to stop future outbreak of Ebola is the rVSVΔG-ZEBOV-GP vaccine at dose of 2 × 107 PFU.</td>
<td><a href="https://doi.org/10.1080/21645515.2021.1932214">https://doi.org/10.1080/21645515.2021.1932214</a></td>
</tr>
</tbody>
</table>