

# Ebola Sudan virus - 2022 outbreak

## Factsheet and news

**UPDATE OF 11 JANUARY 2023**

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>

### 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.

## Epidemiology

- The virus family Filoviridae includes three genera: Cuevavirus, Marburgvirus, and Ebolavirus. Within the genus Ebolavirus, six species have been identified: Zaire, Bundibugyo, Sudan, Taï Forest, Reston and Bombali.
- 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 average EVD case fatality rate is around 50%. Case fatality rates have varied from 25% to 90% in past outbreaks. It is thought that fruit bats of the Pteropodidae family are natural Ebola virus hosts.
- The incubation period is from 2 to 21 days. A person infected with Ebola cannot spread the disease until they develop symptoms. Symptoms of EVD can be sudden and include: fever, fatigue, muscle pain, headache, and sore throat. This is followed by vomiting, diarrhea, rash, symptoms of impaired kidney and liver function, and in some cases internal and external bleeding. 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.
- Supportive care - rehydration with oral or intravenous fluids - and treatment of specific symptoms improves survival. A range of potential treatments including blood products, immune therapies and drug therapies are currently being evaluated. Two monoclonal antibodies (Inmazeb and Ebanga) were approved for the treatment of Zaire ebolavirus (Ebolavirus) infection in adults and children by the US Food and Drug Administration in late 2020. The Ervebo vaccine has been shown to be effective in protecting people from the species Zaire ebolavirus, and is recommended by the Strategic Advisory Group of Experts on Immunization as part of a broader set of Ebola outbreak response tools. In December 2020, the vaccine was approved by the US Food and Drug Administration and prequalified by WHO for use in individuals 18 years of age and older (except for pregnant and breastfeeding women) for protection against Ebola virus disease caused by Zaire Ebola virus. In May 2020, the European Medicines Agency recommended granting marketing authorization for a 2-component vaccine called Zabdeno-and-Mvabea for individuals 1 year and older. The vaccine is delivered in 2 doses: Zabdeno is administered first and Mvabea is given approximately 8 weeks later as a second dose. This prophylactic 2-dose regimen is therefore not suitable for an outbreak response where immediate protection is necessary.
- **Based on available evidence the ERVEBO vaccine — used in the recent responses against the Ebola virus disease outbreaks — will not provide cross-protection against the Sudan virus disease. The Johnson & Johnson (Janssen) vaccine called Zabdeno/Mvabea against Ebola has only been approved by the European Medicines Agency (EMA) against Ebola virus disease and has not been tested against Sudan virus disease.**

## WHO surveillance case definitions for Ebola outbreaks

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

Laboratory confirmed	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.
Probable	<p>a. Any suspected case evaluated by a clinician;</p> <p><b>OR</b></p> <p>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</p>

<b>Suspected</b>	a. Any person, alive or dead, suffering or having suffered from a sudden onset of high fever and having had contact with: <ul style="list-style-type: none"> <li>- a suspected, probable or confirmed Ebola or Marburg case;</li> <li>- a dead or sick animal (for Ebola)</li> <li>- a mine (for Marburg);</li> </ul>
	<b>OR</b>
	b. Any person with sudden onset of high fever and at least three of the following symptoms: <ul style="list-style-type: none"> <li>- headaches - lethargy</li> <li>- anorexia / loss of appetite - aching muscles or joints</li> <li>- stomach pain - difficulty swallowing</li> <li>- vomiting - difficulty breathing</li> <li>- diarrhea - hiccups;</li> </ul>
	<b>OR</b>
	c. Any person with inexplicable bleeding;
	<b>OR</b>
	d. Any sudden, inexplicable death
<b>Non-case</b>	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

<b>WHO</b>	Webpage on Ebola	<a href="https://www.who.int/news-room/fact-sheets/detail/ebola-virus-disease">https://www.who.int/news-room/fact-sheets/detail/ebola-virus-disease</a>
<b>WHO</b>	Ebola Virus Disease Q&A	<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>
<b>WHO</b>	Ebola Virus Vaccine Q&A	<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>
<b>WHO</b>	Safety of two Ebola virus vaccines	<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>
<b>WHO</b>	Repository for Ebola publications at WHO	<a href="https://www.who.int/publications/i?healthtopics=b57416ee-a885-403f-a50d-59ca9d5bb707">https://www.who.int/publications/i?healthtopics=b57416ee-a885-403f-a50d-59ca9d5bb707</a>
<b>CDC</b>	What is Ebola Virus Disease?	<a href="https://www.cdc.gov/vhf/ebola/about.html">https://www.cdc.gov/vhf/ebola/about.html</a>

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

<b>MSS</b>	Maladie à virus Ebola	<a href="https://solidarites-sante.gouv.fr/soins-et-maladies/maladies/maladies-infectieuses/ebola/article/maladie-a-virus-ebola">https://solidarites-sante.gouv.fr/soins-et-maladies/maladies/maladies-infectieuses/ebola/article/maladie-a-virus-ebola</a>
<b>WHO</b>	Ebola/Marburg Research and Development (R&D) Roadmap	<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>
<b>WHO</b>	Sudan Virus Vaccine Tracker - List of vaccine candidates in research & development	<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>
<b>WHO</b>	Therapeutics for Ebola virus disease	<a href="https://www.who.int/publications/i/item/9789240055742">https://www.who.int/publications/i/item/9789240055742</a>
<b>WHO</b>	Ebola and Marburg virus disease epidemics: preparedness, alert, control, and evaluation	<a href="https://www.who.int/publications/i/item/WHO-HSE-PED-CED-2014.05">https://www.who.int/publications/i/item/WHO-HSE-PED-CED-2014.05</a>

WHO	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	<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>
WHO	Interim advice on the sexual transmission of the Ebola virus disease	<a href="https://www.who.int/publications/m/item/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</a>
WHO	Guidelines for the management of pregnant and breastfeeding women in the context of Ebola virus disease	<a href="https://www.who.int/publications/i/item/9789240001381">https://www.who.int/publications/i/item/9789240001381</a>
WHO	Clinical care for survivors of Ebola virus disease	<a href="https://www.who.int/publications/i/item/WHO-EVD-OHE-PED-16.1">https://www.who.int/publications/i/item/WHO-EVD-OHE-PED-16.1</a>
WHO	Roadmap for introduction and roll-out of Merck rVSV-ZEBOV Ebola Virus Disease vaccine in African countries	<a href="https://www.who.int/publications/m/item/merck-EVD-vax-intro-roadmap">https://www.who.int/publications/m/item/merck-EVD-vax-intro-roadmap</a>
WHO	Optimized supportive care for Ebola virus disease: clinical management standard operating procedures	<a href="https://apps.who.int/iris/handle/10665/325000">https://apps.who.int/iris/handle/10665/325000</a>
WHO	Personal protective equipment for use in a filovirus disease outbreak: rapid advice guideline	<a href="https://apps.who.int/iris/handle/10665/251426">https://apps.who.int/iris/handle/10665/251426</a>
WHO	Framework and toolkit for infection prevention and control in outbreak preparedness, readiness and response at the health care facility level	<a href="https://www.who.int/publications/i/item/framework-and-toolkit-for-infection-prevention-and-control-in-outbreak-preparedness--readiness-and-response-at-the-health-care-facility-level">https://www.who.int/publications/i/item/framework-and-toolkit-for-infection-prevention-and-control-in-outbreak-preparedness--readiness-and-response-at-the-health-care-facility-level</a>
HAS	ERVEBO (vaccin contre Ebola Zaïre, vivant atténué)	<a href="https://www.has-sante.fr/jcms/p_3159838/fr/ervebo-vaccin-contre-ebola-zaire-vivant-attenué">https://www.has-sante.fr/jcms/p_3159838/fr/ervebo-vaccin-contre-ebola-zaire-vivant-attenué</a>
HAS	Utilisation du vaccin contre la maladie à virus Ebola ERVEBO	<a href="https://www.has-sante.fr/jcms/p_3159895/fr/utilisation-du-vaccin-contre-la-maladie-a-virus-ebola-ervebo">https://www.has-sante.fr/jcms/p_3159895/fr/utilisation-du-vaccin-contre-la-maladie-a-virus-ebola-ervebo</a>
EMA	Zabdeno	<a href="https://www.ema.europa.eu/en/medicines/human/EPAR/zabdeno">https://www.ema.europa.eu/en/medicines/human/EPAR/zabdeno</a>

### Confirmed cases and deaths (05/01)

Source: <https://www.afro.who.int/countries/uganda/publication/ebola-virus-disease>

Country	Cases confirmed	Deaths confirmed
Uganda	142	55

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

Date	Source	Type of publication	Title	Key facts	Link
05/01/2023	ECDC	Report	Ebola outbreak in Uganda, as of 3 January 2023	According to the World Health Organization (WHO) and the Ugandan Ministry of Health, as of 3 January 2023, there have been 142 confirmed cases of SVD, of which 55 died (CFR: 39%), and 87 recovered. In addition, 22 deaths among probable cases have been reported in individuals who died before a sample was taken. At least 19 healthcare workers have been infected and seven of them died.	<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>
04/01/2023	US CDC	Report	Uganda Ebola Outbreak, September 2022	Outbreaks have been reported in 9 districts (Mubende, Kyegegwa, Kassanda, Kagadi, Bunyangabu, Kampala, Wakiso, Masaka City, Jinja). Rapid Response Teams were deployed to support outbreak response activities, including investigation of the unexplained deaths and contact tracing. CDC is providing support in surveillance, epidemiology, laboratory, communication, and ecological investigations.	<a href="https://www.cdc.gov/vhf/ebola/outbreaks/uganda/2022-sep.html">https://www.cdc.gov/vhf/ebola/outbreaks/uganda/2022-sep.html</a>
30/12/2022	WHO Africa	Report	Ebola Virus Disease in Uganda SitRep - 85	Today marks 105 days of responding to the EVD outbreak and 33 days since the last confirmed case. - Within the past 24 hours, there was no new confirmed case or death registered; there was no recovery. - Case Fatality Ratio (CFR) among confirmed cases still stands 55/142 (39%). - No active contacts are currently under follow-up.	<a href="https://www.afro.who.int/countries/uganda/publications/ebola-virus-disease-uganda-sitrep-85">https://www.afro.who.int/countries/uganda/publications/ebola-virus-disease-uganda-sitrep-85</a>
23/12/2022	Health Policy Watch	News	Exclusive: Vaccine Trial Against Sudan Ebolavirus – With No Recent Infections in Uganda, What's Plan B?	The World Health Organization (WHO) isn't talking about it publicly, but behind the scenes WHO is planning a meeting for 12 January to evaluate next steps, as the absence of new cases in the Uganda outbreak makes it impossible to begin a clinical trial based on a ring vaccination of recent Ebolavirus contacts.	<a href="https://healthpolicy-watch.news/whos-sudan-ebolavirus-vaccine-trial-plan-b/">https://healthpolicy-watch.news/whos-sudan-ebolavirus-vaccine-trial-plan-b/</a>
23/12/2022	WHO Africa	Report	Ebola Virus Disease in Uganda SitRep - 80	Today marks 98 days of responding to the EVD outbreak and 26 days since the last confirmed case. - Within the past 24 hours, there was no new confirmed case or death registered and no recovery. - Case Fatality Ratio (CFR) among confirmed cases still stands 55/142 (39%). - No active contacts are currently under follow-up.	<a href="https://www.afro.who.int/countries/uganda/publications/ebola-virus-disease-uganda-sitrep-80">https://www.afro.who.int/countries/uganda/publications/ebola-virus-disease-uganda-sitrep-80</a>
22/12/2022	News	Article	News at a glance: Ebola vaccine trial on hold	WHO plans to consult with experts in January 2023 on other potential studies of the vaccines.	<a href="https://www.science.org/content/article/news-glance-ebola-vaccine-trial-hold-oppenheimer-cleared-return-coffee-bean?utm_source=sfmc&amp;utm_medium=email&amp;utm_campaign=DailyLatestNews&amp;utm_content=alert&amp;et rid=869157293&amp;et cid=4546554">https://www.science.org/content/article/news-glance-ebola-vaccine-trial-hold-oppenheimer-cleared-return-coffee-bean?utm_source=sfmc&amp;utm_medium=email&amp;utm_campaign=DailyLatestNews&amp;utm_content=alert&amp;et rid=869157293&amp;et cid=4546554</a>
22/12/2022	ECDC	Report	Communicable disease threats report, 18-24 December 2022, week 51	Since the last update on 15 December and as of 22 December 2022, no new cases of Sudan virus disease (SVD) have been reported.	<a href="https://www.ecdc.europa.eu/en/publications-data/communicable-disease-threats-report-18-24-december-2022-week-51">https://www.ecdc.europa.eu/en/publications-data/communicable-disease-threats-report-18-24-december-2022-week-51</a>
21/12/2022	Africa CDC	Report	Outbreak Brief 13: Sudan Virus Disease in Uganda	Since the last brief (14 December 2022), no new confirmed cases and deaths of Sudan virus disease (SVD) were reported from Uganda. The last confirmed case was reported on 27 November 2022; this makes 23 days since the last reported confirmed case.	<a href="https://africacdc.org/disease-outbreak/outbreak-brief-13-sudan-virus-disease-in-uganda/">https://africacdc.org/disease-outbreak/outbreak-brief-13-sudan-virus-disease-in-uganda/</a>
16/12/2022	ECDC	Report	Ebola outbreak in Uganda, as of 13 December 2022	According to the World Health Organization (WHO), as of 13 December 2022, there have been 142 confirmed cases of SVD, of which 55 died (CFR: 39%), and 87 recovered. In addition, 22 deaths among probable cases have been reported in individuals who died before a sample was taken. At least 19 healthcare workers have been infected and seven of them died.	<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>

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15/12/2022	WHO Africa	Report	Uganda Ebola Virus Disease Situation Report No 75	Today marks 90 days of responding to the EVD outbreak, and 18 days since the last confirmed case.	<a href="https://reliefweb.int/report/uganda/uganda-ebola-virus-disease-situation-report-no-75">https://reliefweb.int/report/uganda/uganda-ebola-virus-disease-situation-report-no-75</a>
15/12/2022	University of Oxford	News	Oxford Ebola vaccine manufactured and shipped in record time by SII	More than 40,000 doses of Oxford's Ebola vaccine have been manufactured by SII (Serum Institute of India) in just 60 days and doses shipped to Uganda.	<a href="https://www.ox.ac.uk/news/2022-12-15-oxford-ebola-vaccine-manufactured-and-shipped-record-time-sii">https://www.ox.ac.uk/news/2022-12-15-oxford-ebola-vaccine-manufactured-and-shipped-record-time-sii</a>
14/12/2022	IAVI	News	As Ebola outbreak fades, hope for a vaccine remains	The emergence of the Sudan strain of Ebola virus in Uganda prompted a rush to get vaccine candidates ready. Expectations are it will be needed in the future.	<a href="https://www.iavi.org/iavi-report/as-ebola-outbreak-fades-hope-for-a-vaccine-remains">https://www.iavi.org/iavi-report/as-ebola-outbreak-fades-hope-for-a-vaccine-remains</a>
09/12/2022	WHO	News	Ebola trial candidate vaccines arrive in Uganda in record 79 days after outbreak declared	The arrival of the 1200 doses of candidate vaccines just 79 days after the outbreak was declared on 20 September marks a historical milestone in the global capacity to respond to outbreaks. These doses will be evaluated in a clinical trial called the Solidarity Against Ebola or Tokomeza Ebola.	<a href="https://www.who.int/news/item/09-12-2022-ebola-trial-candidate-vaccines-arrive-in-uganda-in-record-79-days-after-outbreak-declared">https://www.who.int/news/item/09-12-2022-ebola-trial-candidate-vaccines-arrive-in-uganda-in-record-79-days-after-outbreak-declared</a>
08/12/2022	WHO	Report	Ebola disease caused by Sudan ebolavirus – Uganda	Since the last DON (24/11), one new confirmed case was reported, a stillborn baby delivered from a mother infected with SUDV while pregnant who had since recovered. Since the outbreak declaration on 20 September, a total of 142 confirmed cases have been reported by the Uganda Ministry of Health. CFR is of 39%. 22 probable cases (all are deaths) have been also reported. As of 5 December, there are no active cases.	<a href="https://www.who.int/emergencies/disease-outbreak-news/item/2022-DON428">https://www.who.int/emergencies/disease-outbreak-news/item/2022-DON428</a>
08/12/2022	CIDRAP	News	Uganda receives first Ebola vaccine trial doses	Uganda's health ministry today announced that the country has received 1,200 doses of a candidate Sudan Ebola vaccine from the WHO Uganda office. The doses arrived just 79 days after the outbreak was declared and that the clinical trial will be conducted by a team from the University of Makerere, with support from the health ministry and the WHO.	<a href="https://www.cidrap.umn.edu/ebola/uganda-receives-first-ebola-vaccine-trial-doses">https://www.cidrap.umn.edu/ebola/uganda-receives-first-ebola-vaccine-trial-doses</a>
02/12/2022	Reuters	News	Uganda discharges last known Ebola patient, raising hopes - ministry	Uganda has discharged its last known Ebola patient from hospital, raising hopes that an outbreak which has killed at least 56 people could be coming to an end.	<a href="https://www.reuters.com/business/healthcare-pharmaceuticals/uganda-discharges-last-known-ebola-patient-raising-hopes-ministry-2022-12-02/">https://www.reuters.com/business/healthcare-pharmaceuticals/uganda-discharges-last-known-ebola-patient-raising-hopes-ministry-2022-12-02/</a>
30/11/2022	Africa CDC	Report	Outbreak Brief 10: Sudan Ebola virus disease (EVD) in Uganda	Since the last brief (23 November 2022), one new confirmed fatal case of Sudan Ebolavirus disease (SVD) was reported from Uganda. The case was a 32-week male stillbirth delivered on 27 November 2022, to an SVD patient who recovered on 22 November 2022. This new case was confirmed after a 13 days period with no confirmed cases.	<a href="https://africacdc.org/disease-outbreak/outbreak-brief-10-sudan-ebola-virus-disease-evd-in-uganda/">https://africacdc.org/disease-outbreak/outbreak-brief-10-sudan-ebola-virus-disease-evd-in-uganda/</a>
27/11/2022	Al Jazeera	News	Uganda extends quarantine in Ebola epicentre for 21 days	Uganda's President Yoweri Museveni has extended a quarantine placed on two districts that are the epicentre of the country's Ebola outbreak by 21 days. Movement in and out of Mubende and Kassanda districts in central Uganda will be restricted up to December 17.	<a href="https://www.aljazeera.com/news/2022/11/27/uganda-as-president-extends-ebola-epicentres-quarantine-for-21-days">https://www.aljazeera.com/news/2022/11/27/uganda-as-president-extends-ebola-epicentres-quarantine-for-21-days</a>
25/11/2022	ECDC	Report	Ebola outbreak in Uganda, as of 22 November 2022	According to the World Health Organization (WHO), as of 22 November 2022, there have been 141 confirmed cases of Ebola virus disease (EVD), including 55 deaths (case fatality rate: 39%). No new cases have been reported in week 47. Among these, at least 19 healthcare workers were infected, of whom seven died. There are also 22 probable cases who died before samples were obtained for confirmation. 79 cases have recovered.	<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>
24/11/2022	WHO	Report	Ebola disease caused by Sudan ebolavirus – Uganda	Update of the situation and analysis from data of Ministry of Health Uganda and WHO Situation Reports	<a href="https://www.who.int/emergencies/disease-outbreak-news/item/2022-DON425">https://www.who.int/emergencies/disease-outbreak-news/item/2022-DON425</a>
12/11/2022	WHO Africa	Report	Ebola Virus Disease - Republica of Uganda	WHO / Ministry of Health Uganda report on current Ebola outbreak, including situation report (cases, deaths, recoveries, etc), actions to date critical challenges, key messages to the public.	<a href="https://www.afro.who.int/countries/uganda/publications/ebola-virus-disease-uganda-sitrep-58">https://www.afro.who.int/countries/uganda/publications/ebola-virus-disease-uganda-sitrep-58</a>
18/11/2022	IFRC	News	Burundi: Anticipatory Actions for Ebola Outbreak, DREF Application	Given that two suspected Ebola cases have already been found in Burundi (declared negative after investigation and lab tests), it is uncertain, when Burundi MoH and its auxiliary, Burundi Red Cross, would need to respond to an active outbreak. The porous borders between Rwanda and Uganda put Burundi at risk due to daily road connections between Uganda and Burundi.	<a href="https://reliefweb.int/report/burundi/burundi-anticipatory-actions-ebola-outbreak-dref-application">https://reliefweb.int/report/burundi/burundi-anticipatory-actions-ebola-outbreak-dref-application</a>
13/11/2022	CIDRAP	News	Ebola spreads to southeastern Uganda	Uganda's health ministry yesterday reported that Ebola has spread to Jinja district in the southeastern part of the country.	<a href="https://www.cidrap.umn.edu/news-perspective/2022/11/ebola-spreads-southeastern-uganda">https://www.cidrap.umn.edu/news-perspective/2022/11/ebola-spreads-southeastern-uganda</a>
12/11/2022	WHO Africa	Report	Ebola Virus Disease - Republica of Uganda	WHO / Ministry of Health Uganda report on current Ebola outbreak, including situation report (cases, deaths, recoveries, etc), actions to date critical challenges, key messages to the public.	<a href="https://www.afro.who.int/sites/default/files/2022-11/Ug_EVD_SitRep%2348.pdf">https://www.afro.who.int/sites/default/files/2022-11/Ug_EVD_SitRep%2348.pdf</a>

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11/11/2022	ECDC	Report	Ebola outbreak in Uganda, as of 7 November 2022	According to the WHO, as of 7 November 2022, there have been 136 confirmed cases of Ebola virus disease (EVD), including 53 deaths (case fatality rate: 39%). Among these, at least 18 healthcare workers were infected, of whom seven died. There are also 21 probable cases who died before samples were obtained for confirmation. 62 cases have recovered.	<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>
10/11/2022	WHO	Report	Ebola disease caused by Sudan ebolavirus – Uganda	From when the outbreak was declared on 20 September until 7 November, a total of 136 confirmed cases and 53 confirmed deaths (CFR 38.9%) from Ebola disease caused by the Sudan ebolavirus (SUDV) have been reported in 8 districts, representing an increase of 18% and 66% respectively since the last DON published on 28 October 2022.	<a href="https://www.who.int/emergencies/disease-outbreak-news/item/2022-DON423">https://www.who.int/emergencies/disease-outbreak-news/item/2022-DON423</a>
07/11/2022	UKHSA	Guidance	Ebola: overview, history, origins and transmission	The history of Ebola virus disease, animal reservoirs, routes of transmission and an overview of diagnosis and management.	<a href="https://www.gov.uk/government/publications/ebola-origins-reservoirs-transmission-and-guidelines">https://www.gov.uk/government/publications/ebola-origins-reservoirs-transmission-and-guidelines</a>
03/11/2022	WHO	News	Global health agencies outline plan to support Ugandan government-led response to outbreak of Ebola virus disease	The Ministry of Health has designated the Makerere University Lung Institute to conduct vaccine and therapeutics clinical trials. The clinical trial to evaluate candidate vaccines against this ebolavirus is co-sponsored by the Ministry of Health in Uganda and WHO, and involves support from partners. A Principal investigator from Makerere University Lung Institute will lead the vaccine trial. WHO, CEPI and Gavi are providing support to ensure that sufficient doses of candidate vaccines are available for the trial and beyond.	<a href="https://www.gavi.org/news/media-room/global-health-agencies-outline-plan-support-ugandan-government-led-response">https://www.gavi.org/news/media-room/global-health-agencies-outline-plan-support-ugandan-government-led-response</a>
02/11/2022	ECDC	Report	Ebola outbreak in Uganda, as of 2 November 2022	According to the World Health Organization (WHO), as of 2 November 2022, there have been 131 confirmed cases of Ebola virus disease (EVD), including 48 deaths (case fatality rate: 37%). Among these, at least 18 healthcare workers were infected, of whom six died. There are also 21 probable cases who died before samples were obtained for confirmation. 54 cases have recovered.	<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>
29/10/2022	WHO Africa	Report	Ebola Virus Disease - Republica of Uganda	WHO / Ministry of Health Uganda report on current Ebola outbreak, including situation report (cases, deaths, recoveries, etc), actions to date critical challenges, key messages to the public.	<a href="https://www.afro.who.int/sites/default/files/2022-10/Ug_EVD_SitRep%2338.pdf">https://www.afro.who.int/sites/default/files/2022-10/Ug_EVD_SitRep%2338.pdf</a>
28/10/2022	WHO	Report	Ebola Disease caused by Sudan virus - Uganda	As of 26 October, a total of 115 confirmed and 21 probable cases, including 32 confirmed and 21 probable deaths (CFR among confirmed cases: 27.8%) have been reported. 15 cases with four deaths have been reported among HCW. 1844 contacts were under surveillance in 9 districts of the country. A cumulative total of 3166 contacts have been listed since the start of this outbreak, of which 1194 (37.7%) have completed the follow-up period of 21 days. A total of 94 safe and dignified burials (SDB) have been undertaken since the beginning of the outbreak, of which 97.9% (n=92) were community burials.	<a href="https://www.who.int/emergencies/disease-outbreak-news/item/2022-DON421">https://www.who.int/emergencies/disease-outbreak-news/item/2022-DON421</a>
28/10/2022	ECDC	Report	Ebola outbreak in Uganda, as of 26 October 2022	According to the World Health Organization (WHO), as of 26 October 2022, there have been 115 confirmed cases of Ebola virus disease (EVD), including 32 deaths (CFR: 28%). At least 11 healthcare workers were infected, of whom 4 died. There are also 20 deaths among individuals who died before a sample could have been taken but who were linked to confirmed cases. 34 cases have recovered.	<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>
28/10/2022	MoH Uganda	Press release	All contacts to ebola confirmed cases are not allowed to travel locally or internationally for 21 days	All contacts to Ebola confirmed cases in Uganda are NOT allowed to travel locally or internationally for 21 days.	<a href="https://twitter.com/MinofHealthUG/status/1586035843139264513">https://twitter.com/MinofHealthUG/status/1586035843139264513</a>
27/10/2022	WHO	News	Contact tracers and village health teams take on Ebola in Uganda	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.	<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>
26/10/2022	IAVI	News	IAVI to accelerate promising investigational Sudan ebolavirus vaccine development for potential outbreak research and response	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.	<a href="https://www.iavi.org/news-releases/2022/iavi-to-accelerate-promising-investigational-sudan-ebolavirus-vaccine-development-for-potential-outbreak-research-and-response">https://www.iavi.org/news-releases/2022/iavi-to-accelerate-promising-investigational-sudan-ebolavirus-vaccine-development-for-potential-outbreak-research-and-response</a>
24/10/2022	US CDC	Report	September 2022 Uganda	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.	<a href="https://www.cdc.gov/vhf/ebola/outbreaks/uganda/2022-sep.html">https://www.cdc.gov/vhf/ebola/outbreaks/uganda/2022-sep.html</a>
24/10/2022	CIDRAP	News	As Uganda's Ebola outbreak intensifies, cases expand in Kampala	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.	<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>

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24/10/2022	Reuters	News	Uganda says 9 more Ebola cases confirmed in Kampala, urges vigilance	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.	<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>
21/10/2022	ECDC	Report	Ebola outbreak in Uganda, as of 21 October 2022	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%).	<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>
20/10/2022	CIDRAP	News	Uganda's Ebola cases rise amid concern over undetected spread	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.	<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>
20/10/2022	WHO	News	WHO: 'Concerned' about Ebola spread as latest eight cases not contacts of others infected	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.	<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>
18/10/2022	Reuters	News	U.S. sends experimental antibody, antiviral drug to Uganda for Ebola outbreak	The United States sent Gilead Sciences' remdesivir and Mapp Biopharmaceutical Inc's experimental Ebola antibody drug MBP134 to Uganda last week to help safeguard healthcare workers responding to an outbreak that has infected 60 people and killed 44.	<a href="https://www.reuters.com/business/healthcare-pharmaceuticals/us-sends-experimental-antibody-antiviral-drug-uganda-ebola-outbreak-2022-10-18">https://www.reuters.com/business/healthcare-pharmaceuticals/us-sends-experimental-antibody-antiviral-drug-uganda-ebola-outbreak-2022-10-18</a>
18/10/2022	US CDC	News	The U.S. Response to Ebola Outbreaks in Uganda	Mesures 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.	<a href="https://www.cdc.gov/media/releases/2022/s1018-ebola-outbreaks-uganda.html">https://www.cdc.gov/media/releases/2022/s1018-ebola-outbreaks-uganda.html</a>
17/10/2022	The Conversation	News	Ebola : que se passe-t-il en Ouganda ?	Comment a-t-elle commencé ? Que sait-on de la souche Soudan qui en est responsable ? Faut-il craindre une épidémie d'ampleur ?	<a href="https://theconversation.com/ebola-que-se-passe-t-il-en-ouganda-192448">https://theconversation.com/ebola-que-se-passe-t-il-en-ouganda-192448</a>
17/10/2022	Reuters	News	Serum Institute to produce Ebola vaccine for use in Uganda outbreak	The Serum Institute of India plans to manufacture 20,000 to 30,000 doses of the Oxford University experimental Ebola vaccine by the end of November for use in trials against an outbreak in Uganda.	<a href="https://www.reuters.com/world/africa/serum-institute-produce-ebola-vaccine-use-uganda-outbreak-2022-10-17/">https://www.reuters.com/world/africa/serum-institute-produce-ebola-vaccine-use-uganda-outbreak-2022-10-17/</a>
17/10/2022	MoH Uganda	News	Ebola Outbreak Statistics 2022	The new cases lift the number of lab-confirmed cases to 60. So far, 24 deaths have been reported among the patients with confirmed infections. Uganda also has 20 suspected cases from earlier in the outbreak, all of them fatal.	<a href="https://www.health.go.ug/ebola/">https://www.health.go.ug/ebola/</a>
16/10/2022	BBC	News	Ebola in Uganda: Three-week lockdown announced for two districts	A three-week lockdown has been declared in two districts of Uganda as the country battles an Ebola outbreak.	<a href="https://www.bbc.com/news/world-africa-63273603">https://www.bbc.com/news/world-africa-63273603</a>
14/10/2022	ECDC	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.	<a href="https://www.ecdc.europa.eu/en/publications-data/communicable-disease-threats-report-9-15-october-2022-week-41">https://www.ecdc.europa.eu/en/publications-data/communicable-disease-threats-report-9-15-october-2022-week-41</a>
13/10/2022	UKHSA	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.	<a href="https://www.gov.uk/government/news/uk-announces-support-to-help-uganda-manage-ebola-outbreak">https://www.gov.uk/government/news/uk-announces-support-to-help-uganda-manage-ebola-outbreak</a>
13/10/2022	WHO	Report	Highlights from the Meeting of the Strategic Advisory Group of Experts (SAGE) on Immunization – 3-6 October 2022	SAGE recommendations on the current Monkeypox, Poliomyelitis, Respiratory Syncytial Virus, COVID-19, and the Sudan ebolavirus outbreak	<a href="https://cdn.who.int/media/docs/default-source/immunization/sage/2022/october/highlights_sage_oct_2022.pdf?sfvrsn=69f947c4_5">https://cdn.who.int/media/docs/default-source/immunization/sage/2022/october/highlights_sage_oct_2022.pdf?sfvrsn=69f947c4_5</a>
13/10/2022	WHO	Report	WEEKLY BULLETIN ON OUTBREAKS AND OTHER EMERGENCIES	There have been 20 suspected cases, all fatal. Between Sep 19 and Oct 9, 68 cases of the virus were detected, including the 20 suspected cases and 48 lab-confirmed cases. 37 fatalities have been registered including 17 confirmed cases, for an overall case fatality ratio of 54.4%, and 35.4% among confirmed cases. Cases seem to be declining, though deaths are increasing.	<a href="https://apps.who.int/iris/bitstream/handle/10665/363497/OEW41-0309102022.pdf">https://apps.who.int/iris/bitstream/handle/10665/363497/OEW41-0309102022.pdf</a>
13/10/2022	The Observer	News	Uganda to trial two vaccines for rare Ebola virus strain	The ministry of Health and the World Health Organization (WHO) are planning to try out two vaccines for the Ebola Sudan virus to try and curb the spread of the rare strain. The vaccines include one developed at the University of Oxford in the United Kingdom, and the other manufactured by Sabin in the United States.	<a href="https://www.observer.ug/news/headlines/75503-uganda-to-trial-two-vaccines-for-rare-ebola-virus-strain">https://www.observer.ug/news/headlines/75503-uganda-to-trial-two-vaccines-for-rare-ebola-virus-strain</a>
12/10/2022	ECDC	Report	Ebola outbreak in Uganda under ECDC monitoring	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.	<a href="https://www.ecdc.europa.eu/en/news-events/ebola-outbreak-uganda-under-ecdc-monitoring">https://www.ecdc.europa.eu/en/news-events/ebola-outbreak-uganda-under-ecdc-monitoring</a>



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07/10/2022	MoH Uganda	Guidelines	TRAVEL ADVISORY ON EBOLA VIRUS DISEASE (EVD) OUTBREAK	Mudembe district is the epicenter of the outbreak with sporadic cases in Kassanda, Kyegegwa, Kagadi and Bunyagabu districts. All these districts are more than 100km away from the capital city, Kampala. The rest of the country is free from Ebola and there are no travel restrictions. The country is safe for all national and international travelers within the country.	<a href="https://www.health.go.ug/2022/10/07/travel-advisory-on-ebola-virus-disease-evd-outbreak/">https://www.health.go.ug/2022/10/07/travel-advisory-on-ebola-virus-disease-evd-outbreak/</a>
06/10/2022	UKHSA	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.	<a href="https://www.gov.uk/government/publications/ebola-outbreak-of-sudan-ebolavirus-in-uganda/public-health-message-to-all-nhs-service-providers-regarding-ebola-virus-outbreak-in-uganda-sudan-ebolavirus">https://www.gov.uk/government/publications/ebola-outbreak-of-sudan-ebolavirus-in-uganda/public-health-message-to-all-nhs-service-providers-regarding-ebola-virus-outbreak-in-uganda-sudan-ebolavirus</a>
06/10/2022	UKHSA	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.	<a href="https://www.gov.uk/government/news/ukhsa-monitoring-ebola-outbreak-in-east-africa">https://www.gov.uk/government/news/ukhsa-monitoring-ebola-outbreak-in-east-africa</a>
06/10/2022	US Embassy in Uganda	News	Health Alert – Enhanced Screening at Designated U.S. Airports-U. S. Embassy Kampala, Uganda – October 6, 2022	As of October 6, at 11:59 p.m. ET, all U.S.-bound passengers who have been in Uganda in the 21 days prior to their arrival will be routed to one of five designated airports for enhanced screening.	<a href="https://ug.usembassy.gov/health-alert-enhanced-screening-at-designated-u-s-airports-u-s-embassy-kampala-uganda-october-6-2022/">https://ug.usembassy.gov/health-alert-enhanced-screening-at-designated-u-s-airports-u-s-embassy-kampala-uganda-october-6-2022/</a>
06/10/2022	US CDC	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.	<a href="https://emergency.cdc.gov/han/2022/han00477.asp">https://emergency.cdc.gov/han/2022/han00477.asp</a>
05/10/2022	CIDRAP	News	Ebola kills another health worker in Uganda outbreak	63 confirmed and probable cases have been reported, including 29 deaths.	<a href="https://www.cidrap.umn.edu/news-perspective/2022/10/ebola-kills-another-health-worker-uganda-outbreak">https://www.cidrap.umn.edu/news-perspective/2022/10/ebola-kills-another-health-worker-uganda-outbreak</a>
04/10/2022	ASPR	News	ASPR awards \$110 million to advance development, procure therapeutic for Sudan ebolavirus	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).	<a href="https://aspr.hhs.gov/newsroom/Pages/Sudan-ebolavirus-Sept2022.aspx">https://aspr.hhs.gov/newsroom/Pages/Sudan-ebolavirus-Sept2022.aspx</a>
04/10/2022	European Commission	News	Ebola outbreak: EU provides immediate support to Uganda	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.	<a href="https://civil-protection-humanitarian-aid.ec.europa.eu/news-stories/news/ebola-outbreak-eu-provides-immediate-support-uganda-2022-10-04_en">https://civil-protection-humanitarian-aid.ec.europa.eu/news-stories/news/ebola-outbreak-eu-provides-immediate-support-uganda-2022-10-04_en</a>
04/10/2022	NCDC	News	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.	<a href="https://ncdc.gov.ng/news/418/ncdc-on-alert-mode-following-the-outbreak-of-ebola-virus-disease-%28evd%29-detected-in-uganda">https://ncdc.gov.ng/news/418/ncdc-on-alert-mode-following-the-outbreak-of-ebola-virus-disease-%28evd%29-detected-in-uganda</a>
04/10/2022	US CDC	News	Ebola 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.	<a href="https://wwwnc.cdc.gov/travel/notices/alert/ebola-in-uganda">https://wwwnc.cdc.gov/travel/notices/alert/ebola-in-uganda</a>
03/10/2022	UKHSA	Guidelines	Ebola: returning workers scheme (RWS)	Advice for people returning to the UK after working in an Ebola affected area.	<a href="https://www.gov.uk/guidance/ebola-returning-workers-scheme">https://www.gov.uk/guidance/ebola-returning-workers-scheme</a>
03/10/2022	CIDRAP	Report	Ebola sickens 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.	<a href="https://www.cidrap.umn.edu/news-perspective/2022/10/ebola-sickens-8-more-uganda-doctor-among-latest-deaths">https://www.cidrap.umn.edu/news-perspective/2022/10/ebola-sickens-8-more-uganda-doctor-among-latest-deaths</a>
01/10/2022	WHO Africa	News	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.	<a href="https://www.afro.who.int/countries/uganda/news/uganda-defines-priorities-and-needs-its-ebola-response-plan">https://www.afro.who.int/countries/uganda/news/uganda-defines-priorities-and-needs-its-ebola-response-plan</a>
30/09/2022	UKHSA	Guidance	Ebola and Marburg haemorrhagic fevers: outbreaks and case locations	Information about incidents and outbreaks of Ebola and Marburg, both viral haemorrhagic fevers (VHF).	<a href="https://www.gov.uk/guidance/ebola-and-marburg-haemorrhagic-fevers-outbreaks-and-case-locations">https://www.gov.uk/guidance/ebola-and-marburg-haemorrhagic-fevers-outbreaks-and-case-locations</a>
30/09/2022	ECDC	Report	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.	<a href="https://www.ecdc.europa.eu/en/publications-data/communicable-disease-threats-report-25-september-1-october-2022-week-39">https://www.ecdc.europa.eu/en/publications-data/communicable-disease-threats-report-25-september-1-october-2022-week-39</a>
30/09/2022	CIDRAP	News	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.	<a href="https://www.cidrap.umn.edu/news-perspective/2022/09/uganda-ebola-cases-jump-50-1-more-death">https://www.cidrap.umn.edu/news-perspective/2022/09/uganda-ebola-cases-jump-50-1-more-death</a>

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29/09/2022	STAT NEWS	Article	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.	<a href="https://www.statnews.com/2022/09/29/ebola-experimental-vaccine-trial-may-begin-soon-in-uganda/">https://www.statnews.com/2022/09/29/ebola-experimental-vaccine-trial-may-begin-soon-in-uganda/</a>
29/09/2022	CIDRAP	News	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.	<a href="https://www.cidrap.umn.edu/news-perspective/2022/09/uganda-ebola-cases-jump-50-1-more-death">https://www.cidrap.umn.edu/news-perspective/2022/09/uganda-ebola-cases-jump-50-1-more-death</a>
26/09/2022	WHO	Report	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).	<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>
26/09/2022	US CDC	Report	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.	<a href="https://www.cdc.gov/vhf/ebola/outbreaks/uganda/2022-sep.html">https://www.cdc.gov/vhf/ebola/outbreaks/uganda/2022-sep.html</a>
26/09/2022	WHO	Disease Outbreak News	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, Kyegegwa and Kassanda districts, including 23 deaths, of which five were among confirmed cases (CFR among confirmed cases 28%).	<a href="https://www.who.int/emergencies/disease-outbreak-news/item/2022-DON410">https://www.who.int/emergencies/disease-outbreak-news/item/2022-DON410</a>
20/09/2022	Africa CDC	Report	Uganda Reported an Outbreak of Ebola Virus Disease	Announcement of first ebola case of the Uganda 2022 outbreak by the Africa CDC	<a href="https://africacdc.org/news-item/uganda-reported-an-outbreak-of-ebola-virus-disease/">https://africacdc.org/news-item/uganda-reported-an-outbreak-of-ebola-virus-disease/</a>
21/12/2020	FDA	News	FDA approves treatment for ebola virus	Ebanga (Ansuvimab-zykl), 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.	<a href="https://www.fda.gov/drugs/news-events-human-drugs/fda-approves-treatment-ebola-virus">https://www.fda.gov/drugs/news-events-human-drugs/fda-approves-treatment-ebola-virus</a>
14/10/2020	FDA	News	FDA Approves First Treatment for Ebola Virus	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.	<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>

# Ebola Sudan virus - 2022 outbreak

## Factsheet and news

**UPDATE OF 11 JANUARY 2023**

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:**

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

Date	Source	Type of publication	Title	Key facts	Link
17/12/2022	NPJ Vaccines	Research article	Multivalent viral particles elicit safe and efficient immunoprotection against Nipah Hendra and Ebola viruses	In a Syrian hamster model of disease, the VSV multivalent vaccine elicited safe, strong, and protective neutralizing antibody responses against challenge with NiV, HeV, or EBOV.	<a href="https://doi.org/10.1038/s41541-022-00588-5">https://doi.org/10.1038/s41541-022-00588-5</a>
16/12/2022	PLoS One	Research article	Development of Ebola virus disease prediction scores: Screening tools for Ebola suspects at the triage-point during an outbreak	This study develops prediction scores that can help healthcare workers improve their decision-making at the triage-point of EVD suspect-cases during EVD outbreaks.	<a href="https://doi.org/10.1371/journal.pone.0278678">https://doi.org/10.1371/journal.pone.0278678</a>
14/12/2022	NEJM	Research article	Randomized Trial of Vaccines for Zaire Ebola Virus Disease	This study describes two randomized, placebo-controlled trials (one in adults and one in children) to evaluate the safety and immune responses of three vaccine regimens against Zaire Ebola virus disease: Ad26.ZEBOV followed by MVA-BN-Filo 56 days later, rVSVΔG-ZEBOV-GP followed by placebo 56 days later, and rVSVΔG-ZEBOV-GP followed by rVSVΔG-ZEBOV-GP 56 days later. With all three vaccine regimens, immune responses were seen from day 14 through month 12.	<a href="https://www.nejm.org/doi/full/10.1056/NEJMoa2200072">https://www.nejm.org/doi/full/10.1056/NEJMoa2200072</a>
14/12/2022	Vaccine	Research article	Targeted preventive vaccination campaigns to reduce Ebola outbreaks: An individual-based modeling study	Preventive vaccination may reduce Ebola cases, hospitalizations, and deaths, thus safeguarding the healthcare system and providing more time to implement additional interventions during an outbreak.	<a href="https://doi.org/10.1016/j.vaccine.2022.11.036">https://doi.org/10.1016/j.vaccine.2022.11.036</a>
13/12/2022	J Med Virol.	Letter	The outbreak of the Ebola virus: Concerns for the animal-to-human spillover	The outbreak of the Ebola virus: Concerns for the animal-to-human spillover.	<a href="https://doi.org/10.1002/jmv.28398">https://doi.org/10.1002/jmv.28398</a>
07/12/2022	BMJ Global Health	Review	Sudan virus disease outbreak in Uganda: urgent research gaps	Our data highlight a lack of SUDV research and an urgent need for investment to identify an effective vaccine, and optimal supportive care and therapeutic strategies for all at risk groups as a key research priority. Research investments should be prioritised into vaccines and treatment strategies that will be accessible to high-risk populations in affected regions during the outbreak, to protect populations, improve individual outcomes and facilitate outbreak control.	<a href="https://doi.org/10.1136/bmjgh-2022-010982">https://doi.org/10.1136/bmjgh-2022-010982</a>
07/12/2022	BMJ Global Health	Comment	The East African Community's mobile laboratory network's rapid response during the first 2 weeks of the Ebola Sudan virus disease (SVD) outbreak in Uganda and pandemic preparedness activities in South Sudan, Rwanda, Tanzania, Burundi, Kenya	We demonstrate for the first time that a locally established mobile laboratory network, embedded within the National Public Health Laboratories and the respective Ministries of Health, has the potential of bridging the crucial diagnostic time gap by providing immediate BSL-3/4 laboratory capacity at the site of the outbreak until large scale international emergency response starts.	<a href="http://dx.doi.org/10.1136/bmjgh-2022-011073">http://dx.doi.org/10.1136/bmjgh-2022-011073</a>
05/12/2022	Science	Editorial	Uganda's disappearing Ebola outbreak challenges vaccine testing	Public health officials call for African stockpiles of experimental vaccines to speed responses in future	<a href="https://www.science.org/content/article/uganda-s-disappearing-ebola-outbreak-challenges-vaccine-testing">https://www.science.org/content/article/uganda-s-disappearing-ebola-outbreak-challenges-vaccine-testing</a>
03/12/2022	Lancet	Editorial	Ebola outbreak in Uganda: patient values and preferences	To process the informed decision making, the benefits and risks need to be communicated and the patients' values and preferences considered. Health-care providers should accurately explain the positives of quarantining in a way that the patient can easily understand.	<a href="https://doi.org/10.1016/S0140-6736(22)02321-2">https://doi.org/10.1016/S0140-6736(22)02321-2</a>
30/11/2022	NPJ Vaccines	Research article	Non-human primate to human immunobridging demonstrates a protective effect of Ad26.ZEBOV, MVA-BN-Filo vaccine against Ebola	The primary immunobridging analysis evaluated the lower limit of the CI against predefined success criterion of 20% and passed with mean predicted survival probability of 53.4% (95% CI: 36.7–67.4)	<a href="https://doi.org/10.1038/s41541-022-00564-z">https://doi.org/10.1038/s41541-022-00564-z</a>
30/11/2022	Lancet preprints	Research article	Development and Evaluation of a Rapid Decision Algorithm for the Triage of Patients During Ebola Outbreaks	Developing a straightforward tool to help healthcare workers classify suspected cases according to likely risk (low/intermediate/high) of EVD. An EVD prediction score was developed using four priority variables most associated with infection.	<a href="https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4282950">https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4282950</a>
24/11/2022	J Med Virol	Editorial	2022 Uganda Ebola outbreak: early descriptions and open data	2022 Uganda Ebola outbreak: early descriptions and open data	<a href="https://doi.org/10.1002/jmv.28344">https://doi.org/10.1002/jmv.28344</a>

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16/11/2022	NEJM	Editorial	Understanding the Key to Outbreak Control — Sudan Virus Disease in Uganda	The Ugandan authorities recently decided to send a single multidisciplinary team to provide an integrated response to SVD hotspots, rather than sending multiple separate teams to operate in silos. This approach provides an opportunity to present the community with a single point of contact from which a relationship may be built between the people responding to the outbreak and those affected by it that would allow for mutual understanding and building of trust, enabling responders and community members to work together as partners — and would perhaps prevent another small outbreak from becoming large.	<a href="https://www.nejm.org/doi/full/10.1056/NEJMp2213975">https://www.nejm.org/doi/full/10.1056/NEJMp2213975</a>
15/11/2022	Nature	Editorial	To beat Ebola in Uganda, fund what worked in Liberia	Ebola response workers meet with denial and resistance, indicating that a fundamental lack of trust is holding back the response. Mobilizing communities to help themselves is crucial to containing Ebola. Previous experiences in Liberia show that the earlier we could get people to a treatment centre, the better their odds of survival. So the effort was made to identify people with Ebola at the onset of symptoms by deputizing on "active case finders" recruited by local chiefs, community leaders and religious leaders, that were trusted by the population.	<a href="https://www.nature.com/articles/d41586-022-03695-4">https://www.nature.com/articles/d41586-022-03695-4</a>
09/11/2022	Lancet Infect Dis	Research article	Differential symptomology of possible and confirmed Ebola virus disease infection in the Democratic Republic of the Congo: a retrospective cohort study	Establishing the exact time an individual first had symptoms is essential to assessing their infection risk. An individual's exposure history remains of paramount importance, especially in the early phase. Ebola virus disease vaccination reduces symptom severity and should also be considered when assessing the likelihood of infection.	<a href="https://doi.org/10.1016/S1473-3099(22)00584-9">https://doi.org/10.1016/S1473-3099(22)00584-9</a>
09/11/2022	Commun Biol	Research article	Persistent intraocular Ebola virus RNA is associated with severe uveitis in a convalescent rhesus monkey	We show the clinical natural history, resultant ocular pathology, intraocular antigen-specific antibody detection, and persistent intraocular EBOV RNA detected long after clinical resolution.	<a href="https://www.nature.com/articles/s42003-022-04158-2">https://www.nature.com/articles/s42003-022-04158-2</a>
07/11/2022	Nature	News	Can mRNA vaccines transform the fight against Ebola?	On the heels of successful COVID-19 mRNA vaccines, the technology could hold promise in protecting against another deadly pathogen.	<a href="https://www.nature.com/articles/d41586-022-03590-y">https://www.nature.com/articles/d41586-022-03590-y</a>
06/11/2022	Ann Med Surg (Lond)	Research article	Ebola Virus Disease in Uganda: A global emergency call	This article has explored various efforts by the World Health Organization and the Ministry of Health of the Republic of Uganda to coordinate outbreak preparedness and response.	
30/10/2022	Nature	News	Research successfully integrated into the Ebola outbreak response in Africa	New knowledge opens the door for testing new tools and vaccine disease outbreaks in Uganda.	<a href="https://www.nature.com/articles/d44148-022-00153-1">https://www.nature.com/articles/d44148-022-00153-1</a>
28/10/2022	BMJ	Opinion	Pregnancy in an Ebola outbreak—protecting women and health workers	Efforts to contain the spread of Ebola shouldn't compromise healthcare for women experiencing pregnancy complications	<a href="https://doi.org/10.1136/bmj.o2579">https://doi.org/10.1136/bmj.o2579</a>
28/10/2022	BMJ	News	Ebola: Uganda plans trials of two vaccines as cases rise	Ugandan officials are set to start trials of two vaccines against Ebola virus disease in an attempt to halt further spread of the infection.	<a href="https://doi.org/10.1136/bmj.o2589">https://doi.org/10.1136/bmj.o2589</a>
27/10/2022	Emerg Microbes Infect	Research article	Natural history of Sudan ebolavirus infection in rhesus and cynomolgus macaques	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.	<a href="https://doi.org/10.1080/22221751.2022.2086072">https://doi.org/10.1080/22221751.2022.2086072</a>
26/10/2022	Science	News	Merck locates frozen batch of undisclosed ebola vaccine, will donate for testing in Uganda's outbreak	Merck locates frozen batch of undisclosed ebola vaccine, will donate for testing in Uganda's outbreak	<a href="https://www.science.org/content/article/uganda-may-use-destroyed-ebola-vaccine-merck-fight-its-growing-outbreak">https://www.science.org/content/article/uganda-may-use-destroyed-ebola-vaccine-merck-fight-its-growing-outbreak</a>
02/11/2022	Vaccine	Research article	Immunogenicity of rVSVΔG-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	These data demonstrate that rVSVΔG-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.	<a href="https://doi.org/10.1016/j.vaccine.2022.09.037">https://doi.org/10.1016/j.vaccine.2022.09.037</a>
20/10/2022	Lancet Infect Dis	Research article	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	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.	<a href="https://doi.org/10.1016/s1473-3099(22)00594-1">https://doi.org/10.1016/s1473-3099(22)00594-1</a>
15/10/2022	Vaccines	Research article	Development of a Well-Characterized Cynomolgus Macaque Model of Sudan Virus Disease for Support of Product Development	The primary objective of this study was to characterize the disease course in cynomolgus macaques exposed to Sudan virus (SUDV), to determine if infection in this species is an appropriate model for the evaluation of filovirus countermeasures under the FDA Animal Rule.	<a href="https://www.mdpi.com/2076-393X/10/10/1723">https://www.mdpi.com/2076-393X/10/10/1723</a>

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10/10/2022	BMJ	News	Ebola: Uganda battles fresh epidemic as infections threaten to spread	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.	<a href="https://doi.org/10.1136/bmj.o2420">https://doi.org/10.1136/bmj.o2420</a>
08/10/2022	Lancet	Report	Experts hopeful about Ebola control in Uganda	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.	<a href="https://doi.org/10.1016/S0140-6736(22)01924-9">https://doi.org/10.1016/S0140-6736(22)01924-9</a>
07/10/2022	medRxiv	Preprint	Predicting the combined effects of case isolation, safe funeral practices, and contact tracing during Ebola virus disease outbreaks	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.	<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>
07/10/2022	Nature	News	Ebola outbreak in Uganda: how worried are researchers?	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.	<a href="https://www.nature.com/articles/d41586-022-03192-8">https://www.nature.com/articles/d41586-022-03192-8</a>
03/10/2022	PLoS One	Research article	First-in-human study to evaluate safety, tolerability, and immunogenicity of heterologous regimens using the multivalent filovirus vaccines Ad26.Filo and MVA-BN-Filo administered in different sequences and schedules: A randomized, controlled study	Phase 1, randomized, double-blind, placebo-controlled study enrolled healthy adults into four groups, to assess different Ad26.Filo and MVA-BN-Filo vaccine directionality and administration intervals. The primary endpoint was safety; immune responses against EBOV, SUDV, and MARV GPs. Twenty-one days post-dose 2, 100% of participants on active regimen responded to vaccination and exhibited binding antibodies against EBOV, SUDV, and MARV GPs; neutralizing antibody responses were robust against EBOV (85.7–100%), but lower against SUDV (35.7–100%) and MARV (0–57.1%) GPs. An Ad26.Filo booster induced a rapid further increase in humoral responses.	<a href="https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0274906">https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0274906</a>
03/10/2022	<a href="https://virological.org">Virological.org</a>	Report	September 2022 Sudan Ebola virus disease outbreak in Uganda	The new Mubende Sudan Ebolavirus genome is 99.6% complete and most closely related to Nakisamata Sudan Ebolavirus strain that emerged in Luwero District, Uganda in May 2011.	<a href="https://virological.org/t/september-2022-sudan-ebola-virus-disease-outbreak-in-uganda/902">https://virological.org/t/september-2022-sudan-ebola-virus-disease-outbreak-in-uganda/902</a>
29/09/2022	Science	Editorial	Scientists race to test vaccines for Uganda's Ebola outbreak	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.	<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>
29/09/2022	Lancet Infect Dis	News	New guidelines for treatment of Ebola virus disease	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.	<a href="https://doi.org/10.1016/s1473-3099(22)00607-7">https://doi.org/10.1016/s1473-3099(22)00607-7</a>
23/09/2022	Clin Microbiol Infect	Review	The Diagnostic Accuracy of Rapid Diagnostic Tests for Ebola Virus Disease: a Systematic Review	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.	<a href="https://doi.org/10.1016/j.cmi.2022.09.014">https://doi.org/10.1016/j.cmi.2022.09.014</a>
03/09/2022	Lancet Microbe	Review	Effects of therapies for Ebola virus disease: a systematic review and network meta-analysis	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.	<a href="https://doi.org/10.1016/s2666-5247(22)00123-9">https://doi.org/10.1016/s2666-5247(22)00123-9</a>
01/09/2022	Vaccines	Review	Lessons Learned from the Development and Roll-Out of the rVSVΔG-ZEBOV-GP Zaire ebolavirus Vaccine to Inform Marburg Virus and Sudan ebolavirus Vaccines	This article provides insights into how the example of rVSVΔG-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.	<a href="https://doi.org/10.3390/vaccines10091446">https://doi.org/10.3390/vaccines10091446</a>
01/07/2022	Bull WHO	Review	Rapid diagnostic tests versus RT-PCR for Ebola virus infections: a systematic review and meta-analysis	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.	<a href="https://doi.org/10.2471/blt.21.287496">https://doi.org/10.2471/blt.21.287496</a>
01/03/2022	J Infect Public Health	Review	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	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.	<a href="https://doi.org/10.1016/j.jiph.2022.01.005">https://doi.org/10.1016/j.jiph.2022.01.005</a>
30/08/2021	Front Immunol	Research article	Review: Insights on Current FDA-Approved Monoclonal Antibodies Against Ebola Virus Infection	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.	<a href="https://doi.org/10.3389%2Ffimmu.2021.721328">https://doi.org/10.3389%2Ffimmu.2021.721328</a>
16/07/2021	Hum Vaccin Immunother	Review	Immunogenicity and safety of Ebola virus vaccines in healthy adults: a systematic review and network meta-analysis	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 rVSDVG-ZEBOV-GP vaccine at dose of 2 × 10 <sup>7</sup> PFU.	<a href="https://doi.org/10.1080/21645515.2021.1932214">https://doi.org/10.1080/21645515.2021.1932214</a>