

The 'Beyond our Borders' column focuses on selected and current regional and international diseases that may affect South Africans travelling outside the country.

## Ebola virus disease - Uganda

On 20 September 2022, the Ugandan Ministry of Health declared an Ebola outbreak following confirmation of a case of Sudan Virus Disease (SVD) in Mubende district. To date, a total of 36 Ebola cases (18 confirmed and 18 probable) have been reported in the Mubende, Kyegegwa and Kassanda districts in the central part of the country. 23 deaths have been recorded, including five confirmed cases, bringing the case fatality ratio (CFR) to 28% amongst confirmed cases and 64% overall. The majority of cases are female (62%) and the median age of the cases is 26 years (range from 1 to 60 years). 223 contacts have been listed and are being followed up.

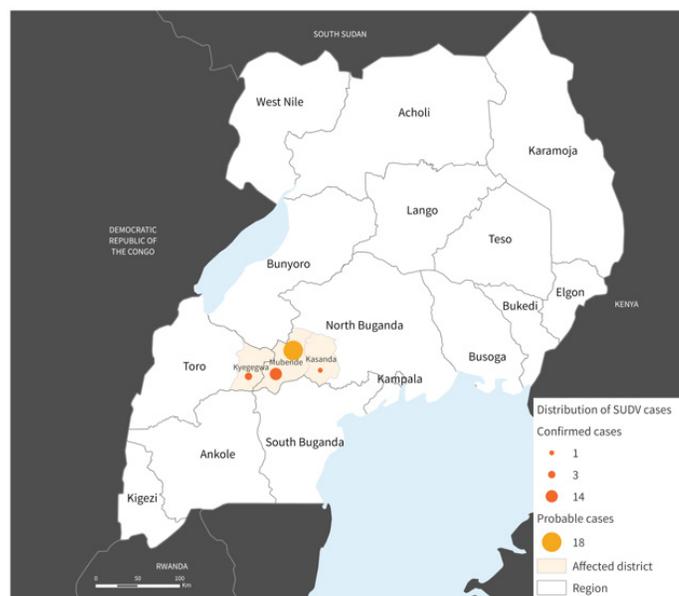
The confirmed primary case is a 25-year-old male peasant farmer who worked in Madudu Sub County. The Uganda Virus Research Institute (UVRI) confirmed the isolation of SVD on 19 September 2022 and the patient died at Mubende Regional Referral Hospital (RRH) on the same day. Prior to his admission to Mubende RRH, the patient was managed at both St. Florence Medical Center and St. John's Medical Clinic in Mubende district.

Currently, there are 13 patients hospitalised at Mubende RHH. There is also an ongoing investigation into reports of clustered deaths in one family in Kiruma Sub County, the first of which occurred on 1 September 2022. The surveillance teams in the area are conducting case investigations, active case finding, event-based surveillance, contact tracing and

management, alert management, rapid response and data management.

There are six species of ebolavirus, including Bundibugyo, Sudan and Zaire which have been responsible for large outbreaks in the past. Uganda's last Ebola outbreak was in 2019 and was caused by the importation of Zaire-EBV from the Democratic Republic of Congo (DRC). SVD has not been isolated in Uganda since 2012, and of the seven previous outbreaks caused by the species, four have occurred in Uganda and three in Sudan. The incubation period ranges from 2 to 21 days and people are only considered infectious once they have developed symptoms. Based on previous outbreaks, SVD has a CFR ranging from 41 to 100%.

The highly-effective Ervebo (rVSV-ZEBOV) vaccine, which has recently been used in ring vaccination campaigns in the DRC, has only been approved for use against Zaire and its effectiveness against SVD is unknown. There is another vaccine produced by Johnson & Johnson which may be used in this outbreak, however, its effectiveness has also not yet been tested against SVD. WHO is working closely with Ugandan health authorities to support the country's efforts to contain the outbreak, including dispatching staff, supplies and an isolation tent to the affected area. No travel restrictions in and out of Uganda have been put in place, however, caution is advised if visiting the affected areas.



**Figure 14.** Map of confirmed (n=18) and suspected (n=18) cases of Ebola disease caused by Sudan virus, by district, Uganda (as of 25 September 2022).

Sources: <https://veoci.com/api/v2/p/files/5ppafwaxw1ihzocu/content>  
<https://www.afro.who.int/countries/uganda/news/uganda-declares-ebola-virus-disease-outbreak>  
<https://www.who.int/emergencies/disease-outbreak-news/item/2022-DON410>

## Cholera – global update with a focus on Malawi

Globally, approximately 1.3 to 4 million people are infected with cholera each year. Between 27 July 2022 and 27 August 2022, there have been 137 763 cases of cholera and 91 deaths reported worldwide, with Afghanistan, Bangladesh, Burkina Faso, Cameroon, the Democratic Republic of the Congo, India, Iraq, Malawi, Mozambique, Nepal, Pakistan, Philippines, Somalia, South Sudan, Syria, and Tanzania all reporting new cases.

Since the detection of the first case of cholera in March 2022, Malawi has reported a total of 2 479 confirmed cases and 85 deaths (CFR=3.4%) in the current outbreak. 19 districts have been affected, with concerns raised by UNICEF regarding previously unaffected lakeshore and urban areas that have reported cholera cases in this outbreak. This is most likely due to overcrowding and insufficient water and sanitation facilities. Of the 19 aforementioned districts, the majority of cases have been recorded by Nkhata Bay (n=612), followed by Blantyre (n=546) and Nsanje (n=291). WHO and UNICEF

have been working closely with the Malawian government to develop a response plan in the country, including the delivery of supplies and services to the affected areas, as well as the implementation of the national Oral Cholera Vaccination (OCV) campaign which has reached more than 1.1 million people since the start of the year.

The majority of people infected with *Vibrio cholera* are asymptomatic, however, can still shed the bacteria in their faeces for 1 to 10 days after infection. Of those who are symptomatic, a small percentage of people may develop severe acute watery diarrhoea and dehydration which can be fatal. Cholera infections and deaths are preventable with effective disease surveillance; adequate water, sanitation and hygiene; early access to treatment and the provision of OCVs. The ongoing transmission of the disease is a marker of global socio-economic inequity and remains a threat to public health worldwide.

Sources: <https://apps.who.int/iris/bitstream/handle/10665/362665/OEW37-0511092022.pdf>

<https://www.unicef.org/malawi/press-releases/unicef-and-who-step-efforts-contain-cholera-malawi-and-call-additional-funds-and>

<https://www.ecdc.europa.eu/sites/default/files/documents/Communicable-disease-threats-report-27-aug-2022-all-users.pdf>

<https://www.who.int/news-room/fact-sheets/detail/cholera>

## Yellow fever – African Region

Between 1 January 2021 and 26 August 2022, there have been 184 confirmed and 274 probable cases of yellow fever reported by 12 countries on the African continent. The ongoing viral transmission of yellow fever, which is endemic in the WHO African Region, has resulted in 21 deaths since January 2021. In 2022, the 8 African countries that have reported confirmed cases are Central African Republic (n=11), Cameroon (n=8), Democratic Republic of Congo (n=4), Kenya (n=3), Chad (n=2), Republic of Congo (n=2), Uganda (n=2) and Ghana (n=1), bringing the total to 33 cases this year.

Yellow fever is a vaccine-preventable disease that has become epidemic-prone due to low population immunity, population migration and various climate and ecological factors which have resulted in the spread of *Aedes* mosquitoes. Infected *Aedes* and *Haemagogus* mosquitoes transmit the yellow fever virus to humans through bites. The typical incubation period is between 3 and 6 days. Whilst many infected people are asymptomatic, some may develop the common symptoms of fever, myalgia, backache, headaches, loss of appetite and nausea and vomiting, which tend to last 3 to 4 days. A small percentage of patients will develop severe disease,

characterised by a “toxic phase,” which begins within 24 hours of recovering from initial symptoms. Signs and symptoms of severe disease include high-grade fever, jaundice, dark urine, vomiting, abdominal pain and bleeding, and occur as a result of multi-organ failure. 50% of patients who enter the toxic phase will die within 7-10 days.

WHO recommends three strategies for the prevention of yellow fever, namely vaccines, vector control and epidemic preparedness and response. Vaccines are the most effective method of preventing the disease and effective immunity is achieved within 10 days of administration for 80-100% of people. The two vaccination strategies that have been adopted by affected countries in Africa are reactive vaccination campaigns (RVC) and preventive mass vaccination campaigns (PMVC). Since 2021, approximately 3.9 million people have been vaccinated through RVC, while 80 million people are expected to be protected by PMVC in 2022. Only one dose of the WHO-approved yellow fever vaccine is needed to achieve life-long immunity against the potentially fatal disease, which is why vaccination remains the most effective method of protection against yellow fever.

Sources: <https://www.who.int/emergencies/disease-outbreak-news/item/2022-DON405>

<https://www.who.int/news-room/fact-sheets/detail/yellow-fever>

## Polio update

As of 13 September 2022, there have been 27 confirmed cases of wild poliovirus type 1 (WPV1) globally in the past 12 months, with the majority occurring in endemic countries (Pakistan n=17; Afghanistan n=4), as well as 5 imported cases in Mozambique and 1 in Malawi. There have also been 534 cases of circulating vaccine-derived poliovirus (cVDPV) globally for the same period, with the majority being VDPV type 2 (n=514).

In the past few months, the United Kingdom (UK) and the United States (US) have reported the detection of genetically-linked cVDPV2 in environmental samples, as well as the confirmation of a case of VDPV2 in Rockland County, New York. The emergence of circulating poliovirus in these countries is evidence that until polio is eradicated globally,

even previously polio-free countries with relatively high vaccination coverage rates (93% in the UK and 92% in the US), remain at risk for importation and re-infection.

WHO therefore emphasises the need for all member states to achieve and maintain a vaccination coverage of at least 95% at every level. There is also a recommendation for all countries to develop highly sensitive surveillance systems for the rapid detection of acute flaccid paralysis (AFP) and VDPV importation or emergence, in order to minimise the consequences of poliovirus transmission. The 32nd Polio IHR Emergency Committee which convened on 15 June 2022 unanimously agreed that the risk of international spread of poliovirus remains a Public Health Emergency of International Concern (PHEIC).

Sources: <https://polioeradication.org/polio-today/polio-now/>  
<https://polioeradication.org/wp-content/uploads/2022/09/weekly-polio-analyses-WPV-20220913.pdf>  
<https://www.who.int/emergencies/disease-outbreak-news/item/2022-DON408>



**Figure 15.** Current outbreaks/events that may have implications for travellers. Numbers correspond to the text above. The blue dot is the approximate location of the outbreak or event.

*Polio Virus Particles*