

BEYOND OUR BORDERS

The 'Beyond our Borders' column focuses on selected and current regional and international diseases that may affect South Africans travelling outside the country. Numbers correspond to Figure 4 on page X.

Vaccine-preventable disease outbreaks

The World Health Organization has stated its concern surrounding the surge in vaccine-preventable diseases witnessed in Africa over the past year. Between the months of January and March 2022, the African region has recorded almost 17 500 cases of measles, representing a 400% increase when compared to the same period in the previous year, in 20 African countries.

Other vaccine-preventable disease outbreaks have also been reported, including a variant of polio, in twenty-four countries, and new yellow fever outbreaks in 13 countries within the African region.

Health inequalities in access to vaccination as well as the disruptions caused by the COVID-19 pandemic have placed huge strain of health infrastructure in these regions, impairing routine vaccination services in many African countries, resulting in suspension of vaccination drives.

WHO has raised concern over the rise in the number of outbreaks of vaccine-preventable diseases in the African region. "Vaccines are at the heart of a successful public health response, and as countries restore services, routine immunization must be at the core of revived and resilient health systems."

Wild poliovirus: Mozambique

The health authorities in Mozambique have declared an outbreak of the wild poliovirus type 1 on 18 of May 2022. This is after it was confirmed in a child in a north-eastern province; it is the 2nd confirmed case of wild poliovirus in southern Africa following an outbreak reported in mid-February 2022 in Malawi.

The last case was detected in the early 90s. In this particular case the child had an onset of paralysis in late March where the genomic sequencing analysis indicated that this case was linked to a strain circulating in Pakistan, and it was also similar to the case reported in Malawi. Both the Mozambique and Malawi cases do not affect Africa's wild poliovirus-free certification because the virus strain is not indigenous. Africa

was declared free of indigenous wild poliovirus in August 2020, after eliminating all forms of wild poliovirus.

The poliovirus is an enterovirus and there 3 serotypes, namely 1,2 and 3. Immunity to one serotype does not produce significant immunity to other serotypes. It gains entry through the mouth and multiplies in the oropharynx and gastrointestinal tract; it then invades the lymphoid system gaining entry to the bloodstream and infects the central nervous system. The common presenting symptoms can be stiffness of the neck, back or legs, with less than 1% of infected children presenting with flaccid paralysis. The paralysis is often permanent.

Measles: Somalia

A total of 3 509 suspected measles cases has been reported in Somalia, with the majority being in the drought-affected districts. Of these, 249 samples were collected, with 142 samples testing positive, 81% of which were from children below the age of 5 years.

Measles is endemic in Somalia with variations in the numbers recorded annually, with 7 494 cases reported in 2021. Regarding vaccinations, WHO-UNICEF estimates of national immunization coverage for the 1st dose has been approximately 46% for the past 10 years. Somaliland has not yet introduced the 2nd dose (MCV2) as part of routine immunization.

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Dengue: Brazil

As of 29 April 2022, Brazil reported dengue serotype 2 for the first time in a sample taken in November 2021. Dengue serotypes 1, 2 and 4 have been detected, and health officials have said that the new lineage is not related to the number of dengue cases reported.

Dengue virus is spread through the bite of an infected *Aedes* mosquito (*Aedes aegypti* or *Aedes albopictus*). It can also be

transmitted from an infected pregnant woman to her foetus during pregnancy or birth. Infection induces long-lived immunity for that specific virus serotype. Dengue can be asymptomatic in 1 out 4 people or could cause mild to severe illness. Clinical signs and symptoms are nausea, vomiting, rash, aches and pains, leukopenia, abdominal tenderness, lethargy, restlessness, and liver enlargement. Treatment is supportive as there are currently no specific antiviral agents.

Source: World Health Organization (who.int); ProMED (promedmail.org); National Institute for Communicable Diseases (nicd.ac.za); Centers for Disease Control and Prevention. (cdc.gov); Outbreak News Today (outbreaknewstoday.com).



Figure 3. Current outbreaks/events that may have implications for travellers. Numbers correspond to text above. The red dot is the approximate location of the outbreak or event.