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## Editor's Note



Dr Ann Mathews

In the month of June, we bring you an update on the COVID-19 outbreak. The first case of COVID-19 in South Africa was identified on 5 March 2020. In the last three and a half months, the number of cases in the country has surpassed the 100 000 mark. The Western Cape Province has experienced a major surge in COVID-19 cases, followed by Gauteng and the Eastern Cape provinces. In this issue, we report data from

the sentinel hospital surveillance and treatment advances for COVID-19.

The 10<sup>th</sup> Ebola virus disease (EVD) outbreak, which was centred in North Kivu and Ituri provinces in the Democratic Republic of Congo (DRC), was declared over on 25 June 2020, after it began on 1 August 2018. In the 22-month-long outbreak, a total of 3 470 EVD cases (3 317 confirmed and 153 probable), and 2 287 deaths (case fatality ratio of 66%) was reported. The fight against Ebola, however, continues. On 1 June 2020, seven cases of EVD were reported in Mbandaka city and neighbouring Bikoro Health Zone in Equateur Province, and an 11<sup>th</sup> outbreak was declared in the DRC. These two outbreaks appear to be unlinked; however, a source of infection has yet to be determined for either.

There have been no laboratory-confirmed cases of human rabies in South Africa in 2020, although there was one probable case in May 2020. Details follow in the article below. The influenza season, expected to occur between May and August, has still not officially started; however, this is likely to be a consequence of various aspects of the COVID-19 global pandemic.

Other international outbreaks of significance include Crimean-Congo haemorrhagic fever in Turkey, pertussis in Canada, yellow fever in Gabon and tick-borne encephalitis in Russia, all further detailed in the 'Beyond our Borders' section.

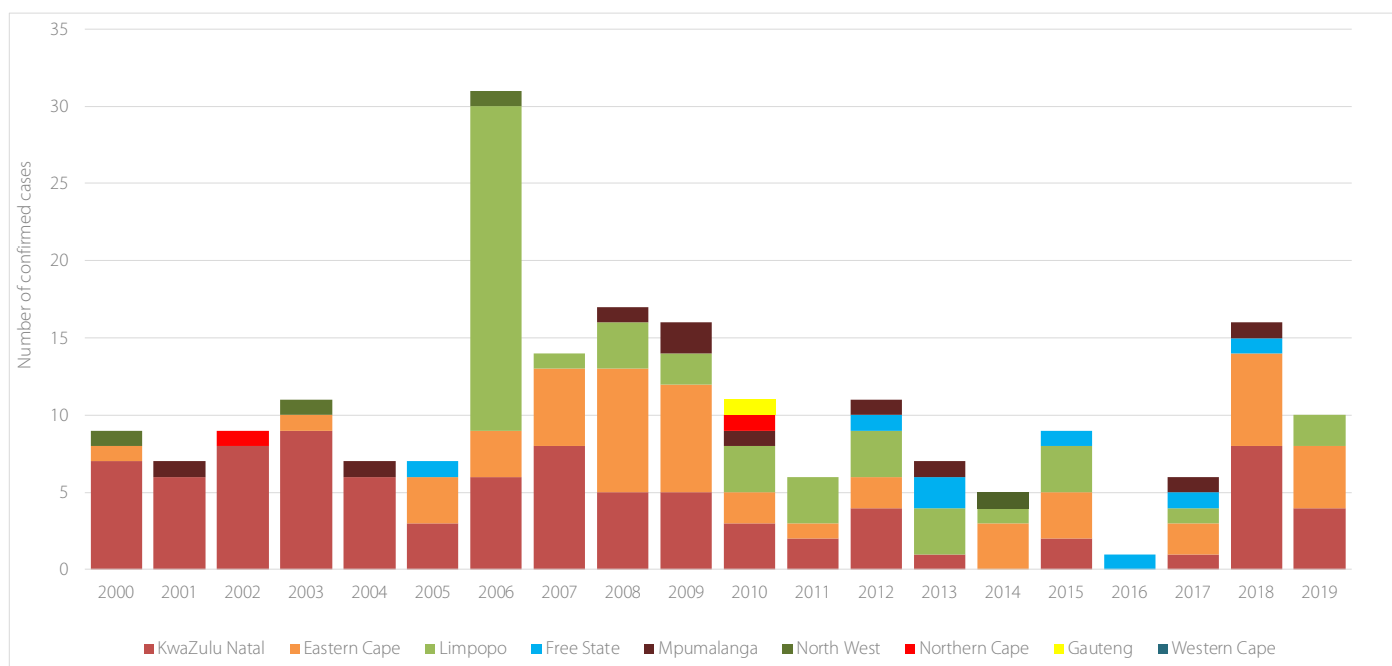
**ZOONOTIC AND VECTOR-BORNE DISEASES**

## An update on rabies in South Africa

No cases of human rabies have been laboratory-confirmed for 2020 to date in South Africa. One probable case was reported from the Eastern Cape Province in May 2020. While this case presented with a clinical and exposure history compatible with rabies, saliva and cerebrospinal fluid samples tested negative for rabies by PCR. South Africa recorded a total of eight laboratory-confirmed human rabies cases and two probable cases from screening and testing of 27 suspected patients during the first half (January – June) of 2019. So far, eight patients have been screened for rabies in 2020, far fewer than the number tested in the same timeframe (January – June) in 2019.

Over the past two decades, 41.9% of human rabies cases in South Africa have been reported from KwaZulu-Natal Province, followed by 24.3% and 21.9% respectively from the Eastern Cape and Limpopo provinces. The remaining cases were reported from Mpumalanga (4.8%), Free State (3.8%), North West (1.9%) and Northern Cape (1.0%) provinces (Figure 1). Most cases were males (71.2%), in children under the age of 18 years (73.4%) and from dog bites or saliva contact (92.4%).

Rabies is inevitably fatal once clinical symptoms show, but can be prevented with post-exposure prophylaxis (PEP). More information on the appropriate delivery of rabies PEP is available from the NICD website ([www.nicd.ac.za](http://www.nicd.ac.za)).



**Figure 1.** Laboratory-confirmed human rabies cases by province, South Africa, 2000-2019

**Article source:** Centre for Emerging Zoonotic and Parasitic Diseases, NICD-NHLS; [januszp@nicd.ac.za](mailto:januszp@nicd.ac.za)

**INTERNATIONAL OUTBREAKS OF IMPORTANCE**

## **An update on the novel coronavirus disease 2019 outbreak, South Africa**

As of 28 June 2020, global cases of the coronavirus disease 2019 (COVID-19) have surpassed 9.8 million, with approximately 494 000 deaths reported from more than 210 countries. Cumulative case numbers are highest in the United States of America (USA), Brazil, Russia, India and the United Kingdom (UK). Latin America is the current epicenter of the pandemic, having surpassed USA and Europe in the number of daily new cases. Within Latin America, Brazil has the highest number of daily cases; however, a higher daily incidence per capita has been noted in Chile, Panama, and Peru. Conversely, the following countries have reported a low-incidence plateau (<10 cases/100 000 population over the last two weeks): Australia, Cambodia, China, France, Germany, Italy, Japan, Netherlands, New Zealand, South Korea, Spain, Taiwan, Thailand and Vietnam.

In Beijing, China, approximately 10 laboratory-confirmed cases are being reported daily. In total, more than 256 laboratory-confirmed cases have been documented since 9 June 2020. This was following a period of more than 50 days in which there was no local transmission within the city. These new cases are linked predominantly to Xinfadi Market, in the Fengtai District, which supplies 80% of the city's produce. Following this surge in cases and the established link to the market, Xinfadi market was closed on 13 June 2020.

In Africa, there have been more than 310 500 cases and 8 100 deaths reported from 56 countries between 25 February and 22 June 2020. Nigeria, Egypt and South Africa have reported the highest number of cases; however, this may be more reflective of the larger laboratory testing resources within these countries as opposed to representative distribution within the continent.

As of 28 June 2020, South Africa has reported 138 134 laboratory-confirmed cases and 2 413 deaths, with the significant 100 000 laboratory-confirmed COVID-19 cases mark reached just in the past week. More details are available in the [COVID-19 Weekly Epidemiology Brief](#). Of concern are the increasing number of hospitals and chronic care facilities reporting clusters and outbreaks of infection.

The Western Cape Province has experienced a major surge in COVID-19 cases with consequent increase in hospital bed occupancy over the past three weeks. In the last

week, Gauteng Province surpassed the Western Cape Province as the province with the most number of new cases. Hospital bed occupancy in Gauteng Province is now nearing capacity. The Eastern Cape Province follows with the third highest number of new cases. It is important to acknowledge that trends in case numbers may be affected by changing testing practices in different provinces. Of note, the Western Cape Province has now prioritised testing of hospitalised patients or high risk/vulnerable individuals with suspected COVID-19 infections, as well as symptomatic healthcare workers, to facilitate optimal patient management and infection prevention practices.

The [COVID-19 Sentinel Hospital Surveillance Update](#) which reports on 201 private and 73 public hospitals in South Africa has received reports on 12 260 patients for the period 5 March to 25 June 2020. There has been a marked increase in hospital admissions in the past five weeks, which as highlighted above was initially driven by the Western Cape Province, and then followed in the last two weeks by the increases in Gauteng and the Eastern Cape provinces. Of the 7 324 COVID-19 patients who had recorded in-hospital outcome, 1 515 died, equating to an in-hospital case fatality ratio (CFR) of 21%. The link between comorbidities and their association with severe COVID-19 disease and possible fatal outcome has been continuously highlighted. These comorbidities include older age groups, male sex and chronic diseases such as hypertension, diabetes, chronic cardiac disease, chronic renal disease, malignancy, HIV and obesity.

A report released in the [COVID-19 Special Public Health Surveillance Bulletin](#) this week presented data from a well-characterised cohort in the Western Cape Province. Importantly, it was found that HIV-infected individuals have a modest increase in risk of COVID-19 associated death compared to HIV-uninfected individuals. There was no evidence of an association between increasing immunosuppression and severity of COVID-19 disease. A noted confounder in this report is that many of the HIV-infected individuals also had other comorbidities, which in themselves already place them at risk of severe COVID-19 related illness.

With the lowering of social restrictions and the return to normal activity, many children in South Africa have gone back to school this month. Similar to other countries,

South African children have a lower risk of COVID-19 illness and disease, and current studies show that when infected, they are less likely to develop severe illness. It is still of utmost importance that physical distancing, wearing of masks and strict hand hygiene be maintained in all schools to minimise the risk of transmission within the school and between students and their households and communities.

Oxygen therapy remains a key component of therapy in the hypoxic patient. It has been found to be especially effective if administered early to patients in the pneumonic phase. Typically, patients with progressive COVID-19 illness will decompensate around day 5-7 after onset of infection and it is therefore critical to encourage patients to seek medical care urgently for oxygen therapy at this stage if experiencing worsening of symptoms.

With regards to treatment advances, data from the UK RECOVERY trial showed that dexamethasone reduced all-cause deaths at day 28 by one-third in ventilated patients

(29.0% vs. 40.7%) and by one-fifth in other patients receiving only oxygen (21.5% vs. 25.0%). No benefit was seen among those patients who did not require respiratory support at randomisation though, and there was paradoxically a signal of possible increased mortality when dexamethasone was used for this subset of patients. As a result, it is now recommended that dexamethasone should be a standard of care for patients requiring supplemental oxygen therapy or ventilation, but avoided in patients who do not require oxygenation support.

### Laboratory Testing

PCR remains the preferred test for diagnosis of patients with acute infection. Shortages of testing reagents and kits has necessitated prioritisation of testing for hospitalised patients, especially patients under investigation for COVID-19, and symptomatic healthcare workers. This will allow appropriate management, allocation of resources and infection prevention and control measures. Repeat testing for patients with COVID-19 is not required for de-isolation.

**Article source:** National Institute for Communicable Diseases COVID-19 response team; NICD-NHLS; [lucilleb@nicd.ac.za](mailto:lucilleb@nicd.ac.za)

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## An update on Ebola virus disease outbreak, Democratic Republic of Congo

Nearly two years after the Democratic Republic of the Congo's (DRC) longest and biggest outbreak began, the country's health officials on 25 June 2020 declared that the Ebola virus disease (EVD) outbreak in the eastern part of the country is over.

Having passed two incubation periods since the last patient was confirmed to be free of the virus, the Ebola virus disease (EVD) outbreak centered in North Kivu and Ituri provinces resulted in 3 470 cases, including 3 317 confirmed and 153 probable cases. Of the total confirmed and probable cases, 2 287 cases died (overall case fatality ratio 66%) and 1 171 survived.

The outbreak, which was the DRC's 10<sup>th</sup>, began on 1 August 2018, and was the world's second largest EVD outbreak. It began just a week after a small 11-week outbreak in the country's northwestern Equateur province was declared over. It was particularly

challenging as it took place in an active conflict zone.

This long, complex and difficult outbreak has been overcome due to the leadership and commitment of the Government of the DRC, supported by the World Health Organization (WHO), a multitude of partners, donors, and above all, the efforts of the communities affected by the virus.

WHO has congratulated the DRC and all those involved in the arduous and often dangerous work required to end the outbreak, but stresses the need for vigilance. Continuing to support survivors and maintaining strong surveillance and response systems in order to contain potential flare-ups is critical in the months to come.

Led by the DRC government and the Ministry of Health and supported by WHO and partners, the more than 22-month-long response involved training thousands of health workers, registering 250 000 contacts, testing 220 000 samples, providing patients with equitable access to advanced

therapeutics, vaccinating over 303 000 people with the highly effective rVSV-ZEBOV-GP vaccine, and offering care for all survivors after their recovery.

The response was bolstered by the engagement and leadership of the affected communities. Thanks to their efforts, this outbreak did not spread globally. More than 16 000 local frontline responders worked alongside the more than 1 500 people deployed by the WHO. Support from donors was essential, as was the work of United Nations (UN) partner agencies, national and international non-governmental organisations (NGOs), research networks, and partners deployed through the Global Outbreak Alert and Response Network. Hard work to build up preparedness capacities in neighbouring countries also limited the risk of the outbreak expanding.

Work will continue to build on the gains made in this response to address other health challenges, including measles and COVID-19.

As countries around the world face the COVID-19 pandemic, the DRC Ebola response provides valuable lessons. Many of the public health measures that have been successful in stopping Ebola are the same measures that are now essential for stopping COVID-19: finding, isolating, testing, and caring for every case and relentless contact tracing. In DRC, community workers were provided with training and a smartphone data collection app that enabled them

to track contacts and report in real time rather than fill in laborious paper reports. Even when violence locked down cities, the community workers, many of them local women, continued to track and trace contacts using the application, something that was crucial for ending this outbreak.

While this 10<sup>th</sup> outbreak in DRC has ended, the fight against Ebola continues. On 1 June 2020, seven cases of Ebola were reported in Mbandaka city and neighbouring Bikoro Health Zone in Equateur Province, and an 11<sup>th</sup> outbreak was declared. This current outbreak is more than 1 000 km west of the previous outbreak in Ituri, North Kivu and South Kivu provinces. These two outbreaks appear to be unlinked; however, a source of infection has yet to be determined for either. WHO is supporting the government-led response with more than 50 staff already deployed and more than 5 000 vaccinations already administered. WHO considers the public health risk to be moderate at the national and regional levels and low at the global level.

WHO salutes the thousands of heroic responders who fought one of the world's most dangerous viruses in one of the world's most unstable regions.

**Article source:** WHO: [www.who.int](http://www.who.int); WHO-AFRO, Division of Public Health Surveillance and Response, NICD-NHLS; [outbreak@nicd.ac.za](mailto:outbreak@nicd.ac.za)

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## SEASONAL DISEASES

### Influenza

To date, the influenza season, which occurs mainly during the winter months of May to August, has not started. However, the ongoing COVID-19 pandemic likely influenced health-seeking behaviour as well as staffing/routines in sentinel surveillance sites. In addition, the various hygiene and physical distancing measures being implemented to reduce SARS-CoV2 virus transmission may also have played a role in interrupting influenza virus transmission. Globally, influenza activity has been at lower

levels than expected and to date, none of the Southern Hemisphere countries have reported any influenza activity. Since the localised outbreak of influenza A(H1N1)pdm09 and influenza B Victoria in the Western Cape Province in the beginning of the year, there has been one detection of influenza A(H1N1)pdm09 in Gauteng Province from a Viral Watch surveillance site in the week ending 14 June. Over the past 36 years, the mean peak of the season has been the last week of June.

**Article source:** Centre for Respiratory Diseases and Meningitis, NICD-NHLS; [cherylc@nicd.ac.za](mailto:cherylc@nicd.ac.za)

## BEYOND OUR BORDERS

**The 'Beyond our Borders' column focuses on selected and current international diseases that may affect South Africans travelling abroad. Numbers correspond to Figure 2 on page 7.**

### 1. Crimean-Congo haemorrhagic fever: Turkey

Just as Turkey tries to return to normal after its battle with the coronavirus, another danger lurks that threatens rural areas. Crimean-Congo haemorrhagic fever (CCHF), a deadly disease usually confined to summer, is forcing authorities to adopt new measures to contain it.

CCHF is common in more than 30 countries and is prevalent in Turkey's northern regions. The death rate from the fever is generally around 4% in Turkey, while in some countries it reaches 80%. Turkey ties its success to strict measures, effective treatment methods and a surveillance system that tracks the prevalence of the disease.

Authorities in Turkey announced that by 10 June 2020, there were 480 infections, and 15 reported deaths for 2020. Since 2002, CCHF has been a threat particularly in the provinces of Giresun, Gumushane, Bayburt, Sivas, Tokat, Amasya and Corum. Although prevalent in these provinces, it is not limited to there, and is active in all seven regions of the country. The highest number of cases in Turkey was reported in 2008 when more than 1 300 infections occurred.

Experts are urging people to wear protective clothing, cover all bare parts of the body and avoid areas with tick risks, like farms, orchards, forests, picnic spots and fields. It is recommended to tuck trousers into socks while going to such places. It is also recommended to wear light-coloured clothes to spot ticks more easily. Experts say the body should be checked for ticks when one returns from risky areas, and the tick should be removed with the aid of a glove or similar material instead of bare hands. If it can't be removed, the nearest hospital or clinic should be visited. It is also important not to touch any fluid or tissue from animals with bare hands. Early diagnosis and treatment is vital to prevent deaths from the disease.

### 2. Pertussis: Canada

The Government of Nunavut, northern Canada, has declared an outbreak of pertussis, also known as whooping cough, in its Sanikiluaq municipality. The index case was diagnosed on 28 May in the Hudson Bay community of Sanikiluaq municipality. The case occurred at a day-care centre. As of 8 June 2020, the number of confirmed cases were less than five.

Health staff have been conducting contact tracing and investigation of symptoms to determine if there are additional undetected cases of pertussis within the community. Health staff has also been reviewing and updating pertussis vaccinations for community members. Day-care centres in Nunavut reopened on 1 June 2020 as part of the easing of COVID-19 restrictions in the territory, but those in Sanikiluaq remain closed due to the whooping cough outbreak.

Whooping cough is caused by the bacterium *Bordetella pertussis*, which can cause uncontrollable, violent coughing that often makes it hard to breathe. Nunavut has been hit by several outbreaks of whooping cough in recent years, with the most recent big outbreak taking place in 2017. Every year in Canada there are one to three deaths due to whooping cough, mostly in babies under the age of three months who have not been immunised, according to Health Canada. Vaccinations and antibiotics can work to fight the spread of the whooping cough infection.

### 3. Yellow fever: Gabon

On 15 April 2020, the World Health Organization (WHO) received information regarding a confirmed case of yellow fever in Magandi village, Tchibanga city in Nyanga Province of southern Gabon, 590 km from the capital, Libreville. A multidisciplinary investigation was conducted in Tchibanga by the Ministry of Health, with technical support from the WHO. According to the field investigation report, the case had no recent travel history prior to the onset of illness, and no additional cases were found in the community despite extensive case-finding activities.

The last cases of yellow fever in Gabon (n=2) were detected in 2019. These two confirmed cases of yellow fever were in unvaccinated international workers in the health district of Mitzic, Woleu-Ntem Region. The yellow fever vaccine was introduced into routine immunisation in 2000. Yellow fever vaccination coverage in Gabon is reported to be suboptimal (less than 85%). The new case is from Mongo health area, where vaccination coverage is 76% in 2020. Enhanced routine immunisation and an entomological survey is being planned in the case's village of residence.

There is currently a risk of disruption to routine immunisation activities due to COVID-19-related impacts on the health system, and a decreased demand for immunisation due to physical distancing requirements or community reluctance. Disruption of immunisation services, even for brief periods, will increase the numbers of susceptible people and the likelihood of outbreaks of vaccine-preventable diseases.

#### 4. Tick-borne encephalitis: Russia

Reported tick bites in the sprawling Krasnoyarsk region of Russia, which stretches up from the lands north of Mongolia to the Arctic shore, are up 400% compared to over the same time in 2019, and the tick season is only just getting under way. According to government statistics, 1 925 people reported bites in the week of 22 – 28 May 2020 in the region, and more than 10 000 bites have already been reported in 2020. Cases of ticks found to be infected with tickborne encephalitis (TBE) have been identified in 57 of the region's 61 administrative districts. The problem is equally prevalent in other regions of Siberia and the Russian Far East, as well as parts of western Russia.

The number of ticks is significantly greater than average and the cause is believed to be the region's unusually mild winter, followed by the early onset of spring. The weather conditions enabled the main hosts for ticks,

forest-dwelling rodents, to survive the winter well. Their numbers have grown, and the number of ticks has increased correspondingly. As a result, the 2020 season has seen an active outbreak of TBE.

To make matters worse, scientists of the Siberian branch of the Russian Academy of Sciences say they are tracking a relatively new tick that is a hybrid of the common taiga (*Ixodes persulcatus*) and Far Eastern (*Ixodes pavlovskiyi*) ticks. The hybrid tick seems to be capable of transmitting to humans all the parasites of both the more common types, including four types of the bacteria that cause Lyme disease, encephalitis, Kemerovo tickborne viral fever, and Siberian tickborne typhus (*Rickettsia*). In addition, experts believe the hybrid tick might be more adaptable to various environments and capable of vastly expanding its geographical range.

Tickborne encephalitis virus (TBEV) infections in Russia are common. This is the season of TBEV transmission in Russia. At present, there is no immunoglobulin for the prevention of TBE in the Russian Federation. Citizens have been advised to refrain from visiting natural places not treated against ticks. In Russia, two inactivated TBE vaccines are available: TBE-Moscow (Chumakov Institute, Russia) and EnceVir (Microgen, Russia). These vaccines should provide cross-protection against all three TBEV subtypes.




**Figure 2.** 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

**WHO-AFRO: OUTBREAKS AND EMERGENCIES**

# WEEKLY BULLETIN ON OUTBREAKS AND OTHER EMERGENCIES

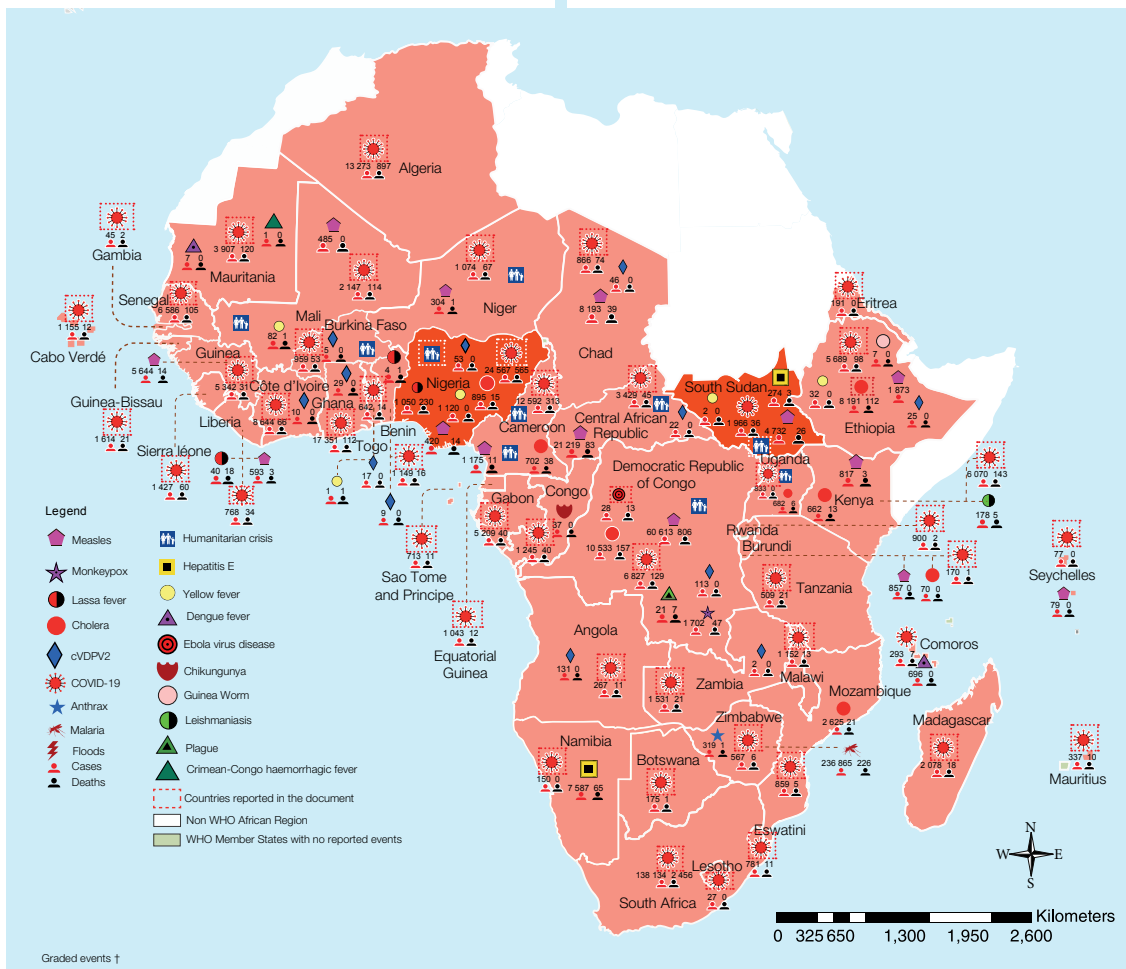
Week 26: 22 - 28 June 2020  
Data as reported by: 17:00; 28 June 2020



**World Health Organization**  
REGIONAL OFFICE FOR **Africa**  
WHO Health Emergencies Programme

0
111
101
10

New event
Ongoing events
Outbreaks
Humanitarian crises



|                                 |                                 |                                 |                              |
|---------------------------------|---------------------------------|---------------------------------|------------------------------|
| <b>49</b><br>Grade 3 events     | <b>15</b><br>Grade 2 events     | <b>1</b><br>Grade 1 events      | <b>39</b><br>Ungraded events |
| <b>2</b><br>Protracted 3 events | <b>2</b><br>Protracted 2 events | <b>3</b><br>Protracted 1 events |                              |

Health Emergency Information and Risk Assessment

**Figure 3.** The Weekly WHO Outbreak and Emergencies Bulletin focuses on selected public health emergencies occurring in the WHO African Region. The African Region WHO Health Emergencies Programme is currently monitoring 111 events. For more information click the link <https://apps.who.int/iris/bitstream/handle/10665/332877/OEW26-2228062020.pdf>



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