

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.

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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 10th, 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