

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

Article source: Promed (www.promed.org), World Health Organization (www.who.int)