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EDITORIAL

This month's Communiqué is shorter than usual on account of relatively fewer communicable disease events over the last month.

In response to the measles cases that have been detected in the North West Province, we report that the provincial health department has conducted a province-wide measles vaccination campaign, targeting children aged six months to 15 years in Rustenburg sub-district and individuals aged six months to five years in the other sub-districts. These vaccination campaigns are essential components of measles prevention, given the global aim to eliminate measles.

The Communiqué also includes a case report of enteroviral meningitis amongst children in Limpopo Province. Surveillance is ongoing, and the NICD is conducting further tests on clinical specimens to identify the exact viral cause. South Africa experi-

enced a large outbreak of enteroviral meningitis due to echovirus 4 last summer, predominantly in the Western Cape Province, which was first reported in the Communiqué (Communicable Diseases Communiqué, December 2018, Vol. 17(12)). Pleasingly, the Ebola virus disease outbreak in the Democratic Republic of Congo (DRC) appears to be abating, with substantially fewer cases per week reported in the most recent World Health Organization (WHO) situation report.

As December approaches, travellers are reminded to ensure they take adequate preventive measures against malaria, and to report the presence of any malaria-like symptoms to their healthcare providers on return from malaria endemic areas. Travellers to the Eastern Cape and KwaZulu-Natal provinces are advised to be aware of high rabies prevalence in these areas and to avoid contact with stray dogs or cats.

1 ZONOTIC AND VECTOR-BORNE DISEASES

a An update on rabies in South Africa

For 2019 to date, the National Institute for Communicable Diseases has confirmed ten cases of human rabies in South Africa. The cases originate from KwaZulu-Natal (n=4), Eastern Cape (n=4) and Limpopo (n=2) provinces. An additional four deaths, two from KwaZulu-Natal Province and two from Eastern Cape Province, were reported as probable rabies cases for the year to date. Probable cases are defined as cases that presented with a clinical and epidemiological history compatible with a diagnosis of rabies, but for which laboratory investigations were not possible to confirm or exclude the diagnosis.

In KwaZulu-Natal and Eastern Cape provinces, 188 dogs were confirmed positive for rabies for 2019 up to the third week of November (Figures 1 and 2). All human cases reported were transmitted by bites from dogs or involved exposure to dogs. Dogs are the source of the vast majority of human rabies deaths in South Africa and globally. Hot spots for dog rabies, such as those in the KwaZulu-Natal and Eastern Cape provinces are therefore of particular

concern from a public health point of view.

Dog vaccination can stop rabies at its source. Ahead of the holiday season, people travelling with their pets are urged to ensure that vaccinations are up to date in the animals. This will ensure protection of the animal, but will also protect any persons who may have contact with the animal. When any significant contact with suspected rabid animals occurs (in particular with stray dogs or cats), rabies post-exposure prophylaxis (PEP) should be sought as a matter of urgency. Rabies PEP, when administered promptly following a possible exposure and in accordance with prescribed guidelines, provides protection against the lethal infection. For more information on rabies and rabies PEP, visit www.nicd.ac.za

Source: Centre for Emerging Zoonotic and Parasitic Diseases, NICD-NHLS; januszp@nicd.ac.za

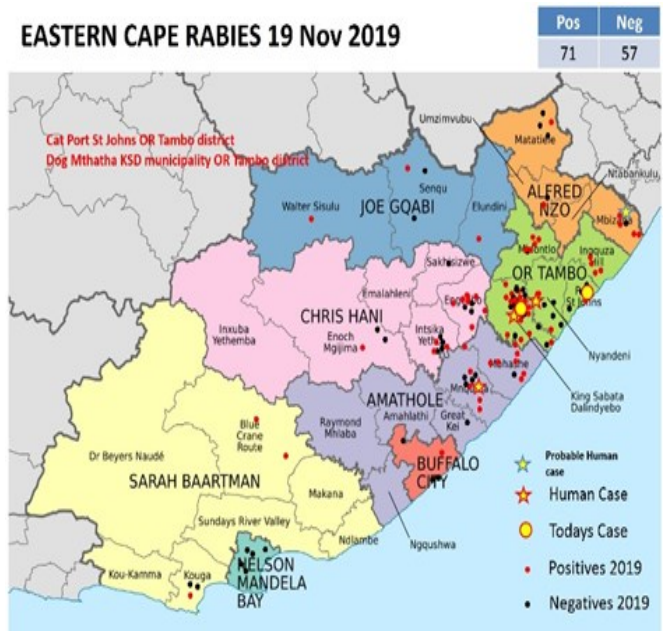
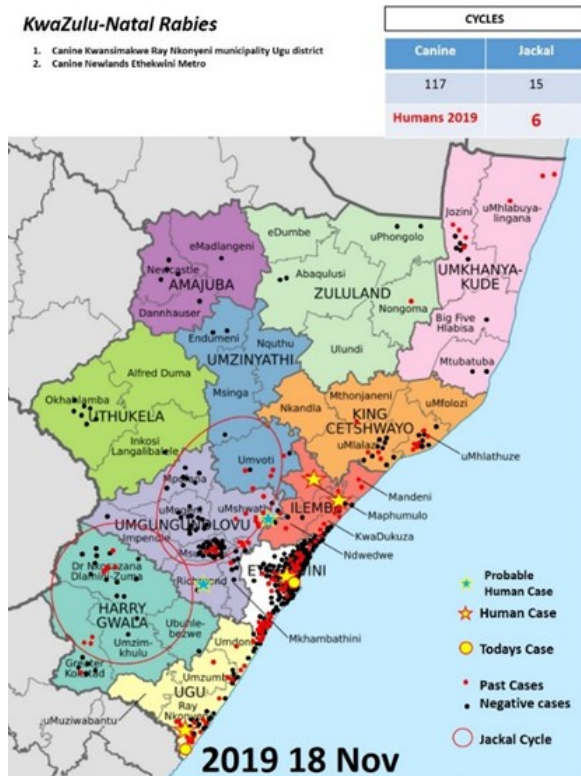


Figure 1 and 2. Distribution of canine, jackal and human cases of rabies in KwaZulu-Natal (L) and Eastern Cape (R) provinces, 2019. Source: KZN Agriculture and Rural Development

2 VACCINE-PREVENTABLE DISEASES

a An update on measles cases, North West Province

As of 21 November 2019, seven measles cases have been detected since August 2019 as part of the outbreak in Bojanala Platinum District of North-West Province (Figure 3) (Communicable Diseases Communiqué, October 2019, Vol. 18(10)). Six of these cases were children under five years old. The North West Provincial Department of Health, in collaboration with the National Department of Health (NDoH), the National Institute for Communicable Diseases (NICD), the United Nations International Children's Emergency Fund (UNICEF) and the World Health Organization (WHO) co-ordinated outbreak response activities. A district-wide vaccination campaign was done, targeting individuals aged six months to 15 years in Rustenburg sub-district and individuals aged six months to five years in the other sub-districts.

Measles is an infectious viral disease spread through respiratory droplets emitted when a patient coughs or sneezes. A suspected measles case is any patient presenting with fever and rash, along with any one of the following: cough, coryza (runny nose) or conjunctivitis (red eyes). Measles cannot be distinguished from other rash illnesses, such as

rubella (German measles) without a blood test. Rubella is also circulating in all nine provinces, including the North West Province. Healthcare workers should collect a blood sample and complete a case investigation form (available on the NICD website) when they identify a suspected measles case. The case should also be notified through the electronic or paper-based Notifiable Medical Conditions (NMC) surveillance system.

Parents should ensure that their children have received all recommended vaccines. Measles vaccine is administered in both the public and private health sectors at six months of age, with a booster at 12 months. Further information is available at <http://www.nicd.ac.za/diseases-a-z-index/measles/>.

Source: Centre for Vaccines and Immunology, NICD-NHLS; North West Provincial Department of Health and National Department of Health; melindas@nicd.ac.za

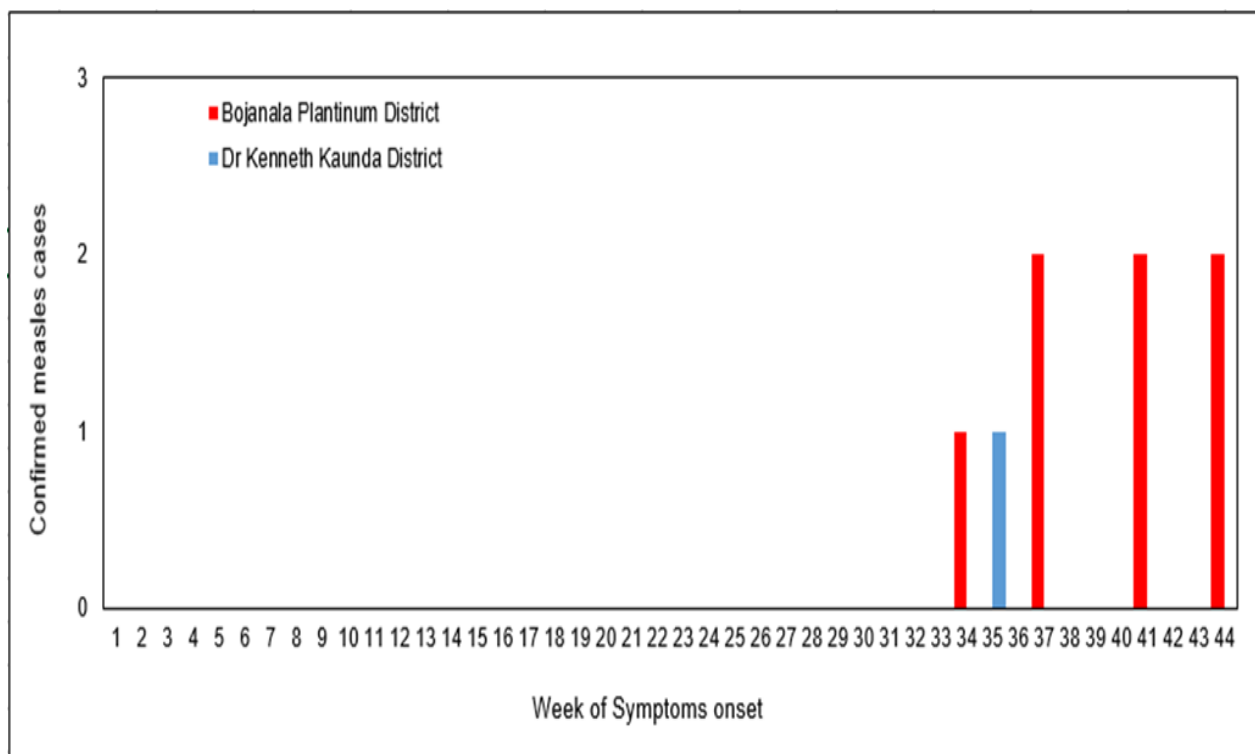


Figure 3. Number of laboratory-confirmed measles cases (n=8) by district in the North West Province, 01 January to 19 November 2019

3 INTERNATIONAL OUTBREAKS OF IMPORTANCE

a An update on Ebola virus disease outbreak in Democratic Republic of Congo

The Ebola virus disease (EVD) outbreak was declared on 1 August 2018. There has been a steady decrease in confirmed cases in the Democratic Republic of the Congo (DRC) over the past three months. The provinces where the outbreak is currently happening are North Kivu, South Kivu and Ituri.

As of 24 November 2019, a total of 3 303 EVD cases was reported, including 118 probable cases and 3 185 confirmed cases. A total of 2 199 deaths was reported with a case fatality rate of 67%. Out of the total confirmed and probable cases, 56% (1 862) were female, 28% (935) were children aged less than 18 years and 5% (163) were healthcare workers.

In the past week, from 18 to 24 November 2019, seven new cases were reported from two affected provinces in four health zones, in comparison to the 126 cases reported during the peak of the epidemic in the last week of April 2019. There has been a suspension of Ebola response activities in some areas of Oicha, Beni and Butembo health zones due to violence and civil unrest that occurred in the past week. Some response personnel were temporarily relocated from Beni on the 26 November 2019 in order to maintain their safety and welfare. However, preservation of essential response activities in these health zones still remain a high priority.

From 4 to 24 November 2019, four health zones and 12 health areas have reported cases. During this period, a total of 28 confirmed cases was reported. As principal hot spots, the highest numbers of cases were reported from Mabalako (n=15, 54%), followed by Beni (n=9, 32%). To date, there has been no new confirmed cases in Nyakunde Health Zone in the past 42 days. Due to the civil unrest and violence in the past week, vaccination efforts, contact tracing and surveillance have been disrupted. To date, over 235 000 contacts have been registered and 3 169 are currently under surveillance as of 24 November 2019. An estimated 86% of contacts were followed on a daily basis in the last seven days in the health zones without interruption of operations.

Currently, the government, Ministry of Health (MOH), other national authorities in the DRC, WHO and partners are implementing outbreak control interventions in order to break the remaining transmission chains as well as to ensure surrounding provinces are response-ready. Regarding vaccination, a total of 255 136 people was vaccinated from 8 August 2018 to 23 November 2019. However, the number of persons being vaccinated has decreased in the past week. More specifically, 3 191 persons were vaccinated in the week of 11 to 17 November 2019 as compared to 3 530 during the week of 4 to 10 November 2019. Additionally, the Johnson & Johnson 2-dose Ebola vaccine (Ad26.ZEBOV/MVA-BN-Filo) was introduced on 14 November 2019, and vaccination is continuing in the Krisimbi health zone with 54 people vaccinated on 16 November 2019. A cumulative total of 147 people has been vaccinated with this vaccine since its introduction.

Based on current information, the WHO still advises against any restrictions of travel or trade with the DRC. WHO will continue to closely monitor and verify trade and travel measures related to the EVD outbreak. Additionally, no country has implemented travel measures that had a significant interference with international traffic to and from DRC. Travelers should seek medical advice before travel and should practice good hygiene. A new dashboard, 'Ebola outbreak in the DRC: Travel and trade health measures' has recently been established in order to monitor the travel and trade patterns around this event.

As of 26 November 2019, there have been no EVD cases in South Africa associated with the current outbreak in the DRC. In addition, there are no suspected cases of EVD in South Africa at present.

Source: WHO: www.who.int; WHO-AFRO, Division of Public Health Surveillance and Response, NICD-NHLS (outbreak@nicd.ac.za)

4 SEASONAL DISEASES

a Malaria

Malaria cases in South Africa are increasing as expected during the summer months, with higher temperatures and rainfall in transmission areas. For January to October 2019, about 12 000 cases with 63 deaths have been reported by the National Department of Health. This is fewer than for the same period in 2018 (around 17 000 cases with 114

deaths). During the holiday season, many people will be exposed because of their travel to higher transmission areas, both internally and outside the country borders, particularly in Mozambique (see updated malaria risk map, Figure 4). In the last few years, there has been some expansion of low or very low malaria transmission to some districts pre-

viously regarded as non-malaria areas in South Africa, such as the Waterberg. People who are planning to travel are urged to take adequate measures to protect themselves from malaria. All people in malaria risk areas should reduce contact with mosquitoes by limiting outdoor activity after dark, covering up bare skin (not forgetting feet and ankles), using mosquito repellents containing DEET, ensuring mosquito screens on windows are closed, and using bednets, fans or airconditioning, if available. Consider antimalarial prophylaxis in higher risk areas – doxycycline and atovaquone-proguanil are available without prescription from pharmacies. Public sector travel clinics will also supply prophylaxis to travellers. It is important to understand that while these precautions will substantially reduce the chance of acquiring malaria, the risk is never completely abolished. All travellers returning from malaria transmission areas, including very low risk

ones, should report 'flu-like illness (headache, fever, chills, fatigue, muscle and joint pain) that occurs up to three weeks after first potential exposure, in case it is malaria. Children with malaria may have very non-specific signs (fever, loss of appetite, vomiting). Healthcare workers seeing ill patients must remember to ask about travel to malaria transmission areas. Malaria risk map, FAQs and further information on prevention are available on the NICD website: www.nicd.ac.za.

Source: Centre for Emerging Zoonotic and Parasitic Diseases, NICD-NHLS; johnf@nicd.ac.za

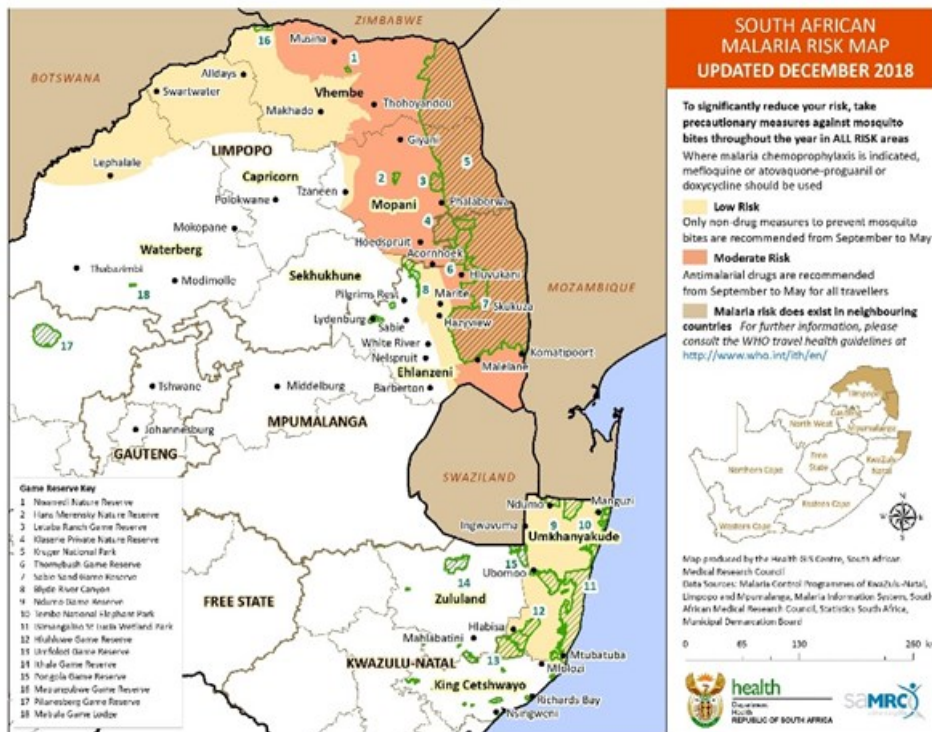


Figure 4. Malaria risk map for South Africa. Malaria transmission occurs in all neighbouring countries.

b A cluster of enterovirus meningitis cases in Limpopo Province, October-November 2019

An increase in the number of laboratory confirmed enteroviral meningitis cases was notified to Limpopo Department of Health (Public Health Directorate) by a private health facility in October 2019. As of 20 October, a total of 16 cases (15 children and one adult) was reported from the same private health facility. The median age was 4.5 years (range 11 months to 29 years). Of the 16 cases, eight (50%) were under the age of 5 years, and of these, one was <1 year of age. Most cases were male (n=11, 69%). The majority presented with fever (n=15), headache (n=4) and vomiting (n=12). The ongoing epidemiological investigation by the Provincial Public Health Directorate revealed two clusters among

nine (56%) cases. Of these nine, six were from crèche 'X' and three from crèche 'Y'. All cases have been discharged. Limpopo Department of Health has activated the district outbreak response team to communicate disease awareness and health promotion messages.

Clinicians should suspect enteroviral meningitis in:

- An individual presenting with meningitis or encephalitis symptoms (these may include headache, vomiting, fever, stiff neck, loss of appetite, photophobia); and

- An 'aseptic' picture on CSF (lymphocytic predominance with normal or slightly raised CSF protein); and
- Negative bacterial pathogens on CSF investigation.

Notify the local and provincial communicable disease control coordinator (CDCC) telephonically if a cluster (≥ 2 cases in a given facility/institution) of enteroviral meningitis cases are suspected. Enteroviral meningitis is a mild form of meningitis due to an enterovirus infection. Enteroviruses are transmitted faeco-orally or through droplet spread from respiratory secretions. Case numbers usually increase in warmer months. There is no specific treatment for enterovirus infections or prophylaxis for patients' contacts. Patients often make a full recovery. Pre-

vention entails appropriate good hygiene practises such as hand washing after using the toilet or changing nappies, before food preparation or consumption, and cough/sneeze etiquette.

For more information about enteroviral meningitis, visit www.nicd.ac.za 'Diseases A-Z'

Source: Limpopo Department of Health (Public Health Directorate); Provincial Field Epidemiology Team and Centre for Vaccines and Immunology, NICD -NHLS; Marlene.Ngobeni@dhsd.limpopo.gov.za

5 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 5 on page 7.

1. Yellow Fever: Venezuela

Yellow fever is endemic in tropical areas of Africa as well as Central and South America. It is a viral disease that is transmitted by the *Aedes* and *Haemagogus* mosquitoes. There is an effective yellow fever vaccine which is usually protective within 10 days of administration and confers lifelong immunity.

On 13 November, Venezuela reported a confirmed yellow fever case in Bolivar state. The 46-year-old case is said to have only travelled to Urinam municipality within the state, and reported symptoms of fever, chills, nausea, vomiting, epistaxis, petechiae, and diarrhoea, which started on 14 September. On 26 September, he presented at a Heres municipality public hospital and was reported to still be hospitalised on 13 November 2019. Venezuela is known to be at risk of sylvatic (jungle transmitted) yellow fever. This is the first autochthonous case since 2005. The Venezuela health authorities have strengthened yellow fever surveillance and have also planned for strategic vaccination activities. Travellers planning to visit or live in various parts of Venezuela have been advised to get vaccinated prior to travelling.

2. Rift Valley Fever (RVF): Sudan

RVF is endemic in Sudan. It is a viral disease that is spread by mosquitos. It commonly causes disease in animals, but can also affect humans. On 10 October 2019, the Sudanese National International Health Regulation (IHR) focal point reported that there were 47 suspected human RVF cases. The cases are reported to have presented with symptoms of high-grade fever, headaches, joint pain and vomiting. No haemorrhagic signs were observed. The first case is believed to have presented on 19 September at the Arb'aat Area in Red Sea State. On 28 September, 14 samples that were sent for testing tested negative for malaria, and five tested pos-

itive for RVF. From 19 September till 11 November 2019, a total of 293 suspected human RVF cases, including 11 associated deaths, has been reported from six states. There have been concomitant deaths and abortions reported in goats in all states. RVF surveillance has been strengthened with active case finding and daily reporting of cases. Health units have also been established in affected villages to manage cases. About 1 949 households have been inspected and vector fogging provided in households that were positive for the competent vectors. This outbreak has been attributed to floods that have favored vector abundance, distribution, and longevity. The risk of transmission can be reduced by preventing mosquito bites and avoiding unsafe consumption of raw or unpasteurised milk or animal tissue.

3. Dengue: South and Central America

Dengue is an acute febrile viral disease that is spread by the *Aedes* mosquito species. It is endemic in many tropical countries. As from January up until October 2019, a total of 2 733 635 cases of dengue (280 cases per 100 000 population) has been reported in the Americas, including 1 206 deaths (CFR 0.044%). Of the total cases, 1 217 196 (44.5%) were laboratory-confirmed and 22 127 (0.8%) were classified as severe dengue.

The four dengue virus serotypes are co-circulating in the Americas. Of the five countries in the Americas with the highest incidence rates, four are in the Central American Isthmus: Belize (1 021 cases per 100 000 population), El Salvador (375 cases per 100 000 population), Honduras (995.5 cases per 100 000 population), and Nicaragua (2 271 cases per 100 000 population). The 5th high-incidence country in the Americas is Brazil (711.2 cases per 100 000 population). There has been more than 13% increase in dengue cases since 2015, and it is

predicted that cases may continue to rise.

Integrated vector control strategies, personal protection from mosquito bites as well as early accurate diagnosis and management of cases are all key in preventing disease and deaths from dengue.

4. MERS-CoV : Saudi Arabia

Middle East respiratory syndrome coronavirus (MERS-CoV) is a viral respiratory disease which was first reported in September 2012. At the end of October 2019, there is a global cumulative total of 2 482 laboratory-confirmed cases of MERS, including 854 associated deaths (case fatality rate, 34.4%). Most of these cases were reported from Saudi Arabia (2 090 cases, including 776 related deaths with a case fatality rate of 37.1%).

From 6 to 13 November 2019, there were four newly confirmed cases of MERS-CoV infection reported by Saudi Arabia, including one fatality. These cases bring the total number of cases reported in Saudi Arabia since 1 November 2019 to nine, and to 198

since January 2019. All but one of the nine cases reported during November 2019 are primary cases with only three having a history of direct contact with camels. Although most human cases of MERS-CoV infections have been attributed to human-to-human infections in healthcare settings, current scientific evidence suggests that dromedary camels are a major reservoir host for MERS-CoV, and an animal source of MERS infection in humans. The virus does not seem to pass easily from person to person unless there is close contact, such as occurs when providing unprotected care to a patient.

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

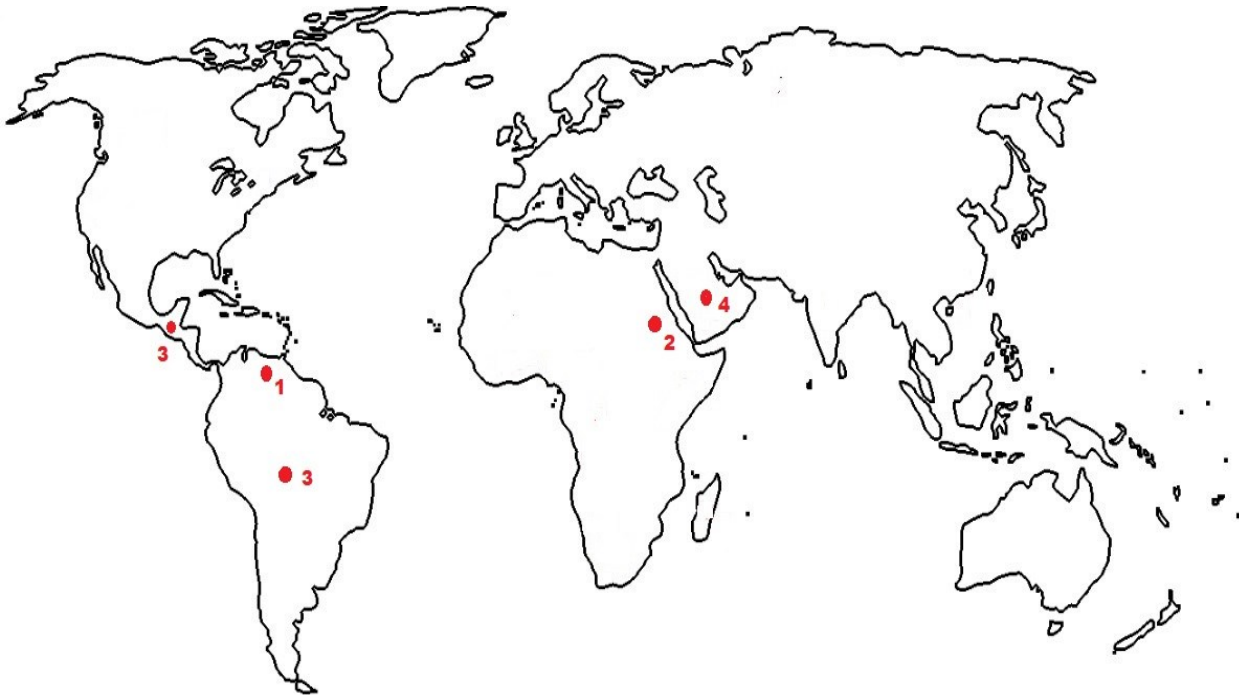


Figure 5. Current outbreaks/ events that may have implications for travellers. Numbers correspond to text above. The red dot is the approximate location of the outbreak or event.

6 WHO-AFRO: OUTBREAKS AND EMERGENCIES

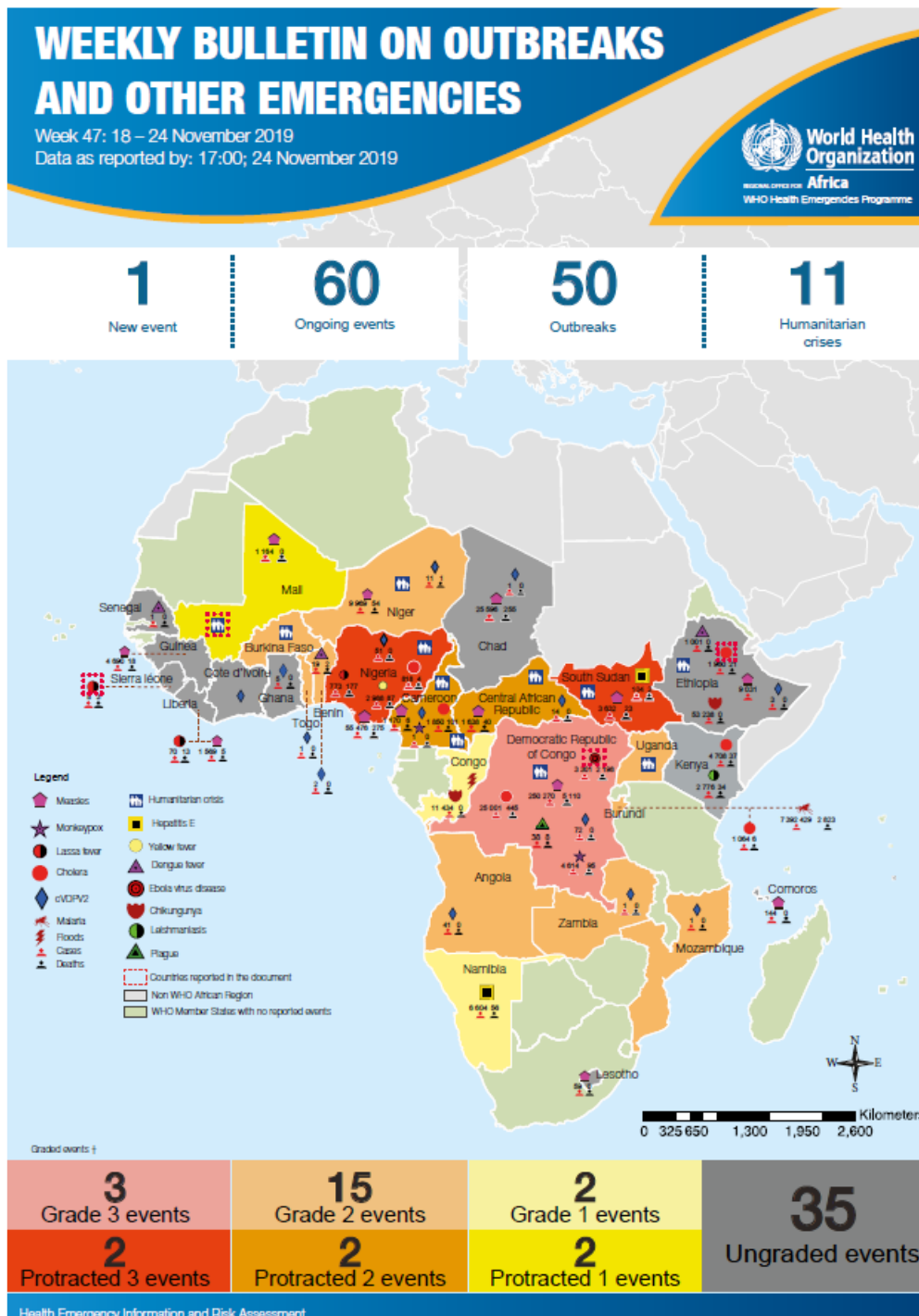


Figure 6. The Weekly WHO Outbreak and Emergencies Bulletin focuses on selected public health emergencies occurring in the WHO African Region. The African Region WHO Health Emergencies Programme is currently monitoring 61 events. For more information see link below: <https://apps.who.int/iris/bitstream/handle/10665/329974/OEW47-25112019.pdf>