

## ZOONOTIC AND VECTOR-BORNE DISEASES

### An update on rabies in South Africa

For year-to-date, two human rabies cases have been laboratory-confirmed in South Africa. These cases were reported from KwaZulu-Natal and Limpopo provinces.

Rabies cases are reported in humans mostly where rabies is found in domestic dogs, which serve as a vector. Many developing countries in Africa and Asia remain affected by rabies-infected domestic dogs, and consequently by human rabies. Rabies can be controlled in domestic dogs (and some other species) and elimination of the disease has been achieved in these animals in Western Europe, Canada, the USA, Japan and a few Latin American countries. The public is urged to ensure that the rabies vaccination records for their dogs (and

other pets) remain updated – vaccination protects animals and consequently prevents spread of the disease from animals to humans. Rabies vaccinations are often also provided by animal welfare and similar groups and the public is urged to seek out such opportunities that may be offered to their communities.

When possible rabies exposures have occurred, the infection may be prevented by and correctly-administered rabies post-exposure prophylaxis. The latter includes wound washing and rabies vaccination and immunoglobulin treatment.

For more information on rabies and disease prevention, please visit the NICD website: <https://www.nicd.ac.za/diseases-a-z-index/rabies/>.

### Arbovirus disease, April 2021

Two suspected cases of chikungunya were reported in April 2021, both being South African citizens fleeing northern Mozambique after armed groups attacked the town of Palma. The first case was admitted to a health care facility in South Africa on the seven day after the onset of symptoms, that included conjunctivitis, an erythematous rash, fever, myalgia, extreme fatigue, arthralgia and arthritis of large joints; it was reportedly bitten by mosquitoes while seeking refuge. The second case was travelling with the first one, had the same exposure and develop similar clinical manifestations.

Both cases tested positive by commercial chikungunya IgM ELISA. A repeat blood sample received from the first case, also tested positive by chikungunya IgM ELISA, with higher titres. The presence of IgM antibodies and increasing antibody titres, strongly suggest a recent infection with chikungunya virus.

Chikungunya virus (CHIKV) is a mosquito-borne virus, maintained in nature by *Aedes* mosquitoes and non-human primates (monkeys and apes), and transmitted to humans by bites of infected mosquitoes. The incubation period following

infection is usually less than seven days. The most prominent clinical manifestations of chikungunya include sudden onset of fever with arthralgia. Other signs and symptoms include myalgia, joint swelling, headache, nausea, fatigue and rash. Differential diagnosis includes dengue fever, caused by dengue virus, which is transmitted by the same vector as CHIKV. The incubation period for dengue fever is approximately 1 week and has overlapping symptoms with chikungunya that may include acute high fever, severe headache, ophthalmalgia, myalgia, arthralgia, nausea, vomiting and rash. Some patients may develop severe dengue shock syndrome or dengue haemorrhagic syndrome that can result in death. Malaria should also be considered in all persons with acute febrile illness who have recently returned from malaria-endemic areas.

There are no specific antiviral treatment or vaccines available for chikungunya fever, as with most other arboviral infections. Prevention of infection is dependent on avoiding mosquito bites, including the use DEET-containing insect repellents.