

ZOONOTIC AND VECTOR-BORNE DISEASES

An update on rabies in South Africa, 2021

In the past month, six new cases of human rabies were laboratory confirmed, originating from the Eastern Cape, KwaZulu-Natal and Limpopo provinces. The total number of laboratory-confirmed cases for 2021 up to 23 November is 17 (including the six cases mentioned here). The provincial distribution of these cases is as follows: Eastern Cape (n=9), KwaZulu-Natal (n=4) and Limpopo (n=4) (Figure 1). Three probable cases from KwaZulu-Natal Province have been documented (Figure 1), in which rabies was suspected on clinical signs and fatal outcome, as well as a history of dog/cat bites, without laboratory confirmation.

The histories for the recent cases are as follows. A case of rabies was confirmed in a 7-year-old boy from Greater Letaba, Mopani District, Limpopo Province in the last week of October. He died following hospitalisation with hydrophobia, hypersalivation, and muscle spasms. No animal exposure history or rabies post-exposure prophylaxis (PEP) was available for this patient. The case was confirmed by testing of a post-mortem-collected brain sample.

An 18-month-old boy from KwaNtabangwangwa, Zululand District, KwaZulu-Natal Province, was bitten in the face and on the hand by a dog on 8 October. He received one dose of rabies vaccine on the same day as the incident, and it was unclear whether rabies immunoglobulin (RIG) was given and if the patient received all doses of vaccine. The child was brought to the hospital two weeks later with fever, shortness of breath, hypersalivation, encephalopathy, and diaphragm paralysis, and died on 31 October. The case was confirmed by testing of a post-mortem-collected brain sample.

The remaining four cases were reported from the Amathole District (n=2) and Nelson Mandela Bay Metropolitan Municipality (n=2), Eastern Cape Province. A 44-year-old woman was bitten on the face and hands by a wild animal (details are being investigated) in Ngxingxolo, Amathole, in mid-September. Five weeks later, she suffered malaise, nausea, muscle spasms, dysphasia, hydrophobia, hyperactivity, and hypersalivation before demising in hospital on 27 October. PCR testing on two saliva specimens was positive. On 17 October, a 10-year-old child was attacked in the face and abdomen by a dog in Silatsha, Mooiplaas. The child received rabies PEP, which included the full course of vaccine (4 doses) although it was unclear whether RIG was administered. Three weeks later, he died in hospital after suffering from fever, malaise, vomiting, muscle spasms, autonomic instability, nausea, and localised pain/paresthesia at the bite sites. PCR testing on two saliva samples were positive for rabies. A 6-year-old girl died on 13 November after being bitten by a stray dog in the beginning of the month near her home in Rosendal, Gamble, Kariega, Nelson Mandela Bay. The wounds were inflicted under the eye and in the back, and only rabies vaccination was started but no RIG was reportedly provided. The child presented with fever, nausea, hypersalivation, vomiting, and dysphasia.

The case was confirmed by testing of a post-mortem-collected brain sample. A 17-year-old man from Kwazakhele, Gqerberha, Nelson Mandela Bay, was bitten on the hand by a dog in September. The patient was hospitalised with fever, nausea, muscle spasms, anxiety, hypersalivation, aggressiveness, vomiting, disorientation, agitation, localized weakness, headache, anorexia, ataxia, sleeplessness, delirium, hydrophobia, hyperactivity and autonomic instability in the second week of November. The case was confirmed by testing of a post-mortem-collected brain sample.

In the eastern provinces of South Africa, rabies is a re-emerging public health problem associated with dog rabies (see <https://www.kzndard.gov.za/latest-news/item/327-rabies-update>). Increases in cases have been reported in the municipalities of Buffalo City, Nelson Mandela Bay and eThekweni, as well as King Cetshwayo and Vhembe districts in 2021 (Figure 1). Cases of rabies in dogs were also reported from the Western Cape Province, specifically Khayelitsha and Gordon's Bay, earlier this year. These were the first reports of dog rabies in this province for decades. No new cases have been reported since mid-October 2021. No human cases of rabies have been identified from the Western Cape Province.

Mass-vaccination campaigns for dogs (and cats) are underway in affected areas. Vaccination of dogs (and cats) is the most important intervention for rabies prevention and control. When possible exposure occurs, infection may be prevented through rabies post-exposure prophylaxis. This requires thorough washing of all wound sites with soap and water followed by rabies vaccination and immunoglobulin therapy. More rabies information, including how rabies is prevented through rabies post-exposure prophylaxis, is on the NICD website at www.nicd.ac.za.

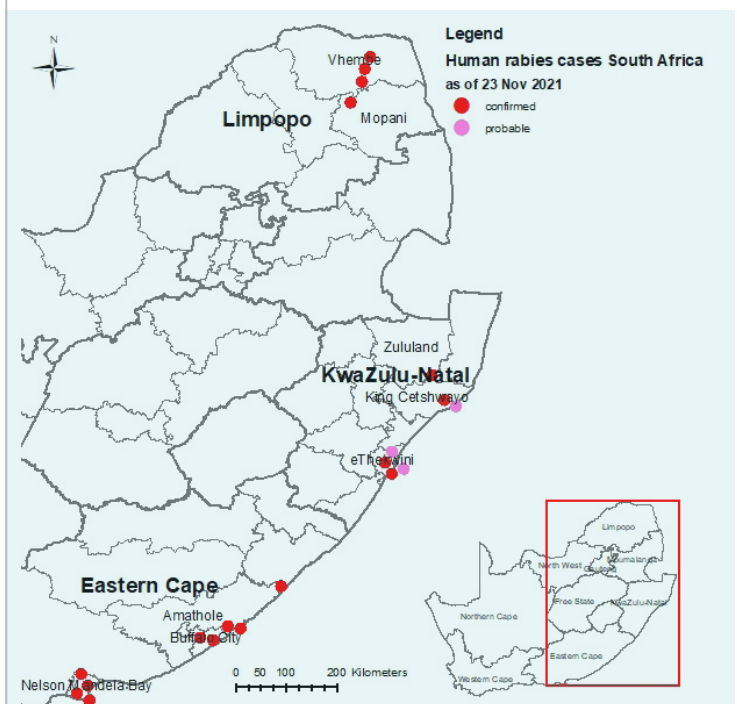


Figure 1. Human rabies cases in South Africa for 2021 until 23 November (created from NICD data)