

2 ZOO NOTIC DISEASES

a Rabies

A total of seven laboratory-confirmed human rabies cases was reported in South Africa during 2013. These cases originated from Mpumalanga (n=1), KwaZulu Natal (n=1), Limpopo (n=3) and Free

State (n=2) provinces. An average of ten cases has been reported annually since 2009, with a peak in 2006 when Limpopo Province experienced a major outbreak (Figure 4).

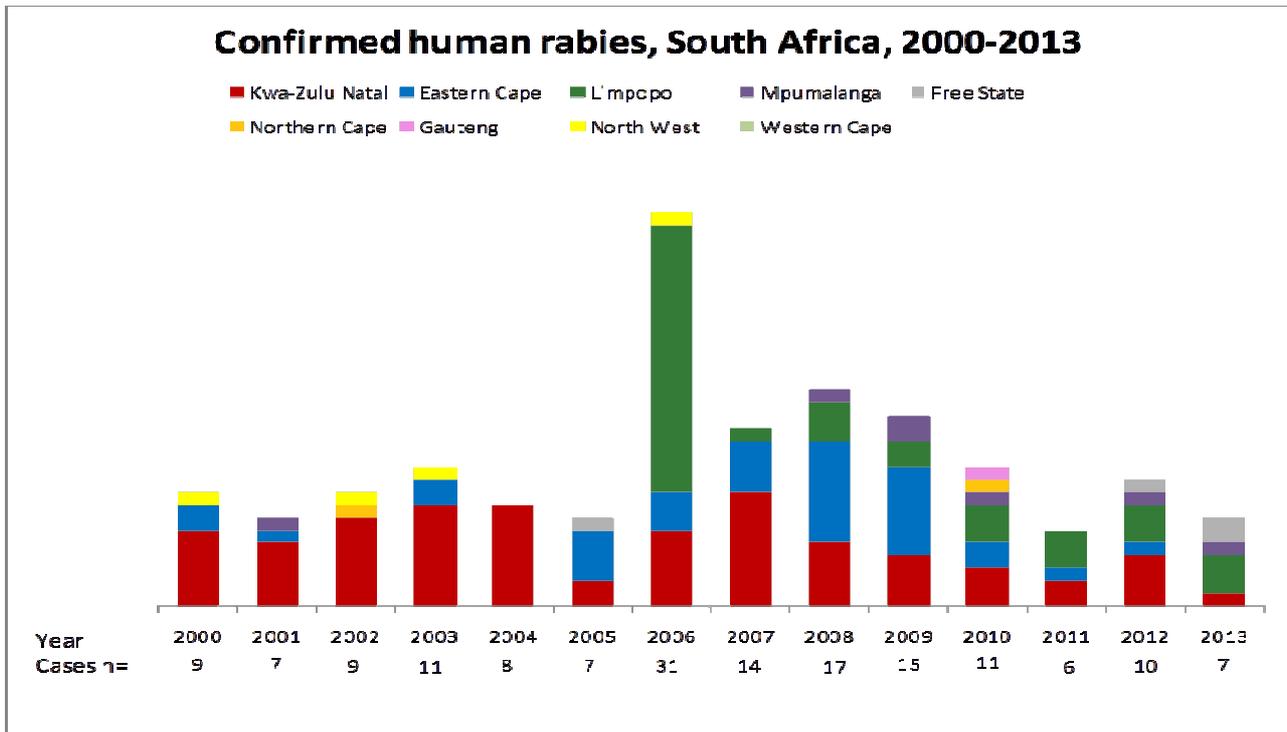


Figure 4. Number and provincial distribution of human rabies cases, South Africa, 2000 – 2013.

Additionally, a total of five clinical rabies cases was documented in 2013. These cases originated from Limpopo (n=2), Eastern Cape (n=2) and Mpumalanga (n=1) provinces. Two of these cases were reported in December 2013, and are discussed further.

A 30-year-old female working in Musina (Limpopo Province) died on 14 December 2013 after a three-day illness of abnormal and aggressive behaviour punctuated by periods of calmness and lucidity, hypersalivation and seizures. On clinical examination, healed scars were found behind the knee, but no history of an animal bite could be established. A post-mortem saliva specimen tested negative for rabies by RT-PCR.

Unfortunately, no other specimens could be obtained for further testing.

A 43-year-old female admitted to an Eastern Cape Province hospital was clinically diagnosed with rabies and died shortly thereafter. Saliva and cerebrospinal fluid (CSF) specimens collected on 23

December 2013 were negative for rabies by RT-PCR, but unfortunately no further specimens were available for testing. No history regarding possible animal bites/exposures was available.

The gold standard for rabies diagnosis remains the fluorescent antibody test performed on post-mortem brain specimens. This test is highly sensitive and allows for the detection of a variety of rabies virus strains. Ante-mortem laboratory diagnosis of rabies is complicated and usually requires multiple tests performed on multiple specimens. RT-PCR on saliva specimens is reasonably sensitive, but repeat specimens have to be tested due to the intermittent shedding of virus in saliva. Negative PCR results from a saliva specimen must therefore not be interpreted as an absolute exclusion of the diagnosis. RT-PCR testing of nuchal biopsy specimens is sensitive, but consent may be required for the procedure. CSF is not the most sensitive specimen for detection of rabies virus RNA but should be included in a battery of tests when investigating suspected cases. Serology

for rabies antibodies is not particularly useful for diagnosis of acute cases due to low or undetectable seroconversion in most cases.

Health professionals and members of the public can access more information on rabies through the NICD website: www.nicd.ac.za.

Source: Source: Centre for Emerging and Zoonotic Diseases, NICD-NHLS