

NAMIBIA

I.) BACKGROUND INFORMATION

Namibia covers 824,292 sq km and shares its borders with Angola, Botswana, South Africa, Zambia and Zimbabwe. Namibia's population is estimated to be around 2.2 million (July 2013), with about 38 percent living in urban areas (2010). With a total GDP per capita (PPP) of 7,800 USD, but a high income inequality (GINI index of 59.7 in 2010), it is ranked according to the Human Development Index of 2013 in 128th place.^{i ii}

In Southern Africa, 4 genotypes of the lyssavirus, which cause rabies, are endemic. The most common is Genotype 1 (Rabies virus, RABV). Others are Genotype 2 (Lagos bat virus, LBV), Genotype 3 (Mokola virus, MOKV) and Genotype 4 (Duvenhage virus, DUVV)ⁱⁱⁱ. Human infections are mostly due to the canine biotype of RABV^{iv}.

Rabies is a notifiable disease in Namibia. It is regulated by the respective acts issued prior to independence, i.e. the 'Animal Disease and Parasites Act' of 1956, and the Regulation 328 of the Health Act from 1977.^v Animal rabies falls under the responsibility of the Ministry of Agriculture, Water and Forestry, Directorate of Veterinary Services, which is occasionally organizing vaccination of pet animals (dogs and cats) in various regions, when deemed necessary.^{vi} Animal rabies specimens are sent to the Central Veterinary Laboratory in Windhoek for direct fluorescent antibody (FAT) testing.^{vii}

II.) HUMAN RABIES EPIDEMIOLOGY

Rabies in humans in Namibia is mostly transmitted through rabid dog bites and occurs in the northern parts of the country. Children up to the age of 16 are most affected, representing 83 percent of all human rabies cases^{viii}. The number of reported cases, however, is conflicting. According to the country report for the years 2010-2012 submitted to SEARG, in December 2012 there was one single human rabies case, while for 2010 and 2011 no rabies cases were reported. A previous country report from 2011 stated that one human rabies case occurred in 2010^{ix}. Data submitted to the OIE reported 13 human rabies cases for the years 2010 and 2011^x. These latter numbers are more in line with recent media reports of the numbers presented by the Chief Veterinarian from the Agriculture, Water and Forestry Ministry. Between 2007 and 2012 62 people died from rabies in Namibia, with the Kavango Region having the highest number of cases (15)^{xi}.

III.) RABIES VECTORS

On average 200 cases of rabies are diagnosed in domestic and wild animals in Namibia annually, with occasional increases in number of cases, as happened in 2010 (467 positive rabies cases). Dogs, cattle and the kudu (*Tragelaphus strepsiceros*) account for approximately 84 percent of all confirmed cases.^{xii} Namibia is unique in a way that rabies is sustained by an independent infectious cycle among the kudu, which was first noticed in 1977^{xiii}. From 1977 to 1985 about 30,000 - 50,000

Kudu died, while the second epizootic, which started in 2002, already claimed around 2500 kudus by 2007.^{xiv}

According to the data submitted to SEARG, in 2012 a total of 177 cases of animal rabies were laboratory confirmed, of which 50 were dogs, 87 other domestic animals and 40 wildlife.^{xv} Contradictory to those numbers is the data within the OIE World Animal Health Information System. For the months of January to June 2012, here 57 dogs, 174 domestic animals (of which 145 were cattle) and 24 wildlife died of rabies.^{xvi}

The main vector for human rabies infection is the dog. In 2011, 104,645 dogs were reported in Namibia. The total number of annual dog bites is unknown. However, the Kavango Region alone reported 984 dog bites from April 2008 to March 2009. After the implementation of a rabies awareness raising campaign by the Rundu Regional Council, which included dog population management and domestic animal vaccination, reported dog bites from April 2009 to March 2010 dropped to 468, which is a decrease of more than 50 percent. Accordingly, expenditure on PEP treatment decreased from 56,600 NAM\$ to 29,600 NAM\$.^{xvii}

IV.) RABIES BIOLOGICS AVAILABILITY

Rabies post-exposure prophylaxis is offered free in state hospitals. No information is available on the availability of Human anti-rabies immunoglobulin^{xviii}.

V.) OTHER

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- ⁱⁱ UNDP (2013). International Human Development Indicators: Namibia. <http://hdrstats.undp.org/en/countries/profiles/NAM.html> [accessed 1.6.2013]
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- ^v SEARG (2013). Namibia country report, 2010-2012. <http://searg.info/doku.php?id=aboutrabies:rabiesepidemiology:2013reportnamibia> [accessed 1.6.2013]
- ^{vi} <http://agrialert.blogspot.de/2012/10/focus-on-animal-health-rabies.html> [accessed 1.6.2013]
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- ^{viii} New Era. 18.2.2013. <http://allafrica.com/stories/201302181257.html>
- ^{ix} SEARG (2011). Namibia country report. 10th SEARG meeting in Maputo, Mozambique. <http://searg.info/fichiers/articles/2011023023d.pdf> [accessed 1.6.2013]
- ^x OIE World Animal Health Information System. Namibia, 2010. http://www.oie.int/wahis_2/public/wahid.php/Reviewreport/semestrial/review?year=2010&semester=0&wild=0&country=NAM&this_country_code=NAM&detailed=1 and Namibia, 2011. http://www.oie.int/wahis_2/public/wahid.php/Reviewreport/semestrial/review?year=2011&semester=0&wild=0&country=NAM&this_country_code=NAM&detailed=1 [accessed 1.6.2013]
- ^{xi} Namibian Broadcasting Corporation (2013). Rabies, a concern in Namibia. http://www.nbc.na/news_article.php?id=8784&title=Rabies%20a%20concern%20in%20Namibia [accessed 1.6.2013]
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- ^{xv} SEARG (2013). Namibia country report, 2010-2012. <http://searg.info/doku.php?id=aboutrabies:rabiesepidemiology:2013reportnamibia> [accessed 1.6.2013]
- ^{xvi} OIE World Animal Health Information System. Namibia, 2012 (1). http://www.oie.int/wahis_2/public/wahid.php/Reviewreport/semestrial/review?year=2012&semester=1&wild=0&country=NAM&this_country_code=NAM&detailed=1 [accessed 1.6.2013]
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