

# RABIES IN ANGOLA: A ONE HEALTH APPROACH

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Rabies is one of the oldest recognized diseases already known by Aristotle in the IV century BC. In Angola, rabies has been introduced among domestic dogs during the 1940s; at present is a notifiable disease and its main vector is the domestic dog (King AA *et al.*, 2004; Nel L *et al.*, 2009; WHO, 2014). Rabies is considered a neglected disease linked to poverty. It is caused by four genotypes of the lyssavirus, the most common being Genotype 1 (Rabies virus, RABV) which causes the highest number of human infections (WHO, 2014). The World Organisation for Animal Health (OIE) reports that each year rabies kills around 70,000 people worldwide. Africa accounts for about 24,000 deaths per year but real rabies incidence is at least 100 times higher than officially reported (OIE, 2015). Angola notifies each year around 100 cases of human rabies (OIE-WHAIS).

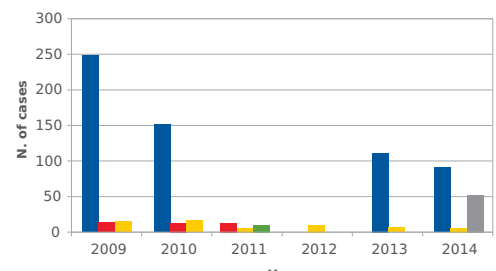


Figure 1. Human cases of rabies notified in Southern Africa

Angola is divided into 18 provinces and in 161 municipalities. In one of these province, namely the Huila province, the Istituto Zooprofilattico Sperimentale dell'Abruzzo e del Molise "G. Caporale" (IZSAM), started the project "Zoonoses Prevention: Integrated Project on Public Health" (PISP) whose objective is the improvement of public health through the decrease of zoonoses and food-borne diseases (Daniel S. *et al.*, 2015). Rabies is widespread in Huila province, and human cases are notified each year in most of the municipalities. Animal vaccination campaigns are implemented regularly, but shortage of vaccine hampers their effectiveness. Environment plays a key role in influencing the size of dog population, as garbage is a common source of food both for stray and owned dogs.



Figure 2. Dog vaccination

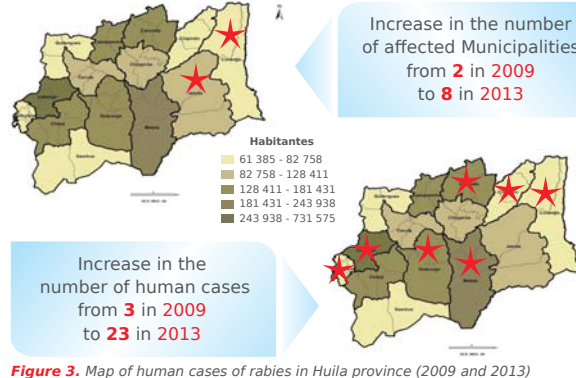


Figure 3. Map of human cases of rabies in Huila province (2009 and 2013)

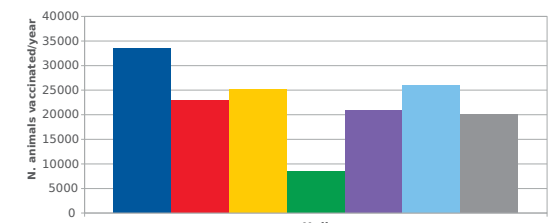


Figure 4. Rabies vaccination in animals - Huila province (2009-2015)

**Como podemos prevenir a RAIVA**

O cão pode ser vacinado durante a campanha de vacinação ou em qualquer momento na clínica dos Serviços de Veterinária ou numa clínica veterinária privada.

**Se for mordido deve:**

- 1 lavar a ferida com muita água e sabão
- 2 localizar o cão que mordeu para sua observação
- 3 ir ao posto de saúde mas próximo o mais rápido possível

**Não deve deixar o cão a solta pelas ruas ou a brincar no lixo**

A raiva é uma doença muito perigosa, que afecta o cérebro (Sistema nervoso central) e geralmente causa a morte. É transmitida através da saliva, geralmente com a mordedura, do cão doente (mas também gato e simio).

**A saúde dos cães é a nossa saúde: avancemos juntos para protegê-la**

Figure 5. Poster on rabies prevention

At national level, an Interministerial Commission for the implementation of the contingency and emergency plan against rabies was created in 2008. The commission is coordinated by the Minister of Agriculture and incorporates the Ministers of Health, Territorial Administration, Interior, Social Communication, and Finance. In Huila province, the PISP project supports the intersectoral collaboration of Public Health and Veterinary Services, through the organization of joint meetings, training activities and health education materials. During these meetings data are shared, constraints are discussed and common strategies are proposed.

Due to the impressive proportion of children affected by rabies and animal bites, health education materials were especially designed for schoolchildren. The involvement of school in rabies prevention is considered a milestone.

- The way ahead**
- During intersectoral meetings it was decided to implement a more comprehensive strategy which includes:
- improvement of surveillance and data sharing
  - involvement of community services in all prevention activities, including dogs capture and garbage disposal
  - health education at school
  - better vaccine conservation during animal vaccination campaigns.

## References

1. King AA, Fooks AR, Aubert M, and Wandeler AJ (editors) 2004. Historical Perspective of Rabies in Europe and the Mediterranean Basin. OIE (World organization for animal health), Paris, France, 361 pp.
2. Nel L, Le Roux K, and Atlas R 2009. Meeting the rabies Control Challenge in South Africa. Microbe 4(2): 61-65
3. WHO 2014. Rabies country profile - Angola ([http://www.who.int/rabies/epidemiology/Rabies\\_CP\\_Angola\\_09\\_2014.pdf](http://www.who.int/rabies/epidemiology/Rabies_CP_Angola_09_2014.pdf) accessed on 14 December 2015)
4. OIE 2015. Rabies portal. (<http://www.oie.int/animal-health-in-the-world/rabies-portal/> accessed 14 December 2015)
5. Daniel S, Gonçalo N.A.S., Barbosa M., Ferri N., Possenti L., Scacchia M. and Parodi P. 2015. Angola: Pilot project on Integrated Animal Recording System. Preliminary Data FAO-ICAR African Symposium on "Animal identification and recording (AIR) systems for traceability and livestock development in sub-Saharan Africa" 14-16 April 2015, Pretoria, South Africa ([http://www.icar.org/Documents/Preliminary\\_Data\\_FAO-ICAR\\_African\\_Symposium\\_on\\_AIR\\_2015/Pictures/05%20Posters/DSC\\_0576.JPG](http://www.icar.org/Documents/Preliminary_Data_FAO-ICAR_African_Symposium_on_AIR_2015/Pictures/05%20Posters/DSC_0576.JPG) accessed on 7 December 2015).



# RABIES ONE HEALTH SITUATION IN NAMIBIA

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Rabies is a notifiable disease in Namibia affecting different animal species such as dogs, cattle, goats, kudus, eland, jackal, humans etc. (Figures 1,7,8). The disease appears in two major clusters in Namibia (Figure 2): the first is located in the Northern Communal Area (NCA) with the characteristics of urban rabies and is driven by the dog population, so-called Canine Rabies. The second cluster occurs south of the Veterinary Cordon Fence (VCF) is among the kudu

(antelope) and it is called Kudu Rabies. With regard to Canine-Human Rabies, a huge impact occurs in the northern regions of the country, although getting the overall data on dog bites and Human Rabies in country is not uniformly coordinated. As such, implementation of the Rabies control strategy is earmarked for these regions first. Rabies is one of the oldest diseases in the world, and is the result of exposure to a virus usually transmitted to humans through the saliva of an infected dog. The strategy report stresses that when it comes to human

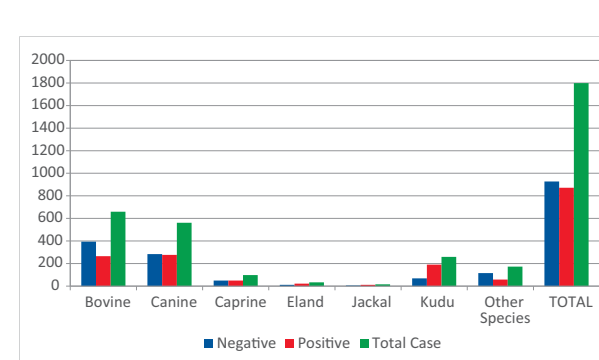


Figure 1. Number of cases in Namibia from 2013-2015. In humans it's on average 10 to 15 cases per year



Figure 2. Namibia has a population of about 2 millions people (2011 national census)



Figure 3. The National Rabies strategy which was launched in March 2015



Figure 4. Cases of Rabies on SILABFA

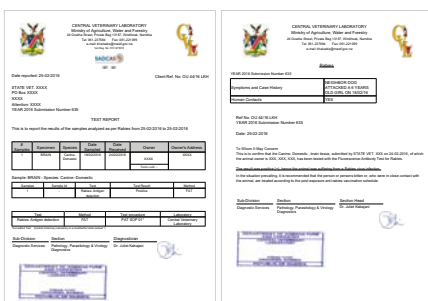


Figure 5. Final Test Report for Rabies case produced by SILABFA



Figure 6. Rabies letter generated by SILABFA automatically



Figure 7. Kudu Rabies is also a serious problem in Namibia

The rate of Human Rabies in Namibia has slightly declined but the rate of infection of dogs and kudus remains unacceptably high and worrisome.

The Rabies cases are tested in the Central Veterinary Laboratory (CVL) that established two locations for Rabies strategy: in Ondangwa CVL and in CVL-HQ in Windhoek where Laboratory Information Management System (SILABFA) developed by Istituto Zooprofilattico Sperimentale dell'Abruzzo e del Molise "G. Caporale", Teramo, Italy) facilitate the fast response in the analysis. In fact since the SILABFA (Figure 4) is installed in the CVL the turnaround time is less than 50% and the processes is now total paper less. The Rabies Test in Antigen detection in FAT method is now accredited to SADCAS. SILABFA automatically produces the Reports signed (Figure 5) and is able to send via email the report to the customers. In reference to the NRCS, in case of Positive results and human-animal contact, alert Letter (Figure 6) is generated and delivered via email by SILABFA in attached to the Test Report directly to the Vet Officer. The notification is prompt and fast.

