



World Rabies Day: Efforts Towards Rabies Awareness in Zaria, Nigeria

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Summary

Rabies is a disease that is associated with very high case fatality rate. This disease is however entirely preventable. World rabies day (WRD) inaugurated on September 8, 2007 was aimed at creating awareness among the public as a major step in the control of this disease. The event is now marked on the 28th September annually. Rabies is endemic in Nigeria among the domestic dogs and human exposure is common. From the year of inauguration of WRD, there have been activities to create awareness in Zaria, Nigeria. Over the last four years since the inception of WRD, several professionals have been involved in creating public awareness about rabies within and outside the Ahmadu Bello University community in Zaria. Events planned and executed include visual arts, sports, public lectures, vaccination campaigns, dog parade, walks, school children education, workshops and distribution of WRD logo-branded souvenirs such as badges, notebooks and gift bags. The print media including local news papers and educational leaflets and posters were also utilized. The electronic media especially the local radio stations were also involved through daily jingles aired during the WRD period. The efforts made so far have been very useful, being focused and target groups reached. There is increased awareness about rabies based on the publics' quest for professional advice where rabies exposure occurred, and for vaccination of their dogs against rabies. This paper looks at the efforts made so far and other opportunities for reaching the public with the message of rabies prevention.

KEYWORDS: Rabies, Public education, Ahmadu Bello University, Zaria, Nigeria

INTRODUCTION

Nigeria occupies a strategic position wherever the history of lyssaviruses is recounted. Presently, three of the seven recognised genotypes have been reported in Nigeria. Of these, two were initially isolated in Nigeria ie

genotypes 2 and 3 namely Lagos Bat virus (LBV) and Mokola virus (MOKV) respectively. The first report of the classical rabies virus (RABV) ie genotype 1 in Nigeria was in 1912 (Boulger and Hardy, 1960), thereafter, LBV was isolated on Lagos island from frugivorous bats *Eidolon helvum* in 1956 (Boulger and Porterfield, 1958). The first isolation of MOKV was in Mokola, Ibadan in 1968 (Shope *et al.*, 1970) from the viscera of the shrews *Crucidura spp.*

MOKV has been implicated in human mortalities in the past (Warrell and Warrell, 2004). Even though human mortalities due to LBV have not been reported, surveillance for *Lyssaviruses* in Nigeria is very poor; therefore, we cannot at this stage say that LBV is not a potential zoonosis. Furthermore, these two lyssaviruses are members of the Phylogroup II, for which there is no appreciable cross-protection since the available rabies vaccines protect only against members of the Phylogroup I (Nel, 2005; WHO 2005). Presently, rabies is endemic in the canine population in the country and poses a serious threat to public health. It is estimated that about 10,000 persons are exposed to rabies each year in Nigeria from dog bites (Okoh, 2007). Transmission occurs mainly through adequate contact of virus laden saliva with an open wound. Some authors (Coker *et al.*, 2000) have reported an average of 7.4 human mortalities annually in Nigeria between 1987 to 1995. However, we believe rabies is grossly under-reported in Nigeria.

Many dogs are not properly cared for, are unvaccinated against rabies and are allowed to roam freely (Adaba *et al.*, 2004), leading to frequent dog bites and potential exposure to the disease. Following exposure, standard and appropriate first aid comprising of proper washing of the bite site with soap and topical

application of antiviral agents is recommended (Briggs and Mahendra, 2007). This should be followed with antirabies biologicals including the rabies immunoglobulin and vaccines. Tetanus toxoid and antibiotics are also recommended as appropriate. If these are instituted, rabies will be prevented (Rupprecht *et al.*, 2006)

Despite this straightforward requirement, many cases of dog bites result in mortality with an estimated 55,000 mortalities worldwide annually (WHO, 1994). This is partly due to the cost of post-exposure prophylaxis and lack of knowledge about the steps for prevention of this disease following exposure. Rabies was considered serious enough that WHO designated September 8, 2007 as the first ever world rabies day. The event is now marked on 28th September annually. It is estimated that about 400,000 people in 74 countries were educated about rabies in the first year and by 2009, about 55 million people in 104 countries have been taught about rabies (www.allianceforrabiescontrol.org).

Public awareness is a viable, relatively inexpensive and highly effective tool for rabies prevention. It is on this that rabies prevention is hinged. The message is to avoid dog bite, apply appropriate first aid, and seek medical attention in cases of exposure. Knowledge about how to handle dog bite wounds is limited and people often present with wounds that have been unattended to because they are either uninformed or misinformed (APCRI, 2004). Traditional practices abound where people apply a variety of substances ranging from powders to animal parts etc (APCRI, 2004) to bite wounds. For public campaigns to be successful, the different levels of age and social status must be incorporated into event planning. This includes simple language, attractive packaging and presentation.

Site of the interventions / campaigns

Zaria is a small town located in North Western Nigeria. It is host to many educational institutions including Ahmadu Bello University, Zaria. This institution has approximately 35,000 students and 7,000 staff members. It has a Faculty of Veterinary Medicine and veterinary services are obtainable from the various Departments in the faculty. There is also a

veterinary clinic owned by Kaduna State in the town.

Rabies public education and awareness campaigns in Zaria

This has been achieved using several means. We have engaged visual arts, sporting events, mass media and vaccination campaigns so far in rabies awareness. Every year, banners were prepared and placed at strategic locations on campus and at the entrances to sensitize the public about upcoming events to mark the WRD for that year.

WRD 2007: A visual art workshop was held by Diploma students of the Industrial Design Department of Ahmadu Bello University, Zaria, and a Women's non-governmental organization (KINESIS: Women Art and Science). These individuals were lectured about rabies and asked to translate the message into posters for public education and rabies campaigns. Rabies educational flyers were also produced in both English Language and Hausa and distributed on campus.

WRD 2008: Several professionals were involved in WRD events for this year. Four day events were organized as follows:

- i) A public lecture on rabies was presented by rabies experts from the veterinary faculty and the university health services unit. Important and relevant topics such as the epidemiology, prevention and control of rabies were tackled and it was a good forum for sharing of information and providing answers to questions about the disease from the general public.
- ii) A novelty basketball match between Kano Pillars team from the neighbouring Kano state and the Ahmadu Bello University basketball team was held. This brought many spectators and informative flyers on rabies were distributed during the tournament.
- iii) A highly educative play performed by The Theatre and Performing Arts Department of the University was staged at the sports arena for public viewing during the basketball tournament. Though humorous, it succeeded in passing on the important message of avoiding dog bite and steps to take towards prevention in the case of an exposure.

- iv) A parade was performed by the Ahmadu Bello University Security Dogs team. This was a wonderful opportunity to show people the usefulness of good dog ownership. These trained dogs were used to demonstrate crowd control and obstacle trainings making people appreciate the usefulness of dogs.
- v) Free dog vaccination campaigns was held at the Veterinary Teaching Hospital. Antirabies vaccines were donated by the Federal Ministry of Agriculture and the first two hundreds dogs to be presented for vaccination received free shots of the vaccine.
- vii) Jingles about rabies were aired on radio daily, reaching many more people with the message, since radio is readily accessible to people in both the rural and urban settings.
- viii) The grand finale was a walk-for-rabies by members of the university community. About 200 very enthusiastic persons including veterinary and non veterinary staff and students, and members of the Samaru community participated in the walk. WRD logo-branded T-shirts and face caps were distributed free to all who showed up and registered. The walk targeted densely populated areas including the major streets in Samaru and the market to distribute educational materials on rabies to commuters, passers-by and people buying and selling in the markets. These educational materials included flyers containing information on frequently asked questions about rabies produced by the Faculty of Veterinary Medicine, and rabies prevention posters donated by The Food and Agriculture Organisation (FAO) and the Centers for Disease Control and Prevention (CDC). All participants received certificates recognizing their contributions to rabies awareness after the walk and they felt rewarded.

WRD 2009: The WRD events in 2009 targeted school children. Since more than 50% of rabies cases occur in children <15 years, emphasis was placed on activities to reach and educate this age group. Education teams were made of staff and students of the Faculty of Veterinary Medicine of the University. Materials including WRD logo branded T-shirts, caps, note books and educational materials were distributed at the schools visited. A total of 16 schools in Zaria

metropolis were visited and lectures about rabies prevention given to the pupils/students and teachers. Rabies prevention posters were placed at strategic locations on the ABU main campus and educational flyers handed to pedestrians and motorists at the point of entering or exiting the campus. A lecture on rabies was also presented at the Army Depot in Sabon Gari to members of the Nigerian army.

WRD 2010: A national rabies workshop was held to mark the day. Invited international speakers gave lectures on the current trends on rabies. The participants were drawn from across the country.

Our Rabies Education Message:

1. All dogs should be vaccinated from three months of age and given yearly boosters to protect them against rabies.
2. In case of exposure to rabies, wash the bite site thoroughly with soap and plenty of water.
3. Report to the nearest veterinary clinic with the offending dog if possible, then the victim should be taken to the nearest hospital for administration of antirabies biologicals

Impact

Thousands of children and adults have been educated about rabies in Zaria. This would not have been the case without the WRD events marked every year. The print media was involved in publicity during the events and pressmen were present and carried the events as news items in the local news papers. The publics' awareness about rabies has increased based on our team members' experiences. People who are exposed to rabies from dog bites contact us through phone calls or personal visits, seeking professional advice. Parents owning dogs have also reported that their children insisted for their family dogs to be vaccinated after our rabies educational visits to their schools. Four years on, people are still seen wearing their WRD logo branded T-shirts and face caps, thereby continuing the campaign all through the year until the next WRD. We have collected data recently (unpublished) to assess knowledge, attitude and practice regarding rabies among children receiving formal and those receiving informal education in Zaria . We chose some schools visited during our WRD campaigns and those not visited. About 51% of the children

attending formal schools were aware of rabies and only 30% of those attending informal schools are aware.

The Future

The success recorded every year ensures that events are planned for the subsequent year. There is hope for us to educate the Nigerian public about rabies one town at a time. The final analysis remains that education is the real key to rabies prevention at all levels of the society and it is believed that by simply increasing educational awareness on local, national, regional and international levels, most rabies deaths could be prevented (Briggs and Mahendra, 2007). Public and professional education as well as community involvement is valuable tools in rabies control (Dedmon, 2008). At this time, multidisciplinary approach needs to be strengthened to achieve this. Our efforts so far have included Governmental organizations (ABU Zaria, Federal Ministry of Agriculture), non-governmental organization (KINESIS), the private sector (Merial), mass media and community participation (Samaru community). These efforts must be sustained to bring us to the point where we can make rabies history.

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