Report of the sixth meeting of the International Coordinating Group of the World Health Organization and the Bill & Melinda Gates Foundation project on eliminating human and dog rabies

Durban, South Africa, 22–24 September 2014

World Health Organization

BILL & MELINDA GATES foundation

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Abbreviations and acronyms

ABTC	animal bite treatment centre
BMGF	Bill & Melinda Gates Foundation
CCG	Community Care Givers
CDC	Centres for Disease Control, South Africa
DoA	Department of Agriculture
DoH	Department of Health
DVO	District Veterinary Officer
GARC	Global Alliance for Rabies Control
dRIT	direct rapid immunohistochemical test
FAT	fluorescent antibody test
ICG	International Coordinating Group
ID	intradermal
IM	Intramuscular
KZN	KwaZulu-Natal
LGU	local government unit
MLFD	Ministry of Livestock and Fisheries Development
NARIS	National Rabies Information System
PEP	post-exposure prophylaxis
PLDP	Peer Learning District Programme
PreEP	pre-exposure prophylaxis
RIG	rabies immunoglobulin
SOPs	standard operating procedures
WAP	World Animal Protection
WCO	WHO Country Office
WHO	World Health Organization

1. Purpose and objectives

The sixth meeting of the International Coordinating Group (ICG) of the World Health Organization (WHO) and the Bill & Melinda Gates Foundation (BMGF) project on eliminating human and dog rabies was held in Durban, South Africa, on 22–24 September 2014. Its purpose was to determine the way forward as the projects draw to a conclusion, with focus on their sustainability, expansion into other geographies and the dissemination of results and information to catalyse progress beyond the project sites. Rabies elimination is possible and requires working across different sectors.

Dr Tsakani Furumele, Director, Communicable Disease Control, National Department of Health, South Africa, welcomed the participants (Annex 1). She highlighted the low perception of the risk of rabies in South Africa and the world. The key lies in raising awareness about rabies risks as well as medical care if people are exposed. So much attention is being given to Ebola virus disease and yet the risk of rabies is a real threat in many African countries, especially in rural communities. She acknowledged the generous contribution of BMGF and WHO to the elimination of rabies in KwaZulu-Natal and the positive results as an expansion of the "One Health" approach to the whole country.

Ms Lani Wepener, International Relations and donor fund coordination, Department of Agriculture and Environmental Affairs, welcomed the group to KwaZulu-Natal and expressed the need for sustainability, resources and awareness-raising. The most important factor moving forward are the people on the ground required to do the necessary work.

The new project coordinator, Ms Molly Mort, Neglected Infectious Diseases Department, Global Health Programme, BMGF, and Dr Bernadette Abela-Ridder, Team Leader, Neglected Zoonotic Diseases, WHO Department of Control of Neglected Tropical Diseases, welcomed the participants and outlined the objectives of the meeting.

The objectives were to:

- Report and review the progress of each project site
- Determine the way forward
- Ensure sustainability
  - continuing successes at the project sites
  - expanding projects to neighbouring countries
- Ensure data collation for reporting and to support advocacy messages

2. Project reports

National coordinators and advisers to the three project sites (KwaZulu-Natal, South Africa; the south-eastern United Republic of Tanzania; and the Visayas, Philippines), WHO staff from country offices and headquarters and the BMGF representative participated in the meeting.

2.1 KwaZulu-Natal

2.1.1 Project implementation

The KwaZulu-Natal (KZN) project site has improved over the past year, with the number of animal rabies cases decreasing to approximately 2 cases per month. This progress has reflected in the province not having a human rabies case in the past 22 months (since the writing of this report) (Figure 1). Political buy-in followed the death of a prominent sports star in the province. Unfortunately, the remaining animal cases can be attributed to a single individual who has not provided the required support in order to successfully control rabies in their area of responsibility.

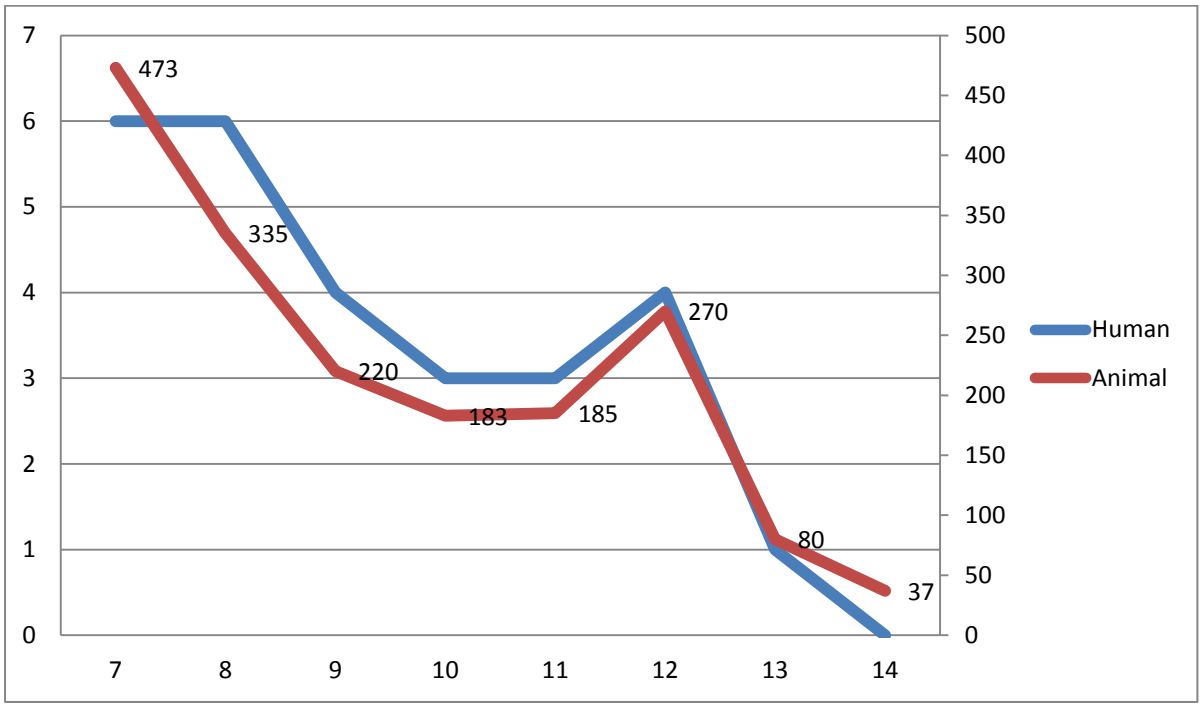

Figure 1. Reduction in the number of human and animal rabies cases, KwaZulu-Natal, 2007–2014

In 2014, the Department of Agriculture (DoA) was audited following fraud and corruption charges, which led to major challenges for the vaccination campaigns that resulted in lower vaccinations being administered (an estimated 300 000 vaccinations will be administered by the end of 2014) and the risk of the disease resurging in the province. Staff fatigue has also been a challenge for the campaign. KZN is looking to develop a maintenance plan following the "rabies-free"' status of the province. This maintenance plan would scale down the intensity of annual mass vaccination campaigns while maintaining rabies-free status.

2.1.1.1 Project data

A new project-specific database has been implemented in the KZN project site aimed at gathering information from all sectors and collating these data to provide accurate, useful information that can aid in focussing the efforts of vaccination teams as well as highlighting possible challenge areas in the province. The database has been expanded to include information on dog bite cases, human population size, epidemiological data on human rabies exposures and the administration of post-exposure prophylaxis (PEP) to assist the Department of Health (DoH) and accelerate the stagnant progress. Accurate data are now readily available and easily accessible.

A fairly comprehensive estimate of the dog population has been performed in KZN using several different methods. Official national data were used and this information was bolstered by a PhD dog ecology study that has been completed. The ecology study has also provided human:dog ratios and other important information. The final estimation for the dog population size in KZN is 1.2 million dogs.

2.1.1.2 Decentralization

The proposed laboratory in Vryheid has now been completed and is fully equipped, yet the accreditation process has been lengthy and is delaying the laboratory from becoming fully functional. Technical staff will be trained.

2.1.1.3 PEP

A network of Rabies Action Groups (RAGs) has been established or revived throughout the province. These groups serve as the platform from which training can be launched into the field. Training days run by the local Centers for Disease Control (CDC) on PEP administration have been held at centres across the province. A toll-free helpline for vets and medics has been established and new vaccination posters have been printed for distribution to clinics and hospitals. The human vaccine stocks for 2014 have been increased and there have been no shortages of vaccine thus far in KZN. Additionally, human rabies immunoglobulin (RIG) is also available upon request; however, more efforts on training and administration are being implemented to reduce the amount of unnecessary vaccination and HRIG being administered. The database is being used to monitor PEP administration and usage in hospitals and clinics. The project has also tried to get the intradermal (ID) route for vaccination accepted by the Medicines Control Council, but its application was rejected. The proposal will be amended and resubmitted in the hope of establishing the ID regimen in high throughput clinics.

2.1.1.4 Research

Immunocontraceptive trial

The immunocontraceptive trial was unsuccessful, possibly due to too high immunogens being administered. However, many lessons were learnt from the experience. One of the challenges was keeping dogs in kennels, including training the animals and keeping them mentally stimulated. It was important to ensure that the dogs would be successfully re-homed after the study. Homing challenges included the time taken (over 4 months) to re-home all of the dogs after the trials. A possible learning outcome would be to ensure that willing homes are identified before trials begin in

order to ensure a smooth process after their completion. The difficulties in obtaining import permits as well as clearance from the Medicines Control Council also delayed the trials significantly.

Rabies-related lyssaviruses

Mokola virus – a rabies-related lyssavirus – has been identified in a cat case near Pietermaritzburg. In response, active surveillance for Mokola virus in cats is being undertaken as part of an MSc (University of KwaZulu-Natal) and a PhD (University of Pretoria). A retrospective study is also being performed and has found that 33% of all previous cat rabies cases are due to Mokola virus infection. Lagos bat virus has been identified recently in some cats in KZN. These rabies-related lyssaviruses therefore pose a new potential challenge to the rabies elimination campaign.

2.1.1.5 Sustainability

The strategy adopted by KZN to safeguard the sustainability of the results towards rabies elimination and prevent the importation of rabies cases from bordering regions has been to conduct border vaccination campaigns and expand them into other provinces and countries. Vaccination campaigns on the border of Mozambique–Northern KZN have been completed. An animal welfare group in Mozambique has also begun vaccinating unrestricted dogs along the southern beaches of Mozambique. Additionally, the Mpumalanga province has removed the disease from one of the areas of the province with the support of the KZN project. A champion in that region has been identified and is looking to expand the Mpumalanga campaign to cover the entire province. Swaziland has also been involved in several mass vaccination campaigns and has been supported by the KZN rabies team through training on animal handling and correct capture techniques, and 50 000 more vaccine doses have been donated. The Free State province and Lesotho collaborations with KZN were initiated in September 2013, but little more has come from these initiatives. Lesotho is currently in a civil war, which has hampered all efforts to control rabies. The Eastern Cape Province collaboration is also under way. Dr Yonela, who attended the ICG, has been a champion in this region. Vaccine, equipment and training have been provided and the border regions with KZN are the initial focus areas with Eastern Cape. KZN is leading the drafting of a rabies national strategy and training programme. Many of the standard operating procedures (SOPs) written by the team are being used internationally (Blueprint for Rabies Control http://www.rabiesblueprint.com) and in other African countries including the Congo, Kenya and Senegal.