

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

Dar es Salaam, United Republic of Tanzania, 8–10 October 2013

**BILL & MELINDA**  
**GATES** *foundation*



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## Table of contents

1. Purpose and objectives .....	1
2. Project reports .....	2
i. KwaZulu-Natal .....	2
ii. Philippines .....	6
iii. United Republic of Tanzania .....	15
3. General summary of discussions .....	23
iv. Sustainability .....	23
v. Lessons learnt .....	25
vi. Laboratory surveillance .....	26
vii. PEP demand .....	27
viii. Bite prevention .....	27
ix. Essential data, analysis and final report .....	28
x. Improved access to vaccine .....	30
xi. Health economic analysis of data from the project sites .....	31
xii. Preparing to assemble the final project report .....	31
4. Additional information .....	33
5. Future discussions and needs .....	33
Appendix A: List of participants .....	i
Appendix B: Agenda .....	iv
Appendix C: WSPA report to WHO: Animal welfare standards in the Gates Foundation funded rabies projects 2009–2013 .....	vi
Appendix D: Primary animal health-care report for KZN project .....	xiii
Appendix E: Biennium budget for no-cost extension .....	xvi

## Abbreviations and acronyms

ABTC	animal bite treatment centre
BMGF	Bill & Melinda Gates Foundation
CDC	Centres for Disease Control
CHD	Central Health Department
DFA	direct fluorescent antibody test
DoH	Department of Health
GARC	Global Alliance for Rabies Control
dRIT	direct rapid immunohistochemical test
GIS	geographical information systems
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
MoHSW	Ministry of Health and Social Welfare
NARIS	National Rabies Information System
PEP	post-exposure prophylaxis
PLDP	Peer Learning District Programme
PreEP	pre-exposure prophylaxis
RIG	human rabies immunoglobulin
SOPs	standard operating procedures
SPCA	Society for the Prevention of Cruelty to Animals
SSA	special service agreements
WCO	WHO Country Office
WHO	World Health Organization
WRD	World Rabies Day
WSPA	World Society for the Protection of Animals

## **1. Purpose and objectives**

The meeting was opened by the Honourable Deputy Minister for Livestock and Fisheries Development, Dr Benedict Ngalama Ole-Nangoro, who assured support to the objectives of eliminating human and dog rabies in the project sites and subsequently in the United Republic of Tanzania. He acknowledged the importance of the cooperation between the Ministry for Livestock and Fisheries Development and the Ministry of Health and Social Welfare. He thanked the Bill & Melinda Gates Foundation (BMGF) for their generous contribution to the project and to the World Health Organization (WHO) for its support. Dr Rufaro Chatora, WHO Representative for the United Republic of Tanzania, welcomed participants and acknowledged the progress made.

Dr Anastasia Pantelias, Neglected Infectious Diseases Department, Global Health Programme, BMGF, and Dr Bernadette Abela-Ridder, Team Leader, Neglected Zoonotic Diseases, WHO Department for Control of Neglected Tropical Diseases, welcomed participants and outlined the objectives of the 5th meeting of the International Coordinating Group (ICG) of the WHO–BMGF project on eliminating human and dog rabies.

The purpose of the 5th ICG was to review the progress made and coordinate upcoming activities. The project was launched in 2008 but its implementation was delayed; therefore, a no-cost extension was not received until the end of 2015.

The objectives of the meeting were to:

- report and review progress for each project site
- plan activities for the subsequent year
- identify challenges, opportunities and relevant lessons learnt to inform future actions
  - planning the way forward on data collation and analysis for the end-of-project outcome report
  - discussing the transition of projects into wider programmes (national and international).

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 in country offices, regions and at headquarters, and the BMGF representative participated in the meeting.

The meeting was closed by Dr Seif S. Rashid, Deputy Minister for Health and Social Welfare.

## **2. Project reports**

### **i. KwaZulu-Natal**

#### ***Project implementation***

##### **Database development**

The aim of the database, which has been set up within the past 13 months, is to centrally store, manage and analyse data. To date, it has allowed for more efficient analysis of case information and the use of Geographical Information Systems (GIS) software, enabling the accessibility of up-to-date information on demand. A second database has also been created for the Department of Health (DoH) in order to analyse dog bite cases and post-exposure prophylaxis (PEP) administration. The DoH has not been using these data and so the BMGF project is now analysing the health data, starting with vaccine use. Through the implementation and use of these databases, human case information is available and of good quality; accurate information on vaccine costs and distribution is also now available. Currently, information on PEP administrations is being researched with the use of these databases.

##### **Dog population size data collation**

Surveys regarding dog population size have been performed in the region through various methods, including direct observations of marked versus unmarked dogs, household surveys, and the use of official information from national and international authorities and agencies. The current dog population in KwaZulu-Natal (KZN) has been estimated at approximately 1.2 million dogs. The PhD dog ecology study has now been completed and the dog to human ratios are being analysed.

##### **Data collation on animal rabies cases and submissions for diagnosis**

The epidemiological data on animal rabies cases and available sample submissions from the regional and national records have been analysed. The data suggest that surveillance in KZN is of a very high standard – this has been partly achieved through the recent accreditation of the laboratory for controlled disease testing. In 2012 and 2013, 1136 and 699 samples were processed with 27% and 11% showing positive results respectively. This demonstrates a dramatic decline in both the number of samples submitted and the number of positive samples. The decline in the number of positive samples is noteworthy, as this percentage typically remains stable; the decline is attributable to the success of the campaigns. In order to compensate for the reduced number of samples submitted, systems of sample collection and submission are being improved through the supply of transport packaging for veterinarians and field staff.

A second diagnostic laboratory located in Vryheid is being renovated and should be operational by the end of 2013. This laboratory will aid in sample submission through the concept of decentralization.

##### **GIS**

The in-country capacity for GIS was assessed to aid project planning and the presentation of results. The GIS, geographical and topographical data were compiled and have been applied to the surveillance data. Currently, three GIS sections are available to the project site.

### Improved targeted delivery of PEP

The project site aims to significantly improve the delivery of PEP throughout the project area through the achievement of several goals:

1. In the next 3 years, 100% of rabid animal-bite victims reporting to clinics within the study area will receive PEP according to WHO guidelines.
2. In the next 3 years, the number of individuals receiving unnecessary PEP will be reduced by 50%.
3. In the next 5 years, the number of individuals receiving unnecessary PEP will be reduced by 80%.
4. Community awareness regarding methods to prevent rabies exposures and infection will be improved.
5. Monitoring of PEP usage as well as the evaluation of PEP administration will be enhanced.

In order to attain these objectives, several actions have already been taken. For example, a good network of 13 rabies action groups has been established and/or revived across the province. These groups act as a base from which training is launched into the field, and have assisted the development and printing of new educational posters and their distribution.

Rabies vaccine stocks have been increased and there are currently no shortages in KZN. In order to address issues regarding PEP administration and to potentially decrease the amount of PEP used, the 5th dose has been dropped from the vaccination schedule; this action has been incorporated into official policy. Additionally, the intradermal (ID) vaccination route (PEP and pre-exposure prophylaxis (PreEP)) has been rejected by the Medicines Control Council; however, a new effort will be made to alter this decision. The standard operating procedures (SOPs) regarding treatment are widely available and have been agreed upon at a national level, with new booklets and treatment DVDs distributed to more than 400 doctors and nurses. A further 3000 copies are being printed in response to popular demand. Furthermore, training days have been held at centres around the province by the local Centres for Disease Control (CDC), and a toll-free helpline for medics and veterinary services is in place. These contribute to reducing PEP demand and reduced administration. Rabies immunoglobulin (RIG) is available free of charge throughout the province; however, improvements are to improve the efficient use thereof through training. Despite these efforts, 2012 saw a shortage of RIG in response to the national media hype. The only death in KZN in 2013 was due to the unavailability of RIG. A database has also been set up in order to monitor PEP administration and usage in hospitals and clinics.

Unfortunately, achieving the above goals is at risk because of the lack of commitment from the DoH. Despite this, PEP administration in KZN remains at a higher standard compared with other African situations.

### Procurement of dog vaccines and equipment, and establishing systems to monitor their usage

Some challenges arose regarding the procurement of vaccine in late 2012 and 2013. For instance, 500 000 doses of rabies vaccine were received late from Merial, ultimately affecting campaigns for a month. This problem was repeated in 2013 with an even greater impact on the campaigns, despite the loan of extra vaccine (an insufficient amount to fully compensate for the shortage) to the project. In order to combat future shortages, a vaccine bank has been established, and new temperature monitoring systems have been installed to monitor and report changes in temperature at the facility.

New cooler boxes have been purchased for technicians to ensure better cold chain management in the field and all basic equipment is in place, including the procurement of extra catch and control equipment for field technicians. Additionally, improvements have been made to the pole syringes to ensure more humane administration of vaccine to certain dogs.

Lastly, a system of compulsory source documents has been instituted whereby communities endorse work done, ensuring a better official record system.

#### Dog vaccination and dog population management

Several SOPs have been developed by KZN that are being used internationally, for instance the 'Blueprint for rabies control'. Additionally, other such procedures are being developed and improved upon constantly.

Training courses for personnel have been developed, including for 47 members of the Society for the Prevention of Cruelty to Animals (SPCA) and the retraining of staff throughout the province to assist with vaccinations. Additionally, 125 new vaccinators (extension assistants) have been trained and integrated in State veterinary offices.

The project has played an increasing role in creating new clinics at welfare organizations that, through the project's support of both medicines and training, are now serving communities in key areas. A 20 million rand project to sterilize pets in KZN has begun and is achieving good results around KZN.

Steps were taken to build community awareness of the need for dog vaccination as well as for responsible dog ownership. Following the incredible media hype of 2012, there was a dramatic decline in interest towards vaccination, which was measurable by the rate of sample submission. The submission rate declined back to levels prior to the media blitz. In order to compensate for this decline in interest, another large media run was done in July 2013. However, without the dramatic news of deaths of famous people, it did not have much of an effect. For example, senior officials who were interested last year seem uninterested now, which may be a reality of this type of project.

Mass vaccination campaigns were carried out throughout 2012 and 2013, vaccinating a record number of animals (638 392) for the calendar year of 2012. This massive effort has dramatically reduced the number of dog rabies cases from 273 to 80 cases. However, a reduced number of vaccinated animals (approximately 450 000) is expected for 2013 in response to the failure of the DoH's intervention strategy caused by bureaucratic obstacles and vaccination campaigns not being

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