One Health in Action: the prevention and control of rabies in Beijing

Beijing, the capital of China, occupies the geographical area of 16,800 km² and its population has amounted to 30 million. With the acceleration of urbanization, there are still some stray dogs in rural or rural-urban interface areas. There are more than 1 million unregistered dogs in Beijing out of the total dog population of 2 million. Dynamics of stray dogs out of the total dog population might play a role in the transmission of rabies to local residents. Given the high density of human population and frequent interactions between humans and dogs, rabies is now a major public health concern of the city. In recent years, Beijing veterinary authorities have prioritized rabies control in dog population to improve public health and consistently committed to apply the One Health approach in the rabies control program. Beijing Center of Animal Disease Control (ACDC), one of the local veterinary authorities, has endorsed innovative disease control strategies through establishing partnership with various related stakeholders, i.e. private sectors, public schools, and non-governmental organizations (NGOs).

One of the strategies adopted by Beijing ACDC is to improve the traceability and transparency of vaccination of pet dogs. Partnering with private pet clinics and local-level veterinary stations, Beijing ACDC has established 408 vaccination stations citywide, and the public can access the information from all these stations through an online vaccination information system accessible for pet owners. This online platform aims to inform dog owners and encourage them to vaccinate their dogs and do so in a timely manner thereby increasing the vaccination coverage in dog population.

In parallel, Beijing ACDC launches public awareness campaigns on rabies prevention in each locality through engaging multi-stakeholders. For instance, an education activity, named as “talk with small animals – delivering rabies control knowledge to the campus”, was held in Nanmofang primary school in March 2017. During the activity, Nanmofang students got an opportunity to learn about routes of infection, preventive measures and proper emergency measures after dog bites. With knowledge dispersion aid tools, including slides, animated films and Q&A contest, have helped pupils learn how to cultivate harmonious relationships with small animals as well as to prevent and control of rabies. The pupils showed great interest in the activities and took an active part in them. Through such activities, the campaign has increased public awareness. In addition, another activity has focused on public welfare, “a little love and health, you and me”, was jointly organized by Beijing ACDC, Beijing Kennel Association and Royal Canine in April 2017. This activity also improved pet owners’ awareness about rabies vaccination, sterilization, health examination for pet dogs and how to be a responsible pet owner.
Dr Liu Hua, a CFETPV graduate, is engaged in China’s aid to Zimbabwe to support local capacity building on veterinary epidemiology

By dispatching agriculture experts, China has funded a technical cooperation program on agriculture in Zimbabwe. Dr Liu Hua, from Anhui Provincial Centre of Animal Disease Control, the 2nd cohort graduate of the China Field Epidemiology Training Program for Veterinarians (CFETPV), was assigned as a veterinarian to provide with technical supports to Zimbabwe starting early 2015. His mission was to work with local veterinary authorities on capacities development in veterinary epidemiology and laboratory diagnostic services. During his mission in Zimbabwe, Dr Liu has been actively engaged in the epidemiological investigations and emergency responses.

Between May and November 2015, a series of African Swine Fever (ASF) outbreaks occurred in the Mount Darwin area of Zimbabwe and gross mortality of 4,527 pigs was reported in 9 villages during the outbreak period. This has caused a huge economic loss for local farmers, especially for small-farm holders. Dr Liu worked with national and local government veterinarians to conduct the epidemiological investigation and provided recommendations to control the ASF outbreaks. Specifically, he organized the training to train local veterinarians on field sampling, Geographic Information System (GIS) and epidemiological survey.

Another challenge Zimbabwe has faced is Foot-and-Mouth Disease (FMD). Dr Liu helped local colleagues conduct a cross-sectional study in Matabeleland South Province to understand FMD situation in local goats, and also provided technical supports for study design, sampling and diagnosis.

In addition, Dr Liu conducted several training sessions on laboratory diagnostic tests techniques for provincial veterinarians and veterinary students in Zimbabwe’s universities. Dr Liu used participatory approach and various teaching tools, including teaching video and case studies, and these training sessions were very popular among local colleagues and students.

As a flagship program between FAO and the Ministry of Agriculture (MoA) of China, the CFETPV not only aims to support epidemiology capacity development for China, but also encourages graduates to engage in epidemiology capacity development in other developing countries.

Upcoming activity

1. Module 2 of the 4th cohort of the China Field Epidemiology Training Program for Veterinarians (CFETPV) will be held from 3 July to 28 July 2017 in Qingdao.
2. Dr Jia Beibei and Dr Han Zifeng from FAO China ECTAD Office will attend two regional workshops in Bangkok, Thailand from 24 July to 27 July 2017: (1) the Consultation Workshop on Communication and Advocacy on Antimicrobial Resistance (AMR) and Antimicrobial Use (AMU); and (2) the Consultation Workshop on AMR/AMU Policy Review Framework and Stakeholder Engagement for AMR Policy.