

TRAINING FOR FUTURE ONE HEALTH WORKFORCE FOR RESPONDING TO EMERGING INFECTIOUS DISEASES IN COMPANION AND EXOTIC ANIMALS

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In the recent outbreaks of various emerging infectious diseases (EIDs) around the world, there were several types of animals infected with the virulent pathogens. Not only livestock and wildlife but also companion and exotic pets can serve as intermediate hosts resulting in an expansion of the extent of human contacts, which poses a serious threat of new emerging zoonotic pathogens infecting humans. In the past, several events showed that companion and exotic pets have risks in contracting EIDs, such as dogs and cats being infected with H5N1 influenza virus in Thailand, prairie dogs infected with monkey poxvirus in the USA, camels infected with MERS-CoV in Middle-Eastern countries, and dogs suspected to be infected with Ebola virus in the USA and Spain. In order to respond rapidly and effectively to new outbreaks of zoonotic EIDs, well-trained workers and a new generation of workforce must be in place. The workforces tackling human, animal and environmental health issues should also have adequate training and skills in handling suspected/infected companion and exotic animals (both legal and confiscated).

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Objective 2: Education & Pre-Service Training of One Health Students (Future Workforce)

In 2016, we prepared recommendations and provided training for the current One Health workforce in responding to EID in suspected/infected companion and exotic animals, and in 2017, the training was provided to One Health future workforce (university students) in preparing them to become a competent workforce able to handle EIDs suspected/infected companion and exotic animal using the recommendations developed from previous workshop, to respond effectively to future threats, to be aware of biosafety concerns, and how to form networks to assist government ministries in training their respective future One Health workforce. The training program also provided an opportunity for participants to share their experience and discuss future collaborations with One Health activities. Participants were university students and newly-graduated veterinarians from THOHUN member institutions (Chiang Mai, Kasetsart, Mahanakorn University of Technology and Mahidol). Teaching faculty was composed of experts from the current One Health Monitoring and Surveillance Center for Zoonotic Diseases in Wildlife and Exotic Animals (MoZWE) workforce, the FAO Reference Center for Zoonotic and Wildlife Diseases, the Faculty of Veterinary Science, Mahidol University, and collaborating organizations (Department of Livestock Development, Department of Diseases Control, Ministry of Agriculture and Cooperatives and Faculty of Tropical Medicine, Mahidol University).

The four-day training program consisted of lectures and practical demonstrations (Fig) on (i) importance of EIDs in companion animal and exotic animals, (ii) soft skills for One Health strategy, (iii) communication pathways to disease control authority and related law, (iv) disease investigation and rapid response team setting, and (v) recommendations for recognizing and responding to EIDs in suspected/infected companion and exotic animals. Content of recommendation manual consisted of (1) Scope and definition, (2) Characteristics of suspected EID infected animals, (3) Information on risk assessment, (4) Sample collection, packaging and transportation, (5) Animal isolation and quarantine, (6) Criteria for release of quarantined animals, (7) Carcass management and waste decontamination, (8) PPE for use in field work, (9) Risk communications on EIDs and response, and (10) Practicals (PPE don and doff, animal transportation and sample collection, animal health monitoring, care and sample collection during quarantine, sample packaging and transportation, spillover management, carcass management and waste decontamination, and scenario-based practice of response to animals

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Fig – Typical training sessions during the four-day training on Responding to Emerging Infectious Diseases in Suspected/Infected Companion and Exotic Animals.

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infected with Ebola virus, MERS-CoV or other highly pathogenic influenza virus).

Data from a survey of participants indicated successful outcomes of the training program: good overall rating of the training, information presented was new to them, informative instructors, useful teaching materials, helpful clarification of their misunderstandings of the One Health strategy, well managed logistics, and intention to implement knowledge acquired from the training program in their workplace. Comments and recommendations from the participants were that (a) awareness of EIDS importance should be promoted among to the practitioners and pet owners, (b) this knowledge should be included in the veterinary curriculum, (c) participants should have opportunity to work with several kinds of the animals, and (d) need to promote a new generation of One Health Workforce.