



# Stewardship of health security: The challenges of applying the One Health approach

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## Summary

Experience with the control of epidemics, notably the 2004 outbreaks of avian influenza, has demonstrated that a “One Health approach,” that recognizes that human, animal, and environmental health are interdependent, is the most effective way of dealing with threats from emerging infectious diseases (EID). However, introducing and applying a One Health approach is challenging for many countries. One of the key challenges relates to stewardship.

The evolution of the strategies and policies used to introduce and adopt the One Health approach in the detection and response to EID over the period 2005 to 2017 is described at global level and in country case studies of Thailand and Indonesia. Both countries experienced significant outbreaks of H5N1 avian influenza from 2004 and have sought to adopt the One Health approach in their response strategies. The challenges for stewardship of health systems in introducing a One Health approach are described, and key lessons identified in regard to national level agency coordination, engagement of the broader civil society outside government, and developing a reliable, credible, and impartial decision-making process. The concept of stewardship provides valuable insights for policymakers on how to incorporate a One Health approach into their EID response systems.

## KEYWORDS

emerging infectious diseases, Indonesia, One Health, stewardship, Thailand

## 1 | INTRODUCTION

Emerging infectious diseases (EID) and the capacity of health systems to detect and respond to outbreaks of infectious disease have been recognized as a key challenge for health systems (Frieden et al., 2014). This has led to increasing interest in health security and the responsibility of governments to “protect the health and safety of its people,” through the elements of prevention, early detection, and timely and effective response (Frieden et al., 2014).

Experience of the Ebola outbreak in West Africa in 2014–2016 demonstrated the risks from the emergence of new infectious diseases that frequently arise from the interaction of humans, animals, and the environment. Jacobsen et al. (2016) in their review of the lessons from the Ebola outbreak identified the need to “increase zoonotic surveillance activities, implement more effective ecological health

interventions, and to ... support medical and public health systems to improve local and international responses to epidemics” (p. 200).

A One Health approach is increasingly considered to be the most effective way of managing and addressing EID threats (Degeling et al., 2015; Vandersmissen & Welburn, 2014). One Health is grounded in the recognition that human, animal, and environmental health are interdependent, that animal species provide a shared reservoir for pathogen exchange and spread, and that many EIDs are driven by varied and dynamic human–animal interactions (Degeling et al., 2015; Smith, de Hann, Larson, Robles, & Sperling, 2010).

However, implementing a One Health approach requires coordination and integration of programmes and activities across three sectors—human health, animal health, and the environment—which are traditionally managed separately by different government agencies. It also requires a decision-making approach that extends beyond the