

## Sero-surveillance of Avian influenza A (H7N9) in high risk provinces of Lao PDR

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### ABSTRACT

Since March 2013, the human case of avian influenza A (H7N9) has been detected in P.R. China. The difference of influenza A (H7N9) from avian influenza A (H5N1) that affected both human and poultry health in the country is low pathogenic apparently healthy poultry but high pathogenic for human health. Although, Lao PDR has not yet been affected by this new influenza subtype however, Lao PDR shares border with P.R. China in the North and as a result the risk of transmission of the virus across the border may be high. In order to ensure the effective and rapid action to prevent the spread of infection, the preliminary sero-surveillance has been conducted to determine whether the avian influenza A (H7N9) may spread across the border and circulate in the poultry population in the country. In addition, the preliminary sero-surveillance has also aimed at identifying the hot spot for further conducting virological surveillance. Based on the information obtained from previous study on the poultry value chain, three high risk provinces that share border with P.R. China were selected for the surveillance. The sero-surveillance has been conducted from January to March 2014 and a total of 657 sera have been collected from apparently healthy chicken from backyard rearing and farm. The screening test of the sera through the use of ELISA technique has been performed at the National Animal Health Laboratory. The sero-conversion rate for influenza A accounts approximately 20% (129/657 serum samples). The result of this preliminary sero-surveillance indicated the circulation of avian influenza A virus in the poultry population in the identified high risk areas. Further tests are required to determine the presence of H7 and N9 in the FluA ELISA positive tested sera. In addition, the results also become significant baseline information for further conducting virological surveillance. Continue keeping vigilance for avian influenza A (H7N9) is of great benefit in preventing the virus incursion.

Key word: Avian influenza A(H7N9), poultry from backyard and farm, serum sample, screening test, ELISA test technique.