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ISVEE 14
Mérida, Yucatán, México 2015

Presentation Abstract

Presentation: 213 - Complementary interest of epidemiology and sociology for investigating epidemiological risk factors - a case study on avian influenza H5N1 in Thailand

Location: Ek-Balam

Pres. Time: Thursday, Nov 05, 2015, 10:45 AM -11:00 AM

Category: +B6. Other topics

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Abstract: To identify risk factors, epidemiology requires variables that are accessible and consistently measured. This may reduce the choice and conduce to use proxy, making results interpretation difficult due to potential hidden confounders. We hypothesize that social sciences would contribute to improve the relevance of epidemiological results.

Following the Highly Pathogenic Avian Influenza (HPAI) H5N1 epidemics in Thailand in 2004-2005, we implemented epidemiological studies to analyze H5N1 maintenance in backyard poultry. A spatial analysis was conducted at the country level and a case-control study in one province. Results pointed out a higher risk of HPAI spread in the surrounding of major cities, as well as trade-related risk factors. These results called for a better understanding of the processes involved in the field.

In order to investigate further these outputs, we implemented a qualitative sociological study in the province of Phitsanulok. Using a value chain analysis, we characterized everyone involved in the local poultry business, from farmers to market retailers, analyzed how these actors were organized and their strategies when facing HPAI.

These results were of great interest for the local veterinary services, as they deciphered the organization of an economic activity involved in HPAI H5N1 spread, but which was not reached by prevention and control measures. Indeed, we found that traditional poultry marketing chains are organized through

informal relations. Traders do not have a clearly identifiable workplace, and are unknown from the authorities. Moreover, we found that the trade of sick chickens, a risky practice regarding HPAI, was justified by local actors by its low zoonotic risk and the need to limit financial losses.

This qualitative approach allowed investigating the practices, reasons, and beliefs which were behind the risk factors quantified in epidemiological studies. More generally, we can hypothesize that the complementarity between epidemiology and social sciences could be extended to various situations. In other circumstances, sociology might also be used at a first stage, to better select the variables or proxies of interest.