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Does control of animal infectious risks offer a new international perspective?

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IMPACT OF MASS VACCINATION CAMPAIGN AGAINST H5N1 IN VIETNAM

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ABSTRACT

Highly Pathogenic Avian Influenza caused by H5N1 virus has become endemic in Vietnam and millions of birds have been culled within the control program with large economical and sociological impacts. Since the end of the first vaccination campaign (Nov-Dec 2005) no new outbreaks in domestic poultry have been reported. Cases of virus shedding within domestic ducks were identified in Aug 2006 by routine surveillance program which confirms the circulation of the virus. The aim of this study was to measure the cost-benefit impact of this vaccination program. We used both descriptive and analytical epidemiology to explore and analyse economical and serological data from the field. A series of questionnaires were designed and farmers were randomly selected using a stratified sampling method based on poultry density and production systems. A stochastic simulation model was set up to account for the total uncertainty in both the direct and indirect control costs along with the financial losses estimates. The vaccinated population might be preventing the occurrence of new outbreaks with a better cost-benefit ratio and less social implications than stamping out. These findings should have wider implication in terms of decision making for HPAI control within infected developing countries with similar production systems.

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