



A socio-psychological investigation into limitations and incentives concerning reporting a clinically suspect situation aimed at improving early detection of classical swine fever outbreaks

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ABSTRACT

The aim of this study was to identify limitations and incentives in reporting clinically suspect situations, possibly caused by classical swine fever (CSF), to veterinary authorities with the ultimate aim to facilitate early detection of CSF outbreaks. Focus group sessions were held with policy makers from the veterinary authorities, and representatives of veterinary practitioners and pig farmer unions. Personal interviews with a small group of pig farmers and practitioners were held to check limitations raised and solutions proposed during the focus group sessions. An electronic questionnaire was mailed to pig farmers and practitioners to investigate perceptions and attitudes with respect to clinically suspect situations possibly caused by CSF. After triangulating the responses of veterinary authorities, veterinary practitioners and farmers, six themes emerged across all groups: (1) lack of knowledge on the early signs of CSF; (2) guilt, shame and prejudice; (3) negative opinion on control measures; (4) dissatisfaction with post-reporting procedures; (5) lack of trust in government bodies; (6) uncertainty and lack of transparency of reporting procedures.

The following solutions to facilitate early detection of CSF were put forward: (a) development of a clinical decision-support system for vets and farmers, in order to get faster diagnosis and detection of CSF; (b) possibility to submit blood samples directly to the reference laboratory to exclude CSF in a clinical situation with non-specific clinical signs, without isolation of the farm and free of charge for the individual farmer; (c) decrease social and economic consequences of reporting CSF, for example by improving the public opinion on first reports; (d) better schooling of veterinary officers to deal with emotions and insecurity of farmers in the process after reporting; (e) better communication of rules and regulations, where to report, what will happen next; (f) up-to-date website with information and visual material of the clinical signs of CSF.

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1. Introduction

Outbreaks of notifiable contagious animal diseases (NADs), such as foot-and-mouth disease (FMD), avian influenza (AI) and classical swine fever (CSF), have large societal and personal consequences. Livestock farmers and

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veterinary practitioners are at the frontline of surveillance, and hence it is widely recognized that they play a key role in detecting first occurrences of NADs. In theory, notification of contagious livestock diseases by farmers to the veterinary authorities can be an effective early detection tool. Therefore, formal rules for reporting clinically suspect situations in livestock by farmers and veterinary practitioners are laid down in national and international legislation all over the world. In the Netherlands it all started with the Dutch Cattle Act, which was officially put into force in the year 1870 (Wester, 1939). It consisted of a list of contagious diseases like rinderpest, anthrax, rabies and FMD. Furthermore, it contained regulations for reporting of affected and suspect livestock to the mayor of the municipality by farmers; obligatory reporting by veterinary practitioners; isolation and prohibition of transport of sick and suspect livestock, etc. In essence, not much has changed with respect to the reporting and eradication process of NADs since those early days. Yet, we cannot conclude that the regulations produce a desired effect, because in spite of strict rules and regulations, experience has shown that the time between the first clinical appearance of a NAD and the actual reporting of farmers of clinically suspect situations to the veterinary authorities is often too long, resulting in extensive spread of the disease to other farms (Capua and Marangon, 2000; CFIA, 2004; Elbers et al., 1999, 2004; Gibbens et al., 2001).

Investigation of the scarce empirical evidence to date on issues concerning delayed reporting and underreporting of clinically suspect situations shows that the problem thus far has mostly been approached as a veterinary-technical problem (Elbers et al., 2006). If livestock farmers and veterinary practitioners are familiar with the clinical signs of a NAD, they are in the best position to detect NAD suspects. However, often these diseases have not been in the country for many years or sometimes even decades, and farmers and some veterinary practitioners do not recognize the associated clinical signs any more (Elbers et al., 2002). Furthermore, many endemic animal diseases cause clinical signs similar to NADs. After a considerable period of freedom from NADs in a country, farmers and vets will have a tendency to think that clinical signs observed are caused by an endemic disease and not by a NAD. As a result, farmers fail to recognize the need to report these early clinical signs of NADs, which implies that the time needed for ultimate detection of a new infection would provide time for the disease agent to spread. For instance, many case reports indicated CSF was suspected only after prolonged medication had failed to produce desired results (Young, 1970; Elbers et al., 1999). Laboratory confirmation would be necessary in order to exclude NADs being the cause of the clinical problems observed. However, laboratory confirmation is in many national regulations only allowed after reporting to the veterinary authorities. Hence, asking for laboratory confirmation may lead to control measures, such as isolation of the farm, until the results of diagnostic testing are available. Moreover, isolation of the farm, especially if this happens for several days, may have negative economic consequences for the farmer.

Only recently, socio-psychological factors have become the focus of interest as possible predictors of delayed

reporting of clinically suspect situations by farmers and veterinary practitioners. Results of a qualitative study among Australian sheep farmers on implementing biosecurity measures (Palmer et al., 2007) showed that one of the basic issues that may underlie the problem of not reporting clinically suspect situations to either the local agricultural department office or even a veterinarian may be a low level of trust in the government as well as agricultural extension agents. This lack of trust in government bodies also appeared as an important factor why farmers do not trust government information on improving biosecurity measures (Heffernan et al., 2008). This lack of trust is based on negative personal experiences with the authorities, such as the way the government had responded to cases of infectious diseases in the past. A study into Norwegian sheep farmers' showing vigilance in reporting scrapie-associated clinical signs (Hopp et al., 2007), indicated that reporting was dependent on both economic and non-economic values. Among the economic values considered important by farmers were being offered free examination of NAD suspects. Knowledge of disease-associated clinical signs by farmers and worries about blaming oneself for experiencing the disease ranked high among the non-economic values.

Increasing the reporting rate and shortening the delay time for reporting is crucial, but it is complicated by the fact that little is currently known about the way farmers behave in possible clinically suspect situations, more specifically, their perception and appraisal of the situation, the decision process that follows, and the intentions and behaviors that flow from these perceptions and decisions.

The purpose of our study was to identify limitations and incentives in reporting clinically suspect situations possibly caused by CSF as perceived by veterinary authorities, pig farmers and veterinary practitioners, with the ultimate aim of improving early detection of CSF outbreaks.

2. Methods

To learn more about why farmers decide to report or not to report clinically suspect situations of NADs, our study combined a qualitative and a quantitative research design. For the qualitative part of our study, focus group sessions were held with a group of policy makers of the Ministry of Agriculture (4 persons) that were among others responsible for animal health policy and regulation; the Food and Consumer Protection Authority (2 persons from the head office responsible for disease eradication) that is responsible for the actual emergency response when a suspicion is reported or an outbreak is detected; board members of several livestock sections from the Royal Dutch Veterinary Association (6 persons: livestock practitioners themselves, but with an interest in veterinary policy making) and with board members of all three pig farmer unions present in the Netherlands (3 persons, also pig farmers themselves) to detect patterns and trends. Subsequently, personal in-depth interviews with 12 pig farmers (randomly selected from a registry of all Dutch pig farmers) and 5 veterinary practitioners (with pig farms in their practice, selected to be more or less representative for different geographical

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