



FMD and CSF Coordination Action



Report on the current status of Laboratory Contingency Planning for Classical Swine Fever

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A global report on the current status of laboratory contingency planning for Classical swine fever (CSF)

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Abstract

One of the objectives of Workpackage 6 “Laboratory preparedness” of the Coordination Action (CA) for Foot-and Mouth-Disease (FMD) and Classical swine fever (CSF) was to determine the current status of laboratory contingency planning for FMD and CSF. To this means (reference) laboratories for CSF world wide were contacted per email and asked for information on their laboratory contingency planning and laboratory exercises.

This report depicts the results and reflects upon the current status of laboratory contingency planning for CSF.

Introduction

In order to adequately and efficiently handle outbreaks of contagious diseases such as CSF, FMD or highly pathogenic Avian Influenza (HPAI) competent authorities as well as laboratories involved have to be well prepared.

For countries belonging to the European Union Article 22 of Council Directive 2001/89/EC on Community measures for the control of CSF requests, that each Member State shall draw up a contingency plan specifying the national measures to be implemented in the event of an outbreak of CSF. Whereas no explicit reference is made in this article to laboratories, Annex VII of the document, providing information on criteria and requirements relating to contingency plans, states that provisions must be made for appropriate resources to be available to ensure a rapid and effective campaign, including laboratory staff, equipment and infrastructure. In order to be able to fulfil these requirements laboratories need to be in possession of a functioning contingency plan.

A laboratory contingency plan (LCP) shall therefore include a practical description of all the procedures, instructions and measures to be employed in case of an outbreak of CSF. Furthermore, it should depict the chain of command and make sure that the necessary facilities, financial and material resources as well as well trained personnel are available and guaranteed. It is essential that such a plan is established already during “peace-time” and is reviewed periodically to assure its practicability. A means to test the functionality and practicability of the LCP is to perform a (real-time) laboratory exercise.

The large epidemics of FMD and CSF that have occurred in Europe in the last decade have illustrated the need for better contingency plans including also laboratory preparedness. Increased trade in animals and animal products has considerably enhanced the risk of (re-) introduction of infectious diseases such as FMD and CSF into countries declared free of these diseases. Due to the complete ban of vaccination against CSF in Europe and in many other countries (e.g. Australia, Canada, U.S.A.) viruses will encounter a totally naive population, so that the danger of rapid spreading of the disease is enhanced. Densely populated livestock areas pose an additional risk. Rapid and reliable diagnosis of CSF is therefore of utmost importance in order to detect an outbreak fast and efficiently and to eradicate the disease effectively. Recent outbreaks of CSF (Germany, 2006) and experiences from the past (e.g. Germany and The Netherlands, 1997/1998 ; Spain, 2001) show that laboratories have to be prepared to test several thousands of samples per week. In addition, many of these tests will have to be performed under enormous time pressure. However, during peace-time routine testing for CSF is limited and the diagnostic and logistic capacities of the laboratories are (most) often not adapted to handling vast numbers of samples. To meet the sudden demand for rapid mass testing in a contingency, laboratories have to be well prepared in advance.

By now, many laboratories have a quality management system put in place and are accredited (or in the process of being so) according to ISO/IEC 17025. In parallel, many efforts are currently undertaken to develop laboratory contingency plans (LCPs).

Thus, the first aim of this workpackage was to determine the current status of laboratory contingency planning for CSF, which is described in this report.

Material and Methods

In order to assess the current status of laboratory contingency planning for CSF, reference laboratories world-wide were contacted per email. Initially, the contact persons were asked if their laboratory was in possession of a LCP. Those laboratories that had given a positive reply were asked to kindly provide their contingency plan to the authors. If necessary, reports were translated into English, so that language barriers could be overcome. All submitted reports were afterwards analysed for common features and structures.

In addition, laboratories were asked if they had performed an exercise on laboratory preparedness. Those, that had responded positively, were asked for further information.

All 25 European NRLs and 15 additional CSF laboratories world-wide (40 laboratories from 36 countries) served as core group for this poll as the workpackage leader and the CRL had already established good contacts to these laboratories and are collaborating closely.

In cooperation with workpackage one of the CA further diagnostic laboratories for CSF world-wide were contacted

Results / Summary

Twenty-three of the 40 laboratories in the core group replied to the query, whereas no reply at all was retrieved from any of the laboratories additionally questioned.

Whereas seven laboratories possessed a LCP and the LCPs of five laboratories were currently under construction, ten laboratories did not have a LCP put in place. One national reference laboratory replied that it did not have a LCP, because it did not perform routine diagnosis of CSF and thus no high numbers of samples were to be expected in case of a CSF contingency. In this case, regional laboratories performed routine diagnosis of CSF. One answer remained unclear, because the laboratory never explicitly answered to the question, whether a LCP was put in place or not.

From the seven laboratories, which were in possession of a LCP, six plans were retrieved and could be used for further analyses.

Discussion

The results of this poll clearly show that there is still a great need to improve laboratory contingency planning. It is assumed that those laboratories that did not respond to the questions, although they were contacted at least twice, were not in possession of a LCP. This means, that of the 40 laboratories of the core group, which all belong to either the European Union or to other highly developed, only 30 % have already established such a LCP.

Although laboratories were assured that results would be treated anonymously and would not be passed on to thirds, it might be speculated that some laboratories nevertheless feared negative consequences if they confessed not to have a LCP. Four out of 19 laboratories had performed real time exercises to test the national system. However, during our work and presentations on real time exercises we had several requests on how to perform a real-time exercise.

Outlook

From the LCPs collected in this study and additional material available in literature and in the world wide web a laboratory contingency planning manual for CSF will be established by late spring 2007. Emphasis will be put on the experience and recommendations of experts from those laboratories that have already successfully prepared LCPs.

In addition, a publication on “Real-time Laboratory Exercises – Experiences from two National Laboratories for Classical Swine Fever” is under preparation, which will be submitted for publication in December 2006. This publication describes the experiences of two national reference laboratories for CSF with such exercises. Pitfalls and shortcomings that were encountered during the laboratory drills are depicted and lessons learnt are analysed. The publication underlines that the exercise is not the same in all countries, as it is a test of the present national situation in the country which determines the number of samples to be tested and the tests to include. Thus, a general guideline for planning and conducting “real-time” laboratory exercises is generated, which can then be used by other laboratories.