



Science Advisory Council

SAC Epidemic Diseases sub-group

Summary of second meeting

8th June 2004, 12 noon-4 pm

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Confidentiality status: for information

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Attendees

Jeffrey Waage (*Chair*)
Roy Anderson
Philip Lowe
Mark Woolhouse
Roger Eddy
Matt Keeling
Laura Green
Jeremy Worth
Tim Bradshaw (*Secretariat*)

Apologies from

David Black
Jo Wallace (*Secretariat*)

The sub-group was joined by a number of senior Defra experts:

Fred Landeg	Veterinary Exotic Diseases Division
Ann Waters	State Veterinary Service
John Wilesmith	Animal Health and Welfare Directorate General
Simon Hewitt	Animal Movements and Exotic Diseases Division
Lance Boxall	Defra Communications Directorate
Gary Clarke	Defra Communications Directorate
David Mouat	Veterinary Exotic Diseases Division

INTRODUCTION

1. Attendees were welcomed to the second meeting of the SAC Epidemic Diseases sub-group considering the Foot and Mouth Disease contingency plan.
2. The meeting covered three main topics:
 - Follow-up of general issues identified in the first meeting
 - Vaccination issues
 - Communication issues

GENERAL ISSUES IDENTIFIED IN FIRST MEETING

Active prevention through biosecurity

3. Members noted that biosecurity was an active issue for pig and poultry farmers, in particular where stock were reared indoors. However, biosecurity was not seen as an active issue of concern for cattle and sheep farmers. The Defra view was that farmers keeping animals had a fundamental responsibility for their health—it was part of the ‘partnership’ involved in animal rearing—and good biosecurity was an element of this.
4. Members agreed that more effort was needed to promote best practice. Simply admonishing farmers over their biosecurity/animal welfare ‘obligations’ would not be successful. More needed to be known about what farmers could and would do in practice to improve biosecurity and why those who didn’t already adopt good biosecurity procedures acted the way they did.
5. It was clear that maintaining ‘disease free without vaccination’ status was a public good (similar to environmental protection), the value of which exceeded the value to individual farmers. The economic aspects of this needed further consideration as it appeared that the cost of this public good was currently only being met by the farmers who decided to take appropriate action.
6. How to inform farmers about the need for biosecurity in non-outbreak times should also be given further consideration by Defra.

Standstill policies

7. It was reported that the 6 day movement ban in non-outbreak times was a compromise solution, based on commercial issues. In particular, there had been considerable pressure from the sheep industry. The system in Scotland was different— a 13 day quarantine period is imposed after purchasing animals.

8. There was concern from members that there was little scientific evidence for the 6 day ban. If the aim was to help prevent the spread of disease then greater levels of precaution would be more appropriate.

Pen-side testing

9. Members debated the value of pen side testing and the danger of introducing further levels of confusion with false positives /negatives. Good data on test sensitivity was required. The effectiveness of tests needed to be sufficiently high as to leave little chance for doubt.
10. Pen side tests should only be used as an *aid* to diagnosis by a vet in the field, not as a *substitute* to clinical diagnosis.
11. Pen side tests for sheep could be of significant value, based on the difficulty of confirming cases in 2001. Fred Landeg noted that policy now would be to 'lock down' a sheep farm where a vet could not confirm on clinical grounds and wait for a full laboratory test result.
12. PCR testing in a lab could identify FMD before clinical signs appeared. Members suggested that PCR testing for FMD could be introduced in the laboratories run by milk buyers and that milk samples could be screened on a daily basis.
13. An offer was made for interested sub-group members to visit IAH Pirbright where PCR testing is conducted.

Action: Members to contact secretariat if you would like to follow this up.

Data gathering

14. Members again highlighted the importance of using technology to gather, distribute and analyse data and to do this as close to real time as possible. Although it appeared that systems would be better than in 2001 there was still concern from members about the extent to which this would be done. This was critical for policy decisions to be made rapidly and to reduce the levels of uncertainty around those decisions.

Defra's policy priorities

15. Fred Landeg stated that Defra's first priority was prevention, followed by early detection. In event of an outbreak the policy was to stop virus production and to prevent its spread.
16. Members raised the point again about needing to know what the Department's priorities were as this would influence the advice that could be given: different objectives were likely to require different scientific advice. Potential objectives of control could be:
 - Minimum number of cases (farms affected)
 - Minimum number of animals killed
 - Shortest duration of epidemic

- Minimum cost (political? direct financial? wider economic? etc.)
- Shortest duration to exit point
- Some other factor

17. There was considerable discussion as members identified conflicts between these policy options. For example: a shortest duration option might lead to more animal deaths; vaccination might increase the duration of an epidemic depending on vaccine effectiveness and strategy used, vaccination also led to a lifetime control requirement on vaccinated animals. The impact on the wider rural economy of these options was also critical.
18. Members agreed that government must answer the sub-group's question on priorities. This was identified as a key issue to raise in the final report.

The plan overall

19. Members asked for a breakdown of where the new contingency plan differed from that used in the 2001 outbreak. It appeared that the plan was almost as before but that mechanisms had now been put in place to make it run quicker and slicker than before. As many players as possible would be contacted on Day 1 and resources would be in place to implement whatever policy was agreed.
20. Members were concerned about how this could be done if Defra's control priorities were not known in advance. A number of different scenarios must be planned for to help build a more robust strategy.

VACCINATION ISSUES

21. Ann Waters reported that on day 5 of an outbreak Defra would have up to 150 three-person vaccination teams available. Each team could vaccinate up to a total of 250 cattle a day, spread over two or possibly three farms (depending on distance). 50 teams could vaccinate 12,500 cattle a day, 150 teams could vaccinate 37,500 cattle a day.
22. Modelling by Matt Keeling showed that to reduce the number of cases significantly in a large outbreak would require 26,000 doses of vaccine to be delivered per day if 3km vaccination rings were used and 100,000 doses a day with 10km rings, requiring a huge logistical effort. Also, the supply of vaccine would most likely run out within 10 days of a large outbreak and mass vaccination action (depending on stocks available and strategy used).
23. To have a significant impact, modelling indicated that a significant vaccination effort (e.g. more than the minimum suggested in the plan) would be required.
24. Options for involving Local Veterinary Inspectors who could recruit significant numbers of lay vaccinators should be considered seriously (as proposed in the Royal society report). This would have a major impact on the speed at which vaccination could be conducted and the time taken to bring an outbreak under

control. Defra experts flagged up concerns over costs and logistics of managing this sort of distributed effort and the need to maintain auditable vaccination trails.

25. Members agreed that the policy on vaccination must be underpinned by a detailed set of possible scenarios to establish when and to what extent it would be useful. The models should also factor in variable such as:
- vaccine efficacy—quantitative clinical data based on experimental studies are required;
 - the effect of imperfect virus-vaccine matches;
 - possible delays in distributing vaccine and the impact if vaccination could be started earlier;
 - the types of animal to be vaccinated etc.
26. It was suggested that a group be formed to identify scenarios and parameters that could then be run through the models.

COMMUNICATION ISSUES

27. Philip Lowe noted that major costs in 2001 were to tourism and the rural economy. Communications on risk etc. clearly influenced public behaviour. By and large they stayed away from the countryside and that had significant knock-on effects. Future strategy on communications should include differentiated clear messages to different audiences. There needs to be a systematic analysis of risk so that correct behaviour proportional to risk can be communicated effectively.
28. Jeremy Worth reported on surveys done for the Countryside Agency demonstrating an underlying reservoir of public good will towards the farming community. Communications in 2001 which were interpreted as 'the countryside is closed' kept people away. However it was almost impossible to get across the opposite message about the countryside being re-open for business again.
29. A full analysis of public behaviour in response to intended and unintended communications in the 2001 outbreak, and the knock-on effects of this behaviour, would be useful in helping to shape future communications and understand likely responses.
30. Members recommended that Defra produce some clear explanatory notes for the public on what the policy would be in the event of another outbreak and what it would mean for them in terms of access to rural areas etc. This should be done and publicised up front alongside the contingency plan. Where the public was involved, good communications were a better aid to disease management strategy than regulations.
31. Engagement of the public, farming and veterinary communities was critical—all needed to be engaged, kept engaged and be given appropriate

advice/information. Engaging the veterinary community should be the highest priority and members welcomed the steps that were already being taken by Defra.

CLOSE

32. Defra staff were thanked warmly for their participation and in particular for their openness in the discussions.

33. Members were asked to e-mail key issues to the secretariat in bullet point form focusing on where the contingency plan could be improved. These comments and comments made in the two meetings would then be drafted into an initial paper by the secretariat for further discussion before being passed onto the SAC.

Action: Members to send comments to Tim Bradshaw as soon as possible. It is hoped to circulate a draft paper for comment on Thursday/ Friday (tim.bradshaw@defra.gsi.gov.uk and cc. to timb@britishlibrary.net).

SAC Secretary