



## PROVIDING CURRENT AWARENESS AND INFORMATION SUPPORT SERVICES DURING A NATIONAL CRISIS: THE ROLE OF THE PIRBRIGHT LIBRARY DURING THE OUTBREAK OF FOOT-AND-MOUTH DISEASE IN THE UK 2001-2

**Sheila Shrigley**

Library, Institute for Animal Health Pirbright Laboratory, Ash Road, Pirbright, Woking, Surrey GU24 0NF, UK  
E-mail: sheila.shrigley@bbsrc.ac.uk

**ABSTRACT:** *The Institute for Animal Health Pirbright Laboratory is a centre of excellence for foot-and-mouth disease (FMD) research and houses the World Reference Laboratory. Most scientific activities take place in secure bio-containment, and a challenge for the library is to provide access to information retrieval sources for the scientist at the bench. In February 2001 a case of FMD was confirmed in the UK: the resultant outbreak spread to most of the country and lasted until September. The UK was finally declared FMD free in January 2002 by which time more than 2,000 premises had been infected and 6 million animals slaughtered. Conservative costs were estimated at £3 billion for the public and £5 billion for the private sectors.*

*This paper describes the valued support which the library gave to all the Laboratory's activities during this outbreak and discusses the problems in locating resources and maintaining an up-to-date information service for clients working under difficult conditions. For many years an in-house database relevant to research on FMD and many other animal viruses exotic to the UK has been maintained. This has a web-based interface and is used to compile an electronic selective dissemination of information (SDI) current awareness service. It contains bibliographic records for journal articles, monographs, book chapters, conference proceedings and abstracts, reports and ephemeral items. It was an invaluable tool in enabling veterinarians, scientists and other staff to have instant access to urgently required papers and reports and was used in the preparation of responses to questions raised by the many official enquiries into the outbreak.*

*The lessons learned and the preparation of contingency plans for any future exotic disease outbreak are also outlined*

### **Background**

The Institute for Animal Health (IAH) is a research institute under the umbrella of the Biotechnology and Biological Sciences Research Council, one of the UK's national bodies charged with driving basic key research in specific areas. The IAH mission is 'to deliver high quality, fundamental, strategic and applied science into infectious animal diseases and from that knowledge, to advance veterinary and medical science, the sustainability of livestock farming, improve animal welfare, safeguard the supply and safety of food and protect the public health and the environment'. Pirbright Laboratory is one of three separate laboratories which make up the Institute and houses the World Reference Laboratories for Foot and Mouth Disease (FMD) and other OIE List A diseases and, until spring 2004, the International Vaccine Bank for FMD. Pirbright scientists are at the forefront of research into many aspects of these viral diseases.

### **Library**

The Library service, staffed by one professional and one paraprofessional, is an integral part of the research process, providing access to world literature through its own collection, provision of databases and other resources. Because most of the scientific staff are working in a biosafety containment area, they do not have convenient access to the facilities. To meet their information needs the service has always been proactive.

### **Database + current awareness service**

An in-house database on the viruses (and their

related families) under research at Pirbright has been maintained since the 1960s and is used to provide an electronic SDI service. Currently, about 500 references per month are added to the database, which contains about 150,000 records for journal articles, monographs, book chapters, conference papers and abstracts and some ephemeral material. References are added retrospectively; the earliest, a Latin description of FMD, is dated 1546 (Fracastorius, 1546). The database is maintained on BRS/Search software and is searchable on the IAH intranet using NetAnswer.

### **FMD outbreak 2001**

#### **Background**

There was a major outbreak of foot-and-mouth disease in the UK in 2001. The first case was confirmed in February, by which time 57 premises had already been infected. The last case was confirmed in September that year, and the UK was given disease-free status in January 2002. The progress of the outbreak and the steps taken to control it had a high media profile (Coghlan, 2001; Woolhouse *et al.*, 2001). It led to an increased awareness of farming practices and related animal welfare and meat production issues among the general public. It had a major impact on various aspects of life: the General Election, due in May, was postponed; the countryside was "closed", with a seriously adverse effect on tourism and local communities. The government's handling of the crisis was subject to criticism from many quarters, leading to a decision by the Prime Minister to "take charge". Some of the political fallout took months to settle (Taylor, 2003; Winter, 2003). The estimated cost to the economy was £3

billion to the public sector and £5 billion to the private sector (Thompson *et al.*, 2002).

### **Role of IAH Pirbright Laboratory**

The effect on life at Pirbright Laboratory was immediate and dramatic. As the UK's FMD diagnostic resource, staff had to deal with over a million serological samples by the end of the outbreak. To provide 24/7 cover for this, additional help was drafted in. Many were volunteers from other laboratories who needed training and supervision by already busy group leaders. On occasions the number of staff working in the Restricted Area rose from the normal complement of around 120 to a peak of 207. The average workload of 400 samples per week peaked to 70,000.

Because the UK was previously a recognised FMD-free zone there was a wide-ranging debate about whether or not vaccination should be used as a control measure. The International Vaccine Bank prepared half a million doses in response to a request from Government, but eventually a decision was made not to vaccinate.

From the onset of the outbreak there was an influx of enquiries from veterinarians, farmers, government departments, the media and members of the general public. Heavy workloads meant that few staff were available to deal with these. Several former members of staff and other veterinary experts from UK and overseas, who had volunteered to come in to help, dealt with most of these. The Laboratory's high media profile resulted in press, TV and radio coverage and interviews.

The Prime Minister set up an Emergency Committee, including some senior Pirbright scientists, to advise on control measures, the likely outcomes of various scenarios and to assess models. The Committee advised on matters such as the extent of airborne spread of the virus, what mass vaccination would mean in relation to controlling the epidemic and its effect on animal exports. They also assessed the impact of the still extremely controversial contiguous cull procedure.

This unexpected and unusual level of activity found Pirbright unprepared. There was no up-to-date contingency plan in place and for the first few weeks the situation was chaotic, leaving staff feeling very stressed: over a year later many still were. Before a routine was established, diagnostics staff were working about 15 hours a day in split shifts every day. Once the extent of the situation became clear, 3 teams provided 24-hour cover. There was a particularly notable achievement at this time. One of the team leaders in the World Reference Laboratory completed the London Marathon.

### **Role of Library**

Staffing levels were immediately affected in the Library; the assistant was drafted in to the World Reference Laboratory for several hours a week to input test result data. At the same time there was a marked increase in enquiries. The Library provided support for the expert

information providers who were dealing with veterinarians in the field, MAFF (now DEFRA) staff, central government and "the public". Some of these experts had not been to Pirbright before, so they needed literature searches to be carried out on their behalf and extra help in finding information. I regularly carried out searches on various aspects of FMD: inactivation of the virus and disinfection, species affected (feral animals, domestic animals, zoo animals), transmission and differential diagnosis. There was also a demand for photographs.

I thought it was important to keep up with scanning the literature that came into the Library, to keep the database updated, and to continue the SDI service. There was a heightened interest in the disease and the virus, resulting in an increase in the number of references to be added. FMD papers increased from around 400 in 2000 to nearly 2000 in 2001. My experience from 12 years as Pirbright Librarian enabled me to forward specific pieces of information direct to relevant staff members, a process they found particularly helpful.

I also had to dip into some social sciences sources. An important feature of the current awareness was monitoring the ephemeral material that was being produced: websites, popular press, cartoons and output from pressure groups. Some of these sources carried discussion relating to the debates that were continuing about whether or not there should be a vaccination programme and about the pros and cons of making decisions based on computer models. Sometimes the small things turn out to be important. I was particularly thanked for ensuring that the BBC Online News reports were posted on the main board every day and cuttings from newspapers were displayed in the Library. People working long hours in the Restricted Area lost touch with the larger picture and this helped them to follow the progress of the outbreak and to see where their role fitted in to the overall pattern of events.

There was an additional demand for seating space in the Library. Visitors from FAO, OIE and other organisations, who were either reporting on the situation or helping Pirbright staff, needed workspace and required extra help with finding and copying material. There were conflicts with television filming. As an open area, the Library space was used for interviews with senior staff, and during these times it became impossible to use the journals collection.

### **Aftermath**

Once the epidemic was declared over, the focus of demand for information changed. There were at least 4 major enquiries (Anderson, 2002; National Audit Office, 2002; Royal Society, 2002; House of Commons Committee of Public Accounts, 2003), and about 9 others, into various aspects of the outbreak: its cause, progress, management and control, and there were several enquiries by local authorities whose rural areas had been particularly badly affected. Many personal

accounts were published (Cook, 2001; Graham, 2001; Leaney, 2001; Morpurgo, 2001; Trewin & King, 2001; Linaker, 2004) and there was much political criticism. I continued to monitor this information and received requests on behalf of some of the enquiry groups. There were major conferences on FMD, the disease and the virus, and several dedicated publications brought experts together. Pirbright Library holds a major resource of FMD information, so it was important to include as much of this material as possible.

### Contingency plans and lessons learned

One of the former staff members who had helped throughout the course of the outbreak was asked to carry out a survey among IAH staff on their views of how the Laboratory coped and then to draw up contingency plans for any future similar event. Staff response to the service provided by the Library during the epidemic was very positive and appreciative, and there was recognition that we had been fully stretched in keeping pace with demand. This is reflected in the contingency plan that requires that Library staffing levels should be reviewed at an early stage of any future emergency.

Thinking back about the lessons learned from this experience and future Library contingency plans I listed four main areas:

Normal service should be maintained as far as possible: there will still be scientific staff not directly involved with the crisis and PhD students who require current awareness and other information resources. At the same time as the UK FMD outbreak, there was a major epidemic of bluetongue in Eastern Europe which Pirbright scientists were monitoring

We should be more proactive in training visitors in Library use and how to search databases for themselves. This is our normal practice, but because of rapid turnover of personnel and constraints on our time, it was not undertaken systematically during the epidemic. We should have reading lists prepared, particularly on inactivation and species affected; similar topics for literature searching were raised regularly. Appropriate topics and key papers should be discussed with one of the experts who dealt with the majority of external enquirers

If this should happen again we must accept help. When I was checking through a file of e-mails from the early stages of the outbreak, I found a mail I sent on 1<sup>st</sup> March to a colleague at the Veterinary Laboratories Agency Library. As she was aware of how busy we were, she had offered any help required. My response was:

That's a very kind thought. So far, we're coping well, though I have a feeling that backlogs of mundane routine tasks will be building up. The press coverage and general enquiries are easing off this week and my impression is that after the initial excitement has worn off, we should get back to normal within a week or so.

Wrong! The direct impact of the outbreak continued for at least another 18 months.

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