

Lessons from an epidemic

Britain's outbreak of foot-and-mouth disease has revealed failures by senior civil servants to learn from previous experience. It has also opened up an unfortunate rift between epidemiologists and veterinary scientists.

As the British outbreak of foot-and-mouth disease begins to subside, recriminations are flying. More than 3.4 million animals have been slaughtered; the cost to farming and tourism runs to billions of pounds. Opposition politicians are calling for a public inquiry. But the government seems likely instead to launch a more limited scientific review of how to prevent animal disease, probably entrusted to the Royal Society.

Most of the current debate surrounds measures used to control the outbreak. The 1969 Northumberland Report into Britain's last foot-and-mouth crisis in 1967 concluded that restrictions should be imposed on animal movement as soon as possible, and that the military be deployed if any logistical problems arise in the culling and disposal of animals. Any investigation should ask why it took the Ministry of Agriculture, Fisheries and Food (MAFF) three days to impose movement restrictions after the first case was confirmed. It should also determine why the army did not become involved until almost a month later.

MAFF released epidemiological data in weeks (rather than years, as happened in the bovine spongiform encephalopathy epidemic). But the largest share of credit for this goes not to MAFF, but to John Krebs, who heads the Food Standards Agency. An animal disease of primarily economic significance is, strictly speaking, beyond the agency's remit, which is to protect public health. But Krebs called together leading scientists to discuss the disease within two weeks of the first confirmed case. Data were then requested from MAFF, and placed in the hands of the epidemiologists convened by Krebs. These scientists' subsequent work was crucial in revealing that a more rigorous culling policy was

needed to control the epidemic (see *Nature* 410, 515–516; 2001). They went on to work under David King, the government's chief scientific adviser, who assisted ministers in their policy options. Although MAFF has now been abolished (see *Nature* 411, 727; 2001), its officials permeate the new Department for Environment, Food and Rural Affairs. They should abandon their territorial leanings and become more proactive in seeking appropriate scientific help.

The veterinary community has also revealed its territoriality. British veterinary scientists — both practitioners and researchers — seem resentful of the leading role played by epidemiologists in the current crisis. Today, some are questioning whether so many animals needed to be killed, others are asking whether vaccination might have been used, and yet others are arguing that the epidemiologists' models were insufficiently sensitive to the virus's behaviour in different host species, and so on.

In few cases do those asking such questions have a coherent argument that alternative policies would have produced a better outcome — and the suspicion is that the complaints are motivated by a desire not to let scientific 'outsiders' take credit for delivering generally sound advice.

That is unfortunate, because veterinary scientists must now work with the wider scientific community to develop the tools required to fight future outbreaks — in Britain, and elsewhere. Most urgently needed are diagnostic tests that can quickly identify animals incubating the disease, and comprehensive databases containing detailed information on animal holdings, demographics and movements. ■

Defending tax-funded navigation

A congressional committee has erred in its appropriate desire to support free enterprise.

Just as debate is raging in the life sciences over models for enhanced access to the full text of the scientific literature, a budget cut recommended by a US congressional subcommittee on energy and water development, of all things, threatens the most basic of researchers' services: search functions across authors, titles and abstracts. The committee singled out PubScience, developed by the Department of Energy to provide such services across the physical sciences and modelled on the biomedical service PubMed. The committee decried PubScience as an undesirable duplication of activities already carried out by the private sector. If enacted, its recommendation will mark the death knell of PubScience.

PubScience, barely two years old, has yet to establish itself. There is little doubt that political lobbying by large secondary publishers (see page 980) influenced the recommendation, and that this exercise has been a practice run for a subsequent challenge on the more established PubMed. Given PubMed's strong bipartisan support across US politics, a challenge seems unlikely to succeed, and seems rather to be aimed at preventing any further expansion of PubMed.

Proponents of a strong government role in scientific information and in a free-access archive to the entire literature should take note of congressional opposition to their position. Supporters and benefi-

ciaries of a free and competitive market, including this journal, might be tempted to salute the congressional recommendation, which upholds a principle that efficiency and public interests are generally best served by governments outsourcing to a competitive private sector, rather than trying to emulate it.

But PubMed, run by the National Library of Medicine, can be appreciated by anyone in biology as a service that works, not only for researchers but also for the public. Publishers who contribute abstracts to both PubMed and PubScience do so voluntarily, and both services drive traffic to publishers' subscription sites. These services provide no-frills access across the literature that, if left to the private sector, would have been obtained more slowly and at a greater cost to the research enterprise.

Those dismayed by the latest development would be wrong simply to blame the publishers, who have as much right to lobby Congress as high-profile researchers. More to the point, a resistance to government incursions on free enterprise is common ground between Democrats and Republicans. But the real issue is where lines should be drawn, and this requires a subtle judgement of the public interest, which is why a bill being introduced that would support PubScience has a chance of success. ■