THE ROYAL SOCIETY

The Academy of Medical Sciences

Summary of oral evidence: Professor John Wilesmith, Defra

24 May 2006

Professor Wilesmith is a consultant epidemiologist and Head of the National Emergency Epidemiology Group Animal Health and Welfare Directorate General, Defra.

Members of the working group present were: Sir John Skehel, Professor Glynis Breakwell, Professor Neil Ferguson, Dr John McCauley, Professor Andrew McMichael, Professor Karl Nicholson and Professor Robin Weiss.

Key points

Surveillance

The National Emergency Epidemiology Group comprises field epidemiologists from the State Veterinary Service and centrally located veterinary epidemiologists and support staff. The Group provides data to external researchers, conducts epidemiological analyses and modelling, collates all relevant data and information and provides advice on control policy and surveillance.

Much of the surveillance of birds that is ongoing in the UK is driven by the EU, which has issued guidelines for the enhanced surveillance of birds within member states. Ornithologist organisations have been very helpful to Defra and while these organisations are very data rich, the synthesis of this data has been relatively limited. Defra are currently sponsoring the analysis of the available relevant data. This includes information on migratory species and landing patterns of birds. Professor Wilesmith said that he has sympathy with these organisations because they lose money if infected birds are identified and they have to close down their reserves.

In terms of surveillance of birds for detection of avian influenza, there are three components:

1. Live bird surveillance which is conducted at three sites in the UK.
2. Surveillance of wild birds which have died, for which Defra are dependent on members of the public and organisations such as the Royal Society for the Protection of Birds (RSPB).
3. Surveillance involving a sample of shot wild birds at specific locations agreed with the officers of the British Association for Shooting and Conservation (BASC).

Discussions about the implementation of more co-ordinated surveillance efforts are ongoing. The objectives of the current research is to identify areas at greatest risk from the coming autumn migration and to identify those areas in which domestic poultry are also at greatest. This will assist in the necessary targeting of surveillance. Professor Wilesmith would also like to see better analysis of the European data from areas where avian flu infection have been detected in wild birds, to determine the risk factors important for the transmission of infection from wild birds to commercial flocks.

Animal Health

If there is a major avian influenza outbreak in the UK, Defra will have to understand where the risks are and take action. If there is an outbreak in wild birds it will not be possible to cull wild bird populations, but EU law determines that areas will have to be placed under restriction.

Vaccination of commercial flocks for avian influenza would be very difficult. Vaccination of domestic birds against other infections is already carried out in the poultry industry, but the methods of administration are simpler being administered in water or using an aerosol delivery method.

One scenario where vaccination could be appropriate in the UK would be if H5N1 was detected in wild birds, which then infected local commercial flocks. An order to keep poultry indoors would be imposed in infected regions, but this could mean keeping free-range and organic birds indoors for longer than they are permitted to retain their free-range status. Vaccination of these birds would involve only contained flocks and the birds could be allowed outside as normal. If a situation arose where avian influenza became uncontrollable in poultry flocks, a mass vaccination strategy would have to be considered. The Government are buying stocks of vaccine.

Defra are not supporting any trials into the evaluation of poultry vaccines and are relying on the pharmaceutical companies to do this. In the animal world, there always seems to be a shortage of data on efficacy of vaccines. Professor Wilesmith was asked about the vaccination policy in the UK and whether it is related to evidence that vaccinated bird can shed virus when infected. Professor Wilesmith responded that he is not involved in policy discussions on vaccination with the Chief Scientific Adviser. In his view, vaccination does not solve all the problems; the Italians have had a number of problems with their vaccination strategies.

Professor Wilesmith's perception is that the risk of transmission of avian influenza to backyard birds from wild birds is low and the consequences for the commercial poultry industry are limited. Measures are in place to protect them from predators such as foxes, which also protects them from other wild birds to some extent. It is very important to protect the feed and water supplies for the poultry.