



Advice on Assessing the Risks of Working with Highly Pathogenic Avian Influenza Virus

The Advisory Committee on Dangerous Pathogens (ACDP), at its meeting on 19 March 2003, discussed the reports of influenza A virus subtype H5N1 (a highly pathogenic avian influenza [HPAI] strain) in Hong Kong and considered the implications for laboratory workers in the UK. Since the meeting an outbreak of influenza A subtype H7N7 was recognised in the Netherlands, which also extended to Belgium and Germany.

There are several strains of HPAI, including subtypes H5N1 and H7N7; the importation and holding of these viruses falls under the responsibility of the Department for Environment, Food and Rural Affairs (Defra). Laboratories who wish to import and work with these strains will need to meet the appropriate legal requirements¹. At the present time, the HPAI strains are being handled in only a few designated laboratories in the UK for investigative purposes.

However, there is the possibility that other laboratories may receive specimens from patients returning from Hong Kong, the Netherlands, Belgium and Germany, who have conjunctivitis and/or febrile respiratory illness, and workers in these laboratories may be concerned about the containment measures required. [Note: if there is any indication that a patient has returned from a SARS-affected area, there is specific advice for handling such specimens provided by the Health Protection Agency, the World Health Organisation and the Health and Safety Executive.]

▶ [Click here for more information on SARS](#)

A risk assessment must be performed, and the results of this assessment communicated to laboratory staff, before work starts with the agent. All staff potentially handling specimens containing such viruses should be given detailed information and instructions on the hazard and the measures needed to reduce the risk of exposure to the agent.

The ACDP makes the following recommendations:

Laboratories knowingly handling influenza A virus subtypes H5N1 and H7N7

For deliberate work with these agents laboratories are required to meet the requirements of Defra. These requirements are primarily to prevent environmental spread of a biological agent.

In addition, in order to protect workers from potential exposure, the appropriate containment level (CL) for working with these agents must be selected after performing a full risk assessment that takes into account the risks presented by the strain of virus and the type of work that will be carried out in the laboratory.

ACDP recommends that CL3 is appropriate for work involving this virus. The use of close-fronted microbiological safety cabinets should be considered (ie Class III cabinets or Class I/III cabinets in Class III mode).

Please note that the Health and Safety Executive must be notified of any

- first use of a biological agent (hazard group 2, 3 or 4) at a particular premises; and
- subsequent use of any agent listed in Part V of Schedule 3 of the Control of Substances Hazardous to Health Regulations 2002.

Further information about the notification process can be found in the [sixth edition of the Biological Agents Bulletin](#).

Other clinical laboratories

In laboratories that are not intentionally working with the virus, Containment Level 2 should be used for clinical samples. However, CL3 is more appropriate for clinical samples, such as respiratory

secretions, from patients known or suspected of being infected with these agents. To ascertain the risk of a patient being infected with influenza A strains H5N1 or H7N7, the attending physician should determine whether the patient has recently travelled from a high risk area. [Note: the physician should also have considered the risk of a patient having been exposed to SARS; see previous paragraph for links to relevant advice.] Again, the use of close-fronted microbiological safety cabinets should be considered (ie Class III cabinets or Class I/III cabinets in Class III mode). However, if Class I/III or III cabinets are not available a standard Class I cabinet should be sufficient for initial diagnostic work.

If there is an intention to replicate the virus, specific advice should be sought from the Health Protection Agency (HPA) Enteric, Respiratory and Neurological Virus Laboratory.

Further information

This can be sought from:

Defra Animal Pathogens Licensing Team, Area 104, 1A Page Street, London SW1P 4PQ
Tel: 020 7904 6144 (Defra requirements)

HPA Enteric, Respiratory and Neurological Virus Laboratory,
Tel: 020 8200 4400 ext 3016 (Replicating the virus)

Mr John Newbold (Principle Specialist Microbiology Inspector)
HSE
Magdalen House
Stanley Precinct
Bootle
Merseyside L20 3QZ (Working with biological agents)

Further information about the ACDP is available from:

Ms Hannah Lewis (ACDP Secretariat)
DH
Skipton House
80 London Road
London SE1 6LW

or

Dr Jim Neilson (ACDP Secretariat)
HSE
Rose Court
2 Southwark Bridge
London SE1 9HS

1 The Requirements of the Importation of Animals Pathogens Order 1980 (as amended) and The Specified Animal Pathogens Order 1998 will need to be met.