

Advisory Committee on Dangerous Pathogens

Biological Agents Bulletin

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Welcome to the second issue

Welcome to the second issue of the Biological Agents Bulletin. This publication is produced by the Joint Department of Health (DH)/ Health and Safety Executive (HSE) Secretariat of the Advisory Committee on Dangerous Pathogens (ACDP) to provide information on the work of the ACDP, and other news of interest to people involved in the control of biological agents in the workplace. The bulletin is aimed at workers in laboratory and health care sectors, as well as people with a public health interest in infectious diseases.

We have received a lot of positive feedback on the first issue, and we hope that this and future issues continue to be well received by our readers. If you have seen a copy of this issue and wish to receive your own copy of future issues, please contact HSE Books at the address on the back page. We are also exploring distribution by e-mail - if you prefer to receive the bulletin by this route could you let the ACDP Secretariat know (e-mail address below).

Update on ACDP

In the first issue, we told you about the reconstitution of ACDP. The Committee has now agreed its overall plan of work for 1999-2001. The main element of work will be in support of the evaluation and amendments

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Welcome to the second issue (cont'd)

of the Control of Substances Hazardous to Health Regulations (COSHH) - see feature on page 3.

Other work includes:

- ◆ issuing guidance on the design, construction and management of microbiological containment laboratories;
- ◆ revising the 1995 guidance on the categorisation of biological agents;
- ◆ ensuring the ACDP/SEAC (the Spongiform Encephalopathy Advisory Committee) guidance on spongiform encephalopathies keeps pace with developments;
- ◆ advising on relevant international work - eg the World Health Organisation (WHO) action plan on poliovirus containment, and on the United Nations (UN) requirements for the transport of infectious substances;
- ◆ advising on the risks from exotic zoonoses of cats and dogs that may arise from proposed changes to the requirements for rabies quarantine.

Interim classification of Nipah virus

Nipah virus - a newly discovered paramyxovirus - has been identified as the cause of a number of deaths in humans in a recent outbreak of disease in Malaysia and Singapore.

An outbreak of what was thought to be Japanese encephalitis began in Malaysia in October last year. As of 23 May 1999, 258 cases of febrile encephalitis, with 100 deaths in humans, had been reported to the Malaysian Ministry of Health. Laboratory tests suggest that, so far, 65 of the deaths were caused by infection with the Nipah virus. The main source of infection is considered to be close contact with pigs - some of the first cases were reported in pig farm workers (there is no evidence of human to human transmission). Control of the outbreak has focused on the restriction of movement and culling of pigs in affected areas. The Malaysian Ministry of Health has also provided advice to workers on hygiene precautions.

Classification of Nipah for laboratory work

COSHH classifies biological agents into four hazard groups, based on their ability to infect healthy workers. The UK classifications are listed in the Approved List of Biological Agents in the fourth edition of the publication *Categorisation of biological agents according to hazard and categories of containment* (see back page for details). Work with biological agents not listed in the current Approved List requires local determination of their hazard group in accordance with the definitions in COSHH. The ACDP was asked to consider the evidence for classifying Nipah, because of potential interest in working with the virus in the UK. The Committee concluded that it should be classified as a Hazard Group 4 biological agent because of the relatively high mortality rate (with some recent evidence of recurring infection); the lack of any treatment; and the classification of a similar paramyxovirus, Hendra, as a Hazard Group 4 agent.

This advice on local classification means that all work with, or consignment of, Nipah virus must be notified in advance to HSE (forms for notification are

available from HSE, Directorate of Science and Technology, Room 443, Magdalen House, Stanley Precinct, Bootle, Merseyside L20 3QZ). Further technical advice on working at Containment Level 4 can be obtained from HSE's Directorate of Science and Technology (Contact: John Newbold, DST E6, HSE, Room 440, Magdalen House, Stanley Precinct, Bootle, Merseyside L20 3QZ Tel: 0151 951 3622). Laboratories should use Containment Level 3 as a minimum for clinical samples where there is the possibility that the virus might be present, eg samples from travellers with fevers returning from the affected areas. However, a local risk assessment should be carried out on the basis of information available - this may indicate the need for additional containment measures, such as the use of a Class III microbiological safety cabinet.

Protection of animal health

It is intended that Nipah virus is classified as a Group 4 specified animal pathogen under the Specified Animal Pathogens Order 1998 (SAPO). This legislation ensures that work with specified animal pathogens, most of which are exotic to Great Britain, takes place under conditions that prevent escape into the environment. In addition, a licence would also be required under the Importation of Animal Pathogens Order 1980 (IAP0), if the virus was to be imported from a non-EC country. Further details on the requirements of SAPO and IAP0 can be obtained from:

- in England - Bovine TB and Zoonoses Division, MAFF (Tel: 0181 330 8275)
- in Wales - Agriculture Policy Division 3, NAWAD (Tel: 01222 825641)
- in Scotland - Animal Health and Welfare Branch, SERAD (Tel: 0131 244 6178)
- in Northern Ireland - Animal Health and Welfare, DANI (Tel: 01232 524100)

(pre Tel numbers shake-up April 2000!)

Changes to COSHH

COSHH 1999

The Control of Substances Hazardous to Health Regulations 1999 (COSHH) came into force on 25 March 1999; revoking and replacing COSHH 1988 and COSHH 1994. The changes made to the Regulations and the Approved Codes of Practice do not affect the substance of the biological agents provisions of COSHH. However, the special provisions relating to biological agents (previously Schedule 9) are now in Schedule 3. The new Regulations also require a new formal notice of approval for the Approved List of Biological Agents, and a COSHH Certificate of Exemption relating to Biological Agents in Hazard Group 3. No other changes have been made to the list of biological agents. The updated version is available on the HSE home page on the World Wide Web:

<http://www.open.gov.uk/hse/hsehome.htm>

Future changes to COSHH

HSE has also concluded an evaluation of the impact in the workplace of Schedule 9 of COSHH. This included a survey of a range of laboratory and other workplaces, as well as the experiences of HSE inspectors enforcing the COSHH provisions. The findings of the evaluation were considered by ACDP in March and by the Health and Safety Commission (HSC) in May. The main conclusion was that Schedule 9 of COSHH has raised awareness of the need to assess and control the risks from biological agents. However, there was a general misperception that the Schedule 9 provisions only relate to deliberate intention to work with biological agents (primarily in laboratories). They were felt to be difficult to apply in general workplaces, where there may be incidental exposure to biological agents.

The Commission has agreed that these issues should be addressed in the planned major revision of COSHH to

implement the Chemical Agents Directive. A consultative document will be issued next year, for final implementation in 2001. There will also be corresponding revisions of the Approved Codes of Practice and of the fourth edition of the ACDP's Categorisation of biological agents according to hazard and categories of containment (see back page for details). We will be considering separate simple guidance, aimed at general workplaces, where there may be exposure to biological agents. Further details of the changes will be given in future editions of the bulletin. Copies of the ACDP and HSC papers on the evaluations and an outline of the proposed changes are available from HSE Information Centres (open from 9.00am to 5.00pm, Monday to Friday).

Sheffield Information Centre, Broad Lane, Sheffield S3 7HQ
London Information Centre, Rose Court, 2 Southwark Bridge, London SE1 9HS
Bootle Information Centre, Magdalen House, Stanley Precinct, Bootle, Merseyside L20 3QZ

The Millennium Bug: The Year 2000 problem and microbiological containment

Much has been said about the Year 2000 problem affecting computer-controlled systems. HSE has mounted a major publicity campaign to raise awareness of the need for business to identify the measures they need to take by reviewing their risk assessments under the Management of Health and Safety at Work Regulations 1992. It has been estimated that 15% of control systems (not necessarily safety-related systems) will fail in some way at Year 2000 or another discontinuity date. The failure rate rises above 50% for more complex inter-connected programmable electronic systems. Embedded micro-processors, even in small items, eg instrument transmitters, laboratory and other equipment, have the potential to cause problems with processes and manufacturing procedures which may have serious implications for health and safety at work.

The precise outcome of using date-sensitive equipment will depend on the context in which it is used. For example, process control systems may continue to operate but some alarms, trends and calculations may be affected. The problem may not be immediately apparent.

If you have any safety systems under computer control, you should ensure controls are either Year 2000 compliant, or that the system cannot fail and the risks of harm are averted. Any risk assessments for processes where computer control is built into the safety system should address this issue. This also applies to building management systems that may affect power, water or gas supplies for equipment which could lead to a risk of failure in a safety critical area.

The Department of Health has issued extensive advice to the NHS on Year 2000 matters. A list of publications is available at www.imc.exec.nhs.uk/2000. Publications can be downloaded from the Internet site or, if you do not have access to the Internet, the list of publications and individual items are available from the Year 2000 Team, NHS Information Authority, 15 Frederick Road, Edgbaston, Birmingham, B15 1JD. Tel: 0121 625 2711.

A series of simple questions about control systems and building management to ask might include:

- Are any of your control systems safety-related and if so, are any controlled or monitored by computers, or linked to such systems by a communications network?
- Does any equipment which is safety-related contain embedded electronic systems and if so, are you aware of the problem posed by faulty date-change software?
- If so, what steps have you taken to ensure that faulty date-change software does not pose additional risks to the health and safety of your employees?



HSE campaign is supported by a series of documents on the Year 2000 problem. For more information, contact HSE Books (see the address on the back page).

Further updates ...

The consultation period on proposed changes to the **Approved Code of Practice (ACOP) and guidance on the control of legionella** finished in July and HSE are currently considering over 100 responses that were received. The changes will include emphasising the importance of access to competent help to assist with preparation of risk assessments and more detailed advice on competence and training. The duties of suppliers of products and

services have been made more explicit and views were also sought on the need for routine monitoring for legionella in cooling towers. The revised ACOP and guidance (to be issued as a single publication instead of the two separate documents previously) should be published early next year.

Guidance on the management, design and operation of microbiological containment laboratories was initially

being prepared to cover work at Containment Level 3. At ACDP's suggestion, it has been expanded to cover Containment Level 2 as much of the guidance is equally applicable to both containment levels. The publication will make clear the statutory requirements for each level and offer advice on both design principles and operational procedures in support of the requirements. The guidance should be completed by the end of the year.

Current ACDP publications

ACDP has produced a number of publications which can be obtained either from HSE Books or The Stationery Office (TSO) see below for individual publication details.

Available from HSE Books

The large-scale contained use of biological agents
HSE Books 1998 ISBN 0 7176 1544 8 £8.50

Supplement to the *Categorisation of biological agents according to hazard and categories of containment* (Fourth edition, 1995)
HSE Books 1998 MISC118 Free

Guidance for handling meat and bone meal material.
(Supplement to *BSE: Background and general occupational guidance*)
HSE Books 1998 ISBN 0 7176 1212 0 Free

Infection risks to new and expectant mothers in the workplace: A guide for employers HSE Books 1997
ISBN 0 7176 1360 1 £10.50

Working safely with research animals: Management of infection risks
HSE Books 1997 ISBN 0 7176 1377 1 £7.95

BSE (Bovine spongiform encephalopathy) Background and general occupational guidance
HSE Books 1996 ISBN 0 7176 1212 0 £5.50

Categorisation of biological agents according to hazard and categories of containment (Fourth edition 1995)
HSE Books 1995 ISBN 0 7176 1038 1 £8.50

Available, free, from the ACDP Secretariat

Working safely with simians: Management of infection risks (Specialist supplement to *Working safely with research animals: Management of infection risks*) MISC134 HSE Books 1998

Guidance on the use, testing and maintenance of laboratory and animal flexible film isolators ACDP 1985

Available from the Stationery Office

Transmissible spongiform encephalopathy agents: safe working and the prevention of infection
TSO 1998 ISBN 0 11 322166 5 £10.00

Microbiological Risk Assessment: an interim report
TSO 1996 ISBN 0 11 321990 3 £9.95

Management and control of viral haemorrhagic fevers
TSO 1996 ISBN 0 11 321860 5 £11.00

Protection against blood-borne infections in the workplace: HIV and hepatitis
TSO 1996 ISBN 0 11 321953 9 £12.00

Advisory Committee on Dangerous Pathogens and Advisory Committee on Genetic Modification. Vaccination of laboratory workers handling vaccina and related poxviruses infectious for humans TSO 1990 ISBN 0 11 885450 X £5.50

HSE Books, PO Box 1999, Sudbury, Suffolk CO10 2WA Tel: 01787 881165; Fax: 01787 313995
website: www.open.gov.uk/hse/hsehome.htm
The Stationery Office, PO Box 276, London SW8 5DT Tel: 0171 873 9090; Fax: 0171 873 8200
website: www.tso-online.co.uk

Coming up... Over the next few months:

The UN are currently discussing the transport of infectious substances and we hope to be able to offer guidance in a future edition of the Bulletin

HSE and DH will be considering how to implement the WHO global action plan for safe handling and laboratory containment of wild poliovirus post-eradication of the disease