Communicable Disease and Health Protection Quarterly Review: April to June 2004

From the Health Protection Agency, Communicable Disease Surveillance Centre

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Policy and practice

The Chief Medical Officer published a contingency plan to prevent and control West Nile virus (WNV) disease at <http://www.dh.gov.uk/assetRoot/04/08/33/33/04083333.pdf>. The plan set out measures to enhance surveillance, to alert clinicians, and to control mosquito populations. In many of these areas, action has already been taken, while in others it will be initiated only if and when a diagnosis of WNV infection is made. Surveillance of birds, mosquitoes, and horses is in progress, in addition to the human surveillance undertaken by the Health Protection Agency (HPA). Key actions for the public to protect themselves and minimize the risk of infection are included. Any effort to tackle WNV would require liaison between veterinary and health services at the local, regional and national level. The contingency plan maps out how such co-operation would be achieved in practice through ‘Public Health Action in Partnership’, the formation of an inter-disciplinary incident control team to take the lead locally, and the creation of a central Government team drawn from the Department of Health, the Department for the Environment, Food and Rural Affairs, and the HPA to provide policy advice nationally.

The latest version of Initial investigation and management of outbreaks and incidents of unusual illnesses, with particular reference to events that may be due to chemical, biological or radiological causes, including deliberate releases (the ‘unusual Illness document’ [v3 April 2004]), was published on the HPA website, and included advice on radiation from the National Radiological Protection Board. The documents can be found on the ‘Unknown Agent’ page of the Deliberate Release pages of the HPA website, with access via the menu page at <http://www.hpa.org.uk/infections/topics_az/deliberate_release/menu.htm>. The complete document may be accessed directly at <http://www.hpa.org.uk/infections/topics_az/deliberate_release/Unknown/Unusual_Illness.pdf>.

The mandatory surveillance of surgical site infection (SSI) in orthopaedic surgery announced by the Chief Medical Officer in June 2003\(^1\) began on 1 April and represented the next phase of Department of Health initiatives for monitoring healthcare-associated infections (HCAI).\(^2\) This surveillance is co-ordinated by the Health Protection Agency’s Healthcare-associated Infection and Antimicrobial Resistance Department. All hospitals where orthopaedic surgery is performed are expected to carry out a minimum of 3 months surveillance in at least one of the four orthopaedic categories – total hip replacements, knee replacements, hip hemiarthroplasties, or open reductions of long bone fractures. Individual reports for each participating hospital will be provided at the end of each surveillance period and data shared with the relevant regional epidemiology unit. A key objective of the surveillance is to enable hospitals to use
Enhanced surveillance

Preliminary results from the first year of the enhanced surveillance of invasive group A streptococcal infections in the United Kingdom illustrated the success in increasing case ascertainment, with reports of group A streptococcal (GAS) bacteraemia having doubled between 2002 and 2003. Initial analysis of reports indicated a possible 2085 severe group A streptococcal infections in 2003 across England, Wales, Northern Ireland and the Channel Islands. Fifty-five per cent of the cases were male. Analysis of information available through questionnaires and routine sources indicate that 90 per cent of cases presented with bacteraemia, with or without a primary focus of infection. Among cases for which a specific diagnosis was available 10 per cent presented with septic arthritis, 9 per cent with pneumonia, 6 per cent with toxic shock-like syndrome, 5 per cent with necrotizing fasciitis, 3 per cent with puerperal sepsis, and just over 1 per cent with meningitis. One in five of the cases were reported as having died within seven days of initial diagnosis, broadly in line with the previous enhanced surveillance period (1994–1997) where the overall mortality rate was 27 per cent.

The enhanced surveillance of invasive group A streptococcal infections currently underway in the United Kingdom is a major component of the European Commission, Fifth Framework Programme (QLK2.CT-2002–01398) on ‘Severe Streptococcus pyogenes disease in Europe’ (Strep-EURO). The main aims are to determine and compare the overall disease burden, type distributions and antimicrobial susceptibility patterns of isolates and clinical manifestations of severe group A streptococcal disease across 11 European countries. The UK enhanced surveillance is a joint collaboration between the HPA Respiratory and Systemic Infection Laboratory and the Healthcare Associated Infections and Antimicrobial Resistance Department and commenced on 1 January 2003 for a period of 2 years.

Disease outbreaks and incidents

An outbreak of influenza A (subtype H1N1) occurred in a primary school in West Sussex in May. Staff at the school reported the outbreak to the local Health Protection Unit when substantial numbers of children developed symptoms of fever, nausea, vomiting, cough and sore throat. Initial direct immunofluorescence testing of throat swabs by the local laboratory proved negative, but a serology specimen was positive for influenza A by single high titre. Influenza A (H1N1) was detected in throat swabs by PCR.

At the beginning of June a hospital in Northern Ireland announced that the arrangements for cleaning and disinfecting one of their endoscopes were not fully in accordance with necessary standards. Following a detailed risk assessment, the Trust undertook a patient notification exercise in relation to over 400 patients. An independent review of the situation in Northern Ireland was commissioned by DHSSPS, and The Medicines and Healthcare Products Regulatory Agency (MHRA) issued an alert to NHS Trusts in England, reminding all staff involved in specification for purchase, purchase, reprocessing and use of endoscopes of the requirement to carry out an assessment of all endoscope decontamination processes. The National Assembly for Wales asked all hospitals in Wales to review practice. Technical advice is available from the British Society for Gastroenterology. The HPA has formed a task force to coordinate activity across the United Kingdom, and an expert advisory group to give independent advice on management.

The Medicines and Health Care Products Regulatory Agency (MHRA) issued an alert about the recall of Rabies Vaccine BP on 5 April 2004. A quality-assurance test had identified the presence of non-inactivated Pitman-Moore virus (an attenuated vaccine strain of rabies virus) in a single product lot. The lot was not distributed. Finding non-inactivated (i.e. live) virus in a lot after it was manufactured indicates a failure in the manufacturing process, and the vaccine may not be safe to give to humans. The manufacturing failure could have affected other lots produced in the same period, although all passed quality-assurance tests.

International

The Chinese authorities reported a suspected case of severe acute respiratory syndrome (SARS) in a 20-year-old nurse on 22 April. Nine cases in three generations were eventually reported. The National Institute of Virology in Beijing was identified as the most likely source of the outbreak – at least four workers at the Institute are known two have been infected, including two in the April outbreak. At that time work was being done on inactivated SARS coronavirus in a general laboratory, but the effectiveness of the inactivation, which had been carried out in a biosafety level 3 laboratory, had not been tested.

A third case of methicillin-resistant Staphylococcus aureus (MRSA) with resistance to vancomycin was reported from the United States, this time from New York. The isolate was from a urine culture from a resident in a long-term care facility, and tests carried out at the Centers for Disease Control and Prevention (CDC) in Atlanta, showed the presence of the vanA gene. Molecular typing indicated that the isolate was not related to the two previous ones.

Publications of interest

The Health Protection Agency published a baseline report on travel-associated illness, Illness in England, Wales, and Northern Ireland associated with foreign travel, following the first year of operation of its new Travel Health Surveillance Section, which was set up to monitor such illness as part of the National Travel Health Network and Centre (NaTHNaC), an English Department of Health initiative to promote clinical standards in travel medicine. The report brought together the surveillance data currently available on imported infections from many Health Protection Agency departments both within and outside CDSC,
highlighted the limitations associated with data currently available and makes recommendations for the improvement of surveillance of travel-associated illness. Illness in England, Wales, and Northern Ireland associated with foreign travel, can be found on the HPA website at <http://www.hpa.org.uk/infections/topics_az/travel/publications.htm>. The report can be downloaded in full, or by the chapter, with accompanying PowerPoint slides. Printed copies were distributed to consultants in communicable disease control, regional epidemiologists, and reporting laboratories.

The Department for Environment, Food and Rural Affairs (DEFRA) published its annual report on zoonoses for the United Kingdom for 2002. Some highlights include documenting the first definite fall in the reports of Campylobacter species with around 52 500 reports in the United Kingdom in 2002 compared with a peak of just over 65 000 in 1998 (there was a small decline in 2001, although that was an anomalous year as incidents and reports were artificially disrupted by the national foot and mouth disease outbreak). Overall trends in Salmonella in humans continue to be downward, despite there was a sharp rise in non-phage type 4 Salmonella enteritidis in England and Wales, although this was not seen in Scotland and Northern Ireland. At least some of this increase in 2002 was due to multiple outbreaks associated with raw hens eggs used in commercial food preparation. The picture for Vero cytotoxin producing Escherichia coli (VTEC) O157 in humans showed a continuation of the decline in the total number of laboratory reports that has been seen most years since 1996. The number of cases of BSE confirmed in cattle in Great Britain continued to fall, with 1039 cases confirmed in 2002, compared with 1113 in 2001. The report can be found on the DEFRA website at <http://www.defra.gov.uk/animalh/diseases/zoonoses/reports.htm>.

The World Health Organization (WHO) Regional Office for Europe published a booklet, 10 health questions about the 10, which gave an overview of trends in population health and healthcare systems in the ten new member states of the European Union (Estonia, Latvia, Lithuania, Poland, Czech Republic, Slovakia, Slovenia, Hungary, Malta and Cyprus). The booklet also outlined some changes that have been made to healthcare systems in the run-up to joining the EU and what potential there is for improvement as a result of EU membership. 10 health questions about the 10 can be downloaded from the WHO Regional Office for Europe website, at <http://www.who.dk/eprise/main/who/mediacentre/pr/2004/20040514_1>.

Features

Exercising the emergency response

Part of the remit of the Emergency Response Division (ERD) of the Health Protection Agency (HPA) is to run exercises that test emergency preparedness in the health service community. These form part of a training programme delivered on behalf of the Department of Health and involve co-ordinating a wide cross-section of organizations, including the Department, other government agencies, the NHS organizations, local authorities and other blue light services, nationally, regionally and locally.

At the end of May 2004, the ERD in collaboration with the HPA Local and Regional Services Division had already run, or co-run, eight exercises, designed to test and improve health emergency plans already in place. These helped to ensure that the health services could respond in a rapid and co-ordinated way to any deliberate release of chemical, biological, radiological or nuclear (CBRN) material, or to emerging, or re-emerging threats.

Exercise Magpie – out in the field

On 28 April, a 1-day combined field and desktop exercise was held in Newcastle-upon-Tyne to test the regional response to a simulated deliberate release of sarin in the City Centre. This was the first exercise of its kind to be held outside London and used computer modelling to make the casualty list as realistic as possible.

Two hundred volunteer casualties took part and were dealt with by the emergency services. Police contained the scene and fire and ambulance services set up decontamination units. Several casualties were taken to Newcastle General Hospital, which prompted the hospital to implement emergency plans and set up its own decontamination procedures. Further casualties were treated at two GP surgeries and the minor injuries’ clinic at the Royal Victoria Infirmary.

The desktop exercise provided an opportunity for representatives from health and emergency services to examine their call-out procedures and other parts of their existing plans, when faced with additional major emergency incidents. An observer programme was also run in parallel, to inform UK emergency planners, senior staff of other government departments and visiting national and international delegates, including Health Minister John Hutton.

The initial exercise report showed that the health service’s response to an incident like this was robust and that the plans of the wider health community worked well.

Some of the issues that will be taken forward are:

Making roles and responsibilities of different agencies and individuals more explicit
Developing new approaches to hot zone rescue
More inter-agency training
Improving procedures for the decontamination of casualties
Faster communication with the public

As a result of the scale and scope of Exercise Magpie, all the agencies involved learned some important lessons that will help to improve and inform many aspects of the management of major incidents.

Winning ways

The Chief Medical Officer (CMO) for England published Winning ways: working together to reduce healthcare associated infection in England late in 2003. Winning ways’ set out the actions necessary to reduce certain healthcare associated infections and to curtail the rise of antibiotic resistant organisms in England.
In addition to a reiteration of best practice for the management of medical devices, hospital cleanliness and the design of infection control into healthcare premises, the report included a number of new measures, including:

The appointment of a Director of Infection Prevention and Control in each organisation providing NHS services.

An assurance that NHS Trust chief executives will be aware of their legal duties to identify, assess, and control risks of infection in the workplace and an obligation for chief executives to ensure that, over time, there is an appropriate provision of isolation facilities within their healthcare facilities.

Further development of the mandatory surveillance system for HCAI and the publication of rates of HCAI on the CMO’s website. Support for prudent antibiotic prescribing and a national audit of deaths from HCAI.

An investigation of new systems to control HCAI, such as collaborative links between the Inspector of Microbiology and the National Patient Safety Authority to ensure that root cause analysis and hazard analysis and critical control point (HACCP) are used.

The implementation of a national research strategy to underpin effective action and ensure new developments in the understanding of HCAI are rapidly translated into benefits for patients.

Reporting of serious outbreaks of infection in healthcare settings to the Health Protection Agency, which will provide advice and support for the management and control of the incident.

The Department of Health will publish additional guidance on the roles and responsibilities of infection control teams, and ensure up-to-date information is provided to the public and patients on infection control and prevention.

The Healthcare Commission will be asked to give priority in assessing NHS performance in reducing HCAI.

The CdaHP series is prepared by the Health Protection Agency with the assistance of colleagues in partner organisations in health protection.

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