Communicable Disease and Health Protection Quarterly Review: April to June 2005

From the Health Protection Agency, Centre for Infections

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The quarter at a glance...

Policy and practice
- Pneumococcal vaccination
- Outbreaks and incidents
- Endoscope sterilization
- Hepatitis C lookback

Surveillance
- MRSA in children
- Diagnoses by genitourinary medicine clinics

News from abroad
- Accidental distribution of H2N2 flu strain

Publications
- Global Influenza Preparedness Plan
- International Health Regulations
- Child vaccination

Features
- Exercise Atlantic Blue. A new centre for radiation, chemical, and environmental hazards

Events of the quarter

Policy and practice
The Chief Medical Officer for England announced that everybody aged 65 years and over who have not previously been immunized against pneumococcal infection should be offered pneumococcal polysaccharide vaccine.1 This is the third phase of the immunization programme originally announced in August 2003. People aged 80 years and over were offered the vaccine in 2003/2004,2 and people aged 75 years and over were offered the vaccine in 2004/2005. For individuals aged 5 years and over in at-risk groups, such as those with heart conditions, chronic lung disease and chronic liver disease, and for all those aged 65 years and over, a single dose of 23-valence pneumococcal polysaccharide vaccine is recommended.

Outbreaks and incidents
The Department of Health, Social Services, and Public Safety (DHSSPS) for Northern Ireland published the findings of an independent review of the systems and processes used within Northern Ireland to achieve the cleaning and high-level disinfection of flexible endoscopes following their use in the investigation and treatment of patients.3 The review was carried out following an incident in Northern Ireland in May 2004 when a gastroscope may not have been adequately disinfected, which had led to a detailed observational audit of all endoscopes in use in hospitals throughout Northern Ireland was undertaken in June 2004. This identified concerns with 16 endoscopes including gastrosopes, duodenoscopes and colonoscopes. Concerns fell into two groups: in the first group, one narrow channel in the endoscope was not fully cleaned or disinfected despite going through the normal cleaning and disinfection process and, in the second group, all the channels had been fully cleaned, but one channel may not have been fully disinfected despite going through the normal cleaning and disinfection process. A patient notification exercise offering testing for bloodborne viruses was undertaken for patients associated with endoscopes in the first group. Patients, who had undergone a procedure with an endoscope in which one channel may not have been fully disinfected despite going through the normal cleaning and disinfection process, were contacted and reassured. The risk of acquiring infection from an endoscope was considered to be very low, given the estimated prevalence of bloodborne viruses in the Northern Ireland population to be less than 3 per 1000.

A complex hepatitis C lookback exercise across seven regions involving 25 trusts in England, two health boards in Scotland and a military hospital and coordinated by the Health Protection Agency (HPA) Centre for Infections (CfI) was undertaken in April.4 In 2004, a patient who had received care in an obstetrics and gynaecology unit in a London hospital was found to be infected with hepatitis C virus. Subsequent investigations revealed that the patient had the same genotype and an identical virus, on phylogenetic analysis, to that of a healthcare worker (HCW) who had been involved in the care of the patient. The independent UK Advisory Panel (UKAP) for HCWs infected with bloodborne viruses recommended offering hepatitis C testing to all patients who had undergone an exposure-prone procedure (EPP) in which the HCW was
involved covering the whole of the HCWs clinical work period in the United Kingdom (1981–2004). Patients who may have been exposed to the hepatitis C virus through a high-risk EPP involving the HCW were identified. Letters were sent to all identified patients for whom addresses were known, explaining the situation, offering advice and blood tests. Blood-testing facilities were provided and dedicated helplines offered support to patients who have been set up at each trust. National Health Service (NHS) direct also set up a dedicated helpline number to provide advice to people who may be concerned but have not been informed by the trust that they should be tested because they were assessed as not having been at risk of infection even though they received medical care from the HCW. Patients were advised to contact the helplines for counselling and to arrange an appointment for hepatitis C testing.

**Surveillance**

A 13-month study of bacteraemia in children, caused by methicillin-resistant *Staphylococcus aureus* (MRSA), began on 1 June 2005. The study is being undertaken across the United Kingdom and the Republic of Ireland by the HPA in collaboration with the British Paediatric Surveillance Unit, St George’s Hospital, London, Health Protection Scotland and the National Disease Surveillance Centre, Dublin. Analysis of reports routinely submitted to LabBase has indicated that although the numbers of cases of MRSA bacteraemia in children remain low, there has been, nonetheless, an upward trend. The number of reports has remained constant in the last few years with around 70–75 cases reported each year. As the above data were derived from voluntary reporting of cases, they probably underestimate the true incidence of infection. The main aim of the study is to obtain a robust estimate of the incidence of MRSA bacteraemia in children. In addition, the study aims to define the demographic and descriptive epidemiological features of the patient population; in particular, the proportion of cases that are either healthcare associated or community acquired. Infections because of MRSA have historically been primarily acquired in hospitals, although in the last few years, there have been reports from other countries of infections in children that have been acquired in the community and which have no demonstrable links to the hospital environment. The consolidation of microbiological, epidemiological and clinical information will allow us to determine whether community-acquired MRSA bacteraemia has also emerged in the United Kingdom. These findings will have implication for the management of severe paediatric infections because of *S. aureus* in the community.

Data released in June showed that in 2004, 751 282 new diagnoses were seen in genitourinary medicine clinics (GUM) in the United Kingdom, an increase of 2% on 2003. There was a decrease in cases of gonorrhoea and genital herpes but an increase in the cases of genital chlamydia, syphilis and genital warts. These data were from cases diagnosed in GUM clinics and do not include cases diagnosed in primary care or other clinical settings. There were a number of areas that gave cause for concern. First, the burden of sexually transmitted infection (STI) remained considerable, and total numbers of diagnoses were increasing. Second, the increase in infectious syphilis had continued. Although overall numbers were much smaller than for other STIs, there had been a fivefold increase since 2000, with wider geographical and behavioural spread. The increase in female cases meant that there would be a possibility of congenital syphilis re-emerging if antenatal screening in pregnancy was not applied universally. Third, the increase in diagnoses of gonorrhoea and syphilis in MSM in London reflected ongoing risk behaviour, and these bacterial STIs are known to facilitate the transmission of human immunodeficiency virus (HIV).

**News from abroad**

The effort to ensure the destruction of live influenza virus panels that were inadvertently distributed to 3747 laboratories in 19 countries was completed during this quarter. The panels, which contained the influenza virus strain A/Japan/305/57 (H2N2), an influenza strain similar to that which caused the 1957–1958 influenza pandemic, were distributed to 19 countries.

One panel was sent to a laboratory in the United Kingdom and was confirmed as destroyed in April. The College of American Pathologists (CAP) requested that all laboratories in receipt of the H2N2 virus panels confirm their destruction and alert national authorities of respiratory disease among laboratory workers. Concern was generated by the incident because of the particular strain of influenza distributed by CAP. The influenza A/Japan/305/57 H2N2 virus, circulated at the beginning of 1957, was highly transmissible among humans causing annual epidemics until 1968, when it ceased to circulate in the human population. As influenza A/H2N2 is not included in the current trivalent vaccine, individuals born after 1968 are expected to have limited or no immunity to H2N2 infection.

**Publications**

World Health Organization (WHO) updated its Global Influenza Preparedness Plan (GIPP) in April. The new plan, which replaces that published in 1999, reflects the output from an international consultation exercise that took place in late 2004, in which the HPA participated actively. It defines the phases of a pandemic to bring the transition between phases into closer alignment with the need for changes in public health actions at international and national levels. The previous ‘interpandemic’ and ‘pandemic’ periods have been supplemented by a third intermediate ‘pandemic alert’ period. There are six separate
phases, of which three (phases three to five in the pandemic alert period) reflect the possibility that a pandemic will emerge gradually from a virus that initially does not transmit readily from person-to-person, but which subsequently adapts to its new human host and becomes increasingly transmissible from person-to-person. More emphasis is placed on rapid public health interventions, which might contain or delay the spread of a new influenza virus subtype in humans before it reaches phase six – the onset of a pandemic. The revised GIPP also reflects more explicitly the human health risks posed by non-human influenza viruses (e.g. avian viruses). Specific objectives and recommended actions for WHO and national authorities are laid out for each pandemic phase, with subdivision into countries ‘affected’ and ‘not yet affected’. The plan also provides for harmonization with the new International Health Regulations (IHR)\(^\text{19}\) which were approved by the World Health Assembly on 25 May. The HPA Influenza Pandemic Contingency Plan\(^\text{15}\) will be revised to reflect the new WHO phases and the relevant recommended national actions.

The new IHR was approved by the World Health Assembly.\(^\text{16}\) The IHR are a legally binding code of practices and procedures designed to prevent the international spread of infectious diseases, while minimizing interference with world travel and trade. The existing regulations were agreed by the member states of WHO in 1969 and include procedures for notification of certain diseases, health-related rules for international travel and trade, procedures and practices at ports and borders and documentation requirements. The revision of the Regulations has been underway for several years with participation by all 192 member states of the WHO. During this process, the HPA, in consultation with counterparts in the devolved administrations, has advised the Department of Health and others in preparing a position on the proposals for the United Kingdom. The new rules extend beyond infectious diseases to rare instances of chemicals or even radiation posing an international threat. Countries will have much broader obligations to build national capacity for surveillance and response, as well as routine preventative measures (such as public health actions at ports and for means of transport). A particular emphasis is on developing the ability as to detect and respond to public health emergencies of international concern and share information about them, with a code of conduct for notification and response. Specific attention is placed on detecting the emergence of new diseases or novel variants of new diseases. There is also provision for detecting deliberately released agents, although terms like bioterrorism are avoided. The regulations include a list of diseases, such as smallpox, polio and severe acute respiratory syndrome (SARS), whose occurrence must be notified to WHO, but also include a matrix to help national authorities to decide whether other incidents constitute public health events of international concern. Consideration is made of whether an outbreak is serious, unusual or unexpected, whether there is a significant risk of international spread and whether there is a significant risk of international travel or trade restrictions. After being adopted by the World Health Assembly, the regulations will formally come into force in 2 years. WHO member states will now have to assess their capacities to identify and verify events, as well as to control them. The regulations identify specific capacity requirements that must be in place in each country within a fixed timeframe.

In May, the HPA published a report, *Protecting the health of the Nation’s children: the benefit of vaccines*. This was the Agency’s first national report on the current status of universal vaccine programmes in the United Kingdom. The report is an important source of information for both the public and healthcare professionals on the monitoring and control of vaccine preventable diseases and the introduction of new vaccines. It sets out the reasons why infectious diseases are monitored, while identifying the different sources of information; defines the role of the Agency’s CfI in improving the understanding of communicable diseases and the impact of vaccines and provides information on how vaccine effectiveness is measured and how mathematical models are used. The report is available on the HPA Website at http://www.hpa.org.uk/hpa/publications/publications.htm.

**Features**

**Exercise Atlantic Blue**

Exercise Atlantic Blue was an international exercise involving the United Kingdom as part of a joint United Kingdom/United States/Canadian counter terrorist exercise. It was designed to examine and test individual and collective responses to a complex but credible international scenario across three countries and two time zones. Exercise Global Resolve was the overall name of this exercise with ‘Atlantic Blue’ as the UK component, the US element was ‘TopOff3’ and Canada ‘Triple Play’.

The exercise provided an opportunity to further enhance the ability of these countries to deal with terrorist events on an international scale and was the first time the HPA had been involved in such an extensive exercise. Planning for the exercise took 2 years, and the objectives were

- **Incident management**: To test the full range of existing procedures for domestic incident management of a terrorist event and improve, through practice, top official’s capabilities in affected countries to respond in partnership.
- **Intelligence/investigation**: To test the handling and flow of operational and time-critical intelligence.
- **Public information**: To practice strategic coordination of media relations and public information issues in response to linked terrorist incidents.
- **Evaluation**: To identify lessons learned and promote best practice.

Around 2500 people in the United Kingdom were involved in the planning and delivery of the Exercise. These included representative from the home office and other government
departments, the Metropolitan Police Service and a wide variety of London agencies, including emergency services, utilities and local government. From the health side, the Department of Health, the NHS, including the Ambulance Service, and the HPA were involved.

The exercise was a command post exercise that ran continuously for 5 days. This means that incident control rooms and the appropriate committees were established, but there was no live play on the ground.

For the HPA, the main objectives were to test international/national liaison and communications, to test the national HPA contingency plans, to practice the Strategic Emergency Response Arrangements and to test the appropriateness of these plans during the immediate action phase, the response phase and early recovery phase of a major CBRN incident.

The scenario involved a catastrophic incident involving chemicals and biological materials and resulted in the HPA working closely with colleagues in the emergency services, government departments and the NHS. The HPA provided specialist advice relating to the biological material from its CfI at Colindale and for the chemicals from its Chemical Hazards and Poisons Division whose headquarters is at Chilton in Oxfordshire. In addition to testing the HPA Strategic Response arrangements, the exercise provided the opportunity for many staff to experience the nature and pressures that would be involved in a real incident.

This exercise was particularly testing owing to its length and the international nature of the scenario. Many lessons were identified, and these will help streamline emergency response capabilities in the future.

A new centre for radiation, chemical and environmental hazards

From 1 April, 2005, National Radiological Protection Board’s (NRPB’s) headquarters (HQ) at Chilton has become the HPA’s Centre for Radiation, Chemical and Environmental Hazards (CRCE), having previously extended a welcome to the Chemical Hazards and Poisons Division (CHAPE) of the HPA. The Director of the Centre is Dr Roger Cox, the former Director of NRPB.

NRPB, which had existed for over 30 years providing valuable research and information on radiation and its effects, merged with the HPA to form the CRCE. The Centre now houses two divisions, the Radiation Protection Division (RPD) and CHaPD.

RPD is responsible for the HPA’s work on ionizing and non-ionizing radiations. It undertakes research to advance knowledge about protection from the risks of these radiations; provides laboratory and technical services; runs training courses; provides expert information and has a significant advisory role in the United Kingdom. The division makes extensive use of the HPA website http://www.hpa.org.uk in order to communicate information to the public.

CHAPE provides comprehensive expert advice and support for chemical incidents affecting human health across England and Wales. This support is provided to UK government departments and agencies where an incident affects water soil or waste. The division also supplies information and support to the NHS and health professionals by giving advice on acute and chronic toxicology issues. The division also commissions the National Poisons Information Service.

The integration of the services enable clear, concise and consistent advice to be provided to all parties with an interest in health protection from chemical hazards and poisons. Further development of information for the HPA Website is ongoing.

The CDAHP series is prepared by the HPA with the assistance of colleagues in partner organizations in health protection.

Reports prepared by Neil Hough (Events), Mike Barker (Exercise Atlantic Blue) and Martin Whild (A new centre for radiation, chemical, and environmental hazards), and edited by Neil Hough and Barry Evans.

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4 HPA. Nationally co-ordinated hepatitis C look-back in England and Wales. This support is provided to UK government departments and agencies where an incident affects water soil or waste. The division also supplies information and support to the NHS and health professionals by giving advice on acute and chronic toxicology issues. The division also commissions the National Poisons Information Service.

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