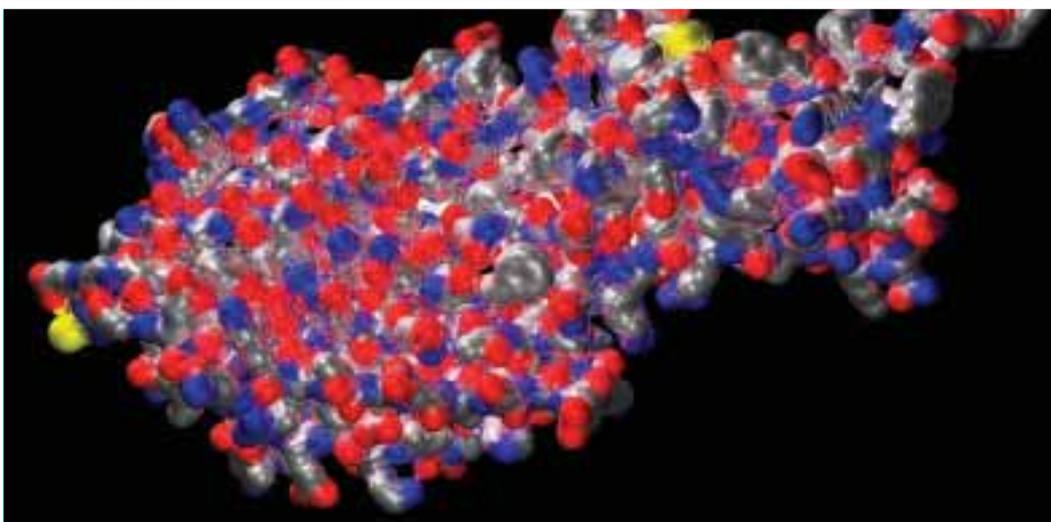


# Health Protection Agency

ANNUAL REPORT & ACCOUNTS 2007

“Because of the way the Agency had prepared for emergencies, it could move rapidly into action to deal with the Polonium-210 incident.”



# Protecting People's Health

The Health Protection Agency is an independent organisation dedicated to protecting people's health in the United Kingdom. We do this by providing impartial advice and authoritative information on health protection issues to the public, communities, professionals and to government.

We combine public health and scientific expertise, research, and emergency planning within one organisation. We work at international, national, regional and local levels and have links with many other organisations around the world.

## Our role includes:

- Providing impartial expert advice on health protection and providing specialist health protection services
- Identifying and responding to health hazards and emergencies caused by infectious disease, hazardous chemicals, poisons or radiation
- Anticipating and preparing for emerging or future threats
- Supporting and advising other organisations with a health protection role
- Improving knowledge about health protection through research and development, education and training.

Our expertise is provided by specialist medical, nursing, scientific and technical staff, backed by administrative and support functions. We have a network of local and regional teams who work with GPs, hospital clinicians and other healthcare providers. Our laboratories help in the identification and analysis of disease or environmental samples. We have experts who monitor disease trends, chemical specialists who advise on the health effects of environmental hazards and radiological experts who advise on ionising and non-ionising radiation. Emergency response teams support the country's readiness and response to unexpected threats, both natural and deliberate. Our research programmes aim to develop new ways of diagnosing, treating and controlling disease and establish how health is damaged by exposure to harmful substances.

Protecting Health, Preventing Harm, Preparing for Threats

For more information on our work visit our website: [www.hpa.org.uk](http://www.hpa.org.uk)

## SOME HIGHLIGHTS FROM

# 2006/07

### APRIL

The Agency was informed that a poultry worker, on the Norfolk poultry farm where an outbreak of H7N3 avian influenza had been found, was suffering from conjunctivitis caused by H7 avian influenza. The Agency's laboratories analysed samples and H7 was confirmed. The local Health Protection Unit provided guidance, advice and preventative medication where appropriate.

The 20th anniversary of the Chernobyl accident reinforced the importance of the role taken by the Agency's Radiation Protection Division (then known as the National Radiological Protection Board or NRPB) in estimating the scale of fallout from the accident and giving advice around the world.

The Agency's annual Donaldson lecture was given by Dr David Heymann, Representative of the Director General for Polio Eradication, World Health Organization (WHO), on the emerging infectious diseases threatening frontline health workers.

The Agency, Northumberland Care Trust and local environmental health officers investigated an outbreak of norovirus affecting over 100 people, including 62 members of staff and 42 guests in a hotel in the Hexham area.

### MAY

The preliminary conclusion of a health surveillance study carried out by the Agency and three local Primary Care Trusts in the Hertfordshire area was that there is currently no evidence of a lasting public health risk from exposure to the smoke plume from the Buncefield oil depot explosion.

The Agency's Centre for Emergency Preparedness and Response received Select Agent Registration from US authorities following a stringent audit of our facilities and security enabling us to work on US biodefence contracts.

A new multi-million pound Medical Toxicology/Bio-monitoring Research Centre for the study of poisons, a joint venture between Newcastle University and the Agency, opened in Newcastle. The Centre brings together international experts from the University and the Agency to carry out research into diseases caused by exposure to toxic chemicals and help to identify preventive measures to improve the protection of the public's health from exposure to toxic chemicals.

### JUNE

Following 11 deaths from malaria in 2005, the Health Protection Agency urged travellers taking summer holidays in destinations where malaria is prevalent to take precautions against contracting this disease. The majority of those who died took either inappropriate or no preventive drugs.

The Agency received reports of 449 confirmed cases of measles in England and Wales up until the end of May 2006, a higher figure than for the whole of 2003 and the highest figure since the current method of monitoring began in 1995.

### JULY

The Agency released figures showing that the number of sexually transmitted infections (STIs) diagnosed increased by 3 per cent between 2004/05. There was a significant increase in the number of new syphilis diagnoses, which rose by 23 per cent from 2,278 in 2004 to 2,807 in 2005. But over the same period new cases of gonorrhoea fell by 13 per cent, a substantial decrease for the second successive year.

On 20 July 2006 an Outbreak Control Team led by the Agency announced that consumption of products made by Cadbury Schweppes was the most credible explanation for an outbreak of *Salmonella Montevideo* that had affected 49 people at that time.

### AUGUST

Signs of contamination (arsenic and lead) were found during routine planning application tests on land at Fulford Cross in the centre of York. The area included allotments, a nature reserve, a walled garden and playing fields used by a local school. Precautionary health advice was issued to local people and a joint investigation between the Agency, York Council and the local Primary Care Trust took place. The investigation concluded that the levels of contamination on the site did not pose a significant risk to human health and the area was safe to use provided precautionary basic hygiene measures were followed.

### SEPTEMBER

Over 1000 delegates took part in the Agency's most successful conference to date. The conference focused on the latest scientific research and its practical application to health protection.

Interim results from the first year of a study to examine the level of MRSA blood poisoning in children, has shown 147 cases in children under the age of 16 between June 2005 and July 2006.

Reports received from all regions in England and Wales show an increase in the number of cases of Legionnaires' disease reported since the beginning of August 2006.

The Agency developed a new system to improve the UK's preparedness for a future influenza pandemic. Surveillance experts at the Agency worked with the University of Nottingham, and GPs to develop a new data collection system called QFLU. The QFLU network incorporates nearly 3,000 GP practices across the UK covering over 17 million people. The practices contribute daily aggregated data on clinical diagnoses and prescribing to a central database throughout the year. QFLU is the largest surveillance scheme of its kind in Europe.

An increased number of travellers returning from the Indian Ocean were identified as having Chikungunya fever due to an on-going outbreak in that part of the world. The Agency raised awareness that there are other diseases, besides malaria spread by mosquitoes and people should take precautions.

### OCTOBER

NHS Borders, Health Protection Scotland and the Health Protection Agency worked together on an anthrax case in the Scottish Borders. Interim results confirmed that minute quantities of anthrax spores had been detected in three drums and two imported animal skins used in the making of

African drums. Experts concluded that the risk of being exposed to anthrax spores through drumming alone, or merely handling these drums is extremely low.

The Agency launched a consultation to look at the social and ethical implications of a blood test for variant-Creutzfeldt-Jakob disease (vCJD), should a test become available in the near future.

A report released by the Agency showed that around one in 50 Injecting Drug Users (IDUs) in the UK are now infected with HIV. Increasing evidence suggests that crack cocaine is a major factor.

## NOVEMBER

The Agency led the public health response to the on-going Metropolitan Police investigations into the death of Alexander Litvinenko associated with Polonium-210 (Po-210) poisoning. This work continued for the rest of 2006/07.

Cases of Tuberculosis (TB) in England, Wales and Northern Ireland have increased by 10.8 per cent from 7,321 cases reported in 2004 to 8,113 in 2005, according to figures released by the Agency.

The Agency reported that an estimated 63,500 adults are now living with HIV in the UK. This latest figure included both those who have been diagnosed, and also around a third (20,100), who remain unaware of their infection.

An updated service supplying 'radiation badges' to people who work with radiation was launched by the Agency. This new personal dosimetry service uses thermoluminescence dosimeters (TLDs), often known as 'radiation badges'. The Agency's dosimetry service currently provides dosimeters for about 50,000 wearers in the UK and elsewhere.

World War Two home guard potassium grenades were found in a back garden in Wiltshire. The local Health Protection Unit was involved in a multi-agency response which included the fire brigade, police and army. A controlled explosion was carried out and the substance identified by staff at the Chemical Hazards and Poisons Division.

## DECEMBER

A report from the Agency showed that the number of people newly diagnosed with hepatitis C has increased; from 2,116 in 1996, to 7,580 in 2005. The latest estimates on the number of adults infected with hepatitis C showed there were around 231,000 in 2003. Many of these infected people do not realise they have the virus as it can take years or even decades for symptoms to appear.

Eight cases of Panton-Valentine Leukocidin (PVL)-positive community-associated MRSA were identified in the West Midlands. Four of these individuals developed an infection, two of whom subsequently died. This outbreak is the first time transmission and deaths due to this strain are known to have occurred in a healthcare setting in England and Wales.

A pneumonia outbreak caused by an unusual strain of pneumococcus in a North Tyneside Primary School led to three children needing admission to hospital. Despite giving preventative antibiotics to the whole reception year at the end of October after the first three cases were identified, another two cases occurred, resulting in the whole year group being offered vaccination.

## JANUARY

A new case of variant-Creutzfeldt-Jakob disease (vCJD) associated with a blood transfusion has recently been diagnosed. The patient is one of less than 30 living individuals who are known to have received a blood transfusion about nine years ago in the UK from a donor who later developed vCJD.

The Agency announced a collaboration with the Serum Institute of India Ltd to develop a vaccine for the prevention of meningococcal septicaemia and meningitis, which it is hoped will be effective against all forms of the disease and may eventually be used to save children's lives throughout the world.

The Agency was a key player in the design and running of Winter Willow One. Winter Willow Two was in February and was described as the largest Civil Exercise since the Cold War.

## FEBRUARY

The Department for the Environment Food and Rural Affairs (Defra) confirmed H5N1 avian influenza on a poultry farm in North Suffolk. Tests for avian influenza carried out by the Agency on four people produced a negative result. The Agency also carried out a risk assessment concluding that the risk to the worker's health would be very low.

The Chemical Incidents in England and Wales 2005 Report was published by the Chemical Hazards and Poisons Division. In 2005, 1040 chemical incidents were recorded for England and Wales, compared to 871 in 2004. The incidents ranged from the largest explosion in post-war Europe at the Buncefield oil depot, to domestic spillages of mercury.

A specialist InterLab Forum (ILF) two day Workshop entitled 'Sampling - the way ahead' organised by the Agency, was held at the Central Science Laboratory in York in February 2007. Six key government scientific agencies have developed a collaborative infrastructure through the InterLab Forum to improve national response and resilience to emergencies. These agencies respond to a variety of emergencies ranging from disease outbreaks to explosions and unplanned radionuclide releases into the environment.

## MARCH

The Agency held a special conference in London to share the public health experience of the Polonium-210 incident with front-line colleagues from across the world. Details of the 52 overseas countries and territories involved in the public health follow-up were presented as part of the event. An extensive monitoring programme of people and places identified by the police investigation, established that the risk to the general public from any exposure to Polonium-210 (Po-210) is likely to be very low.

The Food Standards Agency and the Health Protection Agency alerted consumers that sandwiches supplied to establishments in London and the South East of England may have been contaminated with Listeria.

Reports to the Agency show there has been a rise in the number of people infected by ticks carrying Lyme borreliosis (Lyme disease). Since 2003, the number of people being infected has increased year on year from 292 reported cases in 2003, to a provisional figure of 684 in 2006. A significant number were acquired in the course of leisure activities including walking and mountain-biking.

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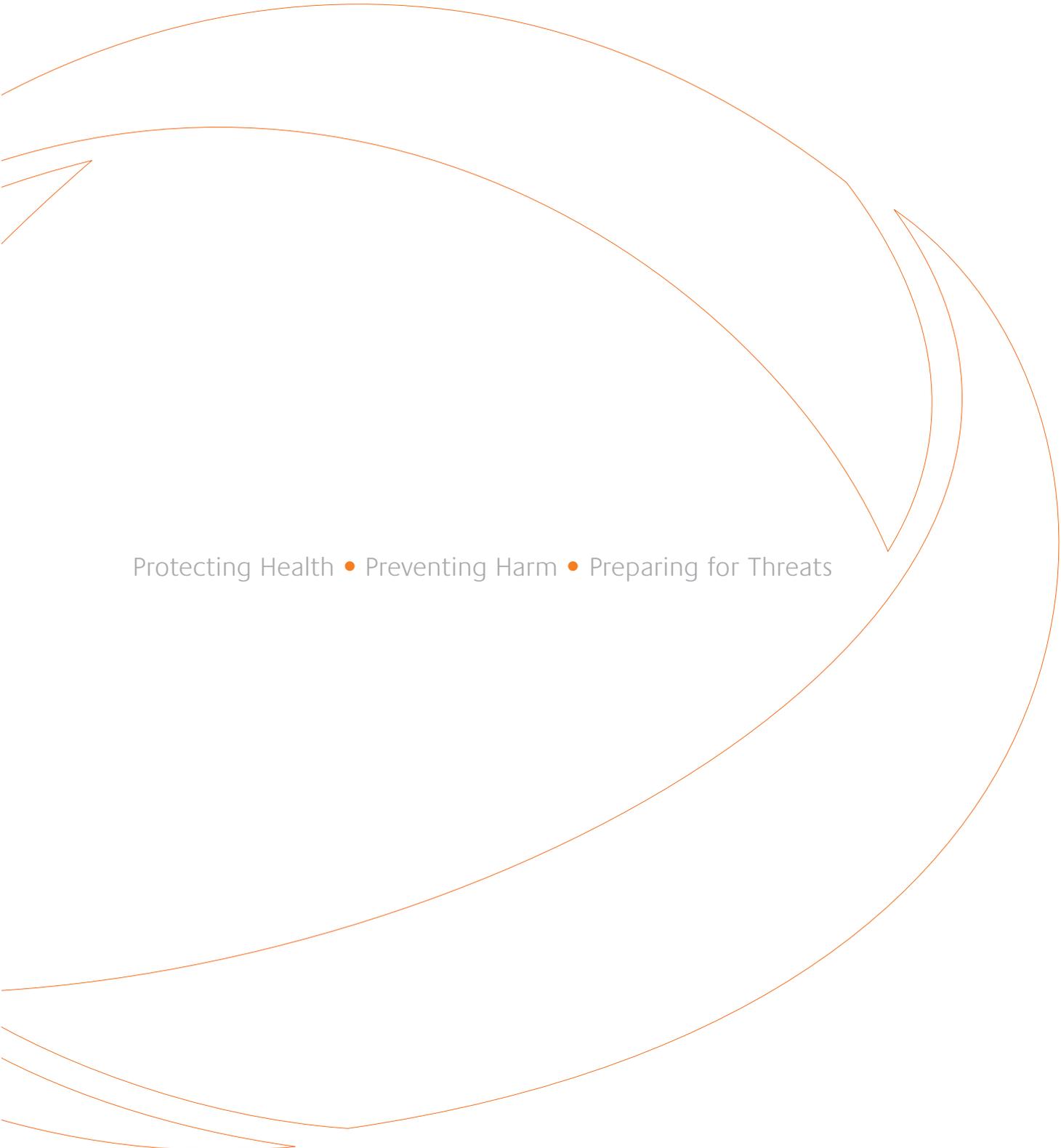
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Protecting Health • Preventing Harm • Preparing for Threats



## CHAIRMAN'S STATEMENT

It gives me great pleasure to introduce the 2006/07 Annual Report of the Health Protection Agency. This has been our busiest year ever. In this report the Chief Executive and her team highlight the extensive and detailed work that we carry out on infectious diseases, chemicals, radiation and environmental hazards. Our role is to work with our sponsors, particularly the Department of Health, other government departments and agencies, the devolved administrations and those in the private sector, to provide first class expertise, skills, analyses, and advice to improve public health protection for the people of the United Kingdom. As in previous years, the Agency has managed to balance its year-end budget. We also won, in competition, 39 per cent of our total income from sources other than our core Department of Health budget. I congratulate staff at all levels and throughout the Agency for their hard work, endeavour and excellence in what they have achieved.

2006/07 further demonstrated our unique strengths in public health protection. The Polonium-210 poisoning incident highlighted our ability to respond quickly, effectively and in a coordinated way. It harnessed our collective strengths, particularly, but not exclusively, in radiation protection, emergency preparedness, local and regional services and communications. I have no doubt that the incident would not have been dealt with as effectively and as quickly if the different sectors involved had not been part of a single corporate Health Protection Agency.

But the Polonium-210 incident is simple compared with the resilience that the Agency and the UK will need if a readily transmitted infectious 'flu pandemic arrives. The UK is as well prepared for this as any country in the world and the ongoing importance of the Agency has been emphasised by the key role we have been given by the Government on pandemic 'flu preparedness. We have also been given a new leading role in the monitoring and surveillance of port health both at sea ports and at airports.

This year we have also been seeking to ensure that our main focus, skills, and activities are best aligned to the needs of the public. Let me mention three areas that we are seeking to continually enhance.

First, we need to continue to be proactive in taking forward issues of the moment such as the recent chocolate/microbial contamination issue. This problem was identified by our microbial surveillance team, who proactively alerted the Food Standards Agency, which has regulatory responsibility for food safety and important action was taken. Good positive relations with other agencies are key to our success.

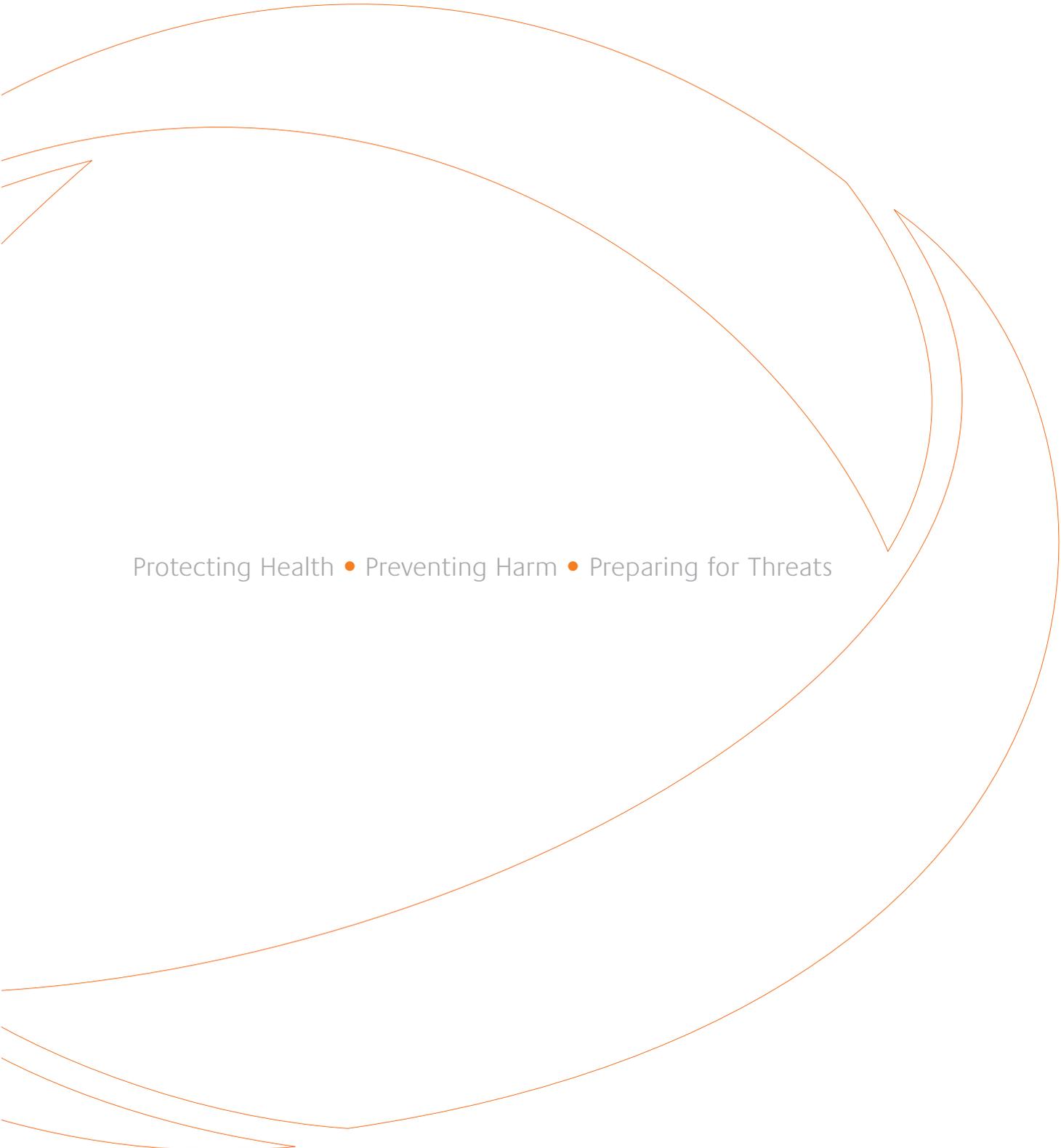
Second, we need to become increasingly proactive so that issues likely to be of forthcoming concern to the public are routinely considered in detail before they become a problem, and that well-considered advice to the general public is clearly set out in a series of authoritative reports and guidance.

Third, we are continuing to strengthen our scientific evidence base and intend to appoint a Corporate Research and Development Director to enhance our research funding base, focusing on translational research.

Finally, I would like to express my thanks for the good relationships which the Agency enjoys not only with the Westminster government and officials, but also with the devolved administrations in Wales, Scotland and Northern Ireland.

A handwritten signature in black ink, which appears to read 'William Stewart'. The signature is written in a cursive style and is positioned above a horizontal line.

SIR WILLIAM STEWART FRS

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## CHIEF EXECUTIVE'S OVERVIEW

I am very pleased to present our fourth Annual Report on the work of the Health Protection Agency. As we have become more established and recognised, the demands on us have increased, and I am very grateful to staff for their tremendous hard work, willingness to look at new ways of working and overall professional response.

One of the reasons we were set up was to ensure an integrated response to emergencies, and this has been demonstrated more than once this year, the most notable being Polonium-210 and Avian Influenza. They demonstrated the value of bringing together high quality science with public health delivery in a national service, and working on a multi-agency basis. They also taught us to 'expect the unexpected'. Each year since we started we have been involved in at least one major incident, all different, so our teams are continuously strengthening their systems to be ready for the next one.

These incidents bring us to the fore in the media, but much more of our work goes on in the background. We must work to ensure that we have in place systems and activities that prevent problems arising, to be ready to respond quickly and effectively when they do, and give the public confidence that when they seek advice and information, it is authoritative, impartial and based on the latest evidence.

So over the past year, we have continued to scrutinise our services to make sure they are 'fit for purpose'. We have looked forward to the 'laboratory of the future' and new surveillance systems, and are introducing new technology. We have published an increasing number of reports and guidelines and strengthened our website. Our conference, 'Health Protection 2006', attracted over 1000 delegates and we held a successful international conference on Polonium-210, as well as many regional and professional meetings and workshops.

To underpin our work, we have strengthened our management, standards and governance. This was our first year for full assessment against the Healthcare Commission standards, and we have 'balanced our books'.

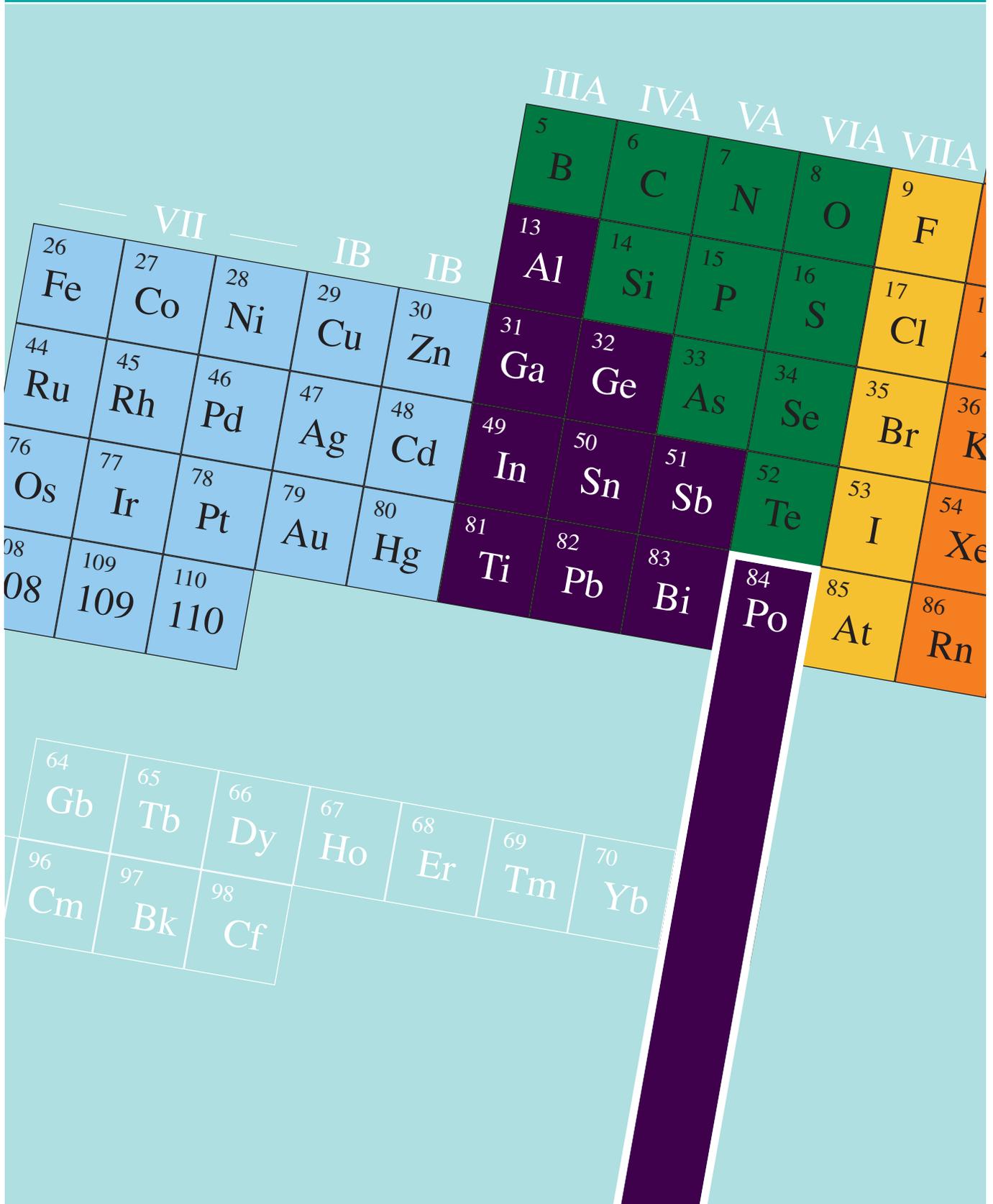
None of this have we delivered on our own. Health protection is the responsibility of many organisations, and we work with colleagues in other national agencies, government departments, the NHS and local authorities, international bodies and many others. Many of these have also been undergoing change, so it has required additional effort to maintain relationships, which are vital to all that we do.

Despite the hard work, it has been an exciting year, seeing the Agency take another step forward to being the integrated public health protection system envisaged in the original proposal in the Chief Medical Officer's report 'Getting Ahead of the Curve'.

A handwritten signature in black ink that reads "Pat Troop". The signature is written in a cursive, slightly stylized font.

PROFESSOR PAT TROOP CBE

*“Because of the way the Agency had prepared for emergencies, it meant it could move rapidly into action although there was no specific Polonium-210 plan.”*



# Polonium -210

# 1

One of the biggest news stories in late 2006 also turned out to be the largest single incident the Health Protection Agency has had to deal with since its creation.

The death of Alexander Litvinenko in November 2006 associated with Polonium-210 (Po-210) poisoning was an unprecedented event in the UK. The resulting public health investigation was led by the Agency, working alongside the police who were leading the criminal inquiry.

Once Po-210 was identified, the Agency had three clear challenges:

- To identify individuals who could have been exposed and establish the radiation dose they may have received
- To prevent further members of the public from being exposed to radiation
- To inform the general public of its findings and on-going investigations.

Nearly 500 people from across the Agency were involved in the response which continued for many months. The unique nature of the incident meant it was vital that our scientists, frontline staff, emergency planning and communication experts worked closely together to build on existing knowledge, and develop the tools, tests and tactics needed to respond rapidly and effectively.

We also worked in close partnership with colleagues in the NHS; in particular NHS Direct (a confidential helpline which provides health advice), University College London Hospitals and Barnet General Hospital, the Metropolitan Police, Westminster City Council, the Health and Safety Executive and colleagues from Government Departments. This approach was coordinated across Government by the Impact Management and Recovery Group which was chaired by the Cabinet Office, as it was essential that the public was protected and reassured. There has also been good co-operation from the people and businesses affected by the incident.

Many of the visitors to the London hotels and restaurants involved were also from other countries. This required liaison with overseas countries and territories and public health bodies across the world through the Foreign and Commonwealth Office.

Monitoring teams from the Agency and other contractors (under the control of the Agency) worked around the clock to check the open public areas of premises identified by the police as being of concern due to the presence of contamination. Throughout the incident the police were responsible for monitoring the areas sealed off as part of their investigations.

Using information from the monitoring teams about which locations had been contaminated, the Agency then contacted individuals identified as being potentially at higher risk of radiation exposure. These individuals included Mr Litvinenko's family

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# Polonium-210

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and the healthcare workers who had treated him, those working in various contaminated premises, as well as those people who contacted NHS Direct following the Agency's two public appeals.

Over 750 people followed up in this way in the UK, were asked by the Agency to provide urine samples for testing as a precaution; 137 showed exposure to Po-210. Of these, a small number (17), had results above 6 millisieverts (mSv – a measurement of radiation dose to the body). This level of radiation was not significant enough to cause any illness in the short term, and any increased risk in the long term was likely to be very small. Careful risk analysis of exposure, and calculation of doses were carried out by radiation experts in the Agency, to be able to inform the individuals of their risk. Our clinical staff explained in person the significance of the results and these risks to this small group and follow-up tests for Po-210 have been offered to them as a precautionary reassurance measure.

The work carried out by the Agency has attracted world-wide scientific interest; in March we held an international conference to share our experience with fellow health protection professionals. We were also visited by a delegation from the International Atomic Energy Agency to hear about the response to the incident.

The incident has allowed many valuable lessons to be learnt and we will build on our experiences to plan for the next emergency. It has also highlighted the importance and value of a single health protection agency to protect the health of the public in such emergencies.

## *Urine testing*

Before this incident there was no routine testing for Po-210 contamination in the population in the UK. Agency scientists had to develop a mass urine testing process which was sensitive enough for public health purposes - and they had to do it quickly.

We all have traces of Po-210 in our bodies because it is a naturally occurring radioisotope present in water,

food and plants, notably tobacco. The Agency needed to distinguish between natural levels of Po-210 in urine and any elevated levels indicating exposure to Po-210 associated with an incident.

A test for environmental samples, such as food was adapted. It relied on a process to separate and concentrate the polonium content of urine and then measure the alpha signal emitted. The testing process required a person to collect all their urine for 24 hours in order to give sufficient material to test for Po-210. The Agency laboratory, together with supporting teams from other organisations, would then need several days to complete the test. This is because of the necessary slow evaporation and concentration process required to transfer the material into a form suitable for measurement in an alpha radiation spectrometer.

The radiation dose assessment procedure based on the urine measurement was then put into operation, utilising the latest scientific research on the behaviour of Po-210 in the body and on radiation dosimetry (the way exposure to radiation is accurately measured). Stringent checks were undertaken by Agency staff to ensure the quality of the final results. This dose assessment work was complemented by environmental assessments which explored various routes of potential exposures to Po-210.

## *Comparisons of radiation exposures*

By March 2007, the Agency's Po-210 testing process had identified 17 people with radiation doses above 6 mSv, 35 people between 1 and 6 mSv and 85 people below 1 mSv. To put these radiation doses into perspective, the average radiation dose to a UK citizen from natural sources is about 2 mSv each year, and can vary, to more than 10 mSv a year depending on local geology. Other comparison exposures include:

Standard chest x-ray – 0.02 mSv  
Return flight (London – New York) – 0.1 mSv  
CT scan of the head – 2 mSv

CT scan of the pelvis – 10 mSv  
Whole body CT scan – 30 mSv

*“This type of hazard had not been anticipated, there was no specific Polonium-210 plan, but the generic preparedness of the Agency acquired through exercises and previous incidents and embodied in its Strategic Emergency Response Plan enabled the Agency to move rapidly into action”.*

Professor Nigel Lightfoot, Health Protection Agency  
Director Emergency Response.



### *Communications*

The illness and death of Mr Litvinenko attracted immense national and international media interest and speculation. It was into this arena that the Agency stepped when it held its first press conference on 24 November 2006, the day after Mr Litvinenko's death. This press conference was vital in 'setting the tone' by explaining clearly and calmly the facts as they stood then, and putting the risks into context.

In the first days of the incident the Agency's Chief Executive, Professor Pat Troop gave many media interviews. Press statements were issued almost every day for the first three weeks, as well as responses to several hundred media questions and ensuring our website was updated regularly with information for the general public and concerned individuals.

The majority of media coverage was balanced, and reiterated the key public health message that the risk to the general public was likely to be very low. Research has since confirmed that the majority of people aware of the incident had heard, and felt reassured by, this message.

*"The team responding to the incident involved all parts of the Agency; demonstrating that no single part of the organisation could have responded on their own".*

Dr Roger Gilmour, Director, Health Protection Agency Centre for Emergency Preparedness and Response and Po-210 Incident Director.

*“If all prisoners could be vaccinated, outbreaks of hepatitis B could become a thing of the past in our communities.”*



Courtesy: Prison Reform Trust

# Prison Health

The UK has one of the largest prison populations in Europe. At any one time, there are just over 76,000 people in the 140 prisons in England and Wales and, over the course of a year, around 166,000 people will pass through the prison system.

From a health perspective, many of these people come from groups which are especially vulnerable to infection and illness like Intravenous Drug Users (IDUs). They also tend to be the groups which are most difficult for health services in the community to help and treat.

As a result, the prison population has higher levels of bloodborne infections, such as hepatitis B and C (which cause inflammation of the liver and can lead to long-term liver damage). The institutional setting of prisons mean easily transmitted infections, like mumps and chickenpox, can have a high impact very quickly. In addition, issues like mental health problems, alcohol addiction and smoking are very prevalent.

A very small percentage of the prison population will spend the rest of their lives in prison. Most travel, not only between different prisons, but also in and out of prison, frequently. The top 25 per cent most frequently imprisoned IDUs will have completed at least seven prison sentences. If diseases are not effectively controlled, prisoners are more likely to pick up infections whilst in prison, which can then be passed on to family and contacts in the community.

For public health practitioners, prisons are a perfect opportunity to offer screening, prevention and treatment programmes. Relatively straightforward interventions in prisons (such as offering immunisations to prisoners) can have very positive effects both on the health of marginalised and difficult to reach groups, and on the health of the wider community outside prisons.

Surveys of IDUs in the community have shown that those who had been immunised to protect them against hepatitis B were most likely to have received the vaccination whilst in prison. At the same time, outbreaks of hepatitis B in communities are reducing, as more people have been vaccinated against the disease whilst in prison.

## 2

We are working closely with the Department of Health and Regional Prison Health Development Teams, who are responsible for prison health, and local primary care trusts (PCTs) who provide prison health services in prisons in their areas, to try and ensure all health services make the most of the opportunities available in prisons both to prevent and treat infections.

### Prison Health - the Agency's contribution

The Agency has a Prison Infection Prevention Team, based at the Centre for Infections in Colindale, which co-ordinates surveillance of infectious diseases affecting prisons. In addition, teams from the Agency's Local and Regional Services Division work closely with individual prisons.

Our main responsibilities in relation to prison health include:

- Monitoring the national prison hepatitis B vaccination programme and improving vaccine coverage
- Providing regular information to prison healthcare staff on infectious diseases affecting the prison population. This includes producing a quarterly bulletin on infectious disease
- Improving the reporting of notifiable diseases in prisons
- Facilitating the development of policies for infection prevention and control in prisons
- Giving advice to prison staff on health issues at local level and supporting the management of outbreaks of infectious disease in prisons
- Offering support, advocacy and expert advice to support health organisations in commissioning health services in prisons.

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# Prison Health

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Alongside the team, the Agency also has a national Health Protection in Prisons Steering Committee, which links with the Department of Health and agrees priorities (currently hepatitis B and C and tuberculosis) and an annual work programme. Each of the Agency's nine regions also has a member of staff with lead responsibility for prison health. They form a network to share work and ideas and standardise the type of services local Health Protection Units offer to prisons.

## Preventing infections in prisons

The prison population is more vulnerable to a number of serious infectious diseases. The Agency is working with its partners to lead the prevention and control of communicable disease in the UK's prison population in many areas. These include tuberculosis, where the close living environment potentially increases the opportunity for the infection to be passed on, sexually-transmitted infections, looking at improving measles, mumps and rubella and meningitis C vaccination programmes, and preparing for an outbreak of pandemic influenza, as well as opportunities for new and updated research.

The role the Agency plays is demonstrated in particular by work undertaken so far in relation to two bloodborne viruses – hepatitis B and hepatitis C.

## Hepatitis B

Hepatitis B is a bloodborne viral infection that causes inflammation of the liver and can lead to long-term liver damage.

Hepatitis B is caught through contact with infected blood or body fluids from someone with the virus. It can be spread from person to person by: sharing or using contaminated equipment when injecting drugs; through sexual contact with an infected person; accidents or injuries involving contaminated sharp instruments and, it can be passed by tattooing and body piercing using equipment contaminated with blood from someone with the virus.

Hepatitis B can be treated – but treatment is expensive and not all patients are suitable. However, there is a vaccine which can protect people against the virus.

Levels of hepatitis B are relatively low in the UK – with less than 2 per cent chronically infected people among

the general population. But levels rise to 8 per cent chronically infected among prisoners generally and to 20 per cent among prisoners with an injecting drug use history. The Prison Hepatitis B Vaccination Programme was set up in 2002/03. A pilot group of 22 prisons were funded to offer a programme of hepatitis B vaccinations to all new prisoners. Over the last four years, the number of prisons involved in the programme has increased and all prisons are now required to implement a hepatitis B vaccination programme from April 2007.

The Agency collects figures from prisons each month showing how many prisoners have been vaccinated and how many doses they have received. The findings are published monthly, including the percentage of the prison population who are vaccinated within a month of arrival or transfer. Prisons out-perform all other approaches to vaccination among IDUs, but there is still room for improvement, with the majority of prisons needing to increase the numbers of prisoners being vaccinated. The Agency is supporting the health service to use the information collected to promote developing prison health programmes and obtaining resources.

The Agency also uses the information, and other statistics, to show the potential impact the vaccination programme could have on reducing the total number of acute hepatitis B infections seen in the UK.

## *Improving hepatitis B vaccine coverage in prisons in London*

Hepatitis B vaccine coverage among prisons in London has been consistently low in the past. The prison healthcare teams and PCTs at two London prisons (HMPs Wandsworth and Pentonville) prioritised implementing the hepatitis B programme. They made it a routine part of the established health programme for all prisoners on reception, with the intention of all new arrivals receiving the three doses needed for full coverage within a month of arrival, following the Agency's recommendation to implement a 'super-accelerated' schedule over 21 days.

This 'super-accelerated' schedule, maximises the opportunity to make sure prisoners both start and complete the three-dose schedule. Many prisoners have short stays in prison before being either released or transferred elsewhere. For example, one half of prisoners entering HMP Pentonville are released or

transferred within two weeks. The high turnover of prisoners poses a challenge to healthcare interventions, but this is being overcome by systematically implementing hepatitis B vaccination programmes on reception to prison.

As a result, the vaccine coverage rates reported monthly at HMP Wandsworth increased from between 0 per cent and 2 per cent from January-March 2006 to 57 per cent in December 2006. Similarly, monthly rates reported from HMP Pentonville increased from between 6 per cent and 7 per cent from January to March 2006 to 50 per cent by December.

### *Hepatitis C*

Like hepatitis B, hepatitis C is a virus transmitted via infected blood which causes inflammation of the liver and can lead to long-term damage. But whilst the infection can be treated, there is currently no vaccine available to protect against hepatitis C.

The virus has very low prevalence in the general population – affecting just 0.5 per cent. But one study, for example, found 7 per cent of all prisoners and 31 per cent of prisoners with an injecting drug use history are infected, making prisons an ideal location to target treatment programmes.

The Agency is currently leading work to compare different models for providing treatment for hepatitis C (including in prisons) to identify the most clinically and cost effective methods, and then share the information with PCTs and other service providers.

### *Screening and treatment for hepatitis C in prisons in East Riding and Humber*

Agency staff in East Yorkshire and the Humber have worked with prison health staff and a consultant from Hull and East Yorkshire Hospitals NHS Trust to set up a screening and treatment service for prisoners in Hull.

All prisoners coming into prisons in the area are offered screening for hepatitis C. In 2005, 256 such tests were carried out in the prisons (26 per cent of the total carried out for the area) and 31 per cent were positive.

The screening programme is supported by a hepatitis C clinic run regularly within the prisons. The consultant and nursing staff visit the prisons and run the clinics inside, ensuring better consistency of treatment and reducing security issues which arise when prisoners have to be transported to hospitals for treatment.

Ongoing support is important for prisoners with hepatitis C, as the treatment can have a range of side-effects. The following story of “Prisoner Pete” illustrates some of the issues:

Pete is a young man taken into the Wolds Prison. Hepatitis screening on arrival showed him to be hepatitis C antibody positive – suggesting the presence of the virus.

He had been injecting heroin and Speed for at least 10 years, although had stopped injecting prior to entry into Prison. Instead he was taking large amounts of Benzodiazepines and Ecstasy. He had previously been very ambivalent about health care services and would not have come forward for screening or treatment if left to his own devices.

He was seen by the consultant in the prison clinic and confirmed to have chronic hepatitis C. After full explanation of his prognosis and potential for treatment, he became very keen to be considered for treatment.

He had 12 months of treatment, throughout which he had an extremely turbulent time, suffering side effects including: depression, anorexia and weight loss. He was supported throughout by the expert nursing and medical team both in prison and at the local hospital.

The prison service wished to transfer him out of area half way through his treatment but, following petition by the consultant, he was given medical leave to stay in the area. Although he was transferred to Hull prison, he continued and completed the treatment and was eventually free from the virus. He received this news shortly before he was released. Without doubt he only got through this time because he was in the controlled and relatively supportive environment of the prison. He would neither have accessed nor managed the full treatment if he had been in the community.

*“When a 'flu pandemic hits the country the top priority for the Government is to protect the public. The World Health Organization has said that the UK is at the forefront of preparations internationally, but it is always necessary to test our responses and improve them where required. Exercise Winter Willow is another part of the continual testing, refining, and developing of our plans.”*

Chief Medical Officer for England, Sir Liam Donaldson.

# Preparing for Emergencies

# 3

The response to any emergency requires seamless multi-agency working based on joint plans, which have been tried and tested through exercises. These exercises challenge the participants, identify where adjustments and improvements are required and provide a big step change in response capability. To facilitate this process, the Department of Health commissions the Agency to design and deliver an annual exercise and training programme, which is focused on improving and testing NHS response to emergencies across the English regions.

In addition to this programme, the Agency's Centre for Emergency Preparedness and Response (CEPR) has designed and delivered emergency exercises for the European Union across all Member States, for the World Health Organisation (WHO) Europe, involving Eastern European countries, for the European Centre for Disease Prevention and Control and across UK government departments to assist in pandemic influenza planning.

## Cross Government Influenza Pandemic Exercises

Planning for these exercises, which started in spring 2006, was led by the Agency, the Department of Health, the Civil Contingencies Secretariat (part of the Cabinet Office) and representatives from all government departments and regions. It resulted in three exercises - Exercise Shared Goal, Exercise Winter Willow I and Winter Willow II. Each explored a different phase of a global flu pandemic.

Exercise Shared Goal involved central government departments, the Government Offices of the South East and the East Midlands and the Devolved Administrations of Scotland, Wales and Northern Ireland. The exercise was intended to provoke reassessment of domestic and international contingency plans, based on emerging data from the World Health Organisation and other sources in the early stages of an influenza pandemic before it becomes global.

Exercise Winter Willow was the largest civil contingency exercise of its kind to be held since the end of the Cold War. The exercise fully tested the UK's ability to manage the effects of an influenza pandemic by playing out the decision-making process at national, regional and local levels, when the scenario described widespread cases across the country. The exercise took place in two stages: on 30 January 2007 when play was limited to Ministerial and senior policy official meetings and at national level on 19-20 February, prefaced on 16 February and followed on 21 February, by Regional Civil Contingencies meetings across the UK. The exercise evaluated the response of the NHS, local authorities and government departments to pandemic flu and provided an excellent opportunity to evaluate the planning assumptions, policy and operational procedures across Government and the NHS. The findings of Exercise Winter Willow will be fed into the Government's overall pandemic flu preparedness plan.



## Department of Health Regional Exercise Programme

**Exercise Green Goblin II** - Billingham in Teesside was the location for this one day table top exercise on 29th June 2006. It provided an opportunity for health professionals and others to practice and develop the strategic responses in the region to a major incident that involved a collision of a petrol and chlorine tanker. It explored the response to, and recovery from, the incident. The exercise studied the roles and responsibilities of the 'health community' during a major incident as well as providing the opportunity to exercise incident command and control on a multi-agency basis. The process for the delivery of consistent health advice to the public through the media was explored, including calling two mock press conferences. The exercise identified the need for gateways to modelling and monitoring to provide reliable routes for access to relevant and timely information to support the response to such an incident.

**Exercise Black Crocus** was a health led multi-agency field training exercise held in Kent on 18 and 19 October 2006. It was developed from Exercise Hercules which was held in the West Midlands on 16 and 17 June 2005 and concentrated almost exclusively on the health service operational aspects of running a mass treatment centre. Exercise Black Crocus helped to inform planners of the wider issues to consider when developing mass treatment plans in particular emphasising the role of local authorities. It explored the capability of the local health service to provide mass treatment to a large number of individuals, played by local volunteers. In the fictitious scenario volunteers were 'exposed' to an infectious biological agent (in this instance plague) through a covert Chemical Biological Radiological or Nuclear (CBRN) incident in an enclosed public space. In the exercise local authority and associated staff made a major contribution to the establishment of treatment centres, highlighting the key role they play in such incidents. Formalisation of a multi-agency approach to planning for mass treatment centres may require clarification at national level.

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# Preparing for Emergencies

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**Exercise Mayflower** was based on the evacuation of an entire hospital, as opposed to the evacuation of specific wards or departments in fire drills. Held on 7 November 2006 in Grantham the exercise was designed to explore the effective and co-ordinated multi-agency response at strategic, tactical and operational level to the evacuation of Pilgrim Hospital in Boston. The scenario was based on the events of 1953 when over 300 people were killed by a combination of severe weather and flooding in the UK. Lessons identified in the exercise showed that all hospitals, or indeed all critical buildings, should be on the Environment Agency flood warning database to enable timely evacuation in a potential six to twelve hour safe period before flooding occurs.

**Exercise Athena** was held on 8 January 2007 to test the response to and management of an influenza pandemic in London by the health service and partner organisations. The exercise examined the roles and responsibilities of Influenza Pandemic Committees (IPCs) in London. It considered the business continuity of the health service and the wider community in an influenza pandemic and examined the recently revised London-wide pandemic influenza plans. The exercise highlighted the need for issues of recovery and restoration following an influenza pandemic to be explored in more detail.

**Exercise Kerner** held on 31 January 2007 near Cambridge, was a one day health led table top multi-agency exercise. It provided an opportunity for professionals to practise and develop the response required during a severe botulism outbreak. It included controlling and managing an outbreak of botulism caused by the deliberate contamination of food at a public event and the initial response and longer term business continuity within health and emergency services. Additionally, the roles of the Health Advisory Team (HAT) and the Regional Civil Contingencies Committee (RCCC) were explored. The exercise identified the importance of communication, including establishing links with other key partners, keeping multi-agency partners up to date with progress and issues and clarity of defined lines of communication both up and down the chain of command.

The Agency was also commissioned to design and deliver a number of other exercises outside of the DH programme during the year. Exercise Big Chill in Scotland and Exercise Delilah in Northern Ireland both evaluated influenza pandemic preparedness plans. Exercise Tamino was a ‘big bang’ terrorist CBRN incident centred around a public event in London.

## *Training*

The Agency’s CEPR training team has continued to develop new and innovative courses for staff in the NHS and other emergency services. The Emergency Planning Officer course developed by the Agency is being delivered by the Emergency Planning College. Thirty courses have taken place and 436 delegates have received training. In total over 110 delegates have successfully completed all seven modules of the course and have been awarded a ‘Certificate in Health Emergency Planning’.

The Emergo Application is a two day training exercise delivered by Coventry University on a weekly basis to prepare accident and emergency staff on emergency plans and capabilities. Some 62 hospitals and over 3000 delegates across England have completed the training.

The ‘Clinical Management of CBRN Injuries’ course is aimed at all pre-hospital, accident and emergency and intensive care unit staff, paramedics, nurses and registered doctors. It has evolved from a two-day course to an online course. The online course consists of a ‘Burns and Blasts’ module, an ‘A&E Resource Management’ module and a ‘Radiation’ module. Several thousand staff have completed different modules since they came online. Delegates are also offered a chance to attend a one-day face-to-face session and will then be faced with different scenarios that will test their knowledge of the modules for the remainder of the training day. A ‘Biological’ module and a ‘Chemical’ module are both being developed and will go online shortly.

The Major Incident Management Training Course for chief executives and directors is being delivered by Catalyst Training Solutions. The course aims to provide chief executives of health organisations with the required



Courtesy: Gloucestershire Fire Service College

knowledge to represent health effectively in a real incident. For those delegates with minimal or basic knowledge, a two hour introductory course of the Civil Contingencies Act might be required.

The Loggists' Training course is a day and a half intensive course on the importance of evidential records and documents in any post-incident legal proceedings. It is delivered regionally, by the Agency in conjunction with the legal training firm, Bond Solon. The training gives an overview of the role of the main players in an incident through lectures, but aims to be as interactive as possible based on health specific case studies. In total 284 loggists were trained between January and April 2007.

### *Caring for children in major incidents*

**Exercise Young Neptune** resulted from discussions with the Department of Health working group on the management of children in major incidents. It was agreed that children needed to be more involved in major incident rehearsals and that they should be routinely involved where appropriate in national and local exercises.

Young Neptune was held in December 2006 to examine the effectiveness of the mass decontamination process on children and, within the limitations of the exercise, the behavioural and psychological impact on children undergoing the process. The exercise sought particularly to identify any specific needs of children.

Although a number of field exercises had been carried out to test mass decontamination procedures both in and out of hospital, few had involved significant numbers of children, and none had been undertaken in the UK using only children as the volunteers. Outside of the UK, paediatric exercises had taken place in warm weather conditions using older children as participants and therefore it was felt important to include young children and to allow for the possibility of cold weather.

Sixty-five children, aged between 6 and 14 years, were recruited locally from St John Ambulance Cadets and Scouting and Guiding groups, together with children of Agency and Defence Science and Technology Laboratory employees. As far as possible, comparable numbers of children were taken from all age groups and both genders, and informed consent from participants and parents was obtained by using age appropriate information leaflets. Personnel from the UK Fire and Rescue New Dimensions programme, UK NHS Ambulance Service and Police CBRN teams participated in the exercise.

On completion of the exercise, detailed feedback was received from the participating children by using questionnaires and small group discussion. This unprecedented feedback from the young users' perspective, together with the formal exercise evaluation, will help to inform emergency responders when reviewing operational procedures.

*“There is generally a low rate of infectious disease among migrants in England, Wales and Northern Ireland, although the majority of patients newly diagnosed with HIV, TB and malaria are born outside the UK. Services in the UK in relation to health, immigration and international travel have been reviewed and will be strengthened. There should be a coordinated and holistic approach to issues of health, migration and travel.”*

Photographs © BAA Limited



# Migrant and Border Health

# 4

## Migrant Health

In the 21st century we live in a 'global village'. Migration affects virtually every country worldwide, and globally, migration is increasing.

In 2001, over 4.3 million people living in the UK were born overseas, and in 2004, an estimated 542,000 people migrated to England and Wales for a period of 12 months or longer. Most are young adults with a similar range of health needs to people born in the UK, and many come from countries with no higher risk of infectious disease. However some arrive from countries with a greater burden of infectious disease, and may therefore have increased health needs.

To help address some of these issues, and provide an overview of health among migrant communities in the UK, the Health Protection Agency published its first report into migrant health in November 2006. The report analysed existing data on a wide range of infections, including TB, malaria and HIV, and found that while the majority are healthy, migrants as a whole suffer from a disproportionate burden of infectious disease. In 2004, 70 per cent of TB and HIV cases reported in England, Wales and Northern Ireland, and 70 per cent of malaria cases reported in the UK were in patients born outside the UK.

The report not only outlined the problem: it suggested some answers. Recommendations included strengthening the provision of culturally appropriate and language-supported health services, increasing awareness of disease in migrant communities and their health care practitioners, and improving monitoring systems.

The Agency will be taking these recommendations forward, in conjunction with the Department of Health and other partners, in order to develop proposals for action to address migrant health needs during 2007/08.

## Port Health

Port health refers to activity at international travel terminals in relation to travel and migration. This is also a changing and challenging environment. There has been a significant expansion in international travel over the last decade which has altered the demands on port health services. At the same time, the creation of the Health Protection Agency has altered the roles of the key organisations involved.

Historically, arrangements for port health have shown little consistency across the country having developed at different times, under different legislation and in different organisations.

In 2006 the Agency, the Department of Health and the Home Office undertook a review of port health. The review examined relevant literature and took evidence from key organisations.

The Review Group's findings and recommendations were published in July 2006. It confirmed that there was a great deal of confusion about the accountabilities and responsibilities for public health services at ports, and in particular between the dual roles of medical inspection of immigrants at port of entry, and public health actions at ports in relation to

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# Migrant and Border Health

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communicable disease control. It also confirmed the variability in the provision of these services at different ports.

The report recommended that new arrangements are introduced that would make lines of accountability clearer and strengthen the clinical governance issues surrounding training and standards. From 1 April 2007 the Health Protection Agency assumed responsibility for ensuring the quality of port health services in England. This includes making sure that there is appropriate health, and specialist health protection input into arrangements for the human (rather than the environmental) aspects of port health and the medical inspection.

The report also looked at the arrangements for screening for TB at ports. There is debate about the effectiveness of this screening service, particularly in the light of changes to immigration procedures. The Agency, along with the Department of Health, will be contributing to an evaluation of the current systems, and making proposals on how services could be moved from ports into the NHS to better meet the needs of migrants.

We are now working with partner organisations to plan for the response at ports to pandemic 'flu. Guidance for activity at ports, outlining what to do at various stages of a pandemic, has been developed, and specific port health issues will be addressed over the next year through cross-government and multinational working.

## International Health Regulations

Another significant development has been the revision of the International Health Regulations (IHRs). The IHRs were developed through the World Health Organisation (WHO) to improve systems for responding to public health threats related to international travel and population movements. They set out how countries should share information about possible threats that could have cross border implications, and how countries might respond. The IHRs were revised in response to some of the changes in international travel highlighted in this chapter but especially in the light of the global SARS experience.

The new IHRs, which formally came into force in June 2007, expand the scope of the Regulations beyond a limited communicable disease remit to include other public health threats such as chemical or radiation incidents. The IHRs require countries to develop their capacity in terms of surveillance and response systems (including investigation, diagnosis and public health action) and an appropriate legal framework for action. WHO consulted last year on how countries might increase capacity and how preparedness for the new IHRs might be assessed. A theme emerging from the consultation was to use the IHRs as a lever to build on existing national public health systems and increase capacity.

An important element of the Regulations is to require countries to establish a National Focal Point for contact between the country and WHO. The Department of Health has asked the Agency's Centre for Infections to be the National Focal Point for the UK. The IHRs have also prompted a review of relevant public health law in the UK to ensure an appropriate legal framework is available.



Courtesy: Dover Harbour Board



*“The presence of harmful chemicals and radiation in the environment can pose a hazard to health. We are working to identify and understand how these substances can affect people, and the best ways we can protect public health.”*

# Environment and Health

# 5

Environmental hazards are an important health protection consideration. They can have an impact on our health in many different ways, and the Agency is working to improve the management of these hazards and provides advice and support to government agencies, health professionals and the general public. This chapter outlines some of the key areas of work we have focussed on during the year.

## Contaminated land

Contamination of land by harmful chemicals is viewed as a significant environmental hazard to health in the UK. Contamination is partly as a result of geology, but is also a consequence of the industrial revolution and the effect of heavy metals such as lead, cadmium and mercury, metalloids including arsenic and persistent organic compounds including benzo(a)pyrene, polychlorinated biphenyls and petroleum hydrocarbons. Many of these chemicals are recognised as being acutely or chronically toxic to human health. With the reduction of heavy industry, many of these contaminated sites known as ‘brown field’ sites became derelict and have now either already been built on or are being used as informal recreational facilities, or will be built on in the future.

Contaminated land may pose a threat to communities so it is essential that public health is considered during both the planning and the risk assessment processes. Regulators, including local authorities and the Environment Agency need public health advice, and in order to ensure consistency of approach, the Agency

has put in place a national multi-disciplinary multi-agency forum on contaminated land. Its principal objective is to develop protocols and guidelines for public health professionals and to develop best practice on a national basis.

## Chemical incidents

To bring together data on environmental hazards, exposures and health outcomes, the Agency is leading the development of a national Environmental Public Health Tracking (EPHT) programme. The national chemical incident surveillance system contributes to the EPHT programme by providing data on acute chemical incidents in England and Wales. This will enable us to improve the management of these hazards by effective targeting and monitoring of any interventions that are undertaken. A series of changes have been made to the surveillance system during 2006 which have improved the quality and type of information that is recorded about incidents involving chemicals. This data are now published in both quarterly and annual reports on the Agency’s website.

## Chemical hazards - information and research

The Compendium of Chemical Hazards is produced by the Agency on the chemicals that are most commonly involved in incidents. The compendium is available on the Agency’s website and contains sections of general information aimed at the public, chemical incident management aimed at first responders (such as the

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# Environment and Health

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police, fire and ambulance services) and a toxicological overview aimed at health professionals. There are now 19 chemicals included in the compendium for example carbon monoxide, mercury and chlorine.

New chemicals are regularly added to the list to increase the amount of information publicly available.

In January 2006, the Agency took on some additional advisory functions from the Department of Health. The Agency now provides a central source of advice on the health effects of air pollution, chemicals in drinking water and in other water sources, in soil and in waste and chemicals in consumer products. In addition it provides input into the approval/licensing process for pesticides, biocides and veterinary medicines to ensure that due account is taken of the public health aspects.

Focussed research provides a way to improve both population and individual health protection in the UK. The Agency is committed to this research which includes work on the clinical consequences of exposure to chemical poisons, the identification of the toxic mechanisms involved and the development of evidence-based management options and preventive measures. Research projects that the Agency has been involved in during 2006 include:

- A study to monitor the blood concentrations of environmental chemicals in the general population
- Work on the role of exposure to environmental chemicals in the development of neurodegenerative diseases such as Parkinson's disease
- A project to determine the factors associated with the absorption of chemicals through the skin.

The Agency also funds research into medical interventions for casualties suffering with severe chemical exposure.

Another important piece of research carried out by the Agency is a project to explore the social implications of decontamination, the management of contaminated waste and the promotion of a return to "normality" following a radiological or chemical incident in an inhabited area. This research project will try to identify

those areas which contribute to the promotion of social recovery in contaminated areas and will produce practical guidance to assist with contingency planning.

## Radiation

Ionising radiation can be present in the environment from natural sources or arise as a consequence of human activities. The Agency regularly assesses the doses to the UK population from all sources of exposure. The health effects of ionising radiations do not depend upon the origin of the source of radioactive materials. These health effects and their relationships with radiation doses are the subject of research and development activities in the Agency. Worldwide scientific outputs are regularly reviewed by international bodies such as the United Nations Scientific Committee on the Effects of Atomic Radiation (UNSCEAR) and the International Commission on Radiological Protection (ICRP). During the year, Agency staff have worked with UNSCEAR and ICRP on a range of reviews. Of particular note is work over eight years with ICRP which will culminate in the issue of the 2007 Recommendations of the ICRP. These recommendations will provide judgements on protection standards and systems which are expected to be adopted internationally. The Agency is required to advise on the applicability of such standards to the UK and to work with stakeholders in order to prepare this advice.

Radon gas arising from uranium-containing rock is the largest source of environmental radiation exposure in the UK. During the year Agency staff and external experts have developed a report, due to be published in the summer of 2007, which will provide the background information for a reassessment of the UK approach to reduce harm from radon.

The safe disposal of man-made radioactive waste in the UK is an important issue of current debate, including the potential for long-term environmental hazard. The Agency has provided its views in a consultation process with the Committee on Radioactive Waste Management and also provided a response to Department for Environment Food and Rural Affairs (Defra) on proposed Government policy for low level radioactive waste management.



Photos Courtesy: Gloucestershire Fire & Rescue Service

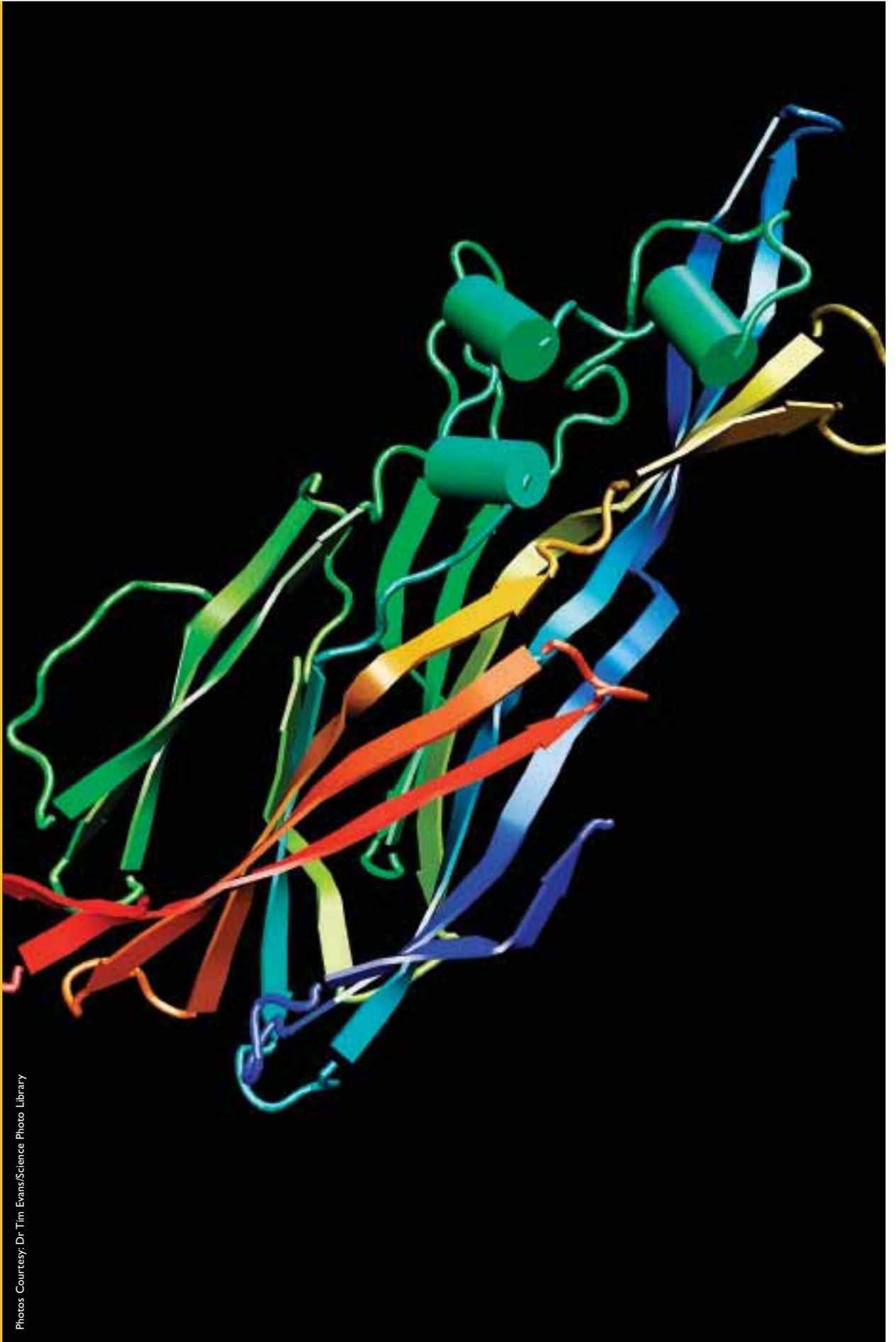
### *Chemical Fires and Health*

In Andoversford, Gloucestershire, in September 2006, a fire in a chemical factory raised immediate concerns for the health of emergency services staff and the public. The factory contained chemicals used as cleaning agents in health care and swimming pools and the fire gave rise to a plume of smoke potentially containing chemical irritants. Management of the fire was complicated by a substantial liquid chemical leak, contained in a highly acidic lagoon on the site. The Agency attended the site and provided information and advice to a multi-agency Strategic Command Group on the potential adverse health effects of the chemicals present as well as advice about exposure assessment.



### *The Lebanon*

The aerial bombardment of the Lebanon in July 2006 led to extensive damage to the country's infrastructure including fuel depots, power plants and fuel storage areas. At the request of the World Health Organisation International Programme for Chemical Safety (IPCS) and the United Nations Environmental Programme/Organisation for the Coordination of Humanitarian Affairs (UNEP/OCHA), the Health Protection Agency provided information on products of combustion, diesel and kerosene to guide the public health management of chemical releases in the area.



Photos Courtesy: Dr. Tim Evans/Science Photo Library

*“Our information and advice on infection prevention and control supports hospitals in tackling and reducing infections.”*

# Healthcare Associated Infections

# 6

Healthcare Associated Infections (HAIs) are infections acquired by patients, following admission to hospital, or as a result of healthcare elsewhere for example nursing homes. A snapshot study carried out in hospitals in England in 2006 found that 8.2 per cent of patients surveyed had an HAI<sup>1</sup>.

The Agency supports a range of activities related to identifying, investigating, monitoring and managing HAIs. We carry out nationwide monitoring to follow trends in resistant strains, research the various strains' genetic make-up to identify what causes resistance and/or virulence, alert the NHS about new and emerging strains and advise on how to control incidents and outbreaks of infection.

Our key achievements during 2006/07 relate to developing our surveillance programmes. Our surveillance reports have been well received by the Department of Health and have informed government policy, as well as providing timely feedback to hospitals to allow them to benchmark themselves against other hospitals.

In January 2007, the Agency released quarterly figures for MRSA bacteraemias and *Clostridium difficile* disease for the first time. It is important to publish this information in a timely manner. It is part of our commitment to support hospitals so that they can gauge their efforts in reducing infections.

There were 55,681 reported cases of *C. difficile* in patients aged 65 years and over in England in 2006. This represents an increase of 8 per cent over 2005 when there were 51,767 cases reported. This is an improvement on the 17 per cent increase in reported cases between 2004 and 2005. Rates were highest in small acute hospital trusts; a trend which has been observed consistently since the introduction of mandatory surveillance in 2004. These results show clearly that there is scope for improvement.

Methicillin-resistant *Staphylococcus aureus* (MRSA) bacteraemia (bloodstream infections) figures showed that there were 3,393 cases of MRSA bacteraemia in England reported between April–September 2006. This was down 5 per cent from the same period in 2005. Generally the data show that some hospital trusts, particularly specialist trusts, are managing to make inroads into high levels of MRSA bacteraemias, whilst in others, notably general acute hospital trusts, levels are still rising.

Early in 2007 we published the Second Report of the Mandatory Surveillance of Surgical Site Infection in Orthopaedic Surgery. There were 592 surgical site infections reported from April 2005–March 2006, compared to 599 the previous year. The overall rate of infection in orthopaedic procedures in four selected categories fell from 1.45 per cent to 1.12 per cent from 2004/05 to 2005/06.

<sup>1</sup>Results of third national prevalence survey of healthcare associated infection in England by the Hospital Infection Society <http://www.his.org.uk>

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# Healthcare Associated Infections

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## Renal Dialysis

There is a higher risk of contracting HCAI during invasive treatments, for example in renal dialysis. Eight per cent of MRSA bacteraemias occur in renal patients and targeting activity on actions to reduce these should impact on hospital trusts' MRSA rates. The national web-based system for monitoring MRSA bacteraemia in England (the mandatory MRSA bacteraemia Enhanced Surveillance System - MESS) has been further developed in 2006/07 to collect more detailed information about patients on dialysis who develop MRSA bacteraemia.

The new dataset has additional information about the usual place where the patient receives dialysis, the type of dialysis and the way it is administered to the patient, (for instance, whether an intravenous catheter has been used).

Following piloting, the developments to MRSA bacteraemia surveillance in renal units was rolled out nationally on 1 April 2007. The information provided by this enhancement to MESS will improve the Agency's understanding of the causes of MRSA bacteraemia and so help efforts to target preventive actions more effectively.

## Methicillin-Resistant *Staphylococcus aureus* (MRSA) bacteraemia in children

The Health Protection Agency is undertaking a two year enhanced surveillance study of MRSA blood stream infections in children under 16 years of age. The study, which is funded by the Department of Health, focuses on children living in the UK and Ireland. Cases are identified and data are collected from a number of sources, including questionnaires filled in by paediatricians as part of the British Paediatric Surveillance Unit (BPSU) monthly reporting system, microbiology reports from hospital laboratories and bacterial isolates sent to the National Reference Laboratory.

The early findings indicate that the overall numbers of MRSA bloodstream infections in children are responsible for approximately 1-2 per cent of all MRSA bloodstream

infections. The study has shown that the majority of cases involve premature babies and very young children, many of whom have underlying conditions which make them more vulnerable to infection. Identification of those groups of children who are at increased risk of developing MRSA blood stream infections should help the development of strategies for the prevention and control of these infections.

## Cluster of PVL-MRSA in a hospital

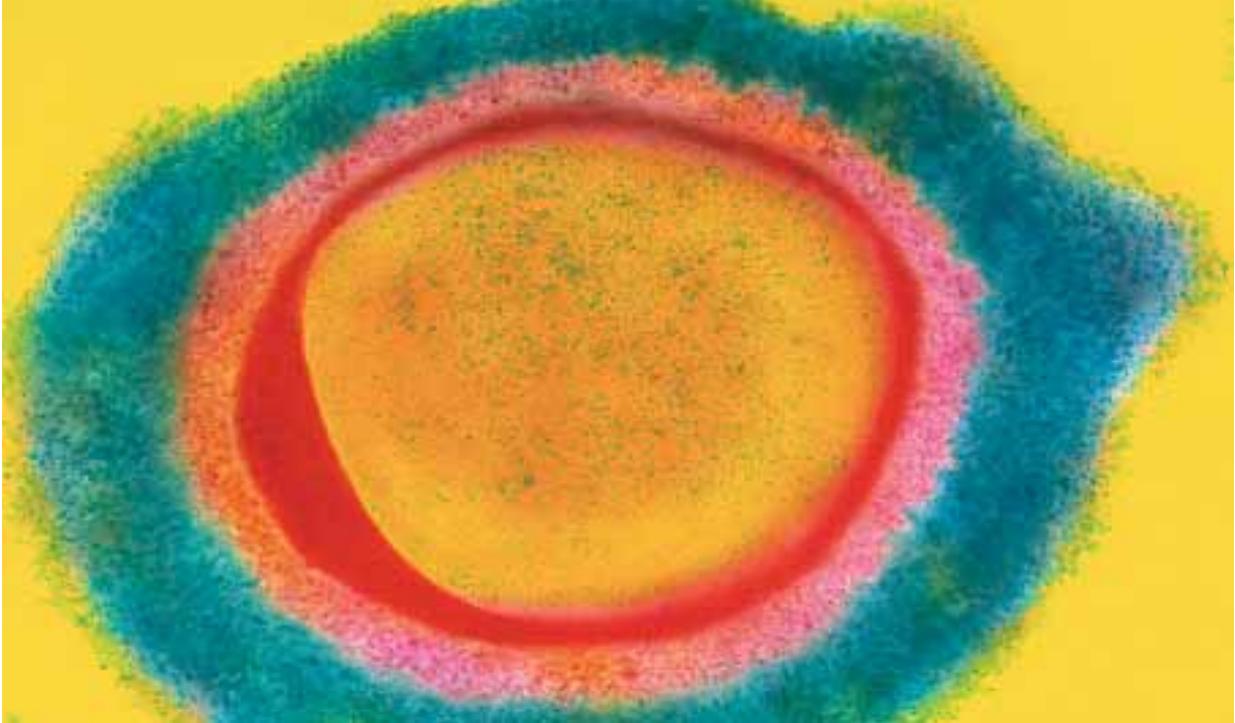
Panton Valentine Leukocidin (PVL) is a toxic substance produced by some strains of *Staphylococcus aureus* which is associated with an increased ability to cause disease. In 2006, the disease received a great deal of media attention after an outbreak of PVL-MRSA in a Staffordshire hospital in which two patients died.

In November 2006, the University Hospital of North Staffordshire identified an unusual and virulent strain of MRSA in the two people who had died at University Hospital of North Staffordshire. Local and regional staff quickly became involved in contact tracing and offering advice on infection control and prevention, while experts from the Agency's Centre for Infections in London were able to share their knowledge on this strain. They all played a role in supporting the hospital's effort to reassure the public locally and nationally.

By January 2007, 17 cases of PVL positive MRSA were identified. The latest analysis of these cases strongly suggests 14 individuals, including one of the patients who died, acquired MRSA in the community. Three, including the second patient who died, are believed to have acquired it within the hospital.

There has been no evidence of hospital transmission since October 2006, and no further epidemiologically linked cases have been identified between December 2006 and the end of March 2007. The hospital, with support from the Agency, is maintaining a programme of early detection and appropriate treatment, whilst also continuing to generate awareness of this newly emerged strain both inside and outside the hospital.

Courtesy: Dr. Kari Lounatmaa/ Science Photo Library



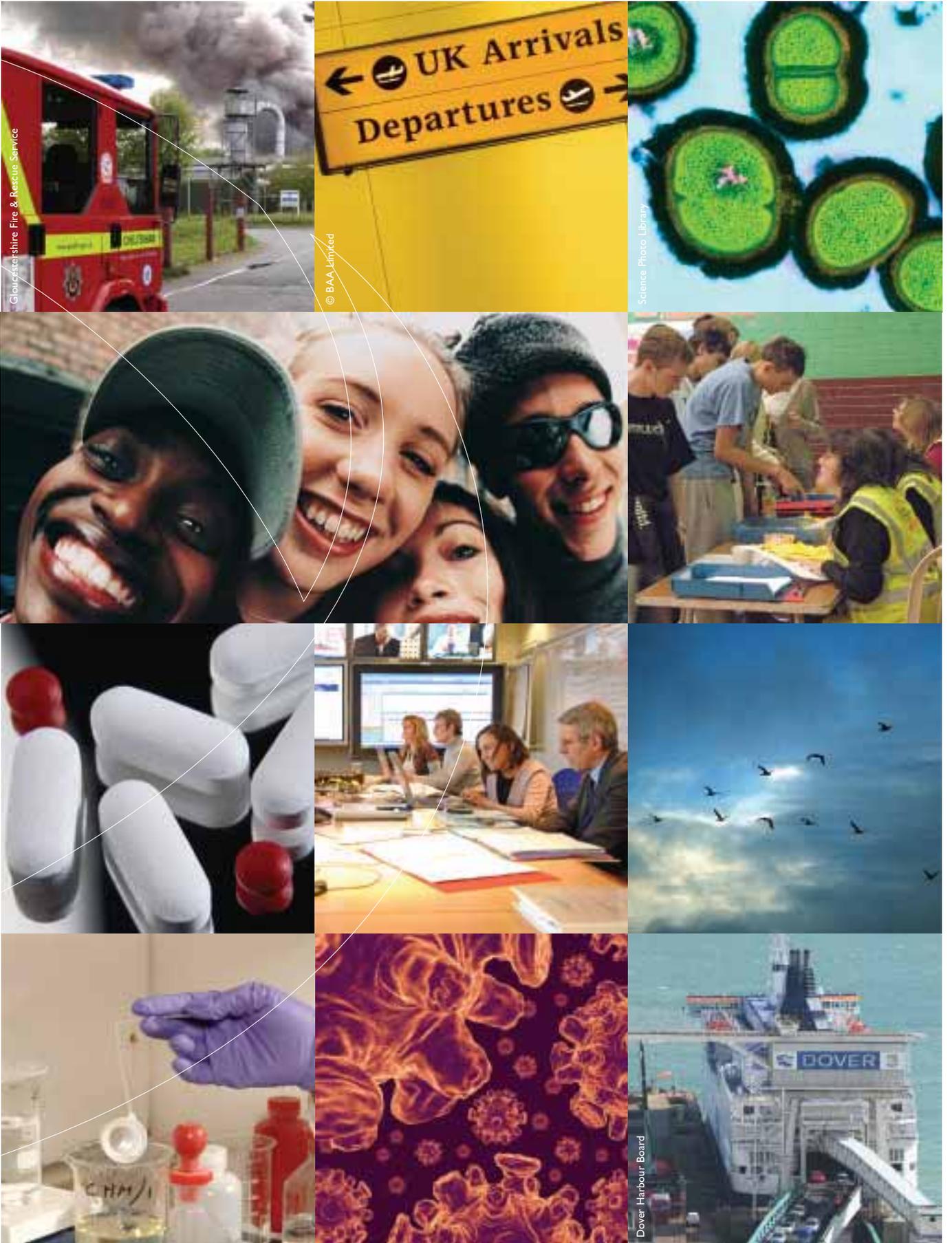
PVL-positive strains of *S. aureus* are not new: in the 1950s and 1960s, PVL-positive Methicillin-sensitive *Staphylococcus aureus* (MSSA) was common in hospitals, and recently a number of deaths have been linked to community associated PVL-positive *S. aureus*. But the West Midlands outbreak was significant because this was the first time deaths due to PVL-positive MRSA had been associated with transmission within a UK hospital.

In 2005, 216 isolates of PVL-positive *S. aureus* were identified by the Health Protection Agency. Of these, 106 were MRSA (i.e. community-associated MRSA) and 110 were MSSA. Most of these were associated with local skin infections such as boils and abscesses and were isolated from sporadic cases occurring in the community.

The Agency has continued its programme for monitoring PVL-positive *S. aureus* in England and Wales, although the figures for 2006 are not yet available.

PVL-positive MRSA rates are escalating across the USA both in the community and in healthcare. Whilst this does not appear to be the case currently in the UK, it is important that we remain vigilant and undertake specific studies. Planned UK-based studies include investigating how frequently these bacteria:

- Cause pus-producing skin infections among people attending accident and emergency departments
- Are found in the nose of healthy people in the community.



Gloucestershire Fire & Rescue Service

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Science Photo Library

Dover Harbour Board

# Strengthening the Frontline

## 7

The frontline of the Agency's public health work is the Local and Regional Services Division – known as LARS.

The Division has 26 Health Protection Units (HPUs), based across the country, each with particular knowledge of the area they cover. Their job is to act as the 'eyes and ears' of the Agency, responding to health protection incidents on their patches and, through surveillance, keeping a finger on the health protection pulse locally.

Each HPU is made up of health protection specialists and practitioners including Consultants in Communicable Disease Control (CCDCs), and information staff who collect and interpret information, gathering a picture of infectious diseases and other hazards in their area. The national nature of the Agency then allows that information to be brought together centrally, creating a national picture.

Each HPU is supported by small teams of staff working across each of the nine English regions who are, in turn, specialists in areas including health emergency planning, business management, epidemiology and communications.

Since 2005, the Agency has been implementing its "Strengthening the Frontline" policy, which has seen a shift in resources away from national and regional centres to the frontline HPUs. This has allowed us to build up our expert multidisciplinary teams and make sure they are local enough to be sensitive to the needs of communities, but also large enough to sustain the expertise and capacity to respond to the full range of health protection threats.

In addition during 2006/07, the original LARS Division was divided to form a new LARS - including the HPUs and regional support teams - and the Regional Microbiology Network, which brings together all the former LARS laboratories across the country.

Work has also gone on to map the varied activities of local HPUs to develop a standard specification for roles, responsibilities and functions. This now defines how HPUs should work with other parts of the Agency and with our partner organisations and is a way of measuring our performance.

A vital part of the work of the Agency's HPUs is the partnerships they create locally with the NHS, local authorities and the other organisations involved in health protection issues. The Agency alone does not deliver health protection for its communities and must work with and through the NHS and other partners.

Together we need to agree local priorities, linked to the burden of disease, to an assessment of future threats and to evidence of effectiveness of possible interventions, as well as national policy priorities. Bridging the gap between where we are and where we want to be will require development and maintenance of an expert workforce, identification of new skills and training and continuing professional development.

Work is already underway to agree a new contract with the NHS with a national specification of core services to be provided by LARS, and of the roles, responsibilities and functions of Strategic Health Authorities and Primary Care Trusts in health protection.

# Strengthening the Frontline

## LARS key achievements 2006/07

**Influenza Preparedness** - LARS has set up a Pandemic Influenza Implementation Group (PIIG) to oversee the Division's part in delivering the objectives of the national Influenza and Respiratory Virus Programme Board. The PIIG has an ambitious programme which included: a survey to help regions identify gaps in their preparedness planning; developing novel surveillance indicators to help gauge the societal impact of a pandemic, and widespread work leading and supporting multi-agency pandemic influenza preparedness at local and regional levels. This work helped pave the way for LARS to play a major part in the success of Exercise Winter Willow – a national cross-governmental exercise led by the Department of Health which focused on pandemic 'flu response arrangements at local and regional level (more details see Chapter 3).

**Tuberculosis** - The LARS Tuberculosis Leads Group has done work to improve the completeness and timeliness of TB surveillance data. In addition there has been real progress in agreeing a plan to take forward molecular typing of *M. tuberculosis* to support local TB control. A major piece of work is being undertaken to define and so improve the standard of TB services provided by HPUs. A detailed service specification will be followed during the coming year by a training programme to ensure that HPUs are competent to deliver the range of TB services to an agreed standard.

**Managing Norovirus outbreaks** - A sub-group of the national Gastrointestinal Disease Programme Board, chaired by a member of LARS, has finalised guidelines for the Management of Norovirus on Cruise Ships. It is intended for joint publication with the Association of Port Health Authorities and the Maritime Safety and Coastguard Agency.

**Chlamydia Screening** – LARS, working with the Centre for Infections, has established a network of Chlamydia Screening programme coordinators in each region. The network's objective is to establish Chlamydia screening programs in all Primary Care Trusts.

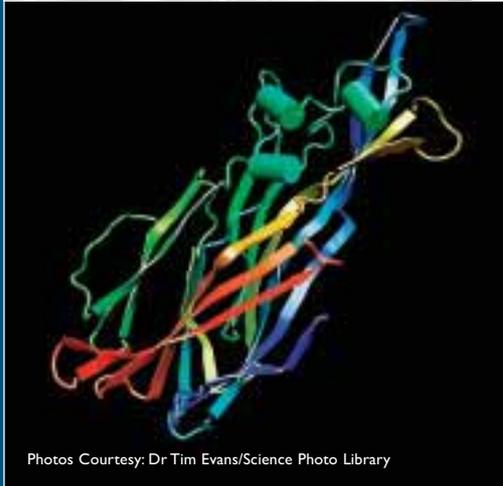
**Chemical and Environmental Hazards** - Significant progress has included establishing an Agency Chemicals/ Environmental Public Health Service. The service will be managed by the Agency's national Chemical Hazards and Poisons Division (CHaPD). A 24-hour service will be provided to defined HPUs and regions, providing input in emergency situations, chronic problems, planning processes and wider environmental work.

**Responding to incidents and emergencies** - LARS played a significant role in shaping the Agency's new Incident and Emergency Response Plan. Standard Operating Procedures have been developed for LARS and made available through a number of training workshops across the country, led by the Agency's West Midlands Region, together with an interim electronic alerting system (IRIS) run by the Agency's North West Region. This allows LARS to be alerted rapidly to incidents which may have implications beyond the HPU or region in which the response is focused.

### *Corporate Governance*

2006/07 was the first year in which the Agency became subject to defined NHS standards, covering health protection service delivery and corporate governance arrangements. This provided a good opportunity to take stock of progress, and focus and prioritise development work across the division.

One of the key areas for development includes the adoption and implementation of a standard approach to clinical and health protection governance across LARS, incorporating audit of practice and of service delivery; the establishment of standards for practice and delivery in high priority areas; and the consolidation of best and evidence-based practice guidance. This will form part of the 2006/07 work programme for the recently established LARS governance network, and for all other LARS programmes.



Photos Courtesy: Dr Tim Evans/Science Photo Library



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During the year LARS made very significant contributions to a number of major incidents:

***Polonium-210:*** The Polonium-210 incident was an unprecedented and complex public health incident for the Agency. The LARS response was led by the London Region and demonstrated the competence and the commitment of staff to deal with complex new threats and to work flexibly as a national team. LARS staff from other regions, as well as colleagues from the Agency's Centres, were deployed to support London, and Emergency Operations Centres were set up in other regions out of normal office hours and during weekends to handle calls from people who had contacted the helpline NHS Direct.

***Panton-Valentine Leukocidin (PVL) positive MRSA/MSSA:*** Several outbreaks of infection with community-associated Methicillin-sensitive *Staphylococcus aureus* (MSSA) and Methicillin-resistant *Staphylococcus aureus* (MRSA) resulting in serious disease and mortality in a small number of cases were identified in care homes, a neonatal unit and a hospital. The West Midlands saw the first reported occurrence in England of transmission of PVL positive MRSA in a hospital with two associated deaths. The new incident arrangements allowed coordination of national expert advice (in the absence of evidence-based guidance), together with local strategic co-ordination with the Agency taking the lead, to agree and oversee the strategy for investigation and control (also see chapter 6).

***Avian influenza outbreak at a turkey farm in Holton, Suffolk:*** Following the confirmation of avian influenza (H5N1) in turkeys at a farm in Suffolk the Agency took the public health lead. The local NHS Primary Care Trusts (PCTs) worked closely with the Agency to deal with the incident, in particular the PCT directors of public health chaired the local incident management team and provided personnel to offer personal advice and antiviral prophylaxis to those workers at the farm who were potentially exposed to the infected birds (also see chapter 8).



# A Regional Round-Up

# 8

Local and Regional Services (LARS) provide support and expertise during outbreaks and incidents around the country which threaten the health of the local communities. LARS are based in nine regional offices around the country (which cover the same area as Regional Government Offices) and each region is divided into a number of health protection units. LARS staff work collaboratively with colleagues in the NHS, local authorities and many other organisations. They are also involved in innovative research projects and provide training and work closely with the Agency's national specialists. This chapter demonstrates some of the wide range of issues LARS staff are called to deal with.

## North East Anthrax investigation

Since September 2006, Health Protection Agency staff in the North East Region and colleagues from the Agency's Centre for Infections and the Centre for Emergency Preparedness and Response, have been assisting an investigation led by the Procurator Fiscal and NHS Borders (which provides health services locally) into the source of anthrax found in properties in the Scottish Borders and North Northumberland.

The investigation followed the death of a man from suspected anthrax poisoning in July 2006. The death was thought to be linked to the making of African drums from animal skins which may have been contaminated.

Testing was carried out in the affected properties and identified minute traces of anthrax on animal skins and drums stored there. Health Protection Agency staff led a

multi-agency response following the discovery of anthrax. Extensive sampling was carried out, both in the original property and neighbouring ones, to determine the level of contamination and whether it had spread. The results of the sampling confirmed the level of contamination to be very low and contained in a single property.

Representatives from the Agency and the local authority met with the occupiers and owners of the contaminated property and their neighbours, to reassure residents that there was no increased risk to public health and have kept them up-to-date throughout the investigation.

As it was the first time this type of naturally occurring contamination had been found in a domestic setting, a panel of international experts was consulted on the best way to deal with it. They have advised that although the traces of anthrax pose no increased risk to public health they should be removed. Plans are currently underway to decontaminate the property in the near future.

## Yorkshire and the Humber Outbreak of *E. coli* O157 traced to a producing butcher in Leeds

At the start of July 2006, staff in the Agency's Health Protection Unit in Leeds were informed by hospital doctors in the city, of four confirmed cases and one possible case of *E. coli* O157. Patients were interviewed to find out where they had been and what they had eaten recently to look for any common links.

It was quickly noticed that several of the cases had bought and eaten food from a butcher's shop in Armley,

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# A Regional Round-Up

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Leeds and a stall in Leeds Market (owned and supplied by the same butchers).

Environmental health staff inspected the premises and took food and environmental samples. Within six days, another 10 cases of *E. coli* O157 had been notified and the owners voluntarily closed the shop and the market stall. The shop sold both raw and cooked meat, produced on the premises. As well as the market stall, cooked meats were supplied to another 20 retail outlets across Leeds. These were immediately recalled.

Tests carried out at the Agency's Food Water and Environment Laboratory in Leeds showed heavy contamination with *E. coli* in the butcher's shop and the market stall. Nine days after the first cases were reported, a sample of sliced roast beef was tested and confirmed positive for *E.coli* O157. By now, there were 14 confirmed cases.

A press release was issued once the positive food sample test was confirmed, advising people not to eat cooked meat products from the butcher's shop, the market stall or the 20 other outlets supplied by the business. The outbreak received considerable coverage in the local and national media. A helpline set up locally received around 600 calls from the public and, following the widespread media publicity, more possible cases were reported to the local Health Protection Unit.

## London Health at Hajj

A special Health at Hajj conference was jointly organized in London in November 2006 by the Agency and the Muslim Council of Britain (MBC), together with Queen Mary College, University of London. It brought together experts from Saudi Arabia, Australia, Singapore and the UK to share experiences and information on providing effective health advice and support for people travelling to the annual Hajj pilgrimage.

More than two million Muslims perform Hajj every year - the largest international gathering of its kind in the world, with around 20,000 pilgrims from the UK. The influx of a large population from around the world within

a confined area over a short period increases the risk of respiratory and gastrointestinal infections, in particular meningococcal disease.

Following an international outbreak of Hajj-associated meningococcal W135 infection (with 22 per cent mortality) among pilgrims and their close contacts, it is now mandatory for travellers to produce a valid and up-to-date proof of vaccination in order to obtain a visa to enter Saudi Arabia. This, together with the Chief Medical Officer's awareness campaign, ended the outbreak. There have been no cases in the UK during the past five years, while work on an audit of meningococcal immunization is on-going.

Delegates heard from a range of speakers who highlighted the key health issues facing pilgrims and the importance of urging pilgrims to ensure their Hajj preparations included all possible precautions to stay healthy, such as getting the appropriate immunizations and consulting their doctor about existing medical conditions.

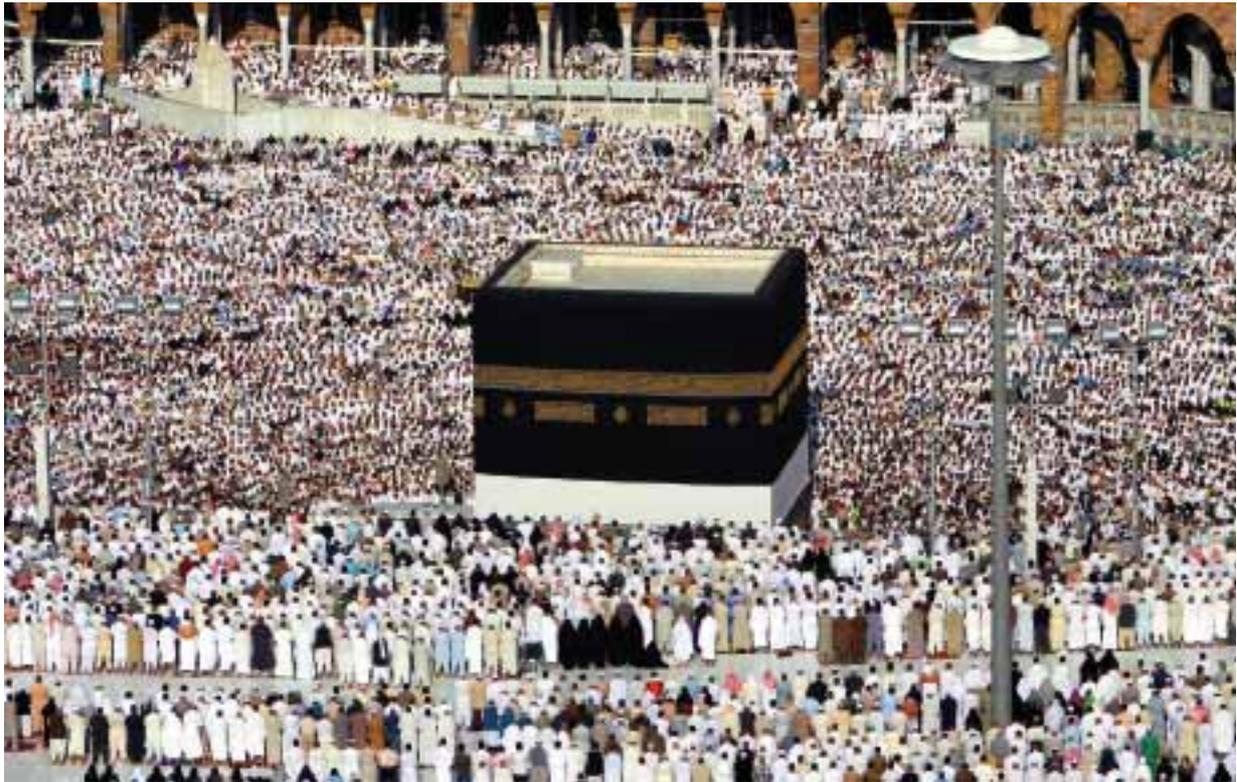
## South West Napoli Container Ship Salvage

Staff from across the Agency in the South West Region were called into action as part of the response to the MSC Napoli incident off the Devon and Dorset coasts.

The container ship, carrying a very large and mixed cargo, was being towed to Lyme Bay, after starting to sink in the Channel in poor weather. To avoid the ship breaking up, it was deliberately beached just over a mile from Branscombe Beach, Devon, and a long, complex salvage operation began.

Apart from the well-reported BMW motorcycles and spare parts, the Napoli was also carrying 3,500 tons of heavy fuel oil and a variety of hazardous substances, including phosphorous, methyl bromide and a variety of acids and alkalis. Many of these could have posed a threat to the salvage teams and local communities, as well as marine life.

Staff led by the Director of the Agency's Dorset and Somerset Health Protection Unit, formed part of the



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Health at Hajj

Environment and Public Health Group, which advised the Salvage Coordinating Group.

Members of the general public, including dog walkers, were advised to stay away from the affected beaches given the potentially hazardous materials washing up. All organisations taking part in the clean-up were advised to undertake risk assessments for their own staff, and we advised that other agencies be alerted to the potential contamination of the human food chain, through the pollution of shellfish beds and crustaceans.

Although there was public disorder initially, police and local authorities were able to secure the affected beach, and the clean up operation both on and off-shore continues to progress safely. The salvage operation will continue into the summer of 2007.

### North West Pandemic Flu Training

Consultants from the Agency's Greater Manchester Health Protection Unit have led a project to develop pandemic influenza training materials for people working in a variety of settings. Central to the training package are versions of a film that have been tailored to meet the



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Napoli Container Ship Salvage

individual needs of staff in GP surgeries, hospitals, nursing and care homes, prisons, domiciliary care and funeral parlours.

The film has been funded by Greater Manchester's Primary Care Trusts. Experts from the Agency set the scene and provided the national expertise. The film has the same introduction and ending and viewers select the centre section that is relevant to their profession or setting from a menu bar.

The film has two purposes; to give viewers the information they will need to protect themselves in a pandemic and to give them the knowledge to contain influenza when it comes into their organisations and prevent it spreading. Hand-washing and the use of protective personal equipment are amongst the key themes.

Copies of the film are being distributed free of charge in DVD or VHS form to primary care establishments, hospitals, residential care homes, prisons, domiciliary care staff and funeral directors throughout Greater Manchester with advice on how to use it as a training tool.

Staff in similar establishments elsewhere in the country will be able to view it free of charge on a website. The film will be supported by an E-learning package which is currently under development.

## East of England

### First outbreak of H5N1 in a poultry farm in the UK

Agency staff working in the East of England found themselves involved in an outbreak of avian influenza for the second time in less than a year when the Department for the Environment, Food and Rural Affairs (Defra) confirmed in February 2007 that a farm in Holton, Suffolk had received positive test results for H5N1 in a turkey barn.

While this was the first case of H5N1 in a poultry flock in the UK, the Norfolk, Suffolk and Cambridgeshire staff were able to draw upon their experiences of an outbreak of H7N3 at a chicken farm in Dereham, Norfolk last spring.

H5N1 is one of the deadliest types of bird 'flu and it became apparent immediately that the Agency had to work quickly to ensure there was no risk to the health of workers associated with the farm or to the general public.

As the first outbreak of H5N1, in the country the incident attracted considerable media attention. Alongside local NHS public health colleagues, Defra, Trading Standards and Bernard Matthews (the company involved) the Agency successfully distributed 480 sets of anti-virals to the workers responsible for the culling of the birds, as well as those who may have been exposed when the outbreak began.

During the operation a small number of workers began to show 'flu-like symptoms and the Agency immediately tested them for H5N1. In total six people were tested, three of these people met the Agency's criteria for testing and three others were tested as a precautionary measure. All six showed negative results for H5N1.

The Agency has been widely praised by Defra and the Department of Health for the way it handled this first outbreak of H5N1 in the UK.

## West Midlands

### Hepatitis B and HIV found in health care worker

In July 2006 a consultant in communicable disease control at Birmingham and Solihull Health Protection Unit was informed that a health care worker based at the Royal Orthopaedic Hospital, Birmingham, had been found to be suffering from hepatitis B infection. Further investigation showed that the healthcare worker was also HIV positive.

Because the healthcare worker had been involved in procedures that might put patients at risk of transmission of these infections, the Agency consulted the UK Advisory Panel (UKAP) for healthcare workers infected with bloodborne viruses. They advised that exposed patients should be contacted and invited to have a blood test for hepatitis B and HIV.

The Agency then worked with hospitals and the Strategic Health Authority on the huge task of tracing patients who could have been exposed to the infections through



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Brigton Argus

contact with this health care worker. This tracing took them back several years, and involved several hospitals including the Royal Orthopaedic Hospital, Birmingham; the Alexandra Hospital, Redditch; Worcestershire Royal Hospital and Southampton General Hospital. In the autumn of 2006, letters were sent out to the patients identified at these hospitals: 1128 patients were invited for testing, of whom 997 accepted. To coincide with this, a press conference was held to announce the news and give details of the tracing exercise. This story hit the headlines both regionally and nationally. NHS Direct (a confidential health helpline) was commissioned to run a dedicated helpline for the recalled patients and booked blood tests for them, and the Agency provided expert advice to the helpline operators. Of the 997 patients tested, none were found to have been infected as a result of the incident.

### South East Fireworks incident near Lewes, December 2006

Agency staff were alerted after a fire and explosion on a farm in Sussex claimed the lives of two firefighters and injured a further eight emergency services personnel. The farm was used as a retail outlet for fireworks and a storage facility for large pyrotechnic displays. Much of the site was destroyed and nearby properties were evacuated. A 500-metre cordon was put in place because of the risk from unexploded fireworks and gas cylinders in an adjacent steel works.

A site visit was agreed following discussion between the Agency's chemical health protection experts, the Agency's local Health Protection Unit and the local environmental health department about possible environmental contamination from fireworks. Asbestos from the fire contaminating nearby properties and air pollution as a result of the fire and explosion were also identified as potential health risks.

Agency staff checked on people who had been evacuated and worked closely with the local authority in agreeing environmental actions.

Fireworks have the potential to cause significant direct and indirect health effects and for this reason, the Agency will undertake further research into their use, storage, import, legislation and environmental impact.

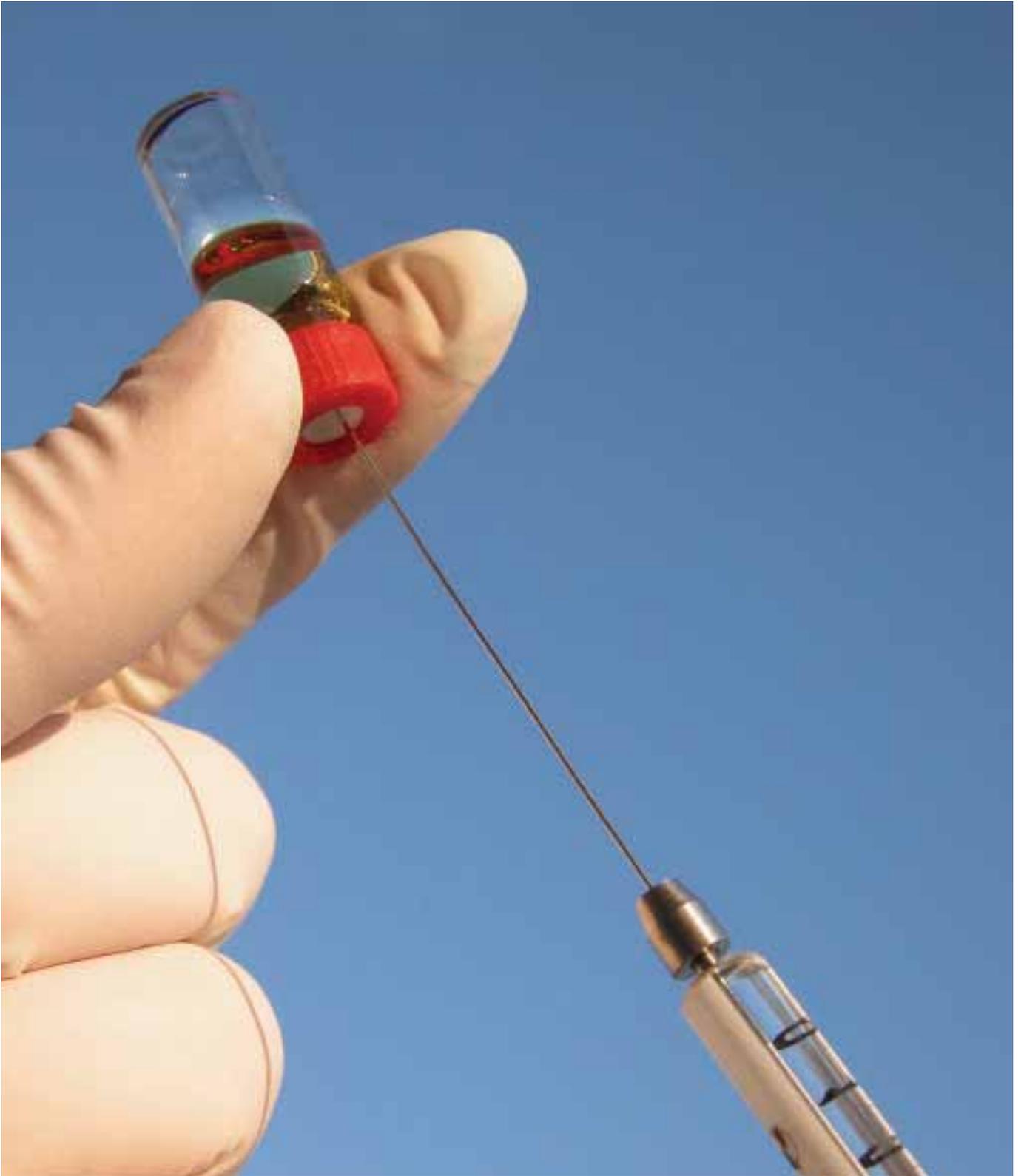
### East Midlands Environmental Public Health Advisory Board

The Agency in the East Midlands set up an Environmental Public Health Advisory Board, to provide a multi-agency forum to discuss issues relating to environmental public health. It was designed to ensure a consistent approach across the region to environment and health issues and allow good practice to be shared across partner organisations.

The forum was established when the Agency's chemical and environmental team in the East Midlands was set up to support NHS Primary Care Trusts with the Integrated Pollution Prevention Control regime (IPPC). The support it provided was highly valued and so its remit was expanded to include advice on both the short and long-term effects of chemical incidents on health and the broader environment.

The Board is chaired by the Health Protection Agency's Regional Director for the East Midlands and coordinated by the Agency's chemical and environmental team. It has membership from local, regional and national public sector organisations, including Universities, Primary Care Trusts (PCTs), the Environment Agency, Food Standards Agency, Government Office and parts of the Health Protection Agency, including the national Chemical Hazards and Poisons Division (CHaPD) and the local Health Protection Units (HPUs).

The Board meets three or four times a year to identify environmental issues of concern or importance within the East Midlands, and looks at how these can be addressed in partnership. The Board has discussed major contaminated land site and landfill issues, considered new legislative tools and guidance including the input in Strategic Environmental Assessments which aim to protect the environment (including human health) and the Children's Environment and Health Action Plan for Europe. The Board also hosts training events for its members that help to broaden their knowledge and expertise.



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# Partnerships with Industry

# 9

The Health Protection Agency works with a broad range of companies in healthcare and other sectors so that our science is translated into practical products and services, and the income generated is reinvested in our technology and capabilities. We have valuable resources in the form of knowledge, skills, and specialised equipment for which, encouraged by Government policy, we seek commercial opportunities wherever appropriate. This chapter summarises some of our key achievements during the year:

#### **Opi – manufacturing of a life-saving leukaemia drug**

The licence agreement with Opi (a division of EUSA Pharma) has gone from strength to strength as Opi develops the drug Erwinase® (crisantaspase) across the world for patients (particularly children) suffering from acute lymphoblastic leukaemia. As a result of the success experienced during the past year, Opi and the Agency have agreed to invest substantially in further development of the biological manufacturing facility.

#### **Emergent Biosolutions – vaccines to protect against biological threats**

Following the grant of a licence to Emergent Biosolutions for use of Agency technology for the development and manufacture of vaccines against botulinum toxin, Emergent Biosolutions has continued to collaborate with us on research and manufacturing work on toxoid and recombinant vaccines. Staff from the Agency and Emergent meet regularly to review progress and plan regulatory and other submissions including bids, tenders and solicited and unsolicited proposals.

#### **BioIndustry Association, UK Trade and Investment and H-I Network – active involvement in industry**

The Agency is an active member of the BioIndustry Association, which seeks to promote the British biotechnology industry and stimulate the development of innovative drugs, vaccines, diagnostics and medical devices from the latest discoveries in biotechnology. The Agency's business managers participate in UK trade missions, and contribute as active members of the H-I network, a forum for corporate innovators across European industry.

#### **Serum Institute of India – meningococcal vaccine for developing countries**

The UK Chancellor of the Exchequer, announced the signing of an agreement between the Health Protection Agency and the Serum Institute of India on development of Agency vaccine technology for meningococcal disease, a major killer particularly of young people in developing countries. Following clinical testing and development, the Serum Institute will manufacture the vaccine in a state-of-the-artfully-equipped facility in Pune, India.

#### **Rotem Industries – helping the NHS deal with radioactive contamination**

The Agency's Radiation Metrology group has established an international reputation assisting manufacturers and importers in the development and type testing of radiation monitoring equipment. Recent work in this area involved the development of an energy compensation

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# Partnerships with Industry

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filter for the Rotem Industries RamGene-1 combined contamination dose rate instrument. This work was performed for the UK importers, Pycko Scientific. This instrument is the standard for use by NHS accident and emergency departments should they have to handle radioactively contaminated patients.

## Mobile Telecommunications and Health Research Programme

Research work into the potential health effects of mobile phone radiation has been and continues to be carried out with funding from the Mobile Telecommunications and Health Research Programme (MTHR). This is a jointly funded initiative between government departments and industrial partners from mobile phone businesses. The programme is overseen by an independent programme management committee which receives scientific administrative support from the Agency.

## National Registry for Radiation Workers

For many years, the Agency's Radiation Protection Division has liaised with organisations that employ radiation workers in order to conduct a long-term epidemiological study. The National Registry for Radiation Workers was set up in 1976 and now holds details of more than 200,000 workers in the UK, mostly employed in the nuclear industry, as well as by research organisations and by companies for which the Agency provides radiation dose record keeping. Two analyses of mortality data have already been published and a new analysis of data on mortality and cancer incidence is currently in progress. This study is important in checking the basis for radiation protection standards.

## Vaccine industry – support for pandemic influenza vaccines

The Agency has a remit to provide national diagnostics for avian influenza infections and a supporting role in the development of the UK pandemic vaccine programme. To deliver this public health response we developed a microneutralisation assay for the detection of H5 antibody responses in human sera after vaccination or natural infection. In addition to supporting the service remit this assay has been used to test antibody responses to H5 vaccines in Phase 1 safety and efficacy clinical trials conducted by major pharmaceutical companies. These

are the first global industry sponsored trials, and are intended to support the licensing dossier of the companies.

## InterAct Partnership – commercialising public sector technology

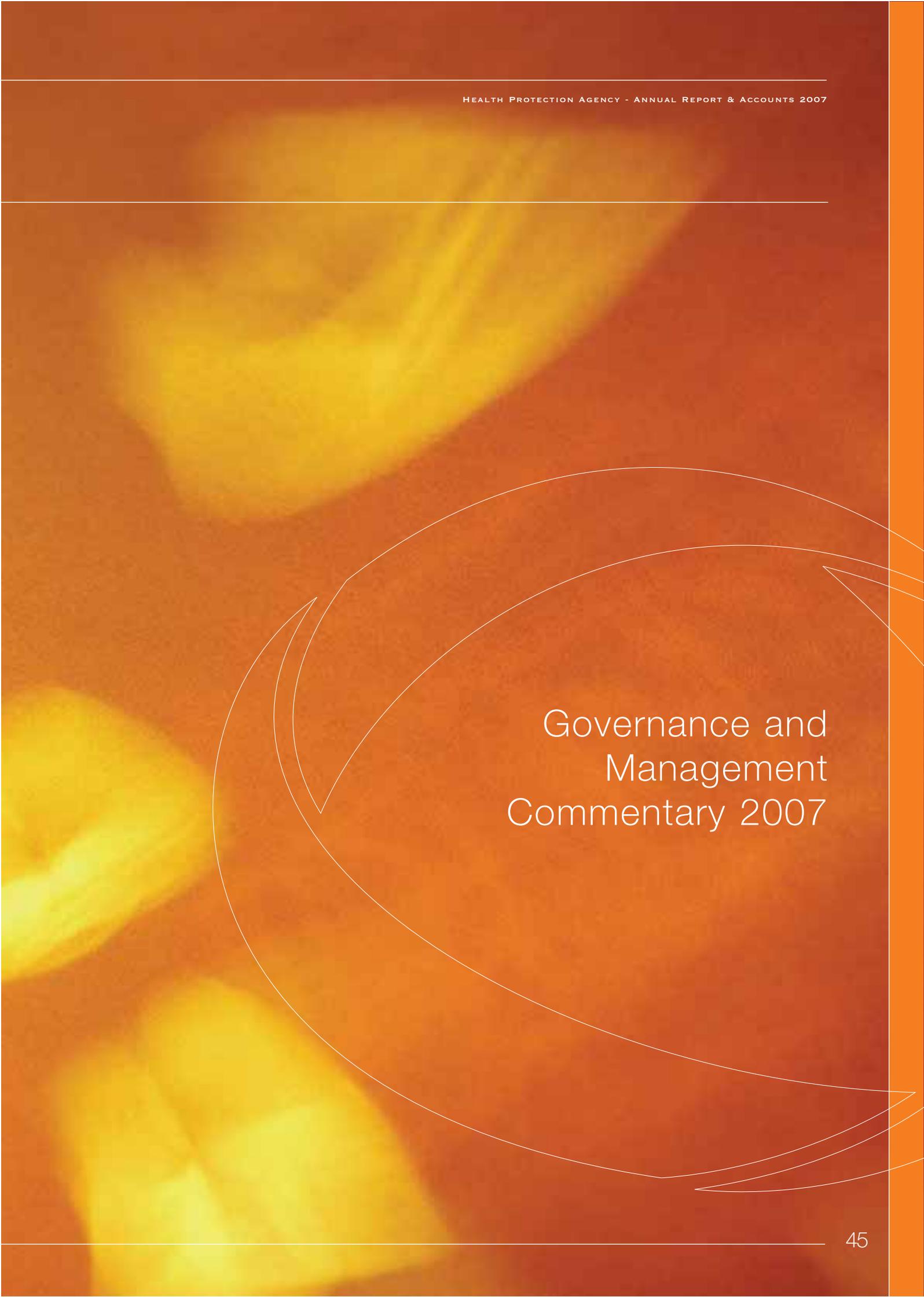
The InterAct partnership is a consortium of public sector bodies active in the life sciences, which collaborate in order to find markets for their technology. Sponsored and supported by the Department of Trade and Industry, the consortium of Health Protection Agency, Veterinary Laboratories Agency, Department for Environment Food and Rural Affairs Central Science Laboratories and the Defence Science and Technology Laboratories receive commercial advice and support from the consultancy firm IP Pragmatics. The partners work together to identify opportunities, research and test markets, and develop technologies to the point where industry can be persuaded to invest.

## Managing our assets

The Agency has a portfolio of over 50 patents, an international client base across many industries and sectors, and a broad range of external contracts. In order to manage our activities effectively, we use a Patent Review Committee and appoint external patent attorneys to manage our intellectual property, a Business Support Network to ensure efficient and professional business practices, and Opportunity Assessment Groups in order to provide rapid feedback to potential customers. The aim is to manage our assets effectively in order to provide the highest level of business professionalism to our customers.

## Communicating with our customers

Communicating with a diverse range of potential industry customers and markets throughout the world is a challenge for any organisation. The Health Protection Agency being a comparatively new name in industry circles, uses a broad range of channels for communicating with its partners in industry: newsletters, trade events, journal articles, and dedicated web pages. Potential partners are always welcomed, and several groups of industry visitors typically visit our facilities each week.



Governance and  
Management  
Commentary 2007

[2.1]

# The Board and the Executive Group

THE BOARD AND THE EXECUTIVE GROUP | THE REMUNERATION REPORT | MANAGEMENT COMMENTARY | OPERATING REVIEW | FINANCIAL REVIEW

The Health Protection Agency is committed to the highest standards of corporate governance and complies with the best practice provisions of the 'Code of Good Practice on Corporate Governance in Central Government Departments' issued by HM Treasury. The Board is led by the Chairman, and the executive management of the Agency is led by the Chief Executive. The roles of Chairman and Chief Executive are separate and clearly defined within the division of responsibilities set out in the Health Protection Agency Act 2004.

## Role of the Board

The role of the Board is to determine the Agency's long-term direction, business objectives and strategy; to ensure that it has adequate resources to meet its objectives and to ensure that it operates an effective risk management system; to monitor its performance and ensure that it acts ethically and meets its responsibilities to stakeholders. Responsibility for delivering the Agency's objectives and running the business on a day-to-day basis lies with the Chief Executive and the Executive Group.

The Board has delegated some of its governance activities to standing Board Committees and Sub-Committees with clearly defined terms of reference set by the Board. The Standing Committees are: the Audit

Committee, the Finance Committee, the Human Resources Committee and the Remuneration and Terms of Service Committee. The Sub-Committees oversee: Life Sciences, Local and Regional Services, and Radiation, Chemical and Environmental Hazards.

The Board met on 10 occasions in 2006/07. Minutes and papers of public meetings are published on the Health Protection Agency website at [www.hpa.org.uk/board](http://www.hpa.org.uk/board). Non-executive directors meet formally without their executive colleagues twice a year.

## Board Membership

During the financial year under review the membership of the Board comprised; 13 non-executive members (including the Chairman), five Board advisers, the Chief Executive, the Director of Finance and Resources, the Director of the Centre for Infections and the Director of the Centre for Radiation, Chemical and Environmental Hazards. The non-executive members of the Board are drawn from diverse backgrounds, bringing a broad range of views and experiences to Board deliberations.

THE BOARD AND THE EXECUTIVE GROUP | THE REMUNERATION REPORT | MANAGEMENT COMMENTARY | OPERATING REVIEW | FINANCIAL REVIEW

### Board Evaluation

During 2005/06, the Board conducted an evaluation of its performance and that of its committees, including a review of their remit, constitution and operating procedures. The changes arising from this review were implemented in this financial year and have led to improved effectiveness of the Board and the Sub-Committees overseeing key operational areas. The Board Committee structure is shown at page 49.

### Board Members' Induction and Development

On appointment, members are provided with written terms of appointment including details of how their performance will be appraised. Members also receive a full induction programme comprising; briefings by senior management; a briefing from the Board Secretary on the Board's responsibilities and procedures, and visits to Health Protection Agency Centres and Divisions. The Board regularly reviews the information it needs to fulfil its responsibilities, and members update their knowledge and develop their understanding of the Agency through site visits, in-depth presentations on topical issues and meetings with key stakeholders. Visits and presentations also give non-executive members the chance to meet staff below Board level.

The Board may, if it wishes, take independent professional advice and all non-executives have access to the advice and services of the Board Secretary.

### Board Appointments

Non-executive Board members are appointed through a rigorous process of open competition against an agreed specification of the roles and capabilities required. Non-executives are eligible to be considered for reappointment at the end of their term of office, normally every four years.

Board members are required to notify and register with the Board Secretary any issues on which they might have a conflict of interest. Declarations of interest are invited at every Board Meeting and the Board as a whole considers how it should discuss the matter(s) on which the member may have a conflict.

The persons who served on the Board during the financial year 2006/07 are listed below. Biographies are available on our website:

[http://www.hpa.org.uk/hpa/board\\_meetings/board\\_members.htm](http://www.hpa.org.uk/hpa/board_meetings/board_members.htm)

## Non Executive Members      Executive Members

Sir William Stewart PhD DSc, FRS, FRSE, DSc (Hon.),  
D Univ (Hon), LLD (HON), FFPH(Hon.) Chairman

Professor Charles Easmon CBE, MD, PhD, MRCP, FRCPath,  
FMedSci Deputy Chairman

Dr Parvaiz Ali† MSc, PhD, CSC, MIPEM, FInstLM

Dr Barbara Bannister† MB, BS, MSc, FRCP

Mr Michael Beaumont CBE, FCA

Mr James T Brown

Mr Ian Cranston FCA

Dr Paul Darragh TD, MD, PhD, MSc, FRCP(UK & IreI),  
FFPH(UK), FFPHM(IreI)

Professor William Gellletly† OBE, PhD, CPhys, FInstP

Professor Rod Griffiths† CBE

Professor Andrew J Hall MB BS, MSc, PhD, FRCP, FFPH,  
FMed Sci

Professor David Latchman MA, PhD, DSc, FRCPath, FRSA

Dr Vanessa Mayatt BSc, PhD, DipOHS, FRSH, CFIOSH

Professor Karl Nicholson MD, FRCPath, FRCP

Mr John Wyn Owen CB

Professor Sandy Primrose PhD

Dr Geoffrey Schild CBE, PhD, DSc, FRCPath, FRCP, F.Med.Sci

Professor Richard Wise† FMedSci, MD, FRCPath, FRCP

Professor Pat Troop CBE, FFPH, FRCP, DSc  
Chief Executive

Professor Peter Borriello PhD, FRCPath, FFPH,  
Director of Centre for Infections

Dr Roger Cox PhD, FMed Sci,  
Director of the Centre for Radiation, Chemical and  
Environmental Hazards

Dr Tony Sannia PhD, FCA,  
Director of Finance and Resources

Mr Michael Harker  
Secretary

Changes to the Board membership which have  
occurred since 31 March 2007 are:

Sir William Stewart has been reappointed as Chairman  
for four years from 1st April 2007;  
Dr Vanessa Mayatt for three years and Dr Sandy  
Primrose for two years. Dr Barbara Bannister†  
has been appointed for a further year. Board Members  
Professor David Latchman, Professor Karl Nicholson,  
Dr Parvaiz Ali† and Professor Richard Wise† left the  
Board on 31 March 2007, at the end of their term of  
office. Professor Rod Griffiths† left the Board on 23  
May 2007.

Professor Stephen Palmer, a member of the  
Executive Group was appointed a member of the  
Board in May 2007.

† denotes persons who are not formal Board members  
but attend Board meetings as advisers

# Board Committees

## Board Committee Structure



# Board Standing Committees

## The Audit Committee

The Audit Committee provides support and assurance to the Chief Executive as Accounting Officer and to the Board in its responsibilities relating to issues of risk, control and governance. The Committee meets four times a year.

Through its oversight of the Integrated Governance Group (IGG), the Audit Committee reviews governance arrangements across the Agency and identifies the actions necessary to improve governance. The IGG also facilitates compliance with best practice and legal and Board requirements on governance. It reports regularly to the Executive Group and the Audit Committee on governance matters.

<b>Members</b>	
Mr Michael Beaumont *	Chairman
Dr Parvaiz Ali †	
Dr Barbara Bannister †	
Dr Vanessa Mayatt *	
<b>In attendance</b>	
Professor Pat Troop	Chief Executive
Dr Tony Sannia	Director of Finance & Resources
Dr Roger Cox	Director, Centre for Radiation, Chemical and Environmental Hazards
Mrs Helen Morris	Head of Internal Audit
Mr Michael Harker	Secretary
Representatives from the National Audit Office	External auditors

\* denotes a non-executive member of the Board

† denotes persons who are not formal Board members but attend Board meetings as advisers

‡ denotes an independent external adviser

## The Finance Committee

The Finance Committee reviews and recommends the annual budget to the Board. It reviews performance against the corporate plan, the business plan and the budget, and considers forecasts. Through its Business Development Sub-Committee, it also considers proposals to maximise external income using the Agency's resources and assets.

The Business Development Sub-Committee is chaired by Professor Sandy Primrose\*.

Members	
Mr Ian Cranston *	Chairman
Mr James Brown *	
Professor Sandy Primrose *	
Dr Tony Sannia	Director of Finance & Resources
Professor Pat Troop	Chief Executive
In attendance	
Mr Michael Harker	Secretary

## The Human Resources Committee

The Human Resources Committee receives reports on items relating to the effective management of human resources and promotion of best employment practice in the Agency. It is responsible for providing guidance on these issues and for reporting on them to the Board. The Committee also reviews the overall framework for employment and remuneration of staff throughout the Agency, and has oversight of the training and development programme.

Members	
Mr Ian Cranston *	Chairman
Dr Barbara Bannister †	
Dr Paul Darragh *	
Professor Charles Easmon *	
Mr John Phipps	Director, Human Resources Division
Professor Pat Troop	Chief Executive
Mr John Wyn Owen *	
In attendance	
Mr Stephen Daniel	Secretary

## The Remuneration and Terms of Service Committee

The Remuneration and Terms of Service Committee determines the policy for the appointment and remuneration of the executive directors and senior level executive posts directly accountable to the Chief Executive. The Committee also reviews the appraisal process for directors and senior executives.

Members	
Sir William Stewart *	Chairman
Mr Michael Beaumont *	
Mr Ian Cranston *	
Professor Charles Easmon *	
In attendance	
Professor Pat Troop	Chief Executive
Mr John Phipps	Director, Human Resources Division
Mr Michael Harker	Director, Corporate Affairs Division and Board Secretary

\* denotes a non-executive member of the Board

† denotes persons who are not formal Board members but attend Board meetings as advisers

‡ denotes an independent external adviser

## Board Sub-Committees

The Board Sub-Committees are responsible for considering issues relating to their area which require careful specialist and professional in depth strategic analysis and to make recommendations in a timely manner to the Board. The persons who served on the Sub-Committees during the year were:

Life Sciences	Radiation, Chemical and Environmental Hazards	Local and Regional Services
Professor Andrew Hall * (Chairman)	Professor William Gelletly † (Chairman)	Professor Charles Easmon * (Chairman)
Dr Barbara Bannister †	Dr Parvaiz Ali †	Dr Bob Adak
Professor Mike Barer ‡ (from Feb 2007)	Professor Peter Blain ‡	Mr Michael Beaumont *
Professor Peter Borriello	Professor Alan Boobis ‡	Mrs Valerie Bevan
Dr Natasha Crowcroft (to Feb 2007)	Professor Gary Coleman	Dr Paul Cosford ‡
Dr David Dance (to Feb 2007)	Dr John Cooper	Mr John Croft
Professor Geoff Garnett ‡	Dr Roger Cox	Mr Tim Everett ‡
Dr Roger Gilmour	Professor Sarah Darby ‡	Professor Stephen Gillespie ‡
Dr Tony Howard ‡ (to Feb 2007),	Dr Paul Darragh *	Dr Diana Grice
Dr Angela Iversen (to Feb 2007)	Professor Paul Elliot ‡	Dr Peter Hammond (Secretary)
Professor Harold Jaffe ‡	Dr Elaine Farmery (Secretary)	Dr Sue Ibbotson
Mrs Frances Knight (Secretary)	Professor Alan Lehman ‡	Dr Christine McCartney
Dr Philip Minor ‡	Professor Malcolm Mason	Dr Jill Meara
Mr Allen Roberts (to Feb 2007)	Dr Jill Meara	Professor Stephen Palmer
Professor Jenny Roberts ‡	Dr John Stather	Dr Mike Painter ‡
Professor Robin Weiss ‡ (to Feb 2007)	<b>Observers</b>	Professor Julius Weinberg ‡
	Dr Hilary Walker (Department of Health)	Professor Richard Wise †
	Dr Arthur Johnston (Scottish Executive)	
	Dr Ken Ledgerwood (Northern Ireland, the Department of Health, Social Services and Public Safety)	
	Dr Lynne Ridler-Wall (Food Standards Agency)	
	Dr Owen Crawley (National Assembly for Wales)	
	Mr Giles Denham (Health & Safety Executive)	
	Dr David Coplestone (Environment Agency)	

\* denotes a non-executive member of the Board

† denotes persons who are not formal Board members but attend Board meetings as advisers

‡ denotes an independent external adviser

## The Executive Group

The Health Protection Agency Executive Group consists of executive directors and is chaired by the Chief Executive, Professor Pat Troop. It is responsible for the strategic and operational management of the organisation and for implementing the policies and strategies agreed by the Board. The Chief Executive is also the Accounting Officer for the Agency, and has responsibility to Government for the management of the organisation. The Executive Group meets monthly. Members who served on the Executive Group since 1 April 2006 are listed below:

Professor Pat Troop CBE, FFPH, FRCP, DSc  
Chief Executive

Ms Lis Birrane MCIPR, Director of Communications

Professor Peter Borriello PhD, FRCPATH, FFPH  
Director of Centre for Infections

Dr Roger Cox PhD, FMed Sci, Director of the Centre for  
Radiation, Chemical and Environmental Hazards

Dr Roger Gilmour PhD, FIFST Director of Centre for  
Emergency Preparedness and Response

Mr Michael Harker IHSM, Director of Corporate Affairs  
and Secretary to the Board

Dr Christine McCartney OBE, PhD, FRC Path,  
Director Regional Microbiology Network from  
September 2006

Dr Mary O'Mahony MRCPI, FFPH was Director of Local  
and Regional Services until she retired in April 2006

Professor Stephen Palmer MA, FRCP, FFPH,  
Director of Local and Regional Services (acting from  
April 2006 and substantive from June 2006)

Mr John Phipps Director of Human Resources

Dr Tony Sannia PhD, FCA, Director of Finance  
and Resources

[2.2]

# The Remuneration Report

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## Remuneration and Terms of Service Committee

An overview of all matters relating to the remuneration of all staff and more detailed consideration of the remuneration of the members of the Executive Group is performed by the Agency's Remuneration and Terms of Service Committee. The Committee membership comprises four non-executive Board members:

Sir William Stewart (Chairman)  
 Professor Charles Easmon  
 Mr Ian Cranston  
 Mr Michael Beaumont

The Committee is responsible for making recommendations to the Board, within agreed terms of reference, on the Agency's framework of staff and executive remuneration and on overall remuneration packages for those senior executives directly accountable to the Chief Executive.

The Remuneration and Terms of Service Committee is advised by the Director of Human Resources. The Committee is able to call upon external advice, when it chooses to do so.

The Remuneration Report has been prepared in consultation with the Remuneration and Terms of Service Committee, following the provisions in the Government's Financial Reporting Manual.

## Remuneration Policy

### *Non-Executive Board Members*

Non-executive Board members, including the Chairman, are appointed by the Secretary of State for Health or by the Ministers of the Devolved Administrations, as advised by the Independent Appointments Commission, for a defined term, normally four years.

The Secretary of State for Health or the Ministers of the Devolved Administrations, determine the remuneration of the non-executive board members, which they review annually.

In addition to receiving the fees for their normal Board duties and responsibilities, non-executive Board members are entitled to receive daily allowances for carrying out work outside and additional to those normal Board duties and responsibilities. This work is classified into four areas: chairing recruitment panels for medical appointments; serving as panel members for final stage grievance and disciplinary hearings; specially commissioned consultancy work; and serving or acting as an observer on the Board (or similar) of other organisations as a representative of the Agency, where no payment is received for this from the other organisation.

Non-executive Board member remuneration is not pensionable.

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In addition to the non-executive Board members appointed by the Secretary of State for Health or the Ministers of the Devolved Administrations, a number of advisers attend the Agency's Board meetings. These advisers receive the same remuneration as the non-executive Board members.

The remuneration of non-executive Board members is not performance related, but performance is assessed by the Chairman of the Board through an annual appraisal process.

### *Members of the Executive Group*

The Health Protection Agency's remuneration package for members of the Executive Group consists of a salary and pension provisions. In determining the remuneration of members of the Executive Group, the Remuneration and Terms of Service Committee has regard to pay and employment policies elsewhere in the Agency and the need to recruit, retain and motivate suitably able and qualified people to exercise their different responsibilities.

The salaries of the members of the Executive Group are reviewed annually, in line with guidance from the Department of Health and changes to terms and conditions of employment in the NHS. The increase in basic salary for Executive Group members from 2005/06 to 2006/07 was an annualised 1.5 per cent.

Cost of living increases for other employees within the Agency ranged from an annualised 1.5 per cent for staff on medical consultant contracts to 2.5 per cent for all other staff.

There are no performance related bonuses payable to members of the Executive Group; however their performance is assessed by the Chief Executive in consultation with the Chairman of the Board through the Agency's annual appraisal procedure.

The members of the Executive Group (with the exception of Dr Roger Cox) are members of the NHS Pension Scheme. Dr Roger Cox transferred to the Health Protection Agency from the National Radiological Protection Board on 1 April 2005 and retained his membership of the United Kingdom Atomic Energy Authority Combined Pension Scheme that offers very similar benefits to the NHS Scheme. Details of the pension schemes, including benefits payable, are included in the notes to the financial statements. The members of the Executive Group hold employment contracts which are open-ended until they reach the contractual retirement age of 65 years. Early termination by the employer, other than for misconduct, would result in the individual receiving compensation in accordance with NHS terms and conditions and, in the case of Dr Roger Cox, in accordance with the terms of the United Kingdom Atomic Energy Authority Combined Pension Scheme.

## Remuneration of the non-executive Board Members

The total emoluments of the Chairman of the Board, Sir William Stewart, for the year ended 31 March 2007, were in the band £60,000 - £65,000 (2006: £60,000 - £65,000). All other non-executive Board members, with the exception of the Chair of the Audit Committee, received emoluments in the band of £5,000 - £10,000 (2006: £5,000 - £10,000) in respect of their Board responsibilities. Mr Michael Beaumont, Chair of the Audit Committee, received emoluments in the band of £10,000 - £15,000 (2006: £5,000 - £10,000).

In addition to their basic Board remuneration, the following non-executive Board members received the following amounts in respect of the daily allowances for carrying out a number of specific duties additional to their normal Board duties and responsibilities:

	Daily allowances 2007	Daily allowances 2006
	Bands of £5,000	Bands of £5,000
Mr Michael Beaumont	0-5	0-5
Mr Ian Cranston	0-5	0-5
Prof Charles Easmon	-	0-5
Dr Vanessa Mayatt	10-15	0-5
Dr Sandy Primrose	-	0-5
Dr Geoffrey Schild	0-5	0-5
Prof Richard Wise	0-5	0-5

No other benefits were received by any non-executive Board member or Board adviser.

## Remuneration of the Members of the Executive Group

The salary and allowances for the full year of the members of staff who served on the Executive Group during the year ended 31 March 2007, were as follows:

	Basic salary & fees	Other remuneration	Total 2007	Total 2006
	Bands of £5,000	Bands of £5,000	Bands of £5,000	Bands of £5,000
<b>Chief Executive</b>				
Prof Pat Troop <sup>1</sup>	175-180	-	175-180	170-175
<b>Executive Directors</b>				
Ms Lis Birrane	75-80	-	75-80	70-75
Prof Peter Borriello <sup>1</sup>	140-145	-	140-145	135-140
Dr Roger Cox <sup>1</sup>	125-130	-	125-130	125-130
Dr Roger Gilmour	150-155	10-15	160-165	150-155
Mr Michael Harker	105-110	5-10	110-115	105-110
Dr Christine McCartney	65-70	-	65-70	-
Mr John Phipps	100-105	0-5	105-110	105-110
Dr Tony Sannia <sup>1</sup>	115-120	-	115-120	110-115

<sup>1</sup> Denotes persons who are currently members of the Health Protection Agency Board

The remuneration of Professor Pat Troop includes a clinical excellence award funded by the Department of Health.

The other remuneration relates wholly to relocation expenses.

Dr Christine McCartney was appointed as a member of the Executive Group from 1 September 2006 and the salary disclosed in the table above relates to the proportion of her annual salary payable in respect of her appointment to the Executive Group.

Professor Stephen Palmer was a member of the Executive Group throughout the year ended 31 March 2007. He is an employee of Cardiff University. The amount paid by the Agency to the University to cover his salary and employer on-costs for the year totalled £219,000. The total amount paid to the University included a clinical excellence award which is funded by the Department of Health.

The National Institute of Biological Standards and Control (NIBSC) is planned to merge with the Health Protection Agency, subject to legislation. As Chief Executive of NIBSC, Dr Stephen Inglis participated as an HPA Executive Group member throughout the year ended 31 March 2007, with no costs being borne by the Agency.

No benefits in kind were received by any member of the Executive Group.

Following the re-organisation of the Agency's Local and Regional Services, the Director's post became redundant and the incumbent, Dr Mary O'Mahony, took early retirement in April 2006 and received compensation in accordance with the NHS Whitley terms and conditions. No other awards or compensation payments have been made to former members of the Executive Group.

The pension entitlements of the members of the Executive Group are as follows:

	Real annual increase in accrued pension	Real annual increase in lump sum	Pension value as at 31 March 2007	Lump sum value as at 31 March 2007	Cash equivalent transfer value as at 31 March 2007	Real annual increase in cash equivalent transfer value
	Bands of £2,500	Bands of £2,500	Bands of £5,000	Bands of £5,000	To nearest £1,000	To nearest £1,000
<b>Chief Executive</b>						
Prof Pat Troop	2.5 - 5.0	10.0 - 12.5	75.0 - 80.0	225.0 - 230.0	1,289	62
<b>Executive Directors</b>						
Ms Lis Birrane	0.0 - 2.5	2.5 - 5.0	0.0 - 5.0	5.0 - 10.0	33	11
Prof Peter Borriello	10.0 - 12.5	35.0 - 37.5	45.0 - 50.0	135.0 - 140.0	509	142
Dr Roger Cox	0.0 - 2.5	2.5 - 5.0	45.0 - 50.0	140.0 - 145.0	824	16
Dr Roger Gilmour*	0.0 - 2.5	2.5 - 5.0	10.0 - 15.0	40.0 - 45.0	-	-
Mr Michael Harker	0.0 - 2.5	5.0 - 7.5	45.0 - 50.0	140.0 - 145.0	761	50
Dr Christine McCartney*	0.0 - 2.5	0.0 - 2.5	50.0 - 55.0	150.0 - 155.0	-	-
Mr John Phipps*	0.0 - 2.5	2.5 - 5.0	15.0 - 20.0	50.0 - 55.0	-	-
Dr Tony Sannia	0.0 - 2.5	2.5 - 5.0	15.0 - 20.0	45.0 - 50.0	229	18

\* There is no Cash Equivalent Transfer Value for those members who were over the age of 60 years

The Cash Equivalent Transfer Value (CETV) is the actuarially assessed capitalised value of the pension scheme benefits accrued by a scheme member at a particular point in time. The benefits valued are the member's accrued benefits and any contingent spouse's pension payable from the scheme. A CETV is a payment made by a pension scheme or arrangement to secure pension benefits in another pension scheme or arrangement when the member leaves a scheme and chooses to transfer the benefits accrued in their former scheme.

The pension figures shown relate to the benefits that the individual has accrued as a consequence of their total membership of the pension scheme, not just their service in a senior capacity to which disclosure applies. The CETV figures include the value of any pension benefit in another scheme or arrangement which the individual has transferred to the NHS Pension Scheme (or in the case of Dr Roger Cox, to the United Kingdom Atomic Energy Authority Combined Pension Scheme). They also include any additional pension benefit accrued to the member as a result of their purchasing additional years of pension service in the scheme at their own cost. CETVs are calculated within the guidelines and framework prescribed by the Institute and Faculty of Actuaries.

The real increase in the value of the CETV reflects the increase in CETV effectively funded by the employer. It takes account of the increase in accrued pension due to inflation, contributions paid by the employee (including the value of any benefits transferred from another pension scheme or arrangement) and uses common market valuation factors for the start and end of the period.

## Auditable and non-auditable elements of this report

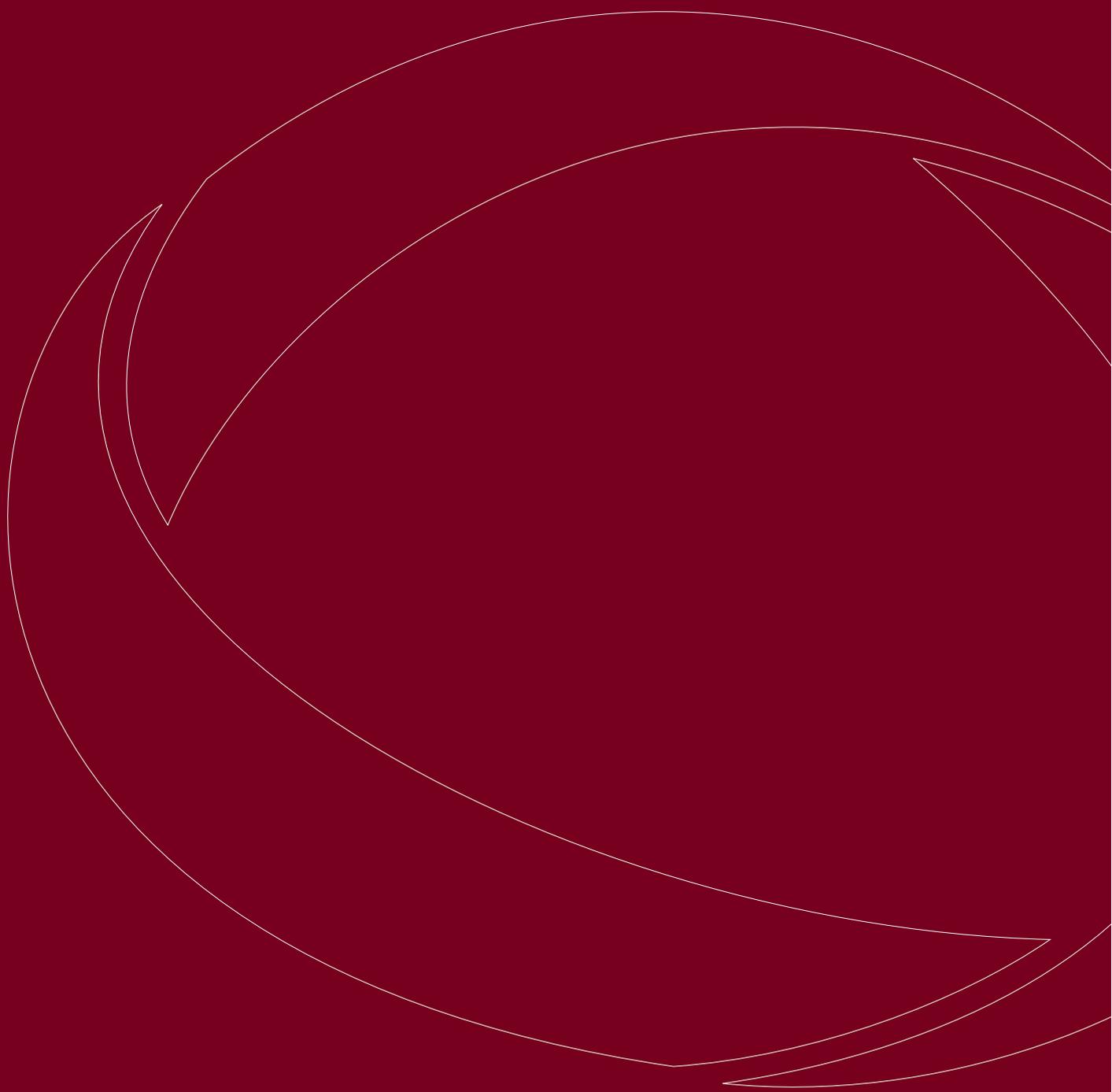
The law requires the Agency's auditors to audit certain of the disclosures provided within the Remuneration Report. Audited sections of this report include the following:

- Remuneration of the non-executive Board Members;
- Remuneration of the Members of the Executive Group;
- Pension Entitlements of Members of the Executive Group;
- Details, if any, of any element of the remuneration package which is not cash;
- Details, if any, of compensation payable to former senior managers;
- Details of amounts, if any, payable to third parties for services of a senior manager.

The auditor's opinion is included within the Audit report on Page 101.



**Professor Pat Troop** CBE  
Chief Executive  
29 June 2007



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# Management Commentary

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## ABOUT THE HEALTH PROTECTION AGENCY

### Brief History

The Health Protection Agency was established as a Special Health Authority in April 2003 in advance of the Health Protection Act 2004. This Act brought together the Health Protection Agency Special Health Authority and the National Radiological Protection Board to become the Health Protection Agency as an Executive Non-Departmental Public Body; an independent specialist organisation dedicated to protecting the health of the population of the United Kingdom.

### Our Role

As an independent specialist organisation dedicated to protecting the health of the population of the United Kingdom, the Agency provides impartial advice and authoritative information on health protection issues to the public, to professionals and to government. Everything we do is based on expert skills and knowledge applied to strong front-line services. We work at international, national, regional and local levels to identify new threats to health, to prepare for them, prevent them where possible, and should they arrive, reduce their impact on public health. We combine public health, scientific and health protection expertise, research,

and emergency planning within one organisation. We provide an integrated approach to protecting UK public health through the provision of support and advice to the NHS, local authorities, emergency services, other Arms Length Bodies, the Department of Health and the Devolved Administrations.

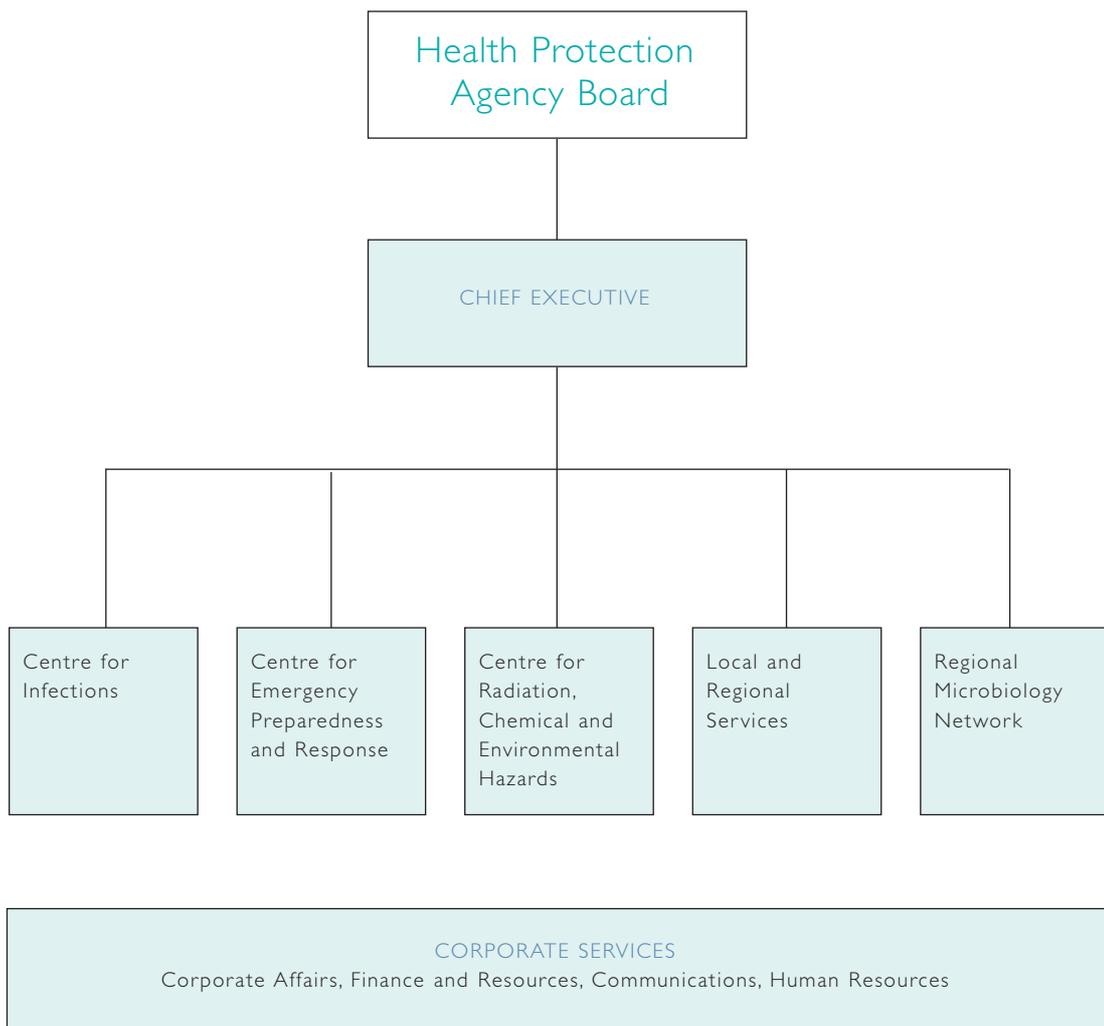
### Staff

During 2006/07, the Agency employed 3,252 staff. They are based in three centres (Colindale, North London; Chilton, Oxfordshire and Porton Down, Wiltshire) and in locations across England, Wales, Scotland and Northern Ireland. The Agency's headquarters are based in London.

Agency staff include doctors and nurses, scientific and technical staff from many specialist disciplines, administrative staff and emergency planners. They work with colleagues in corporate affairs, finance and resources, communications and human resources divisions.

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## Organisational Structure



## Centre for Infections

The Centre for Infections, based at Colindale, north London, is responsible for a number of essential frontline national services including;

- Infectious disease surveillance
- Providing specialist and reference microbiology and microbial epidemiology
- Co-ordinating the investigation of national and cross-regional outbreaks
- Helping advise government on the risks posed by various infections and responding to international health alerts.

It monitors unusual disease outbreak activity, and carries out typing and fingerprinting of infectious agents. This is done by working closely with partner organisations in the UK such as the Veterinary Laboratories Agency for infections transmitted from animals, and international bodies such as the World Health Organisation and the European Communicable Disease Centre as well as other parts of the Health Protection Agency.

At the local level, the Centre provides expert support to colleagues in Local and Regional Services and the Regional Microbiology Network as well as directly supporting customers. Expert staff are on-call 24-hours a day for normal business and to ensure an immediate response to national emergencies. The Centre also provides commercial services, expert disease modelling, quality assurance schemes, training, and has an active research programme.

## Centre for Emergency Preparedness and Response

The Centre for Emergency Preparedness and Response (CEPR) manages the Agency's Centre at Porton Down, Wiltshire. The Centre co-ordinates emergency preparedness across the Agency and it works closely with the NHS, local authorities and the emergency services, identifying and strengthening countermeasures. CEPR staff were heavily involved in the response to the Polonium-210 incident, particularly in co-ordinating and leading the Central operations room and co-ordinating with the Metropolitan Police Counter-Terrorism Command (SO15). Exercises to test responses are conducted across the country with UK and EU partners, further improving emergency planning and preparedness. A major training programme is conducted for health professionals in chemical, biological, radiological and nuclear scenarios and casualty management.

The Centre models disease, particularly for agents considered a bioterrorism threat. It has high containment laboratories for diagnosis of imported dangerous pathogens like Ebola or agents which could be used in a deliberate release. It conducts research on diseases such as tuberculosis, meningitis and on prions. Anthrax vaccine is manufactured for the UK Government and defence vaccine research is carried out for the UK and US Governments. The Phase 1 safety and immunogenicity clinical trial of *Neisseria lactamica* vaccine is ongoing and interim analysis of the data is underway.

## Centre for Radiation, Chemical and Environmental Hazards

The Centre for Radiation, Chemical and Environmental Hazards is based in Chilton, Oxfordshire, with a number of offices and laboratories in Birmingham, Cardiff, Leeds, London and Glasgow serving regional needs. The Centre has two Divisions; Radiation Protection and Chemical Hazards and Poisons. They cover a diverse range of issues associated with the risks to public health resulting from exposure to noxious chemicals and poisons, and to ionising/non-ionising radiations.

In respect of radiation hazards, the key functions are to give advice, to conduct research and to provide services. The scope covers both ionising and non-ionising radiations including ultrasound and infrasound. Specific areas of work include: the assessment of exposures and the consequent risks to health; advising UK Government, other bodies and the public on these risks; providing an input to emergency preparedness and response; providing training and other commercial services and working in partnership on health protection issues with other national and international bodies. The Centre has a well-developed environmental monitoring and individual dose assessment capability. It also provides advice and support within the Agency, particularly to staff in Local and Regional Services who, with primary care trusts, respond to local incidents and public concerns.

In respect of chemical hazards and poisons, the key functions include: advice to UK Government Departments and Agencies on the impact to human health from chemicals in water, soil and waste as well as information and support to the NHS and health professionals on toxicology. These functions are of particular importance in emergency situations. The Centre is undertaking research to improve our understanding of long-term consequences of low level, chronic exposure to chemicals and poisons especially in relation to reproductive health, asthma and cancers. The Centre also advises doctors and nurses on the best way to manage patients who have been poisoned. It provides this service through the National Poisons Information Service (NPIS).

## Local and Regional Services (LARS)

Local and Regional Services (LARS) has responsibility for working with key stakeholders at local and regional levels to provide specialist health protection advice and operational support, directly to all primary care trusts, strategic health authorities, regional directors of public health and all local authorities in England. Support to Northern Ireland is also provided and there is a close working relationship with many other government agencies in England. LARS works to ensure health protection security and to reduce the burden of disease. It does this by responding to and controlling some 2,500-3,000 infection and environmental incidents and outbreaks each year, assisting in tackling infections such as MRSA, tuberculosis and sexually transmitted infections. LARS also actively engages in the Agency's preparedness and response to emergencies, from flooding to the deliberate release of biological and/or chemical agents. It is heavily involved in developing training both internally and externally, aiming to improve practice, overall capacity and leadership in health protection. Local and Regional services are provided through nine Regional Offices (which correspond to the Government Offices of the Regions). There are 26 Health Protection Units (HPUs), each covering an area with a population of about 2 million. Each unit has a director, health protection consultants and other staff with specialist health protection skills. They have access to expert advice from the other centres and divisions in the Agency.

Functions include local disease surveillance, alert systems, investigation and management of the full range of health protection incidents and outbreaks, and ensuring local delivery and monitoring of national action plans for infectious diseases.

## Regional Microbiology Network

The Regional Microbiology Network (RMN) comprises seven Regional Microbiology Laboratories and 37 Collaborating Laboratories. These Laboratories provide frontline diagnostic and public health microbiology services to NHS Trusts and the Agency's Health Protection Units. There are 26 Food, Water and Environmental (FW&E) Laboratories of which nine are directly managed by the HPA and 17 are located in Collaborating Laboratories in NHS Trusts. The Regional Microbiology Network has extensive links with the Centre for Infections, Centre for Emergency Preparedness and Response and the National Institute for Biological Standards and Control (NIBSC) to facilitate the co-ordination of microbiology services within the Agency.

## Corporate Services

The three Centres, LARS and the Regional Microbiology Network are supported by four divisions within the corporate services function:

### *Finance and Resources*

The Finance and Resources Division includes the departments of Finance; Estates and Facilities; Information Systems; Information and Knowledge Management; the International Office and Internal Audit. The Division provides the Agency with efficient, effective economic financial and resource management services to enable the Agency to achieve its strategic goals.

During the first two years of the Agency's existence the Division concentrated on standardising basic systems. Since then the focus has been on more 'value-added' activity. During 2006/07, a new electronic staff records system was successfully implemented, a new IT network and email system were rolled out, and the Agency's website was expanded and its content enhanced to reflect its growing status. The Division continues to work closely with its colleagues across the organisation to ensure that systems and infrastructure meet the Agency's evolving business and strategic needs.

### *Corporate Affairs*

The Corporate Affairs Division supports the Board and the Executive on secretariat matters and takes the corporate lead on a number of Agency activities including business planning and risk management, governance, health and safety, quality and environmental policy, security, legislation and non-commercial legal issues. The division also manages the Agency's complaints procedure, subject access requests under the Data Protection Act and requests under the Freedom of Information Act. It plays a central role in preparing the annual declaration to the Healthcare Commission on compliance with the

Department of Health *Standards for Better Health*.

The Expert Advice Support Office provides the scientific secretariat service to a number of Department of Health Advisory Committees.

### *Communications*

Specialists in publications, design, branding, stakeholder engagement, public involvement and internal communications provide comprehensive support for the Agency's work at all levels, from local and regional to national and international. The Division strives to ensure that the entire Agency's communications activities, whether advice, information, publications or stakeholder communications, fully support, enhance and take forward its strategic goals and priorities and contribute to their successful delivery.

Press Office teams provide a nationwide round-the clock service to the Agency, its stakeholders and the media, ensuring that advice and information is timely, authoritative, consistent, accurate and clear.

The Communications Division deals with hundreds of press enquires each month leading to between 500 – 800 mentions in the print media and facilitates an average of 100 - 150 broadcast and print interviews.

### *Human Resources*

The Human Resources Division provides operational support to all parts of the Agency. The Division has led the implementation of the Agenda for Change Programme with the welcome and widespread support of trade union colleagues. Remedial action has continued on the improvements identified through the Employee Opinion Survey.

The Division has conducted a series of Development Centres for the identification of executive potential thus addressing the issue of succession planning across the Agency.

## **Additional Corporate Information**

### *Human Resources Policies and Process Development*

- The Agency continues to develop a wide range of policies and processes in partnership with staff representatives, designed to improve the employment experience of Agency staff and to assist the organisation in meeting its objectives.

Recent initiatives include development of policies to improve the work-life balance of employees, for example flexible working and flexi-time policies. The Agency has also placed an increased emphasis on employee development through the introduction of a new appraisal process supported by a comprehensive employee development and support policy.

*Employee relations* - We promote positive employment relations with staff and their representatives and a Recognition and Procedure Agreement has been entered into with the relevant trade unions. The quarterly meetings of the National Joint Staff Committee, which is made up of management and staff-side representatives, provides a valuable mechanism for on-going constructive consultation on the Agency's wide range of issues and developments.

*Communications with employees* - The Agency is committed to regular informed communications with its employees at all levels. This is carried out by the Human Resources and the Communication divisions using a variety of means, both formal and informal. This aims to ensure the regular and clear communications of information that may impact upon employees' working and professional lives.

*Equality and diversity* - The Agency undertakes to promote equality and diversity and not to discriminate between employees or job applicants in respect of age, sex, sexual orientation, marital status, race, colour, ethnic or national origin, disability, religion, gender reassignment, HIV status or trade union membership.

The Agency has established a working group to look at all Equality and Diversity issues within the organisation. The group was established initially to look at Race Equality issues as the organisation is bound under the Race Relations (Amendment) Act 2000 although its remit has recently expanded to look at all equality and diversity issues.

The group is currently working on a number of issues including an audit of Human Resources and non-Human Resources policies, a leaflet to be given to all existing and new staff, equality and diversity training, an equality statement to go on job descriptions, a report on recruitment issues and the sourcing of equality information on staff for monitoring purposes.

**Persons with disabilities** - The Agency's policy in respect of people with disabilities is incorporated into its Equality and Diversity Policy. The Agency takes all practicable steps to ensure that it meets the requirements of the Disability Discrimination Act 1995. Relevant principles and practices are incorporated into training programmes for staff involved in recruitment and selection procedures.

**Pensions** - The Majority of the Agency's employees are covered by two pension schemes; the National Health Service (NHS) Pension Scheme and the Combined Pension Scheme. A few employees have retained their individual membership of The Principal Civil Service Pension Scheme, or have exercised other options available as a result of the Social Security Act 1986. The three schemes available to Health Protection Agency employees are defined benefit schemes, all of which prepare separate scheme statements, which are readily available to the public. Details of the major pension schemes are provided in the notes to the financial statements.

**Health and Safety** - The Agency continues to implement its Health and Safety Management Strategy in order to comply with Health and Safety legislation and best practice requirements. Responsibilities for the local implementation of the policies and achievement of improvement in Health and Safety performance rests with the Centres and is taken forward via their Health and Safety plans.

A significant number of Corporate Health and Safety policies have been introduced to help develop a consistent approach across the Agency.

Comprehensive programmes of audits, inspections, risk assessments and training are undertaken. The Agency is committed to ensuring safe and healthy working conditions for employees, contract staff and visitors and has introduced a number of policies that promote a healthy lifestyle. From April 2007, all HPA sites became no smoking premises.

Health and Safety reports to the Board have demonstrated a reduction in serious and significant incidents, such as those reported under the Reporting of Injuries, Diseases and Dangerous Occurrences Regulations, 1995 (RIDDOR). The overall number of RIDDOR reports in 2006/07 was 12, compared with 25 in 2005/06. The Health and Safety Executive has investigated a RIDDOR reportable incident which occurred in June 2005 and analysis of the evidence is awaited. In the meantime the lessons learned from the incident are being promulgated to staff and managers.

**Environmental Management Strategy and Sustainability** - The Agency is fully supportive of the UK Government commitment to sustainable development and has developed an environmental strategy to deliver the commitments within its Environmental Policy. The Environmental Strategy Group (ESG) leads on this process on behalf of the Executive Group and the Agency's Board and progress has been made in several areas, for example;

- The Agency will be contributing to the pan-government fund set-up to offset carbon dioxide emissions from air travel for the 2006/07 financial year.
- Actions identified by Carbon Trust energy usage reviews at the three main sites are being taken forward.
- An energy policy outlining our approach to achieving better utilisation of natural resources has been drafted and will be implemented in 2007/08.
- The ESG has produced a Sustainable Development Plan, which identifies several key environmental activities

and policies to be developed and published in the coming year.

- An Environmental Intranet site was launched to improve staff participation in the Agency's environmental agenda. This includes an email address for staff suggestions.

The Agency's Sustainable Development plan will take a broader view of our environmental strategy and performance and outline proposals in areas such as assessing and reducing our carbon footprint, sustainable procurement and improved waste strategies.

**Research and Development** - The Agency uses research and development (R&D) expertise to underpin its authoritative evidence based advice and, working in partnership with the commercial and public sectors, to deliver new procedures and information which benefit public health. During the year the Agency continued to increase its expenditure on research and development by attracting further external funding in its key priority areas. At the beginning of 2007 the Department of Health conducted a comprehensive review of the Agency's internal and external expenditure on R&D and assessed whether the R&D undertaken met its R&D priorities. The recommendations of this review are awaited and the Agency will initiate its responses during 2007/08.

**Register Of Interests** - The Health Protection Agency's Register of Interests is subject to inspection by auditors, and is open to public inspection. The Register is maintained and held by the Board Secretary at the Central Office in Holborn Gate, and may be viewed by appointment during office hours only. Please call 020 7759 2710 to make an appointment

**Information Access Requests** - During 2006/07 the Agency received 182\* information access requests, including requests transferred to the Agency from other public authorities.

Most requestors cited the Freedom of Information Act but the figure also includes requests handled in part or exclusively under other information access legislation. Specifically, six requests were handled under the

Environmental Information Regulations and eight were subject access requests for personal information (made by the data subject or agents acting on their behalf) and were handled under the Data Protection Act.

**Parliamentary Questions** - A total of 200 Parliamentary Questions (PQs) were referred to the Agency during 2006/07.

The majority of PQs concerned infectious diseases and micro-organisms, with the commonest topics being healthcare associated infections and antibiotic resistance, HIV/AIDS and sexually transmitted diseases. There were an increased number of PQs on tuberculosis and zoonotic infections compared with previous years, and a fall in PQs on hepatitis.

**Complaints** - Seven complaints were received from members of public, patients and service users during the year and were handled in accordance with the Agency's Complaints Procedure, which is available from our web site. This compares to 13 complaints received in the previous year. At the time of preparation of this report, all seven complaints had been dealt with through the local resolution procedure.

**Stakeholder relations** - During 2006/07 the Agency assessed its relationships with key stakeholder organisations and identified a corporate lead for each stakeholder. The assessment indicates that stakeholder relationships are currently satisfactory. These findings will be used as a baseline against which improvements and changes are measured as further work to actively manage stakeholder relationships is taken forward. Changes across the Agency and the NHS during the year meant that some of the corporate leads and relationships had to be reviewed.

Each of the Agency Programmes is required to map out and establish good working relationships with key stakeholder organisations and individual collaborators. This is being taken forward in a number of ways depending on the needs of the Programme. Some programmes have included external stakeholder members on their Programme Boards. Other programmes undertake wider consultations with various organisations including Government Departments and Agencies, Devolved Administrations and Universities.

\* Additional information requests from an individual on the same subject were counted as part of the original request..

## Operating Overview 2006/07

This year's report again set out to demonstrate the breadth of the Health Protection Agency's work, which includes infections and the health effects of environmental hazards such as chemicals and radiation, and emergency health protection incidents. We might be working with local communities or with national or international agencies, but the overall aim is the same; to protect the health of the community. The activities are also broad, including improving the knowledge base, giving information and advice, providing services or responding to incidents, very seldom acting on our own; more usually acting and working with partners. All of these have been features of the work of the past year.

One of the dominant activities has been responding to or preparing for emergencies. The most significant was the Polonium-210 poisoning and the subsequent findings of radiation in a number of locations in London, but during the course of this there were also a number of others. These included H5N1 Avian Influenza in a farm in Suffolk, new strains of infection emerging and supporting the response to the grounding of the ship Napoli. Responding to these emergencies required hard work from many staff, but showed that we are able to deliver in a positive and professional manner, and that we are able to sustain a response over many weeks. Such responses increase the cohesiveness of the organisation, are an opportunity for training and teach lessons on how to improve our performance and business continuity. No matter how small the incident, we have a standard 'lessons identified' procedure which feeds into our planning. They also highlighted one of the main reasons for setting up the Health Protection Agency; to protect the health and well-being of the population.

In early 2007, whilst we were still responding to these, we were involved in planning the cross-government exercise on pandemic influenza, Winter Willow. The Agency was also an active participant, with input from across the whole organisation, needing extensive preparation, good coordination and communication. Maintaining multiple responses and the other essential work of the Agency at the same time put a strain on many staff, but showed that we do have a level of resilience that would have been much more difficult before the Agency was set up.

We are continuing to embed the programme approach on our priority areas, bringing together staff from across the Agency towards common goals, and with many of them this is beginning to bear fruit in terms of more systematically tackling health problems. So far, the programmes have been putting in place the building blocks, such as better testing, more focussed surveillance and training, but now we need to do more and identify deliverable health outcomes. This will be addressed in our next strategic plan.

An increasing number of Agency staff are actively involved in international work and collaborating with contacts from abroad. The Agency published a new strategy in 2006, but whilst there is considerable demand on the Agency from international institutions and other countries, we do not have core funding for this work. We do regard some of the work as normal business, as we need to work globally to protect the community, and we work closely with international organisations such as the World Health Organisation. In a few situations, we also receive specific funding for projects, but our work is limited by a lack of dedicated resource.

All these activities have resulted in an increase in our profile with stakeholders, the media and the public. We have worked hard to maintain our position as an independent organisation, which can be trusted to give authoritative advice based on sound science. Nevertheless, we recognise that increased visibility can lead to vulnerability and maintaining our reputation is of increasing importance if we are to be successful in our functions.

Behind these higher profile activities, we have continued to deliver our everyday work, such as maintaining surveillance, running laboratories, publishing reports, giving advice, training and carrying out research. We have almost wholly met our annual business plan targets and balanced the books. We attracted more external income than previously and have continued to spread our income base. We completed the split of Local and Regional Services, by setting up a new Regional Microbiology Network, with two new Directors appointed. The Board carried out a review of Corporate Services, and changes are being made in some of the operations.

When we were set up, we recognised that we would need to put in place many new systems, such as IT, finance and human resources. Each year we have made progress on this, and last year was no exception. We introduced a new Electronic Staff Records system, and continued to strengthen our financial operating system, which has given us much more useful information for managing the Agency. We have continued to rationalise our accommodation, particularly within Local and Regional Services, to create larger teams with greater critical mass and better skill mix and release resources for additional work. We have continued to implement Agenda for Change. This is not straightforward in a specialist organisation such as ours. Compared with the overall NHS, our profile has come out well, but the process of regrading has had an impact on some staff morale. Our training programmes continue, and we have instituted a succession management scheme, starting with those at near director level.

We are now looking ahead at the next strategic plan for the next five years and the big issues that the Agency will face. Whilst we still need to continue with modernisation, we are now better set to respond to the major challenges of the health effects of climate change, globalisation and border health, the increasing environmental concerns and persistent infectious diseases, and in particular a health protection emergency. Incidents like Polonium-210 have also taught us to 'expect the unexpected'.

[2.4]

# Operating Review

THE BOARD AND THE EXECUTIVE GROUP | THE REMUNERATION REPORT | MANAGEMENT COMMENTARY | OPERATING REVIEW | FINANCIAL REVIEW

The Health Protection Agency delivers its strategic goals through 15 programmes. This provides a co-ordinated way of working across the organisation and provides us with a critical assessment of whether we are using our resources to best effect to achieve our aims and objectives.

Each programme is overseen by a director, who is a member of the Executive Group. The director is supported by a programme manager who co-ordinates the work. Members of each programme are drawn from across the organisation.

## The Programme aims are:

### Programme 1

Reducing the incidence and consequences of infection.

- To reduce the incidence and consequences of healthcare-associated infections and antimicrobial resistance.
- To reduce the incidence and consequences of gastrointestinal disease and food poisoning.
- To reduce the incidence and consequences of infection with hepatitis B and C.
- To reduce the incidence and consequences of HIV and sexually transmitted diseases.
- To reduce the incidence and consequences of infection with vaccine preventable diseases.
- To combat pandemic influenza.
- To reduce the incidence and consequences of tuberculosis.

### Programme 2

To protect against the adverse health effects of acute and chronic exposure to chemicals, poisons and other environmental hazards.

### Programme 3

To improve protection against the adverse effects of exposure to ionising and non-ionising radiation.

### Programme 4 and 6

To prepare and respond to emerging health threats and emergencies including those caused by deliberate release.

### Programme 5

To protect and improve the health of children.

### Programme 7

To strengthen information and communications systems for identifying and tracking diseases and exposures to infection, chemical and radiological hazards.

### Programme 8

To build and improve the evidence base through a comprehensive programme of research and development.

### Programme 9

To develop a skilled and motivated workforce.

### Programme 10

To manage knowledge and sharing expertise.

### Programme 11

To build on and develop the intellectual assets of the organisation in partnership with industry and other customers, in order to better protect the public.

### Programme 12

To raise the understanding of health protection and involvement of the public and ensure they have access to authoritative, impartial and timely information and advice.

### Programme 13

To strengthen frontline services in the community.

### Programme 14

To contribute to UK international health objectives and to global health.

### Programme 15

Making it happen.

# Individual Programmes

THE BOARD AND THE EXECUTIVE GROUP | THE REMUNERATION REPORT | MANAGEMENT COMMENTARY | OPERATING REVIEW | FINANCIAL REVIEW

## | Programme 1 |

### Reducing the consequences of infection

#### Healthcare-associated infections and antimicrobial resistance

We work in partnership with the NHS to improve the effective control of healthcare-associated infections. The shared aims are to reduce infections associated with healthcare and to lessen the occurrence and consequences of antimicrobial resistance (AMR). Our role is to provide support and advice to healthcare professionals, hospital management, primary care trusts (PCTs), strategic health authorities (SHAs), the Department of Health (DH) and other agencies such as the National Patient Safety Agency (NPSA).

The mandatory surveillance and reporting of healthcare-associated infections (HCAIs) including Methicillin Resistant *Staphylococcus aureus* (MRSA) bacteraemias, *Clostridium difficile*, glycopeptide-resistant enterococci (GRE) and surgical site infection in orthopaedic surgery have been delivered consistently throughout the year incorporating further developments to the MRSA surveillance at the request of the DH. Liaison with SHAs and PCTs has continued to be strengthened.

The first annual report of mandatory HCAI surveillance was published in July 2006. It informed DH strategy and government policy, as well as providing valuable feedback to hospitals to inform their infection control activities.

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A new Antimicrobial Resistance Alert System was delivered on schedule. This enables the DH Inspector of Microbiology to share information on new emerging resistance problems as identified by our reference laboratories.

We published our third report on Trends in Antimicrobial Resistance in England and Wales: 2004/2005, providing a detailed overview of antimicrobial resistance in a range of pathogens (bacteria, viruses, fungi, and protozoa) of public health importance. The report provides information to healthcare workers in the fields of public health, infectious disease and clinical microbiology, of existing and emerging problems of resistance that may impact on patient management (e.g. policies for empirical prescribing of antimicrobial agents) and clinical outcomes. Sharing the national and regional trend data also provides an impetus for local surveillance initiatives.

### Gastrointestinal disease

We continue to work with the Food Standards Agency (FSA) and other stakeholders in maintaining effective health protection in the area of gastrointestinal infections. A sub-group of the Gastrointestinal Disease Programme Board has finalised guidelines for *The Management of Norovirus on Cruise Ships*. We intend to

publish this jointly with the Association of Port Health Authorities and the Maritime Safety and Coastguard Agency. The Agency is also involved in an EU project on Sanitation in Cruise Ships and Ferries.

A study reviewing the evidence for changes in the epidemiology of listeriosis was published and epidemiological investigations are under way into a significant population exposure to *Listeria monocytogenes* through contaminated sandwiches.

A review of the epidemiology of cryptosporidiosis in England and Wales for the Drinking Water Inspectorate has been completed and published. There has been a reduction in cryptosporidiosis associated with improved water treatment.

Following the introduction of new vaccines for rotavirus, a two-year pilot surveillance project to assess the burden of nosocomial rotavirus infection has begun in collaboration with our North West Region, the University of Liverpool and the University of Nagasaki. A UK national rotavirus surveillance (11 centres) and European surveillance initiative (12 countries), led by the Virus Reference Department has been established.

## Hepatitis

Hepatitis B and C remain significant sources of preventable chronic ill health in the UK. Acute infections with hepatitis B are at an unacceptably high level with large numbers of people living with undiagnosed hepatitis C infection. The programme aims to minimise avoidable mortality and morbidity from viral hepatitis in UK residents. We are making a major contribution towards this aim by influencing, involving and collaborating with many other stakeholders to achieve change.

The second *Hepatitis C annual report* was published in December 2006. The latest modelling indicates that in 2003 there were 231,000 hepatitis C antibody positive individuals aged between 15-59 in England and Wales. 57 per cent of these were in ex-injecting drug users (IDUs) and 31 per cent in current IDUs with the remainder in non-IDUs. Risk of infection remains high in current injectors. Data on infection in minority ethnic communities in England is limited but data analysis shows that hepatitis C prevalence appears to be higher in those of South Asian origin. We are collaborating on a study of hepatitis C prevalence in ethnic minority populations.

The standards for improved surveillance and control of hepatitis B and C at local level are being put into practice across the Agency with the help of an implementation group who have set priorities for local units. The group established a network of hepatitis leads to improve communication and assist with implementation.

The group has also agreed a minimum dataset and protocol for dataflow on acute hepatitis B between local services and the Agency's Centre for Infections (CfI). This will allow local units to cross-check their data to reveal any under-reporting and new cases requiring follow up. A better national picture of hepatitis B infection will be built up at the same time.

Surveillance information will also be hugely improved by the updates to our CoSurv surveillance system being carried out by regional information officers to improve data capture on antibody status. This will assist local services and CfI to identify acute hepatitis B infections and should have a major impact on surveillance and management of cases. Connecting for Health (which is delivering the National Programme for IT for the NHS) has also been alerted to the need to distinguish acute from chronic cases.

The Agency has also been working with the British Liver Trust to produce prisoner information leaflets on bloodborne viruses. The pilot has been successful in engaging prisoners and the leaflet is due to be launched in 2007. There is scope for joint working on similar leaflets in the future. Chapter 2 of this Report details some of the Agency's work on Hepatitis within the prison population.

## HIV and Sexually Transmitted Diseases

The Programme aims are to facilitate and support the national strategy for improving sexual health and preventing HIV/sexually transmitted infections (STI's) in partnership with the Department of Health (DH). It provides specialist and reference microbiological services and operational support and advice at local and regional level to the NHS, to strategic health authorities (SHAs), and other organisations concerned with the development and implementation of HIV/STI prevention programmes and initiatives.

Roll-out of the National Chlamydia Screening Programme (NCSP) gathered pace in 2006. The number of programme areas (groups of PCTs) providing screening data increased from 28 in December 2005 to 34 in December 2006. Screening is now offered by 43 per cent of PCTs in England.

The NCSP is continuing to work with DH in providing guidance to support the implementation of the Local Delivery Plan target for chlamydia screening coverage. Regional facilitators are working closely with Regional sexual health leads across the country. The Annual Report of the NCSP was published in November 2006.

Figures we published during the year indicated that new diagnoses of sexually transmitted infections (STIs) and other conditions diagnosed in genitourinary medicine (GUM) clinics in the UK increased by 3 per cent to 790,387 in 2005 compared with 768,339 in 2004. However the number of new cases of gonorrhoea fell by 13 per cent, from 22,350 in 2004 to 19,495 in 2005. This was particularly significant given the previous 10 per cent fall in cases from 2003 to 2004, and it appears real progress is being made in this area. Increases however were observed in new diagnoses of chlamydia, syphilis, genital warts and genital herpes. The data supports DH and the NHS in planning and allocating resources to tackle these STIs.

The fourth combined annual report of HIV and other sexually transmitted infections in the UK was published in November 2006 marking the 25th anniversary of the first reported case of acquired immunodeficiency syndrome (AIDS) in the UK. The report profiles the increasing complexity in the evaluation and management of the continuing HIV and STI epidemics. It identifies the potential for reducing mortality associated with late HIV diagnosis through targeted promotion and opportunistic HIV testing in healthcare settings. The Agency is working with the DH and other partners to develop clearer recommendations on HIV testing in response to the changing epidemic.

### Vaccine preventable diseases

We continue to collaborate with stakeholders to reduce the morbidity and mortality caused by vaccine preventable infections and work closely with the Department of Health (DH) to inform national policy on health. We provide

support, evidence, guidance and recommendations to the statutory bodies responsible for control and prevention programmes. We also provide advice and support training to individual healthcare professionals delivering the national vaccination programme.

The clinical trials programme of the Vaccine Evaluation Consortium continues, with the booster phase of the meningococcal C conjugate and pneumococcal conjugate vaccines study. Around 60 per cent of children have received booster vaccinations and this phase will finish in the second quarter of 2008 marking the end of the clinical aspect of the project. The study will be completed with the final datasets from laboratories which will be analysed and the findings presented to the Joint Committee on Vaccination and Immunisation (JCVI) and published in a peer reviewed journal.

Our novel meningococcal disease vaccine, against the Group B meningococcus, is currently being assessed in a phase I safety and immunogenicity study in adult volunteers. The interim analysis of the data is currently underway and we are collaborating with the Serum Institute of India Ltd to develop the vaccine for the prevention of meningococcal septicaemia and meningitis in developing countries. It is hoped the vaccine will be effective against all forms of the disease and may eventually be used to save children's lives throughout the world.

We provide training in immunisation for staff from a range of disciplines and at a range of levels. This includes Masters level courses and modules, regional seminars and local courses and updates for general practitioners and practice nurses. Over the past year our Health Protection Units have been actively involved in supporting primary care trusts in delivering local immunisation training for primary care staff.

We are mandated to collect vaccination coverage data on behalf of DH through the *Cover of Vaccination Evaluated Rapidly* (COVER) scheme. However, the new child health systems present an ongoing challenge to

maintain this data collection. This has delayed the initiative to measure inequalities in immunisation uptake in London. The issues with data collection need to be resolved before there is any further development on the plan for collecting postcode level immunisation coverage information at national level.

### Pandemic Influenza

There is wide international consensus regarding the inevitability of an influenza pandemic, although the precise timing of this event cannot be predicted. Concerted efforts are being taken on a global level to prepare and plan for the pandemic. The contingency planning for the next influenza pandemic is developing rapidly within the UK and we have significant responsibilities in supporting the UK's response.

Following the publication of our Pandemic 'Flu Plan during 2006, we provided relevant expert input to the drafting of the new Cabinet Office/Department of Health (DH) Pandemic 'Flu Plan. We participate in the activities of the DH Pandemic Influenza Management Group and the Cabinet Office Ministerial level Pandemic 'Flu Working Group. Advice provided includes: microbiological guidance for avian influenza specimens, evidence base for mask use by the public, phase specific prophylactic use of oseltamivir, algorithm development for avian influenza case management, and modelling evidence to look at the triggers for school closure.

We continue to develop infection control guidelines for specific non-medical care environments (eg schools, universities, blue light services, local authority domiciliary services, prisons, nursing care homes).

Laboratory testing using Polymerase chain reaction (PCR) for 'Flu B, 'Flu A and H5 RT is now available across our Regional Microbiology Network in laboratories representing our different regions, and is also available in Belfast, Dublin, Glasgow and Cardiff.

We are working on practical solutions to ensure appropriate deployment of oseltamivir to our Health Protection Units during an avian influenza incident; this priority area for action includes tackling relevant Patient Group Direction (PGD) or Patient Specific Direction (PSD) development in conjunction with NHS prescribing authorities, wholesaler dealer licences and potential replenishment of expired contingency supplies of oseltamivir (100 treatment courses) and seasonal influenza vaccine during an avian influenza incident.

The Agency is working with Department for Environment, Food and Rural Affairs (DEFRA) and State Veterinary Service (SVS) colleagues to develop guidance for use locally in various avian influenza situations (wild bird, poultry, H5N1/ other avian influenza etc); joint operational response arrangements were activated during recent avian influenza incidents during 2006/07.

All our business continuity planning processes are required to reflect the implications of pandemic 'flu on our workforce at a strategic and operational level.

Over a year's planning culminated in the pandemic flu exercise, 'Winter Willow' involving thousands of staff across government and the regions. This is detailed in Chapter 3 of this report - Preparing for Emergencies.

### Tuberculosis

Tuberculosis (TB) continues to increase in England and the Agency is supporting the Department of Health's national programme through the national steering committee, and through activities in support of key action areas.

To improve TB control we need to strengthen our approach at both a local and national level to: the surveillance system, the evaluation of potential new vaccines, the potential screening of prospective migrants to the UK for TB and the effective delivery of TB services at the local level.

The Agency has strengthened and redeveloped the national surveillance system for tuberculosis, including the combining of clinical, epidemiological and microbiological information at the local level in support of the Chief Medical Officer's National Action Plan for TB. Piloting work is now beginning and will be followed by role out across the Agency.

We are contributing to the international effort to develop an improved TB vaccine, in order to strengthen efforts to prevent tuberculosis in both high incidence groups in the UK and in countries with a high burden of TB. Over the past year 10 new vaccine formulations have been evaluated in aerosol infection models.

An assessment of the effectiveness of screening for TB in applicants for migration to the UK carried out in countries of origin has been provided to the DH.

We are working with local stakeholders including primary care trusts, acute hospital trusts and local authorities, and nationally, with DH, the National Institute for Health and Clinical Excellence and the British Thoracic Society and internationally with the European Commission and World Health Organisation in order to realise these objectives.

A training curriculum for effective TB prevention and control for staff in health protection units working with local TB services is being developed for delivery in early 2007/08.

## Programme 2

# To protect against the adverse health effects of acute and chronic exposure to chemicals, poisons and other environmental hazards

Acute and chronic exposures to chemicals, poisons and other environmental hazards cause a considerable burden of disease and can also raise public anxieties. Each year, over 100,000 patients are admitted to UK hospitals with acute poisoning. We are working to develop improved systems for the delivery of health-related advice on the diagnosis and treatment of patients who have been poisoned, to the NHS and health related organisations, to reduce the adverse impact of poisonings on public health. The National Poisons Information Service's centralised database is currently undergoing final testing.

Thousands of people are exposed to potentially harmful chemicals during incidents or through chronic exposures from contaminated land, waste, water and other environmental exposures each year. We are developing standards for advice and support given in these situations and we are auditing performance against these standards. Our advice on environmental legislation includes a joint *Guide to Best Practice within Pollution Prevention Control (PPC)* produced with the Environment Agency, and the development of consultation guidance on Strategic Environmental Assessment (SEA).

Our Chemical Hazards and Poisons Division (CHAPD) is coordinating the collation of national environmental health data for an Environment and Health Information System (ENHIS) being developed by the World Health Organisation Europe Centre for Environment and Health. ENHIS aims to establish a harmonised and evidence-based system to support public health and environmental policies in Europe. Underpinning this project is a set of environmental health indicators, which has been selected to provide a balanced and comprehensive picture of the most health-relevant problems.

Our first report on chemical incident surveillance was published during the year and it provides a summary of the distribution, characteristics and public health impacts of chemical incidents that occurred in England and Wales in 2005 and highlights our response as a result of this analysis.

We are in the process of developing a compendium of chemical hazards for a prioritised list of chemicals and the first set of 19 have been placed on the Agency's website. These publications will form the basis of a handbook on Chemical Toxicology.

The Medical Toxicology Research Centre at the Wolfson Unit in the University of Newcastle was opened in May 2006. This is a joint venture between Newcastle University and the Health Protection Agency. Both the University and CHAPD have established an international

reputation in scientific and clinical toxicology research. The Centre will bring these international experts together to carry out research into diseases caused by exposure to toxic chemicals such as heavy metals, organochlorine pesticides and specific endocrine disruptors. It will also research the possible environmental causes of chronic illnesses such as Parkinson's disease.

### Programme 3

## To improve protection against the adverse effects of exposure to ionising and non-ionising radiation

Key issues relating to exposure to ionising radiations include the need to develop understanding and measurement of environmental, medical and occupational exposures to man-made radioactive materials. Statistical analysis of data from the third analysis of the National Registry for Radiation Workers has been carried out in order to provide information to quantify the effects of occupational exposure to low doses of radiation. This forms the basis of practical and proportionate health protection measures for workers

and the public. A draft report has been developed for consideration which will then proceed to publication.

There is a need to develop a greater understanding and measurement of the exposures to radon gas and other sources of naturally occurring radiation. In order to provide background information for a reassessment of the UK approach to preventing harm from radon, which is the largest source of radiation exposure in the UK, the Advisory Group on Ionising Radiation (AGIR) Radon Sub-Group is finalising an authoritative up to-date review of the hazards of radon entitled 'Radon and Public Health'.

The Agency also monitors UK exposure to solar ultraviolet radiation. New monitoring equipment has been installed at the seven UK sites which provide reliable and accurate continuous assessment of exposure to solar ultraviolet radiation at approximately every 2 degrees of latitude in the UK. This information is provided to the public on the web site [www.hpa.org.uk/radiation](http://www.hpa.org.uk/radiation) to help plan their own health protection and historical data are available to scientists for study.

We have started a review of the scientific evidence relevant to possible adverse health effects on patients and volunteers undergoing magnetic resonance imaging (MRI) examinations. A consultation paper providing advice on limiting patient and volunteer exposure to electromagnetic fields and noise associated with MRI is being prepared for review by external MRI experts and others with a view to issuing formal advice to Government in April 2008.

We provide a range of commercial services in radiation protection including the monitoring of occupational exposures. Over the last year a new thermoluminescent dosimetry system has been implemented for some 60,000 workers at risk of exposure. This replaces extremity dosimeters and body dosimeters used by many employers in the UK to check radiation doses for their workers and monitor worker exposure following a radiation incident.

Training courses we offer cover a range of topics associated with radiation hazards. To make sure employers and staff in a wide range of industries are aware of the provisions of the European Commission's Physical Agents Directive on Electromagnetic Fields, the first of a series of training courses on implementation of the Directive has been held.

The Polonium incident, which dominated the work of the Agency throughout December, is covered in Chapter 6 - Polonium-210.

## Programme 4/6

# To prepare and respond to emerging health threats and emergencies including those caused by deliberate release

## Emerging Health threats

New or emerging infectious threats can arise from either within the UK or internationally and this Programme is undertaking horizon-scanning activities to detect and assess these risks.

Scientific support is provided to strategic groups within the Agency and other organisations, including the collation and dissemination of information on potential emerging infectious disease and public health threats on a monthly basis. Risk assessments and peer-reviewed papers continue to be published. Diagnostic assays for two key biological agents have been developed and will be ready for use by regional laboratories once staff have undergone training.

The diagnosis of clusters of undiagnosed illness and new infections is integral to the detection of possible new infections. The protocol for the investigation of microbiologically unexplained serious illness and death, and the emergency clinical situations algorithm have been posted on our website, as have reports of incidents which have been assessed.

### Emergency Response

NHS trusts, strategic health authorities and primary care trusts are required to have plans in place to deal with incidents and emergencies. Through a cycle of exercises and training, these plans are tested for their effectiveness in dealing with health protection emergencies. Twelve exercises were held over the year and these are discussed in detail in Chapter 3 - Preparing for Emergencies.

We aim to continually improve the speed and effectiveness of our response to incidents and threats to reduce their impact on public health in terms of morbidity and mortality. Over the past year the Emergency operations centres (EOC) at our headquarters in Holborn Gate, London and Centre for Emergency Preparedness and Response (CEPR) have been established and tested with plans to establish the EOC at our Centre for Infections in north London in 2007/08. Plans to upgrade the EOC in The Centre for Radiation, Chemical and Environmental Hazards have been revised in light of the polonium incident.

### Creutzfeldt-Jakob disease (CJD)

We are undertaking major studies on variant Creutzfeldt-Jakob disease (vCJD) tissue infection risks including providing an archiving service for surgical instruments used, or potentially used, on vCJD patients. This will provide evidence on the potential for vCJD transmission through dentistry, delivering an enzyme-based approach to prion decontamination (the agent believed to be responsible for infection with vCJD), and exploring novel approaches to vCJD prophylaxis and treatment.

Studies to evaluate the potential transmission of vCJD via exposure to contaminated surgical instruments have continued and a paper *Surface Decontamination of Surgical Instruments: an Ongoing Dilemma* was published in 2006.

We monitor vCJD incidence trends and evaluate the geographic distribution of vCJD cases and the health of designated 'at-risk' subjects to provide information in relation to the future impact of the disease.

The National Anonymous Tonsil Archive (NATA) has been established which will be used to undertake studies of detectable abnormal prion protein. The tonsils are collected from people of all ages during routine tonsillectomies and only tissue which would normally be discarded is used. The tonsil collection is being maintained at over 400 pairs per week.

### Programme 5

To protect and improve the health of children

Children's respiratory and gastrointestinal infections are a major contributor to absenteeism in schools and have a broad socio-economic burden of disease. Evidence suggests that the transmission of these infections can be significantly reduced by improving hygiene, in particular hand washing, in schools. We are leading a hand hygiene initiative for primary schools across England and Wales. A resource pack has been developed which includes a variety of lesson plans, games, facts and posters. This pack was piloted in 2006 in 300, out of 500, primary schools in Essex in close collaboration between the local Health Protection Unit, healthy schools team and school nurses. The evaluation was very positive indicating that schools liked the campaign, in particular the lesson plans, stickers and animation, and valued the provision of a consistent 'off the shelf' approach. The children learnt the correct hand-washing technique, what germs are (both good and bad), the diseases they can cause and how easily they spread. The evaluation has been completed and is being used to improve the resources for the next pilot phase.

A revised and updated guidance on Infection Control in Schools and other Child Care Settings has been published and is also posted on our website. This has been distributed to about 85,000 schools and nurseries.

The effect the environment has on children's health, especially in the long-term, is not currently fully understood. A scoping study to identify and review current activities and gaps relating to the World Health Organisation (Euro) Children's Environment and Health Action Plan for Europe (CEHAPE) and European Union environment and health initiatives has been completed. This is being integrated into a broader background report which will in turn inform the action plan which will be developed and out for consultation in the summer of 2007. The views of young people have been sought as part of the process of developing the Action Plan and will be included in this. Their views were quite different from the areas identified in CEHAPE, focusing on: mental health, food/nutrition (obesity), pollution and sexual health.

## Programme 7

# Strengthening information and communications systems for identifying and tracking diseases and exposures to infectious, chemical and radiological hazards

The early detection of disease outbreaks, and chemical or radiological hazards, means that informed action can be taken to protect people's health. Good routine data and intelligence are also needed to prevent, control, and understand how infections and other hazards affect public health.

Our Surveillance Strategy Programme Board along with Health Protection Scotland and the Centre for Health and Environmental Research Expertise (CHERE), have developed an evaluation of surveillance systems to help inform future strategies for surveillance. The evaluation focuses upon the public health utility, efficiency and value for money of these systems. The evaluation will include an assessment of the agencies ability to meet requirements under the International Health Regulations (IHR).

Agreement has been reached with the Department of Health and Connecting for Health (CfH) to build our surveillance requirements into systems delivered under the NHS National Programme for IT. A project to define these requirements from across the Agency is progressing well. Work planned for our data dictionary has been deferred since the CfH project will have a major impact on the nature of data that we receive from the NHS.

The Programme has focused on the identification of an incident management and reporting tool for corporate deployment. It has completed evaluation of candidate Field Information Management Systems and the evaluation of HP Zone as an operational support tool for Health Protection Units. This will assist in the handling of routine enquiries, through case management and contact tracing, to the management of a large outbreak.

## Programme 8

# To build and improve the evidence base

# through a comprehensive programme of research and development

During the year the Department of Health undertook a review of Research and Development in the Agency led by Professor Ray Dixon. The review team visited the Centre for Infections, the Centre for Emergency Preparedness and Response and the Centre for Radiation Chemical and Environmental Hazards and had separate discussions with the Executive team and the Board Chairman. The review team indicated they were very impressed with the standard and quality of the research being carried out within the Agency. The final report is awaited.

The estimated income from external grants in 2006/07 was approximately £13.9m, which is a 24 per cent increase over the £11.2m recorded for 2005/06.

In August 2006, we were awarded Academic Analogue status by Research Councils UK. However, in October 2006 Academic Analogue Status was replaced with new Independent Research Organisation (IRO) criteria. Although we do not meet these criteria and are no longer eligible for research council funding, the Medical Research Council has modified its rules to allow us to apply for commissioned strategic funding calls. In addition, we have received exceptional IRO status from the Economic and Social Research Council to apply to the UK Clinical Research Collaboration Public Health Centres of Excellence call.

Twelve awards were made to support new 'pump-priming' Research and Development projects in 2006/07 whilst three Agency PhD studentships were funded in 2006 with a further six agreed for 2007.

## Programme 9

# To develop a skilled and motivated workforce

The implementation of Agenda for Change (AfC), the NHS based pay and grading scheme adopted by the Agency, resulted in the assimilation of 99 per cent of staff to AfC terms and conditions by March, excluding former National Radiological Protection Board staff. A small number of staff were assimilated on estimated bandings, pending completion of the full job evaluation process. Five hundred (20 per cent) staff have exercised their right to seek a review of their AfC grading. The National Institute of Biological Standards and Control which is not due to merge with the Agency until 2009 has commenced the AfC process with 30 staff trained as assessors.

By the end of March, approximately 75 per cent of staff appraisals were completed, with associated Personal Development Plans (PDPs). Completed Personal Development Plans have been used to inform the annual corporate training programme, which was launched in September 2006 and updated during the year. This programme has been expanded for 2006/07, offering a wider range of training opportunities at an increased number of locations across the Agency.

A senior management development centre and associated development programme, to support executive-level succession planning was launched, and 37 senior managers have attended the four development centres. A programme of development centres was also delivered to senior personnel within Health Protection Units.

## Programme 10

# To manage knowledge and share expertise

The Programme aims to achieve the improved management of knowledge and the sharing of expertise within the Agency and between the Agency and its partners. This is to empower professionals and to reduce harm and the burden of disease, by the provision of information, knowledge and expertise, through our publications, our website, and our guidance and advice.

The *Health Protection Report* was launched during the year replacing the *Communicable Disease Report Weekly*. The new publication has been developed into an interactive database with additional content included to cover chemicals, radiation, and emergency response.

Our online services have seen a major redevelopment, with work focused on development of the design, content and structure of our web and intranet systems. Our website has seen a major revision, including new areas for the Regional Microbiology Network, an area for external consultations, the launch of the chemicals compendium and migration of the content from the Local and Regional Services external sites.

Approximately 70 new areas of content have been developed on the intranet, with items such as Electronic Staff Record (ESR), payroll, corporate programmes restructure, Agency briefings and surveys being prominent. The number of page visits has grown from 45,345 in March 2006 to 104,692 in March 2007. The keyword facility for registering and locating expertise within the on-line directory of staff has been expanded and will be used to create a set of 'yellow pages' of expertise on the corporate Intranet.

The implementation of on-line access to full text Science Direct and the American Society for Microbiology journals across the Agency, means that these are now available to all our staff. Our inter-library loans system was re-designed to take account of IT changes and advances in electronic delivery and 75 per cent of loans are now received within 24 hours of initial request.

The National Knowledge Service (KNS) pilot on tuberculosis has been extended in the light of its successful completion and being cited in the National Institute of Health and Clinical Excellence guidelines of tuberculosis at the end of last year. Information resources have been developed and piloted specifically for those working with 'at-risk' population groups including staff who work with the homeless, asylum seekers, the prison population and carers who work with children.

## Programme 11

# To build on and develop the intellectual assets

# of the organisation in partnership with industry and other customers, in order to better protect the public

We generate significant external income, through services, research and development, and products. These external contracts are selected on the basis of contributing to our skills and capabilities which may be required to respond to national need. The programme aims to agree significant external contracts which build on our capabilities or translate our knowledge into practical public health outcomes and have a financial, clinical or public health impact.

Significant external contracts which build our capabilities or translate our knowledge into practical public health outcomes were signed during the year. These include a major contract from Emergent BioSolutions to undertake development and possible manufacture of a botulinum vaccine; a license agreement with the Serum Institute of India (SII) to licence the *N. lactamica* vaccine for Meningitis B for use in developing countries and an agreement with Opi, to market Erwinase® in the USA with plans in place to work towards gaining Federal Drug Administration approval. These are presented in greater detail in Chapter 9 – Partnerships with Industry.

A number of competitive bids/task orders have been awarded to the Centre for Emergency Preparedness and Response (CEPR) by the US National Institute for Allergy and Infectious Diseases (NIAID) under the US Government bioterrorism countermeasures programme bringing the total to nine. The work contributes to improving the diagnosis and treatment of infectious disease.

As a member of the InterAct partnership between Central Science Laboratory, Defence Science and Technology Laboratory, the Veterinary Laboratories Agency, we are focused on building value through enhancing commercial technology. The Agency has achieved significant funding for five successful proofs of concept proposals.

The 2006 Health Protection Agency Innovations Competition attracted a broad range of entries from across the Agency with the winning entry from Mark Sutton of CEPR with an application to study 'Novel sialic-acid specific binding ligands and their applications'.

The performance of our spin-out company, Syntaxin, has generated enthusiasm from investors, and the company is anticipating raising further investment funds shortly. An award of £1.5m was made from the Department of Trade and Industry's 'Succeeding Through Innovation' initiative to the Agency, Syntaxin and UCL.

A series of workshops and exercises have been held in order to identify the intellectual assets of the Agency offering the greatest potential for business growth. Our technology scouting activities have identified a number of new patent opportunities including four from the Centre for Infections, two from the Regional Microbiology Network/Local and Regional Services and two from the Centre for Radiation, Chemical and Environmental Hazards.

## Programme 12

To raise the understanding of health protection and involvement of the public and ensure they have access to authoritative, impartial and timely information and advice

We continue to strive to ensure that all our communications are of the highest standard in terms of accuracy, authority, appropriateness and timeliness in order to maintain our reputation as a trusted source of advice and information on health protection issues.

Our information must be easily accessible to the public, and useful and relevant to people's daily lives if they are

to be empowered to make informed choices about how best to protect their own and their family's health. To demonstrate our commitment to clear communication we have corporate membership of the Plain English Campaign and run various in-house courses.

The communications team has had a busy year putting out public health messages via press briefings, issuing press releases on various health issues and also responding to local and national incidents by providing information and health messages to the public. During the year, reports have been issued on a variety of topics such as HIV and sexually transmitted infections, TB, hepatitis and health care associated infections. For the first time reports have been produced in other areas of work including the health of migrants, guidelines on malaria prevention for health professionals, and fungal diseases.

A considerable amount of the communication division's work has been dedicated to providing support and advice in emerging local and national outbreaks and incidents. Numerous incidents have received a very high profile in the media over the last year including Polonium-210 and the avian 'flu outbreak in Holton, Suffolk. All have required careful and clear communications throughout, and for considerable time following each incident. For example, over the course of four months we issued 40 statements concerning polonium and organised three press briefings. In addition, numerous media interviews were carried out by the Chief Executive to ensure the public had the most up-to-date information in regard to the public health element of the incident. Many other local outbreaks have involved complex communications handling including an outbreak of Pontiac fever, various *E.coli* outbreaks, Panton Valentine Leukocidin positive Methicillin Resistant *Staphylococcus aureus* and *Clostridium Difficile* to name a few.

The Agency continually seeks to develop opportunities to connect directly with the public, not only in terms of providing information but also making sure people can identify and interact with our staff and inform our agenda. The public involvement programme has continued throughout the year, including public meetings on a variety of topics of local concern. The conference programme has continued to expand so that information is shared with health professionals and the public. It has included events on topics such as the Hajj, polonium, prevention of occupational exposure to infections, the London bombings and our Annual Conference, Health Protection 2006.

## Programme 13

# To strengthen the front-line health protection at local and regional levels

A new Framework Agreement with the NHS specifying core services to be provided by our Local and Regional Services (LARS), and the roles, responsibilities and functions of strategic health authorities and primary care Trusts in health protection is under consultation. Negotiations with the Department of Health led to the decision that LARS will take responsibility for Port Health functions in 2007/08.

LARS governance arrangements have been strengthened significantly. A new job description for Health Protection Unit (HPU) Directors has been developed, emphasising leadership responsibilities and during the year every HPU and Regional team undertook a self-assessment of compliance against DH Standards for Better Health. Subsequent action plans at local, regional, divisional and Agency-wide level achieved 80 per cent compliance by March 2007.

LARS has played a key part in delivering our programmes such as pandemic 'flu preparedness, improving surveillance of tuberculosis and leading the development of guidelines for the *Management of Norovirus on Cruise Ships*. Significant progress has been made in improving LARS operational delivery in respect of chemical hazards and in establishing an Agency Chemicals/ Environmental Public Health Service. Following the Buncefield fire, a set of competencies and standards were defined. An audit against the standards in LARS, led to the development of local, regional and a LARS-wide improvement plan and subsequent follow up demonstrated significant improvement in all regions.

LARS played a significant role in shaping the new Agency Incident and Emergency Response Plan, and Standard Operating Procedures have been developed and been made available across the country. An electronic alerting system (IRIS) run by our North West Region has been set up, allowing rapid alerting of LARS to incidents which may have implications beyond the HPU or Region in which the response is focussed.

During the year the competence and capacity of LARS to respond to emergencies was amply demonstrated through several major incidents including the avian influenza outbreak at a turkey farm in Holton, Suffolk, the Polonium-210 incident in London, the Panton-Valentine Leukocidin (PVL) positive Methicillin Resistant *Staphylococcus aureus* and Methicillin-sensitive *Staphylococcus aureus* outbreak in the West Midlands and the Anthrax contamination in the North East. These are presented in greater detail in chapter 7 –

Strengthening the Frontline and chapter 8 – A Regional Round-Up.

A LARS Research and Development committee was established with national and regional leads. LARS staff identified priorities for future research and capacity building. Research collaborations were either put in place or are under development in the North West, West Midlands, East Midlands, and South West Regions. A LARS publications database was established which lists the details of all LARS publications since 2003. A LARS-wide Training Group was set up and there has been a significant increase in the training delivered for LARS from Corporate Services. Agency-wide Leadership Development Centres have been run for heads of HPUs.

## Programme 14

# To contribute to UK international health objectives and to global health

The Agency aims to make sure that our international activities contribute to our health goals and that global health protection priorities are supported by our international activities.

We will become the UK's national focus point for International Health Regulations (IHR) from June 2007. These are a legally binding international instrument to

“prevent, protect against, control and provide a public health response to the international spread of disease in ways that are commensurate with and restricted to public health risks, and which avoid unnecessary interference with international trade and traffic”.

Collaboration and exchange of information continues under our Memorandum of Understanding with the Centre for Health Protection in Hong Kong and a senior Agency staff member visited the Centre in January 2007 to compare approaches to surveillance of respiratory infections.

Our scientists continue to play a leading role in international health protection issues; our specialists in influenza serve on the European Centre for Disease Prevention and Control’s scientific panel on influenza, and our staff have provided specialist consultancy to the World Health Organisation and the International Atomic Energy Agency on public health issues. Staff were asked to participate in a UK mission to China under the Department of Health’s Memorandum of Understanding with the Chinese Ministry of Health.

We have a wide range of international grants and collaborations; we are part of a European Union (EU)-funded programme known as FLUESECURE to help manufacturers develop vaccines against pandemic influenza, specialists in emergency planning have run two EU-wide exercises to evaluate communications and responses to the deliberate release of biological agents and an influenza pandemic. The US National Institute for Allergy and Infectious Diseases (NIAID) has awarded the Agency a significant number of contracts under the US Government bioterrorism countermeasures programme which contributes to improving the diagnosis and treatment of infectious disease.

In 2006, we were invited to join the International Association of National Public Health Institutes (IANPHI), which was established with assistance from the Gates

Foundation to provide a global forum for leaders of national public health institutes and to promote international capacity building in public health at national levels. Through IANPHI, we were invited to provide specialist expertise for a multi-national IANPHI project in Uganda based at the Uganda Virus Research Institute. In October 2006 our International Strategy, which was first produced in 2004, was revised and updated to reflect global public health developments, such as the agreement of the International Health Regulations and to reflect our growing international profile.

## Programme 15

# Making it happen

Our Corporate Services aim to provide economic and effective services so that operational and frontline staff have the infrastructure and tools to achieve their strategic goals.

As a statutory public sector body, the Agency is committed to meeting all relevant legislative and regulatory requirements and comply with Government, Treasury and Department of Health guidelines wherever applicable. Since our inception and in the spirit of the Arms Length Bodies review, we have been seeking to make sure that our Corporate Services are of an appropriate size and structure to meet our business needs, whilst also generating savings to enable funds to be released to the frontline.

A considerable amount of progress has already been achieved in harmonising and streamlining our finance functions, processes and systems and in providing a high quality finance service to our business community. Work is continuing to embed the financial systems and processes throughout the organisation. Full benefits of

the system, processes and functions will only be fully realised when this process is complete. To increase financial efficiency we have transferred our payroll processing for the whole Agency to the NHS Shared Services on the NHS Electronic Staff Records (ESR) system.

To establish Agency-wide training needs, appraisal and personal development plans are being embedded across the organisation. From 2006, our appraisal process incorporated the NHS Knowledge and Skills Framework (KSF).

When the Agency was formed in April 2003, our staff were located on 140 sites. These have now been reduced to 93 and will continue to be rationalised with a further reduction to 85 locations expected by March 2008.

Our wide range of services are monitored extensively by external regulatory bodies and assessors. Additionally, the Health Protection Agency Act states that, where healthcare is provided, we will be treated for the purposes of standards provision as an English NHS body. All our public health work is defined as healthcare under the Act and we are committed to meeting the standards set out in the Department of Health 'Standards for Better Health' through the Healthcare Commission's Annual Health Check. The first submission to the Commission was made in April 2007.

[2.5]

# Financial review

THE BOARD AND THE EXECUTIVE GROUP | THE REMUNERATION REPORT | MANAGEMENT COMMENTARY | OPERATING REVIEW | **FINANCIAL REVIEW**

## Overview

The Health Protection Agency's fourth year of operation has proved again to be a challenging year. The Agency's operations continue to grow, exerting significant pressure on the available financial resources, whilst the internal organisation is being progressively developed in order to support front line services.

The Agency is continuing to expand. Following the required legislation, the Agency merged with the National Radiological Protection Board (NRPB) on 1 April 2005 and this is reflected in the 2005/06 figures in the four year views below. During 2006/07 the Agency expanded its operations in several areas, managed the international Polonium-210 poisoning incident, and assumed increased responsibility for Port Health from 1 April 2007. Following the Department of Health's 'Arms Length Bodies (ALB)' review in 2004, the Secretary of State announced that the Agency should, by absorption, merge with the National Institute for Biological Standards and Control (NIBSC), subject to consultation and legislation. We are already working in close partnership.

In the course of the year, the Scottish Ministers conferred on the Agency powers to provide certain services in Scotland in the chemicals, poisons and emergencies fields.

## Result for the year

Under the Government Financial Reporting Manual (FRM) for the 2006/07 financial year, non-departmental public bodies should regard Government grants and grant in aid received for revenue purposes as a financing flow and no longer as income. Therefore our accounts include an Operating Cost Statement in place of the Income and Expenditure Account. The prior year comparisons have been restated to reflect the change in accounting and presentation.

The Agency suffered a recurring £4.1million cut in core funding as part of the ALB review savings programme. However, by re-prioritising our workload, controlling our costs and expanding our external income, we managed to carry out our activities within the financing envelope provided. With royalties £2.6million ahead of the original budget, we completed the year ended 31 March 2007 with a net operating cost £2.3million below the total revenue Government grant in aid relating to the net operating cost for the financial year, compared with the break even budget position. This mostly offsets the 2005/06 position, where the net operating cost was £2.5million above the total revenue Government grant in aid relating to the net operating cost for the financial year, after allowing for £3.3million of exceptional charges.

THE BOARD AND THE EXECUTIVE GROUP | THE REMUNERATION REPORT | MANAGEMENT COMMENTARY | OPERATING REVIEW | **FINANCIAL REVIEW**

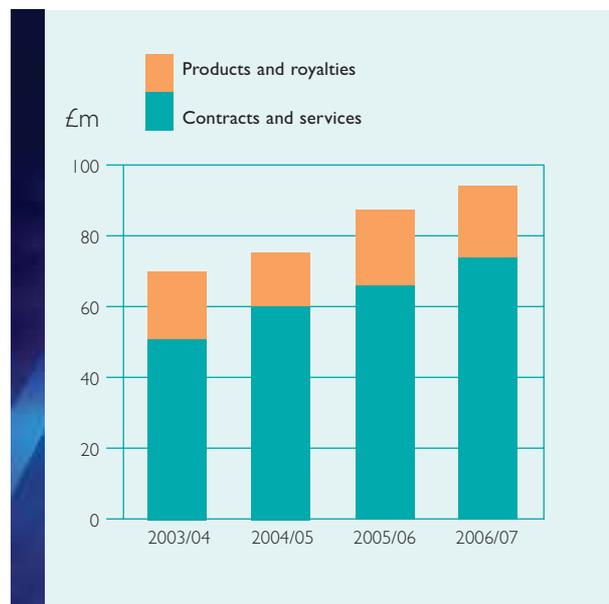
### Revenue Government financing

In spite of the recurring cut in core funding, the Agency's total revenue Government grant in aid relating to the net operating cost for the financial year from the Department of Health and Devolved Administrations has increased to £156.1 million compared to £146.9 million in 2005/06. This represents an overall increase in funding of 6.3 per cent and reflects the continual expansion of the Agency's operations. The revenue grant in aid and its comparison with previous years may be illustrated as follows:



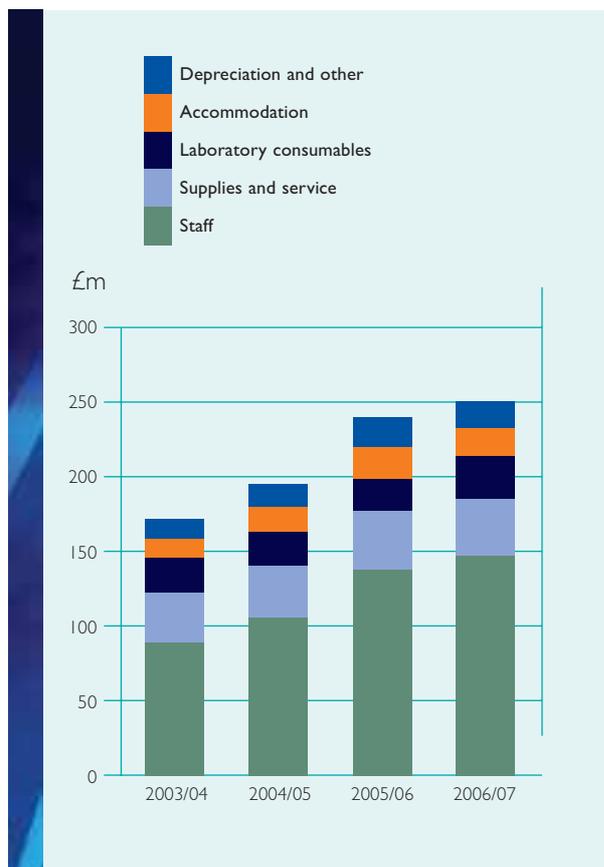
### Operating income

The Agency's total operating income has increased by 7.3 per cent from £87.5 million in 2005/06 to £93.9 million this year. This represents 39 per cent of the Agency's total revenue and provides a substantial contribution to our overheads and to the staff and facilities available for core public health purposes. The component parts of the operating income of £93.9 million and its comparison with previous years may be illustrated as follows:



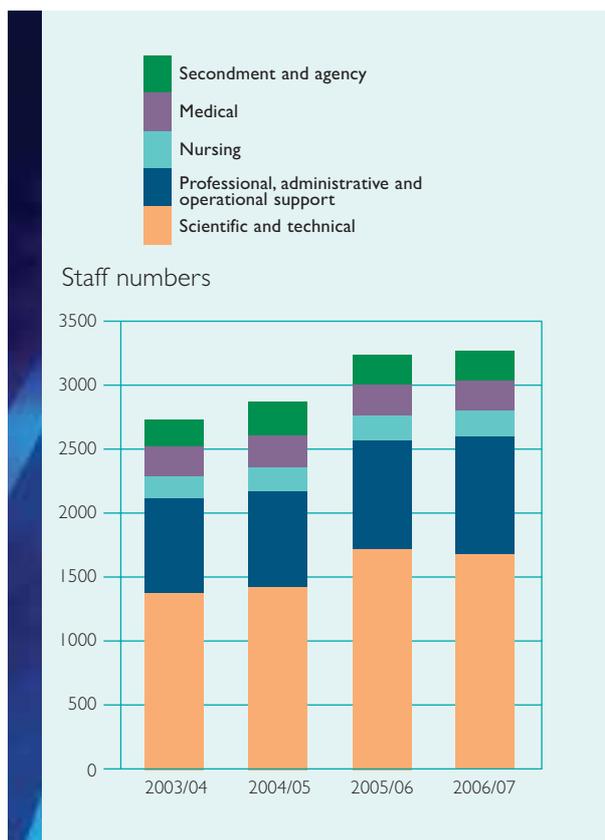
### Revenue Expenditure

Total gross operating costs for the year have increased from £237.1 million in 2005/06 to £248.0 million this year. This represents a 6.0 per cent increase after allowing for the £3.3 million pension provision adjustment exceptional item last year. The increase mostly reflects the increased activity levels and the cost pressures which have been mitigated by our continuing savings programme. The component parts of the total gross operating costs of £248.0 million and its comparison with previous years may be illustrated as follows:



### Staff Numbers

Total average staff numbers for the year, including secondments and agency staff, have increased from 3217 staff in 2005/06 to 3252 staff in 2006/07. This represents a 1.1 per cent increase and reflects the increased levels of activity being covered by the Agency. The component parts of the 3252 staff and the comparison with previous years may be illustrated as follows:



The Agency consolidated its payroll function in February 2007 from two legacy systems onto the Electronic Staff Records (ESR) platform managed by the NHS Shared Business Services. The numbers above represent an average using the ESR and legacy systems. This has contributed to the apparent year on year change within categories.

### Capital for the year

The Agency incurred capital expenditure of £16.6 million (2006: £15.6 million), mostly to upgrade its laboratory facilities, accommodation and infrastructure. The total capital Government grant in aid relating to the capital expenditure for the financial year has increased to £16.7 million from £14.8 million in 2005/06. In addition the Agency received other capital grants of £1.2 million (2006: £nil).

### Investments

The Agency has a minority shareholding in Syntaxin Limited, which is classed as an investment. To build on and develop the intellectual assets of the organisation in partnership with industry, Syntaxin was founded in November 2005 as a spin out from the Agency, following a multi-million pound financing deal with Abingworth Management Limited (ABV), a leading healthcare venture firm. During 2006/07 Syntaxin was awarded a £1.5 million collaborative Research and Development grant from the UK Department of Trade and Industry, it expanded its strategic alliance with Allergan for novel therapeutic compounds, and managed to hit the milestones necessary to complete a further financing round. The second financing round provides an opportunity for the injection of additional capital into Syntaxin Ltd, with founder members, including the Agency, being granted rights to purchase additional shares in the company.

### Infrastructure

At the time of establishing the Health Protection Agency, it was well known that the Agency's corporate support services required substantial work to ensure that they would provide the appropriate level of support to enable the front-line services to achieve their aims and to create the systems, processes and infrastructure

appropriate to meeting the needs of a modern and effective Agency. It was always recognised that work to harmonise both procedural and physical systems across the corporate service areas would be necessary and this was exacerbated by the chronic lack of investment in some parts of the Agency's inherited infrastructure. This modernisation programme and harmonisation has focused on the following areas:

- The implementation of a harmonised finance and resource management system managed by a single finance department;
- The upgrading and stabilisation of our IT infrastructure;
- The requirement to address the most urgent and critical accommodation issues in our local and regional services;
- The building of an appropriately robust web presence;
- The requirement to fund any redundancies arising from the creation of the Agency; and
- The harmonisation of Human Resources policies, procedures and the terms and conditions of employment.

During 2006/07 work to progress this modernisation and harmonisation programme has continued successfully.

### Financial Position

The Agency has no authority to borrow or to invest without the prior approval of the Department of Health and the Treasury. Financial assets and liabilities are generated by day-to-day operational activities and are not held to change the risks facing the Agency in undertaking its activities. The Agency has no borrowings and relies primarily on funding from the Department of Health for its own cash requirements.

### Accounting policies

The accounts are prepared under United Kingdom generally accepted accounting principles (GAAP) using appropriate accounting policies. As previously mentioned, under the Government Financial Reporting Manual (FRM) for the 2006/07 financial year, non-departmental public bodies should regard Government grants and grant in aid received for revenue purposes as a financing flow and no longer as income. The accounts reflect this change in policy and the prior year comparisons have been restated to reflect the change in accounting and presentation. With this exception the accounting policies are consistent with those used in the 2005/06 accounts. Further details of the accounting policies are set out in the notes to the financial statements.

### Going concern

The Agency has considered the results for the year, the amounts owed by the Agency, its financial position at the end of the year, the continuing support of the government and the Health Protection Agency Act 2004. Taking all of these factors into consideration, the Agency believes that it is appropriate for the accounts to be prepared on a going concern basis.

### Statement of payment practices

It is the Health Protection Agency's policy to pay suppliers in accordance with the Better Payments Practice Code. For the year ended 31 March 2007, 93 per cent (2006: 89 per cent) of invoices, which amounted to 94 per cent (2006: 87 per cent) of the total value of payments, were paid within 30 days of the invoice being registered. Measures to continue the improvement of the Agency's payment performance are in place and will be facilitated by the ongoing implementation of the new Agency-wide financial system.

### Post balance sheet events

The financial statements were authorised to be issued on 9 July 2007 by Professor Pat Troop, Accounting Officer/Chief Executive. There are no other post balance sheet events that would require reporting under Financial Reporting Standard 21.

### Audit

The Agency's auditor is the Comptroller and Auditor General. Details of the audit fee for the year are disclosed in the notes to the financial statements.

Other than the statutory audit of the financial statements, the Comptroller and Auditor General has not provided any other services to the Health Protection Agency during the year ended 31 March 2007.

During the audit of these financial statements my staff and I have cooperated fully with the Comptroller and Auditor General. I have taken all feasible steps to ensure that I am fully aware of all information pertinent to the audit and to ensure that this information is notified and made available to our auditors. Consequently, as far as I am aware, there is no relevant audit information which has not been available to our auditors.



**Professor Pat Troop** CBE  
Chief Executive  
29 June 2007

# Accounts 2007

## Statement of Accounting Officer's responsibilities

Under The Health Protection Agency Act 2004, the Secretary of State (with the consent of HM Treasury) has directed the Health Protection Agency to prepare for each financial year a statement of accounts in the form and on the basis set out in the Accounts Direction. The accounts are prepared on an accruals basis and must give a true and fair view of the state of affairs of the Health Protection Agency and of its net operating cost, recognised gains and losses and cash flows for the financial year.

In preparing the accounts, the Accounting Officer is required to comply with the requirements of the Government Financial Reporting Manual and in particular to:

- observe the Accounts Direction issued by the Secretary of State and approved by HM Treasury, including the relevant accounting and disclosure requirements;
- apply suitable accounting policies on a consistent basis;
- make judgements and estimates on a reasonable basis;
- state whether applicable accounting standards as set out in the Government Financial Reporting Manual have been followed, and disclose and explain any material departures in the financial statements; and
- prepare the financial statements on a going concern basis.

The Accounting Officer for the Department of Health has appointed the Chief Executive as the Accounting Officer for the Health Protection Agency. The responsibilities of an Accounting Officer, including responsibility for the propriety and regularity of the public finances for which the Accounting Officer is answerable, for keeping proper records and for safeguarding the Health Protection Agency's assets, are set out in the Accounting Officers' Memorandum issued by HM Treasury and published in Government Accounting.

# Statement on internal control

## SCOPE OF RESPONSIBILITY

As Accounting Officer I have responsibility for maintaining a sound system of internal control that supports the achievement of the Board's policies, aims and objectives; whilst safeguarding the public funds and Agency's assets for which I am personally responsible, in accordance with the responsibilities assigned to me in Government Accounting.

The relationship between the Health Protection Agency and its sponsoring department, the Department of Health and the Devolved Administrations is specified in the Management Statement. The Agency's business plan, objectives and associated risks are discussed at the annual accountability meeting with the Minister for Public Health and at the quarterly review meetings with officials from the Department of Health and from the Devolved Administrations as appropriate.

Accountability within the Health Protection Agency is exercised through:

- the Board and the Audit Committee. The Agency's Board has established an Audit Committee, under the Chairmanship of a non-executive Board member, to support its corporate governance role and me in my responsibility for risk, controls and associated assurance;
- an Executive Group comprising all Centre and Divisional Directors and with myself as the Accounting Officer. Executive Directors are personally accountable for the management of the risks within their Centres and Divisions.

## THE PURPOSE OF THE SYSTEM OF INTERNAL CONTROL

The system of internal control is designed to manage risk to a reasonable level, rather than to eliminate all risk of failure to achieve policies, aims and objectives; it can therefore only provide reasonable, and not absolute assurance of effectiveness. The system of internal control is based on an ongoing process designed to identify and prioritise the risks to the achievement of the Board's policies, aims and

objectives, to evaluate the likelihood of those risks being realised and the impact should they be realised, and to manage them efficiently, effectively and economically. The system of internal control has been in place in the Agency for the year ended 31 March 2007 and up to the date of approval of the annual report and accounts, and accords with HM Treasury guidance.

## CAPACITY TO HANDLE RISK

The Agency aims to minimise adverse outcomes such as harm, loss or damage to the organisation, its people or property, or those who receive its services, through adequate supervision and training, appropriate delegation, continuous review of processes and the environment, and the sharing of lessons learned and best practice. This is achieved, primarily, through setting standards for professional practice and service delivery. The Adverse Incident Reporting system, available to employees through the Agency's intranet, is used to promulgate lessons learned.

The Agency's risk management policy and procedure set out responsibilities at all levels including senior-level leadership for the risk management process. In addition, risk management is included as part of all Centre Directors, Divisional Directors and senior staff performance criteria. Responsibility for risk management is included in job descriptions and person specifications, and is part of the staff appraisal process.

Executive directors and management staff have attended risk management workshops to equip them in assessing risks, and to demonstrate methods of promoting risk management. A programme of risk management training for managers is in place, and guidance is provided to staff through the Agency's intranet.

## THE RISK AND CONTROL FRAMEWORK

A Strategic Risk Register is maintained by the Executive Group and reviewed periodically by the Board. A bottom-up approach is also in place where risks are reported via risk registers, verbally during staff and management meetings, or through written reports.

## Statement on internal control Continued

These mechanisms help ensure that the appropriate filtering and delegation of risk management is in place. The risks identified at a centre level are updated quarterly and are fed into the strategic risk register where appropriate. All centre and divisional business plans and major business cases include risk assessments.

Assessment of the adequacy of controls is a vital part of our systematic approach that attempts to limit risk to an acceptable residual level, rather than obviate the risk altogether. Staff are encouraged to balance cost with control to help ensure that value for money is achieved. The risk appetite of a complex organisation is difficult to assess. A broad framework based on a risk matrix is used to help staff assess risks relating to their specific area of work.

The Agency's Adverse Incident reporting policy and procedure which provides a formal mechanism for reporting and learning from incidents across the Agency has been revised and reissued. A real-time electronic incident management and investigation system is being implemented to improve the timeliness and rate of reporting. The Agency also publishes reports on major events such as the Buncefield oil depot fire and these are used to promulgate lessons learned for both the Agency and its partners. The Agency has a formal complaints procedure for patients and service users which is published on the Health Protection Agency website.

The Risk Management Group develops the Agency's approach to risk management, and identifies crosscutting operational risks. The Agency's Clinical and Health Protection Governance Group helps to ensure that robust clinical and health protection governance systems operate throughout the Agency.

The Agency's Health and Safety Strategy Group (HSSG) has continued to review the Agency's health and safety strategy and arrangements to ensure that they are appropriate for the future requirements of the agency; and that they continue to meet changing statutory requirements. HSSG has developed and, through the Executive Group, has promulgated health and safety policies and guidance at a national level. HSSG has also

ensured that our health and safety reporting processes have been further developed and that the resulting performance data have been reviewed and presented to the Executive Group and the Board on a regular basis.

An assurance framework has been developed and published on the Agency's intranet. Performance against the Department of Health's *Standards for Better Health* (SfBH), through the Healthcare Commission's *Health Check* process, was assessed for the first time in April 2007. Executive directors are responsible for producing self-assessments for their centre/division that are reviewed by the Agency's Healthcare Standards Project Group (HCSPG). This group produced the single self-assessment declaration for the Agency, which was agreed with the Executive Group before sign-off by the Board.

The Agency's work involves a large number of stakeholders, and work is carried out through partnerships and contractual agreements. A review of these relationships was completed by the Executive Group during 2005 and a programme of work is being undertaken by the Agency's Organisational Development and Delivery Group. As part of the Agency's programme approach to the delivery of objectives, key risks are being identified and discussed with partners to establish a common understanding and to clarify responsibilities.

The Agency's Emergency Response Liaison Group ensures that the Agency can achieve coordinated and effective emergency response arrangements. Accountability for emergency response lies with Centre and Divisional Directors and through Regional Directors to local teams. The Health Protection Agency has been involved in, and has undertaken, a number of exercises to improve our preparedness and there is a rolling programme of exercises. Work with partners and other stakeholders to meet the requirements of the Civil Contingencies Act has been carried out at regional and local levels by emergency planners and resilience groups.

As an employer with staff entitled to membership of the NHS Pension Scheme, control measures are in place to ensure that the Agency complies with all of the employer obligations contained within the Scheme regulations.

## REVIEW OF EFFECTIVENESS

As Accounting Officer, I have responsibility for reviewing the effectiveness of the system of internal control. My review of the effectiveness of the system of internal control is informed by the work of the internal auditors and executive managers who have responsibility for the development and maintenance of the internal control framework, and comments made by the external auditors in their management letter and other reports. I have been advised on the implications of my review of the effectiveness of the internal control system by the Board and the Audit Committee and a plan to address weaknesses and ensure continuous improvement of the system is in place.

The Agency's Board receives regular reports from the Chairman of the Audit Committee concerning risk, control and governance, and associated assurance. The Audit Committee is fully committed to ensuring that corrective action is taken in a timely manner where necessary.

The Integrated Governance Group (IGG), reviews governance activities within the Agency and identifies the actions necessary for improvement. The appropriateness, effectiveness and progress of the risk management strategy, policy and approach are monitored by the IGG. The IGG reports and makes recommendations to the Audit Committee. Cross-attendance between the IGG, the Audit Committee and the Health and Safety Strategy Group helps to ensure that a consistent approach is taken. During 2006/07 the Quality Strategy Group (a sub-group of the IGG) identified those external organisations that provide the Agency with assurances and this has informed the Agency's response to the Department of Health's *Standards for Better Health*.

Internal Audit provides an independent, objective assurance and consulting service designed to add value and improve the Agency's operations. Its work is based on an agreed audit plan, which is carried out in accordance with Government Internal Audit Standards. This helps ensure that the work undertaken by Internal Audit provides a reasonable indication of the controls in operation across the whole of the Agency. Findings from work carried out during the year are presented to me and the Audit Committee. In addition, the Head of Internal

Audit provides me with copies of all final reports and an annual written statement setting out a formal opinion on the adequacy, reliability and effectiveness of the systems and controls in place across the Agency.

## CONTROL ISSUES DURING THE YEAR

A great deal of work has been undertaken in emergency response preparedness and the events of this last year have highlighted the importance of having a resilient organisation that is able to continue its everyday business whilst dealing with issues such as contamination with Polonium-210. Although there have not been any serious control issues in this area, further work is being undertaken to develop the Agency's business continuity management (BCM) processes. Initiatives such as home-working are currently being trialled which should help improve our capacity to respond effectively to future BCM issues.

In preparation for the Healthcare Commission's *Health Check* process, improvement plans are being developed to strengthen the Agency's compliance with Department of Health standards. The plans cover risk management, child protection, medicines management, patient consent, evidence-based guidance and the clinical governance strategy.

The Agency liaised with the Human Tissue Authority (HTA) on interpretation of the Human Tissue Act to determine the number of HTA licences it requires. This affected the timeliness of applications for licences.

The Health and Safety Executive has investigated a Health and Safety incident which occurred in June 2005 at the Agency's Centre for Emergency Preparedness and Response, and analysis of the evidence is awaited. No-one was harmed in the incident and significant steps have been taken to address all of the lessons learned and to prevent recurrence. It is not yet known whether the HSE will be taking any further action regarding the incident.



**Professor Pat Troop** CBE  
Chief Executive  
29 June 2007

# The certificate and report of the Comptroller and Auditor General to the Houses of Parliament

I certify that I have audited the financial statements of the Health Protection Agency for the year ended 31 March 2007 under the Health Protection Agency Act 2004. These comprise the Operating Cost Statement, the Balance Sheet, the Cashflow Statement, the Statement of Recognised Gains and Losses and the related notes. These financial statements have been prepared under the accounting policies set out within them. I have also audited the information in the Remuneration Report that is described in that report as having been audited.

## RESPECTIVE RESPONSIBILITIES OF THE CHIEF EXECUTIVE AND AUDITOR

The Chief Executive, as Accounting Officer, is responsible for preparing the Annual Report, the Remuneration Report and the financial statements in accordance with the Health Protection Agency Act 2004 and directions made thereunder by the Secretary of State for Health, and for ensuring the regularity of financial transactions. These responsibilities are set out in the Statement of Accounting Officer's Responsibilities.

My responsibility is to audit the financial statements and the part of the Remuneration Report to be audited in accordance with relevant legal and regulatory requirements, and with International Standards on Auditing (UK and Ireland).

I report to you my opinion as to whether the financial statements give a true and fair view and whether the financial statements and the part of the Remuneration Report to be audited have been properly prepared in accordance with the Health Protection Agency Act 2004 and the directions made thereunder by the Secretary of State for Health. I report to you whether, in my opinion, certain information given in the Annual Report, which comprises the Governance and Management Commentary is consistent with the financial statements. I also report whether in all material respects the expenditure and income have been applied to the purposes intended by Parliament and the financial transactions conform to the authorities which govern them.

In addition, I report to you if the Health Protection Agency has not kept proper accounting records, if I have not received all the information and explanations I require for my audit, or if information specified by HM Treasury regarding remuneration and other transactions is not disclosed.

I review whether the Statement on Internal Control reflects the Health Protection Agency's compliance with HM Treasury's guidance, and I report if it does not. I am not required to consider whether this statement covers all risks and controls, or form an opinion on the effectiveness of the Health Protection Agency's corporate governance procedures or its risk and control procedures.

I read the other information contained in the Annual Report and consider whether it is consistent with the audited financial statements. I consider the implications for my report if I become aware of any apparent misstatements or material inconsistencies with the financial statements. My responsibilities do not extend to any other information.

## BASIS OF AUDIT OPINION

I conducted my audit in accordance with International Standards on Auditing (UK and Ireland) issued by the Auditing Practices Board. My audit includes examination, on a test basis, of evidence relevant to the amounts, disclosures and regularity of financial transactions included in the financial statements and the part of the Remuneration Report to be audited. It also includes an assessment of the significant estimates and judgments made by the Chief Executive in the preparation of the financial statements, and of whether the accounting policies are most appropriate to the Health Protection Agency's circumstances, consistently applied and adequately disclosed.

I planned and performed my audit so as to obtain all the information and explanations which I considered necessary in order to provide me with sufficient evidence to give reasonable assurance that the financial statements and the part of the Remuneration Report to be audited are free from material misstatement, whether caused by fraud or error, and that in all material respects the expenditure and income have been applied to the purposes intended by Parliament and the financial transactions conform to the authorities which govern them. In forming my opinion I also evaluated the overall adequacy of the presentation of information in the financial statements and the part of the Remuneration Report to be audited.

## Opinions

### AUDIT OPINION

In my opinion:

- the financial statements give a true and fair view, in accordance with the Health Protection Agency Act 2004 and directions made thereunder by the Secretary of State for Health, of the state of the Health Protection Agency's affairs as at 31 March 2007 and of its net operating cost for the year then ended;
- the financial statements and the part of the Remuneration Report to be audited have been properly prepared in accordance with the Health Protection Agency Act 2004 and directions made thereunder by the Secretary of State for Health; and
- information given in the Annual Report, which comprises the Governance and Management Commentary is consistent with the financial statements.

### AUDIT OPINION ON REGULARITY

In my opinion, in all material respects the expenditure and income have been applied to the purposes intended by Parliament and the financial transactions conform to the authorities which govern them.

### REPORT

I have no observations to make on these financial statements.



**John Bourn**  
Comptroller and Auditor General  
9 July 2007

National Audit Office  
157-197 Buckingham Palace Road  
Victoria  
London SW1W 9SP



# Operating Cost Statement

FOR THE YEAR ENDED 31 MARCH 2007

	Note	2007 £'000	Restated 2006 £'000
<b>Gross operating costs</b>			
Staff costs	3	145,672	136,930
Other operating charges	6	91,543	87,109
Exceptional item: pension provision adjustment	26	-	3,257
Amortisation and depreciation	7	10,747	9,780
Notional cost of capital charge		4,440	4,596
		<b>252,402</b>	<b>241,672</b>
<b>Gross operating costs before deduction of notional cost of capital charge</b>			
Reversal of notional cost of capital charge		(4,440)	(4,596)
		<b>247,962</b>	<b>237,076</b>
<b>Total gross operating costs</b>			
Operating income	2	(93,887)	(87,483)
		<b>154,075</b>	<b>149,593</b>
<b>Net operating cost before interest</b>			
Interest receivable		(228)	(241)
		<b>153,847</b>	<b>149,352</b>

The notes on pages 106 to 124 form part of these accounts. All operations are continuing.

The net operating cost reported above represents the net cost of the public health work financed by Government grant in aid from the Department of Health and the Devolved Administrations. After this financing, the net operating cost under/(over) Government grant in aid for the year was £2,288,000 (2006: (£2,459,000)) (see note 18).

In addition to the Government grant in aid financing, the Agency generates significant operating income from Government and commercial customers and grant funding bodies. This income enables the Government grant in aid to be kept below the full cost of the Agency's public health work and enables a wider public health function than would otherwise be possible with Government grant in aid financing alone.

# Statement of Recognised Gains and Losses

FOR THE YEAR ENDED 31 MARCH 2007

	2007 £'000	Restated 2006 £'000
Unrealised surplus on revaluation of tangible fixed assets	8,554	3,060
<b>Gain recognised for the year</b>	<b>8,554</b>	<b>3,060</b>

As a result of the change in accounting policy on Government grant in aid set out in note 1c, the Statement of Total Recognised Gains and Losses previously reported for the year ending 31 March 2006 has been replaced by the above Statement of Recognised Gains and Losses. The prior year comparatives have been restated to reflect this change in accounting treatment.

The notes on pages 106 to 124 form part of these accounts. All operations are continuing.

# Balance Sheet

AS AT 31 MARCH 2007

	Note	2007 £'000	Restated 2006 £'000
<b>Fixed assets</b>			
Intangible fixed assets	8	700	931
Tangible fixed assets	9	153,958	139,305
Investments	10	1	1
<b>Total fixed assets</b>		<b>154,659</b>	<b>140,237</b>
<b>Current assets</b>			
Stock	11	4,261	4,322
Debtors	12	35,243	35,743
Cash at bank and in hand	13	22,914	8,840
<b>Total current assets</b>		<b>62,418</b>	<b>48,905</b>
<b>Creditors: amounts falling due within one year</b>	14	<b>(58,538)</b>	<b>(44,642)</b>
<b>Net current assets</b>		<b>3,880</b>	<b>4,263</b>
<b>Total assets less current liabilities</b>		<b>158,539</b>	<b>144,500</b>
<b>Provisions</b>	15	<b>(7,413)</b>	<b>(15,380)</b>
<b>Net assets</b>		<b>151,126</b>	<b>129,120</b>
<b>Capital and reserves</b>			
Capital grant reserve	16	1,154	-
Revaluation reserve	16	11,614	3,060
General reserve	16	138,358	126,060
<b>Total capital and reserves</b>		<b>151,126</b>	<b>129,120</b>

The notes on pages 106 to 124 form part of these accounts. All operations are continuing.



**Professor Pat Troop** CBE  
Chief Executive  
29 June 2007

# Cash Flow Statement

FOR THE YEAR ENDED 31 MARCH 2007

	Note	2007 £'000	Restated 2006 £'000
<b>Net cash (outflow) from operating activities</b>	19	<b>(144,684)</b>	(131,871)
<b>Returns on investment and servicing of finance</b>			
Interest received		228	241
<b>Capital expenditure and financial investment</b>			
Payments to acquire tangible fixed assets	9	<b>(16,587)</b>	(15,583)
Payments to acquire investments	10	-	(1)
Payments to acquire intangible fixed assets	8	<b>(15)</b>	-
Funds received from the sale of assets to the NHS returned to the Department of Health		<b>(331)</b>	(1,162)
Receipts from the sale of tangible fixed assets		<b>30</b>	145
<b>Net cash (outflow) before financing</b>		<b>(161,359)</b>	(148,231)
<b>Financing</b>			
Government revenue grant in aid received	18	<b>149,313</b>	134,955
Government capital grant in aid received	18	<b>16,696</b>	7,700
Other capital grants received	16	<b>1,211</b>	-
Receipts from the sale of assets to the NHS on 1 April 2003		<b>331</b>	1,162
<b>Increase/ (decrease) in net cash in the year</b>	13	<b><u>6,192</u></b>	<u>(4,414)</u>

The notes on pages 106 to 124 form part of these accounts. All operations are continuing.

# Notes to the Financial Statements

## 1. ACCOUNTING POLICIES

### a) Principal accounting policies

The accounts for the Health Protection Agency have been prepared under the historical cost convention, modified to include the revaluation of fixed assets, and comply with the provisions of the Health Protection Agency Act 2004 (Schedule 1).

Without limiting the information given, the accounts have been prepared in accordance with the Accounts Direction issued by the Secretary of State for Health with the approval of HM Treasury, and are in accordance with:

- (i) the Companies Act 1985;
- (ii) generally accepted accounting principles in the United Kingdom (UK GAAP); and
- (iii) the accounting and disclosure requirements of 'Government Accounting' and HM Treasury guidance 'The Government Financial Reporting Manual' insofar as these are appropriate to the Health Protection Agency.

The aforementioned direction and guidance requires the following departures from the Companies Act and accounting standard requirements:

- (i) the note on historical cost profit and losses required under Financial Reporting Standard 3 'Reporting Financial Performance' has not been disclosed; and
- (ii) the historical cost information regarding assets included at valuation as required by paragraph 33(3) of Schedule 4 to the Companies Act 1985 has not been disclosed.

### b) Operating income

Operating income comprises amounts receivable, excluding Value Added Tax, for goods and services supplied. Income on long term contracts is recognised as the work progresses, in accordance with the contractual arrangements and the stage completion of the work.

### c) Government grant in aid

Under the Government financial reporting manual for the 2006/07 financial year, non-departmental public bodies should regard Government grants and grants in aid received for revenue purposes as a financing flow and no longer as income. This is based on the position that grant and grant in aid are, in effect, a contribution from a controlling party and tend to be given to finance the activities of the non-departmental public body rather than to acquire specific goods and services and, therefore do not meet the generally accepted accounting principle (GAAP) definition of income.

Both revenue and capital Government grant in aid received via the Department of Health and the Devolved Administrations is credited to the general reserve as received.

Prior year comparatives have been restated to reflect this change in accounting treatment and the effects of the change are analysed in note 17.

**d) Intangible fixed assets**

Intangible fixed assets comprise software licences purchased from third parties with a life of more than one year. Individual licences with a life of less than one year, or a value below £5,000, are not capitalised. Such software costs are charged to operating costs as they are incurred.

Where capitalised, software licences are valued at cost, net of amortisation and impairment, or depreciated replacement cost where materially different. The cost or valuation of software licences, less their estimated residual values, is amortised on a straight-line basis over the life of the licence or the life of the related asset where there is no licence expiry date.

**e) Tangible fixed assets**

Freehold land is valued on an existing use basis. Buildings with a specialised use are valued at depreciated replacement cost and non-specialised buildings are valued at their open market value for their existing use. Independent valuations will be carried out every five years in accordance with guidance issued by the Royal Institute of Chartered Surveyors. The freehold land and buildings were valued on 31 March 2005 by the Valuation Office Agency. In the years where no valuation occurs, land and buildings are revalued using the appropriate indices contained within the NHS Finance Manual.

Individual items with a value below £5,000 are not capitalised. Tangible fixed assets of the same or similar type acquired around the same time and scheduled for disposal about the same time, or assets which are purchased at the same time and are used, and subsequently disposed of together, are grouped and treated as if they were individual assets.

Other tangible fixed assets are valued at depreciated replacement cost. The depreciated replacement cost is calculated by applying, annually, the appropriate indices contained within the NHS Finance Manual.

Expenditure on tangible fixed assets is recorded at historic cost under assets under construction until the point at which the assets are brought into use. They are then reclassified as fixed assets, under the appropriate asset category, depreciated from the date on which they were brought into use and revalued as at the 31st March in line with the policy set out above.

The difference between the net book revaluation of tangible fixed assets at 31 March and the net book value at historic cost is credited (in the case of a surplus) or debited (in the case of a deficit) to the revaluation reserve. This is a change in accounting treatment: prior year comparatives have been restated to reflect the change and the effects on the accounting statements are analysed in note 17.

Capital grants receivable for the purchase of specific capital assets are credited to a capital grants reserve and released to operating income to match the depreciation charged over the life of the capital assets concerned.

**f) Investments**

Investments comprise the Agency's 20.81% (2006: 24.41%) holding of ordinary shares of £0.001 in the issued share capital of Syntaxin Limited (Syntaxin), acquired for a cash consideration of £1,232.50 on 10 November 2005. These investments are valued on the historic cost basis. Further details are shown in note 10.

## Notes to the Financial Statements Continued

### g) Depreciation

Depreciation is provided on all tangible fixed assets from the month of purchase, but not in the month of disposal, at rates calculated to write off the cost of valuation of each asset evenly over its expected useful life as follows:

Asset Category	Expected Useful Life
Freehold buildings	Up to 50 years as advised by the Valuation Office Agency
Leasehold land and buildings	Over the life of the lease
Fixtures and fittings	Up to 20 years as advised by the Valuation Office Agency
Plant and equipment	5 to 20 years
Vehicles	7 years
Information technology equipment	3 to 5 years

Freehold land, investments and assets under construction are not depreciated.

### h) Stock

Stocks are valued at the lower of cost, or net current replacement cost if materially different, and net realisable value. For stock held for resale, net realisable value is based on estimated selling price less further costs expected to be incurred to completion. Work in progress is valued at cost, less the cost of work invoiced on incomplete contracts and less foreseeable losses. Cost means direct cost plus production overheads. Where necessary, provision is made for obsolete, slow moving and defective stocks.

### i) Research and development

Research and development expenditure is charged to operating costs as incurred.

### j) Taxation

The Agency, as a body corporate, is subject to the provisions of the Income and Corporation Tax Act 1988. As the majority of operations are funded by Government grant in aid, no provision is required in these accounts for any Corporation Tax liability.

### k) Value Added Tax

The Health Protection Agency is registered for Value Added Tax (VAT). VAT is charged on invoices for business contracts relating to products, services and research activities. The Health Protection Agency recovers part of its input VAT proportionate to its business activities in relation to total income. Expenditure is shown net of recoverable VAT. Non-recoverable VAT is charged to the most appropriate expenditure or capitalised if it relates to a fixed asset.

### l) Operating leases

Operating lease costs are charged to operating costs on a straight line basis over the lease term.

**m) Foreign currencies**

Transactions denominated in foreign currencies are translated into sterling at the exchange rate ruling on the date the transaction takes place or at the contracted rate if the transaction is covered by a forward exchange contract. Balances denominated in foreign currencies are translated into sterling at the exchange rate ruling at the end of the year. Exchange gains and losses are dealt with in accordance with Statement of Standard Accounting Practice 20.

**n) Pensions**

The Health Protection Agency provides pension schemes for the benefit of the majority of its employees, and participates in three defined benefit schemes:

1. The National Health Service (NHS) pension scheme;
2. The United Kingdom Atomic Energy Agency (UKAEA) Combined Pension Scheme; and
3. The Principal Civil Service Pension Scheme.

Although each is an unfunded scheme, they each receive contributions, partly from participating employees and partly from the Agency. Details of each scheme are included in the notes to the financial statements (note 5). Each scheme is multi-employer, and the scheme administrators prepare separate accounts which are subject to audit and regular actuarial review. Because of this, HM Treasury's Financial Reporting Manual (paragraph 6.5.2) requires the pension schemes to be treated as defined contribution schemes within these financial statements. The amount charged to operating costs is the employer's contributions payable for the year.

In certain circumstances, employees taking early retirement are entitled to an enhanced lump sum and ongoing pension. The Health Protection Agency is responsible for meeting the additional cost of the lump sum, the full cost of the pension until normal retirement age and the enhanced element of the pension thereafter. Payment is made in full for all early retirees from the NHS pension scheme in the year of retirement; for all other pension schemes, provision is made for the estimated future cost of early retirements at the time when the employee retires. Further details are provided within note 15.

**o) Provisions for liabilities and charges**

The Health Protection Agency maintains balance sheet provisions, as allowed by Financial Reporting Standard 12, for a number of significant future liabilities arising from past events where the timing and amount of the liability is uncertain. These provisions are reviewed annually as at the balance sheet date and are adjusted to reflect the latest best estimate of the liability. These adjustments are reflected in the Operating Cost Statement for the year. Details of the provision are contained in note 15.

**p) Notional costs of capital**

Operating costs include a notional charge for the cost of the Government funded capital employed during the year. The charge is calculated at 3.5% of the average net assets for the year, excluding cash balances held with the Office of the Paymaster General which do not attract interest and fixed assets funded by grants other than Government grant in aid. There are no other notional costs.

## Notes to the Financial Statements Continued

### 2. OPERATING INCOME

	<b>2007</b>	<i>Restated</i>
	<b>£'000</b>	<i>2006</i>
		<i>£'000</i>
Products and royalties	<b>20,379</b>	22,078
Contracts and services	<b>73,149</b>	65,264
Other operating income	<b>359</b>	141
<b>Total operating income</b>	<b>93,887</b>	<i>87,483</i>

No segmental reporting disclosures have been made as all the Agency's activities are inter-related and contiguous and have the single objective to further the health protection functions stated in the Health Protection Act 2004.

### 3. STAFF COSTS

	<b>2007</b>	<i>Restated</i>
	<b>£'000</b>	<i>2006</i>
		<i>£'000</i>
Salaries and wages	<b>110,986</b>	105,999
Social security costs	<b>10,223</b>	9,192
Other pension costs (note 5)	<b>14,644</b>	11,781
<b>Total costs of staff employed</b>	<b>135,853</b>	<i>126,972</i>
Agency and seconded staff	<b>9,205</b>	8,718
Redundancy and early retirement costs	<b>211</b>	647
Transfer to provision for future costs of early retirement (note 15)	<b>656</b>	-
<b>Total costs of employed and other staff</b>	<b>145,925</b>	<i>136,337</i>
Manufacturing staff costs transferred (to)/from finished goods	<b>(253)</b>	593
<b>Total staff costs</b>	<b>145,672</b>	<i>136,930</i>

### 4. EMPLOYEE NUMBERS

The average number of full-time equivalent staff employed during the year was as follows:

	<b>2007</b>	<i>Restated</i>
		<i>2006</i>
Medical	<b>249</b>	260
Nursing	<b>184</b>	180
Professional, administrative and operational support	<b>920</b>	847
Scientific and technical	<b>1,689</b>	1,725
<b>Total employee numbers</b>	<b>3,042</b>	<i>3,012</i>

The Agency consolidated its payroll function in February 2007 from two legacy systems onto the Electronic Staff Records (ESR) platform managed by the NHS Shared Business Services. The employee numbers reported represent an average using the ESR and legacy systems. This has contributed to the apparent year on year change within categories.

The above figures relate to staff with a United Kingdom employment contract, and include those staff on maternity, sick, special or paternity leave and those on career breaks, but only where they are being paid by the Agency.

In addition, during the year ended 31 March 2007, the Agency engaged staff on various agency, secondment and similar arrangements for variable time periods. Due to the nature of these engagements it is not possible to quantify the precise number of full-time equivalent persons engaged. It is estimated that the average number of persons engaged on these arrangements amounted to approximately 210 (2006: 205) whole time equivalents.

## 5. PENSION SCHEME

### a) Pension scheme participation

The majority of the Agency's employees are covered by two pension schemes; the National Health Service (NHS) Pension Scheme and the Combined Pension Scheme. A few employees have retained their individual membership of The Principal Civil Service Pension Scheme, or have exercised other options available as a result of The Social Security Act 1986. The three schemes available to Health Protection Agency employees are defined benefit schemes, all of which prepare separate scheme statements, which are readily available to the public. Details of the major pension schemes are provided below.

### b) The NHS Pension Scheme

The NHS Pension Scheme is an unfunded multi-employer defined benefit scheme, the provisions of which are contained in the NHS Pension Scheme Regulations (SI 1995 No. 300). The Scheme is notionally funded, with payment liabilities underwritten by the Exchequer. Scheme accounts are prepared annually by the NHS Business Services Authority and are examined by the Comptroller and Auditor General. The Government Actuary's Department values the NHS Pension Scheme every four years, and those quadrennial reports are published. The Scheme has a money purchase Additional Voluntary Contribution (AVC) arrangement which is available to employees to enhance their pension benefits.

Between valuations the Government Actuary's Department provides an update of the scheme liabilities on an annual basis. The latest assessment of the liabilities of the Scheme is contained in the *Report of the Actuary*, which forms part of the *NHS Pension Scheme & Compensation for Premature Retirement Scheme Resource Accounts*, published annually. These accounts can be viewed on the NHS Pensions website at [www.nhs.gov.uk](http://www.nhs.gov.uk). Copies can also be obtained from the Stationery Office.

Under NHS Pension Scheme regulations, the Agency and participating employees are required to pay contributions, as specified by the Secretary of State for Health. These contributions are used to defray the costs of providing the NHS Pension Scheme benefits. For the year ended 31 March 2007, employees were required to pay contributions of 6% (manual staff 5%) of pensionable pay. The employer's contribution amounted to 14% of pensionable pay in all cases. Employer contributions are charged to operating costs as they become due.

The Agency is unable to identify its share of the underlying assets and liabilities of the scheme. Having sought advice, the Agency considers that Financial Reporting Standard 17 and the Government Financial Reporting Manual requires the scheme to be accounted for as defined contribution in nature.

## Notes to the Financial Statements Continued

### c) The Combined Pension Scheme

The Combined Pension Scheme (CPS) was set up as a statutory body with effect from 1 July 1997 as a result of merging the previous UKAEA Principal Non-Industrial Superannuation Scheme (PNISS) and the UKAEA Industrial Superannuation Scheme (ISS) and is managed by the UKAEA. It is a multi-employer scheme which provides defined benefits to its members.

In common with other public sector schemes the CPS does not have many of the attributes of normal pension schemes. All contributions are paid to and benefits paid by HM Government via the Consolidated Fund. Any surplus of contributions made in excess of benefits paid out in any year is surrendered to the Consolidated Fund and any liabilities are met from the Consolidated Fund via the annual Parliamentary vote. Government does not maintain a separate fund and the scheme valuations are based on a theoretical calculation as to how a typical UK pension scheme would have invested the historical surplus of contributions over payments. There is no actual fund.

The nature of the CPS, supported as it is by the Government's Consolidated Fund and a theoretical portfolio of assets, has required the Agency to consider carefully the most appropriate treatment to meet the requirements of Financial Reporting Standard 17 and present a true and fair view. Having sought advice, the Agency considers that Financial Reporting Standard 17 and HM Treasury's Financial Reporting Manual requires the scheme to be accounted for as defined contribution in nature.

### d) Employer contributions

From 1 April 2006, HM Treasury replaced the method of calculating employer contributions to unfunded pension schemes with the Superannuation Contributions Adjusted for Past Experience (SCAPE) methodology. Further details are available within each of the pension scheme reports. There was no increase in the employer contributions for the NHS Pensions Scheme (14%), however SCAPE resulted in the employer contributions to the Combined Pension Scheme increasing from 0.5% to 17.3% with effect from 1 April 2006. This resulted in costs of £1,542,000 in 2006/07 (2005/06: £46,000). The additional cost of implementing SCAPE was met by additional grant in aid funding.

The Agency has accounted for its employer contributions to these schemes as if they were defined benefit schemes. The Agency's employer contributions were as follows:

	<b>2007</b> <b>£'000</b>	<i>Restated</i> <i>2006</i> <i>£'000</i>
The National Health Service (NHS) Pension Scheme	<b>12,920</b>	11,608
The Combined Pension Scheme	<b>1,542</b>	46
Other pension schemes	<b>182</b>	127
<b>Total contributions by the Health Protection Agency</b>	<b>14,644</b>	<b>11,781</b>

**6. OTHER OPERATING CHARGES**

	<b>2007</b>	<i>Restated</i>
	<b>£'000</b>	<i>2006</i>
		<i>£'000</i>
Laboratory consumables and services	<b>27,046</b>	23,490
Supplies and services	<b>38,471</b>	39,126
Accommodation	<b>20,139</b>	19,605
Travel and subsistence	<b>4,767</b>	4,366
Foreign exchange losses	<b>208</b>	68
Auditor's remuneration	<b>130</b>	133
Bad and doubtful debt provision	<b>689</b>	296
Losses on disposal of tangible fixed assets	<b>93</b>	25
<b>Total other operating charges</b>	<b>91,543</b>	<b>87,109</b>

**7. AMORTISATION AND DEPRECIATION**

The charge to operating costs for amortisation and depreciation for the year is as follows:

	<b>2007</b>	<i>Restated</i>
	<b>£'000</b>	<i>2006</i>
		<i>£'000</i>
Charge in respect of assets funded by capital grant in aid from the Department of Health		
- Intangible fixed assets (note 8)	<b>245</b>	249
- Tangible fixed assets (note 9)	<b>10,445</b>	9,531
	<b>10,690</b>	9,780
Charge in respect of other tangible fixed assets (note 9)	<b>57</b>	-
<b>Total charge to operating costs</b>	<b>10,747</b>	<b>9,780</b>

**8. INTANGIBLE FIXED ASSETS**

	<i>Software licences</i>
	<i>£'000</i>
<b>Cost or valuation</b>	
At 1 April 2006	1,358
Additions	15
Disposals	(3)
<b>At 31 March 2007</b>	<b>1,370</b>
<b>Amortisation</b>	
At 1 April 2006	427
Charge for year	245
Disposals	(2)
<b>At 31 March 2007</b>	<b>670</b>
<b>Net book value</b>	
<b>At 31 March 2007</b>	<b>700</b>
At 31 March 2006	931

# Notes to the Financial Statements Continued

## 9. TANGIBLE FIXED ASSETS

	<i>Land and buildings £'000</i>	<i>Fixtures and fittings £'000</i>	<i>Plant and equipment £'000</i>	<i>Information technology equipment £'000</i>	<i>Vehicles £'000</i>	<i>Assets under construction £'000</i>	<i>Total £'000</i>
<b>Cost</b>							
At 1 April 2006 (restated)	117,400	1,877	19,503	6,390	188	13,127	158,485
Additions	-	-	-	-	-	16,587	16,587
Transfer of assets brought into use	3,540	2,988	5,343	2,931	-	(14,802)	-
Revaluations	9,043	52	537	-	3	-	9,635
Disposals	(52)	-	(210)	(89)	(22)	-	(373)
<b>At 31 March 2007</b>	<b>129,931</b>	<b>4,917</b>	<b>25,173</b>	<b>9,232</b>	<b>169</b>	<b>14,912</b>	<b>184,334</b>
<b>Depreciation</b>							
At 1 April 2006 (restated)	8,743	32	7,540	2,780	85	-	19,180
Charge for year	6,469	345	2,421	1,243	24	-	10,502
Revaluations	718	1	222	-	2	-	943
Disposals	(6)	-	(134)	(89)	(20)	-	(249)
<b>At 31 March 2007</b>	<b>15,924</b>	<b>378</b>	<b>10,049</b>	<b>3,934</b>	<b>91</b>	<b>-</b>	<b>30,376</b>
<b>Net book value</b>							
<b>At 31 March 2007</b>	<b>114,007</b>	<b>4,539</b>	<b>15,124</b>	<b>5,298</b>	<b>78</b>	<b>14,912</b>	<b>153,958</b>
At 31 March 2006 (restated)	108,657	1,845	11,963	3,610	103	13,127	139,305

### Land and Buildings

Freehold land and buildings have a net book value of £113,760,000 (2006: £108,421,000), leasehold land and buildings have a net book value of £247,000 (2006: £236,000).

### Third party owned assets

In addition to the above tangible fixed assets, the Agency held tangible fixed assets with a total cost of £2,130,000 (2006: £980,000) which were funded and remain in the ownership of third parties.

These assets consisted of modular buildings £1,350,000 (2006: £436,000) and plant and equipment £780,000 (2006: £544,000).

## 10. INVESTMENTS

Investments comprise the Agency's 20.81% (2006: 24.41%) holding of ordinary shares of £0.001 in the issued share capital of Syntaxin Limited (Syntaxin), acquired for a cash consideration of £1,232.50 on 10 November 2005. The shareholding was diluted in 2006/07, due entirely to a bonus issue of ordinary shares to Syntaxin employees.

There is no readily ascertainable market value for the Syntaxin ordinary shares, so the Board has opted to disclose the holdings on a historic cost basis. This valuation policy conforms to the Government financial reporting policy, and will be subject to regular review.

## 11. STOCK

	<b>2007</b>	<i>Restated</i>
	<b>£'000</b>	<i>2006</i>
		<i>£'000</i>
Raw materials	<b>194</b>	66
Finished goods	<b>3,219</b>	2,171
Laboratory consumables and other stores	<b>848</b>	2,085
<b>Total stock</b>	<b>4,261</b>	<i>4,322</i>

The replacement cost of raw materials, laboratory consumables and other stores is not materially different from the balance sheet value.

## 12. DEBTORS

	<b>2007</b>	<i>Restated</i>
	<b>£'000</b>	<i>2006</i>
		<i>£'000</i>
<b>Amounts falling due within one year</b>		
Trade debtors	<b>11,001</b>	14,205
Accrued income	<b>11,757</b>	9,751
Prepayments	<b>3,235</b>	2,802
Other debtors	<b>8,986</b>	8,756
	<b>34,979</b>	<i>35,514</i>
<b>Amounts falling due after more than one year</b>		
Other debtors	<b>264</b>	229
<b>Total debtors</b>	<b>35,243</b>	<i>35,743</i>

The debtor amounts falling due after more than one year relate to lump sums paid to premature retirees from the Combined Pension Scheme. These amounts will be repaid by the Scheme administrators to the Agency on the retirees' normal retirement age, or death, whichever is the earliest.

### Intra-Government balances

Intra-Government balances within the totals for debtors are as follows:

	<b>2007</b>	<i>Restated</i>
	<b>£'000</b>	<i>2006</i>
		<i>£'000</i>
Balances with the Department of Health	<b>1,380</b>	2,473
Balances with NHS Trusts	<b>8,127</b>	12,871
Balances with other central Government bodies	<b>3,832</b>	2,347
Balances with local authorities	<b>1,957</b>	1,532
<b>Total intra-Government balances</b>	<b>15,296</b>	<i>19,223</i>

## Notes to the Financial Statements Continued

### 13. ANALYSIS OF CHANGES IN NET FUNDS

	<b>31 March 2007 £'000</b>	<i>Restated 1 April 2006 £'000</i>	<i>Change in year £'000</i>
Cash at bank and in hand	<b>22,914</b>	8,840	14,074
Overdraft (note 14)	<b>(10,684)</b>	(2,802)	(7,882)
<b>Net funds</b>	<b><u>12,230</u></b>	<u>6,038</u>	<u>6,192</u>

**Net funds can be analysed as follows:**

	<b>2007 £'000</b>	<i>Restated 2006 £'000</i>
Paymaster General Account	<b>19,663</b>	6,893
Commercial Banks	<b>(7,433)</b>	(855)
<b>Net funds</b>	<b><u>12,230</u></b>	<u>6,038</u>

The overdraft is a technical book overdraft relating to the value of unrepresented payments as at the balance sheet date. No actual bank overdraft existed at any time during the year.

### 14. CREDITORS: AMOUNTS FALLING DUE WITHIN ONE YEAR

	<b>2007 £'000</b>	<i>Restated 2006 £'000</i>
Trade creditors	<b>9,496</b>	8,386
Overdraft	<b>10,684</b>	2,802
Deferred income	<b>18,330</b>	10,957
Taxation and social security	<b>2</b>	3,041
Accruals	<b>16,286</b>	13,080
Other creditors	<b>3,740</b>	6,376
<b>Total creditors: amounts falling due within one year</b>	<b><u>58,538</u></b>	<u>44,642</u>

There were no creditor amounts falling due after more than one year at 31 March 2007.

The overdraft is a technical book overdraft relating to the value of unrepresented payments as at the balance sheet date. The cash to meet these payments was held in the Agency's account with the Office of the Paymaster General. No actual bank overdraft existed at any time during the year.

#### **Intra-Government balances**

Intra-Government balances within the totals for creditors are as follows:

	<b>2007 £'000</b>	<i>Restated 2006 £'000</i>
Balances with the Department of Health	<b>1,419</b>	2,256
Balances with NHS Trusts	<b>8,903</b>	5,836
Balances with other central Government bodies	<b>1,150</b>	5,217
Balances with local authorities	<b>236</b>	998
<b>Total intra-Government balances</b>	<b><u>11,708</u></b>	<u>14,307</u>

**15. PROVISION FOR LIABILITIES AND CHARGES**

	<i>Legal claims £'000</i>	<i>Future costs of early retirement £'000</i>	<i>Agenda for Change £'000</i>	<i>Total provision £'000</i>
Provision at 1 April 2006 (restated)	1,969	8,326	5,085	15,380
Reversal of unused provisions	(143)	-	-	(143)
Expenditure in respect of capitalisation of NHS pensions liability	-	(7,182)	-	(7,182)
Other expenditure during the year	(178)	(119)	(6,893)	(7,190)
Additional provisions	-	656	5,892	6,548
<b>Provision at 31 March 2007</b>	<b><u>1,648</u></b>	<b><u>1,681</u></b>	<b><u>4,084</u></b>	<b><u>7,413</u></b>

The provision for legal claims comprises several items, the most significant of which relates to a clinical negligence claim the Agency inherited from the Public Health Laboratory Service. Although significant progress has been made during the year to arrive at a settlement, medical assessments continue, and the case remains unresolved.

The provision for the future costs of early retirement consists of the element of the cost in respect of staff that have taken early retirement before 31 March 2007 that, in accordance with the terms of the Agency's pension schemes (note 5) fall on the Agency. The balance in respect of NHS Pensions was paid off during the year and there is no further liability with the NHS pension scheme; the balance, therefore is Nil (2006: £7,182,000) and the provision in respect of members of the Combined Pension Scheme is £1,681,000 (2006 £1,144,000).

The Agenda for Change provision relates to the estimated increase in the non-medical staff costs from 1 October 2004 (1 April 2005 for former staff of the National Radiological Protection Board), the implementation date for the new pay structure for the NHS and related bodies. Actual increases in pay will be based on formal job evaluations which are expected to be completed during the financial year ending 31 March 2008.

## Notes to the Financial Statements Continued

### 16. CAPITAL AND RESERVES

	<i>General reserve £'000</i>	<i>Revaluation reserve £'000</i>	<i>Capital grant reserve £'000</i>	<i>Total £'000</i>
Balance at 1 April 2006 (restated)	126,060	3,060	-	129,120
Net operating cost for the year	(153,847)	-	-	(153,847)
Revenue grant in aid credited for year (note 18)	149,313	-	-	149,313
Capital grant in aid credited for year (note 18)	16,696	-	-	16,696
Capital grants received for specific projects	-	-	1,211	1,211
Release of capital grant to offset depreciation	-	-	(57)	(57)
Realisation of revaluation reserve (difference between historic cost depreciation and current cost depreciation)	136	(136)	-	-
Revaluation of tangible fixed assets (note 9)	-	8,690	-	8,690
<b>Balance at 31 March 2007</b>	<b><u>138,358</u></b>	<b><u>11,614</u></b>	<b><u>1,154</u></b>	<b><u>151,126</u></b>

### 17. EFFECTS OF CHANGE IN ACCOUNTING POLICY ON GOVERNMENT GRANT IN AID

Under the Government financial reporting manual for the 2006/07 financial year, non-departmental public bodies should regard Government grants and grants in aid received for revenue purposes as a financing flow and no longer as income. This is based on the position that grant and grant in aid are, in effect, a contribution from a controlling party and tend to be given to finance the activities of the non-departmental public body rather than to acquire specific goods and services and therefore do not meet the generally accepted accounting principle (GAAP) definition of income.

Both revenue and capital government grant in aid received via the Department of Health and the Devolved Administrations is, therefore, credited to the general reserve as received. As a result of this, the part of the former Government grant reserve representing accumulated Government grant in aid has been transferred to the general reserve (formerly called the income and expenditure account reserve). In addition, the remaining part of the former Government grant reserve representing the surplus on the revaluation of tangible fixed assets has been transferred to a new revaluation reserve.

The effects of the change in accounting policy set out in note 1c on the accounts for the year ending 31 March 2006 are shown below:

<b>Effect on the results for the year ending 31 March 2006</b>	<b>£'000</b>
Deficit for the year as previously stated	(2,459)
Total revenue Government grant in aid relating to the net operating cost for the financial year (note 18)	(146,893)
<b>Net operating cost for the financial year (restated)</b>	<b>(149,352)</b>

<b>Effect on the reserves as at 31 March 2006</b>	<i>Government grant reserve £'000</i>	<i>General reserve £'000</i>	<i>Revaluation reserve £'000</i>	<i>Total reserves/ net assets £'000</i>
Balance as previously stated	139,422	(10,302)	-	129,120
Elimination of the Government grant reserve	(139,422)	136,362	3,060	-
<b>Balance as restated (note 16)</b>	<b>-</b>	<b>126,060</b>	<b>3,060</b>	<b>129,120</b>

The effect of the changes in the accounting policy set out in note 1c on the results for the year ending 31 March 2007 are shown below:

<b>Effect on the results for the year ending 31 March 2007</b>	<b>£'000</b>
Net operating cost under Government grant in aid for the year	2,288
Total revenue Government grant in aid relating to the net operating cost for the financial year (note 18)	(156,135)
<b>Net operating cost for the financial year</b>	<b>(153,847)</b>

<b>Effect on the reserves as at 31 March 2007</b>	<i>Government grant reserve £'000</i>	<i>General reserve £'000</i>	<i>Revaluation reserve £'000</i>	<i>Capital grant reserve £'000</i>	<i>Total reserves/ net assets £'000</i>
Balance without application of the new policy	157,986	(8,014)	-	1,154	151,126
Elimination of the Government grant reserve	(157,986)	146,372	11,614	-	-
<b>Balance with application of the new policy (note 16)</b>	<b>-</b>	<b>138,358</b>	<b>11,614</b>	<b>1,154</b>	<b>151,126</b>

Included within the general reserve are liabilities of £7,013,000 inherited from the Agency's predecessor bodies, the National Radiological Protection Board and the Public Health Laboratory Service.

There is no impact on the overall reserves/net assets position of the Health Protection Agency as a result of the change in accounting policy set out in note 1c.

## Notes to the Financial Statements Continued

### 18. GOVERNMENT FINANCING

	<b>2007</b> <b>£'000</b>	<i>Restated</i> <i>2006</i> <i>£'000</i>
The following grant in aid has been received during the year:		
Department of Health	<b>163,593</b>	140,303
Scottish Executive	<b>704</b>	640
National Assembly for Wales	<b>400</b>	376
Consultants' Clinical Excellence Award	<b>1,312</b>	1,336
<b>Total Government grant in aid received</b>	<b>166,009</b>	142,655
Less Government grant in aid in respect of general capital expenditure	<b>(16,696)</b>	(7,700)
<b>Total revenue Government grant in aid received</b>	<b>149,313</b>	134,955

The Health Protection Agency has United Kingdom-wide responsibilities. In addition to the formal grant in aid reported above, the Agency received income from the Northern Ireland Executive of £712,000 (2006: £710,000) to fund specific work which is included within operating income (note 2). The Agency also received other income from United Kingdom Government departments for contract and grant work which is also included within note 2.

#### Result for the year

The net operating cost for the financial year shown in the Operating Cost Statement and the related total revenue Government grant in aid for the financial year may be compared as follows:

	<b>2007</b> <b>£'000</b>	<i>Restated</i> <i>2006</i> <i>£'000</i>
Total revenue Government grant in aid received	<b>149,313</b>	134,955
Revenue Government grant in aid received in current year but relating to future years commitments	<b>(3,868)</b>	-
Revenue Government grant in aid received in past years but relating to current year commitments	-	1,988
Depreciation on assets funded by capital grant in aid from the Department of Health (note 7)	<b>10,690</b>	9,780
Capital grant in aid released on disposal of tangible fixed assets	-	170
<b>Total revenue Government grant in aid relating to the net operating cost for the financial year</b>	<b>156,135</b>	146,893
Less net operating cost for the financial year	<b>(153,847)</b>	(149,352)
<b>Net operating cost under/(over) Government grant in aid for the year</b>	<b>2,288</b>	(2,459)

**Capital for the year**

The capital expenditure for the financial year may be compared with the capital financing for the financial year as follows:

	<b>2007</b> <b>£'000</b>	<i>Restated</i> <i>2006</i> <i>£'000</i>
Government grant in aid in respect of general capital expenditure	<b>16,696</b>	<b>7,700</b>
Capital Government grant in aid received in past years but relating to current year commitments	-	7,069
<b>Total capital Government grant in aid relating to the capital expenditure for the financial year</b>	<b>16,696</b>	14,769
Capital grants received for specific projects	<b>1,211</b>	-
Total capital financing for the financial year	<b>17,907</b>	14,769
Less capital expenditure for the financial year	<b>(16,602)</b>	(15,583)
<b>Capital expenditure under/(over) capital financing for the year</b>	<b>1,305</b>	(814)

**19. RECONCILIATION OF NET OPERATING COST TO NET CASH OUTFLOW FROM OPERATING ACTIVITIES**

	<b>2007</b> <b>£'000</b>	<i>Restated</i> <i>2006</i> <i>£'000</i>
Net operating cost for the financial year	<b>(153,847)</b>	(149,352)
Interest received	<b>(228)</b>	(241)
<b>Net operating cost before interest</b>	<b>(154,075)</b>	(149,593)
<b>Adjustments</b>		
Amortisation of intangible fixed assets (note 8)	<b>245</b>	249
Depreciation of tangible fixed assets (note 9)	<b>10,502</b>	9,531
Loss on disposal of fixed assets	<b>93</b>	25
Release of capital grant from capital grant reserve (note 16)	<b>(57)</b>	-
Net transfer to provisions (note 15)	<b>(7,967)</b>	4,673
Decrease in stock	<b>61</b>	2,226
Decrease/(increase) in debtors and accrued income	<b>169</b>	(749)
Increase in creditors	<b>6,345</b>	1,767
<b>Net cash (outflow) from operating activities</b>	<b>(144,684)</b>	(131,871)

## Notes to the Financial Statements Continued

### 20. RELATED PARTY DISCLOSURES

The Agency is sponsored by the Department of Health, which is regarded as a related party. During the year the Agency has had various material transactions with the Department of Health itself and with other entities for which the Department of Health is regarded as the parent entity. These include many NHS and Primary Care Trusts, the Medicines and Healthcare products Regulatory Agency, the NHS Litigation Authority, NHS Logistics, and many others.

The Department of Health's 2004 review of its Arms Length Bodies proposed transferring the management of the National Institute of Biological Standards and Control to the Health Protection Agency, thus allowing for the abolition of the National Biological Standards Board. Subject to the passage of legislation, this is expected to be implemented by April 2009.

In addition, the Health Protection Agency had transactions with other Government departments and Central Government Bodies. These include the Ministry of Defence, the Food Standards Agency, the Department for Environment, Food and Rural Affairs, the Department for International Development and the Medical Research Council.

During the year no Board members, members of the senior management or other related parties have undertaken any material transactions with the Health Protection Agency except for:

- Professor Peter Borriello, an executive Board member, is a member of the Scientific Advisory Committee of Biomerieux UK Ltd., from whom the Agency transacted £1,594,000 (2006: £1,207,000) of laboratory consumables and equipment during the year to 31 March 2007.
- Professor David Latchman, a non-executive Board member, has a part-time appointment as Professor of Genetics at the Institute of Child Health, University College London. The Agency transacted £450,000 (2006: £349,000) of goods and services with University College London during the year to 31 March 2007.
- Professor Pat Troop, Chief Executive and executive Board member, is also a Board member of the London School of Hygiene and Tropical Medicine, from whom the Agency purchased £396,000 (2006: £282,000) and provided £78,000 (2006: £66,000) of goods and services during the year to 31 March 2007.
- Professor Stephen Palmer is an employee of Cardiff University, and acted as a member of the Executive Group for the whole of the year ended 31 March 2007. The amount due to Cardiff University for the year totalled £285,000.
- Dr. Barbara Bannister is an employee of the Royal Free Hospital, and attends Board meetings as an advisory member. During the year to 31 March 2007, the Agency paid a total of £23,000 (2006: £56,000) to the Royal Free Hospital, of which £10,000 (2006: £37,000) related to additional services provided by Dr. Bannister to the Agency.
- Dr. Vanessa Mayatt is a director of Mayatt Risk Consulting Limited, as well as non-executive member of the Agency's Board. During the year to 31 March 2007, the Agency paid £10,000 (2006: £nil) to Mayatt Risk Consulting Limited for additional services provided by Dr. Mayatt to the Agency.
- The Agency has a shareholding in Syntaxin Limited (see note 10), and charges the entity for goods and services provided by the Agency. During the year ended 31 March 2007, Syntaxin Limited was charged £2,209,000 (2006: £541,000) for goods and services received from the Agency.

### 21. CAPITAL COMMITMENTS

The contracted capital commitments at 31 March 2007 not provided for in the accounts amounted to £2,137,000 (2006: £3,632,000). There were no other financial commitments at 31 March 2007 (2006: £nil) that require disclosure.

## 22. COMMITMENTS UNDER OPERATING LEASES

Commitments under operating leases to pay rentals during the year following the year of these accounts are given in the table below, analysed according to the period in which the lease expires.

<b>Obligations under operating leases comprise</b>	<b>2007</b>	<i>Restated</i>
	<b>£'000</b>	<i>2006</i>
		<i>£'000</i>
<b>Land and buildings</b>		
Expiring within one year	<b>3,761</b>	3,338
Expiring between two and five years	<b>584</b>	617
Expiring after five years	<b>240</b>	238
<b>Other leases</b>		
Expiring within one year	<b>1,495</b>	1,852
Expiring between two and five years	<b>282</b>	379
Expiring after five years	-	-
<b>Total obligations under operating leases at 31 March</b>	<b><u>6,362</u></b>	<u>6,424</u>

## 23. FINANCIAL INSTRUMENTS

Financial Reporting Standard 13, Derivatives and Other Financial Instruments, requires disclosure of the role which financial instruments have had during the year in creating or changing the risks an entity faces in undertaking its activities.

Due to the largely non-trading nature of its activities, and the way in which it is financed, the Health Protection Agency is not exposed to the degree of financial risk faced by other business entities. Moreover, financial instruments play a much more limited role in creating or changing risk than would be typical of the listed companies to which Financial Reporting Standard 13 mainly applies. The Health Protection Agency has no authority to borrow or to invest without the prior approval of the Department of Health and the Treasury. Generally, financial assets and liabilities are generated by day-to-day operational activities and are not held to change the risks facing the Health Protection Agency in undertaking its activities.

### a) Liquidity risk

The Health Protection Agency has no borrowings and relies primarily on funding from the Department of Health for its own cash requirements, and is therefore not exposed to liquidity risks. It also has no material deposits, and all material assets and liabilities are denominated in sterling.

### b) Interest rate risk

The Health Protection Agency is not exposed to significant interest rate risk.

### c) Foreign currency risk

The Health Protection Agency has foreign currency income of approximately £10,051,000 per annum (2006: £5,000,000), upon which there is an element of currency risk. The only other currency risk is that of a Euro currency bank balance, valued at £106,000 on 31 March 2007 (2006: £179,800), and a US Dollar bank balance valued at £81,000 (2006: £48,000). The Agency operates Euro and US Dollar bank accounts to handle transactions denominated in those currencies. This helps to manage potential exposure to exchange rate fluctuations. The fair value of cash is the same as the book value.

For all other assets and liabilities book value represents fair value.

As allowed by Financial Reporting Standard 13, debtors and creditors that are due to mature or become payable within 12 months from the balance sheet date have not been disclosed as financial instruments.

## Notes to the Financial Statements Continued

### 24. CONTINGENT LIABILITIES

As at 31 March 2007, there were a small number of outstanding legal claims made against the Health Protection Agency by patients and others. Standard accounting practice requires that provision only be made in the accounts if it is probable that a claim will be successful, and that a reliable estimate of the claim can be made. The Health Protection Agency's provision for legal claims is disclosed at Note 15.

The possibility of reimbursement of certain elements of the legal claims mentioned above is remote. In such circumstances, accounting practice requires the Agency to disclose a contingent liability within the financial accounts. The NHS Litigation Authority recommended that the Agency discloses a contingent liability of £22,860 as at 31 March 2007 (2006: £34,500) in respect of legal damages, claimants' costs and the Health Protection Agency's costs.

The Agency also received an Equal Pay claim from the UNISON trade union in early 2007. It is a non-specific claim, in respect of two employees, and the Agency has requested further particulars from UNISON. The Health Protection Agency cannot predict the outcome of the claim, nor can any economic obligation be measured reliably.

There were no other contingent liabilities as at 31 March 2007.

### 25. LOSSES AND SPECIAL PAYMENTS

There were no losses or special payments that require disclosure during the year ended 31 March 2007 (2006 – £Nil).

### 26. EXCEPTIONAL ITEMS

The Agency inherited liabilities relating to staff who had taken early retirement or redundancy from two of its predecessor bodies, the Public Health Laboratory Service and the National Radiological Protection Board. Following an actuarial valuation carried out by the Government Actuary's Department as at 31 March 2006, the provision for these liabilities was increased by £3,257,000. This increase was charged to operating costs for the year ending 31 March 2006 as an exceptional item in accordance with Financial Reporting Standard 3. There are no exceptional items for the year ending 31 March 2007.

### 27. POST BALANCE SHEET EVENTS

The financial statements were authorised to be issued on 9 July 2007 by Professor Pat Troop, Accounting Officer/Chief Executive.

There are no other post balance sheet events that would require reporting under Financial Reporting Standard 21.



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