Health Protection Agency

ANNUAL REPORT AND ACCOUNTS | 2012/13

Health Protection Agency
Annual Report and Accounts 2012/13

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PROFESSOR DAVID L HEYMANN
CHAIRMAN

Chairman's foreword

During its 10 years of operation, the Health Protection Agency (HPA) combined expertise in infectious disease, environmental hazards and biological medicines to create an organisation that was recognised worldwide for the quality of its scientific advice, its rapid response capabilities and the leading-edge research that underpinned its work.

This expertise, together with the commitment and professionalism of its staff, ensured that Public Health England (PHE)—the body to which most of the HPA's activities transferred on 1 April 2013—inherited the best possible foundation for the health protection functions it will provide.

UNPARALLELED EXPERTISE

In becoming chairman of PHE, my priority is to build on the HPA's unparalleled expertise in communicable disease, chemicals, radiation and other environmental hazards in such a way that all parts of PHE benefit from this legacy. That includes those parts of PHE (not formerly part of the HPA) that will be working to improve health and wellbeing and to prevent non-communicable diseases such as diabetes, high blood pressure, cancers and other diseases related to smoking, and heart disease.

In this final Annual Report and Accounts of the HPA, I would like to thank all staff and members of the Board (past and present) for the huge contribution they made to health protection in the UK.

MAJOR ADVANCES IN HEALTH PROTECTION

During the past decade, the HPA was responsible for, or contributed to, major advances in the prevention, control of, and response to health protection problems. The HPA helped to reverse the increase in meticillin-resistant *Staphylococcus aureus* and *Clostridium difficile* infections in healthcare settings—an achievement that other countries have sought to replicate.

The agency played a lead role in developing the UK-wide response to pandemic and seasonal influenza. Microbiology was transformed by innovations in molecular diagnostics; surveillance systems were extended to cover new infections and the adverse health effects of chemical and radiological contamination were better understood. A high level of surveillance and emergency response preparedness was maintained during the 2012 Olympic and Paralympic Games, contributing to this notable success for the UK.

Challenges were presented by emergencies and extreme events, such as the Buncefield oil depot fire in 2005, the polonium-210 contamination incident in London in 2006 and the H1N1 flu pandemic in 2009. Lessons from these and other episodes led to improvements in services and infrastructure that strengthened the base from which PHE continues to protect and enhance public health.

LOCAL, NATIONAL AND INTERNATIONAL WORK

Over time, the HPA gained a justified reputation for the services it provided at local, national and international level. Health protection units offered 24/7 specialist support to the NHS and other partners at a local level. National experts were available to provide government and other agencies with the very latest scientific knowledge. Our staff also contributed to global health security—co-operation that is increasingly important to meet international disease threats. These activities were supported by research—much of it in collaboration with partner bodies and academic institutions —that was translated into applications to improve public health.

SPECIALIST FACILITIES

In recent years, the HPA planned for the replacement of the 60-year-old specialist research and manufacturing facilities at Porton, which are critical to the UK's biological security. The facilities, including high containment laboratories for examining dangerous pathogens and the capability to manufacture emergency vaccines, are unlikely to be sustainable much beyond 2015/16. A proposal to co-locate key public health functions, including microbiology and epidemiology, in a modern laboratory complex in Harlow is being further developed ahead of submission for government approval.

PROTECT AND IMPROVE HEALTH

From the HPA's inception in 2003, efforts were made to develop a public-facing body that provided independent, authoritative, evidence-based advice–an approach that engendered a high level of public confidence and trust. This principle also guided the agency's research and development programme, allowing scientists to work unimpeded on projects that made a difference to people's health. Links with academia and industry enriched the applicability of the research and the HPA's ability to generate substantial external income from trading activities and grants provided an essential resource. We hope to ensure through a transparent advisory board to PHE that examines and analyses scientific evidence that PHE can build on these approaches in its work to protect and improve public health.

BUILDING ON THE HPA'S WORK

One part of the former HPA, the National Institute for Biological Standards and Control, has joined the Medicines and Healthcare products Regulatory Agency rather than PHE—a merger with strategic benefits for both. The other functions of the HPA, along with parts of some 70 other public health bodies, were combined to form PHE. This offers opportunities to develop cross-cutting services, to expand surveillance in areas beyond infectious disease and to provide better intelligence for those who work in public health.

I am pleased that PHE will continue to work alongside the reformed NHS and with the devolved administrations in Scotland, Wales and Northern Ireland and their equivalent public health agencies. However, the new organisation has a far wider remit than the HPA. Most significantly, PHE has a new role supporting English local authorities, which now have major responsibilities for improving the health of their local populations.

Despite this wider remit, there is continuity of purpose between the HPA and its successor in delivering integrated public health services to meet the needs of the 21st century.

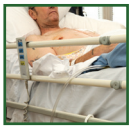
“I am pleased that PHE will continue to work alongside the reformed NHS and with the devolved administrations in Scotland, Wales and Northern Ireland and their equivalent public health agencies.... most significantly, PHE has a new role supporting English local authorities”

Some significant events from 2012/13

APRIL

The Health Protection Agency (HPA) reported a continued rise in **whooping cough** cases, with clusters of infection in schools, universities and healthcare settings. The rise in cases extended to very young children, who have the highest risk of complications and death.

Having considered a large number of studies on cancer risks in relation to **telecommunications technologies**, the HPA's independent Advisory Group on Non-Ionising Radiation said there was still no convincing evidence that modern telecommunications are a risk to health.

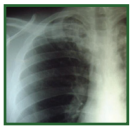


MAY

Visitors to the countryside were warned to watch out for **venomous adders** by experts from the HPA-commissioned National Poisons Information Service (NPIS). They advised NHS clinicians about 196 patients with snakebites between 2009 and 2011. About half of the bites occurred after a snake was picked up.

A survey of **healthcare-associated infections** (HCAI), published by the HPA, showed that 6.4% of hospital patients in 2011 had an infection compared with 8.2% in 2006. The study of 52,443 patients in English hospitals found that respiratory (22.8%), urinary tract (17.2%) and surgical site infections (15.7%) were the most common. HCAI prevalence was highest in patients in intensive care (23.4%) followed by surgical wards (8%). Since the last study in 2006, MRSA bloodstream infections had reduced 18-fold and *Clostridium difficile* infections were down five-fold.

New diagnoses of **sexually transmitted infection** rose by two per cent in England in 2011, with nearly 427,000 new cases, reversing the small decline observed the previous year, HPA figures showed. The rise was primarily driven by new diagnoses of gonorrhoea (up 25% on 2010), syphilis (up 10%) and genital herpes (up 5%).



JUNE

An increase in cases of the gastrointestinal infection, **cryptosporidiosis**, in North East England, Yorkshire, West Midlands and East Midlands, was investigated by the HPA. There were 352 additional cases of the infection, which is caused by an organism called Cryptosporidium, compared to the same period last year.

Radiation doses from individual **X-ray examinations** continued to fall. An HPA survey found further reductions in the radiation doses received by patients in 320 hospitals and more than 4,000 dental surgeries. On average, radiation dose levels for each x-ray procedure are now half of those used in the 1980s.

JULY

After seven years of preparation for the **London 2012 Olympic and Paralympic Games**, the HPA announced that world-class systems were in place to monitor and respond to outbreaks of infectious diseases or environmental hazards. Rapid laboratory testing for gastrointestinal illnesses and new surveillance systems to detect emerging infections in the community and hospitals were introduced.

HPA microbiologists confirmed that bacteria taken from a hot tub on display at a warehouse in Stoke-on-Trent matched bacteria taken from patients affected by an outbreak of **Legionnaires' disease**. Twenty-one people developed the infection, two died.

Tests carried out by the HPA identified the toxin that causes botulism in a jar of Italian olives. The investigation came after an Oxfordshire resident was admitted to hospital with **botulism** poisoning.

An estimated 216,000 people in the UK are chronically infected with **hepatitis C**, the HPA reported. Hospital admissions for hepatitis C-related end stage liver disease and liver cancer increased from 612 in 1998 to 1,979 in 2010.

Deaths rose from 98 in 1996 to 323 in 2010 while registrations for liver transplants rose from 45 in 1996 to 101 in 2011.

AUGUST

Nearly one in 10 women develop an infection after a caesarean section operation, HPA researchers reported in an article in the *British Journal of Obstetrics & Gynaecology*. Out of 4,107 women followed up after caesarean sections, 394 developed **surgical site infections**.

Rapid laboratory tests and enhanced surveillance proved effective in responding to a number of alerts at the **Olympic and Paralympic Games**, including several norovirus cases in athletes in Derby, and the presence of *legionella* bacteria in a floating hotel on the Thames.

Parents were urged to ensure that children receive two doses of the **measles, mumps and rubella vaccine** after HPA figures showed a rise in measles and rubella. The first half of 2012 saw 57 rubella cases—exceeding the annual totals for the previous nine years—and 964 confirmed measles cases compared to 497 in the same period of 2011.

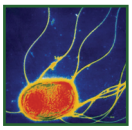
SEPTEMBER

HPA experts contacted some 100 UK tourists who may have stayed in cabins at Yosemite National Park, California, at the time of an outbreak of **hantavirus pulmonary syndrome**, which affected eight people, killing three. Visitors with symptoms of the virus—particularly fever, muscle aches or a cough—on returning from the USA were advised to seek urgent medical care.

Climate change presents serious challenges to public health, said an HPA report. A greater risk of heatwaves could result in 12,000 heat-related deaths a year by the 2080s compared to 2,000 now; premature deaths and respiratory illness due to ozone exposure could increase; the changing climate could increase the health risks from overheated buildings; and exotic mosquitoes could spread insect-borne infections to the UK.

The rapid adoption of new prescribing guidelines for **gonorrhoea** resulted in a slight fall in antibiotic resistance in 2011—the first drop in five years. The HPA said this must be seen against a 25% rise in new gonorrhoea diagnoses, with nearly 21,000 cases in 2011, one third of which are repeat infections and one third are diagnosed alongside another sexually transmitted infection.

A new type of **coronavirus** was identified in a patient who arrived in the UK from the Middle East. The patient received intensive care at a London hospital. Coronaviruses are causes of the common cold as well as more severe illnesses, such as Severe Acute Respiratory Syndrome (SARS). HPA respiratory experts monitored people who were in close contact with the patient and worked with international colleagues to investigate the virus.

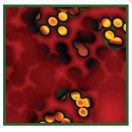


OCTOBER

Seven people were infected with ***Salmonella* Enteritidis PT1** after eating a pasteurised liquid egg product. The product, sold as liquid egg whites, was recalled from sale.

Radiation scientists at the HPA reported that the risk to public health from **radioactive sources** discovered at Dalgety Bay beach, Scotland, is low and should not stop people using the beach. The HPA advised that monitoring should continue so that contaminated objects are detected and removed, and a detailed public health risk assessment carried out.

The HPA was awarded a £4 million US government contract to develop a next-generation **anthrax vaccine** that will be delivered by an intra-nasal spray instead of an injection and will require fewer doses than the current vaccine. The project, worth up to £14 million, reflects the HPA's world-leading status in anthrax vaccine research and development.

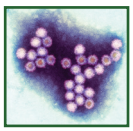


NOVEMBER

Half of people who inject drugs are infected with **hepatitis C**, one in 100 have HIV and a third have a bacterial infection as a result of their injecting. Nearly one quarter of younger injectors (aged under 25) continue to share needles and syringes, said an HPA report.

HPA scientists published the **full genome sequence** of the novel coronavirus infection that was diagnosed in a UK patient in September 2012. This enabled scientists around the world to understand more about the virus and develop strategies for treatment and prevention.

A vaccine to protect against **meningitis B**, the most common cause of bacterial meningitis in the UK, came a step closer to being licensed for use after it was approved by the European Medicines Agency. HPA scientists were among those collaborating with the pharmaceutical company Novartis to develop the vaccine.



DECEMBER

Dentists were warned not to use a hand-held **X-ray** machine, made in China and sold on the internet, after testing by the HPA revealed that the devices had the potential to expose dentists and patients to much larger than anticipated doses of radiation.

There were 541 reports of healthcare workers being exposed to **blood borne viruses** carried by patients as a result of needle stick injuries in 2011. This was double the 271 injuries in 2002. Most exposures occurred in the ward, theatre, intensive care and accident and emergency setting. Many were preventable.

A total of 3,877 cases of **norovirus** were confirmed by laboratories between July and the end of December 2012, the HPA said. This was 72 per cent more than the same period in 2011, when there were 2,255 cases.

JANUARY

An HPA-led consortium, consisting of European **emergency response** experts, won an EU contract, worth up to €6m (£5.2m), to design, plan, conduct and evaluate exercises and training relating to cross-border threats to health.

More than 2,140 children from 21 schools in the UK set a new Guinness World Record for hand washing. The HPA's e–Bug Team and the School Councils UK organised the event for school children to smash the record for the largest simultaneous **hand hygiene** lesson at multiple venues.

Genetic testing by the HPA revealed that the dominant strain of **norovirus** (the most common cause of infectious gastroenteritis) circulating in the UK during the winter was Sydney 2012, which was first seen in Australia.

FEBRUARY

The HPA followed up more than 100 people who had close contact with three family members who were infected with the **novel coronavirus** that was first identified in 2012. The three family cases provided evidence of person-to-person transmission.

Cases of **measles** were at their highest level for 18 years. The HPA said that the 2,016 confirmed cases of measles in England and Wales in 2012 was the highest annual total since 1994.

HPA scientists found evidence of an association between Pandemrix flu vaccination and **narcolepsy** in children in England. The study, in collaboration with researchers from Papworth and Addenbrooke's hospitals in Cambridge, looked at 75 children, aged four to 18 who were diagnosed with narcolepsy from 2008. The findings, were consistent with Finnish and Swedish studies that found a similar association.

MARCH

Whooping cough cases decreased for the third consecutive month. However, numbers remained unusually high following the sustained outbreak during 2012, which saw 9,741 (provisional figure) cases. This was almost 10 times higher than the 1,119 cases reported in 2011 and the 902 in 2008—the last peak year before the current outbreak.

Guidance on how people who keep rodents can reduce the risk of infections was issued by the HPA after two people were hospitalised with **hantavirus**. One patient was a man from North Wales who kept pet rats, the other was a rat breeder's spouse.

Cases of ***Pneumocystis jirovecii*** pneumonia (a type of preventable pneumonia caused by a fungus found in the environment) increased in England by an average of seven per cent each year since 2000, the HPA reported. The agency said that further work was needed to re-assess the prevention strategies in place for dealing with the infection, which usually affects people with impaired immune function.

Closing review

From its creation in 2003 to the transfer of its functions to Public Health England (PHE) in April 2013, the Health Protection Agency (HPA) was a successful force in protecting the public from health hazards and emergencies caused by infectious disease, chemicals, radiation and environmental threats.

The need for such a capability was identified after crises such as the foot and mouth epidemic in Britain in 2001 and the terrorist attacks in America later that same year. After the HPA was established, events such as the bombings on London transport in 2005, the polonium-210 contamination incident in London in 2006 and the influenza pandemic of 2009 underlined the importance of an integrated health protection body.

Throughout 2012/13, the final year of the HPA's existence, the agency delivered its normal functions while also preparing for the progression to PHE, with measures to ensure the smooth transfer of services and staff and carefully thought out health protection plans to guide the future of public health.

PHE, an executive agency of the Department of Health (DH), will continue to work closely with the NHS, local authorities, other government departments and the devolved administrations so as to ensure the UK has effective health protection advice, services and emergency response arrangements.

This closing review focuses on some of the advances made by the HPA in reducing health protection problems, the challenges presented by emergencies and extreme events, and the lasting legacy on which PHE will be built.

EMERGENCY RESPONSE

A major disease outbreak occurred almost every year of the past decade, from Severe Acute Respiratory Syndrome (SARS) in 2003 to pandemic influenza in 2009. Natural hazards such as flooding caused severe disruption across the UK and the threat of bioterrorist and conventional terrorist incidents was ever real.

As well as providing frontline expertise to limit the health consequences of emergencies as they happened, the HPA worked with the NHS, local authorities and the emergency services to improve preparedness for, and responses to, emergencies. Most emergencies were incidents at local and regional level, which required HPA expertise and support on a day-in, day-out basis. Others were national-scale crises.

Tabletop, command post and live exercises were used to test and improve the health service response to different types of emergency. Exercise Winter Willow in 2007, for instance, tested the UK's ability to manage pandemic influenza by playing out the decision-making process at national, regional and local level. It was the largest civil contingency exercise of its kind since the Cold War. Other types of training were also delivered. For example, nearly 44,000 health professionals completed computer-based courses in chemical, biological, radiological and nuclear (CBRN) threats.

The agency displayed its capabilities before, and during, the London 2012 Olympic and Paralympic Games—the largest and second largest international sporting mass gatherings in the world. In the seven years preceding the Games, systems were put in place to identify potential threats to public health and ensure they were effectively managed. Preparations included improved surveillance and reporting, faster microbiological testing, better cross-agency and collaborative working, and highly responsive communications.

The HPA's Microbial Risk Assessment team provided analysis and advice on new and emerging disease threats, such as the potential for vector-borne diseases (West Nile,

Chikungunya, Dengue and Crimean–Congo haemorrhagic fevers) to be imported to the UK. Modelling, mapping and behavioural science techniques were used in threat assessments and preparations for influenza pandemics, potential acts of bioterrorism such as the deliberate release of smallpox, anthrax or plague, and other threats.

CHEMICALS AND RADIATION

The Centre for Radiation, Chemical and Environmental Hazards (CRCE) provided world-leading expertise on the health risks associated with exposures to radiation, chemicals and other environmental hazards. Specialists worked to reduce the preventable burden of disease attributable to exposures in the home, the environment, in workplace settings and in medicine as well as to those caused by accidental or deliberate releases.

The HPA commissioned the National Poisons Information Service to provide 24/7 advice to healthcare professionals about patients who had been poisoned. Clinicians could communicate directly with a toxicologist or use a clinical toxicology database called TOXBASE (available as a computer 'app') to access information about diagnosing, treating and managing patients suffering from exposure to a wide range of poisonous substances.

CRCE staff responded to thousands of incidents and used their expertise when compiling advice documents, scientific and technical reports. Two incidents with international dimensions are described below:

The **polonium-210 contamination incident** in London in 2006 presented the HPA with an unprecedented public health emergency. Polonium-210 had never before been directly involved in an environmental contamination incident. Some aspects of the advice to protect public health had to be developed during the incident regarding, for example, the 'safe' environmental level for polonium-210. The trail of radioactive contamination meant the agency had to monitor more than 50 public places to decide if they were safe. These locations included two hospitals, hotels, restaurants and offices in central London, commercial aeroplanes and a London Premier League football stadium. The agency rapidly established a laboratory test for urine samples from people who may have been exposed to radioactivity. Radiation experts carried out complex calculations to assess whether there would be a risk to health. Nearly 750 people were tested. Of these, 139 people showed evidence of contact with polonium and 17 people had relatively elevated levels of polonium that warranted further monitoring. The agency traced people from 52 countries who could have been exposed to polonium.

Following the **Fukushima Dai-ichi nuclear emergency** in Japan in 2011, when explosions at a nuclear power plant resulted in the release of radioactivity to the environment, the HPA co-ordinated the UK public health response and provided health protection advice to the UK government. This included: (i) urgent advice about the protection of British nationals in Japan, international travellers, the crews of ships in Japanese waters and products imported from Japan; (ii) a modelling capability to assess, within two hours, the impact of a potential future release, and (iii) criteria to trigger monitoring of people coming by plane from Japan. Staff joined a number of international expert panels to assess the levels and effects of radiation exposure caused by the nuclear accident, including the health risks to the Japanese population.

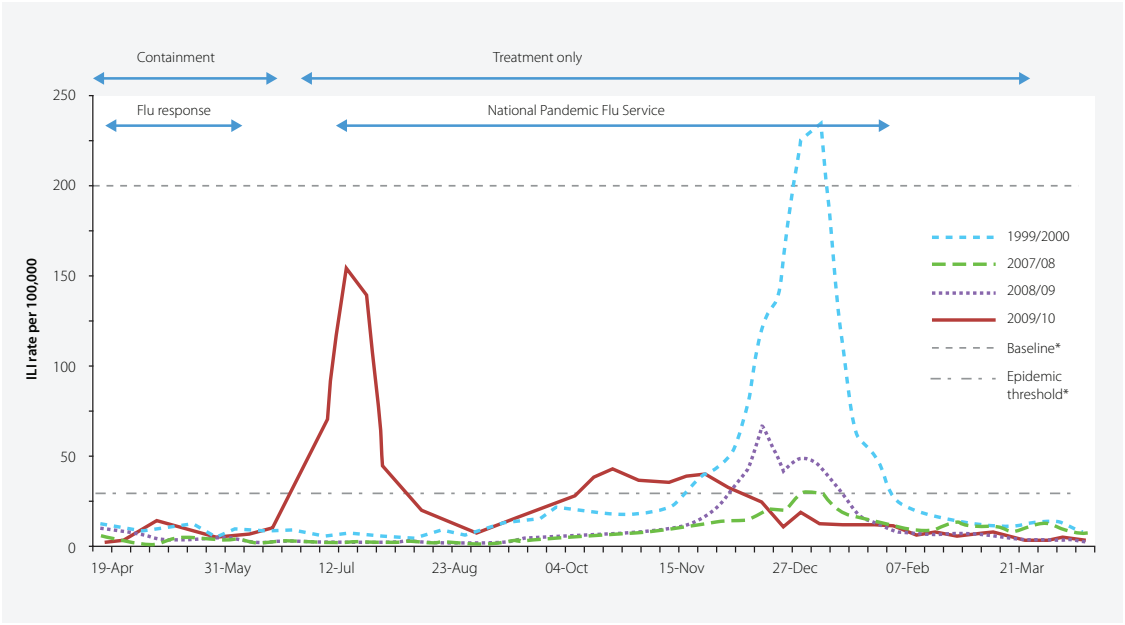
PANDEMIC INFLUENZA

The HPA played a major role in developing a response capability to the H1N1 influenza pandemic that emerged in North America in April 2009. By November of that year, 51 deaths had been reported in the UK and 6,255 worldwide.

In the early stages of the 'swine flu' pandemic, UK government policy was to slow the spread of infection (by giving antivirals to patients and close contacts) and buy time to develop countermeasures. The HPA quickly developed a response capability to support the policy of early containment. HPA virologists developed a diagnostic test for H1N1 and regional laboratory staff started to test patient samples on behalf of the NHS. Clinical and epidemiological information about the virus was gathered; antiviral stockpiles were built up and scientific advice was provided for the public, the NHS and government.

The HPA produced the first genetic fingerprint of the virus and by May 2009—three weeks after the outbreak started—provided the World

Figure1: Reponse to the 2009/10 influenza pandemic



Health Organization with a strain of virus that was suitable for vaccine development.

Daily situation reports on UK case numbers and their distribution were produced for government. Updates were published on the HPA website, along with information for the public, health professionals, schools, employers and the media.

HEALTHCARE-ASSOCIATED INFECTIONS AND ANTIMICROBIAL RESISTANCE

One of the major successes of the decade was to halt, and then reverse, the rise in infections caused by meticillin-resistant *Staphylococcus aureus* (MRSA) and *Clostridium difficile* (CDI). Both infections—associated with interventions in hospitals and other healthcare settings—increased rapidly in the first half of the 2000s. The trend was reversed by better methods to prevent and control infections. HPA peer support, surveillance (including data about surgical site infection) and research contributed to improved hygiene in hospitals, effective screening methods, improved antibiotic stewardship and the development of new therapeutics.

The graphs opposite illustrate the decline in MRSA and CDI cases. Reports of MRSA infection peaked in 2003, but had fallen 86% by 2012. Reports of CDI fell by 53% between 2008 and 2011. The largest declines were in hospital rather than community settings, a likely result of targeted interventions.

Figure 2: Reports of MRSA bacteraemia in England, 2002–2012

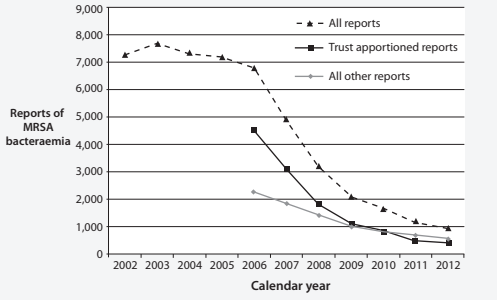
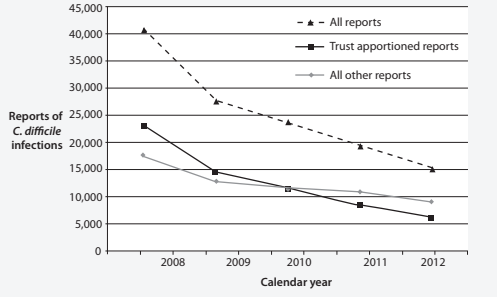


Figure 3: Reports of *Clostridium difficile* infection in England, 2008–2012



Meanwhile, infections caused by less well-known organisms, such as a group called Gram-negative bacteria, increased over the past decade. This was compounded by an alarming rise in resistance to antibiotics, which

has diminished the number of antibiotics that remain effective against these organisms.

Antimicrobial resistance was a critical area of work. The HPA provided valuable information to help improve antimicrobial stewardship and the evaluation of new antimicrobial therapies. Through its reference laboratory activity, the HPA worked to track and provide national alerts on the emergence of novel types of antibiotic resistance, such as that related to carbapenemase-producing organisms—a problem of both national and international concern. The HPA developed guidance on the detection of these novel types of antimicrobial resistance, subsequent early public health interventions and appropriate use of antibiotics.

One species of Gram-negative bacteria, *Escherichia coli*, causes one third of all bloodstream infections, or 30,000 cases a year. In 2000, two per cent of *E. coli* from these infections were resistant to cephalosporins (a group of antibiotics) and four per cent to ciprofloxacin (another antibiotic). These rates are now 11 and 21%, respectively—a five-fold increase. Enhanced surveillance for *E. coli* bacteraemia is being used to determine risk factors and potential interventions. Guidance on multi–drug resistant Gram-negative bacteria was reviewed.

NEW THERAPIES

The HPA used its unique research capabilities and resources to develop new vaccines and treatments for disease. Along with clinical trials, HPA Porton undertook biopharmaceutical manufacturing, maintained culture collections and provided testing services. Much of the R&D was in collaboration, or under contract, with industry, universities, other funding bodies and governments (including that of the UK).

HPA Porton's laboratory facilities allowed scientists to work with a range of diseases and causative agents, including dangerous pathogens. Anthrax, botulism, influenza, meningitis B, tuberculosis and haemorrhagic fevers were among the diseases studied.

Examples of work included:

- Being the sole manufacturer of the UK's licensed anthrax vaccine, which is supplied to the DH for occupational health use and to the Ministry of Defence to protect service personnel.
- Assisting an international project to develop a more effective vaccine against tuberculosis, which killed 1.4 million people worldwide in 2011. HPA Porton performed many of the essential pre-clinical evaluations to determine which vaccine candidates were selected for clinical trial.

INTRODUCING VACCINES

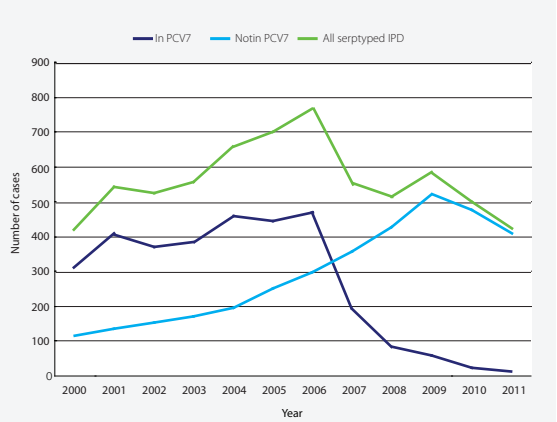
The HPA informed national vaccination policy by providing evidence from clinical trials, surveillance, sero-epidemiology studies, modelling and economic analysis. The agency also assisted the NHS in delivering vaccination programmes to target populations and monitoring their effectiveness.

In 2008, a vaccine was introduced to protect women against human papillomaviruses (HPV) that cause more than 70 per cent of cervical cancer cases. This was informed by a programme of studies of HPV type-specific epidemiology in England, as well as modelling and cost-effectiveness studies. Monitoring of vaccine uptake showed that in 2011/12, 87% of 12 to 13-year-old females completed the three-dose course.

Earlier, in 2006, the pneumococcal conjugate vaccine (PCV) was introduced for children, based upon extensive work by the HPA. Enhanced surveillance, including serotyping of strains causing invasive pneumococcal infection, was used to determine the preventable burden of infection. Extensive modelling of transmission, based on HPA carriage studies, demonstrated the cost-effectiveness of a vaccination programme. The schedule for the use of the vaccine was optimised based on HPA clinical trials.

Subsequent surveillance of pneumococcal disease showed a dramatic reduction in the seven serotypes in the initial vaccine (see graph below). This impact was seen in vaccinated children and in adults in the UK, demonstrating effective herd immunity. However, serotypes not in the vaccine continued to increase, which resulted in the decision to introduce a 13-valent vaccine from 2010.

Figure 4: Cases of invasive pneumococcal disease (IPD) by serotype in children under 15 years in England and Wales



GASTROINTESTINAL DISEASE

At least one in four people experience an episode of gastroenteritis each year—a 43% increase since the mid 1990s, according to HPA research. Contaminated food is a major cause of illness, with an estimated 1.7 million cases of foodborne disease in England and Wales each year.

To reduce the impact of gastrointestinal infections, the HPA provided expert advice and support during the investigation and control of outbreaks; rapid microbiological testing to identify pathogens; surveillance systems to monitor trends and evaluate the success of interventions; and scientific evidence to inform and determine priorities for national disease prevention and research.

HPA microbiologists and epidemiologists, in collaboration with researchers from other institutions, undertook a major investigation of gastrointestinal disease in the UK between 2007 and 2009. Norovirus was the most common cause of disease, accounting for 17% of all intestinal illness. In terms of bacterial infections, campylobacter was the most frequent, with more than 280,000 cases a year or 3% of cases. HPA modelling showed that contaminated chicken was the primary cause of food poisoning, affecting almost 400,000 people each year. The results informed government policy and led to initiatives to improve the microbiological quality of chicken on sale in the UK.

SURVEILLANCE

Over 10 years, the HPA developed a series of world-class surveillance systems to inform national and local action against infectious disease. New systems were introduced, existing systems were upgraded and the use of HPZone, which is a case management system and data bank for frontline staff, was expanded. The 2009 influenza pandemic, the outbreak of *Escherichia coli* O157 at Godstone Farm in Surrey in 2009, and the 2012 Olympic and Paralympic Games prompted enhancements that remain in place.

Syndromic (or real-time) surveillance was an HPA success story, starting off as a small innovative project and expanding into a nationwide service. Syndromic systems monitor respiratory, gastrointestinal and other clinical indicators by tracking calls to NHS Direct, calls to GP out-of-hours services, and visits to GP surgeries, hospital emergency departments and NHS walk-in-centres.

- Mandatory reporting of healthcare-associated infections (HCAIs) began with MRSA in 2001. It was extended to CDI and surgical site infections in orthopaedic patients in 2004, and *E. coli* bacteraemia and meticillin-susceptible *Staphylococcus aureus* (MSSA) in 2011. The data increased awareness of HCAIs and led to improved prevention and control measures in hospitals.
- The H1N1 influenza pandemic led to several important changes to flu and mortality surveillance, which have continued. They include mandatory surveillance of patients with diagnosed influenza in hospital intensive care units. Monitoring of influenza vaccine uptake began in 2005 and influenza vaccine effectiveness in 2007.
- To improve information on HIV and sexually transmitted infections, comprehensive electronic reporting systems were introduced, including the Genito-Urinary Medicine Clinic Activity Dataset in 2008 and the Chlamydia Testing Activity Dataset in 2011. To monitor the impact of the human papillomavirus (HPV) immunisation programme, surveillance of type-specific HPV in young women began in 2008 and a pilot of enhanced surveillance of cervical cancers in 2012.
- To monitor gastrointestinal infections, enhanced surveillance of Vero cytotoxin-

producing *E. coli* (VTEC) was introduced in 2008 and surveillance of hospital norovirus outbreaks in 2009. After the Godstone Farm outbreak, changes were made to the surveillance of VTEC and haemolytic uraemic syndrome in children.

- In preparation for the 2012 Olympics, surveillance of undiagnosed serious infectious illness was introduced to permit a number of UK hospital intensive care units to report potentially new and emerging infections. Syndromic surveillance was also extended to people attending hospital emergency departments, walk-in centres and GP out-of-hours services with symptoms of infectious and other acute diseases.
- Enhanced surveillance of pneumococcal disease began in 2006 to monitor the impact of the national vaccination programme. Systems to monitor HPV vaccine coverage and pertussis immunisation in pregnancy started in 2008 and 2012, respectively.
- Surveillance to support the long-term follow-up of people potentially exposed to Creutzfeldt-Jakob disease (CJD) through surgery and certain blood exposures was established in 2006 and later enhanced.

GENETIC SEQUENCING

Since viruses such as SARS and avian flu (H5N1) were discovered a decade or more ago, huge technological leaps have been made in the identification and characterisation of viruses and bacteria that cause disease. HPA laboratories were at the forefront of advances in medical microbiology and molecular diagnostics, which transformed the speed and accuracy of diagnostic services, leading to faster and better-targeted treatments and improved responses to outbreaks of disease. Strain typing for tuberculosis, for example, contributed to the effective control of TB incidents and outbreaks.

A more recent technology, next generation sequencing (NGS), allows microbiologists to determine the precise transmission pathways of pathogens. By examining the entire genome, they can, over the course of an outbreak, track mutations in a pathogen's genome, identify where and when particular variants arose and trace person-to-person transmission events. The HPA, working with partners, used NGS to elucidate the micro-epidemiology of infections such as *Staphylococcus aureus* and *Clostridium difficile* in hospital settings as well as to identify and characterise pathogens of global public health significance such as *Escherichia coli* O104 and a novel coronavirus, the genome sequence of which was published by the HPA in 2012.

Routine use of NGS in public health laboratories could revolutionise the investigation and control of infections by enabling rapid, real-time analysis of patient samples. However, it will now be for Public Health England to develop a strategy for how this technique should be utilised in the future to maximize the benefits for public health.

BIOLOGICAL MEDICINES

During the four years that the National Institute for Biological Standards and Control (NIBSC) was part of the HPA, biological medicines played an increasingly important role in the prevention and treatment of disease. The huge clinical benefits offered by such medicines (made by biological rather than chemical methods) depend on international standards and control mechanisms to ensure their safety and quality.

NIBSC is a world leader in the development and supply of international standards to underpin accurate patient dosing and consistent manufacture of biological medicines. From 2009 to 2013, the institute developed 60 new or replacement standards and supplied more than half a million standards and reference materials to manufacturers, regulators and researchers in more than 80 countries. These materials were vital to support the development and continued production of safe and effective medicines such as vaccines, blood and tissue-derived products, cytokines, growth factors and many more life-saving medicinal products.

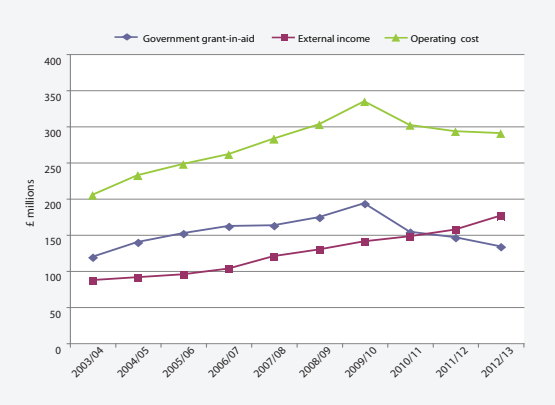
As the UK's Official Medicines Control Laboratory for biologics, NIBSC also provided independent regulatory testing and certification of medicines submitted by manufacturers for European batch release. More than 12,000 batch release certificates were issued relating to 20 different vaccines and more than 75 therapeutic medicines.

INCOME GENERATION

Over time, the HPA generated an increasing proportion of its income from sources other than government grant-in-aid. This self-generated income allowed the agency to provide more comprehensive health protection services than if it had relied solely on the UK taxpayer.

In 2012/13, £176 million of the HPA's total revenue, or 55%, was derived from services to third parties, the sale of products, and success in securing research grants. This continued the steady growth from the agency's first year (2003/04: 41%) and from 2011/12 (52%).

Figure 5: HPA external income, government funding and expenditure, 2003–2013



External income helped the HPA to train and retain its specialist workforce (paying the costs of an estimated1,250 employees a year), undertake additional research and provide important emergency response capabilities for the UK. In addition, the HPA was, through careful budget management, able to withstand a 24.1% real reduction in government funding between 2009 and 2013.

Examples of income-generating work included the block laboratory services provided to the NHS; the radiation protection advisor services provided to industries in the UK; the manufacture of Anthrax vaccine for the UK government, and royalties earned from sales of Dysport®, which is used in the treatment of muscle spasms and cerebral palsy. Sales of Erwinase®, an enzyme used in the treatment of a type of leukaemia that particularly affects children, also provided revenue to feed back into public health services. The product, developed at HPA Porton, helped to save the lives of thousands of children. Greater worldwide sales of Erwinase®, plus contract revisions, increased the revenue raised by the product.

OLYMPIC AND PARALYMPIC GAMES

During seven years of preparation for the London 2012 Olympic and Paralympic Games, world-class systems were put in place to protect athletes and visitors from infectious diseases and other dangers to health.

Surveillance and reporting were improved so that outbreaks of infection or other threats could be rapidly analysed, managed and brought under control. Improved molecular diagnostics for gastrointestinal pathogens were developed along with new tests for leptospirosis. These tests allowed faster diagnosis (one day, rather than several) and the identification of causality in outbreaks.

In conjunction with the emergency services and hospitals, plans were put in place to manage mass casualties or fatalities and respond to emergencies at event venues or in the community. Health advice for travellers and teams of athletes covered guidance about vaccinations, food and water safety, and other information, including emergency contact numbers.

During the Games period, 73 daily situation reports on public health were distributed to the DH, the Games organisers and other partners. The information covered public health threats, incidents and patterns of disease across the UK, and any significant international event that had the potential to affect the Games.

As a result of this work, the World Health Organization (WHO) designated the HPA a WHO Collaborating Centre on Mass Gatherings and Extreme Events, reflecting the agency's expertise and willingness to share knowledge with international partners.

GLOBAL HEALTH

The HPA contributed to global health through a programme of international work that included strategic secondments and a range of projects overseas. These activities aimed to forge long-term links with other nations that would be of mutual benefit in terms of improving public health. This was supplementary to the

huge range of international work that HPA staff undertook day-to-day, such as research collaborations, and participation in conferences and international advisory panels.

Projects funded by the HPA Global Health Fund helped to—build capacity in meningococcal serology across the sub-Saharan 'meningitis belt' in Africa; improve public health emergency preparedness and response in India; develop training materials for the public health management of chemical incidents; develop an influenza surveillance network across South America to detect antiviral drug resistance; build the epidemiology, surveillance and laboratory capacity at the National Institute for Communicable Diseases (NICD) in South Africa; and strengthen collaborative work with the World Health Organization (WHO) on chemical risk assessment.

Secondments since 2010 included HPA scientists working on research around the health effects of climate change at the National Centre for Epidemiology and Population Health, Australia; two consultants helping to establish the Centre of Excellence for Infectious Diseases at Public Health Foundation of India, New Delhi; and a regional epidemiologist working at the NICD in South Africa on TB control. In addition, the HPA hosted nine WHO collaborating centres and was involved in WHO missions including to Sierra Leone (cholera) and Qatar (coronavirus).

CLIMATE CHANGE

The HPA provided advice to governments and other agencies on the public health effects of climate change, extreme weather events and natural disasters. The work aimed to prepare for, and lessen the adverse effects of, flooding, drought, cold weather, heatwaves, wildfires, thunderstorm asthma, earthquakes and volcanic ash.

Among the many research projects, journal articles and publications, a report on the long-term health effects of climate change in the UK was published in 2012. A *Cold Weather Plan for England 2012* was piloted in six areas before being launched. The plan provides advice for individuals, communities and agencies on how to prepare for and respond to severe cold weather as part of wider winter planning.

It operates in a similar way to the heatwave plan by using a system of cold weather alerts generated by the Met Office, which are sent to government offices and voluntary, social and healthcare organisations.

MODERN FACILITIES

In 2008, the HPA launched the Chrysalis Programme to investigate the re-provision of ageing facilities at Porton, where research into dangerous pathogens and pandemic-prone diseases is carried out. The specialist infrastructure provided at HPA Porton has been regarded as vital in terms of national security. It includes high-containment laboratories for examining microorganisms such as anthrax, botulism and Ebola virus, and manufacturing facilities, including the capability to produce emergency vaccines in response to a severe disease pandemic.

Independent assessments of the condition of the Porton facilities, housed in 60-year-old premises, indicated that most of the research facilities were no longer fit for purpose and would have to be rebuilt or replaced. Maintaining the current facilities to the required standards was increasingly expensive and difficult, and, without the development of new facilities, the research functions were unlikely to be sustainable much after 2015/16.

The HPA identified an option to acquire a modern laboratory complex in Harlow, Essex, which is close to much of England's biomedical sector, collaborating universities and research institutes. This site would allow the HPA's central microbiological expertise to be co-located in a single centre of excellence. The existing buildings would provide for disease control, epidemiology, reference and specialist microbiology, national microbial culture storage, information and intelligence as well as space to develop containment level 3 and 4 laboratories to replace those at Porton. This programme is being progressed by Public Health England.

2 Operating review

Introduction to operating review

The HPA vision document *Leading the Way in Health Protection* (published in 2008) identified the HPA's ambitions in terms of public health outcomes and strategic aims for developing the organisation. The agency's 10 Key Health Protection Programmes (KHPPs) developed strategies to advance that work. The strategies were reviewed in readiness for adaptation to the needs of Public Health England and the Public Health Outcomes Framework for England 2013–2016. The long-term plans of the KHPPs and strategic aims are broken down into measurable annual objectives in the HPA's business plan.

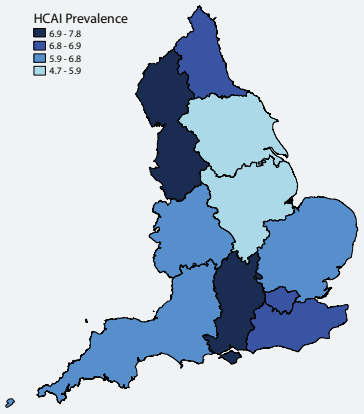
This Operating Review sets out the progress made by each of the 10 KHPPs and also reports on progress made in support of the HPA's strategic aims.

Key health protection programmes

The following section reviews the progress made by the KHPPs during the lifetime of the agency, with specific reference to the achievements made during 2012/13 as well as the priorities that the agency believed should be taken forward in the future.

1. Healthcare-associated infections and antimicrobial resistance

Figure 6: Healthcare-associated infection prevalence in acute hospitals in England in 2011



Source: English National Point Prevalence Survey on Healthcare Associated Infections and Antimicrobial Use, 2011. Health Protection Agency, 2012.

Infections that occur following healthcare interventions in hospital and community settings represent a significant burden of disease. Despite major improvements to infection control, protecting people from healthcare-associated infections (HCAIs) remains a challenge. This has been exacerbated by the increase in bacteria that are resistant to important antibiotics.

The HPA worked to reduce HCAIs and antimicrobial resistance (AMR) through the provision of surveillance data, expert advice, laboratory diagnostics and evidence to inform government policy as well as undertaking leading-edge research.

Infections caused by meticillin-resistant *Staphylococcus aureus* (MRSA) and *Clostridium difficile* (CDI) increased rapidly in the 1990s and early 2000s. However, improved prevention and control reversed this trend and led to sustained reductions in both infections. Resistant pneumococci also declined, in particular following the deployment of the conjugate vaccine.

By contrast, the situation with Gram-negative organisms worsened. Species such as *Enterobacter, Klebsiella, Serratia and Pseudomonas* present a growing problem, particularly in intensive care and neonatal units, whilst *Escherichia coli* has become the most common cause of bloodstream infections, with many cases seemingly related to an underlying infection of the genito-urinary tract.

The issue has been compounded by increasing antibiotic resistance among Gram-negative bacteria, including resistance to carbapenems, a powerful group of antibiotics used for serious infections.

Compared to previous decades, there is a relative lack of new antibiotics to counter current and emerging HCAIs. However, the HPA worked with pharmaceutical companies to evaluate the few new products under development and to assess their activity against strains of bacteria resistant to currently available antibiotics.

Of great importance internationally, and to the UK, is the rise of large-scale antibiotic resistance problems in areas such as India, China, the USA, Southern Europe and the Middle East. To address this, the HPA collaborated extensively with colleagues overseas.

Achievements in 2012/13

- Advice and support was provided to public health partners in Northern Ireland regarding *Pseudomonas aeruginosa* infection in neonatal units.
- A Healthcare Epidemiology Competency Framework was compiled to provide a development resource tool for NHS and HPA staff.
- Operational guidance was provided to local health protection teams defining responsibilities, standards and quality outcomes in relation to HCAI and AMR in acute hospital and community settings.
- The Antimicrobial Resistance and Healthcare Associated Infections Reference Unit was created by the merger of two former reference laboratories to provide better coordination of specialist reference functions for the detection and investigation of HCAI and AMR.
- Results from the fourth national Point Prevalence Survey (PPS) on HCAI and the first national PPS on antimicrobial use in England were published by the HPA (see map above). They showed that 6.4% of individuals within hospitals at the time of survey (2011) had an active HCAI and 34.7% were on an antimicrobial. Prevalence was highest in patients in intensive care units followed by those on surgical wards.

Future priorities

Surveillance:

- Develop a system for the national voluntary surveillance of HCAI, AMR and antimicrobial use in adult, paediatric and neonatal intensive care units.
- Develop quality measures for antimicrobial stewardship across healthcare settings.
- Improve data linkage across microbiology and clinical datasets to determine changes in the epidemiology of HCAIs.
- Strengthen the surveillance and reporting of HCAI outbreaks, including those in community care homes to share lessons learned and inform public health practice.
- Continue to detect and track emerging AMR problems, both in terms of resistance mechanisms and strain types.

Advice and support:

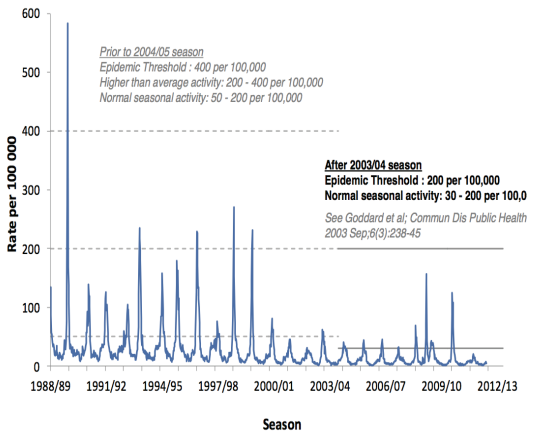
- Improve the national peer support service for NHS colleagues during 'difficult to manage' incidents and outbreaks.
- Refine guidance for HCAI and AMR in response to changing epidemiology, evidence-based practice and scientific understanding.
- Continue work to develop a national strategy to combat the increasing problems with carbapenem-resistant organisms and understand their transmission characteristics and pathogenesis.

Research:

- Develop techniques for the rapid detection of HCAIs and AMR.
- Investigate the use of vaccines/therapeutics to protect the public from HCAIs and, with academic and commercial partners, facilitate their development.
- Ongoing development and review of the evidence base to prevent and control HCAI and AMR.

2. Respiratory infections

Figure 7: Influenza-like illness, 1987 onwards



The HPA supported the NHS in preventing and controlling influenza, tuberculosis, Legionnaires' disease and other respiratory infections by providing expert scientific and clinical advice and virological, microbiological, epidemiological and modelling services.

Influenza

During the past 10 years, the HPA played a major role in developing the UK-wide response to pandemic and seasonal influenza. This included:

- Contributing to national plans to prepare for, and respond to, seasonal and pandemic influenza.
- Assisting with the successful management of the H1N1 2009 pandemic and the 2010/11 post-pandemic season.
- Developing a system of virological surveillance using HPA expertise in polymerase chain reaction (PCR) testing and strain characterisation.
- Developing modelling estimates of population impact and population-based seroprevalence studies.
- Introducing enhanced influenza surveillance after the 2009 pandemic to monitor trends in infection using data from GP surgeries, hospitals, laboratories, NHS Direct, community telephone surveys and death registrations.
- Playing a lead role in the characterisation of influenza viruses and in monitoring antiviral susceptibility (including the detection of drug-resistant influenza in 2008, which led to a global alert).

Tuberculosis

Enhanced surveillance of tuberculosis, using web-based entry of data by TB clinics, was introduced by the HPA to replace five-yearly surveys of the disease. This showed that tuberculosis rates have begun to stabilise after increasing over the past decade. The changing rates are largely attributable to changing patterns of migration to the UK. Strain typing for tuberculosis was introduced. Early evaluation suggested it was contributing to the effective control of incidents and outbreaks.

Other respiratory pathogens

As part of the HPA's Olympics legacy, a PCR test for legionella was developed, which is currently being validated across Europe. This will have a major impact on the public health investigation of legionella incidents. The agency also helped to control numerous outbreaks of Legionnaires' disease over the past 10 years. The HPA contributed to the characterisation of the novel coronaviruses that caused Severe Acute Respiratory Syndrome (SARS) and developed serological and diagnostic tests to detect these highly virulent viruses. A novel human coronavirus was identified in 2012.

Achievements in 2012/13

- Epidemiological surveillance data, virological characterisation, modelling expertise and expert interpretation were provided to the Joint Committee on Vaccination and Immunisation to assist its recommendation to extend the annual influenza vaccination programme to children aged 2 to 16 from 2014.
- As part of HPA research into the diagnosis of latency in TB, plans for screening new entrants to the UK for latent tuberculosis infection were progressed and discussed with NHS England.
- HPA and Oxford University researchers collaborated on research, published in *The Lancet Infectious Diseases*, that demonstrated how next generation sequencing (as opposed

to limited genetic typing techniques) could revolutionise the control of tuberculosis by mapping the spread of disease more precisely and potentially lead to earlier treatment of patients and their contacts.

- A contact-tracing module was developed that helps NHS colleagues in the surveillance and management of TB and contributes to improvements in TB control.
- HPA virology experts identified a new type of coronavirus and epidemiologists worked with international colleagues to understand the epidemiology and control of the spread of this virus.
- In response to the Department of Health Pandemic Influenza Strategy, the HPA introduced an agency-specific strategy for pandemic influenza.

Future priorities

Influenza:

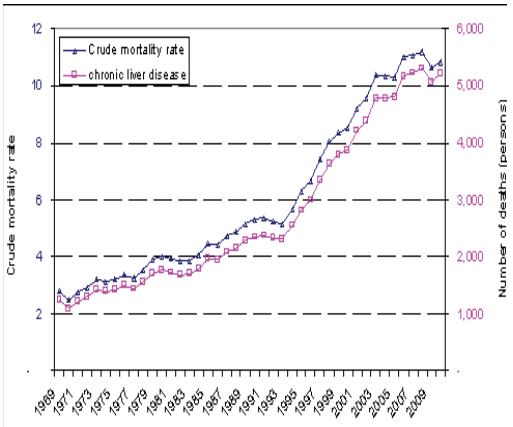
- Fulfil the major role of introducing and supporting the proposed childhood vaccination programme for influenza. This will include surveillance and measurement of vaccine uptake, effectiveness and impact.
- Strengthen preparedness and planning for the next influenza pandemic, ensuring that appropriate virological testing and surveillance strategies are in place and unaffected by the NHS changes.
- Provide improved guidelines, especially in care homes, to achieve better control of seasonal influenza.

Tuberculosis:

- Develop a cost-effective programme to screen new arrivals to the UK for latent TB infection.
- Continue the introduction of next generation sequencing into the public health management of tuberculosis, including its use for the identification of resistance and in outbreak control.
- Develop the capability to store large datasets combining epidemiological data with sequence data.
- Research to advance next generation sequencing of tuberculosis and to help develop a new BCG vaccine.

3. Blood borne infections

Figure 8: Crude mortality rate and chronic liver disease deaths in England



Hospital admissions and deaths from chronic liver disease caused by hepatitis B and C continue to rise in the UK. Despite considerable work to tackle blood borne viruses (BBV) in the past 10 years, more needs to be done if the burden of disease is to be reduced in future years.

An estimated 216,000 people in the UK are chronically infected with hepatitis C (HCV). Many were infected as a result of injecting drug use. HPA modelling suggests that, if left untreated, 15,840 people in England will be living with HCV-related cirrhosis in 2020. Hepatitis B infection can be prevented by vaccination. HBV among people who inject drugs declined over the past decade, probably as a result of initiatives to increase vaccine coverage among this group.

The HPA worked to prevent new cases of viral hepatitis, increase testing and diagnosis, and improve the management of people with chronic hepatitis infection. A national network of Hepatitis Leads was established to co-ordinate action at the local level. To raise awareness, the HPA published regular

epidemiological and surveillance reports; supported public information campaigns, and helped to develop education programmes for doctors. The HPA hosted the Prison Infection Prevention Team, which is responsible for the national surveillance of infectious diseases in prisons and worked with the Prison Network to reduce BBV among prisoners.

Advances in the genetic typing of hepatitis A and B allowed the HPA to introduce enhanced surveillance of these viruses. The agency also established the capacity to identify molecular level changes associated with antiviral resistance. In addition, economic analysis and modelling by the HPA influenced a decision not to offer universal HBV vaccination to all children, but to enhance the selective programme.

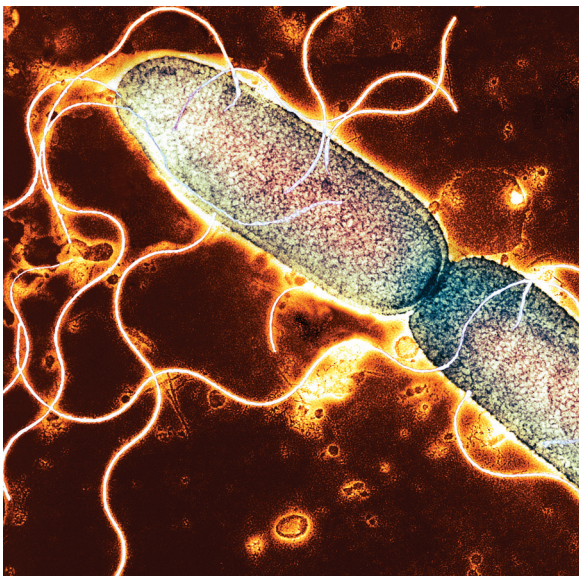
Achievements in 2012/13

- A certificate, accredited by the Royal College of General Practitioners, was launched to train primary care practitioners in the detection and diagnosis of hepatitis B and C.
- At least 10 UK laboratories started to offer dried blood spot testing to diagnose blood borne viruses. This was predominantly targeted at hard-to-reach populations who might otherwise not be tested and therefore not enter treatment and care pathways.
- Diagnostic investigations by the HPA formed part of a research collaboration to define the molecular diversity and management of chronic hepatitis B infections in the UK.
- Mathematical modelling was used to assess the impact of increasing HCV treatment on the future burden of HCV-related disease in the UK.
- In partnership with the Department of Health, the HPA published a national survey of hepatitis C services in prisons in England, which was the first of its kind.

Future priorities

- Roll out of dried blood spot testing for diagnosis of BBV nationally.
- Continue the viral genetic typing that contributes to enhanced surveillance of hepatitis A and B and the development of avidity testing for hepatitis B and C.
- Monitor antiviral resistance to address issues related to current and future therapies.
- Continue collaboration with NHS Blood and Transplant to maintain the safety of the blood supply. With evidence of hepatitis E virus (HEV) in blood donors, there is a need to address questions on the potential extent of HEV-related post transfusion hepatitis and the outcome of receiving HEV-containing blood/ blood components.
- Maintain surveillance and improve the quality of data nationally.
- Ensure that data are reported on a timely basis and disseminated to the appropriate organisations to support prevention work and commissioning.
- Improve and sustain hepatitis B immunisation coverage in key groups and the follow-up of children born to mothers with HBV infection.
- Describe the treatment outcomes for those treated for chronic hepatitis B and C.

4. Gastrointestinal infections



One of the major challenges of 2012/13 was to rapidly detect and manage outbreaks of gastrointestinal (GI) infection at the 2012 Olympic and Paralympic Games. Along with the specific preparations outlined below, the HPA's work to counter GI infections over the past decade helped to reduce the risk of outbreaks of illness among visitors to the Games.

At least one in four people experience an episode of gastroenteritis each year—many of these cases being caused by contaminated food. Along with advances in surveillance (such as enhanced surveillance databases for *Escherichia coli)*, the HPA developed local and national capabilities for responding to GI infection and provided scientific evidence from research.

In the laboratory, molecular diagnostics and next generation sequencing were introduced for typing GIs as well as improved polymerase chain reaction (PCR) typing for reporting from both the Salmonella Reference Unit and the Gastrointestinal Reference Unit. All five Food, Water and Environmental (FW&E) microbiology laboratories introduced real-time PCR tests along with more rapid confirmation of salmonella, vero cytotoxin-producing *E. coli,* listeria and campylobacter.

Achievements in 2012/13

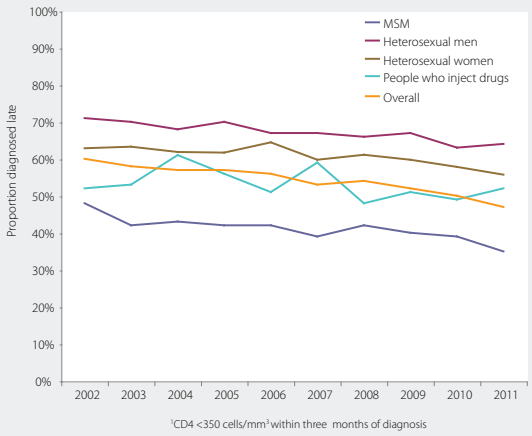
- Support was given to Northern Ireland during a large outbreak of *E. coli* O157.
- Following the recall of a French-made pasteurised liquid egg white product, three laboratories independently recovered *Salmonella* Enteritidis PT1 from bottles of egg white distributed in the UK through an internet company, averting an outbreak similar to one in 2007.
- Preparations for the Olympic Games involved increased surveillance for GI infections, rapid laboratory testing of human, food and environmental samples (with results available in one day rather than several) using specially developed PCR diagnostic assays, and enhanced investigation and response procedures. The HPA worked with local authorities before the Games, and during them, to monitor food vendors, seawater, hotel and ship locations, swimming pools and spa pools etc. All sources of water at Olympic sites were subject to microbiological testing. Advice was given about two norovirus outbreaks among athletes and about the presence of legionella bacteria in a ship providing accommodation to Olympic Park staff (no cases of illness were identified).
- An ice manufacturer (supplying 300 pubs, clubs and restaurants) was prosecuted by London Borough of Lambeth in connection with adverse results from a sampling study performed by Lambeth and the HPA. The food business operator was found guilty against 14 hygiene offences.
- Completion of a Joint Review of Zoonoses Services in the HPA and Animal Health and Veterinary Laboratories Agency (AHVLA). This provided the opportunity to assess the current capabilities of HPA and AHVLA to respond to endemic, exotic and emerging zoonoses and to consider the longer-term requirements of both agencies.

Future priorities

- Develop the most appropriate detection, identification and typing strategies for clinical, food, water and environmental microbiology for key pathogens.
- Further develop high quality real-time surveillance systems in order to rapidly detect trends, incidents and outbreaks; monitor interventions; prioritise activities and inform policy makers.
- Ensure rapid detection, high quality investigation, control and reporting of outbreaks and incidents across Public Health England.
- Establish a comprehensive set of evidence-based standards, operating procedures, guidance/best practice and algorithms for investigating cases of food/water/environmental contamination by key organisms.
- Ensure systematic collection of appropriate microbiological and epidemiological data for risk assessment and source attribution to inform policy makers and provide timely evaluation of interventions to reduce food and waterborne infections.
- Take forward the recommendations of the HPA and AHVLA review of zoonoses services through a joint AHLVA and PHE board.

5. Sexually transmitted infections

Figure 9: Trends in late diagnosis[1] of HIV by exposure group: UK, 2002–2011



Around 448,000 new diagnoses of sexually transmitted infections (STI) were made in 2012, a five percent rise on the previous year. Although continued transmission through unsafe sexual practices may be a partial explanation, the increase must be interpreted with caution—changes to surveillance methods during 2012 meant that chlamydia diagnosed at community-based settings among those aged over 24 years were included in the figures for the first time.

The HPA carried out routine surveillance, epidemiological investigations and research to help protect the population from STIs. From 2005, the agency coordinated the National Chlamydia Screening Programme that aims to prevent and control chlamydia through early detection and treatment. More than two million tests were conducted among young people aged 15 to 24 in England in 2011, and 150,000 infections were diagnosed.

To monitor the effectiveness of sexual health policies and improve services, the HPA launched the Genito-Urinary Medicine Clinic Activity Dataset (GUMCAD) in 2008 to collect better information about patients attending clinics and estimate the burden of sexual ill health at a local, regional and national level.

The Gonococcal Resistance to Antimicrobials Surveillance Programme (GRASP) collects laboratory and clinical data on trends in emerging resistance in gonorrhoea. These data informed changes to antibiotic prescribing policy to improve the effectiveness of treatment for gonorrhoea.

At the start of 2000, levels of HIV testing were lower than desirable, even in genitourinary medicine clinics and antenatal services. The agency helped to change attitudes to HIV testing by disseminating evidence from research, contributing to policy developments and advocating the expansion of HIV testing in at-risk populations and areas of high HIV prevalence.

Achievements in 2012/13

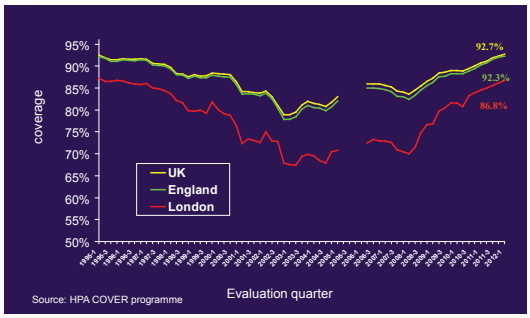
- First results of surveillance to monitor the impact of the national immunisation programme against human papillomavirus (HPV)—an infection that causes cervical cancer—indicated that it is successfully preventing HPV 16/18 infection in young women in England.
- To reduce the high incidence of HIV and STIs among men who have sex with men (MSM), the HPA and the Medical Research Council Clinical Trials Unit established the PROUD pilot study to investigate the public health effectiveness of pre-exposure prophylaxis in preventing HIV transmission.
- An HPA investigation into an outbreak of *Shigella flexneri* in MSM gave fresh insight into how the infection is transmitted, which helped in developing targeted messages for health promotion and infection prevention and control.
- A web survey of young adults showed that among those who had been screened for chlamydia, there was a positive impact on subsequent health-seeking behaviour (with 68% of respondents saying they would be more likely to request a chlamydia test from a healthcare professional) and a smaller impact on sexual behaviour (40% of respondents saying that they were more likely to use a condom every time).
- In recognition that antimicrobial resistance in gonorrhoea poses a threat to public health, an action plan for England and Wales outlined a national response to retain gonorrhoea as a treatable infection, with recommendations that aim to extend the useful life of current gonorrhoea treatments.
- An audit of expanded HIV testing in areas of high HIV prevalence demonstrated poorer uptake than expected. As a result, the agency started a project of direct engagement with general practices to promote HIV testing.
- In preparation for new commissioning arrangements, the HPA worked with NHS and local authority representatives to highlight the need for MSM to be included in Joint Strategic Needs Assessments as a group with extreme vulnerability to poor sexual health outcomes, particularly HIV.

Future priorities

- Support and facilitate the commissioning and delivery of the National Chlamydia Screening Programme, monitor progress and evaluate its impact in England.
- Expand GUMCAD to include all sexual health service providers and develop the dataset to encompass additional aspects of sexual health such as service use and sexual behaviour, partner notification outcomes, contraception and reproductive health.
- Promote widespread HIV testing to reduce late HIV diagnosis (see Figure 9) and onward transmission. This will entail increased HIV testing for individuals with clinical indicator diseases (e.g. tuberculosis and mononucleosis); those who may be at higher risk of HIV infection (e.g. MSM and those from sub-Saharan African countries); and, in areas of high prevalence, the routine offer and recommendation of an HIV test for hospital general medical admissions and new patients in general practice.
- Monitor access to HIV treatment after diagnosis and ensure that HIV data are maintained during reorganisation in the NHS.
- Pilot and roll out the new HIV and AIDS Reporting System (HARS) dataset across England during 2013.
- Map the spread of HIV and other STIs using new sequencing technologies (next generation sequencing) and new analytical techniques.
- Identify pathogen and host factors that affect the transmissibility of STIs, progression to disease, and susceptibility to treatment or vaccination.
- Evaluate the HPV immunisation programme. Contribute to collaborative efforts to improve cervical cancer prevention by the integration of HPV immunisation and cervical screening.

6. Vaccine-preventable infections

Figure 10: Quarterly MMR coverage at 24 months, UK, England and London: April 1995-June 2012



Note: The breaks in lines are due to missing data from several London PCTs.

To improve the control of vaccine preventable diseases, the HPA worked to increase the coverage of safe and effective vaccines. The agency supported the NHS in introducing and delivering vaccination programmes, monitored the uptake and impact of vaccines, supplied advice and guidance, and contributed to national policy by providing epidemiological data, modelling and economic analysis.

In the past decade, the routine childhood immunisation programme underwent many changes and young children are now offered protection against 10 infections. New vaccines added to the schedule include a booster dose of whooping cough vaccine for pre-school children in 2001, the pneumococcal conjugate vaccine (PCV) and the Hib/Meningitis C boosters in 2006. The human papillomavirus (HPV) vaccine was introduced in 2008 to protect women against cervical cancer. The 5-in-1 vaccine against diphtheria, tetanus, whooping cough, polio and *Haemophilus influenzae* type b (Hib) introduced in 2004 combines two vaccines previously offered separately.

Following unfounded, adverse publicity in the late 1990s and early 2000s, MMR vaccine coverage at two years of age declined from 92% in 1995 to 80% in 2003. Many years of sub-optimal coverage allowed the transmission of measles to re-establish and a resurgence of cases followed. By 2009, after sustained efforts to improve MMR coverage and a national catch-up campaign, MMR coverage had returned to 92%.

Other previously well-controlled vaccine preventable diseases increased in recent years. For example, from 2004 there was a resurgence of mumps in adolescents who were not eligible for routine MMR. A large outbreak of whooping cough in 2012—with the greatest numbers of cases in adolescents and young adults but the highest rates of disease in infants—prompted the DH to introduce a temporary programme of vaccination for pregnant women to protect newborn infants before routine immunisation could start at eight weeks of age.

Achievements in 2012/13

- The agency responded to the whooping cough (pertussis) epidemic, managing it as a level 3 incident. Guidelines were produced on the public health management of pertussis and on managing pertussis in healthcare settings.
- HPA reports and presentations to the Joint Committee on Vaccination and Immunisation (JCVI) informed recommendations on the control of pertussis (implementation of antenatal programme), vaccination against meningococcal infection (change to the vaccination schedule), and pneumococcal infection (vaccination of high-risk groups).
- Papers on the cost-effectiveness of seasonal influenza vaccination were submitted to the JCVI and led to decisions to extend the childhood influenza vaccination programme to all 2–16 year olds.
- A study to assess a possible link between narcolepsy and pandemic flu strain vaccine was completed and a research paper published in the *British Medical Journal*.
- Expert advice and support was provided to the NHS locally on delivery of the immunisation programme and the control of incidents and outbreaks of vaccine preventable diseases, particularly measles and pertussis.

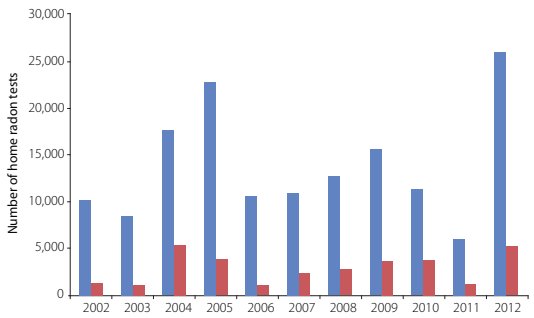
- During the transition to Public Health England and the restructuring of the NHS, support was provided to maintain uninterrupted, high-quality vaccination coverage. (For the first time since reporting began in 1995, the UK achieved the WHO target of 95% coverage for all vaccines evaluated at 12 months).

Future priorities

- Maintain support for the NHS in delivering the immunisation programme during the NHS restructuring and the HPA transfer to PHE in order to prevent any decline in childhood immunisation, particularly in deprived areas. This will include the provision of advice and training and support for methods to improve vaccine coverage, particularly in hard-to-reach and under-vaccinated groups.
- Support the implementation of new vaccination programmes. New vaccines to be introduced in 2013/14 include rotavirus for babies, a booster dose of conjugate meningococcal C for adolescents, and shingles for the elderly. On the horizon are meningococcal protein vaccines to target serogroup B disease.
- In 2012, the JCVI recommended that children aged 2–16 should be offered an annual influenza vaccination. Support will be required in terms of planning (including the procurement and supply of vaccine); commissioning the service providers; providing clinical advice and training; public and media communications, and evaluation and monitoring of coverage, disease impact and estimation of vaccine effectiveness.

7. Environmental hazards

Figure 11: Home radon tests completed in June by HPA annually across the UK, showing results that exceeded the radon Action Level.



Note: The HPA completed an average of 14,000 home radon tests each year. About a fifth of these tests were above the radon Action Level: here householders were given individual advice. The peaks generally correspond to targeted programmes in areas of higher radon.

The HPA's Centre for Radiation, Chemical and Environmental Hazards (CRCE) was the major UK source of advice and expertise on public health protection from radiation and chemical exposures. Authoritative advice was provided to the Government, devolved administrations, health services, international agencies and other bodies. Consultancy services were provided to employers, other users of radiation sources and hazardous chemicals, and emergency responders.

Experts from the agency assisted during hundreds of small incidents and a number of large-scale incidents including the Buncefield fire in 2005 and the London polonium-210 contamination incident in 2006. They also provided advice during the Japanese earthquake and tsunami emergency of 2011 and co-ordinated the public health risk assessments of the Icelandic volcanic eruptions of 2010 and 2011.

CRCE provided radiation protection advice to some 730 companies and 2,500 dental practices under commercial contracts. In addition, the HPA Personal Dosimetry Service provided personal dosimeters to about 61,000 radiation workers. Approximately 2,000 man-days of training were provided over the year for radiation workers, managers, dentists and health protection professionals.

The HPA commissioned the National Poisons Information Service (NPIS) to help clinicians manage patients who had been poisoned. The service received 578,253 online enquiries during 2011/12, a 5.7% increase, while telephone queries dropped by 5.8% to around 51,000. Some of the most common enquiries related to the medicinal drugs paracetamol,

ibuprofen, cocodamol and citalopram. The most common queries about drugs of misuse concerned cocaine, MDMA and heroin.

Staff published hundreds of advice documents, scientific and technical reports and peer-reviewed papers. Research activities increased our understanding of the risk of cancer and non-cancer diseases from chemicals and radiation, led to better health risk assessments and enabled better responses to public and governmental enquiries, emergencies and incidents. Published work included the safety of Wi-Fi network devices, mechanisms of radiation carcinogenesis, ways to improve the health risk assessment for solar and optical radiations; the effects of exposure to chemicals and the uptake and toxicity of nanomaterials.

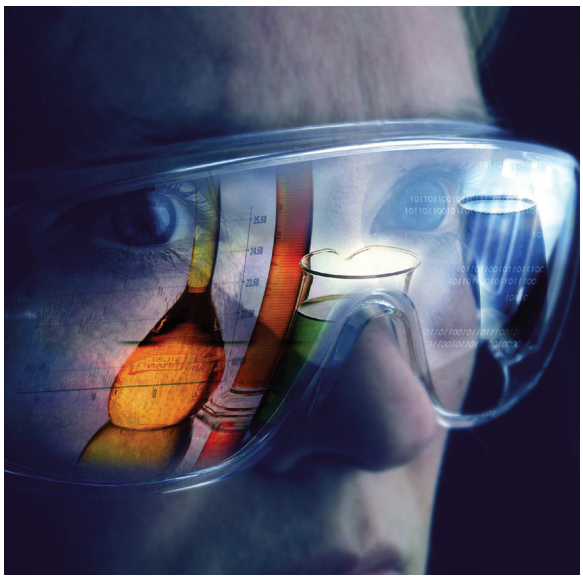
Achievements in 2012/13

- A work programme was developed to investigate the behaviour of nanoparticles in the human body. This will lead to a greater understanding of their effects and will ultimately contribute to evidence-based public health advice.
- A study into the effects of ultra-efficient lighting on circadian rhythms and health was completed. The results will lead to evidence-based health protection advice. The project was in collaboration with the Technology Strategy Board, Surrey University and Whiteley Village, where the tests were carried out.
- The Fukushima nuclear accident provided further evidence about the efficiency of countermeasures for protecting the public from accidental releases of radioactivity. A report reviewing the evidence upon which sheltering and evacuation decisions are based—including information from the Fukushima accident—was finalised. This work will inform advice to responders, public health professionals and members of the public and will lead to improved emergency response.
- The NPIS established a system to secure 24/7 advice from specialists in radiation medicine at the Institute of Naval Medicine in case of radiation overexposures to the public.

Future priorities

- Maintain an effective emergency response capability for chemical, radiological and nuclear incidents.
- Assist WHO and the United Nations Scientific Committee on the Effects of Atomic Radiation (UNSCEAR) in their assessment of exposures and health risks from the Fukushima accident in Japan.
- Maintain high standards of occupational radiation safety by provision of radiation protection consultancy and training services to employers, dentists, ambulance staff and health and safety professionals.
- Undertake research that will:
  - Improve acute incident response including alerting systems, physical, biological and computational exposure assessment tools and decontamination protocols.
  - Improve assessment of chronic health impacts, including the environmental component of three major causes of death—cardiovascular disease, cancer and respiratory disease.
  - Assess emerging technologies, including the use of wireless technologies for new applications, new lighting technologies, waste management and energy production technologies, and the increased use of nanomaterials.
  - Inform health protection advice in relation to prevention of asthma and the health effects of noise.

8. Biological standards and control



The National Institute for Biological Standards and Control (NIBSC) joined the HPA in 2009 to support the agency's role in protecting public health by providing standardisation and control of biological medicines and related biological products. In April 2013, when the HPA transferred to Public Health England, NIBSC became part of the Medicines and Healthcare products Regulatory Agency.

During NIBSC's four years in the HPA, the importance of biological medicines continued to grow. The range of products available—encompassing both new versions of existing medicines and completely new kinds of product—increased dramatically. New and highly complex technologies, such as gene and cell therapy, also showed great promise.

This fuelled demand for the services offered by NIBSC, which, as a world leader in the regulation of biological medicines, deploys its unique expertise and facilities to ensure that medicines are manufactured to consistent standards and at the correct potency to provide accurate patient dosing.

Central to NIBSC's work is the development of International Standards to support the development and continued production of safe and effective medicines such as vaccines, blood and tissue-derived products, cytokines, growth factors and many more life-saving medicinal products.

In four years, NIBSC supplied more than half a million International Standards and reference materials to manufacturers, regulators and researchers in more than 80 countries. In addition, more than 12,000 batch release certificates were issued relating to 20 different vaccines and 75 therapeutic medicines.

NIBSC also supported the development of stem cell therapies through the work of the UK Stem Cell Bank. Over the past year, the bank developed and characterised cell lines to support laboratory research and, as part of a long-term goal to deal with an anticipated explosion in the availability of cell-based medicines, the bank concentrated on validating facilities and processes needed to prepare for clinical trials.

Achievements in 2012/13

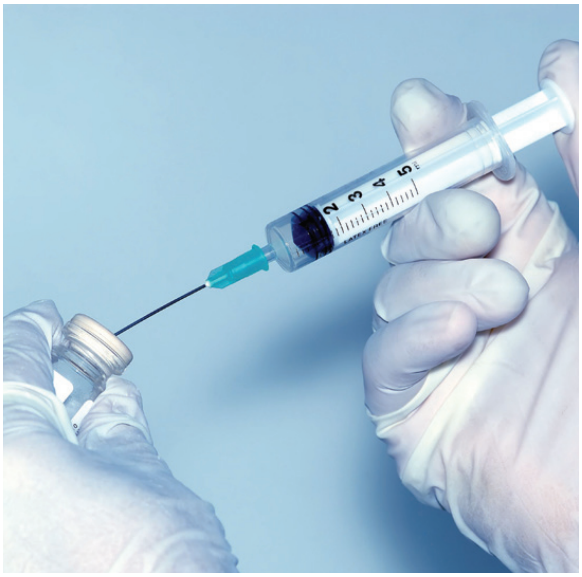
- NIBSC developed 15 new International Standards that were needed to ensure that vaccines and other vital biological medicines continue to be manufactured consistently and administered to patients at the correct dose. This brings the number of new or replacement International Standards produced during the past four years to 60.
- To support the global influenza vaccination campaign, candidate strains for vaccine production were developed and supplied to manufacturers as well as potency standards needed to measure the strength of the vaccine and assure its safety before release to customers. The year 2012 was particularly challenging because WHO required changes to two of the three component strains of the vaccine.
- As the UK's Official Medicines Control Laboratory, NIBSC tested and certified for release within Europe over 1,300 batches of biological medicines submitted by manufacturers. The turn-round time for testing was also improved.
- Critical contributions were provided to guidelines and monographs for improving the quality of biological medicines.

- More than 70 papers relating to standardisation and control of biological medicines were published.
- More than £2.5 million was generated from R&D grants and contracts outside of the Department of Health's National Institute for Health Research block grant.

Future priorities

- Continue to build links with international organisations that develop reference materials, such as the European and National Pharmacopeias, to promote global standardisation and to maximise the reach and influence of the international standards developed by NIBSC.
- Continue to build expertise in key areas of biological medicines development, in particular cell-based medicines, biosimilars and monoclonal antibodies.

9. New vaccines and novel interventions



The past decade saw renewed interest in the development of vaccines and immunotherapeutics. However, the development pathway is long, complex and costly. In partnership with industry, academia and government, the HPA provided expertise and access to a unique range of capabilities in order to accelerate the development and implementation of new vaccines and interventions to meet national and international public health needs.

Much of the work took place at the HPA's centre at Porton, which is renowned for world-class research into dangerous pathogens and pandemic-prone disease. R&D activities included antigen discovery, development, preclinical testing and assay development, process development, and clinical trial and post-licensure support.

Successes over the past decade include:

Tuberculosis: A unique capability for the discovery and evaluation of tuberculosis vaccine candidates was established. Eight out of 12 new vaccines were selected for progression to clinical trials following evaluation in relevant biological models at HPA Porton.

Meningitis: HPA expertise was used to take candidate vaccines from discovery and preclinical testing to evaluation in clinical trials (e.g. a candidate meningococcal B disease vaccine). The agency provided extensive laboratory testing of new vaccines (e.g. for MenAfriVac which is now preventing meningitis A epidemics in sub-Saharan Africa).

Anthrax: Post-licensure support allowed the continued manufacture and supply of the UK anthrax vaccine. A novel recombinant anthrax vaccine was produced.

***Clostridium difficile*:** An immunotherapeutic agent for *C. difficile* colitis was showing great promise.

Influenza: A model to understand influenza transmission and assess efficacy of vaccines was developed.

Biodefence: A poxvirus model to assess vaccine efficacy was developed and work was underway to provide an evidence base for treatment and prevention of a number of

rare but severe infections, including anthrax, meliodosis and plague.

Achievements in 2012/13

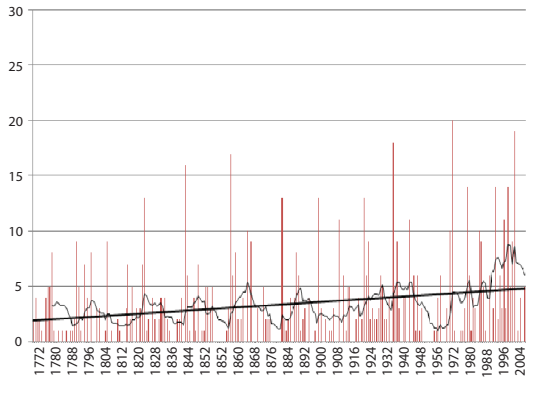
- Novel antiviral compounds and vaccines against a range of seasonal and avian influenza strains were evaluated. This work is essential to developing new treatments for influenza and assists manufacturers in the preparation of vaccines to combat seasonal and pandemic influenza.
- The safety and immunogenicity of a novel meningococcal serogroup B vaccine was assessed in a phase 1 clinical trial. This project, in collaboration with academia, seeks to evaluate a new vaccine that can be tailored to changes in circulating strains over time and place.
- The manufacturing process for *C. difficile* toxin antigens was scaled up so that the antigens could be used to prepare antitoxins for a planned phase 1 safety and immunogenicity clinical trial. Currently, there is no approved antitoxin therapeutic for use against *C. difficile* infection.
- Preclinical evaluation of novel tuberculosis vaccines and therapeutics was carried out to inform the selection of lead candidates for use in planned European clinical trials. There is an urgent global need for new drugs to treat tuberculosis and more effective vaccines to prevent it.
- Support was provided for the assured manufacture of safe and efficacious medicines, including anthrax vaccine (which is used for the prevention of occupationally-acquired anthrax e.g. in the animal skin and wool industries) and Erwinase®, which is used in the treatment of certain kinds of childhood leukaemia.
- Contracts were secured for the development and evaluation of various novel therapeutic and preventative medicines for globally important, emerging and re-emerging diseases such as whooping cough, anthrax, Q-fever, influenza and monkeypox.

Future priorities

- Research, in partnership with academia, public sector and industry, to support the development of new vaccines and novel interventions (including immunotherapeutics and antimicrobials). This will develop much needed interventions as well as retaining and developing skills and capabilities that allow a response to microbiological emergencies.
- Establish centres of excellence for vaccinology (focussing on preclinical and manufacturing development) and for biological models for infectious disease. This will further the HPA's commitment to support UK and international efforts in the accelerated development and implementation of vaccines and other therapeutics.

10. Climate change and extreme events

Figure 12: Number of hot days (with mean temperature over 20°C) per year from daily mean Central England Temperature. The straight black line shows the linear trend and the other black line shows the 10-year moving average.



In 2010, the HPA set up a new programme to meet the challenges of climate change and extreme events. It brought together staff working on aspects of climate change, including air pollution, insect vectors, extreme events and ultraviolet radiation.

The HPA edited and published a major report on the *Health Effects of Climate Change in the UK 2012*. This documents the projected health effects and challenges posed by climate change and recommends research and policy responses to meet them. The HPA also contributed to the first *UK Climate Change Risk Assessment* published in 2012, which includes an assessment of risks for the health sector.

The science of climate change and adaptation is an emerging field with significant uncertainties and evidence gaps about potentially wide-ranging effects. The HPA worked with many national and international bodies—including the Department for Energy and Climate Change, the Environment Agency and the devolved administrations in the UK—to develop and implement the *National Adaptation Programme* for climate change, a requirement of the Climate Change Act 2008.

Achievements in 2012/13

- *Health Effects of Climate Change in the UK 2012* was published by the HPA. The report covers current evidence, recommendations for the protection of public health and research gaps.
- The agency contributed to the Department of Health's *Cold Weather Plan for England 2012*.
- The agency contributed to the health sections of the first *UK Climate Change Risk Assessment* report. Work was continuing with the Climate Ready team at the Department for Environment, Food and Rural Affairs to develop the health section of the *National Adaptation Programme* as mandated by the Climate Change Act 2008.
- A one-year secondment to develop international networks for climate change research was completed at the National Centre for Epidemiology and Population Health, Australia.
- A work programme in climate change and extreme events was drawn up by the HPA, including a detailed R&D strategy.

Future priorities

Climate change: Research to improve understanding of the direct and indirect impacts of climate change on human health in the short and long term, e.g. the impact of heat through the urban heat island effect, heat stress, dehydration, heat related disease; respiratory illness associated with rising concentrations of ozone and other air pollutants; new or increased incidence of vector borne diseases and increased exposure to UV radiation leading to increased incidence of skin cancer.

Extreme events: Research to improve the understanding, prediction, alerting and response to extreme events on human health and the likely injuries and morbidity from extreme weather events, such as:

- flooding and its consequent hazards including drowning, electrocution, carbon monoxide poisoning and exacerbation of psychological stress;
- higher temperatures leading to direct health effects as well as more frequent droughts and wildfires in forests and moorland that affect air quality.

Databases: Assemble new climate/extreme events/air pollution health databases to permit a critical awareness of new data, research developments and gaps in knowledge, and allow public dissemination, discussion and understanding of this evidence.

Key objectives supporting the Health Protection Agency's 10 strategic aims

This section reviews the progress made during 2012/13 with some of the objectives supporting the HPA's strategic aims that have been particularly important in enabling health outcomes to be achieved.

Note that the outcomes from some objectives supporting strategic aim 2—"to be trusted by all in providing advice and services to the public, health professional government and others"—relating to public and stakeholder engagement, and strategic aim 8—"to be one cohesive organisation"—relating to governance, health and safety, and equality and diversity, are referred to in the Governance section (see pages 50-52).

STRATEGIC AIM: To be the primary expert force in delivering health protection	
2012/13 OBJECTIVE	**OUTCOME**
Prepare for and deliver the HPA Olympic commitments during the Games, ensuring the HPA can respond to any health protection threats related to the Olympics 2012 and provide legacy information to future mass gathering organisers	• Successful delivery of the HPA's London 2012 Olympic and Paralympic Games commitments. • Overarching summary report published in January 2013 which included recommendations for HPA (and its successor organisation Public Health England or PHE) on planning and delivery of mass gatherings, improved working practice and emergency response arrangements. • HPA published *Learning from London 2012 – a practical guide to public health and mass gatherings* for future planners of mass gatherings, using the London 2012 Games as a case study. • Expertise and knowledge retained through the ongoing work of the WHO Collaborating Centre on Mass Gatherings and High Visibility/High Consequence Events.
To provide consistent, effective and evidence based responses to incidents and outbreaks at a local and national level and effective emergency preparedness and response operations in partnership with key stakeholders	• The agency's Incident and Emergency Response Plan (IERP) was revised and published in preparation for the 2012 Olympics. Procedures were developed and implemented for identifying lessons from incidents and emergencies. Guidance on identifying and implementing lessons from incidents and exercises were also produced. • The agency managed four level-3 incidents with nationwide rises in the incidence of pertussis and measles cases, a widespread cryptosporidium outbreak, and assistance given to CDC Atlanta in the follow up of travellers returning from Yosemite National Park in the USA in response to cases of hantavirus. The agency also identified a novel coronavirus in a patient with severe respiratory illness medically evacuated to London from Qatar. • Plans were put in place for continued effective response to any incidents and outbreaks. These plans were revised and updated to take into account the new operating model for public health from April 2013.

STRATEGIC AIM: To be expert and mature in effective partnership working with the NHS and others at local, national and international levels

2012/13 OBJECTIVE	OUTCOME
Reduction of health inequalities: Contribute health protection elements to national approaches to health inequalities with a focus on hard-to-reach groups and geographical communities that suffer deprivation	• An equality analysis of the 2012/13 Business Plan, published on HPA's intranet, demonstrated that a majority of the health protection objectives in the plan support work to reduce health inequalities. The final (quarter four) report on progress with objectives in the plan included evidence from objective owners of how their work contributed to reducing these inequalities. • Addressing long-term health inequalities will be a priority for PHE and will be taken forward by the Directorate of Health Protection and the Directorate of Health and Wellbeing.
Agree mechanisms for PHE units to work with Directors of Public Health in local government and NHS Commissioners	• Programme established for developing health protection arrangements for PHE in relation to local government functions. PHE Centres have complete health protection functions within them in the final structure for PHE. • An approach is being developed to inequalities and infectious disease building on the London Find and Treat service to support a wider service for people from excluded groups and will be taken forward by PHE.
Confirm joint working arrangement with Food Standards Agency (FSA) on foodborne infection	• Good progress made in discussions with FSA to agree a mutual understanding of roles in the event of an outbreak.

STRATEGIC AIM: To be respected by the scientific community for excellence in relevant sciences

2012/13 OBJECTIVE	OUTCOME
Develop the evidence base to support new innovations and interventions to reduce the incidence of HPA priority health threats with two innovations/ interventions brought close to implementation	• Three projects were identified to support this objective—the development of a portable environmental test for anthrax spores, the neutron dosemeter project, and the development of rapid process monitoring tools to support cleaning of surgical instruments and endoscopes in healthcare settings. • All three projects demonstrated how the HPA translated high-quality research into practical tests and devices that will provide more effective health protection. They show the breadth of the HPA's research, ranging from effective environmental monitoring through increased sensitivity in radiation detection to greater confidence in the cleanliness of complex surgical instruments. • A company was identified that wished to develop the test on anthrax spores into a portable test. • The licensee for the process monitoring of surgical instruments showcased prototype devices at decontamination-related conferences. A number of customers and potential distributors for the final product were identified. • The aim was to take these and other initiatives forward into PHE.

STRATEGIC AIM: To be recognised internationally as a world-class health protection body	
2012/13 OBJECTIVE	**OUTCOME**
Contribute to delivering the Department of Health 'Health is Global' strategy (see also Global Health Section of Closing Review)	• Short-term secondments to the Ministries of Health in Taiwan, Thailand and Vietnam were successfully completed. Each secondment resulted in the production of an action plan outlining agreed areas for research collaboration with funding sources to support those activities. The rising incidence of emerging infections in the region, along with frequent travel by British citizens to these destinations, has highlighted the need to establish strong working relationships with regional partners ahead of any future incidents that might subsequently impact on the health of the UK population. • The HPA contributed to the UK-Brazil Memorandum of Understanding action plan that directly drew upon the influenza and mass gatherings expertise of the agency. The handover of Olympic responsibilities from London to Rio was an important focus for much of the work and also supported preparations for FIFA World Cup 2014.
STRATEGIC AIM: To be forward-looking, expert in both managing risks and anticipating future challenges, with an emphasis on prevention	
2012/13 OBJECTIVE	**OUTCOME**
Identify new and emerging threats, in particular those caused by zoonoses, before they can have a significant effect on public health and put in place effective interventions	• The functions undertaken by the HPA on behalf of the National Expert Panel on New and Emerging Infections (NEPNEI) included horizon scanning and risk assessment work for new and emerging threats and potential zoonoses, including the Human, Animal Infections and Risk Surveillance (HAIRS) group. • When NEPNEI was stood down, there was a strong desire across government to retain the functions undertaken by the HPA. The HAIRS group will therefore report into the Advisory Committee on Dangerous Pathogens (ACDP). The remit and membership of ACDP will be amended to reflect the changes. • A paper outlining the arrangements for the formation of an Animal Health and Veterinary Laboratories Agency (AHVLA)/Department for Environment, Food and Rural Affairs (Defra)/HPA board for taking forward the recommendations of the AHVLA/HPA review of zoonoses was produced. Meetings regarding the establishment of the Board and streamlining this work with other strategic developments have been held with Defra and AHVLA. The first Board meeting was held in February 2013.
STRATEGIC AIM : To be one cohesive organisation	
2012/13 OBJECTIVE	**OUTCOME**
Prepare and support the implementation of transition to Public Health England (PHE)	• Corporate services staff led a number of work streams to ensure the readiness of infrastructure for PHE. These included ICT, Estates and Finance. All infrastructure work was successfully delivered by the launch of Public Health England on 1 April 2013. • A programme of work to transfer the National Biological Standards and Control Division of the HPA to the Medicines and Healthcare products Regulatory Agency was also successfully completed.

STRATEGIC AIM: To be equipped with state-of-the-art facilities to deliver consistent, cutting-edge services

2012/13 OBJECTIVE	OUTCOME
Develop and operate surveillance and epidemiology systems and processes in order to provide the data to support the reduction of the burden of disease	The objective covered the delivery of four information systems to help deliver HPA responsibilities in faster, more efficient and innovative ways. The systems support new activities and the improvement of existing activities. • Following the UK H1N1 influenza outbreak in spring 2009, the HPZone Dashboard project was initiated to provide a suite of situational awareness tools that could be customised to organise information into a single integrated operational picture, providing a view of summary data collected by Health Protection Units concerning incidents and outbreaks for use across the agency. The system resulted in more efficient use of resources and a rapid cross-agency understanding of the local spread of disease. • Syndromic reporting increased in importance because of the need for real-time surveillance to identify new and emerging threats. The Strengthening Syndromic Surveillance project managed a range of developments, including the surveillance of diagnoses made in emergency departments and the roll out of an out-of-hours primary care surveillance system. The project delivered ahead of schedule in time for the 2012 Olympics. At the end of March 2013, out-of-hours surveillance was conducted by 119 PCTs and 32 hospital emergency departments, all of which were delivering daily data. • The Second Generation Surveillance System (SGSS) project progressed well. The system will capture all data required by PHE from laboratories across the country and make the information available for sharing with public health professionals. The system will replace CoSurv and will present more opportunities for rapid detection of, and earlier intervention against, emerging outbreaks. The project is due to be complete early in 2014. • Progress was made on the Environmental Public Health Surveillance System, which is due to be delivered in 2016. The system will hold data on all environmental hazards, exposure assessment and health outcome data.
Develop the strategy for next generation sequencing (NGS), with particular emphasis on bioinformatics and smaller, lower throughput platforms	The Next Generation Sequencing Implementation Project will bring together state-of-the-art technology and valuable scientific expertise. It will help to revolutionise the way microbiology services are delivered to stakeholders. Progress during the year was as follows: • Implementation strategy for high throughput NGS capability within microbiology was approved and the NGS Implementation Group was established. Laboratory and bioinformatics staff were recruited. • A mini project established as a pilot to use the Illumina MiSeq machine on loan (as part of the HPA collaboration with the Modernising Medical Microbiology Partnership lead by Oxford University) concluded that turnaround times and the quality of the data obtained were suitable for outbreak investigation.

	• The platform was used during a listeria outbreak. The added value of whole genome sequence data included the opportunity for analysis of antimicrobial resistance markers/mechanisms, variant typing, the relatedness of organisms, multi locus sequence typing and molecular serotyping. • NGS therefore has the potential to replace existing methodologies. Outputs will be used to inform developments of the main NGS project. • Rapid advances in science mean innovative approaches must be developed and implemented to prepare for future challenges.
Manufacture Erwinase® and anthrax vaccine to meet respective customer requirements	The HPA anthrax vaccine is the only available vaccine outside of the USA. It is a strategically important countermeasure against potential terrorist attack with anthrax. The HPA maintained the UK stockpile on behalf of the Department of Health (DH). All batches for 2012–13 were manufactured and delivered at agreed intervals. Further third party sales were agreed and approved by DH. A DH request for 10 stockpile batches to be re-labelled to reflect the increased shelf life was completed. Erwinase® is used to treat the most common form of childhood cancer, acute lymphoblastic leukaemia. The product is sold worldwide and saves the lives of thousands of children. Product batches have been manufactured to schedule and delivered to the customer. Worldwide products sales continued to increase, with record sales to the USA and substantial revenue increases to the HPA.

Financial review

INTRODUCTION

The financial statements on pages 67 to 71 cover the period 1 April 2012 to 31 March 2013 and were prepared in accordance with Schedule 1 paragraph 22 of the Health Protection Agency Act 2004. A copy of the Act may be accessed online at www.legislation.gov.uk. The financial statements were prepared in accordance with the *Government Financial Reporting Manual 2012/13* (FReM).

FUNDING

Funding of the agency's day-to-day costs and capital investment was received as grant-in-aid, through the Parliamentary Supply process, and allocated within the main Department of Health (DH) estimate. This funding took account of income received from the devolved administrations, as well as receipts for the products, royalties and services that the agency provided to customers. The HPA obtained additional funding from various public and private sector contracts.

For 2012/13, the total funding received by the HPA was £346.0m (2011/12: £331.2m), which represented a 1.2% increase, after adjusting for the £10.7m in respect of Public Health England (PHE) transition costs in 2012/13 paid for by the DH. As government grant-in-aid accounted for 49% (2011/12: 52%) of total funding, the agency's exposure to liquidity risk was limited.

The need to reduce high levels of public debt continued to have an impact on the agency's funding. The DH included efficiency savings of 2.5% within the funding for 2012/13 resulting in an overall reduction in revenue grant-in-aid from the DH of £3.8m. Pay and inflationary pressures increased the overall burden on the agency to around £10m, although constraints on pay increases kept the agency's 2012/13 total pay cost below budget.

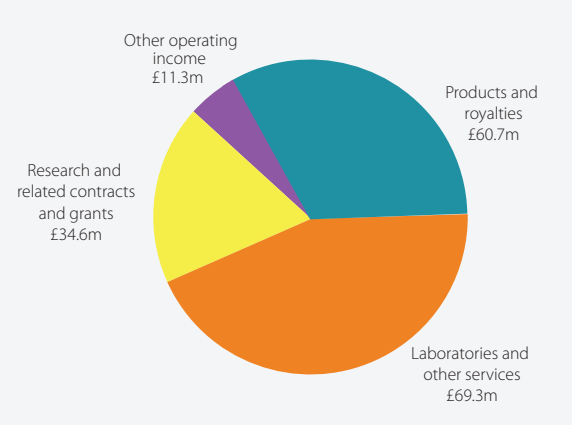
Table 1: Source of funding

Source of funding	2012/13 £'000	2011/12 £'000
Revenue grant-in-aid from DH	**140,359**	**144,157**
Revenue grant-in-aid from the devolved administrations	2,030	2,020
Interest receivable	14	19
Other operating income	11,311	495
Research contracts and grants	34,613	35,853
Contracts and services	69,312	68,537
Products and royalties	60,626	51,764
Total revenue funding	**318,265**	**302,845**
Other capital grants	239	839
Capital grant-in-aid from DH	27,500	27,500
Total funding	**346,004**	**331,184**

Further information about the HPA's 2012/13 funding and expenditure can be found within the Notes to the Financial Statements on pages 72 to 98.

In addition to receiving income through government funding, the agency generated significant income from other sources. Income from customer sales in 2012/13 was £175.9m as shown in Graph 1, providing a substantial and ongoing contribution to fixed costs. Included within this total were royalties of £25.2m (2011/12: £20.7m), earned mostly on sales of Dysport©.

Graph 1: Non grant-in-aid (GIA) income, 2012/13



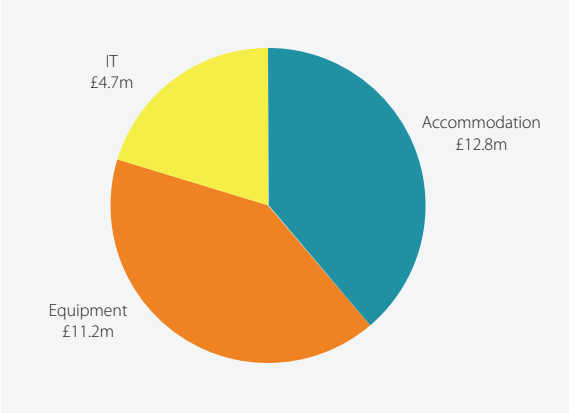
REVENUE EXPENDITURE IN 2012/13

For 2012/13, the gross operating costs incurred by the HPA were £323.4m (2011/12: £317.5m), which represented a 1.5% decrease, after adjusting for the £10.7m in respect of PHE transition costs in 2012/13 paid for by the DH. This was as a result of internal efficiencies that helped to control operating charges, and limits on pay increases that helped reduce the total staff costs. As illustrated in Graph 2, all expenditure was attributed against the agency's five strategic objectives, with shortfalls in funding met (and sometimes exceeded) through the contribution from additional revenue generation activities.

2012/13 FINANCIAL RESULTS

Overall, increased income and lower expenditure compared to the previous year, resulted in the agency reporting a surplus of £21.0m in 2012/13 on a net cost budget of £168.5m. Reduced grant-in-aid, combined with pay and inflationary pressures, exerted significant cost pressures in 2012/13. However, the impact was mitigated through internal cost savings and efficiencies and, combined with royalty gains and an increase in product sales and inventory, this generated a significant surplus.

Graph 3: Capital expenditure by type

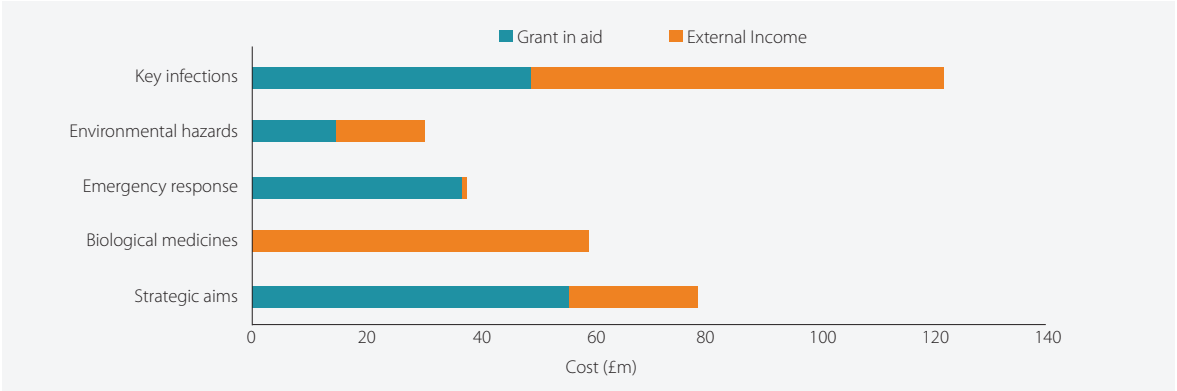


CAPITAL INVESTMENT IN 2012/13

The 2012/13 capital budget of £27.7m represented a 2.0% decrease on the prior year. The overall budget continued to reflect the ongoing investment in public health services, which included the re-provision of ageing equipment and laboratory facilities.

During 2012/13, £28.7m (2011/12: £28.2m) was invested in some 368 capital projects, with the 20 highest value schemes accounting for £12.6m of the total. The agency spent £11.2m

Graph 2: Expenditure by strategic objective



on updating scientific equipment, £12.8m on renewing estate facilities and £4.7m on improving the information technology infrastructure, as seen in Graph 3.

FINANCIAL POSITION

The agency maintained its strong non-current asset base with the addition in the year of property, plant and equipment and intangible assets to the value of £28.7m. Taking into account depreciation and disposals of £26.1m, and a revaluation increase of £8.6m, the total value of non-current assets as at 31 March 2013 was £297.8m (2012: £286.9m).

In addition, only 4.7% of the agency's £68.7m of liabilities were of a long-term nature. These included provisions for the future costs of early retirement, potential compensation liabilities, as well as the cost of minor repairs when returning leased buildings to their owners. The total balance of taxpayers' equity as at 31 March 2013 was £359.6m (2012: £328.6m).

RELATIONSHIPS WITH SUPPLIERS

It was the agency's policy to pay all suppliers in accordance with the Better Payments Practice Code and to settle 90% of undisputed supplier invoices on time, while striving to pay small and medium-sized entities within five working days. For the year ended 31 March 2013, 98% (2012: 98%) of invoices, which amounted to 96% (2012: 98%) of the total value of payments, were paid within 30 days of a correctly presented invoice being registered. As at 31 March 2013, the aggregate amount owed to trade creditors compared to the aggregate amount invoiced by suppliers during the year was 26 days (2012: 24 days).

EFFICIENCY MEASURES

The HPA participated fully in the efficiency measures announced by the Government in May 2010 and the transparency rules introduced during 2010/11. Expenditure and procurement controls were embedded throughout the organisation's business-as-usual processes and complemented operational management.

In parallel with the government efficiency measures, in 2010 the agency initiated a Performance Improvement Programme to identify areas where economies could be made. This programme was delivered through the Expenditure Management Board, which targeted categories of procurement, and ran in parallel with day-to-day tight budgetary management. These measures worked alongside other embedded financial and management mechanisms to ensure reductions in the agency's budget were accommodated with minimal adverse effect on the achievement of key objectives.

Under transparency initiatives, the agency disclosed expenditure by publishing invoices over £25,000 and Government Procurement Card transactions over £500 on a monthly basis.

2013/14 AND BEYOND

The Health and Social Care Bill received Royal Assent on 27 March 2012 to become the Health and Social Care Act 2012. Throughout 2012/13, the HPA ensured that it delivered its health protection functions to allow for a seamless continuation of public health services on 1 April 2013 as Public Health England, and in respect of activities relating to biological standards and control transferring to the Medicines and Healthcare products Regulatory Authority.

STATEMENT AS TO DISCLOSURE OF INFORMATION TO AUDITORS

During the audit of these financial statements my staff and I cooperated fully with the Comptroller and Auditor General. I took all feasible steps to ensure that I was fully aware of all information pertinent to the audit and to ensure that this information was notified and made available to the agency's auditors. Consequently, as far as I am aware, there was no relevant audit information that was not available to the auditors.

GOING CONCERN

In accordance with the Health and Social Care Act 2012, all the functions of the HPA were transferred as a going concern to Public Health England and the Medicines and Healthcare products Regulatory Authority on 31 March 2013. Taking this into account, together with the continuing financial support of government, I believe it appropriate for these accounts to be prepared on a going concern basis.

Duncan Selbie
Accounting Officer
20 June 2013

3 Governance

Governance statement

GOVERNANCE FRAMEWORK

The HPA was established as a special health authority in April 2003 in advance of the Health Protection Agency Act 2004. This Act brought together the HPA Special Health Authority and the National Radiological Protection Board to become the Health Protection Agency in April 2005 as an executive non-departmental public body. In April 2009 the National Institute for Biological Standards and Control (NIBSC) became part of the HPA.

The Health and Social Care Act 2012 proposed a new focus for public health. The Act provided the foundation for Public Health England to be established as an executive agency of the Department of Health, to bring together key public health groups and functions and provide a national drive and focus for protecting and improving the health of the public.

On 1 April 2013 the HPA was abolished and its functions were transferred to Public Health England with the exception of those carried out by the NIBSC division, which were transferred to the Medicines and Healthcare products Regulatory Agency.

During its final year, the HPA worked closely with the Public Health England transition programme, and its related projects, and existing governance groups were expanded where appropriate to incorporate views from other organisations transferring to Public Health England. Throughout the year, the HPA took care to maintain its accountabilities whilst taking into account the Public Health England vision and its future management structures.

Accountability within the HPA was exercised as follows:

THE EXECUTIVE GROUP

The HPA had an Executive Group comprising the divisional directors and the Chief Executive/ Accounting Officer. This group was responsible for the strategic and operational management of the organisation and for implementing the policies and strategies agreed by the Board. The Accounting Officer was responsible to Parliament for the management of the organisation. The Executive Group met monthly and members also communicated through a weekly teleconference. The members who served on the Executive Group since 1 April 2012 are shown on page 59. Executive directors were personally accountable to the Accounting Officer for the management of risks and controls within their divisions.

THE HPA BOARD

The Board was committed to the highest standards of corporate governance and complied as appropriate with the best practice provisions of the *Code of Good Practice on Corporate Governance in Central Government Departments* issued by HM Treasury. Non-executive Board members were appointed by the Secretary of State, or ministers of the devolved administrations, through a rigorous process of open competition against an agreed specification of the roles and capabilities required. This process was conducted on behalf of the Secretary of State by the independent Appointments Commission until its abolition in 2012. No new non-executive appointments were required following the abolition of the Appointments Commission. Non-executive members were normally appointed for terms of three years and were eligible for re-appointment, subject to the prevailing limits on public office.

The executive members of the Board were appointed by the chairman and the non-executive members of the Board. The non-executive members were drawn from diverse backgrounds, bringing a broad range of views and experiences to Board deliberations. Biographical details of Board members were published on the HPA website. In

Board attendance 2012/13

	Board	Audit Committee	Finance Committee	Human Resources Committee	Nomination Committee	Remuneration & Terms of Service Committee
Non-executive members						
Professor David Heymann (Chair)	5 (5)	-	-	-	-	2 (3)
Dr Barbara Bannister	5 (5)	5 (5)	-	-	-	-
Michael Beaumont	5 (5)	5 (5)	-	-	-	3 (3)
James Brown	5 (5)	-	4 (4)	-	-	-
Michael Carroll	5 (5)	-	3 (4)	-	-	-
Professor Charles Easmon	2 (5)	-	-	3(3)	1 (1)	3 (3)
Helen Froud	4 (5)	-	-	3(3)	1 (1)	3 (3)
Professor Willliam Gelletly	5 (5)	-	-	-	-	-
Martin Hindle	3 (5)	-	4 (4)	-	-	2 (3)
Deborah Oakley	5 (5)	-	4 (4)	-	-	-
John Wyn Owen	4 (5)	-	-	1(3)	1 (1)	-
Dr Dipti Patel	4 (5) *	5 (5)	-	-	-	-
Professor Debby Reynolds	4 (5)	-	-	2(3)	0 (1)	-
Dr Timothy Wyatt	5 (5)	5 (5)	-	-	-	-
Executive members						
Dr Paul Cosford	2 (2)	1 (2) **	0 (2)	1(1)	1 (1)	1 (0) **
Justin McCracken	3 (5)	3 (3) **	1 (2)	1(1)	-	1 (1) **
Dr Tony Sannia	5 (5) *	5 (5) **	4 (4)	-	-	1 (1) **
Duncan Selbie	0 (1)	0 (1) **	0 (0)	0 (1)		0 (0) **

The maximum number of meetings held during the year that each member could attend is shown in brackets.

* This member attended for part of one Board meeting.

** The Audit and Remuneration Committees consisted only of non-executive Board members and independent members of the committee. The Executive members shown above attended as non-members.

addition to participating in regular informal teleconferences, the Board met formally on five occasions in 2012/13. Minutes and papers of public meetings were published on the HPA website.

During the financial year under review, the Board consisted of the chairman and 13 other non-executive members, plus the Chief Executive and those divisional directors of the Executive Group who were also executive members of the Board. The membership of the Board during the year is set out above. The Board was also supported by a number of observers from the Department of Health, the Faculty of Public Health, and from the devolved administrations and their public health bodies.

ROLE OF THE BOARD

The Board had corporate responsibility for ensuring that the HPA fulfilled the aims and objectives set by the Secretary of State for Health and promoted the efficient and effective use of staff and other resources. The Board established the overall strategic direction of the HPA within the policy and resources framework determined by the Secretary of State for Health. Responsibility for delivering the HPA's objectives and running the business on a day-to-day basis lay with the Chief Executive, supported by the Executive Group. The roles of the chairman, Chief Executive and Board members were separate and clearly defined within the division of responsibilities set out in the management statement, which was agreed with the Department of Health and published on the HPA website. The Board met to consider all

matters relating to the overall control, business performance and strategy of the HPA.

BOARD COMMITTEE STRUCTURE

The Board was supported by standing Board committees with clearly defined terms of reference set by the Board, including some specific delegated powers. Each standing committee was chaired by a non-executive Board member. There were five governance committees: the Audit Committee, the Finance Committee, the Human Resources Committee, the Nominations Committee and the Remuneration and Terms of Service Committee. There were also four technical committees: the Global Health Committee, the Infections Committee, the Environmental Hazards Committee and the Biological Medicines Committee. During the latter part of 2012/13, the work of the latter three technical committees was suspended in order to facilitate the development and transition to new strategic oversight structures in the shadow Public Health England and the Medicines and Healthcare products Regulatory Agency.

THE AUDIT COMMITTEE

The HPA Board established an Audit Committee, under the chairmanship of a non-executive Board member, to support its corporate governance role and to support the Accounting Officer in his responsibility for risk, controls and associated assurance.

REGULATORY OVERSIGHT COMMITTEE

A Regulatory Oversight Committee was established by the Board at the direction of the Secretary of State for Health, with delegated authority and an independently appointed chairman. The committee provided assurance that any potential conflict of interest between the regulatory control function discharged by the National Institute for Biological Standards and Control and other HPA activities was monitored and managed effectively. The committee reported directly to the Secretary of State. Further details were published on the HPA website.

BOARD MEMBERS' INDUCTION AND DEVELOPMENT

On appointment, members were provided with written terms of appointment, including details of how their performance would be appraised. Members also received 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 HPA sites. Non-executive Board members provided the chairmanship and core membership of the governance and technical committees of the Board. In addition, each non-executive member adopted an area of the UK in which to take a special interest through visits, meeting with related organisations and HPA staff, and reporting back to the Board. In this way, each Board member made a distinctive contribution to collective Board decisions through a particular knowledge of an area of governance, technical aspect of health protection and part of the UK. The Board could, if it wished, take independent professional advice and all non-executive Board members had access to the advice and services of the Board secretary.

BOARD MEMBERS' INTERESTS

Board members were required to notify and register with the Board secretary any issues on which they might have had a conflict of interest. Declarations of interest were invited at every Board meeting and the Board as a whole considered how it should discuss the matter(s) on which the member may have had a conflict. The register of Board members' interests was maintained by the Board secretary at the HPA central office and could be viewed by appointment during office hours. Changes to the Board membership that occurred since 1 April 2012 are shown on page 58.

THE BOARD'S PERFORMANCE

During 2012/13 the Board did not carry out an assessment of its effectiveness as a whole as the HPA was to be abolished. However it met at the start of the year to agree appropriate changes in its ways of working for the final year of transition, including the content and format of Board meetings and the work of Board committees. The Board's governance functions continued up to abolition.

The performance and effectiveness of the Board was assessed through:

- Periodic appraisal of Board effectiveness using standard templates developed by external bodies, and periodic self-assessments of the Audit Committee function.
- Oversight of minutes and key issues from the Board's governance committees (Finance, Audit, HR, Nominations and Remuneration, and the technical committees).

- Individual appraisal of Board members against their objectives by the chairman.

RISK MANAGEMENT FRAMEWORK

The HPA Board was responsible for the overall risk strategy and for monitoring and reviewing the level of risk borne by the HPA. The Accounting Officer was responsible for ensuring that the strategy was implemented, and was accountable to the Board. The Executive Group was responsible for monitoring and reviewing risk management in the organisation.

The Board controlled and monitored risk management by reviewing the principal strategic risks facing the HPA. It also considered issues referred by the Accounting Officer, the Executive Group and the Audit Committee. Executive directors were responsible for risk management within their areas of responsibility. This included promoting risk awareness and supporting staff in managing risk. Unit heads were responsible for ensuring that risks were managed in their units, through the assessment of risks relating to the achievement of their objectives and by mitigating these risks. The assessment was carried out in conjunction with the development of the business plan, and was reviewed regularly.

The Head Of Internal Audit provided an annual assurance statement to the Accounting Officer, the Audit Committee and the Board on the effectiveness of the organisation's risk management arrangements. This was based on work undertaken throughout the year to assess the robustness of the system, to provide information on its strengths and weaknesses, and to advise on where improvements were necessary and desirable for good governance.

The system of internal control was designed to manage risk to a reasonable level rather than to eliminate all risk of failure to achieve policies, aims and objectives. It could therefore only provide reasonable, and not absolute, assurance of effectiveness. The system of internal control was based on an ongoing process designed to identify and prioritise the risks to the achievement of the HPA'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. Improvements to controls were encouraged through a strong culture of learning from both positive and negative experience. The risk management arrangements were not designed to reduce risks to zero but to reduce risks to an acceptable level, at which point the cost of reducing the risk further outweighed the benefit. The system of internal control had been in place in the HPA for the year ended 31 March 2013, and accorded with HM Treasury guidance.

CAPACITY TO HANDLE RISK

The HPA's risk management policy and procedure set out responsibilities at all levels including senior-level leadership for the risk management process. To augment this, an information risk management policy clarified specific roles and responsibilities.

In addition, risk management was included as part of the performance criteria of all divisional directors and senior staff. Responsibility for risk management was included in job descriptions and person specifications where appropriate, and was included within generic competencies as part of the staff appraisal process. The HPA aimed to minimise adverse outcomes such as harm, loss or damage to the organisation, its people or property, or those who received its services, through adequate supervision and training, appropriate delegation, continuous review of processes and the environment, and the sharing of lessons learnt and best practice.

This was achieved, primarily, through setting standards for professional practice and service delivery.

An electronic incident management and investigation system was used to manage adverse incidents, with lessons-learnt reports being promulgated through email, the CEO bulletin and the HPA's intranet. A programme of mandatory risk management training was in place for all levels of staff, and guidance was provided through the intranet. To improve the quality of adverse incident investigations and action plans, root cause analysis training was promoted to managers.

The HPA had dedicated emergency preparedness, resilience and response arrangements including emergency operations centres, business continuity planning and regular exercises.

The HPA's Emergency Response Development Group ensured that the agency's Incident and Emergency Response Plan was robust, resilient and fit for purpose. A sub-group was in place to

ensure that business continuity management was consistent and robust across the HPA. Accountability for emergency response lay with divisional directors and through regional directors to local teams. The HPA was involved in, and undertook, a number of exercises to improve its preparedness and there was a rolling programme of exercises. Work with partners and other stakeholders to meet the requirements of the Civil Contingencies Act 2004 was carried out at regional and local levels by emergency planners and resilience groups.

The HPA had a dedicated, competent health and safety advisory function, with appropriate governance structures and arrangements in place, particularly to manage and seek assurance as it conducted a number of activities considered to be 'high hazard' by the Health and Safety Executive. These included working with radioactive sources and with the most dangerous human pathogens (for some of which no therapeutic response is available). In addition, at a senior level, good working relationships were established with the regulator, the Health and Safety Executive, along with a plan of focussed intervention visits.

The HPA undertook an assessment against the requirements of the revised Cabinet Office Security Policy Framework. The HPA's overall level of compliance was considered acceptable; there were no areas where the HPA's internal assessment identified critical weaknesses and no areas where the HPA reported non-compliance.

The HPA adopted the HM Treasury's Managing Risk of Financial Loss Toolkit for assessing its performance. This toolkit includes two assessment elements: an assessment of the organisation's capability to manage risk of financial loss, and assessments of relevant end-to-end financial processes. Previously, the Executive Group had undertaken the Organisational Capability Assessment and determined that the HPA's capacity to manage risk of financial loss was appropriate given the level of inherent risk that it carried.

In relation to information risk, the HPA used the standards and codes for information governance set out in the NHS Information Governance Toolkit, BS ISO 27002 (code of practice for information security) and codes of practice from the Information Commissioner's Office. The HPA maintained access to the NHS National Network and related systems by providing a statement of compliance and an annual information governance toolkit assessment. This gave additional assurance that the HPA met key information governance requirements and had robust improvement plans to address any shortfalls.

The flow of information between the HPA and its partners was essential to the provision of its services. To ensure that patient identifiable data were adequately safeguarded, there was a network of individuals with specific roles and responsibilities, namely an HPA Caldicott guardian, associate Caldicott guardians, information asset owners, system owners, and security of information officers. The HPA also sought approval from the National Information Governance Board for permission to continue to handle patient identifiable information, on an annual basis.

CAPTURING AND RESPONDING TO RISK INFORMATION

The strategic risk register was reviewed every quarter by the Executive Group and biannually by the Board. Risk registers for the HPA's divisions and programmes were updated quarterly and risks were fed into the strategic risk register where appropriate. With the move to Public Health England and other changes to the healthcare system, the HPA recognised that there were additional inherent risks. Such risks were incorporated into an HPA strategic risk summary. The summary distinguished between HPA strategic risks, transition risks that the HPA Executive Group had some control over, and a third group of risks in relation to the creation of Public Health England that belonged primarily to the Department of Health. During the transition phase, appropriate mechanisms were put in place to ensure that risks to the strategic activities of the HPA were adequately considered by the Department of Health teams. Mechanisms included staff secondment, and membership of appropriate committees such as the Public Health England transition and implementation teams.

Risk registers were also maintained at one level below the HPA divisions, for programmes, and for key projects. Where a risk could not be managed at a particular level within the organisation it was escalated to the next level up. A bottom-up approach was also in place where risks were reported via risk registers,

verbally during staff and management meetings, or through written reports. These mechanisms helped to ensure that the appropriate filtering and delegation of risk management was in place and that the system was embedded throughout the HPA.

Assessment of the adequacy of controls was a vital part of the HPA's systematic approach that attempted to limit risk to an acceptable residual level, rather than obviate risk altogether. Staff were encouraged to balance the cost of control with the risk to be mitigated and to help ensure that value for money was achieved. The HPA was unwilling to accept risks that might result in failure to meet its statutory responsibilities in relation to activities such as responding to high level (4 or 5) incidents, testing of containment level 3 and 4 pathogens, managing clinical trials and manufacturing vaccines. Its willingness to accept risk in these areas ('risk appetite') was therefore low. Any identified risk for these activities that could not be managed locally had to be escalated to the Executive Group. The HPA's adverse incident and serious untoward incident policy and procedure provided a formal mechanism for reporting and learning from incidents across the HPA. An electronic incident management and investigation system enabled management to report and track key issues. The HPA also published reports on major events and these were used to promulgate lessons learnt for both the HPA and its partners. The HPA had a formal complaints procedure for patients and service users, which was published on the HPA website.

The risk management team developed the HPA's approach to risk management, identified cross-cutting operational risks, and provided support to incident management and investigation. It also reviewed top-level risk registers and provided feedback to improve the quality of risk information.

The HPA's Clinical and Health Protection Governance Group helped to ensure that robust clinical and health protection governance systems operated throughout the HPA, through implementation of the Clinical and Health Protection Governance Framework. This aimed to ensure continuous improvement in the quality of HPA clinical services and of services that safeguarded the health of the public. Clinical incident information was reviewed at each meeting to identify any changes in the pattern of incidents and enable earlier investigation. In addition, the lead Consultant in Public Health Strategy carried out weekly reviews.

The HPA's arrangements to mitigate health and safety risk included the work of the Health and Safety Steering Group, which was chaired by an executive director. This group reviewed the HPA's health and safety strategy and arrangements to ensure that they were appropriate for the future requirements of the HPA; and that they continued to meet changing statutory requirements. Performance data were reviewed and presented to the Executive Group and the Board on a regular basis.

An HPA information asset register was enhanced and populated to include process maps, dependencies, and system specific risk assessments. This helped the HPA to govern information risks and improve risk and assurance information.

The HPA's work involved a large number of stakeholders, and work was carried out through partnerships and contractual agreements. For this reason a stakeholder management policy and toolkit were in place.

The HPA was invited to give evidence to the Mid Staffordshire NHS Foundation Trust inquiry in August 2010. The agency welcomed the publication of the inquiry report. The abolition of the agency on 31 March 2013 means that the consideration of any recommendation relating to health protection is for the Department of Health.

REVIEW OF EFFECTIVENESS

The Accounting Officer had responsibility for reviewing the effectiveness of the system of internal control. This review was informed by the work of the internal auditors and executive managers within the HPA who had 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. The Board and the Audit Committee advised the Accounting Officer about the implications of their review of the effectiveness of the internal control system. A plan to address weaknesses and ensure continuous improvement of the system was in place.

The HPA's Board received regular reports from the chairman of the Audit Committee concerning risk, control and governance, and associated assurance. The Audit Committee was

committed to ensuring that corrective action was taken in a timely manner where necessary.

The Board was of the opinion that the information received throughout the year in order to allow it to conduct its business was acceptable.

The Board accepted the reported opinion of the Audit Committee to the final meeting of the Board that this annual report was consistent with the draft Governance Statement, the Head of Internal Audit Opinion, and the External Audit review, and that there were no matters that the committee was aware of at that time that had not been disclosed appropriately.

The Integrated Governance Group (IGG) reviewed governance activities within the HPA and identified the actions necessary for improvement. The appropriateness, effectiveness and progress of the risk management strategy, policy and approach were monitored by the IGG. The IGG reported and made recommendations to the Audit Committee. Cross-attendance between the IGG, the Audit Committee, the Health and Safety Steering Group, and the Clinical and Health Protection Governance Group helped to ensure that a consistent approach was taken.

A system for gathering and monitoring assurances was in place and was used to inform the HPA's registration with the Care Quality Commission. The development of internal standards also helped to identify areas that needed strengthening.

Internal audit provided an independent, objective assurance and consulting service designed to add value and improve the HPA's operations. Its work was based on an agreed audit plan, which was carried out in accordance with government internal audit standards. This helped to ensure that the work undertaken by internal audit provided a reasonable indication of the controls in operation across the whole of the HPA. Findings from work carried out during the year were presented to the Audit Committee.

In addition, the Head Of Internal Audit provided the Accounting Officer with an opinion that, looking at the overall arrangements, she was able to provide reasonable assurance that the HPA had adequate and effective risk management, control and governance processes in operation in respect of the year ending 31 March 2013. In addition to the independent assurance received from internal audit, periodic management assurance was obtained in the form of an annual assurance statement made by each executive director in respect of the effectiveness of controls in areas of key management responsibility. Ongoing management assurance was available from inspection and compliance teams, which provided an overview of specific and defined areas including health and safety, clinical governance and quality assurance. Assurances were also received from external accreditation and regulatory bodies, mainly in the field of laboratory practice.

To obtain a better understanding of the HPA's overall assurance activities, further assurance mapping activities were carried out during the year.

The HPA was registered with the Care Quality Commission and complied with the Health and Social Care Act 2008 (Regulated Activities) Regulations 2010. An assurance register was also available on the HPA intranet.

KEY RISKS

The year ending 31 March 2013 was challenging because of the need to manage business-as-usual activities whilst engaging and responding to changes as part of the wider health reforms. In balancing various demands, a number of transitional risks were identified. In particular:

- Loss of focus on core health protection work arising from multiple pressures on staff, e.g. organisational change programme; financial pressures; general pressures on the Arm's Length Bodies sector; and proposed integration of the HPA within Public Health England.
- Lack of clarity of accountability during transition leading to poorer quality of decision making and/or "planning blight".
- Loss of corporate memory and specialised, experienced HPA staff due to:
  - a) not being treated equitably in transfer of posts and competing for jobs in transition process;
  - b) uncertainty about their personal career future and the environment within PHE;
  - c) age profile of HPA staff without succession plans being in place.

- Loss of support services tailored specifically to HPA requirements.
- Insufficient input of specialist health protection advice around the setting up of Public Health England, leading to poor decision-making.

To manage these risks the HPA Executive Group ensured that there was:

- Extensive arrangements for staff engagement, with a high priority given to internal communications.
- Quarterly updates to Executive Group on reasons for senior HPA staff leaving.
- Agreed templates with Department of Health setting out all HPA's budget centres that include staff costs.
- Establishment of a transition support group in HPA.
- An infrastructure project for Public Health England, led by HPA.
- Membership of the Public Health Engagement Group and close working with new PHE appointees.
- Engagement with the Department of Health on all externally driven pressures (including the transition team, sponsor team and Public Health England 'designate' team as it was established), on specific issues regarding leadership on emergency preparedness and response, and on changes associated with implementation of Public Health England.
- An HPA Business Plan for 2012/13 with input to the Public Health England planning process for 2013/14.
- A structured plan for managing organisational change with clarity about transition arrangements within HPA.
- The provision of handover documentation to PHE, including the quality agenda, and a handover meeting of the Audit Committee and the Board to record relevant legacy governance issues.

CONTROL ISSUES

In January 2011, a Serious Untoward Incident (SUI) panel was established by the HPA's chief executive to investigate the use of a hepatitis C test by the HPA South West Regional Laboratory in Bristol, and the subsequent management of that incident by the HPA. Six monthly reports on progress were provided to the HPA Board with all 45 recommendations, including actions related to any impact on patients, accepted and implemented: 18 of these were fully implemented, 24 were on track to deliver and three were in the process of implementation, although delayed.

In August 2012, a SUI panel was established to investigate concerns around the efficiency, timeliness and appropriateness of the investigation of tuberculosis incidents in a health protection unit during the period from the start of 2011 to summer 2012. The panel's recommendations included actions to address; failures of leadership at a number of levels; inefficient working practices across the professional teams; poor documentation of risk assessments, actions taken and future plans; and poor communication with both HPA and external colleagues. The investigation panel found no evidence that any person had suffered significant delay in the treatment of clinical or infectious tuberculosis. PHE have advised us that it is reviewing its systems and processes for handling the investigation of TB incidents, to take account of both the specific circumstances of this unit and also the wider lessons in other areas and localities.

There were no significant security incidents, including data security, during the year ended 31 March 2013.

In order to ensure that the integrity of the system of internal control was maintained during the transition period into PHE, the responsibility for the Accounting Officer role was reassigned during the year as set out in the Remuneration Report.

Duncan Selbie
Accounting Officer
20 June 2013

Additional corporate information

STAFF COMMUNICATIONS AND ENGAGEMENT

Communicating and engaging with staff was a priority for the HPA and considerable effort was devoted to this, particularly during the transition. In addition, the HPA had good relations with the trade unions and management met regularly with staff side representatives. Specific staff communications and engagement activities during the past year included:

- A fortnightly Chief Executive's bulletin cascaded to staff, covering important issues, news, achievements, new or revised policies and guidance, and other developments.
- A weekly Friday message circulated to all staff by Duncan Selbie, Chief Executive of Public Health England.
- Regular monthly core briefs produced by the Executive Group and cascaded for line managers to deliver to all employees, covering key organisational change issues.
- Health Protection News, a monthly newsletter written by and for HPA staff members.
- Responses to all staff questions about the core brief. These went to the teams raising the questions and were published on the intranet.
- 'Change agent' volunteers, recruited from all parts of the HPA, assisted line managers in addressing organisational change issues locally.
- Biannual meetings to update 'change agents' and provide them with tools and ideas.
- Visits, roadshows and webcasts by the chief executive and Board members were held at HPA locations across the country to inform staff about significant developments in relation to the transfer to Public Health England.
- HPA staff worked with the Public Health England transition team to contribute to and develop key elements of the transition, including HR and operational work.
- HPA staff made significant contributions to the Arm's Length Bodies review of shared services, including leading a number of the workstreams.

EQUALITY AND DIVERSITY

The HPA undertook to promote equality and diversity and not to discriminate between employees or job applicants, in accordance with the Equality Act 2010 protected characteristics, namely: age; gender; disability; marriage and civil partnership; gender reassignment; pregnancy and maternity; race; religion or belief (including lack of belief); sexual orientation and trade union membership.

An HPA Statement of Commitment to Equality and Diversity, which replaced the Single Equality Scheme, was agreed and published in April 2012. This document enabled the HPA to meet the statutory obligation to publish equality objectives in accordance with the Equality Act 2010 (Specific Duties) Regulations 2011, and also emphasised the HPA's values and continuing commitments to promote equality and diversity. Good progress was made against the agreed action plan contained in the statement. Equality and diversity information was published in January 2012 to ensure compliance with the statutory requirement to publish information as laid down in the Equality Act 2010.

An equality analysis of the 2012/13 business plan was drafted and published on the HPA's intranet. A majority of the health protection objectives in the plan supported work to reduce health inequalities and the final (quarter four) report on progress with objectives in the plan included evidence from objective owners of how their work contributed to reducing these inequalities. Equality analysis was an important part of developing the business plan for PHE. Previous key equality impact assessments (EIA), together with accompanying action plans, were progressed. However, a new equality analysis process replaced the EIA process for strategic level decisions and policies.

A number of staff support groups were set up in the following areas: black and minority ethnic (Network for Equality and Diversity); lesbian, gay, bisexual and transgender; employees with disabilities, and women. The focus of these groups was to provide a point

of contact for, and support to, members of the groups and feedback to the HPA on policies and other changes within the organisation. In May 2012, the HPA Executive Group agreed that the HPA should enrol in the Stonewall Diversity Champions Scheme. As a result, the HPA became part of a wide-ranging network of some 600 organisations (including the Department of Health and the Care Quality Commission) that acted as 'diversity champions'.

HEALTH AND SAFETY

Consistent with the vision to protect the health of everyone in the UK, the HPA protected the health, safety and wellbeing at work of its employees and others who may be affected by its activities. The HPA underpinned its strategic aims by adopting excellent standards of health and safety performance.

The HPA Board underlined the importance of health and safety by setting the direction and conducting a formal annual review of health and safety aligned with the Institute of Directors' guidance. In addition, it challenged safety performance via the six-monthly health and safety performance reports. The Executive Group was responsible for and took the lead on improving health and safety performance, and it monitored progress regularly. The HPA engaged and consulted with staff through a network of safety representatives/safety advocates and held regular health and safety meetings with these representatives. Improvement in health and safety performance was managed through a corporate health and safety plan and subsequently through local plans. The number of incidents reported under the Reporting of Injuries, Diseases and Dangerous Occurrences Regulations (RIDDOR) decreased over the past five years, including those related to biological agents, demonstrating a sustained improvement.

SICKNESS ABSENCE DATA

During the year ended 31 March 2013, the total number of whole time equivalent days (WTE) lost to sickness absence was 39,943 days. This information is disclosed in accordance with the *Government Financial Reporting Manual* (FReM) and equates to an average of 11.94 days per WTE; and a sickness absence rate of 4.97%. This was an increase of 0.89 days per employee per year from the previous year.

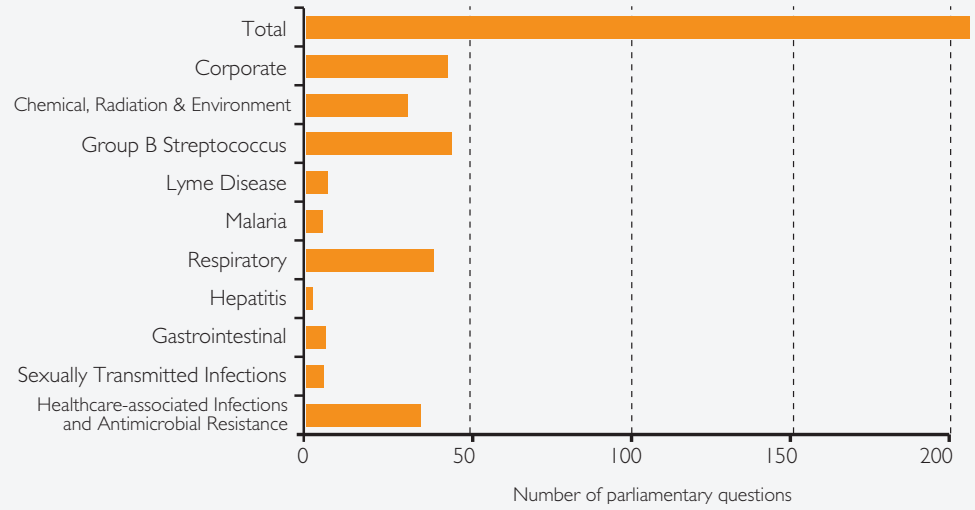
PARLIAMENTARY QUESTIONS

Members of the House of Commons and House of Lords hold the Government to account. One way in which they do so is to ask parliamentary questions (PQs). They can use PQs to seek information or press for action. During 2012/13, 205 PQs were referred to the Health Protection Agency. Since 2009, PQs relating to corporate matters have increased steadily. The graph below shows the number of PQs referred by topic.

REPORTING OF PERSONAL DATA-RELATED INCIDENTS

The HPA's adverse incident and serious untoward incident policy and procedures provided a framework for the management of incidents involving personal data. There were

Parliamentary Questions referred to the HPA in 2012/13



no incidents in the report period that fell under the criteria for reporting data losses to the Information Commissioner's office. There were no data losses whose release could have put individuals at risk of harm or distress.

STATUTORY INFORMATION REQUESTS

During 2012/13, the HPA received 449 (2011/12: 410) information access requests, including requests transferred to the HPA from other public authorities. Most requests cited the Freedom of Information Act, but the figure also included requests handled in part or exclusively under other information access legislation. Specifically, 20 (2011/12: 15) requests were handled under the Environmental Information Regulations and 58 (2011/12: 62) were subject access requests for personal information (made by the data subject or agent acting on their behalf) and were handled under the Data Protection Act.

ENQUIRIES VIA WEBSITE

During 2012/13, the HPA received 4,700 (2011/12: 2,600) online enquiries from members of the public, healthcare professionals, patients and service users.

COMPLAINTS

A total of 22 complaints (2011/12: 20) were received from members of the public, patients and service users during the year and were handled in accordance with the HPA's complaints procedure.

PUBLIC AND STAKEHOLDER INVOLVEMENT

Public involvement was a key element of the HPA's communications strategy. The HPA surveyed the public on two occasions and consulted stakeholders to benchmark its reputation and to find out the best way to involve them in its work. A provisional timetable for a third survey in September 2012 was included in the Communications Business Plan for 2012/13, but due to the transition to Public Health England it did not take place.

This benchmarking process informed the development of the HPA's model of involvement and grew in popularity. The number of people who signed up to join the People's Panel increased from 333 in 2007 to 908 in 2012. The public involvement programme continued to develop during the ongoing transition to Public Health England.

Since 2011:

- Some 130 members of the panel took part in discussion groups, workshops or committees and working groups organised by the HPA.
- There were six discussion groups, four workshops, 12 working group meetings and two stakeholder engagement events for the People's Panel.
- A series of regional workshops were held with public health stakeholders from the NHS and local authorities.

These activities provided feedback on the HPA's draft equality objectives, supporting People's Panel participation on working groups and proposals for public involvement within Public Health England.

Between 2008 and 2013, 388 members of the People's Panel took part in public involvement activities organised by the HPA. There were 33 discussion groups or workshops and one online community pilot.

During 2012/13, public participation in HPA committees and working groups was healthy. In 2012, the membership of the Health Protection and Society Advisory Group (HPSAG) was refreshed with the recruitment of seven new members from the People's Panel and the membership of the Equality Forum was increased to 20. The Health Protection and Society Advisory Group produced a set of proposals for public involvement in Public Health England.

There was good evidence to show that public involvement provided a positive contribution to key decisions and policy development. A focus group in January 2013 tested the quality and readability of documents used in the collection of clinical samples, such as blood and urine, and tested the effectiveness of web-based video clips for public health advice and information.

The HPA continued to develop social media as an engagement tool, for example by raising awareness of a measles outbreak in the North West, which was 're-tweeted' many thousands of times by local football clubs.

Environmental management and sustainability

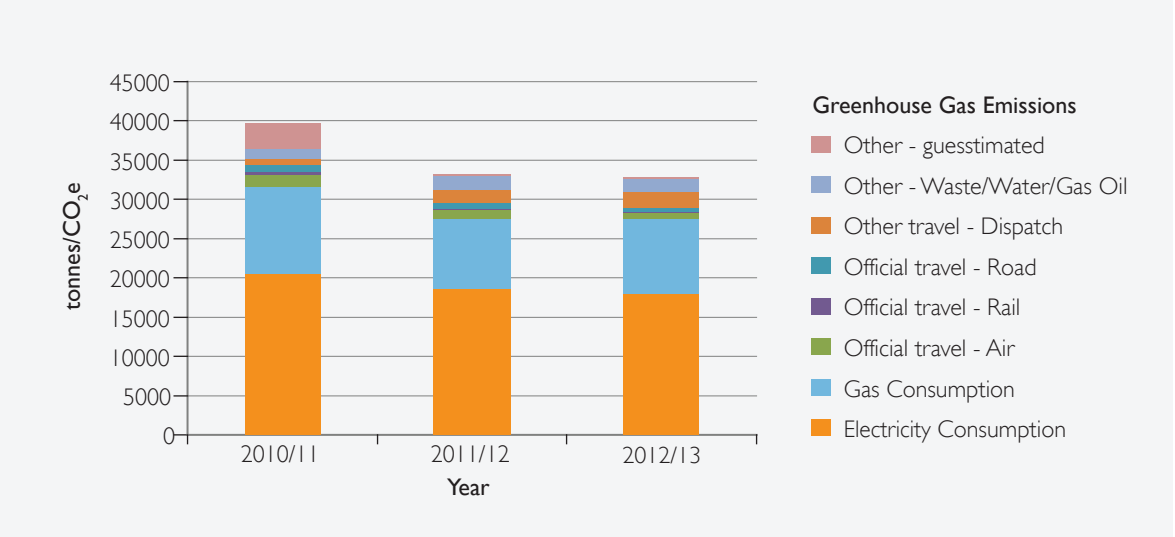
GREENHOUSE GAS EMISSIONS		2010/11	2011/12	2012/13
Non-Financial Indicators (tCO_2)	Total Gross Emissions for Scope 1+2	33,250	27,978	27,700
	Total Gross Emissions for Scope 1+2 (non-reportable sites)	2,456	2,211	1,882
	Total Net Emissions for Scope 1+2 (i.e. less reductions - e.g. green tariffs)	35,589	30,189	29,434
	Gross Emissions Scope 3 (Business Travel)	2,828	1,965	1,399
	Other Scope 3 emissions measured	1,151	1,858	2,283
Related Energy Consumption (kWh)	Electricity Non-Renewable (reportable sites)	33,182,260	31,924,147	31,973,871
	Electricity Non-Renewable (non-reportable sites)	4,596,875	3,678,655	2,520,302
	Gas (reportable sites)	55,235,365	42,833,004	49,036,466
	Gas (non-reportable sites)	4,848,910	2,235,629	2,282,275
	Gas Oil (reportable sites)	3,697,017	4,458,416	4,112,196
	Gas Oil (non-reportable sites)	1,723,496	2,025,354	898,155
	Steam (reportable sites)	584,699	1,414,208	907,778
Financial Indicators (£)	Expenditure on Electricity	4,267,111	3,098,230	3,058,306
	Expenditure on Gas	1,211,828	1,212,274	2,034,140
	Expenditure on Gas Oil	284,730	392,612	357,763
	CRC License Expenditure (2011 onwards)	345,000	345,000	300,300
	Expenditure on official business travel	2,607,503	2,107,234	2,386,525

The HPA agreed a number of targets to reduce carbon emissions from its estate. These included utility use, business travel, water consumption and the reduction of waste sent to landfill. Work was also underway to reduce carbon emissions arising from the HPA's supply chain. Monitoring processes were implemented to allow management to evaluate and develop reduction strategies. This approach led to a significant reduction in carbon emissions for the year 2012/13. Details of the HPA's sustainability activities are below. A more detailed analysis will be included in the Annual Sustainability Report.

GREENHOUSE GAS EMISSIONS

The HPA set a target to reduce its carbon emissions by 15% (to 27,681 t/CO_2e) by March 2015, and by 34% (to 24,102 t/CO_2e) by March 2020, compared to its 2007/08 baseline levels, in line with the Government's 'Greening Government' initiative. Preliminary analysis indicated that the HPA's carbon emissions were 33,116 t/CO_2e, suggesting a continued downward trend in the carbon footprint. This meant the HPA was well placed to meet government requirements, with good progress towards the target above.

The main direct impacts for the HPA were its electricity and gas consumption. Through its carbon reduction delivery plan, the agency introduced a number of strategies to help reduce its carbon burden. The agency continued to engage staff through its mandatory e-learning programme on sustainability and carbon management. This



training ensured that staff were aware of the need to minimise their carbon footprint, and act in a sustainable manner that took account of their impact on the environment.

Work to strengthen the HPA's green procurement initiatives continued in line with central government initiatives, including future use of the 'CAESER' software tool with suppliers. This helped to ensure a robust approach to sustainability through the supply chain. The agency continued to embed sustainability into contracts, which helped to highlight risks to the agency arising from procurement.

The HPA was fully committed to sustainable development in all its activities. In line with the commitments made in the environmental policy, the carbon reduction delivery plan set out the organisation's aims for future work. A number of capital projects intended to improve the efficiency of the organisation's future energy usage began at major HPA-owned sites, and sub-metering of utility supplies was introduced so that greater local control could be achieved.

The HPA owned seven of the premises it occupied and had a direct relationship with the utility provider at a further four. These buildings were taken into account in the Government's Carbon Reduction Commitment Energy Efficiency scheme reporting boundary. The agency also had shared facilities embedded in government-owned property (including hospitals) and in other tenanted accommodation. There was no direct relationship with the utility provider in these premises and no sub-metering was undertaken. To avoid double-accounting for the related carbon emissions, these were identified separately for reporting purposes. The HPA had no properties within SSSI or AONB boundaries.

The HPA had an active programme to reduce paper usage, in line with government targets. There were several dedicated working groups tasked with reducing paper usage in their areas. The move to multi-function devices for printing was well received across the business. Signage and good communication about minimising printing also helped to reduce paper usage over the year.

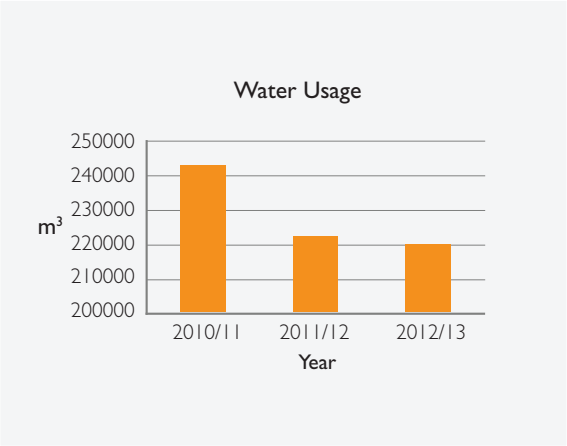
A third-party provider continued to be engaged to recycle and reuse, wherever possible, all redundant ICT equipment. More than 13 tonnes of ICT waste was processed in this manner. This approach continued to be an effective method of disposal for this waste stream and supported government policy in this area.

Steps were taken to reduce domestic air travel by members of staff, with a revised Sustainable Travel Policy to provide advice and guidance. A number of further local initiatives were introduced to monitor business travel.
In preparation for the transition to Public Health England, the agency helped to shape the sustainability agenda for the new organisation by developing its sustainability policies, strategies and management arrangements.

FINITE RESOURCE CONSUMPTION - WATER			2010/11	2011/12	2012/13
Non-Financial Indicators (m^3)	Water Consumption	Supplied (reportable)	242,948	222,066	219,943
		Supplied (non-reportable)	11,123	6,612	9,414
		Abstracted	0	0	0
Financial Indicators (£)	Water Supply Costs		179,611	201,929	201,545

WATER CONSUMPTION

The HPA set a target to reduce its water consumption by 10% compared to a 2007/08 baseline, (to 202,503 m^3) by 2015 and by 25% by 2020, in line with the Government's Greening Government initiative. The trend was positive, with a number of projects identified to further reduce the organisation's water consumption.



A number of HPA sites had a mixture of office and non-office facilities, and it was therefore not possible to split the two categories into any viable dataset. The financial cost shown above relates to the water that was directly supplied to those sites which were within the reporting boundary.

The HPA's major impacts in terms of water consumption were through its main centres, where a large number of laboratories were housed. Water that was consumed at offices and laboratories embedded in tenanted accommodation was estimated using the Carbon Trust's benchmarking algorithm.

The water supply to the HPA's main sites was monitored and measured, and therefore the pattern of daily usage was known. Senior managers used this information to further develop strategies that helped towards meeting water reduction targets. Water at one of the main sites is supplied by a third party and was abstracted by them, from a borehole on their site.

WASTE

The HPA set a landfill waste reduction target of 20% (to 505 tonnes) by 2015 compared to 2007/08 figures, and to reduce this by 25% by 2020, in line with the Government's Greening Government initiative. Preliminary analysis indicated a 14% reduction of waste going to landfill over the last year; a more detailed analysis will be included in the Annual Sustainability Report. Waste data for earlier years have been recalculated using the current DEFRA formula.

The HPA had an rigorous programme in place to reduce, wherever practicable, its waste to landfill and to increase its level of recycling. The trend was very positive with a number of projects being implemented to divert waste from landfill to other waste streams, principally to energy from waste. This reduced the landfill disposal dramatically, with significant social, financial and environmental benefits for the agency.

Due to the nature of the work carried out at the majority of HPA sites, a significant quantity of

hazardous waste was produced and a number of controls were in place to manage this. The majority of this waste was sent for incineration, in compliance with government guidelines.

A new generic waste monitoring system was introduced in 2011/12 to try to harmonise the various systems in use. A number of additional initiatives were in place to reduce waste at all locations covering both offices and laboratories.

Contractors working at HPA sites were informed of the requirement to reduce their waste wherever possible, in line with the HPA's waste policy and the associated management arrangements.

WASTE			2010/11	2011/12	2012/13
Non-Financial Indicators (tonnes)	Total Waste (Minimum Requirement)		1,373	1,049	1,574
	Hazardous Waste	Total	445	299	405
	Non-Hazardous Waste	Landfill	375	112	96
		Reused/Recycled	444	436	831
		Incinerated/Energy from Waste	109	202	242
Financial Indicators (£)	Total disposal cost (Minimum Requirement)		456,199	334,623	407,279
	Hazardous Waste - Total Disposal Cost		348,365	227,698	244,442
	Non-Hazardous Waste - Total disposal cost	Landfill	44,732	30,426	33,782
		Reused/Recycled	49,460	51,600	68,176
		Incinerated/Energy from Waste	13,642	46,529	60,879

Remuneration report

This report details the policy on the appointment, appraisal and remuneration of members of the Board and the Executive Group of the HPA for the year ended 31 March 2013.

The report has been prepared in consultation with the HPA's Remuneration and Terms of Service Committee, and is based upon the provisions contained within the *Government Financial Reporting Manual 2012/13*.

COMMITTEE MEMBERSHIP

The Remuneration and Terms of Service Committee consisted of five non-executive Board members. The members for 2012/13 were:

Remuneration and Terms of Service Committee Members
Professor David Heymann (HPA chairman)
Professor Charles Easmon (chairman of the Human Resources Committee)
Michael Beaumont (chairman of the Audit Committee)
Martin Hindle (chairman of the Finance Committee)
Helen Froud (chairman of the Nomination Committee)
All five members served on the committee throughout the year

Meetings were attended by the HPA chief executive and the director of human resources, other than when their own remuneration was being discussed.

APPOINTMENT AND APPRAISAL OF MEMBERS OF THE BOARD AND THE EXECUTIVE GROUP

Non-executive Board members

All non-executive Board members were appointed by the Appointments Commission on behalf of the Secretary of State for Health or by the ministers of the devolved administrations, for a defined term. Performance of non-executive Board members was assessed by the chairman of the Board through an annual appraisal process. The appraisal process for the chairman was conducted by the Department of Health senior sponsor.

ACCOUNTABILITY

As a committee of the HPA Board, the Remuneration and Terms of Service Committee was accountable to the Board.

Role

The terms of reference required the committee to consider and make recommendations to the Board on the following issues:

- The overall framework for determining the remuneration and terms of service arrangements for all staff employed by the HPA.
- The remuneration and terms of service of senior executives, including the chief executive and other members of the Executive Group.
- The contractual arrangements for senior executives, including the calculation and scrutiny of termination payments, ensuring that such payments were appropriate and took account of national guidance.
- The mechanism for monitoring the performance of the senior executives and their individual objectives for the forthcoming year.
- The approval of all severance packages with a total cost of £100,000 or more.
- The approval of any premature retirement applications on the grounds of 'in the interests of the efficiency of the service'.

REMUNERATION OF NON-EXECUTIVE BOARD MEMBERS

The table that follows lists all persons who served on the Board during the year ended 31 March 2013. All the appointments ended on 31 March 2013 on the abolition of the HPA. A summary of their appointment is accompanied by the total remuneration due to each individual during their tenure in post in 2012/13.

MEMBERS OF THE EXECUTIVE GROUP

The Remuneration and Terms of Service Committee determined the policy for the appointment of the members of the Executive Group that reported directly to the chief executive. The members of the Executive Group

REMUNERATION OF NON-EXECUTIVE BOARD MEMBERS

	Date of first appointment	Total salary, fees and allowances	
		Year ended 31 March 2013 £'000	Year ended 31 March 2012 £'000
Non-executive Board members			
Professor David Heymann	1 May 2009	60-65	60-65
Dr Barbara Bannister[1]	1 April 2008	5-10	5-10
Michael Beaumont	1 April 2005	10-15	10-15
James Brown	1 October 2005	5-10	5-10
Michael Carroll	1 April 2009	5-10	5-10
Professor Charles Easmon	1 April 2005	5-10	5-10
Helen Froud	1 April 2009	5-10	5-10
Professor William Gelletly	1 April 2010	5-10	5-10
Martin Hindle	1 April 2009	5-10	10-15
Deborah Oakley	1 April 2009	5-10	5-10
John Wyn Owen	1 February 2006	5-10	5-10
Dr Dipti Patel[2]	1 April 2010	5-10	5-10
Professor Debby Reynolds	1 April 2008	5-10	10-15
Dr Timothy Wyatt	1 April 2010	5-10	5-10

[1] An organisation related to Dr Bannister received payments from the HPA in respect of services provided by her as set out in note 17 'Related party disclosures' in the notes to the financial statements.

[2] Dr Patel was employed by the HPA on a permanent contract with effect from 1 May 2012 on a part-time basis and seconded as a director (on a job share) of the National Travel Health Network and Centre, NaTHNaC, which is part of University College London Hospitals NHS Foundation Trust. Dr Patel's total earnings for the year 2012/13 paid by the HPA in respect of this role were in the band £50-55K.

held employment contracts that were open-ended with notice periods of three months, with the exception of the Chief Executive which was six months. Early termination by the HPA, other than for misconduct, would have resulted in the individual receiving compensation in accordance with NHS terms and conditions or, in the case of Dr Cooper, in accordance with the terms of the UK Atomic Energy Authority Combined Pension Scheme. Any payments for compensation for loss of office would have been agreed by the Remuneration and Terms of Service Committee with reference to the Department of Health and HM Treasury guidelines.

The committee also reviewed and assessed the annual appraisal process for members of the Executive Group, whose appraisal was undertaken by the Chief Executive. The Chief Executive undertook an appraisal interview with each member of the Executive Group. Performance was assessed against a range of objectives and a set of core management skills and leadership qualities. The outcome of the appraisal interview was reviewed by the chairman of the Board.

REMUNERATION OF EXECUTIVE GROUP MEMBERS

The table below lists all persons who served on the Executive Group during the year ended 31 March 2013. A summary of their employment contract is accompanied by the total remuneration due to each individual during their tenure in post in 2012/13.

In preparation for the abolition of the HPA and the transition of its functions to Public Health England (PHE) and the Medicines and Healthcare products Regulatory Agency (MHRA), a number of changes took place within the year concerning the role of Chief Executive and Accounting Officer. Justin McCracken stood aside from the Chief Executive role with effect from 30 September 2012 to facilitate the integration of the HPA into PHE and continued to work on special projects from 1 October 2012 to 31 March 2013. Dr Tony Sannia was acting Chief Executive and Accounting Officer from 1 October 2012 until 14 October 2012 and no additional remuneration was paid for this period. Dr Paul Cosford was acting Chief Executive and Accounting Officer from 15 October 2012 until 31 January 2013, and

REMUNERATION OF EXECUTIVE GROUP MEMBERS

	Date of first appointment	Expiry date of current appointment	Notice period	Total salary, fees and allowances	
				Year ended 31 March 2013 £'000	Year ended 31 March 2012 £'000
Members of the Executive Group					
Lis Birrane	6 October 2003	Transferred to PHE	3 months	100-105	100-105
David Conway	5 October 2012	Transferred to PHE	3 months	40-45	NIL
Dr John Cooper[1]	4 June 2009	31 March 2013	3 months	120-125	120-125
Dr Paul Cosford[2,3]	6 September 2010	31 March 2013	1 month	-	-
Dr Stephen Inglis	1 April 2009	Transferred to the MHRA	13 weeks	165-170	165-170
Professor Anthony Kessel[4]	16 March 2009	Transferred to PHE	3 months	170-175	170-175
Dr Christine McCartney[5]	1 September 2006	4 October 2012	3 months	75-80	140-145
Justin McCracken[3]	7 April 2008	31 March 2013	6 months	190-195	210-215
Dr Tony Sannia[3]	1 April 2003	Transferred to PHE	3 months	140-145	140-145
Duncan Selbie[3]	1 February 2013	31 March 2013	1 month	-	-
Tony Vickers-Byrne	1 April 2008	Transferred to PHE	3 months	100-105	100-105

1. Retired from HPA on 31 March 2013.

2. Dr Paul Cosford provided services to the HPA on secondment as an employee of the East of England Strategic Health Authority (as detailed on p60).

3. Executive members of the HPA Board throughout the year except Paul Cosford, who was appointed on 15 October 2012, and Duncan Selbie, who was appointed on 1 February 2013.

4. The remuneration of this member of the Executive Group included a clinical excellence award, funded by the Department of Health.

5. Retired from the HPA on 4 October 2012.

then he became Deputy Chief Executive from 1 February 2013 until 31 March 2013. Dr Paul Cosford was not paid any additional remuneration for any of these additional duties. Duncan Selbie provided services to the HPA as acting Chief Executive and Accounting Officer on secondment from the Department of Health from 1 February to 31 March 2013. No payments were made by the HPA to the Department of Health in respect of this secondment. The Department of Health made no payments to Duncan Selbie in respect of his secondment to the HPA in addition to his salary of £30,800 (for the two months period 1 February 2013 to 31 March 2013) in respect of his appointment as Shadow Chief Executive for Public Health England.

COMPENSATION FOR LOSS OF OFFICE

Justin McCracken was entitled to a redundancy payment of £74,433 on 31 March 2013. This payment was calculated, based on his remuneration and years of service, in accordance with the Agenda for Change Terms and Conditions Handbook, which applies to all non-medical staff. Of the total due, £26,385 was paid to him directly and £48,048 was paid to the NHS Pension Scheme to cover the cost of his election to bring his retirement pension into immediate effect. No other termination payment was paid to Justin McCracken. During the year ended 31 March 2013, no payment of compensation for loss of office was made to any other member of the Board or the Executive Group.

REMUNERATION POLICY

Non-executive Board members

Non-executive Board members' remuneration was not performance related, and was determined by the Secretary of State for Health and the ministers of the devolved administrations. The remuneration package was subject to an annual review by the relevant authority.

MEMBERS OF EXECUTIVE GROUP

The Remuneration and Terms of Service Committee determined the policy for the remuneration of the members of the Executive Group. There were no performance-related bonuses payable to members of the Executive Group. Their remuneration package consisted of a salary and pension contributions. In determining the package, the Remuneration and Terms of Service Committee had regard to pay and employment policies elsewhere within the HPA as well as 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 were reviewed annually, having regard to the remuneration policy which takes into account the NHS Very Senior Managers Pay Framework. For the 2012/13 financial year, members of the Executive Group received no cost of living increase, the same as 2011/12. There were no cost of living increases for medical consultants or other staff within the HPA—with the exception of staff earning less than £21,000 or less who received an increase of £250, the same as 2011/12.

Details of amounts payable to third parties for services of a member of the Executive Group

Dr Paul Cosford was a member of the Executive Group throughout the year ending 31 March 2013. He was an employee of the East of England Strategic Health Authority. The amount paid by the HPA to the SHA to cover his salary and employer on-costs for the year totalled £198,000. This total included a clinical excellence award that was funded by the Department of Health.

Salary, fees and allowances

Salary, fees and allowances covered both pensionable and non-pensionable amounts, and included any allowances or other payments to the extent they were subject to UK taxation. They did not include amounts that were simply a reimbursement of expenses directly incurred in the performance of the individual's duties. However, expenses paid to Board members and Executive Group members were published on the HPA website.

Benefits in kind

During the year ended 31 March 2013, no benefits in kind were made available to any non-executive member of the Board or any member of the Executive Group.

PENSION ENTITLEMENTS

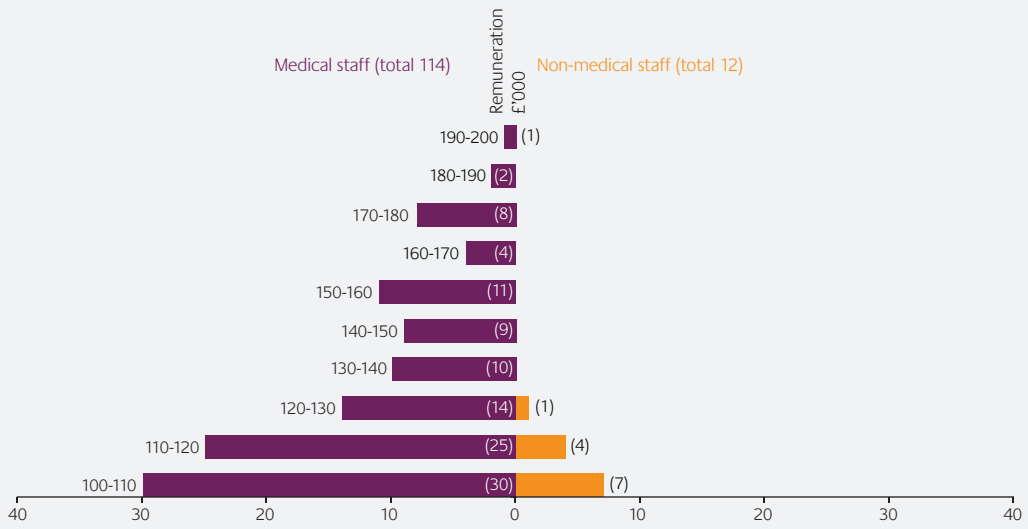
Non-executive and Board member remuneration was not pensionable. The members of the Executive Group (with the exception of Dr Cooper) were members of the NHS Pension Scheme. Dr Cooper transferred to the HPA from the National Radiological Protection Board on 1 April 2005 and retained his membership of the UK Atomic Energy Authority Combined Pension Scheme, which offers very similar benefits to the NHS Scheme. Details of both pension schemes, including benefits payable, are included in the notes

PENSION ENTITLEMENTS OF EXECUTIVE GROUP MEMBERS

	Real annual increase (decrease) in accrued pension Bands of £2,500	Real annual increase (decrease) in lump sum Bands of £2,500	Pension value as at 31 March 2013 Bands of £5,000	Lump sum value as at 31 March 2013 Bands of £5,000	Cash equivalent transfer value as at 31 March 2012 To nearest £1,000	Cash equivalent transfer value as at 31 March 2013 To nearest £1,000	Real annual increase (decrease) in cash equivalent transfer value To nearest £1,000
Members of the Executive Group							
Lis Birrane	0.0 - 2.5	0.0 - 2.5	10.0 - 15.0	35.0 - 40.0	227	249	22
David Conway	2.5 - 5.0	7.5 - 10.0	25.0 - 30.0	80.0 - 85.0	452	516	64
Dr John Cooper[1]	(0.0 - 2.5)	(2.5 - 5.0)	50.0 - 55.0	155.0 - 160.0	-	-	-
Dr Stephen Inglis	2.5 - 5.0	0.0 - 2.5	50.0 - 55.0	100.0 - 105.0	832	899	67
Professor Anthony Kessel	0.0 - 2.5	5.0 - 7.5	30.0 - 35.0	100.0 - 105.0	524	571	47
Dr Christine McCartney[1]	(0.0 - 2.5)	(2.5 - 5.0)	70.0 - 75.0	220.0 - 225.0	-	-	-
Justin McCracken	0.0 - 2.5	5.0 - 7.5	20.0 - 25.0	65.0 - 70.0	439	493	54
Dr Tony Sannia[1]	0.0 - 2.5	2.5 - 5.0	30.0 - 35.0	90.0 - 95.0	-	-	-
Tony Vickers-Byrne	0.0 - 2.5	(0.0 - 2.5)	35.0 - 40.0	105.0 - 110.0	696	706	10

1. There is no CETV (cash equivalent transfer value) for those members who are over the age of 60 (1995 Section of the NHS Pension Scheme) and members over 65 (2008 Section).

Number of employees with remuneration of £100,000 or more



to the financial statements. The pension entitlements of the members of the Executive Group who served during the year and were employed directly by the HPA are shown in the table below.

CASH EQUIVALENT TRANSFER VALUES

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 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 Cooper, to the UK 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 pensionable service in the scheme at their own cost. The CETV is calculated within the guidelines and framework prescribed by the Institute and Faculty of Actuaries.

REAL INCREASE IN CETV

The real increase in the value of the CETV takes account of the increase in accrued pension due to inflation and contributions paid by the employer and 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.

Changes in the factors used to calculate the CETV, which came into force on 1 October 2008 as a result of the Occupational Pension Scheme

COMPARISON OF MEDIAN PAY TO HIGHEST EARNER'S REMUNERATION

	Year ended 31 March 2013	Year ended 31 March 2012
Highest earning executive director's total remuneration (£'000)	190-195	210-215
Median total remuneration*	£33,098	£33,940
Ratio of median remuneration and remuneration of highest earning executive director	5.9	6.2

*The calculation of the median salary is based on the total remuneration of staff employed for the full year in question and therefore excludes any starters and leavers within the year. The remuneration for part-time staff has been adjusted to the appropriate full-time equivalent figure.

(Transfer Value Amendment) regulations, affected CETV real annual increase values. Further regulations from the Department for Work and Pensions to determine CETV from public sector pension schemes came into force on 13 October 2008.

NUMBER OF EMPLOYEES WITH REMUNERATION OF £100,000 OR MORE

The diagram above shows the number of employees, excluding the Executive Group, that had gross taxable remuneration of £100,000 or more during 2012/13. The earnings of both medical and non-medical staff were determined by the application of nationally agreed NHS terms and conditions of employment.

COMPARISON OF MEDIAN PAY TO HIGHEST EARNER'S REMUNERATION

The previous table shows a comparison between the median workforce remuneration and the remuneration of the highest paid employee.

AUDITABLE AND NON-AUDITABLE ELEMENTS OF THIS REPORT

The tables in this Remuneration Report, as well as the details of amounts payable to third parties for the services of senior managers, have been subject to audit and are referred to in the Certificate and Report of the Comptroller and Auditor General to the House of Commons. The auditor's opinion is included within the Auditor's Report on page 66.

Duncan Selbie
Accounting Officer
20 June 2013

4 Accounts

Statement of Accounting Officer's responsibilities

Under the Health Protection Agency Act 2004, the Secretary of State (with the consent of HM Treasury) directed that the Health Protection Agency 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 statement of comprehensive net expenditure, changes in taxpayers' equity and the cash flow statement 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 *Managing Public Money* published by HM Treasury.

The certificate and report of the Comptroller and Auditor General to the Houses of Parliament, the Scottish Parliament and the Northern Ireland Assembly

I certify that I have audited the financial statements of the Health Protection Agency for the year ended 31 March 2013 under the Health Protection Agency Act 2004. The financial statements comprise the statements of comprehensive net expenditure, financial position, cash flows changes in taxpayers' equity 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 ACCOUNTING OFFICER AND AUDITOR

As explained more fully in the statement of Accounting Officer's responsibilities, the Accounting Officer is responsible for the preparation of the financial statements and for being satisfied that they give a true and fair view. My responsibility is to audit, certify and report on the financial statements in accordance with the Health Protection Agency Act 2004. I conducted my audit in accordance with International Standards on Auditing (UK and Ireland). Those standards require me and my staff to comply with the Auditing Practices Board's Ethical Standards for Auditors.

SCOPE OF THE AUDIT OF THE FINANCIAL STATEMENTS

An audit involves obtaining evidence about the amounts and disclosures in the financial statements sufficient to give reasonable assurance that the financial statements are free from material misstatement, whether caused by fraud or error. This includes an assessment of: whether the accounting policies are appropriate to the Health Protection Agency's circumstances and have been consistently applied and adequately disclosed; the reasonableness of significant accounting estimates made by the Health Protection Agency, and the overall presentation of the financial statements. In addition, I read all the financial and non-financial information in the Health Protection Agency Annual Report to identify material inconsistencies with the audited financial statements. If I become aware of any apparent material misstatements or inconsistencies, I consider the implications for my certificate.

I am required to obtain evidence sufficient to give reasonable assurance that the expenditure and income reported in the financial statements have been applied to the purposes intended by Parliament and the financial transactions recorded in the financial statements conform to the authorities which govern them.

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 recorded in the financial statements conform to the authorities which govern them.

OPINION ON FINANCIAL STATEMENTS

In my opinion:

- the financial statements give a true and fair view of the state of the Health Protection Agency's affairs as at 31 March 2013 and of its net operating cost for the year then ended; and
- the financial statements have been properly prepared in accordance with the Health Protection Agency Act 2004 and Secretary of State directions issued thereunder.

OPINION ON OTHER MATTERS

In my opinion:

- the part of the Remuneration Report to be audited has been properly prepared in accordance with Secretary of State directions issued under the Health Protection Act 2004; and
- the information given in the Financial Review, the Additional Corporate Information and Environmental Management and Sustainability sections of the Annual Report for the financial year for which the financial statements are prepared is consistent with the financial statements.

MATTERS ON WHICH I REPORT BY EXCEPTION

I have nothing to report in respect of the following matters which I report to you if, in my opinion:

- adequate accounting records have not been kept; or
- the financial statements and the part of the Remuneration Report to be audited are not in agreement with the accounting records and returns; or
- I have not received all of the information and explanations I require for my audit; or
- the Governance Statement does not reflect compliance with HM Treasury's guidance.

REPORT

In forming my opinion, which is not qualified, I have considered the adequacy of the disclosures made in note 1 to the financial statements concerning the application of the going concern principle. The Health Protection Agency was abolished on 1 April 2013. Its functions transferred to other public sector health entities and so in accordance with the *Government Financial Reporting Manual* these financial statements have nevertheless been prepared on a going concern basis.

Amyas C E Morse
Comptroller and Auditor General
National Audit Office
157-197 Buckingham Palace Road
Victoria
London SW1W 9SP

25 June 2013

Statement of comprehensive net expenditure

FOR THE YEAR ENDED 31 MARCH 2013

	Note	2013 £'000	2012 £'000
Gross operating costs			
Employee costs	4	191,508	184,066
Other operating charges	6	106,527	108,392
Amortisation and depreciation	7	25,339	25,028
Total gross operating costs		323,374	317,486
Operating income	3	(175,862)	(156,649)
Net operating costs before interest		147,512	160,837
Interest receivable		(14)	(19)
Net operating cost for the financial year	16	**147,498**	160,818

The net operating costs reported above represent the net cost of the public health work funded by government grant-in-aid from the Department of Health and the devolved administrations.

Within the net operating costs shown above, an amount of £64,442,000 (2012: £56,282,000) is classified as programme costs and £83,056,000 (2012: £104,536,000) is classified as administration costs. In this context, the term administration means the costs are not programme costs.

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, which represents 54% (2012: 49%) of the total gross operating costs, 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.

Other comprehensive expenditure

FOR THE YEAR ENDED 31 MARCH 2013

	Note	2013 £'000	2012 £'000
Net operating costs for the financial year		147,498	160,818
Net (gain)/loss on revaluation of property, plant and equipment	8	(8,639)	939
Total comprehensive expenditure for the financial year		**138,859**	161,757

The notes on pages 72 to 98 form part of these accounts.
All operations are continuing (see note 1.1).

Statement of financial position

AS AT 31 MARCH 2013

	Note	2013 £'000	2012 £'000
Non-current assets			
Property, plant and equipment	8	291,100	278,057
Intangible assets	9	6,605	8,746
Financial assets	10	95	95
Total non-current assets		297,800	286,898
Current assets			
Inventories	11	19,857	13,037
Trade and other receivables	12	48,672	36,942
Cash and cash equivalents	13	61,950	57,757
Total current assets		130,479	107,736
Total assets		428,279	394,634
Current liabilities			
Trade and other payables	14	(64,709)	(59,746)
Provisions	15	(815)	(1,790)
Total current liabilities		(65,524)	(61,536)
Non-current assets plus net current assets		362,755	333,098
Non-current liabilities			
Provisions	15	(3,201)	(4,519)
Assets less liabilities		359,554	328,579
Taxpayers' equity			
Revaluation reserve		65,365	56,417
General reserve		294,189	272,162
Total taxpayers' equity		359,554	328,579

The notes on pages 72 to 98 form part of these accounts.
All operations are continuing (see note 1.1).
The financial statements on page 67 to 71 were approved and signed by:

Duncan Selbie
ACCOUNTING OFFICER
20 June 2013

Statement of changes in taxpayers' equity

FOR THE YEAR ENDED 31 MARCH 2013

	General reserve	Revaluation reserve	Total
	£'000	£'000	£'000
Balance at 1 April 2012	272,162	56,417	328,579
Net gain on revaluation of property, plant and equipment	-	8,639	8,639
Realised (gain) on inventories – biological standards (note 11)	-	(135)	(135)
Transfers between reserves (realisation of revaluation reserve)	(444)	444	-
Net operating costs for year after interest and tax	(147,498)	-	(147,498)
Total recognised income and expenses for the year	**(147,942)**	**8,948**	**(138,994)**
Grants from the Department of Health and the devolved administrations:			
Capital grant (note 16)	80	-	80
Revenue grant-in-aid (note 16)	142,389	-	142,389
Capital grant-in-aid (note 16)	27,500	-	27,500
Total grants from the Department of Health and the devolved administrations:	**169,969**	**-**	**169,969**
Balance at 31 March 2013	**294,189**	**65,365**	**359,554**

The notes on pages 72 to 98 form part of these accounts.
All operations are continuing (see note 1.1).

Statement of changes in taxpayers' equity

FOR THE YEAR ENDED 31 MARCH 2012

	General reserve	Revaluation reserve	Total
	£'000	£'000	£'000
Balance at 1 April 2011	260,026	57,133	317,159
Net loss on revaluation of property, plant and equipment	-	(939)	(939)
Realised (gain) on inventories - biological standards (note 11)	-	(187)	(187)
Transfers between reserves (realisation of revaluation reserve)	(410)	410	-
Capital grants received (note 16)	839	-	839
Release of reserves	(1,152)	-	(1,152)
Net operating costs for year after interest	(160,818)	-	(160,818)
Total recognised income and expenses for the year	**(161,541)**	**(716)**	**(162,257)**
Grants from the Department of Health and the devolved administrations:			
Revenue grant-in-aid (note 16)	146,177	-	146,177
Capital grant-in-aid (note 16)	27,500	-	27,500
Total grants from the Department of Health and the devolved administrations:	**173,677**	**-**	**173,677**
Balance at 31 March 2012	**272,162**	**56,417**	**328,579**

Under the *Government Financial Reporting Manual 2011/12*, the requirement for a capital grant reserve was removed with the balance on the capital grant reserve being transferred to the general reserve. The effect of this in these accounts is an increase to the general reserve of £15,013,000 (2011: £15,326,000; 2010: £12,283,000).

Statement of cash flows

FOR THE YEAR ENDED 31 MARCH 2013

	Note	2013 £'000	2012 £'000
Cash flows from operating activities			
Net operating cost before interest		(147,512)	(160,837)
Adjustments for non-cash transactions:			
Loss on de-recognition of property, plant and equipment	6	751	896
Amortisation and depreciation	7	25,339	23,804
Realised gain on inventories – biological standards	11	(135)	(187)
Release from reserves	7	-	(1,152)
Impairment in value of assets written off to the statement of comprehensive net expenditure	7	-	1,224
(Increase) in trade and other receivables	12	(11,730)	(153)
(Increase) in inventories	11	(6,820)	(1,783)
Increase in trade and other payables	14	4,963	7,435
Decrease in capital payables		295	3,137
Reclassification of asset held for sale		350	-
Expenditure charged to provisions	15	(275)	(347)
(Decrease) in provisions	15	(2,018)	(725)
Net cash (outflow) from operating activities		**(136,792)**	**(128,688)**
Cash flows from investing activities			
Purchase of property, plant and equipment	8	(27,116)	(20,844)
Purchase of intangible non-current assets	9	(1,587)	(7,425)
Decrease in capital payables		(295)	(3,137)
Interest received		14	19
Decrease in non-current financial assets	10	-	191
Net cash (outflows) from investing activities		**(28,984)**	**(31,196)**
Cash flows from financing activities			
Government revenue grant-in-aid received	16	142,389	146,177
Government capital grant-in-aid received	16	27,500	27,500
Other capital grants received	16	80	839
Net cash inflows from financing activities		**169,969**	**174,516**
Net increase in cash and cash equivalents in the period	13	**4,193**	**14,632**
Cash and cash equivalents at the beginning of the year	13	**57,757**	**43,125**
Cash and cash equivalents at the end of the year	13	**61,950**	**57,757**

The notes on pages 72 to 98 form part of these accounts.
All operations are continuing (see note 1.1).

Notes to the financial statements

1 STATEMENT OF ACCOUNTING POLICIES

1.1 Context

The Health Protection Agency is required by the Health Protection Agency Act 2004 (Schedule 1) to prepare annual financial statements.

These financial statements have been prepared in accordance with the *Government Financial Reporting Manual 2012/13* (FReM) issued by HM Treasury, as applicable to non-departmental public bodies. The accounting policies contained in the FReM apply International Financial Reporting Standards (IFRS) as adapted and interpreted for the public sector context. Where the FReM permits a choice of accounting policy, the accounting policy which is judged to be most appropriate to the particular circumstances of the Health Protection Agency for the purpose of giving a true and fair view has been selected. The particular policies adopted by the Health Protection Agency are described below. They have been applied consistently in dealing with items which are considered material to the accounts.

By virtue of the Health and Social Care Act 2012 all of the Health Protection Agency's functions continue in Public Health England as an executive agency established within the Department of Health with effect from 1 April 2013, except for those functions relating to the National Institute of Biological Standards and Control, which transferred to the Medicines and Healthcare products Regulatory Agency on 1 April 2013.

As a result, management considers it appropriate to adopt the going concern basis in preparing this annual report and financial statements

1.2 Accounting convention

These financial statements have been prepared under the historical cost convention except where otherwise stated in these accounting policies.

1.3 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.

1.4 Government grants

Grants and grants-in-aid received for revenue and capital purposes from the Department of Health and the devolved administrations are treated as contributions from controlling parties rather than as operating income and are therefore credited directly to the general reserve as received.

Capital grants receivable from non-government bodies for the purchase of specific capital assets are recognised as income as they are received provided no conditions are attached. Where there are conditions attached to the grant, the income is transferred to deferred income until those conditions are met.

1.5 Non-current assets: property, plant and equipment

Individual items of property, plant and equipment with a value below £5,000 are not capitalised. Individual items below this threshold are capitalised if they are part of a group of similar assets acquired around the same time and with a similar estimated useful life. In this case, the group is treated as a single asset for capitalisation and depreciation purposes.

Expenditure on property, plant and equipment is carried at historic cost in the statement of financial position, and classified under assets under construction, until the point at which an asset is brought into use. The asset is then reclassified as property, plant and equipment, under the appropriate asset category, and is carried in the statement of financial position at fair value less accumulated depreciation and impairment losses.

The fair value of freehold land and buildings is determined by an independent valuation carried out every five years in accordance with guidance issued by the Royal Institute of Chartered Surveyors. A valuation took place at 31 March 2013. Valuation is on an open market (existing use) basis except for buildings of a specialised nature, where a market value is not readily obtainable, which are valued on a depreciated replacement cost basis. In the years when no valuation occurs, land and buildings are reviewed to ensure that carrying amounts are not materially different from those that would be determined at the end of the reporting period, and in the third year following each quinquennial valuation, an independent verification exercise is carried out.

Other leasehold property, plant and equipment are valued at depreciated replacement cost which is used as a proxy for fair value. The depreciated replacement cost is calculated by applying, annually, appropriate indices.

The difference between the carrying value, net of accumulated depreciation, of property, plant and equipment at the date of the statement of financial position 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.

Impairment losses, where identified, are charged against the revaluation reserve balance attributable to the asset concerned. If the loss exceeds this balance, the excess is taken to the statement of comprehensive net expenditure.

1.6 Non-current assets: intangible assets

Intangible non-current assets comprise software and licences, purchased from third parties with a life of more than one year and a cost in excess of £5,000, and other costs relating to applications software including employee and other costs incurred in order to bring such software into a working condition.

Intangible non-current assets are carried on the statement of financial position at cost, net of amortisation and impairment, or depreciated replacement cost where materially different. Amortisation is calculated on a straight-line basis over the useful life of the asset. Useful lives are determined on an individual asset basis in accordance with its anticipated economic life.

1.7 Financial instruments

Investments, comprising unlisted investments, are carried at historic cost in the statement of financial position as a readily ascertainable market value cannot be obtained.

Trade and other receivables are measured at amortised cost. This is assumed to equal the invoiced amount, as the impact of discounting is not material. Accrued amounts not invoiced are measured at the estimated fair value of the goods or services rendered. Trade and other receivables are tested annually for impairment and the difference between the carrying amount and the impaired value is written off to operating costs. The carrying value of loans and receivables on the statement of financial position is net of a provision for impairment.

Notes to the financial statements Continued

Cash and cash equivalents are shown at fair value which is either the sterling balance or the sterling equivalent of foreign currency balances as at the statement of financial position date.

Trade and other payables are measured at the invoiced amount which is equivalent to fair value. Goods or services received but not yet invoiced are accrued at estimated fair value.

Contractual provisions are measured in accordance with note 1.16.

1.8 Depreciation: property, plant and equipment

Depreciation is provided on all property, plant and equipment assets from the month of purchase, but not in the month of disposal, at rates calculated to write off the fair value of each asset evenly over its expected useful life, as follows:

Asset category	Expected useful life
Freehold buildings	Up to 80 years
Leasehold land and buildings	Land: over the lease term. Buildings: over the shorter of the estimated useful life or the lease term
Fixtures and fittings	Up to 20 years
Plant and equipment	5 to 20 years
Vehicles	7 years
Information technology equipment	3 to 5 years

Freehold land and assets under construction are not depreciated.

1.9 Inventories

Inventories are valued at the lower of cost, or net current replacement cost if materially different, and net realisable value. For inventories 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 inventories.

1.10 Research and development

Research expenditure is charged to operating costs as incurred. Development expenditure is capitalised to the extent that it results in the creation of an asset and meets the criteria for capitalisation of internally-generated assets set out in International Accounting Standard 38.

1.11 Corporation tax

The agency is subject to corporation tax in respect of activities that could be defined to be 'trading' in nature as defined by the Corporation Taxes Act 2010.

1.12 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 non-current asset.

1.13 Operating leases

Operating lease costs are charged to operating costs on a straight-line basis over the lease term. Lease premiums paid for leasehold property are shown as financial assets (leasehold premium prepayments) in the statement of financial position. The prepayments are released annually to operating costs over the life of the relevant leases.

1.14 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 as at the statement of financial position date. Exchange rate gains and losses are recognised in the statement of comprehensive net expenditure in the period in which they arise.

1.15 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 Pension Scheme (NHSPS);

2. The United Kingdom Atomic Energy Authority (UKAEA) Combined Pension Scheme CPS; and

3. The Principal Civil Service Pension Scheme (PCSPS).

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, the *Government Financial Reporting Manual 2012/13* (FReM) 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.

Notes to the financial statements Continued

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 5.

1.16 Provisions

The Health Protection Agency maintains a number of provisions. These are reviewed annually as at the statement of financial position date and are adjusted to reflect the latest best estimate of the present obligation concerned. These adjustments are reflected in the statement of comprehensive net expenditure for the year. Where the time value of money is material, the future estimated cashflows are discounted to present values using the appropriate discount rate set by HM Treasury. Details of provisions are contained in note 15.

2 ANALYSIS OF NET OPERATING COST BY SEGMENT

The agency operates as a single reportable operating segment as defined within the scope of International Financial Reporting Standard 8 (Operating Segments) under paragraph 12 (aggregation criteria). 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. All parts of the agency provide products and services related to public health and are supported by government grant in aid. All decisions about resources are made with consideration to the agency as a single operating segment.

3 OPERATING INCOME

	2013 £'000	2012 £'000
Products and royalties	60,626	51,764
Laboratories and other services	69,312	68,537
Research and related contracts and grants	34,613	35,853
Other operating income	11,311	495
Total operating income	**175,862**	**156,649**

The total operating income for research and related contracts and grants above included grants received from the European Union of £3,899,000 (2012: £5,049,000).

An amount of £10,687,000 (2012: £nil) is included within other operating income. This relates to work carried out on behalf of the Department of Health in respect of the preparations for the establishment of Public Health England (see notes 4 and 6).

4 EMPLOYEES

	2013 £'000	2012 £'000
Employee costs		
Salaries and wages	149,886	145,926
Social security costs	13,440	12,801
Other pension costs (note 5)	19,540	19,194
Total costs of staff employed	**182,866**	**177,921**
Agency and seconded staff	10,031	6,267
Redundancy and early retirement costs	613	917
Total costs of employed and other staff	**193,510**	**185,105**
Manufacturing staff costs transferred (to) finished goods	(1,194)	(217)
Employee staff costs transferred (to) Porton Down reprovision	(808)	(822)
Total staff costs	**191,508**	**184,066**

An amount of £1,840,000 (2012: £nil) is included within total costs of staff employed relating to work carried out on behalf of the Department of Health in respect of the preparations for the establishment of Public Health England. This amount has been fully recovered from the Department of Health (see note 3).

Notes to the financial statements Continued

Employee numbers

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

	2013	2012
Medical	239	237
Nursing	171	174
Professional, administrative and operational support	1,173	1,146
Scientific and technical	1,992	1,936
Total employee numbers	**3,575**	**3,493**

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 2013, the HPA engaged staff on various employment 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 166 (2012: 121) whole time equivalents.

Redundancy and other departure costs

Exit package cost band (£)	Number of compulsory redundancies	Number of other departures agreed	Total number of exit packages by cost band	Number of compulsory redundancies	Number of other departures agreed	Total number of exit packages by cost band
	2013	2013	2013	2012	2012	2012
0-10,000	6	-	6	15	-	15
10,000-25,000	11	-	11	17	-	17
25,000-50,000	9	-	9	3	-	3
50,000-100,000	4	-	4	1	-	1
100,000-150,000	1	-	1	1	1	2
Total number of exit packages by type	**31**	**-**	**31**	**37**	**1**	**38**
Total resource cost (£000)			**928**			**839**

Redundancy costs have been calculated in accordance with the NHS Pension Scheme. Exit costs have been accounted for in full in the year of departure. Where the agency has agreed early retirements the additional costs are met by the agency and not by the pension scheme.

5 PENSION SCHEMES

a) Pension scheme participation

The majority of the agency's employees are covered by two pension schemes; the National Health Service Pension Scheme (NHSPS) and the United Kingdom Atomic Energy Authority (UKAEA) Combined Pension Scheme (CPS). A few employees have retained their individual membership of the Principal Civil Service Pension Scheme (PCSPS), or have exercised other options available as a result of the Social Security Act 1986. The pension 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 NHSPS 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: payment liabilities are underwritten by the Exchequer. The agency is unable to identify its share of the underlying assets and liabilities. 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 (GAD) values the NHSPS 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 GAD 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 & NHS Compensation for Premature Retirement Scheme Resource Accounts*, published annually. These accounts can be viewed on the NHS Pensions website at www.nhsbsa.nhs.uk. Copies can also be obtained from The Stationery Office.

Under NHSPS 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 NHSPS benefits. Employer contributions are charged to operating costs as they become due. Employer contributions are 14% of pensionable pay in all cases (2012: 14%).

Employee contribution rates are based on pensionable pay scaled to the full year, full time equivalent for part-time employees, as follows:

	2012/13 Annual pensionable pay banding	2012/13 Employee Contribution
Tier 1	Up to £21,175	5.0%
Tier 2	£21,176 – £26,557	6.5%
Tier 3	£26,558 – £48,982	8.0%
Tier 4	£48,983 – £69,931	8.9%
Tier 5	£69,932 – £110,273	9.9%
Tier 6	More than £110,274	10.9%

Notes to the financial statements Continued

Contributions for new members of the NHS Pension Scheme are based on their pensionable pay at the time of joining the Scheme.

The *Government Financial Reporting Manual 2012/13* (FReM) requires the scheme to be accounted for as defined contribution in nature.

c) The UKAEA Combined Pension Scheme

The UKAEA 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). The scheme is managed by the UKAEA. It is a multi-employer scheme which provides defined benefits to its members. The agency is unable to identify its share of the underlying assets and liabilities.

For the year ended 31 March 2013, employees were required to pay contributions of 5% (2012: 5%) of pensionable pay. The employer's contribution amounted to 17.3% (2012: 17.3%) of pensionable pay in all cases. Employer contributions are charged to operating costs as they become due.

In common with other public sector schemes the UKAEA 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 *Government Financial Reporting Manual 2012/13* (FReM) requires the scheme to be accounted for as defined contribution in nature.

d) Employer contributions

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

	2013 £'000	2012 £'000
The National Health Service Pension Scheme (NHSPS)	17,998	17,568
The UKAEA Combined Pension Scheme (CPS)	1,475	1,538
Other pension schemes	67	88
Total contributions by the Health Protection Agency	19,540	19,194

The contributions from the March 2013 supplementary payroll in respect of the NHS Pension Scheme were outstanding as the date of the statement of financial position; there were no prepaid contributions as at the date of the statement of financial position.

e) Retirements due to ill health

During 2012/13, there were no (2012: 1) early retirement from the agency on the grounds of ill-health. The NHS Pension Agency estimated the additional liabilities of these ill-health retirements to be £nil (2012: £11,021).

6 OTHER OPERATING CHARGES

	2013 £'000	2012 £'000
Laboratory consumables and services	38,617	40,856
Supplies and services	29,106	36,119
Accommodation	33,855	24,756
Travel and subsistence	5,165	5,461
Foreign exchange losses	138	28
Auditor's remuneration	130	130
(Release)/charge of provision for impairments	(38)	15
Net release of other provisions (note 15)	(2,018)	(725)
Loss on de-recognition of property, plant and equipment and intangible assets (notes 8 and 9)	751	896
Porton Down re-provision costs	821	856
Total other operating charges	**106,527**	**108,392**

Public Health England transition costs

An amount of £8,847,000 (2012: £nil) is included within the total operating costs relating to work carried out on behalf of the Department of Health in respect of the preparation for the establishment of Public Health England, of this, £6,287,000 relates to accommodation and £2,560,000 to supplies and services. These are one-off costs relating to the establishment of PHE. This amount has been fully recovered from the Department of Health (see note 3).

Notes to the financial statements Continued

Porton Down re-provision costs

The Porton Down re-provision costs relate to the expenditure incurred in developing the plans for re-providing the agency's specialist laboratory facilities at Porton Down, which are reaching the end of their useful life.

Due to the size of the likely investment required and the uncertainty surrounding the availability of public funding, it is considered appropriate to treat the expenditure as a charge to revenue rather than to carry it forward as an asset. The Porton Down reprovision costs includes payroll costs (note 4).

7 AMORTISATION AND DEPRECIATION

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

	2013 £'000	2012 £'000
Charge in respect of assets funded by capital grant-in-aid from the Department of Health:		
Non-current assets – property, plant and equipment (note 8)	21,649	19,496
Impairment (note 8)	-	1,224
Non-current assets – intangible assets (note 9)	3,690	3,156
	25,339	23,876
Charge in respect of other non-current assets – property, plant and equipment (note 8)	-	1,152
Total charge to operating costs	**25,339**	25,028

8 NON-CURRENT ASSETS – PROPERTY, PLANT AND EQUIPMENT

FOR THE YEAR ENDED 31 MARCH 2013

	Land and buildings	Fixtures and fittings	Plant, equipment and vehicles	Information technology equipment	Assets under construction (AUC)	Total
	£'000	£'000	£'000	£'000	£'000	£'000
Cost						
At 1 April 2012	225,815	8,171	82,039	15,748	24,359	356,132
Reclassification of tangible assets	5,496	(5,746)	(39)	(134)	-	(423)
Additions	-	-	50	-	28,653	28,703
Transfer of AUC	11,005	19	6,855	3,248	(21,127)	-
Transfer of AUC to intangible assets	-	-	-	-	(1,587)	(1,587)
Revaluations	8,869	(13)	(450)	(6)	-	8,400
Elimination of accumulated depreciation	(32,858)	-	-	-	-	(32,858)
De-recognition	(26)	-	(4,708)	(3,381)	-	(8,115)
At 31 March 2013	**218,301**	**2,431**	**83,747**	**15,475**	**30,298**	**350,252**

	Land and buildings	Fixtures and fittings	Plant, equipment and vehicles	Information technology equipment	Assets under construction (AUC)	Total
	£'000	£'000	£'000	£'000	£'000	£'000
Depreciation						
At 1 April 2012	19,472	3,036	43,251	12,316	-	78,075
Reclassification of assets	2,216	(2,119)	(62)	(108)	-	(73)
Charge for year	11,195	451	7,770	2,233	-	21,649
Revaluations	-	(5)	(234)	-	-	(239)
Elimination of accumulated depreciation	(32,858)	-	-	-	-	(32,858)
De-recognition	(25)	-	(4,172)	(3,205)	-	(7,402)
At 31 March 2013	**-**	**1,363**	**46,553**	**11,236**	**-**	**59,152**
Net book value						
At 31 March 2013	**218,301**	**1,068**	**37,194**	**4,239**	**30,298**	**291,100**
At 31 March 2012	206,343	5,135	38,788	3,432	24,359	278,057

Notes to the financial statements Continued

FOR THE YEAR ENDED 31 MARCH 2012

	Land and buildings	Fixtures and fittings	Plant, equipment and vehicles	Information technology equipment	Assets under construction (AUC)	Total
	£'000	£'000	£'000	£'000	£'000	£'000
Cost						
At 1 April 2011	216,799	8,016	81,026	15,221	21,201	342,263
Reclassification of assets	226	(71)	(204)	(620)	-	(669)
Impairment	-	-	(1,224)	-	-	(1,224)
Additions	-	-	70	-	28,199	28,269
Transfer of AUC	9,072	665	6,543	1,336	(17,616)	-
Transfer of AUC to intangible assets	-	-	-	-	(7,425)	(7,425)
Revaluations	-	18	121	-	-	139
Revaluations adjustment	(282)	(456)	(217)	(16)	-	(971)
De-recognition	-	(1)	(4,076)	(173)	-	(4,250)
At 31 March 2012	**225,815**	**8,171**	**82,039**	**15,748**	**24,359**	**356,132**

	Land and buildings	Fixtures and fittings	Plant, equipment and vehicles	Information technology equipment	Assets under construction (AUC)	Total
	£'000	£'000	£'000	£'000	£'000	£'000
Depreciation						
At 1 April 2011	9,479	2,014	38,988	11,156	-	61,637
Reclassification of assets	82	(6)	(91)	(608)	-	(623)
Charge for year	9,911	1,024	7,791	1,922	-	20,648
Revaluations	-	5	102	-	-	107
De-recognition	-	(1)	(3,539)	(154)		(3,694)
At 31 March 2012	**19,472**	**3,036**	**43,251**	**12,316**	**-**	**78,075**
Net book value						
At 31 March 2012	**206,343**	**5,135**	**38,788**	**3,432**	**24,359**	**278,057**
At 31 March 2011	207,320	6,002	42,038	4,065	21,201	280,626

Additions
Additions to property, plant and equipment are processed through assets under construction in the first instance and transferred into the appropriate asset category when the item is brought into service.

Reclassification of assets
During the year 2012/13, assets previously classified as fixtures and fittings with a total

net book value of £3,627,000 were reclassified to land and buildings. Assets previously classified as information technology with a net book value of £28,000 were reclassified to plant and equipment. Assets previously classified as plant and equipment with a net book value of £5,000 were reclassified as land and buildings.

During the year 2012/13, assets previously classified as land and buildings with a net book value of £350,000 were reclassified as a current asset as they are deemed to be an asset held for sale under IFRS 5. The amount is in respect of the HPA site at Seacroft, Leeds, which has been vacated with staff relocating to other sites.

During the year 2011/12, assets previously incorrectly classified as fixtures and fittings with a total net book value of £65,000 had £26,000 reclassified to plant and equipment and £39,000 to land and buildings during the year. Assets previously incorrectly classified as plant and equipment with a net book value of £139,000 had £105,000 reclassified to land and buildings and £34,000 to non current assets: intangible assets during the year. Assets previously incorrectly classified as IT equipment with a net book value of £12,000 were reclassified as non current assets: intangible assets during the year.

Assets held at nil net book value

Within the asset register, assets with a cost of £19,665,000 are held at nil net book value. The assets are being used beyond their expected useful life. As a consequence, the *Government Financial Reporting Manual 2012/13* requires a revaluation to the end of the useful economic life. If the agency were to recognise this, the revaluation would be a maximum of £3,110,000. However, the actual value of these assets is considerably less and management do not consider this to be material. If an adjustment were made, it would have no impact on the statement of comprehensive net expenditure as the accounting entries would be to increase the revaluation reserve in addition to the asset cost. As these assets currently have a life that is beyond that anticipated, they have economic value and are capable of use, therefore, management will review the asset position as part of ongoing activity to ensure that where an asset is approaching its end of depreciated life the value in life is re-assessed.

Land and buildings

A professional valuation of land and buildings was carried out on 31 March 2013 which resulted in a net revaluation of £8,869,000 which comprises of a revaluation increase of £17,768,000 and a revaluation decrease of £8,899,000. In line with International Accounting Standard 16, accumulated depreciation has been eliminated against the carrying amount of the asset with the net amount restated to equal the revalued amount. The net book values of land and buildings are as follows:

	2013 £'000	2012 £'000
Freehold buildings	185,536	174,068
Freehold land	28,715	28,225
Long leasehold land	4,050	4,050
	218,301	**206,343**

Third party owned assets

In addition to the above assets, the agency held non-current assets - property, plant and equipment,at no cost to the agency, with a total cost of £4,068,000 (2012: £4,141,000) which were funded by and remain in the ownership of third parties.
These assets, required to meet customer contracts, consisted of modular buildings £2,149,000 (2012: £2,149,000) and plant and equipment £1,919,000 (2012: £1,992,000).

Notes to the financial statements Continued

9 NON-CURRENT ASSETS – INTANGIBLE ASSETS

FOR THE YEAR ENDED 31 MARCH 2013

	Licences £'000	Software £'000	Total £'000
Cost or valuation			
At 1 April 2012	5,934	10,650	16,584
Reclassification of assets	-	73	73
Transfer from AUC	337	1,250	1,587
De-recognition	-	(938)	(938)
At 31 March 2013	**6,271**	**11,035**	**17,306**
Amortisation			
At 1 April 2012	689	7,149	7,838
Reclassification of assets	-	73	73
Charge for year	1,404	2,286	3,690
De-recognition	-	(900)	(900)
At 31 March 2013	**2,093**	**8,608**	**10,701**
Net book value			
At 31 March 2013	**4,178**	**2,427**	**6,605**
At 31 March 2012	5,245	3,501	8,746

FOR THE YEAR ENDED 31 MARCH 2012

	Licences £'000	Software £'000	Total £'000
Cost or valuation			
At 1 April 2011	122	12,401	12,523
Reclassification of assets	-	669	669
Transfer from AUC	5,812	1,613	7,425
De-recognition	-	(4,033)	(4,033)
At 31 March 2012	**5,934**	**10,650**	**16,584**
Amortisation			
At 1 April 2011	75	7,677	7,752
Reclassification of assets	-	623	623
Charge for year	614	2,542	3,156
De-recognition	-	(3,693)	(3,693)
At 31 March 2012	**689**	**7,149**	**7,838**
Net book value			
At 31 March 2012	**5,245**	**3,501**	**8,746**
At 31 March 2011	47	4,724	4,771

10 NON-CURRENT ASSETS: FINANCIAL ASSETS

	2013 £'000	2012 £'000
Advances to UKAEA Combined Pensions Scheme	71	70
Leasehold premium prepayment	21	22
Investments	3	3
Total non-current assets: financial assets	**95**	**95**

Advances to UKAEA Combined Pensions Scheme

The advances to the UKAEA Combined Pension Scheme relate to lump sums paid to premature retirees from the 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. The relevent amounts in respect of the premature retirees reaching normal retirement date within one year of the date of the statement of financial position have been classified as current assets within other receivables and total £nil (2012: £131,000).

Leasehold premium prepayment

The leasehold premium prepayment comprises the non-current element in respect of a lease premium which is being written down over the term of the lease.

Investments

The investments comprise the unlisted securities of Syntaxin Limited (Syntaxin), Proacta Incorporated (Proacta), and Spectrum (General Partner) Limited (Spectrum).

The agency holds a 5.1% interest in Syntaxin acquired in 2005 (2012: 5.1%). The holding was acquired for a cash consideration of £2,565 (2012: £2,565), and is made up of 100 Series B preferred shares of £1 each (2012: 100 Series B preferred shares of £1 each) and 2,465,000 ordinary shares of 0.1p each (2012: 2,465,000).

The agency holds a 1% interest in Proacta (2012: 1%) and is made up of 25,052 shares (2012: 25,052) of the US$ 0.001 common stock of Proacta, for which there was no cash consideration.

The agency also holds a 3.1% interest in Spectrum (2012: 3.1%) and is made up of 3,125 (2012: 3,125) ordinary shares of £0.01 in Spectrum, which were acquired for a cash consideration. The company does not trade and has no assets other than £100 share capital.

The agency has no significant influence over the operating and financial policies of Syntaxin, Proacta or Spectrum. There is no easily ascertainable market value for each investment, so the Board discloses these on a historic cost basis as permitted under International Accounting Standard 39.

Notes to the financial statements Continued

11 CURRENT ASSETS: INVENTORIES

	2013 £'000	2012 £'000
Raw materials	803	580
Finished goods	9,338	3,516
Biological standards	6,702	6,051
Laboratory consumables and other stores	3,014	2,890
Total inventories	**19,857**	**13,037**

When first recorded in the balance sheet at 31 March 2001 an unrealised gain of £7,320,000 was credited to the revaluation reserve. In subsequent years the portion of the reserve relating to these inventories held at 31 March 2001 and distributed during the year is credited as a realised gain to operating costs. The amount thus realised in 2013 was £135,000 (2012: £187,000).

12 CURRENT ASSETS: TRADE AND OTHER RECEIVABLES

	2013 £'000	2012 £'000
Trade receivables	20,604	17,203
Accrued income	17,098	11,151
Prepayments	3,781	4,458
Other receivables	6,839	4,130
Asset held for sale (see note 8)	350	-
Total trade and other receivables	**48,672**	**36,942**

Intra-government balances

Intra-government balances within the totals for trade and other receivables are as follows:

	2013 £'000	2012 £'000
Balances with the Department of Health	7,823	2,803
Balances with NHS trusts	4,288	3,202
Balances with other central government bodies	1,318	1,518
Balances with local authorities	128	185
Total intra-government balances	**13,557**	**7,708**

13 CURRENT ASSETS: CASH AND CASH EQUIVALENTS

Analysis of changes in net funds 2013

	31 March 2013 £'000	31 March 2012 £'000	change in year £'000
Cash at bank and in hand	61,950	57,757	4,193
Overdraft (note 14)	(43)	(218)	175
Net funds	**61,907**	**57,539**	**4,368**

Analysis of changes in net funds 2012

	31 March 2012 £'000	31 March 2011 £'000	change in year £'000
Cash at bank and in hand	57,757	43,125	14,632
Overdraft (note 14)	(218)	(693)	475
Net funds	**57,539**	**42,432**	**15,107**

The overdraft is a technical book overdraft relating to the value of un-presented payments as at the statement of financial position date. No actual bank overdraft existed at any time during the year.

Analysis of net funds

	2013 £'000	2012 £'000
Government Banking Service	58,589	52,015
Commercial bank accounts	3,318	5,524
Net funds	**61,907**	**57,539**

Notes to the financial statements Continued

14 CURRENT LIABILITIES: TRADE AND OTHER PAYABLES

	2013 £'000	2012 £'000
Trade payables	10,800	8,631
Overdraft (note 13)	43	218
Deferred income	15,901	17,371
PAYE and social security	4,313	14
Accruals	30,978	30,301
Other payables	2,674	3,211
Total trade and other payables	**64,709**	**59,746**

The overdraft is a technical book overdraft relating to the value of un-presented payments as at the statement of financial position date. The cash to meet these payments was held in the agency's account with the Government Banking Service. No actual bank overdraft existed at any time during the year.

Intra-government balances

Intra-government balances within the totals for trade and other payables are as follows:

	2013 £'000	2012 £'000
Balances with the Department of Health	3,004	1,010
Balances with NHS trusts	775	3,892
Balances with other central government bodies	5,634	121
Balances with local authorities	1,648	29
Total intra-government balances	**11,061**	**5,052**

15 PROVISIONS FOR LIABILITIES AND CHARGES

Movement in provisions 2013

	Legal claims £'000	Future costs of early retirement £'000	Other provisions £'000	Total provision £'000
Provision at 1 April 2012	2,627	1,267	2,415	6,309
Expenditure during the year	(138)	(127)	(10)	(275)
Reversal of unused provisions	(960)	-	(1,453)	(2,413)
Additional provisions	-	120	275	395
Provision at 31 March 2013	**1,529**	**1,260**	**1,227**	**4,016**

These provisions are classified on the statement of financial position, as follows:

	2013 £'000	2012 £'000
Current liabilities		
Legal claims	29	200
Future costs of early retirement	84	132
Other provisions	702	1,458
Total provisions classed as current liabilities	**815**	**1,790**
Non-current liabilities		
Legal claims	1,500	2,427
Future costs of early retirement	1,176	1,135
Other provisions	525	957
Total provisions classed as non-current liabilities	**3,201**	**4,519**
Total provisions	**4,016**	**6,309**

Legal claims

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. The claim was settled on 22 April 2010 and the agency is liable for 50% of the settlement amount which continues until an uncertain date in the future, and is recorded at its net present value using discount rates in line with HM Treasury guidance; the change in discount rate has led to the movement in the value of the provision.

Future costs of early retirement

The provision for the future costs of early retirement consists of the element of the cost in respect of employees who took early retirement before 31 March 2013 which, in accordance with the terms of the agency's pension schemes (note 5) falls to the agency. The provision relates entirely to members of the UKAEA CPS.

Notes to the financial statements Continued

Other provisions

Other provisions consist of the following:

- A provision of £567,000 (2012: £487,000) for the estimated costs of making good dilapidations on various properties leased by the agency, when these properties are returned to the lessors on the termination of the leases. The sum represents the expected costs of making good dilapidations.

- A provision of £426,000 (2012: £438,000) for the estimated costs of the agency's liabilities for the disposal of radioactive sources falling within the scope of the High Activity Sealed Radioactive Sources and Orphan Sources Regulations 2005. The sum represents the expected costs of disposal.

- A provision of £18,000 (2012: £24,000) for the estimated costs of the agency's liabilities in respect of the future costs of life assurance premiums for 3 staff (2012: 5) up to their retirement dates to equalise the benefits provided to them under a former pension scheme.

- A provision of £166,000 (2012: £125,000) in respect of foreign income tax due in respect of employees seconded abroad, which may not be recovered in the UK under relevant double taxation treaties.

- A provision of £nil (2012: £1,341,000) in respect of an ongoing review by HMRC to better understand the activities of the agency and with particular reference to the merger with the National Biological Standards Board. HMRC has completed its review and have confirmed that no corporation tax is due.

- A provision of £50,000 (2012: £nil) in respect of several claims by employees regarding contractual entitlements.

16 GOVERNMENT FINANCING

The following grant-in-aid has been received during the year:

	2013 £'000	2012 £'000
Department of Health	166,150	169,759
Scottish Government	607	607
National Assembly for Wales	1,073	1,073
Northern Ireland Assembly	350	340
Consultants' Clinical Excellence Award	1,709	1,898
Total government grant-in-aid received	169,889	173,677
Less government grant-in-aid in respect of general capital expenditure	(27,500)	(27,500)
Total revenue government grant-in-aid received	142,389	146,177

The Health Protection Agency was a UK-wide body. In addition to the formal grant in aid reported above, the agency received income from the devolved administrations of £131,000 (2012: £392,000) to fund specific work, which is included within operating income (note 3). The agency also received other income from UK government departments for contract and grant work which is also included within note 3.

Notes to the financial statements Continued

Comparison of government grant-in-aid with results for the year

The net operating cost for the financial year shown in the statement of comprehensive net expenditure and the related total revenue government grant-in-aid for the financial year may be compared as follows:

	2013 £'000	2012 £'000
Total revenue government grant-in-aid received	142,389	146,177
Depreciation on assets funded by capital grant-in-aid from the Department of Health (note 7)	25,339	22,652
Loss on de-recognition of assets funded by capital grant-in-aid from the Department of Health (note 6)	751	896
Impairment of assets (note 7)	-	1,224
Total revenue government grant-in-aid relating to net operating cost for the financial year	**168,479**	**170,949**
Less: net operating cost for the financial year	(147,498)	(160,818)
Government grant-in-aid less net operating cost for the year	**20,981**	**10,131**

Capital expenditure for the year

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

	2013 £'000	2012 £'000
Total capital government grant-in-aid relating to the capital expenditure for the financial year	27,500	27,500
Capital grants received for specific projects (Department of Health cash)	80	647
Other capital grants received (non Department of Health)	159	192
Total capital financing for the financial year	**27,739**	**28,339**
Less: capital expenditure for the financial year	(28,703)	(28,269)
Capital financing less capital expenditure for the year	**(964)**	**70**

In line with the *Government Financial Reporting Manual 2012/13*, the capital grants received from bodies other than the Department of Health were credited to income in the year the assets were brought into use.

17 RELATED PARTY DISCLOSURES

The Health Protection Agency is sponsored by the Department of Health, which is regarded as a related party. During the year the Health Protection 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 bodies including the NHS Litigation Authority.

In addition, the Health Protection Agency has had transactions with other government departments and central government bodies. These included the Home Office, 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 ended 31 March 2013, no Board members, members of senior management, or other parties related to them have undertaken any material transactions with the Health Protection Agency except for the following:

Related party	Name of HPA Board member or senior manager	HPA/related party appointment	Value of goods and services provided to related party £'000 (prior year)	Value of goods and services purchased from related party £'000 (prior year)	Amounts owed to related party £'000 (prior year)	Amounts due from related party £'000 (prior year)
East of England SHA	Dr Paul Cosford	Deputy Chief Executive/Regional Director of Public Health	**30** (104)	**365** (366)	- (-)	- (-)
London School of Hygiene & Tropical Medicine	1. Dr David Heymann 2. Mr Justin McCracken 3. Professor Anthony Kessel	1. Chairman/ lecturer 2. Chief Executive Officer/Member of Court of Governors 3. Director of Public Health/Co-ordinator	**121** (159)	**696** (462)	**57** (-)	**25** (23)
The Royal Free Hospital	1. Dr Barbara Bannister 2. Mrs Deborah Oakley	1. HPA non-executive board member/employee 2. HPA non-executive board member/ non-executive	**91** (86)	**322** (364)	**20** (1)	**13** (11)
UCLH NHS Foundation Trust	Dr Dipti Patel	Non-executive board member, part-time Director of NaTHNaC	**135** (78)	**755** (548)	**1** (5)	**16** (19)

Notes to the financial statements Continued

18 CAPITAL COMMITMENTS

The contracted capital commitments at 31 March 2013 not provided for in the accounts amounted to £10,581,000 (2012: £8,006,000).There were no other financial commitments at 31 March 2013 (2012: £nil) that require disclosure.

19 COMMITMENTS UNDER OPERATING LEASES

The agency's minimum total future obligations under non-cancellable operating leases in existence as at 31 March 2013 are given in the table below reported according to the year in which the total future lease payment arises. The obligations are as at the date of the statement of financial position.

Obligations under operating leases comprise:	2013 £'000	2012 £'000
Land and buildings:		
- Not later than one year	4,818	4,106
- Later than one year and not later than five years	8,452	3,170
- Later than five years	1,858	607
Other leases:		
- Not later than one year	1,149	1,229
- Later than one year and not later than five years	179	90
- Later than five years	-	4
Total obligations under operating leases at 31 March	16,456	9,206

The total operating lease payments recognised as an expense in the year were £7,546,000 (2012: £5,671,000).

The 2013 commitments include a commitment of £5,600,000 in relation to leases formally transferred from the NHS which were not included in the previous year.

20 FINANCIAL INSTRUMENTS

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 most other business entities. The agency has no authority to borrow or to invest without the prior approval of the Department of Health and HM Treasury. Financial instruments held by the agency comprise mainly assets and liabilities generated by day-to-day operational activities and are not held to change the risks facing the agency in undertaking its activities.

The Health Protection Agency operates foreign currency bank accounts to handle transactions denominated in Euro (€) and US Dollar ($). This helps to manage potential exposure to exchange rate fluctuations. The fair value of cash is the same as the book value as at the statement of financial position date.

During the year to 31 March 2013, the agency received Euro income equivalent to £9,008,000 (2012: £6,219,000) and US Dollar income equivalent to £7,090,000 (2012: £7,061,000) upon which there was some currency risk.

The only other currency risk is that of a Euro currency bank balance, valued at £249,000 (2012: £261,000), and a US Dollar bank balance valued at £185,000 (2012: £278,000). 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.

21 CONTINGENT LIABILITIES

As at 31 March 2013, 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.

As mentioned in Note 15, the provision for legal claims includes a significant clinical negligence claim which the agency inherited from the Public Health Laboratory Service. The claim was settled on 22 April 2010 and the agency has provided for its liability for 50% of the net present value of the settlement amount using discount rates in line with HM Treasury guidance. The agency can be held jointly and severally liable for the remaining 50% which is estimated at £1,500,000 (2012: £2,461,000).

There were no other contingent liabilities as at 31 March 2013 (2012: £nil).

22 LOSSES AND SPECIAL PAYMENTS

Losses and special payments requiring disclosure during the year ended 31 March 2013 totalled £75,000 (2012: £68,000).

23 EVENTS AFTER THE REPORTING PERIOD

In accordance with the requirements of International Accounting Standard 10, events after the reporting period are considered up to the date on which the accounts are authorised for issue. This is interpreted as the date of the Certificate and Report of the Comptroller and Auditor General.

By virtue of the Health and Social Care Act 2012, all of the Health Protection Agency's functions, except for those functions relating to the National Institute of Biological Standards and Control that transferred to the Medical Healthcare products Regulatory Authority (MHRA), were transferred to Public Health England (PHE) on 1 April 2013.

These provisions are classified on the statement of financial position, as follows:

	To be transferred to PHE £'000	To be transferred to MHRA £'000	HPA Total £'000
Non-current assets			
Property, plant and equipment	196,052	95,048	291,100
Intangible assets	6,158	447	6,605
Financial assets	95	-	95
Total non-current assets	**202,305**	**95,495**	**297,800**
Current Assets			
Inventories	13,097	6,760	19,857
Trade and other receivables	47,134	1,538	48,672
Cash and cash equivalents	53,987	7,963	61,950
Total current assets	**114,218**	**16,261**	**130,479**
Total assets	**316,523**	**111,756**	**428,279**
Current liabilities			
Trade and other payables	(57,635)	(7,074)	(64,709)
Provisions	(813)	(2)	(815)
Total current liabilities	**(58,448)**	**(7,076)**	**(65,524)**
Non-current assets plus net current assets	**258,075**	**104,680**	**362,755**
Provisions	(3,185)	(16)	(3,201)
Assets less liabilities	**254,890**	**104,664**	**359,554**
Taxpayers' equity			
Revaluation reserve	2,957	62,408	65,365
General reserve	251,933	42,256	294,189
Total taxpayers' equity	**254,890**	**104,664**	**359,554**

The Accounting Officer for HPA authorised these financial statements for issue on 25 June 2013

Five-year financial summary

STATEMENT OF COMPREHENSIVE NET EXPENDITURE

	2008/09[1] £'000	2009/10 £'000	2010/11 £'000	2011/12 £'000	2012/13 £'000
Gross operating costs					
Employee costs	180,438	199,080	190,144	184,066	191,508
Other operating costs	117,119	134,974	110,383	108,392	106,527
Amortisation and depreciation	21,280	28,888	23,203	25,028	25,339
Total operating costs	**318,837**	**362,942**	**323,730**	**317,486**	**323,374**
Operating income	(128,483)	(140,433)	(146,298)	(156,649)	(175,862)
Interest receivable	(291)	(18)	(924)	(19)	(14)
Net operating cost for the financial year	**190,063**	**222,491**	**176,508**	**160,818**	**147,498**

GOVERNMENT FUNDING

	2008/09[1] £'000	2009/10 £'000	2010/11 £'000	2011/12 £'000	2012/13 £'000
Total revenue government grant-in-aid relating to net operating cost for the financial year	190,370	221,846	176,064	170,949	168,479
Net operating costs	(190,063)	(222,491)	(176,508)	(160,818)	(147,498)
Gross surplus or (deficit)	**307**	**(645)**	**(444)**	**10,131**	**20,981**

STATEMENT OF FINANCIAL POSITION

	2008/09[2] £'000	2009/10 £'000	2010/11 £'000	2011/12 £'000	2012/13 £'000
Non-current assets					
Property, plant and equipment	249,468	274,247	280,626	278,057	291,100
Intangible assets	2,247	3,870	4,771	8,746	6,605
Financial assets	287	286	286	95	95
Total non-current assets	252,002	278,403	285,683	286,898	297,800
Current assets					
Inventories	10,594	13,417	11,254	13,037	19,857
Trade and other receivables	35,527	46,292	36,789	36,942	48,672
Cash and cash equivalents	29,756	28,093	43,125	57,757	61,950
Total current assets	75,877	87,802	91,168	107,736	130,479
Total assets	327,879	366,205	376,851	394,634	428,279
Current liabilities					
Trade and other payables	(56,754)	(58,113)	(52,311)	(59,746)	(64,709)
Provisions	(2,656)	(2,092)	(435)	(1,790)	(815)
Total current liabilities	(59,410)	(60,205)	(52,746)	(61,536)	(65,524)
Non-current assets plus net current assets	268,469	306,000	324,105	333,098	362,755
Non-current liabilities					
Provisions	(3,462)	(5,553)	(6,946)	(4,519)	(3,201)
Assets less liabilities	**265,007**	**300,447**	**317,159**	**328,579**	**359,554**
Taxpayers' equity					
Revaluation reserve	50,950	56,445	57,133	56,417	65,365
General reserve[2]	214,057	244,002	260,026	272,162	294,189
Total taxpayers' equity	**265,007**	**300,447**	**317,159**	**328,579**	**359,554**

[1] The agency merged with the National Biological Standards Board (NBSB) on 1 April 2009. In accordance with Financial Reporting Standard number 6, the financial information presented for 2008/09 has been restated, as if the NBSB had been part of the agency throughout that accounting period.

[2] Under the *Government Financial Reporting Manual 2012/13*, the requirement for a capital grant reserve has been removed and funds have been transferred to the general reserve as appropriate.

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