Health Protection Agency

ANNUAL REPORT AND ACCOUNTS | 2011/12

Health Protection Agency
Annual Report and Accounts 2011/12

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PROFESSOR DAVID L HEYMANN
CHAIRMAN

Chairman's foreword

This is one of the more challenging years the Health Protection Agency has faced, not merely because of the range of health protection issues in which it has been involved, but because the organisation, in moving towards the transition to Public Health England (PHE) on 1 April 2013, is part of the wider changes to the entire health system that are being ushered in by the Health and Social Care Act 2012.

This has obviously had a major impact. The HPA's priority has been to continue to provide its customary services within a very rapidly changing health landscape in respect of its local partners and stakeholders, and staff have done this with selfless competence despite the uncertainties that go along with the transformation to PHE. At the same time, many staff have also contributed a considerable amount of time to the various Department of Health workstreams on the development of PHE without compromising their HPA responsiblities.

PUBLIC HEALTH ENGLAND

The new public health system, of which PHE will be part, has the potential to provide the coordinated, comprehensive public health service needed to meet the challenges posed by the 21st century, whether from new and emerging diseases, the resurgence of old ones or the impact on health of environmental developments such as climate change. It also has the potential to add value and expertise to those activities of the department that deal with non-communicable diseases and other issues along the life course.

The experience and expertise of the staff currently within the HPA will be an invaluable resource for PHE as their functions move into the new executive agency. PHE will, like the HPA, work at local, national and international levels but across a far broader spectrum of activity.

The HPA's international work – which includes the provision of advice and support to public health professionals around the world, as well as participation in EU and WHO networks – took a giant stride forward this year. HPA supported three secondments – to India, South Africa and Australia – and more are in the pipeline. These will further extend and consolidate our existing global network, which is essential now that extensive travel has transformed the world into a global village in public health terms.

In addition, the World Health Organization has now designated the HPA as a Collaborating Centre on Mass Gatherings and Extreme Events. This brings to nine the number of WHO collaborating centres in the HPA, reflecting the agency's expertise and high international standing. I am exceptionally pleased that the HPA will be able to hand over to PHE such a vibrant and productive international programme.

HPA'S LEGACY

I am also proud that the HPA's very considerable legacy in respect of its cutting edge science, its surveillance, its microbiological and epidemiological expertise both nationally and locally will provide a firm foundation on which to build these elements of PHE's work.

The HPA is continuing to plan for the reprovision of the ageing facilities at Porton Down and awaits a decision from the Department of Health.

TRIBUTE TO THE DEDICATION, PROFESSIONALISM AND FOCUS OF OUR STAFF

The HPA Board and I will continue to do everything we can to support the HPA and its staff during the transition to PHE. I would like to again take the opportunity to pay tribute to the dedication, professionalism and focus of our staff who have worked calmly on through a period of prolonged uncertainty and delivered the HPA's services without any loss of quality or dip in standards. This is a major achievement and I am very grateful to staff for this.

The Board has, throughout this year, sought to contribute to the development of PHE and will continue to do so as we move through the transition process to 1 April 2013. There is still much work to be done to ensure the transition is as seamless as possible and it is of critical importance that we stay focused on this target and get it right. This we are determined to do.

> "we will support the HPA and its staff during the transition to PHE"

JUSTIN McCRACKEN
CHIEF EXECUTIVE

Chief executive's statement

This has certainly been a busy and productive year as can be seen from the wide variety of activity recorded in this year's annual report.

It began with the catastrophic Japanese tsunami and the damage to the nuclear reactors in Fukushima which required the HPA to issue advice to people at home and abroad and carry out high volume air sampling to monitor radiation levels in this country.

Our 'business as usual' included everything from tuberculosis, measles and *E. coli* outbreaks to radon testing in communities in high-risk areas. We looked at fish pedicures and levels of mercury in people's hair, acted to contain a surge in whooping cough cases and contributed to the development of a vaccine against meningitis B.

FINANCIAL CHALLENGES

We have done all this against a background of much reduced government funding. Managers and staff across the HPA have responded magnificently to the associated challenges, prioritising very carefully, taking every opportunity to raise income from other sources, and of course by determined hard work. The income from other sources now amounts to £157m, which represents around half of our total funding.

When I joined the organisation, I said I was determined to see the HPA transformed from an organisation of experts into an expert organisation. This model has been tried and tested in all kinds of extremes and I think it is fair to say that we have succeeded in building that expert organisation.

PUBLIC HEALTH ENGLAND

The year, of course, ended with the passage of the Health and Social Care Bill, which includes provision for the abolition of the HPA from 1 April 2013 and the transfer of its functions (with the exception of those provided by the National Institute for Biological Standards and Control) into Public Health England (PHE).

HPA staff have made a substantial contribution to the development and design of this new executive agency. There is considerable enthusiasm about the opportunities afforded by the new arrangements to deliver a seamless service right across public health in which the outputs of our expert services can be harnessed to local knowledge, priorities and resources in order to deliver improved outcomes.

PROFESSIONALISM, EXPERTISE, DEDICATION

I believe PHE will benefit enormously from the exceptional strengths of the HPA and that the professionalism, expertise, dedication and determination of its workforce will be a major asset to the new body. Looking forward to the coming year, our main goals will be to ensure the HPA provides all the expert advice, information and support required throughout the Olympic and Paralympic Games, and to work tirelessly to assure a seamless transition from HPA to PHE at the end of the year.

As the HPA enters its final year, both I and all my staff retain a firm dual focus – continuing to protect people by the delivery of the HPA's priority aims and objectives for 2012/13, and preparing for the new public health system to be introduced in 2013.

> "the HPA has been transformed from an organisation of experts to an expert organisation"

Some significant events from 2011/12

APRIL

Following damage to the **Fukushima** nuclear reactors in Japan, the HPA issues advice and undertakes high volume air sampling to monitor radiation levels. Minute traces of radiation are found that pose no risk to public health. The HPA is on standby 24/7 to provide dose and health risk assessment expertise to Tokyo, if required.

On World Malaria Day, the HPA reminds people travelling to countries with **malaria** to take anti-mosquito precautions and anti-malaria tablets after infections in the UK rise by 30%, from 1,370 cases in 2008 to 1,761 in 2010.

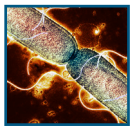
HPA research into outbreaks of **intestinal disease** following visits to petting farms shows that one risk factor is reliance on hand gels instead of hand washing. The HPA says that hand gels are not effective at killing bugs such as *Escherichia coli* or cryptosporidium found in animal droppings on farms.

MAY

According to HPA surveillance, reports of **dengue fever** in UK travellers more than double, rising from 166 cases in 2009 to 406 in 2010. Most are associated with travel to India. Reported cases of chikungunya, another mosquito-borne infection, rise from 59 to 79 cases in the same period.

The HPA issues advice to travellers and health professionals about a major outbreak of **verocytotoxin-producing *Escherichia coli*** (VTEC) O104 in Germany that is linked to 51 deaths and more than 860 cases of haemolytic uraemic syndrome.

By the end of May, 496 cases of **measles** are confirmed in England and Wales compared with 374 cases for the whole of 2010. Cases are mainly in those under 19, almost all unvaccinated. However, in two-year-olds, uptake of the MMR vaccination reaches 90% – the highest level for 13 years.



JUNE

HPA scientists are among the first to assemble an accurate and detailed genetic analysis of the ***E. coli* O104** strain causing the outbreak in Germany. Their annotated map of the genome assists the international effort to control the outbreak and confirms earlier research that *E. coli* O104 has evolved to produce a new variant.

More than 100,000 people in the UK will be living with **HIV** by 2012, HPA epidemiologists predict in a report to mark 30 years since HIV was first diagnosed. Since the first diagnosis of HIV, 115,000 infections have been identified in the UK.

For the first time in more than 10 years, HPA figures show a small decrease (-1%) in the total number of **sexually transmitted infections** (STIs) diagnosed in England in 2010 compared to the previous year. Trends for specific infections vary, with decreases in diagnoses of syphilis (-8%; 2,846 to 2,624), genital warts (-3%; 77,900 to 75,615) and non-specific genital infection (-6%; 85,188 to 79,983) but rises in diagnoses of genital herpes (8%; 27,564 to 29,703) and gonorrhoea (3%; 15,978 to 16,531). Diagnoses of chlamydia were stable (189,625 to 189,612) despite a 10% increase in tests through the National Chlamydia Screening Programme.

JULY

Well-managed **landfill sites** do not pose a significant risk to public health, HPA toxicologists and environmental scientists conclude after taking into account the available epidemiology, monitoring results from the Environment Agency and the latest advice from the Independent Committee on Toxicity.

HPA scientists estimate that 2,000 to 5,000 Scottish homes could have excess levels of **radon gas** after publishing a new radon map of Scotland that was produced with the British Geological Survey using digital mapping techniques.

Around 4,200 people in England may need a liver transplant by 2020 unless action is taken to reduce **hepatitis C,** the HPA warns. Around 216,000 people in the UK are living with chronic hepatitis C, many of them unaware of their illness. Those people who have not yet been diagnosed and treated are at risk of developing serious liver disease.

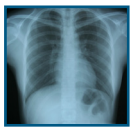
The HPA and partners establish a link between a batch of imported eggs and an outbreak of ***Salmonella*** **Enteritidis** Phage Type 14b infection in England and Wales, which has affected 262 people. The eggs come from a specific shed on one farm in Spain. The hens involved are culled and the shed cleaned.

Staff work with the producers of The Archers, the BBC Radio 4 series, to make sure the fictional handling of an outbreak of ***E. coli*** **O157** is portrayed accurately.

AUGUST

The World Health Organization recognises the HPA's preparations for the **2012 Olympic and Paralympic Games**, and the high level of support provided by a specialist HPA team in London, by designating the office as a WHO Collaborating Centre on Mass Gatherings and Extreme Events. The HPA now has nine WHO collaborating centres.

The HPA's Advisory Group on Ionising Radiation publishes new estimates on the lifetime risk of developing 'solid cancers' – such as breast, lung and colon cancer – following exposure to **ionising radiation**. The new estimates are used to calculate the cancer risks from various medical investigations, including CT scans and mammography screening.



SEPTEMBER

A mobile X-ray unit to 'find and treat' people with **tuberculosis** in London's hard-to-reach communities is a cost-effective way of treating people with tuberculosis, says a paper by HPA experts in the *British Medical Journal*.

Up to 17 million people in the UK – one in four of the population – suffer from an **intestinal infection** each year, and rates of gastrointestinal illness have risen by nearly 50% since the 1990s, HPA researchers tell the agency's annual conference.

Three times as many people sought post-exposure vaccine for **rabies** in 2008/09 as 2000, says the HPA. Potential exposures to rabies often occur in India, Thailand and Turkey. Dogs, bats, cats and monkeys are the animals most commonly involved.

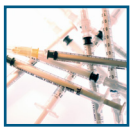
The HPA's National Poisons Information Service launches a computer system to highlight when A&E hospital staff access information about recreational drugs, or so-called 'legal highs', in order to treat patients. This will help to identify trends in **drug misuse** and speed up diagnosis and treatment.

OCTOBER

Fish pedicures are unlikely to pose a risk of infection provided that good standards of hygiene are observed, says an HPA-led working group. However, people with weakened immune systems or underlying medical conditions should avoid fish pedicures.

Screening all intensive care patients for **meticillin-resistant *Staphylococcus aureus*** (MRSA) using new molecular tests could be a good use of NHS resources, according to HPA research published in the *British Medical Journal*, provided patients found to be MRSA positive are treated promptly.

HPA surveillance shows that the bacterium that causes **gonorrhoea** is becoming increasingly resistant to the antibiotic cefixime, which has been the first-line therapy for a decade. In some patients, this decreased susceptibility has led to treatment failure. Treatment guidelines for doctors are changed as a result.



NOVEMBER

The HPA's annual Shooting Up report says that people who inject drugs are at increased risk of developing bacterial infections such as wound **botulism and tetanus**, which, less than a decade ago, were very rare in drug users.

More than half of people who contact their doctor or nurse about **coughs or colds** expect to be given antibiotic treatment, according to research commissioned by the HPA. This is despite the fact that most coughs, colds and 'flu are caused by viruses, which do not respond to antibiotics.

The HPA recruits 120 volunteer mothers and children to take part in research to assess the level of **toxic chemicals** found in people across Europe. Scientists will measure the level of mercury in volunteers' hair, and the level of cadmium, phthalates and tobacco smoke chemicals in their urine.

New guidelines for managing **norovirus** outbreaks, published by the HPA and other professional bodies, say that cases should be managed in single rooms and bays in the first instance, if possible. If this fails to control an outbreak, closure of an entire ward should be considered.

DECEMBER

The agency's annual report on **tuberculosis** shows that 8,483 new cases of the disease were reported in the UK in 2010 – a decrease of 4.9 per cent from 2009. London had the highest proportion of cases in the UK with almost 40%, followed by the West Midlands with 11%.

JANUARY

The HPA writes to GPs about **whooping cough** after cases rise from 421 in 2010 to 1,040 in 2011. Whooping cough levels peak in cycles, rising every three to four years, and the 2011 figures are in line with the last peak of 2008. The letter to doctors stresses the importance of vaccination and the prompt reporting of cases to reduce the spread of the disease.

Guidelines for the investigation, control and prevention of infections caused by **group A streptococcal (GAS) bacteria** in hospitals are launched by an HPA-led working group. GAS infections include sore throats, skin infections and invasive disease such as necrotising fasciitis.

FEBRUARY

After **Schmallenberg virus** (SBV) is identified in UK livestock (mostly sheep and some cattle), a HPA expert in emerging infections says there is currently no evidence that the new animal virus causes illness in humans. However, the HPA, which works closely with veterinary and European public health agencies, advises farm workers to report any fevers they develop following contact with affected animals.

An outbreak of ***Salmonella* Newport** among 30 people in England, Wales and Northern Ireland may be linked to the consumption of watermelon, says the HPA.

HPA scientists are joint authors of research that will help in the development of a vaccine against **meningitis B**, which affects 785 to 1,700 people a year in England and Wales. The research, published in the journal ***Vaccine***, examines a crucial component of the vaccine and its ability to stimulate an immune response.

MARCH

To guard against **Lyme disease**, which is transmitted by ticks, the HPA reminds people to take sensible precautions when camping, walking and mountaineering in affected areas, such as the southern counties of England, the Lake District and the Scottish Highlands. An estimated 2,000 to 3,000 people in England and Wales acquire Lyme disease each year after being bitten by an infected tick.

Following a 'lookback' exercise, the HPA says about 75 people could have received an incorrect diagnosis for **syphilis** due to faulty results from a commercially available syphilis test kit, which was withdrawn from sale. Some people were wrongly diagnosed with syphilis and others were diagnosed with early stage syphilis instead of late stage disease.

Strategic framework

The Health Protection Agency is an independent UK organisation that was set up by government in 2003 to protect the public from threats to their health from infectious diseases and environmental hazards. It does this by providing evidence-based advice and information to the public, to health professionals and to national and local government.

The cost of health protection to the UK taxpayer is kept to a minimum by the HPA's commercial activities such as sales of health products and services to third parties, by winning research grants and through careful budget management. During 2011/12, the HPA raised £157 million from such activities, representing around 50% of its total gross operating costs.

The HPA is dedicated to working efficiently and increasing productivity to deliver the best possible health outcomes with the resources available.

The Health and Social Care Act 2012, which received Royal Assent on 27 March, includes provision for the abolition of the Health Protection Agency and transfers to the Secretary of State the duty of protecting the public in England from disease or other dangers to health. The functions carried out by the National Institute for Biological Standards and Control are expected to transfer to the Medicines and Healthcare products Regulatory Agency.

The changes are expected to take effect on 1 April 2013. A chief executive designate for a new agency, Public Health England, was announced in April 2012. The HPA has welcomed the legislation and is working with the Department of Health to support it in managing the risks associated with the transfers.

WHAT DOES THE HPA DO?

The HPA identifies and responds to health hazards and emergencies caused by infectious disease, chemicals, poisons or radiation. It also ensures the safety and effectiveness of biological medicines such as vaccines and blood products.

It gives impartial advice and authoritative information on health protection issues to the public on how to stay healthy and avoid health hazards; provides data and information to national and local government and the devolved administrations; advises professionals working in healthcare such as doctors and nurses, and supports and advises other organisations that play a part in protecting health. It also makes sure the nation is ready for future threats to health that could happen naturally, accidentally or deliberately.

The HPA combines public health and scientific knowledge, research and emergency planning in one organisation – and works at international, national and local levels.

The HPA's evidence-based advice, information and services are underpinned by specialist research. It uses its research to develop new vaccines and treatments that directly help patients. In addition, the HPA develops standards for, and monitors, the safety and efficacy of biological medicines. It also plays a leading role in the development of novel ways to prevent harm from infectious and other diseases.

The agency exists to help protect the health of everyone in the UK. Its ambition is to lead the way by identifying, preparing for and responding to health threats.

WHO DOES THE HPA WORK WITH?

The HPA works with a wide range of people and organisations, including the public, the NHS, the UK Government and the governments of Scotland, Wales and Northern Ireland, other public sector agencies,

www.hpa.org.uk

The HPA's strategic framework

VISION

The Health Protection Agency exists to help protect the health of everyone in the United Kingdom. Our ambition is to lead the way by identifying, preparing for and responding to health threats and setting standards for health protection.

PUBLIC HEALTH OUTCOMES

- Reduction of key infections
- Minimised health impact from environmental hazards including radiation, chemicals and poisons
- Reduction in harm arising from incidents, emergencies and outbreaks
- Safe and effective development of biological medicines

KEY HEALTH PROTECTION PROGRAMMES 2011/12

1 Healthcare-associated infection, antimicrobial resistance and stewardship
2 Respiratory infections
3 Blood-borne infections
4 Gastrointestinal infections
5 Sexually transmitted infections
6 Vaccine-preventable infections
7 Environmental hazards
8 Biological standards and control
9 Supporting the development of new vaccines and novel interventions
10 Climate change and extreme events

STRATEGIC AIMS

1 The primary expert force in delivering health protection
2 Trusted by all in providing advice and services to the public, health professionals, government and others
3 First choice for authoritative, independent advice and advocacy, excellent information management and communications
4 Expert and mature in effective partnership working with the NHS and others at local, national and international levels
5 Respected by the scientific community for excellence in relevant sciences
6 Recognised internationally as a world-class health protection body
7 Forward-looking, expert in both managing risks and anticipating future challenges, with an emphasis on prevention
8 One cohesive organisation
9 Equipped with state-of-the-art facilities appropriate to deliver consistent, cutting-edge services
10 An employer of choice, which values and respects staff

VALUES

- Innovation
- Striving for excellence
- Focus on quality of service
- Respect for others
- Integrity

local authorities, industry, academia and international health organisations.

HOW IS THE HPA ORGANISED AND MANAGED AS A PUBLIC BODY?

The HPA is an executive non-departmental public body sponsored by the Department of Health and is accountable to the Secretary of State for Health and the Minister of State for Public Health and the devolved administrations. The functions, duties and powers of the HPA are set out in the Health Protection Agency Act 2004 and in the Health Protection Agency Regulations 2005.

More specific aims are agreed with the Department of Health as part of the annual corporate and business planning process. The Secretary of State for Health is accountable to Parliament for the activities and performance of the HPA. In consultation with the devolved administrations as appropriate, his/her responsibilities include approving the HPA's strategic objectives and the policy and performance framework within which the HPA will operate, and keeping Parliament informed about the HPA's performance.

The Department of Health ensures that financial and management controls applied to the HPA are sufficient to safeguard public funds and that this is monitored. Note that 'public funds' include not only funds granted to the HPA by Parliament but also other funds generated by approved activities or falling within the stewardship of the HPA.

STAFF AND STRUCTURE

The HPA's expertise is provided by around 3,620 staff. They include doctors and nurses, scientists, technicians, emergency planners and administrators.

The agency has four frontline divisions. Around half the staff are based locally, working with the NHS to provide health protection expertise for the community, and in a network of microbiological laboratories. The rest are based at four major centres in north London, Oxfordshire, Wiltshire and Hertfordshire. There is also a small central office in London. A location map of HPA sites is shown on p55.

1. Microbiology Services

This division consists of the laboratory groups that are located at the HPA sites at Colindale and Porton, plus the network of regional microbiology laboratories and their associated supports.

2. Health Protection Services

This division consists of two nationally organised services: Local and Regional Services and an Epidemiology Service.

3. The Centre for Radiation, Chemical and Environmental Hazards

This division comprises the Radiation Protection Division and the Chemical Hazards and Poisons Division.

4. The National Institute for Biological Standards and Control (NIBSC)

This division assures the quality and safety of biological medicines.

The HPA is governed by a Board, which is led by a chairman. This sets the organisation's long-term direction, objectives and strategy. The delivery of these, along with the day-to-day management of the agency, is the responsibility of the chief executive and an Executive Group.

STRATEGIC FRAMEWORK

Since it was established, the HPA has worked to develop a strategy for its unique role in the public health system in the UK and the world. This has built on the particular expertise of the individuals, facilities and organisations that combined to form the HPA. In each area of public health this entailed identifying and working with partner organisations, including the NHS and local authorities, and many more specialised bodies.

The HPA's contribution to public health is built on the statutory frameworks of pre-existing organisations, its wealth of historical experience and patterns of service to the NHS, local authorities and others, and continuous developments in combating individual health threats. For example, a newly emerging disease must be identified and characterised before it can be cured with suitable medicines, prevented by vaccination or avoided through

effective public health measures. These stages develop over many years and may involve public health and NHS bodies, universities, commercial pharmaceutical companies and the international community.

The transfer of HPA functions, with the exception of those carried out by NIBSC, to Public Health England from April 2013 will broaden the horizons of health protection into a complete public health service for England. This annual report, however, reflects the plans and achievements in the system as it existed in 2011/12.

THE HPA VISION

The HPA formulated a vision document, *Leading the Way in Health Protection*, in 2008 consistent with its statutory functions. This identified the HPA's ambitions in terms of public health outcomes and its strategic aims for developing the organisation (see diagram on p10).

Ten key health protection programmes carry out work in particular areas of public health and formulate strategies to advance that work. These strategies can be found on the HPA website, along with the HPA's strategic plan for 2008 to 2013, covering the period under review.

During 2011/12 all the key health protection programmes updated their long-term plans in readiness for adaptation to the needs of Public Health England and the published *Public Health Outcomes Framework for England, 2013-2016.*

BUSINESS PLANNING AND REPORTING

The achievement of the HPA's health outcomes and strategic aims is broken down into measurable short-term objectives in the HPA's annual business plan. The plans are agreed with ministers at the start of each year and the HPA reports its performance against its key objectives to the Department of Health each quarter.

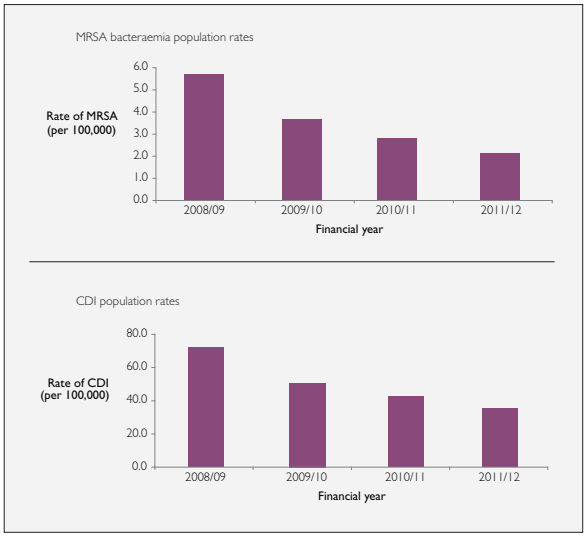
Outcomes of the objectives from the key health protection programmes and objectives supporting the HPA's strategic aims are described in the operating review section of this report.

2 Operating review

Key health protection programmes

This section reviews the HPA's 10 key health protection programmes, describing some objectives for 2011/12, why they are important for public health and how they were achieved. More information can be found online at www.hpa.org.uk.

1. Healthcare-Associated Infection, Antimicrobial Resistance and Stewardship



To reduce the impact of healthcare-associated infections (HCAIs), and minimise the threat posed by antimicrobial resistance (AMR), the HPA provides expert advice and support to the NHS and community sector.

This includes close collaboration in the prevention and control of HCAI incidents and outbreaks, and the promotion of good antimicrobial stewardship to restrict the spread of AMR.

The HPA also provides surveillance data and epidemiological reports that inform the development of guidance and interventions. Specialist laboratory services provide rapid diagnosis and reference microbiology to identify clusters and emerging trends.

Our research programme aims to reduce the burden of HCAI and AMR by providing improved surveillance, diagnostics, microbial identification, strain characterisation, and prevention and control measures.

Note: Data for 2011/12 is provisional

During 2011/12, cases of meticillin-resistant *Staphylococcus aureus* (MRSA) bacteraemia dropped by 25% compared with 2010/2011 and *Clostridium difficile* infection (CDI) fell by 17%, a sustained downward trend in both infections.

Bacteria that destroy carbapenem antibiotics (which are often the last line of effective treatment for patients with infections) were a high priority because of the increasing number of carbapenem-resistant organisms sent to HPA reference laboratories.

Recent outbreaks suggest that these multi-resistant bacteria are becoming established in the UK, in community and hospital settings.

Highlights

Details of all the HCAI and AMRS objectives from the HPA Business Plan for 2011/12 can be found online at www.hpa.org.uk. Objectives that were met include:

1. Upgrade the HCAI data capture system to enable reporting of *Escherichia coli* and meticillin-sensitive *Staphylococcus aureus* (MSSA). Mandatory bacteraemia reporting schemes were introduced for both infections. Around 30% of *E. coli* infections occur in hospital patients. The data will help to identify ways to reduce infection in hospital settings.

2. Participate in the European Centre for Disease Prevention and Control prevalence survey of HCAIs and antimicrobial use in acute hospitals. The HPA coordinated the survey. Results from 220 English hospitals will give a better understanding of the burden of HCAI, the prevalence and types of antibiotics being prescribed, and the use of medical devices.

This will inform future interventions to reduce HCAI. As part of the project, the agency trained 350 people from 125 NHS trusts, 17 independent hospitals and the HPA to improve their understanding of basic epidemiology, surveillance and data collection issues relevant to HCAIs.

3. Provide effective laboratory reference, infection, prevention and control advisory services. Two national reference laboratories provided specialist services in HCAIs and the detection and investigation of antibiotic resistance. New techniques were introduced, including whole genome sequencing to identify the complete DNA sequence of an organism's genome. This will give a better understanding of how strains spread and help in the detection of virulent clones.

4. Improve surveillance of community CDI. A community surveillance scheme was introduced to provide better information about the prevalence of *C. difficile* ribotypes causing community-associated CDI. Rates of CDI in hospitals fell after enhanced surveillance was introduced in 2007. The new scheme aims to reduce community-associated CDI. It will help to identify clustered cases and highlight geographical associations between CDI strains.

5. Streamline data collection around CDI. The largest ever study of the laboratory diagnosis of CDI was completed. This led to new guidance for the NHS on patient sampling, testing and case reporting.

6. Establish a pilot project to develop a set of statements and measures and describe high-quality care and best practice in the prevention and control of HCAI in hospital settings. The HPA worked with the National Institute for Health and Clinical Excellence to produce a best practice guide on the prevention and control of HCAIs in hospitals. It provides practical examples of the types of management, processes and interventions that are most effective in reducing HCAIs.

7. Continue to provide timely national and local surveillance data to inform NHS readiness and improve the management of norovirus outbreaks. In collaboration with other professional bodies, the HPA developed new guidelines for managing outbreaks of norovirus in hospital and community settings. Hospital outbreaks are estimated to cost the NHS more than £100 million each year.

8. Strengthen healthcare epidemiology. Modules on healthcare epidemiology were included in the new HPA-led Field Epidemiology Training Programme to strengthen the trainees' understanding of HCAI and AMR matters and increase the HPA's capacity to provide advice and support to the NHS.

9. Develop operational guidance for health protection units (HPUs) that will clarify the local HPA role in responding to HCAI and set standards for HPUs. The agency developed operational guidance to ensure HPUs fulfill their HCAI roles effectively.

10. Produce guidelines. The HPA published new UK guidelines on the prevention and control of group A streptococcal infections in acute healthcare and maternity settings. In collaboration with the Advisory Committee on Antimicrobial Resistance and Healthcare Associated Infections (ARHAI), the HPA developed guidance on management of patients who are infected with bacteria resistant to carbapenem antibiotics.

11. Formalise arrangements for the escalation of concerns to performance managers and regulators. An algorithm was developed and piloted to establish criteria for the escalation of concerns regarding the management of HCAI in trusts to NHS performance managers and to the Care Quality Commission.

12. Formalise arrangements for peer support visits to NHS trusts. The arrangements under which the HPA undertakes peer support visits to NHS trusts to provide advice and support in response to incidents and outbreaks were documented and agreed.

Examples of future plans:

- To improve HCAI surveillance, the HPA will replace the existing data capture system with a faster and more robust system. It will also investigate linking databases so that HCAI and AMR epidemiology can be studied in greater depth.

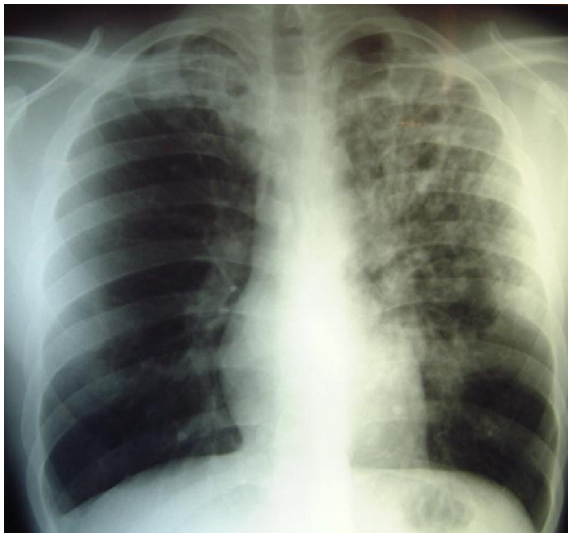
- The HPA will continue to monitor and analyse AMR trends locally, nationally

and internationally to identify emerging threats. HPA reference laboratories will continue to provide high-quality microbiological tests and develop new tests when required. Research will be undertaken to develop new interventions against HCAIs and AMR.

- To help NHS trusts with high levels of HCAI or antibiotic-resistant organisms, the agency will develop a register of HPA experts to work with local teams. The peer support service will enable NHS trusts to request assistance from a specialist HPA team. The service will support the work of local HPUs, which provide day-to-day advice on managing HCAIs.

- To improve antimicrobial stewardship in primary care, the HPA will raise awareness of antibiotic resistance among clinicians and the public. This will include working with the Royal College of General Practitioners to launch an educational module and toolkit to increase GPs' knowledge of urinary tract infection diagnosis.

2. Respiratory Infections (including influenza and tuberculosis)



The HPA works with the NHS and other partners to control respiratory infections such as influenza (both seasonal and pandemic), tuberculosis and Legionnaires' disease.

It provides surveillance data, microbiological laboratory expertise to identify and characterise respiratory pathogens, clinical expertise, advice on public health interventions, support with the investigation and management of outbreaks, evidence based risk assessment, vaccine development and evaluation, and other research.
The agency contributes to national and international policy to ensure procedures are in place to control the spread of disease.

More than 9,000 new cases of tuberculosis were reported in 2011, according to provisional figures. The HPA contributes to local, regional and national efforts to control tuberculosis, providing public health management, leadership and coordination.

In some winters, seasonal influenza can cause as many as 25,000 excess deaths while pandemic influenza remains a significant national threat.

The HPA plays a key role in controlling influenza through surveillance, virological identification and characterisation, vaccine development, and public health interventions and response.

The agency assists in the diagnosis, public health investigation and management of outbreaks of legionellosis and other acute respiratory infections and provides expertise in a number of other respiratory viruses, including emerging and bioterrorist threats.

Highlights

Details of all the respiratory infection objectives from the HPA Business Plan for 2011/12 can be found at www.hpa.org.uk. Objectives that were met include:

1. Prepare for the 2012 Olympic and Paralympic Games. To prevent serious outbreaks of respiratory illness at the Olympics, and ensure any incidents are managed promptly, extensive preparatory work was carried out to improve the deployment of

molecular diagnostics in frontline laboratories. The response capability for major respiratory outbreaks was tested and refined through participation in simulation exercises.

2. Develop seasonal and pandemic influenza surveillance. To ensure NHS clinicians receive high quality surveillance data to inform decision-making, a range of surveillance streams have been developed, including a network of acute hospitals that provide syndromic surveillance. Both individual and population health indicators have been developed to identify outbreaks of infection before they are confirmed by laboratory diagnoses.

3. Make evidence from influenza pandemic 2009 available for future intervention. High quality evidence synthesis and reviews in four major areas of intervention control were published and shared nationally and internationally.

4. Establish clinical guidelines for antiviral resistance monitoring. Guidance was published on the surveillance and laboratory diagnosis of antiviral-resistant influenza, along with clinical guidance on the use of antivirals. Antiviral-resistant strains of influenza continue to emerge and spread across the world. Enhanced epidemiological and microbiological surveillance by the HPA monitors activity in England, informs clinical decisions about the most appropriate therapies for patients, reduces the possibilities of antiviral resistance and assists in the management of influenza outbreaks.

5. Ensure roll-out of national tuberculosis strain typing. The roll-out of strain typing continued with the production and circulation of the new version of the strain typing manual and provision of training. In the next phase, NHS staff will be trained to use strain typing information.

6. Contribute to improved tuberculosis interventions. The HPA worked with the NHS to improve the care of tuberculosis through the use of cohort review techniques and service reviews. Cohort reviews are being carried out in areas with high tuberculosis incidence. This has led to improvements in contact tracing.

7. Strengthen microbiological and epidemiological surveillance. Good surveillance is essential for monitoring the impact of tuberculosis and identifying how best to control it. Enhanced surveillance was introduced, which has yielded important epidemiological information to inform national tuberculosis strategy.

8. Improve management of incidents and outbreaks of tuberculosis. When tuberculosis outbreaks are managed well, fewer people are infected and the pool of people who can transmit tuberculosis is smaller. All regions carried out an audit of the management of incidents and outbreaks. Training on managing outbreaks in specific situations (schools, prisons and healthcare settings) was arranged. Guidance on managing tuberculosis in schools was produced and guidance on prisons re-circulated.

Examples of future plans:

Influenza

- To provide robust and effective surveillance to detect respiratory viruses that may emerge during the Olympic and Paralympic Games.
- To continue research on vaccines to prevent influenza, to monitor their impact and effectiveness and the best schedule to administer them.

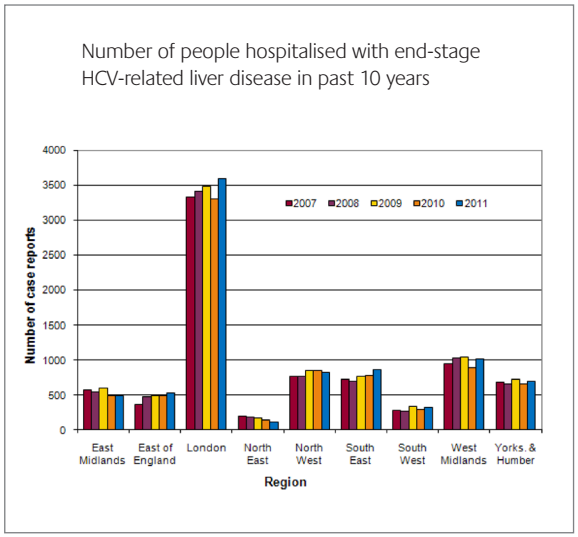
Tuberculosis

- To evaluate and refine HPA strain typing services. This is a prerequisite to moving to whole genome sequencing.
- To work with others to improve the control of tuberculosis in migrants through evaluating the most cost effective ways to detect the infection and ensure that a cost effective screening method is introduced.

Legionnaires' disease and other respiratory pathogens

- To clarify responsibilities for managing incidents and the detection of legionella in water in public and private buildings.
- To improve diagnostic capability for a range of respiratory infections, including mycoplasma and ensure capability for response for emerging infections.

3. Hepatitis and Blood Borne Infections



Hepatitis is a liver infection caused by several viruses, of which the major ones are hepatitis A, B, C and E. Hepatitis B and C are spread by exposure to blood and body fluids, and in the UK, are most commonly acquired through injecting drug use.

An estimated 180,000 people in the UK are chronically infected with hepatitis B and 216,000 with hepatitis C. Other blood borne infections, such as human T cell lymphotropic virus (HTLV), may also lead to chronic infection.

Chronic hepatitis can result in liver cirrhosis and hepatocellular cancer, the need for liver transplantation and premature death. Treatment can lead to viral clearance in over 50% of individuals with chronic hepatitis C, and viral suppression of chronic hepatitis B.

While HTLV infection is life-long, around 5% of those infected develop related disease, with first symptoms occurring years after infection. HTLV may cause a form of leukaemia and/or a long-term neurological condition. New treatments for infection are undergoing clinical trials.

The HPA works with others to reduce the incidence and prevalence of hepatitis and other blood borne infections, increase the proportion of people with chronic hepatitis who are diagnosed, and improve the management of disease. To do this, the HPA provides:

- Surveillance data to inform commissioning and help devise, implement and evaluate prevention and control measures.
- Expert advice and guidance to support national policy and local service delivery.
- Specialist diagnostic and reference services at HPA laboratories.
- Leadership in the investigation of, and response to, recognised transmission incidents.
- Efficient and up-to-date tests, assays and diagnostic algorithms and modelling services.

Highlights

Details of all the hepatitis and blood borne infection objectives from the HPA Business Plan for 2011/12 can be found at www.hpa.org.uk. Objectives that were met include:

1. Reduce the incidence and prevalence of hepatitis and other blood borne infections.

A new service to strengthen surveillance of infants born to mothers infected with hepatitis B was set up, using a dried blood spot (DBS) test. Infants that are infected at birth are more likely to develop chronic infection, with the risk of serious complications such as hepatocellular cancer later in life.

A cutting-edge laboratory test was introduced that differentiates between acute and chronic hepatitis B infection, allowing appropriate public health action to be taken, informing prevalence and incidence estimates and improving the HPA's ability to respond to outbreaks.

To support drug and alcohol action teams, DBS testing for hepatitis was introduced in settings used by people who inject drugs. The test is simpler to use and more sensitive. As a result, diagnoses increased; individuals received more accurate information about their infection status and the most appropriate treatment; and information about transmission patterns among drug users improved.

New standards for local surveillance and

follow up of hepatitis B and C, which include improved checks and audits, were finalised and disseminated.

The HPA provided data and modelling information to the Advisory Committee on the Safety of Blood, Tissues and Organs. The committee is making recommendations to ministers on men who have sex with men and blood donation.

2. Increase the proportion of individuals chronically infected with HCV and HBV whose infections are diagnosed. The HPA commissioned the Royal College of General Practitioners to develop a certificate and e-module on the diagnosis and treatment of hepatitis C and B in primary care. The training resources will help GPs and healthcare professionals to detect, diagnose and manage patients with hepatitis B and C.

3. Improve the management (assessment, referral and treatment) of individuals with chronic hepatitis infection. The Hepatitis C Annual Report was published by the HPA. It estimates that around 216,000 people are chronically infected with hepatitis C. Much of the infection is concentrated in marginalised populations with injecting drug users (IDUs) at greatest risk of acquiring infection. Improvements to national surveillance in all UK nations are ongoing. In addition, action plans and work programmes are in place across the UK to tackle the infection.

Other achievements included:

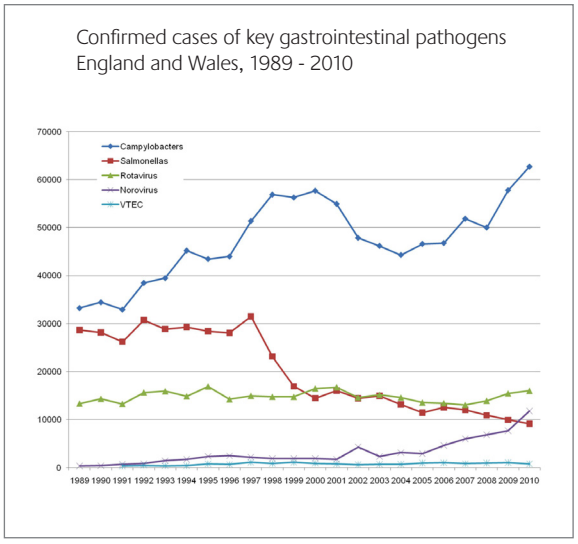
The control of a hepatitis A outbreak in a primary school (where three pupils were infected) and of two cases associated with the consumption of sun-dried tomatoes.

Guidance on hepatitis B in boarding schools and the public health management of hepatitis E was developed.

Examples of future plans

- Reduce the incidence of hepatitis A by identifying risk factors for infection.
- Inform prevention of hepatitis B through accurate data collection on acute HBV infections.
- Inform prevention of hepatitis C and B in people who inject drugs through accurate estimates of incidence.
- Sustain high rates of diagnosis for hepatitis B and C.
- Improve treatment response for those with hepatitis C.
- Improve services and evaluate prevention and control measures for those infected with hepatitis B and C.
- Advocate for better services for individuals with hepatitis C.

4. Gastrointestinal Infections



Gastrointestinal infections are a major burden of disease in England and Wales with an estimated 17 million cases, one million GP consultations, 250,000 hospital admissions and 5,000 deaths each year. Causes include bacteria, such as campylobacter, *Escherichia coli*, listeria and salmonella, the protozoan parasite cryptosporidium, and rotavirus.

When incidents and cases of gastrointestinal infection occur, the HPA needs to respond quickly and effectively in order to investigate and control the sources of infection and provide advice about reducing the number of people affected. This is particularly so for food borne

outbreaks, which have the scope to be large, fast-moving and have political and international dimensions.

The HPA aims to control and reduce the impact of gastrointestinal infections, including food and water borne pathogens, and act as a source of authoritative advice on gastrointestinal infections by:

- Ensuring rapid microbiological diagnosis, typing and timely reporting of infections to identify local and national outbreaks and trends of infection to inform action by the HPA, the Food Standards Agency (FSA) and others.
- Continuing to develop surveillance systems to provide timely identification and evaluation of interventions to reduce food and water borne infections.
- Maintaining a local and national response capability for the investigation, intervention and prevention of gastrointestinal infections. Developing the scientific evidence that is needed to inform and determine priorities for national disease prevention and research.

Highlights

Details of all the gastrointestinal infection objectives from the HPA Business Plan 2011/12 can be found at www.hpa.org.uk. Below is a selection of objectives that were met.

1. Improve response times for pathogen detection in clinical and food, water and environmental samples. A comprehensive set of polymerase chain reaction (PCR) assays for enteric pathogens was developed and established at laboratories in London and Southampton. Real-time PCR assays for campylobacter, salmonella, verocytotoxin-producing *Escherichia coli* (VTEC) and listeria are operational at food, water and environmental laboratories in Birmingham, Leeds and Preston.

2. Introduce real-time detection of gastrointestinal infection incidents and outbreaks. Web-based surveillance systems to collect data on foodborne/zoonotic outbreaks were launched. These will facilitate faster public health action.

3. Maintain and improve the level of services to local authorities. Food, water and environmental microbiology laboratories were amalgamated to consolidate expertise, improve resilience and secure the future of specialist services.

4. Support the FSA in its five-year strategic plan to reduce food borne disease using a targeted approach – tackling campylobacter in chicken as a priority. Campylobacter is the most important gastrointestinal bacterial pathogen. The number of laboratory confirmed cases continues to rise with almost 65,000 cases in 2011 compared with 50,000 cases reported in 2008. Molecular methods were developed for use in the reference laboratory, and will be introduced to routine practice shortly, which will give a greater understanding of the source of infection and inform interventions and control methods in order to reduce cases.

5. Establish and maintain a comprehensive set of evidence-based guidance/best practice for the investigation of cases and contamination by key organisms across the HPA. Public health operational guidelines for typhoid and paratyphoid (enteric fever) were produced.

Other achievements included:

Responding to the outbreak of VTEC O104 in sprouted seeds in Germany. During 2011, VTEC O104 caused an unprecedented outbreak, mainly in Germany, with almost 900 cases of haemolytic uraemic syndrome (HUS) and more than 3,000 cases of diarrhoea. The HPA launched an urgent public health response. Activities included issuing briefing notes and alerts for the HPA, NHS and HPA laboratory staff and the public; regular press briefings; contributing to chief medical officer and ministerial briefings; enhanced surveillance for potential cases; undertaking reference microbiological testing of clinical samples from symptomatic cases and the development of VTEC testing protocols; testing of fenugreek seeds from an implicated

seed supplier and frequent liaison with the European authorities. Surveillance for potential cases found 17 cases (seven confirmed VTEC O104 and 10 possible cases with bloody diarrhoea) in the UK. All were related to travel to Germany.

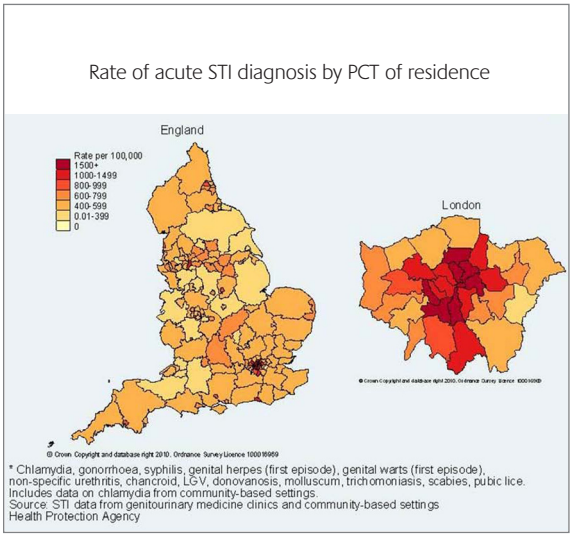
Enhanced surveillance of HUS. As a result of the German outbreak, enhanced surveillance of HUS in children was established through the British Paediatric Surveillance Unit (BPSU), whereby paediatricians report each month the number of cases they have seen. This will improve VTEC surveillance data and knowledge of HUS.

Investigating an outbreak of VTEC PT8. Handling unpacked leeks and potatoes was identified as the main risk factor for a large national outbreak of VTEC phage type 8. An FSA food hygiene campaign on washing and handling vegetables aimed to prevent cases.

Examples of future plans

- Use next-generation sequencing to develop and improve typing methods. Complete the analysis of 25 listeria genomes and integrate them with epidemiological data to inform public health interventions.
- Maintain data completeness for the national enhanced surveillance systems for VTEC and listeria with standardised epidemiological data matched to 90% of VTEC cases and 75% of listeriosis cases confirmed by the Laboratory of Gastrointestinal Pathogens.
- Integrate data from the BPSU clinical surveillance scheme for childhood HUS with the enhanced VTEC surveillance system.
- Introduce systems to improve quality management and outputs in food, water and environmental laboratories by completing the introduction of a national document control system.

5. Sexually Transmitted Infections



Preventing the transmission of HIV and sexually transmitted infections (STIs) is a major public health challenge. Despite effective treatment and prevention measures, a total of 5,600 people (4,050 men and 1,550 women) were diagnosed with HIV in the UK in 2011. This provisional figure is likely to rise to 6,150 after adjustment for reporting delays. In 2011, diagnoses in men who have sex with men (MSM) surpassed heterosexual new diagnoses for the first time since 1998. Late HIV diagnosis remains an issue in the UK.

In England, the total number of new STI diagnoses rose by two per cent in 2011 (426,867), with the most significant increases seen in MSM: gonorrhoea diagnoses increased by 61 per cent, syphilis by 28 per cent and chlamydia by 48 per cent in this group. Overall, genital chlamydia remained the most commonly diagnosed infection (186,196). Chlamydia diagnoses in 15-24 year olds, the age group targeted by the National Chlamydia Screening Programme, fell by 4% compared to 2010, driven by a 10% fall in screening volumes in this age group. STI outbreaks continued to emerge, including outbreaks of Shigella flexneri and gonorrhoea and the ongoing lymphogranuloma venereum (LGV) epidemic in MSM. The impact of poor sexual health remains greatest in young adults (15-24 year olds) and in MSM and sexual health promotion remains a priority.
The HPA works to reduce the incidence and

consequences of sexually transmitted HIV and other STIs in England. We will know we are succeeding when:

- The proportion of people presenting with late stage HIV is reduced.
- Control of chlamydia infection is improved through appropriate and widespread chlamydia screening.
- HIV and STI transmission rates among men who have sex with men (MSM) are reduced.
- All patients with STIs are diagnosed promptly and treated appropriately, and their partners notified swiftly.
- Vaccine-preventable HPV infections among young women are reduced.

Highlights

Details of all the STI objectives from the HPA Business Plan for 2011/12 can be found at www.hpa.org.uk. Below is a selection of objectives that were met.

1. Improve the quality and utilisation of STI and HIV information. New data collection processes were devised for genitourinary medicine (GUM) clinics and chlamydia testing services, and approved by the NHS Information Standards Board. They will allow comprehensive surveillance data on STI testing and diagnosis to be collected from all commissioned sexual health services and laboratories, and improve the quality and utility of the National Chlamydia Screening Programme (NCSP) monitoring data. This will ensure that commissioning decisions and public health priorities are based on accurate and timely information.

New national guidelines for treatment of gonorrhoea were published after reduced susceptibility to current therapy was detected through the HPA's Gonococcal Resistance to Antimicrobials Surveillance Programme.

HPA regions produced reports on HIV and STIs, with area-by-area analysis and interpretation of data, on an annual or more frequent basis.

2. Develop further and evaluate laboratory methods for HIV diagnosis and drug resistance estimation. Phenotypic assays were developed to examine resistance to drugs used for treating HIV infection. They will give a better understanding of emerging drug resistance and help clinicians choose the most effective therapies.

3. Develop further HPA engagement with sexual health commissioning. Guidance was published to help local areas replace stand-alone chlamydia screening offices by embedding chlamydia screening in sexual health services and primary care. This will improve efficiency and maximise opportunities to improve the sexual health of young people.

A toolkit was prepared to help sexual health commissioners expand HIV testing in areas of high HIV prevalence. The expansion of HIV testing in general medical admissions and general practice is a way to reduce late HIV diagnosis.

Commissioners, clinicians and the HPA collaborated on the development of markers to monitor the quality of HIV care, thereby helping to improve standards and inform commissioning and prevention efforts. A valuable consequence of this work has been to drive up the quality of surveillance data provided to HPA by the NHS.

4. Foster further increases in HIV testing in GUM clinics and lead an expansion of geographically targeted clinical HIV testing. The HPA began to provide routine data on HIV test uptake rates, by prevention group and primary care trust. This will enable commissioners and providers of sexual health services to measure the quality of HIV testing provision and assess whether more challenging standards need to be set.

5. Facilitate improvements in partner notification. Good partner notification prevents re-infection, limits onward transmission and makes an important contribution to the control of infection and associated ill health. An audit of local partner notification (PN) practices as part of the NCSP was completed and the report published on the NCSP website. Procedures and guidance on PN delivery were updated.

6. Facilitate and support opportunistic chlamydia testing in 15 to 24-year-olds. As part of the Department of Health's *Public Health*

Outcomes Framework 2013-2016, the HPA developed an indicator for chlamydia diagnosis rates in young people. Prompt detection and treatment of chlamydia reduces prevalence of the infection and associated health problems.

Other achievements included:

A new web-based data collection system was introduced to provide comprehensive, high-quality data about antimicrobial resistance in patients with gonorrhoea. This replaces the previous paper-based data entry system.

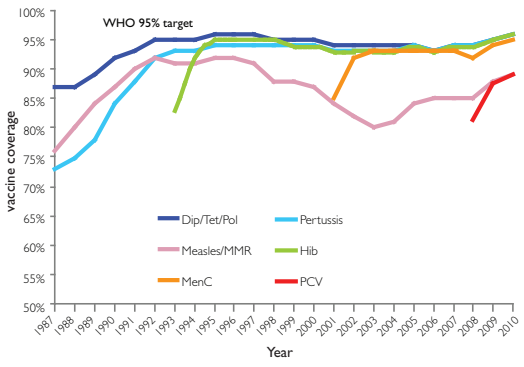
Increasing numbers of outbreaks of sexually transmissible infections are being seen across the UK, some of which have involved unusual pathogens, such as LGV and species of shigella. In response to an LGV outbreak in MSM, the HPA, working in collaboration with local government and a leading HIV and sexual health charity, visited sites attended by patients diagnosed with LGV to provide health promotion information and hygiene advice. The agency conducted enhanced surveillance of *Shigella flexneri* to describe and monitor an outbreak in MSM.

Examples of future plans

- The HPA will support the implementation of public health outcome indicators for chlamydia diagnoses rates and reducing late HIV diagnoses.
- Establish a web-accessible compendium of evidence for HIV/STI prevention.
- The HPA will develop local area profile reports and provide other support to local authorities for preparation of joint strategic needs assessments.
- Monitor the impact of human papillomavirus (HPV) immunisation on genital infections in young women and vaccine-induced antibodies against vaccine-type HPV infections.
- Commence enhanced surveillance of cervical disease in younger women.
- Monitor antimicrobial resistance in *Neisseria gonorrhoeae*.
- Evaluate next-generation sequencing technologies for the monitoring of acquired and transmitted drug resistance in HIV.
- Undertake surveillance of high-risk behaviour among MSM attending selected GUM clinics.

6. Vaccine Preventable Infections

Annual vaccination coverage at 24 months England : 1987/88 – 2010/11



Note: MMR replaced single measles vaccine in 1988; Hib introduced in 1992; Meningococcal C (MenC) in 1999; Pneumococcal vaccine (PCV) in 2006

The national vaccination programme includes routine childhood vaccination for 10 infections that were previously major causes of childhood illness and death. The success of the programme means most of these infections are now rare and polio is almost eradicated globally. Selective vaccination, including adolescent and adult vaccination, for certain diseases is offered to those at additional risk of infection.

National vaccination policy is decided by the Secretary of State based on recommendations from the Joint Committee on Vaccination and Immunisation (JCVI). The HPA provides scientific evidence to support the development of vaccine policy. This includes collating, analysing and interpreting data on vaccine preventable disease epidemiology, providing high quality diagnostic and reference microbiology, carrying out modelling and cost-effectiveness analysis and conducting clinical trials of new vaccines and vaccine schedules.

The HPA also supports the NHS in providing vaccination locally. It does this through:

- Surveillance to guide control strategies (data on laboratory confirmed cases, vaccine coverage, and on age/sex-specific seroprevalence of key infections).
- Expert advice, best practice guidance and training support for healthcare professionals.
- Supporting ways to extend vaccination to unprotected groups.
- Detection, investigation of and response to incidents and outbreaks of vaccine preventable disease (including the provision of immunoglobulin).
- Risk assessment, investigation and formulation of advice to the NHS with respect to possible adverse events.

During the year, studies were undertaken on extending seasonal flu vaccination, introducing new vaccines such as rotavirus for children, the need for adolescent booster doses of some vaccines e.g. pertussis and meningococcal vaccines, and vaccination of groups at increased risk of pneumococcal disease.

Highlights

Details of all the vaccine preventable infection objectives from the HPA Business Plan for 2011/12 can be found at www.hpa.org.uk. Objectives that were met include:

1. Inform JCVI sub-group advising on future meningococcal vaccination programmes. Meningococcal serogroup B (MenB) disease is the most common cause of life-threatening meningitis and septicaemia. Effective vaccines for MenB have proved difficult to develop due to inherent variability in target antigens. The HPA studied the potential coverage of one MenB vaccine, reported the results to the JCVI meningococcal sub-group and contributed to an assessment of potential cost effectiveness. Further work on the persistence of protection from meningococcal serogroup C (MenC) vaccine has indicated the need for an adolescent booster dose.

2. Evaluate the cost-effectiveness of existing seasonal influenza vaccination. The HPA carried out transmission modelling to assess the impact and cost effectiveness of extending seasonal flu vaccines to children and some adults. JCVI noted that, on the basis of HPA findings, extending vaccination to children was likely to be cost effective, but would not be so for adults aged 50–64. HPA analysis showed significant benefits from increased vaccination among people with clinical risk factors. Therefore, the committee advised that increasing vaccine uptake in clinical risk groups should remain the priority whilst further work on extending the programme to children is undertaken.

3. Inform JCVI sub-group advising on future adolescent vaccination programmes. The JCVI is reviewing the adolescent vaccination programme. Potential changes include boosters for pertussis, mumps and MenC, the introduction of targeted varicella (chickenpox) vaccination, and efforts to increase coverage of the Td/IPV (tetanus, diphtheria, polio) booster. To support this review, the HPA developed a model of mumps transmission that predicts that outbreaks are likely to occur repeatedly over the next 50 years, with long-term disease incidence between 10-50% lower than the pre-vaccination incidence. Based on work largely conducted by HPA, the JCVI advised that an adolescent dose of MenC vaccine be introduced and a dose of this vaccine in infants be removed.

4. Inform future and evaluate current vaccination programmes for pneumococcal infection. The HPA conducted analysis to estimate the increased risk of invasive pneumococcal disease among clinical risk groups, taking account of the herd protection effects from 7-valent pneumococcal conjugate vaccine in children. This work concluded that vaccination of risk groups with the 13-valent conjugate vaccine is unlikely to be cost effective.

5. Evaluate the cost-effectiveness of a rotavirus programme. An HPA cost-effectiveness analysis of rotavirus vaccine was considered by JCVI. The committee said that rotavirus vaccination in childhood would reduce the incidence of gastroenteritis, but at current vaccine prices, it was unlikely to meet applicable economic criteria.

6. Support the NHS at local level in maximising vaccine uptake during transition.

The HPA in partnership with professional stakeholders developed a set of quality criteria for commissioners and providers of immunisation services, to be available particularly during the transition to Public Health England. Publication of this document on the HPA website is pending.

The HPA worked with primary care trusts to maximise vaccine coverage and sustain confidence in the safety of vaccination, especially in under-vaccinated, at-risk groups. Record high levels of immunisation coverage were achieved during 2011/12. Figures published by the HPA in March 2012 showed that for the first time since UK coverage data reporting began in 1995, coverage of all primary immunisations evaluated at 12 months of age achieved the WHO target of 95%. Increases in coverage for vaccines evaluated at 24 months and five years were also observed, with UK MMR coverage of one dose at 24 months reaching 92% and coverage for two doses at five years reaching 87%.

Examples of future plans

- Improve the quality of expert support offered to the NHS by developing a competency framework for those providing advice at all levels.
- Maximise the effectiveness of the current vaccination programmes by undertaking analysis of pertussis, meningococcal infection, and mumps, and reporting to the JCVI sub-groups on adolescent vaccination and meningococcal infection.
- Minimise the incidence of pertussis by supporting the appropriate investigation and control of cases/incidents/outbreaks by conducting a case-control study and producing a business case for the implementation of oral fluid testing of notified cases of pertussis.
- Support the cost-effective use of hepatitis B virus vaccines by conducting studies of combination vaccines that include a hepatitis B component.
- Advise, commission or undertake clinical trials to support the UK vaccination schedule by conducting trials of boosters of MenC-containing vaccines in adolescents.

7. Environmental Hazards

The 20th century saw major advances in the protection of people from radiological, chemical and environmental hazards. However, public concern about environmental hazards remains high and the 21st century has seen the emergence of new problems.

Electromagnetic fields from mobile phones and Wi-Fi remain a source of public concern as do air pollution, and the health impacts of waste management and contaminated land.

The HPA has expertise in health hazards caused by exposure to chemicals and poisons, ionising and non-ionising radiations, and ultrasound and infrasound (but not audible sound frequencies). It has set up an Environmental Hazards Programme to lead work in three

key areas: home and environment, workplace and healthcare, and emerging environmental threats. Staff work with other expert agencies, health bodies, local authorities and the public to prevent or mitigate harm to health. They do this by:

- Providing authoritative, evidence-based advice about chemical and radiation hazards in the indoor and outdoor environments.
- Identifying priority areas for public health action and measures to reduce the burden of disease associated with environmental factors.
- Assisting statutory bodies and government departments in developing evidence-based controls that improve health protection.

Highlights

Details of all the environmental hazards objectives from the HPA Business Plan for 2011/12 can be found at www.hpa.org.uk. A selection of objectives that were met in 2011/12 includes:

1. Improve understanding of health risks from radiation in the environment. As part of research into mechanisms of radiation-induced circulatory disease, an in vitro model system was devised to study the development of human atherosclerotic plaques. This will be used to study the effects of ionising radiation on key events leading to atherosclerosis. The work will inform future advice on the magnitude of risk of circulatory disease following radiation exposure at high and low doses.

2. Reduce the health effects from chemical hazards. A research and development strategy was developed to improve understanding of the health impact of existing and new chemicals. The HPA responds to more than 1,000 chemical incidents per year. Response tools and guidance are continuously developed to help public health professionals respond to acute incidents and chronic exposures.

3. Improve understanding of health risks from chemicals in the environment. Air pollution is one of the most common environmental causes of disease, being responsible for many thousands of deaths each year. The Committee on the Medical Effects of Air Pollutants (COMEAP) was consulted about methods for estimating the number of deaths associated with air pollution at a local (e.g. local authority) level. As a result, the Department of Health included an indicator on the mortality effects of fine particulate matter in its public health outcomes framework.

4. Improve diagnosis and treatment of patients. The National Poisons Information Service was commissioned to provide 24/7 poisons information and clinical advice on the care of patients to all UK hospitals. An annual report was published and an audit, which showed 90% customer satisfaction with the service.

5. Reduce harm from potential/future man-made radiation exposures. The HPA has a statutory role to provide health protection advice in nuclear and radiation emergencies and in the planning of new nuclear installations. It is formally embedded in the Department for Energy and Climate Change's revised arrangements for providing emergency preparedness guidance, and specialist advice about new nuclear build and the Weightman (post-Fukushima) recommendations.

6. Reduce harm from potential/ future man-made or natural chemical exposures. The HPA is developing an environmental public health tracking system to support and monitor strategies and policies that reduce the environmental burden of disease. To demonstrate the potential of a tracking system to improve health protection, projects on risk prioritisation, arsenic in private water supplies and carbon monoxide in homes were undertaken. Reports with identified health protection actions were published on these three topics.

7. Protect people from harm from radiation by providing high quality radiation dosimetry and metrology services for the measurement of radiation exposures. People who use the HPA Personal Dosimetry Service to measure and record occupational exposure to ionising radiation were given secure online access to exposure information following the introduction of a personal dosimetry website.

Other achievements included:

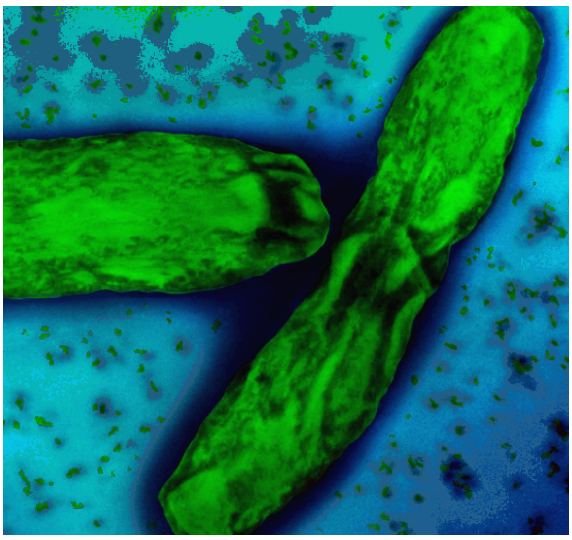
The HPA provided urgent health protection advice following damage to the Fukushima nuclear reactors in Japan with the release of radioactivity and potential for further releases. A modelling capability was established to assess the impact of a potential future release within two hours. The HPA is part of international work to determine the health effects of the Fukushima releases.

The HPA Advisory Group on Ionising Radiation published new estimates on the lifetime risk of developing 'solid' cancers, such as breast, lung and colon cancer, following exposure to ionising radiation.

Examples of future plans

- To publish a comprehensive scientific review of the health effects of radio-frequency fields prepared by the Advisory Group on Non-ionising Radiation.
- To explore with the Nuclear Industry Occupational Health Doctors Group and other clinicians with expertise in radiation medicine how TOXBASE and the National Poisons Information Service can become the first point of contact for generalist advice on the diagnosis, treatment and care of patients where exposure to radiation is a credible clinical possibility.
- To scope the requirements for a chemical occupational advice service.
- To develop cross-departmental collaborations to focus on chemical and nanomaterial interactions with physiological pathways.
- To publish an updated radon atlas of Northern Ireland.
- In collaboration with the University of Oxford, to investigate whether power frequency electromagnetic fields affect circadian physiology in mammals and circadian clock gene expression cycles.
- To develop the evidence base for shelter/evacuate messages during radiation and chemical incidents.

8. Biological Standards and Control



Biological medicines ('biologics') include many of today's most widely used medicines, such as vaccines, blood products and biotherapeutics, together with some of the most exciting prospects for the future. The huge clinical benefits derived from biologics depend on standardisation and control measures to ensure the products are safe and effective.

This regulatory work is carried out by the National Institute for Biological Standards and Control (NIBSC), which became part of the HPA in April 2009.

However, NIBSC is due to become part of the Medicines and Healthcare products Regulatory Agency (MHRA) in April 2013 when the other HPA functions transfer to Public Health England.

NIBSC is the world authority on developing standards to assure the quality of biologics. Its role includes:

- Testing, evaluation and control of biological medicines and source materials to assure their quality and safety.

- Developing and distributing biological standards and other reference materials.
- Expertise and advice for government, public health bodies and manufacturers.
- Research to support existing and novel biological medicines and procedures.

The market for biologics currently exceeds £100bn per annum and, within the next five years, it has been predicted that the majority of top selling pharmaceuticals will be biologics. Rapid advances in science, in particular breakthroughs in genetics and biotechnology, are creating new opportunities and challenges at an unprecedented rate. At the same time, public expectations of medicine safety have increased, while trust in manufacturers and public health authorities remains fragile.

Highlights

Details of all the biological standards and control objectives from the HPA Business Plan for 2011/12 can be found at www.hpa.org.uk.

A selection of objectives that were met in 2011/12 is as follows:

1. Carry out independent testing of vaccines, blood products and immunologicals according to regulatory requirements (batch release and CAP testing) to ensure safety and effectiveness. NIBSC is the UK's Official Medicines Control Laboratory (OMCL), assuring the quality of biological medicines under EU batch release regulations. During the year, designated timelines for testing products were achieved: within 60 days of receipt for vaccines; within 30 days for blood products; and 80% within 10 days for all influenza vaccines.

2. Meet national and international demand for biological standards and reference materials needed for accurate measurement and dosing of biological medicines. NIBSC met increased demand for biological standards and reference materials and continued to provide high quality services to customers.

3. Establish new/replacement biological standards and reference materials needed for accurate measurement and dosing of biological medicines. Continual changes in biological medicines require ongoing development of standards and, therefore, the continual production of new and replacement stocks to keep up with demand. Projects to develop new standards can take 3-5 years and a large number are always in development. This year, the target was to have more than 10 new standards endorsed by the WHO Expert Committee on Biological Standardisation and 12 were accepted. One of these is the first international standard for meningococcal serogroup C (MenC) polysaccharide, which will improve the quality control of MenC vaccines.

4. Develop and supply reference standards to improve accuracy of infectious disease diagnosis, leading to better disease surveillance and patient treatment. NIBSC increased the distribution of working reagents as well as the number of reagents available in its catalogue.

5. Support influenza vaccine production to ensure timely supply of effective products for the 2011/12 season and optimal preparation for the emergence of potentially dangerous new strains. It is essential to support both seasonal and pandemic vaccine production and pandemic preparation through timely provision of candidate vaccine virus strains, reagents and standards to manufacturers, regulators and researchers. Once virus strains suitable for the annual vaccination campaign were chosen, suitable strains with satisfactory growth properties for vaccine manufacturers were produced within four weeks and new calibrated potency assessment reagents produced within 16 weeks of this strain selection.

6. Develop, assess and establish new/improved methods for assuring the quality of biological medicines. Ongoing development of methods is essential to ensuring the quality of medicines for the future. One project aims to develop a more accurate and precise alternative to the current biological model of the in vitro histamine test used to ensure the safety of pertussis vaccines. The first phase of an international validation of an in

vitro alternative to the histamine test was completed. It will now undergo full validation for inclusion in Pharmacopoeia.

7. Support development of safe and effective cell-based medicines. Producing safe and effective cell-based medicines requires an understanding of the differentiation potential of stem cell populations and the control mechanisms that regulate differentiation. The development of appropriate assays for assessing the safety, quality and efficacy of cell-based medicines will be critical for manufacturers of stem-cell based medicinal products when they characterise these products prior to licensing. Validation and standardisation of pluripotent stem cell methodologies are also critical to the development of this technology for human application. Genetically engineered, induced pluripotent stem cells for advancing research on novel cellular therapies for type-1 diabetes were constructed, fully characterised and made available through the Stem Cell Bank.

8. Maintain research inputs and outputs. A substantial number of publications were produced, reflecting the expertise of the scientific work carried out at NIBSC, the valuable collaborations between scientists and the ability to attract external funding.

9. Strengthen NIBSC position as leading global standards and control laboratory. Relationships with China and India have continued to grow, creating new opportunities for the supply of NIBSC reference materials in support of global standardisation of biological medicines production as well as providing insights into the quality of the products developed in these countries.

10. Ensure continuity of specialist laboratory facilities for medicines control, standardisation and research work. Work has continued to improve facilities and to ensure that they remain resilient, in spite of continued uncertainty about possible relocation over the long term.

9. Supporting the Development of New Vaccines and Novel Interventions

The HPA has unique capabilities to support the development of new vaccines, therapeutics and novel interventions that reduce the severity or incidence of infectious disease. Working in partnership with the biotechnology and pharmaceutical industries, academic groups and other public sector bodies, the agency uses its unrivalled expertise and specialised facilities to undertake translational research projects that have the potential to make significant improvements to public health.

The majority of the work is funded through external sources, via commercial contracts, grant funding or UK/foreign government funding. These collaborations reinforce the agency's capabilities, helping to maintain the scientific skills base and other resources, such as bio-containment facilities, which support the UK's ability to respond to emergencies.

Projects undertaken during the year contributed to the development of vaccines, or other interventions, for meningococcal serogroup B (MenB) disease, tuberculosis, influenza, hepatitis

C, HIV, polio, anthrax and other emerging infections and high threat agents. Novel immunotherapeutic approaches to combat *Clostridium difficile* infection (CDI) were also investigated.

Highlights

Details of all the objectives from the HPA Business Plan 2011/12 for work on new vaccines and novel interventions can be found at www.hpa.org.uk. Objectives that were met include:

1. Leverage the National Institute for Health Research (NIHR) translational research programme to obtain wider funding from the commercial and not-for profit sector in the support of the development of new public health interventions. At least 11 commercial contracts that will generate additional income were secured. Examples include the design of a genetically-modified pertussis vaccine strain; evaluation of an influenza vaccine; quality control testing of a next-generation anthrax vaccine, and the evaluation of meningitis and non-typeable *Haemophilus influenzae* vaccines.

2. Develop new meningococcal vaccines. The development of conjugate vaccines against MenB disease has proved difficult, so alternatives have been sought. Two approaches are under investigation that may provide the broad cross-protection required to prevent a major proportion of UK meningococcal disease. For one candidate vaccine, a report has been submitted to the Medicines and Healthcare products Regulatory Agency in preparation for a phase 1 clinical trial. For the other, a manufacturing process has been developed to allow production of clinical trial vaccine.

3. Support the development of lead European tuberculosis vaccines. Progress has been made in the pre-clinical development of an improved tuberculosis vaccine. Manuscripts are being drafted, reporting the protective efficacy of vaccine models.

4. Conduct pre-clinical studies of vaccines and therapeutics for influenza. The ability of influenza to rapidly mutate can result in resistance to therapeutics and render existing vaccines ineffective. Working with academic and pharmaceutical industry collaborators, pre-clinical studies were conducted to evaluate novel influenza therapeutics and vaccines.

5. Define *Clostridium difficile* toxins A/B recombinant antigens and support assay systems that can underpin the production of therapeutic antibodies. Severe CDI is life threatening, with few antibiotics and therapeutics to treat it. To provide a potential treatment, and fill this therapeutic gap, recombinant antigens have been defined which produce antibodies that are effective against two *C. difficile* toxins. An improved assay for assessing antibody potency has been developed and qualified.

6. Work with third parties to evaluate next generation anthrax vaccine. With commercial funding, a cell-based assay has been developed and validated to study the potency and stability of a new anthrax vaccine. Expertise and capabilities developed during this work were used in responding to the UK anthrax outbreak. A new project is underway to develop tests to evaluate a novel plague vaccine.

7. Using a comprehensive, structured review of data on a wide range of vaccine types, derive a set of recommendations and rules for vaccine design and production strategies likely to have a high chance of success in man. Vaccine development is a lengthy and expensive process with a high failure rate. However, emerging disease threats require timely, effective and rational approaches to vaccine design, testing and release. The scientific evidence base on vaccine research and development was reviewed to determine optimum strategies for rapid design and manufacture of successful vaccines. A descriptive framework – or 'vaccinology' – is now being developed to help scientists identify the best type of vaccine, and protective antigens, against a given pathogen.

8. Development of safe polio vaccines for post-eradication era. Industrial partners have

been identified for further development of safer, inactivated poliovirus vaccine.

9. To establish the optimal method to elicit mucosal anti-viral responses. A safe and effective vaccine to prevent transmission of HIV is global health priority. HPA has specialised facilities for undertaking pre-clinical research into the immunogenicity and likely efficacy of novel candidate vaccines. As a result of data arising from 2011/12, additional work was requested from a collaborating partner and additional funds were secured.

10. Work within HPA to identify translational research projects. Provide robust support for existing HPA products. Support was provided for existing products, Erwinase and anthrax vaccine, to ensure that all market demand was met. A licence to supply Erwinase in the US was approved, which will considerably increase income for the HPA in coming years.

Other projects included:

- MenB vaccine, which is being developed by the HPA and a commercial partner, with intellectual property from both and funding from the Medical Research Council.
- *Clostridium difficile* antitoxin development based on HPA intellectual property.
- Second-generation anthrax vaccines, where HPA intellectual property has been pivotal in securing a major contract from an overseas partner for producing a novel vaccine and supporting clinical trials.

Examples of future plans

- To support the development of new vaccines against influenza, HIV-AIDS, tuberculosis, hepatitis C, MenB disease, neonatal sepsis (group B streptococcus), polio, anthrax and other threats.
- To support the development of novel interventions against anthrax and other toxin-mediated diseases (e.g. due to *Clostridium difficile* or verocytotoxin-producing *Escherichia coli*), tuberculosis, and other threats.
- To identify unmet needs in vaccine and intervention research, assessment and development.
- Provide evidence-based expert advice, knowledge and know-how on developments in vaccines and therapeutics and in 'best practice' for preclinical and clinical evaluation, and manufacture.

10. Climate Change and Extreme Events

Climate change and extreme events have significant implications for public health. Higher temperatures as a result of long-term climate change could lead to more heat-related illness and deaths, cancers from sun/UV exposure, respiratory complaints aggravated by ozone and air pollution, and new infectious disease.

Increased flooding could disrupt large numbers of people, causing illness, injuries and death.

The HPA has established a Climate Change and Extreme Events Programme to ensure that the agency is able to provide an appropriate response to these public health challenges.

By working in collaboration with other partners, it will seek to mitigate the adverse health effects through evidence-based interventions and devise strategies for adapting to the long-term consequences. Its work involves:

- Identifying gaps in the scientific evidence and conducting or promoting research projects/collaborations to inform health protection advice.
- Developing strategies to protect public health from the likely impacts of climate change and extreme events, whether caused by infectious disease, exposure to chemicals or radiation, or other environmental hazards.
- Coordination of all HPA activities relevant to the public health consequences of climate change and extreme events.

The HPA has been extensively involved in compiling the health sector response to the government-led UK Climate Change Risk Assessment, which looked at the potential risks to all UK sectors from climate change and the need for resilience, mitigation and adaptation policies.

Highlights

Details of all the objectives for work on climate change and extreme events during 2011/12 can be found at www.hpa.org.uk. Objectives that were met include:

1. Establish a programme board and work programme to take forward HPA work on climate change. A board and programme of work were established, including a five-year strategic plan. Coordinated work is needed to develop priorities so that the HPA works in the areas where the most public health benefit is to be gained.

2. Provide authoritative advice to government departments and agencies on the public health aspects of climate change and support HPA regional services with relevant advice. The HPA had significant input into the first UK Climate Change Risk Assessment (CCRA) as the health sector champion. This project, led by the Department for Environment Food and Rural Affairs, aims to identify and quantify as far as possible all risks from climate change across 11 areas, including the challenges for public health.

The Department of Health commissioned the HPA to produce a separate report on the health effects of climate change, which updates previous reports in 2001 and 2008. This is a major HPA publication with external and internal experts as authors. The 2012 update uses newly available climate projections to predict the health effects of climate change under a variety of environmental scenarios. Publication is due early in 2012/13.

Examples of future plans

- Conduct a gap analysis of HPA activity in climate and health protection. This will focus on gaps in surveillance, research, capacity, guidance and policies for reducing the health impacts of climate variability and change (including responding to and planning for health-related impacts), and evaluation of the effectiveness of policies.
- Provide authoritative advice, peer-reviewed articles and reports.
- Establish a research portfolio to support the advisory role of the HPA on the public health risks from climate change.
- Maintain vector surveillance systems and targeted field studies.
- Evaluate the Cold Weather Plan for England. The HPA will work with DH and the Met Office to run evaluation workshops for government, academic, professional, voluntary and healthcare partners.

Key objectives related to the 10 strategic aims

Introduction

To support the objectives from the key health protection programmes, there are cross-cutting objectives that relate to systems and infrastructure. They are derived from the HPA's 10 strategic aims, as set out on p10. Some of the strategic objectives, which have been particularly important in enabling health outcomes to be achieved, are described below. Details of all the objectives supporting the 10 strategic aims in the HPA Business Plan for 2011/12 can be found at www.hpa.org.uk.

Strategic aim 2: To be trusted by all in providing advice and services to the public, health professionals, government and others.

Objective: Use feedback from the Hard to Reach seminar and the Equality Forum to identify a seldom-heard community for the agency to work with.

Outcome: The Equality Forum was expanded to include people from hard-to-reach communities and the organisations that represent them. The Public Health Strategy division developed a methodology for prioritising the work of the HPA and is working with the Public Involvement Team to apply this to public engagement.

Strategic aim 4: To be expert and mature in effective partnership working with the NHS and others at local, national and international levels.

Emergency preparedness, response and resilience

Objective: To ensure an appropriate emergency response plan is in place for the Olympic and Paralympic Games 2012 and to test the plan through at least one major exercise.

Outcome: The emergency response plan was tested through exercises, both internally and externally with partner organisations. Further exercises are planned before the Olympic period.

Preparing for the Olympics 2012

Objective: Ensure the HPA can respond to any health protection threats related to the Olympic and Paralympic Games.

Outcome: Systems to deliver the agency's commitments are in place and have been tested.

Port health

Objective: Pursue the scientific case for stopping the chest X-ray screening service at Heathrow and Gatwick (currently part of the Medical Inspection Service at ports in England) and recommend a more appropriate way to identify and treat tuberculosis in migrant populations.

Outcome: This will allow the HPA to focus on more effective medical inspection and health protection interventions at our larger ports. This will free up about £2.6 million per year. Support and advice can be provided to the UK Border Agency regarding plans for rolling out a pre-entry screening programme.

Strategic aim 8: To be one cohesive organisation.

Corporate management and governance

Objective: To maintain the revenue budget balance of the HPA for 2011/12, within the agreed grant-in-aid funding.

Outcome: The HPA achieved a budget surplus of £10 million on its revenue account as shown in note 16 to the annual accounts on p92.

Clinical and health protection governance

Objective: All necessary procedures are in place to provide adequate, consistent, reliable and timely advice on a quality assured basis – including clear lines of responsibility and accountability, a comprehensive programme of quality improvement activities, clear policies to manage risk, and procedures for all professional groups to identify.

Outcome: Measures to enhance arrangements for clinical and health protection governance included:

- Revision of the Clinical and Health Protection Governance 'Policy' and 'Arrangements' documents in November 2011, in order to highlight new developments in the overall framework and strengthen reporting arrangements.
- Publication of new pages on clinical governance on the HPA intranet to improve understanding of, and support for, clinical governance.
- Revision of the terms of reference for the Clinical Health Protection Governance Group (CHPGG) in order to clarify the group's function, outputs, membership and meetings.
- A 'stocktake' of clinical governance arrangements within divisions was conducted in July 2011 to identify gaps in arrangements. Gaps identified were discussed at CHPGG meetings in July and November 2011. Relevant areas of concern were followed up with senior managers and executive directors, with support for divisions on strengthening arrangements.
- Reports to the Integrated Governance Group and the Executive Group on the corporate and divisional arrangements for clinical and health protection governance, highlighting gaps in the framework.
- Preparation of an 'assurance map' that sets out the means whereby the CHPGG meets its terms of reference, the frequency with which it gains this assurance, and how this is reported upwards.
- Corporate action to strengthen divisional responsibility for reporting, managing and investigating clinical adverse incidents and near misses.
- Improved participation by divisions in the systematic audit programme of the CHPGG, with a robust process used to assess clinical audit reports and provide feedback to authors.
- A division-wide quality and governance strategy developed by the Health Protection Services (HPS) division, which adopts the need to manage and continuously improve the quality of services as an organising principle for the work of the division.

Strategic aim 9: To be equipped with state-of-the-art facilities appropriate to deliver consistent, cutting-edge services.

Managing our information systems

Objective: Create a resilient, quality-based IT operation integrating Connecting for Health and DH shared and aggregated services, where possible.

Outcome: Work to provide full resilience for key operational IT services, such as email, telephony and essential business and scientific systems, was completed. The HPA's ability to recover from disaster has been demonstrated both operationally and by audit.

Surveillance

Objective: Deliver a dashboard summarising incident and outbreak information across the country in a reliable way.

Outcome: Health protection unit staff use HPZone for case and outbreak management. The new HPZone dashboard will allow timely, accurate and secure sharing of data for a wide variety of purposes, including surveillance and national-level outbreak management. The dashboard is provided via an internally hosted service environment that allows for the greatest flexibility in terms of deployment, availability and access by staff and other users. Accessible and high-quality information needed to support the daily operation and strategic direction of the business is provided quickly and agency-wide information sharing and collaborative working both internally and externally has been improved. Administrative overheads for HPA staff have been reduced and quality and timeliness of data improved.

Objective: The HPA is capable of supporting the Olympics surveillance effort through analysis of data sourced from hospital emergency departments.

Outcome: A reliable and robust syndromic surveillance service capable of operating for the duration of a major incident or outbreak has been developed with greater coverage (10% above expected), in a shorter timescale than anticipated, and to cost.

This will improve the HPA's ability to detect and inform on emerging infection and health protection problems (including possible deliberate release) at an early stage and ensure

that those managing major incidents have real time data on any acute impact on public health. Crucially, this improved service has been informed by, and is ready for, the Olympic Games 2012.

Investment in the estate

Objective: Progressing a major re-provision of the HPA's Porton Down research facilities, by moving towards a full business case.

Outcome: The outline business case (OBC) for the re-provision of the Porton research facilities made progress through the government review process. The OBC situation has necessarily caused a delay in the design and town planning activities that will lead to site acquisition and full business case submission. However, additional analyses have been carried out, along with substantial preparative work on the assumption of a positive OBC decision for co-location at Harlow. These are summarised below:

- Review by the Department of Health Capital Investment Branch of the OBC resulted in more than 700 comments. A number of these resulted in changes to the business case and a revised version was agreed.
- Originally, the proposed move to Harlow was envisaged as a two-phase process, with Porton re-provision first and wider agency co-location to follow. However, there was a particular interest, during the review, in the benefits of co-location. As a result, an additional annex to the OBC was developed to provide more detail around co-location options, economic benefits and assumptions around synergies and benefits. This highlighted the benefit of carrying out early co-location and combining the two phases.
- Additional reports on town planning risk, site valuation and land title were generated to support site acquisition.
- A Gateway Review was carried out, resulting in an amber status outcome which was a commendable result taking into account the circumstances.
- New financial annexes were added to update the costs in line with inflation, subsequent scope refinement and requests for change.
- During review by Department of Health senior management, briefings on a wide range of topics were requested. These were added to the OBC as an additional annex.
- The user requirements for co-location at Harlow were gathered, reviewed, challenged and approved by the programme board.
- Day-to-day governance processes and procedures were strengthened to put the programme on the best possible footing following an OBC decision.
- Work commenced on the construction strategy. This strategy is likely to be a condition of any OBC approval and will require Department of Health review and approval prior to going out to tender. It is seen as a particular area of risk and is therefore being started early.

Strategic aim 10: To be an employer of choice, which values and respects staff

Objective: Develop two new training posts in medical toxicology.

Outcome: A five-year training programme to increase the number of medical toxicologists was agreed. The HPA worked with Faculty of Public Health, College of Emergency Medicine and colleagues from National Poisons Information Service, which hopes to achieve General Medical Council accreditation for clinical toxicology.

Objective: Development and implementation of a Field Epidemiology Training Programme.

Outcome: Five fellows commenced training in September 2011.

Objective: Training and development programme objectives for HPA-funded PhD students awarded annually in competition aligned to HPA strategic objectives.

Outcome: Six PhD awards were made in 2011/12.

Financial review

INTRODUCTION

The financial statements on pages 65 to 69 cover the period 1 April 2011 to 31 March 2012 and have been 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.opsi.gov.uk. The financial statements have been prepared in accordance with the *Government Financial Reporting Manual 2011/12* (FReM).

FUNDING

Funding of the agency's day-to-day costs and capital investment is received as grant-in-aid, through the Parliamentary Supply process, and allocated within the main Department of Health Estimate. This funding takes 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 obtains additional funding from various public and private sector contracts.

For 2011/12 the total funding received by the HPA was £331.2m (2010/11: £340.7m), which represents a 2% decrease after adjusting for the non-cash capital grant-in-aid allocation of £3.0m in 2010/11. As government grant-in-aid accounted for 52% (2010/11: 56%) of total funding, the agency's exposure to liquidity risk is limited.

Table 1: Source of funding

Source of funding	2011/12 £'000	2010/11 £'000
Revenue grant-in-aid from Department of Health	**144,157**	**151,468**
Revenue grant-in-aid from the devolved administrations	2,020	2,105
Products and royalties	51,764	35,033
Research related contracts and grants	35,853	39,374
Laboratories and other services	68,537	71,429
Other operating income	495	462
Interest receivable	19	924
Total revenue funding	**302,845**	**300,795**
Capital grant-in-aid from Department of Health	27,500	36,381
Non-cash capital grant-in-aid from Department of Health	-	2,968
Other capital grants	839	559
Total funding	**331,184**	**340,703**

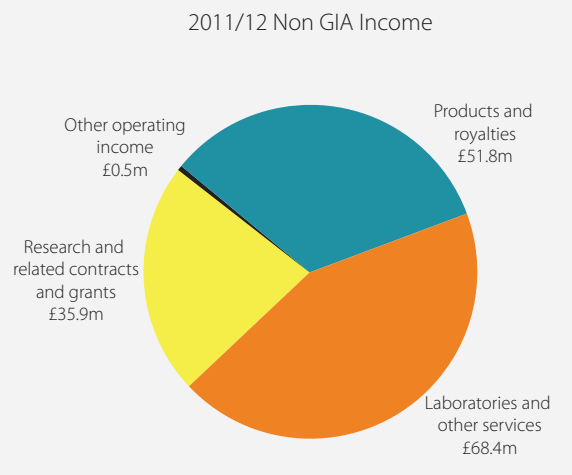
You can find further information about our 2011/12 funding and expenditure within the notes to the financial statements, on pages 70 to 95; or by visiting our website at www.hpa.org.uk.

In addition, the 2011/12 capital budget of £27.5m represented a 24% decrease on the prior year, and the indications are that capital funding will also come under increasing pressure in future years. However, the overall budget does continue to reflect the ongoing investment in public health services, which includes the re-provision of ageing laboratory facilities and the rationalisation of regional and local accommodation.

The need to reduce high levels of public debt has already started to impact the agency's funding. The Department of Health included efficiency savings of 6% within the funding for 2011/12, which resulted in an overall reduction in the base revenue grant-in-aid from the Department of Health of £9.0m. Pay and inflationary pressures, placed a similar burden on the agency as the funding cut, although constraints on pay increases kept the agency's 2011/12 total pay cost below budget. The indications are that funding will come under increasing pressure in 2012/13 requiring further efficiency savings and the re-prioritisation of work.

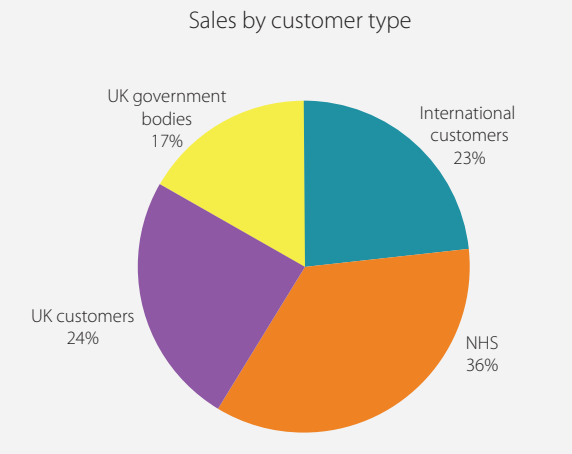
The significant income generated by the agency supplements government funded activities as illustrated in Graph 1.

Graph 1: Non-grant-in-aid (GIA) income



The total income from customer sales in 2011/12 of £156.6m, provided a substantial and ongoing contribution to fixed costs. Included within this total were royalties of £20.7m (2010/11: £18.6m), earned mostly on sales of Dysport, which were £1.9m ahead of budget for the year. The distribution of income across the customer base is shown in Graph 2.

Graph 2: Sales attribution by customer type



REVENUE EXPENDITURE IN 2011/12

Gross operating costs decreased by 1.9% in the year from £323.7m in 2010/11 to £317.5m in 2011/12. Internal efficiencies helped control operating charges this year and the limits on pay increases reduced staff costs. As illustrated in Graph 4, all expenditure is attributed against the agency's five strategic objectives, with shortfalls in funding met (and sometimes exceeded) through contribution from additional revenue generating activities.

FINANCIAL POSITION

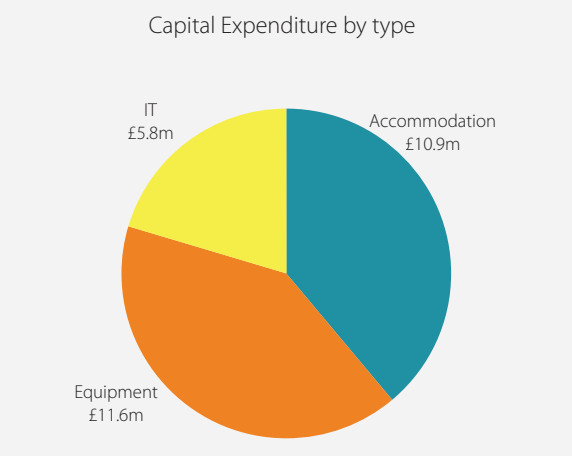
The agency maintained its strong non-current asset base with the addition in the year of property, plant and equipment and intangible assets to the value of £28.3m. Taking into account depreciation of £23.8m, and revaluation, impairment and derecognition of assets of £3.3m, the total value of non-current assets as at 31 March 2012 was £286.9m (2011: £285.7m).

In addition, only 7% of the agency's £66m of liabilities are of a long-term nature. These include provisions for the future costs of early retirement, potential compensation liabilities, as well as the cost of minor repairs when the agency returns leased buildings to their owners. The total balance of taxpayers' equity as at 31 March 2012 was £328.6m (2011: £317.2m).

CAPITAL INVESTMENT IN 2011/12

During 2011/12, £28.3m (2010/11: £30.5m) was invested in some 368 capital projects, with the 20 highest value schemes accounting for £8.7m of the total. The capital expenditure incurred in 2011/12 by type is illustrated in Graph 3.

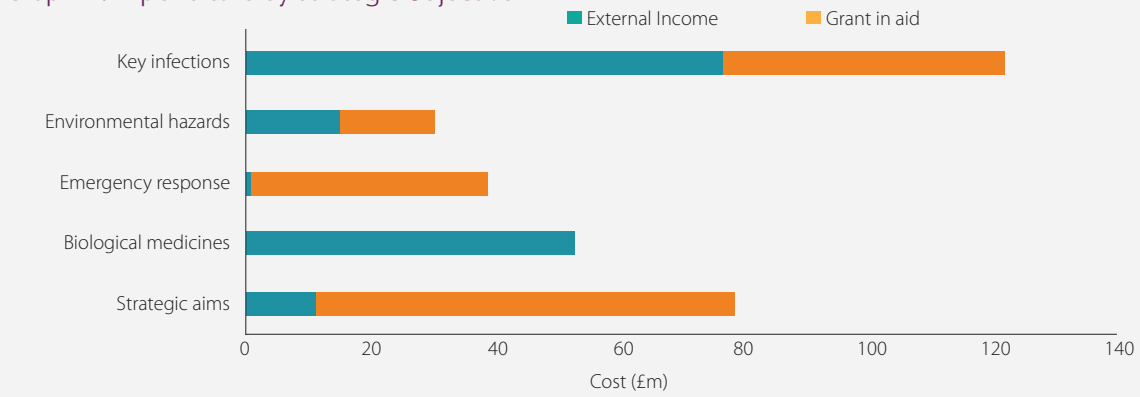
Graph 3: Capital expenditure by type



2011/12 FINANCIAL RESULTS

Overall, both income and expenditure were lower than in the previous year, with the result that the agency reported a surplus of £10.1m in 2011/12 on a net funding base of £170.9m. Reduced grant-in-aid, combined with pay and inflationary pressures, exerted significant cost pressures this year. However, the impact was mitigated through internal cost savings and efficiencies, and combined with royalty gains and an increase in product sales this generated a surplus.

Graph 4: Expenditure by strategic objective



RELATIONSHIPS WITH SUPPLIERS

It is the agency's policy to pay suppliers in accordance with the Better Payments Practice Code and to settle at least 90% of undisputed supplier invoices on time, at least while striving to pay small and medium-sized entities within five working days. For the year ended 31 March 2012, 98% (2011: 98%) of invoices, which amounted to 98% (2011: 97%) of the total value of payments, were paid within 30 days of the invoice being registered.

EFFICIENCY MEASURES

The HPA is participating fully in the efficiency measures announced by the Government in May 2010 and the transparency rules introduced during 2010/11 (see Governance section on p39 for further details). In parallel with the government efficiency measures, the agency initiated a Performance Improvement Programme in 2010 to identify areas where gains can be made. This programme, which runs in parallel with tight budgetary management, forms the control mechanism to ensure reductions in the agency's budget can be accommodated with minimal adverse effect on its key objectives.

NEXT STEPS

Under the Health and Social Care Act 2012, the Health Protection Agency will cease to exist as a non departmental public body on 31 March 2013 at which point its functions (with the exception of those carried out by the National Institute for Biological Standards and Control) will continue in Public Health England (PHE), as an Executive Agency within the Department of Health. Throughout 2012/13, the HPA will continue to ensure that it delivers its public health functions whilst contributing to the establishment of PHE.

STATEMENT AS TO DISCLOSURE OF INFORMATION TO AUDITORS

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

GOING CONCERN

The Board has considered the results for the year, the amounts owed by the agency, its financial position at 31 March 2012, the continuing support of Government under the Health Protection Agency Act 2004, and the continuation of functions from 1 April 2013 under the Health and Social Care Act 2012. Taking all of these factors into consideration, the Board believes it is appropriate to continue to adopt the going concern basis in preparing the annual report and financial statements.

Justin McCracken
Accounting Officer
11 June 2012

3 Governance report

Governance statement

GOVERNANCE FRAMEWORK

The HPA was established as a special health authority in April 2003 in advance of the 2004 Health Protection Agency Act. This Act brought together the HPA Special Health Authority and the National Radiological Protection Board to become the Health Protection Agency – an executive non-departmental public body. On 1 April 2009 the National Institute for Biological Standards and Control (NIBSC) became part of the HPA.

During 2010, the Government indicated through its white paper on public health that subject to legislation the HPA would be abolished and its functions (with the exception of those carried out by NIBSC) moved into Public Health England. The Health and Social Care Act 2012 will allow these changes to come into force.

Accountability within the HPA is exercised through:

- The Board and the Audit Committee. The agency's 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.

- An Executive Group comprising all centre and divisional directors and the chief executive/accounting officer. This group is responsible for the strategic and operational management of the organisation and for implementing the policies and strategies agreed by the Board. The accounting officer is responsible to Parliament for the management of the organisation. The Executive Group meets monthly and members also communicate through a weekly teleconference. The members who served on the Executive Group since 1 April 2011 are shown on p58. Executive directors are personally accountable to the accounting officer for the management of the risks and controls within their centres and divisions.

www.hpa.org.uk

THE HPA BOARD

The Board is committed to the highest standards of corporate governance and complies to the relevant extent 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 are 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. Prior to March 2012, this process was conducted on behalf of the Secretary of State by the independent Appointments Commission. Following the abolition of the Appointments Commission, the process will in future be conducted by the Department of Health. Non-executive members are normally appointed for terms of three years and are eligible for reappointment, subject to the prevailing limits on public office.

The executive members of the Board are appointed by the chairman and the non-executive members of the Board. The non-executive members are drawn from diverse backgrounds, bringing a broad range of views and experiences to Board deliberations. Biographical details of Board members are published on the HPA website at www.hpa.org.uk/board.

The Board met formally on six occasions in 2011/12. Minutes and papers of public meetings are published on the HPA website at www.hpa.org.uk/board.

During the financial year under review the Board consisted of the chairman and 13 other non-executive members (who are not officers of the HPA), plus the chief executive and one executive member, the director of finance and resources (who are officers of the HPA). The Board is also

supported by a number of observers from the Faculty of Public Health, the Department of Health, and the devolved administrations and their public health bodies.

ROLE OF THE BOARD

The Board has corporate responsibility for ensuring that the HPA fulfils the aims and objectives set by the Secretary of State for Health and for promoting the efficient and effective use of staff and other resources. The Board establishes 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 agency's objectives and running the business on a day-to-day basis lies with the chief executive, supported by the Executive Group. The roles of the chairman, chief executive and Board members are separate and clearly defined within the division of responsibilities set out in the management statement, which is agreed with the Department of Health and published on the HPA website. The Board meets to consider all matters relating to the overall control, business performance and strategy of the HPA.

BOARD COMMITTEE STRUCTURE

The Board is supported by standing Board committees with clearly defined terms of reference set by the Board, including some specific delegated powers. Each standing committee is chaired by a non-executive Board member. There are five governance committees: the Audit Committee, the Finance Committee, the Human Resources Committee, the Nomination Committee and the Remuneration and Terms of Service Committee. There are also four technical committees, the Infections Committee, the Environmental Hazards Committee, the Biological Medicines Committee, and the Global Health Committee.

Attendance of non-executive and executive members at Board and Board Governance Committee meetings during 2011/12

	Board	Audit Committee	Finance Committee	Human Resources Committee	Nomination Committee	Remuneration and Terms of Service Committee
Non-executive members						
Professor David Heymann (Chair)	6 (6)	-	-	-	-	2 (2)
Dr Barbara Bannister	5 (6) *	2 (4)	-	-	-	-
Michael Beaumont	6 (6)	4 (4)	-	-	-	2 (2)
James Brown	6 (6)	-	3 (4)	-	-	-
Michael Carroll	4 (6) *	-	3 (4)	-	-	-
Professor Charles Easmon	5 (6)	-	-	4 (4)	1 (1)	2 (2)
Helen Froud	4 (6) *	-	-	4 (4)	1 (1)	2 (2)
Professor Willliam Gelletly	5 (6)	-	-	-	-	-
Martin Hindle	5 (6)	-	4 (4)	-	-	2 (2)
Deborah Oakley	6 (6)	-	3 (4)	-	-	-
John Wyn Owen	5 (6)	-	-	2 (4)	0 (1)	-
Dr Dipti Patel	6 (6)	3 (4)	-	-	-	-
Professor Debby Reynolds	6 (6)	-	-	2 (4)	1 (1)	-
Dr Timothy Wyatt	6 (6)	4 (4)	-	-	-	-
Executive members						
Justin McCracken	6 (6)	2 (4) **	3 (4)	4 (4)	1 (1)	2 (2)
Dr Tony Sannia	5 (6) *	4 (4) **	4 (4)	-	-	-

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

* These members attended for part of one Board meeting each.

** The Audit Committee consists only of non-executive Board members and independent members of the committee. The chief executive and director of finance and resources attend as non-members.

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 provides 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 is monitored and managed effectively. The committee reports directly to the Secretary of State. Further details can be found on the HPA website at www.hpa.org.uk/board.

BOARD MEMBERS' INDUCTION AND DEVELOPMENT

On appointment, members are provided with written terms of appointment including details of how their performance will be appraised. Members also receive a full induction programme comprising briefings by senior management, a briefing from the Board secretary on the Board's responsibilities and procedures, and visits to HPA sites.

Non-executive Board members provide the chairmanship and core membership of the governance and technical committees of the Board. In addition, each non-executive adopts 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 makes 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 may, if it wishes, take independent professional advice and all non-executive Board members have access to the advice and services of the Board secretary.

BOARD MEMBERS' INTERESTS

Board members are required to notify and register with the Board secretary any issues on which they might have a conflict of interest. Declarations of interest are invited at every Board meeting and the Board as a whole considers how it should discuss the matter(s) on which the member may have a conflict. The register of Board members' interests is maintained by the Board secretary at the HPA central office and may be viewed by appointment during office hours. Please call 020 7811 7026 to make an appointment. The changes to the Board membership that have occurred since 1 April 2011 are shown on p57.

THE BOARD'S PERFORMANCE

The performance and effectiveness of the Board is 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, Nomination and Remuneration, and the technical committees).
- Individual appraisal of Board members by the chairman against their objectives.

RISK MANAGEMENT FRAMEWORK

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

The Board controls and monitors risk management by reviewing the principal strategic risks facing the agency. It also considers issues referred by the accounting officer, the Executive Group and the Audit Committee. Executive directors are responsible for risk management within their areas of responsibility. This includes promoting risk awareness and supporting staff in managing risk. Unit heads are responsible for ensuring that overall risks are managed in their units, through the assessment of risks relating to the achievement of their objectives and by mitigating these risks. The assessment is carried out in conjunction with the development of the business plan, and is reviewed regularly.

The head of internal audit provides 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 is 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 are necessary and desirable for good governance.

The system of internal control is designed to manage risk to a reasonable level rather than to eliminate all risk of failure to achieve policies, aims and objectives. It can therefore only provide reasonable, and not absolute, assurance of effectiveness. The system of internal control is based on an ongoing process designed to identify and prioritise the risks to the achievement of the 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 are encouraged through a strong culture of learning from both positive and negative experience.

The risk management arrangements are not designed to reduce risks to zero but to reduce risks to an acceptable level, which is the point at which the cost of reducing the risk further outweighs the benefit.

The system of internal control has been in place in the HPA for the year ended 31 March 2012 and up to the date of approval of the Annual Report and Accounts, and accords with HM Treasury guidance.

CAPACITY TO HANDLE RISK

The agency'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 clarifies specific roles and responsibilities.

In addition, risk management is included as part of the performance criteria of all centre directors, divisional directors and senior staff. Responsibility for risk management is included in job descriptions and person specifications where appropriate, and is included within generic competencies as part of the staff appraisal process.

The agency aims to minimise adverse outcomes such as harm, loss or damage to the organisation, its people or property, or those who receive its services, through adequate supervision and training, appropriate delegation, continuous review of processes and the environment, and the sharing of lessons learnt and best practice. This is achieved, primarily, through setting standards for professional practice and service delivery. An electronic incident management and investigation system is used to manage adverse incidents, with lessons learnt being promulgated through the HPA's intranet.

A programme of mandatory risk management training is in place for all levels of staff, and guidance is provided through the intranet. To improve the quality of adverse incident investigations and action plans, root cause analysis training is promoted to managers.

CAPTURING AND RESPONDING TO RISK INFORMATION

The strategic risk register is reviewed every quarter by the Executive Group and biannually by the Board. Risk registers for the agency's centres and divisions and programmes are updated quarterly and risks are fed into the strategic risk register where appropriate.

Under the Health and Social Care Act 2012, the HPA will be abolished at the end of March 2013, and its functions (with the exception of those carried out by NIBSC) moved into Public Health England (PHE), a new executive agency within the Department of Health. The HPA recognises that there are inherent risks as a result of these changes and other changes to the healthcare system. Such risks have been incorporated into an HPA strategic risk summary. The new structure of the summary distinguishes HPA strategic risks, transition risks that the HPA Executive Group has some control over, and a third group of risks in relation to the creation of PHE that belong primarily to the Board of the Department of Health.

During the transition phase, appropriate mechanisms have been put in place to ensure that risks to the strategic activities of the HPA are adequately considered by the Department of Health teams (see also 'control issues during the year'). Mechanisms include staff secondment, and membership of appropriate committees such as the PHE

transition and implementation teams. Risk registers are also maintained at one level below the HPA divisions and for key projects. Where a risk cannot be managed at a particular level within the organisation it is escalated to the next level up.

A bottom-up approach is also in place where risks are reported via risk registers, verbally during staff and management meetings, or through written reports. These mechanisms help to ensure that the appropriate filtering and delegation of risk management are in place and that the system is embedded throughout the agency.

Assessment of the adequacy of controls is a vital part of our systematic approach that attempts to limit risk to an acceptable residual level, rather than obviate the risk altogether. Staff are encouraged to balance the cost of control with the risk to be mitigated and to help ensure that value for money is achieved.

The HPA is unwilling to accept risks that may 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') is therefore low. Any identified risk for these activities that cannot be managed locally must be escalated to the Executive Group.

The HPA's adverse incident and serious untoward incident management policy and procedure provide a formal mechanism for reporting and learning from incidents across the agency. An electronic incident management and investigation system enables management to report and track key issues. The agency also publishes reports on major events and these are used to promulgate lessons learnt for both the agency and its partners. The agency has a formal complaints procedure for patients and service users, which is published on the HPA website.

The risk management team develops the HPA's approach to risk management, and identifies cross-cutting operational risks. The agency's Clinical and Health Protection Governance Group helps to ensure that robust clinical and health protection governance systems operate throughout the agency, and that the clinical and health protection governance strategy is fit for purpose.

The agency's arrangements to mitigate health and safety risk include the work of the Health and Safety Steering Group (HSSG), which is chaired by the chief executive. This group reviews the agency's health and safety strategy and arrangements to ensure that they are appropriate for the future requirements of the HPA; and that they continue to meet changing statutory requirements. Performance data is reviewed and presented to the Executive Group and the Board on a regular basis.

In relation to information risk, the agency uses 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 maintains access to the NHS National Network and related systems by providing a statement of compliance and an annual information governance toolkit assessment. This gives additional assurance that the agency meets key information governance requirements and has robust improvement plans to address any shortfalls.

The flow of information between the agency and its partners is essential to the provision of our services. To ensure that patient-identifiable data is adequately safeguarded, we have 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 seeks approval from the National Information Governance Board for permission to continue to handle patient identifiable information, on an annual basis.

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

The HPA's Emergency Response Development Group ensures that the agency's Incident and Emergency Response Plan is robust, resilient and fit for purpose. A sub-group is in place to ensure that business continuity management is consistent and robust across the agency. Accountability for emergency response lies with centre and divisional directors and through regional directors to local teams.

The HPA has been involved in, and has undertaken, a number of exercises to improve our preparedness and there is a rolling programme of exercises. Work with partners and other stakeholders to meet the requirements of the Civil Contingencies Act 2004 has been carried out at regional and local levels by emergency planners and resilience groups.

The HPA has 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 Agency's capacity to manage risk of financial loss is appropriate given the level of inherent risk that it carries. During 2011/12, end-to-end reviews of processes that generate cash flows were carried out. This assessment concluded that no remedial action has arisen from any element of the process reviews and that no gaps have been identified between the required level of risk mitigation and the existing level.

The HPA has undertaken an assessment against the requirements of the revised Cabinet Office Security Policy Framework. The HPA's overall level of compliance is considered acceptable; there were no areas where the agency's internal assessment identified critical weaknesses and no areas where the HPA reported non-compliance. There are a number of areas where work is underway to further strengthen the HPA's security practices.

REVIEW OF EFFECTIVENESS

The accounting officer has responsibility for reviewing the effectiveness of the system of internal control. This review is informed by the work of the internal auditors and executive managers within the agency who have responsibility for the development and maintenance of the internal control framework, and comments made by the external auditors in their management letter and other reports.

The Board and the Audit Committee have 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 is in place.

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

The Integrated Governance Group (IGG) reviews governance activities within the agency and identifies the actions necessary for improvement. The appropriateness, effectiveness and progress of the risk management strategy, policy and approach are monitored by the IGG. The IGG reports and makes recommendations to the Audit Committee. Cross-attendance between the IGG, the Audit Committee, the Health and Safety Steering Group, and the Clinical and Health Protection Governance Group helps to ensure that a consistent approach is taken. A system for gathering and monitoring assurances is in place and is used to inform the agency's registration with the Care Quality Commission.

Internal audit provides an independent, objective assurance and consulting service designed to add value and improve the agency's operations. Its work is based on an agreed audit plan, which is carried out in accordance with government internal audit standards. This helps ensure that the work undertaken by internal audit provides a reasonable indication of the controls in operation across the whole of the HPA.

Findings from work carried out during the year were presented to the Audit Committee.

In addition, the head of internal audit has provided the accounting officer with an opinion that, looking at the overall arrangements, the agency has had adequate and effective risk management, control and governance processes in operation in respect of the year ending 31 March 2012

In addition to the independent assurance received from internal audit, periodic management assurance is 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 is available from inspection and compliance teams, which provide ongoing review of specific and defined areas including health and safety, clinical governance and quality assurance. Assurances are 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, work has been carried out during the year to map assurances to key activities. More robust assurance has also been sought on the controls identified in the strategic risk register and those relied upon by programme boards as part of a Board Assurance Framework.

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

KEY RISKS AND CONTROL ISSUES

Risks

The current year has been challenging with 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 (PHE).
- Loss of HPA staff due to uncertainty about both their future careers, and the environment within PHE, including equitable treatment during the transfer process.
- Loss of capacity during transition for multi-agency response within critical stakeholders, including primary care trusts, leading to loss of clarity in coordination, command and control arrangements for multi-agency incident response.
- Loss of non-grant-in-aid income.

To manage these risks, the HPA Executive Group has ensured that there has been:

- Extensive arrangements for staff engagement with a high priority given to internal communications.
- Engagement with the Department of Health on all externally driven pressures, on specific issues regarding leadership on emergency preparedness and response, and on changes associated with implementation of PHE.
- A structured plan for managing organisational change.
- New organisational structures for the Microbiology Services and Health Protection Services divisions following consultation.
- Engagement in human resources framework discussions and with the Department of Health, including the involvement of senior HPA human resources staff.
- Engagement with the Association of Directors of Public Health on local arrangements, including several joint projects that have been reported to the Department of Health.
- Input into the Department of Health transition workstream on emergency planning, including work with key players to map current capability and capacity sector wide, so that these risks can be managed collaboratively.

Control issues

The HPA has continued to work closely with the Department of Health in relation to expenditure controls introduced in May 2010. Dedicated resource has been required to implement these controls however, and to provide the various monthly returns on expenditure by categories. The additional procurement controls have added complexity and time to operational activities, but these have been accommodated and no major disruption has been suffered to any of the HPA's service deliverables.

Despite the further reduction in the agency's grant-in-aid funding, the continued efforts to generate external income and cost efficiencies enabled the HPA to deliver its core services without any detrimental impact. The agency has also been able to plan for 2012/13 on the basis that funding reductions will again be offset by increased income and efficiency savings.

In January 2011, a panel was established by the HPA 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. The investigation, which has now been completed, identified root causes, lessons to be learnt, and recommendations for improving systems and services. The HPA Board has agreed an action plan to address the recommendations of the investigation. Six-monthly reports on progress will be provided to the HPA Board. The HPA also established a look-back exercise for patients that might have been affected. Affected individuals were subsequently contacted in 2011.

The Information Commissioner's Office (ICO) issued a Decision Notice stating that the HPA failed to comply with the requirements of regulations 11(3) and 11(4) of the Environmental Information Regulations (EIR), in that it failed to consider a complainant's representations and notify him of its decision. The complaint related to a request for digital copies of maps showing areas of Northern Ireland where homes were most likely to be at risk from radon. The ICO required the HPA to conduct an internal review of the complainant's request to meet the requirement of the EIR. This internal review has been carried out and the information requested has been provided in full to the satisfaction of the complainant and the matter closed with the Information Commissioner's Office.

The incinerator at the HPA's site in Wiltshire suffered a failure of the continuous emissions monitoring system. A minor exceedance of emissions gases from the incinerator was reported to the Environment Agency in February 2012. There was no harm arising from this incident and no public health implication.

In June 2010, the report of the Independent Investigation Committee into the major *Escherichia coli* O157 outbreak at Godstone Farm in 2009 was published. The investigation report made 43 recommendations with an overarching recommendation for a multi agency implementation committee to be set up, coordinated by the HPA, to ensure that the recommendations are implemented.

The Godstone Multi Agency Implementation Committee, chaired by the HPA, provided oversight on progress with implementing the 43 recommendations. Quarterly updates were provided to the HPA Board and the final report was presented in November 2011. The successful partnership working will continue with an annual update meeting of the members of the committee ahead of the main open farm season to review outstanding or ongoing work.

There were no significant security incidents, including data security, during the year ended 31 March 2012.

I am the accounting officer for the HPA.

Justin McCracken
Chief Executive
11 June 2012

Additional corporate information

STAFF COMMUNICATIONS AND ENGAGEMENT

Communicating and engaging with staff is a priority for the HPA and considerable effort is devoted to this. In addition, the agency has good relations with the trades unions and management meets 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.
- Regular monthly core briefs produced by the Executive Group and cascaded for line managers to deliver to all employees, covering key organisational change issues.
- 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 agency, acted as staff advocates to explain organisational change.
- Biannual meetings were held to update 'change agents' and provide them with tools and ideas (which are also available via the intranet).
- Regular updates and signposts to important publications were published on the organisational change pages of the intranet.
- Workshops and narrated presentations were used to support line managers through change.
- Visits and roadshows by the chief executive and Board members were held at HPA locations across the country to consult staff about significant developments in relation to the transfer to PHE.
- Contributions were made to Department of Health initiatives including 'Towards a workforce strategy for the public health system' and 'Building a PHE People Transition Policy'.
- A contribution was submitted to the Arm's Length Bodies review of shared services.

EQUALITY AND DIVERSITY

The HPA undertakes 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.

During 2009/10, the HPA published a Single Equality Scheme, including an action plan. Good progress has been made against the agreed actions and the agency is on target to complete the remaining activities in 2012.

An HPA Statement of Commitment to Equality and Diversity, which replaces the Single Equality Scheme, has been agreed and was published in April 2012. This document enables HPA to meet the statutory obligation to publish equality objectives in accordance with the Equality Act 2010 (Specific Duties) Regulations 2011, and also emphasises the HPA's values and continuing commitments to promote equality and diversity. It also provides information, a vision for the future and evidence about achievements.

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.

Previous key equality impact assessments (EIA), together with accompanying action plans, have progressed. However the new equality analysis process will replace the EIA process and will focus on strategic level decisions and policies. It is anticipated that positive evidence of cultural change and progress on under-representation issues will be seen in the workforce statistics over the coming months.

A number of staff support groups have now been 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 is 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.

HEALTH AND SAFETY

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

The HPA Board sets the direction and conducts a formal annual review of health and safety aligned with the Institute of Directors' guidance. The Executive Group is responsible for, and leads on, improving health and safety performance and it monitors progress regularly. The HPA engages and consults with staff through a network of safety representatives/safety advocates and holds regular health and safety meetings with these representatives. Improvement in health and safety performance is 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) has increased slightly with 11 in 2011/12 compared to 9 in 2010/11. However, this is less than the totals of 16 and 19 in the previous two years.

SICKNESS ABSENCE DATA

During the year ended 31 March 2012, the total number of whole time equivalent days (WTE) lost to sickness absence was 34,937 days. This information is disclosed in accordance with the *Government Financial Reporting Manual* (FReM) and equates to an average of 9.8 days per WTE; and a sickness absence rate of 4.08 %. This is an increase of 0.03 days per employee per year from the previous year.

REPORTING OF PERSONAL DATA-RELATED INCIDENTS

The HPA's adverse incident and serious untoward incident management policy and procedures provide a framework for the management of incidents involving personal data. There have been no incidents in the report period that fall under the criteria for reporting data losses to the Information Commissioner's office. There have been no data losses whose release could have put individuals at risk of harm or distress.

STATUTORY INFORMATION REQUESTS

During 2011/12, the HPA received 410 (2010/11: 302) information access requests, including requests transferred to the agency from other public authorities. Most requests cited the Freedom of Information Act, but the figure also includes requests handled in part or exclusively under other information access legislation.

Specifically, 15 (2010/11: 6) requests were handled under the Environmental Information Regulations and 62 (2010/11: 47) 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

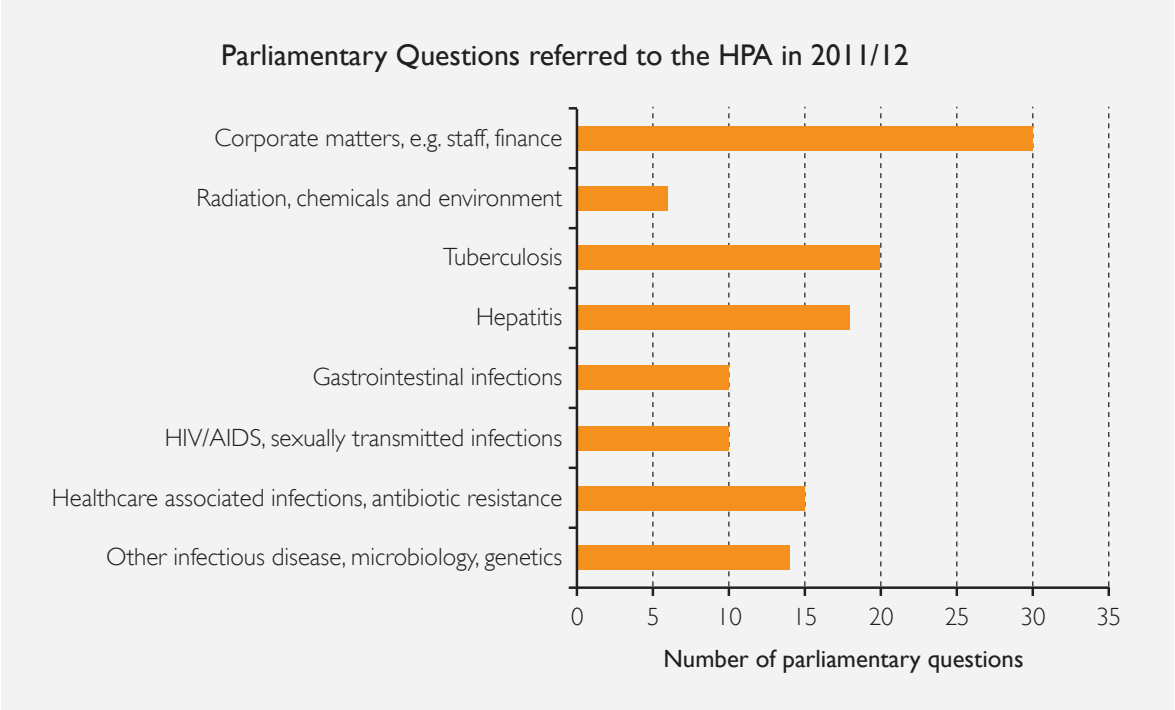
During 2011/12, the HPA received 2,600 (2010/11: 9,500) online enquiries from members of the public, healthcare professionals, patients and service users. This reduction of centrally managed enquiries was a result of changes made to the contact section of the website, which now enables users to make enquiries to the relevant departments, centres and health protection units directly.

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 2011/12, 123 PQs were referred to the Health Protection Agency. Since 2009, PQs relating to corporate matters have been steadily increasing, and are now the most frequent topic. The graph on p50 shows the number of PQs referred by topic.

COMPLAINTS

A total of 20 complaints (2010/11: 22) 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, which is available from www.hpa.org.uk.

PUBLIC AND STAKEHOLDER INVOLVEMENT

Public involvement continues to be a high level priority for the HPA and remains a key element of its communications strategy. The agency has twice surveyed the public and consulted stakeholders to benchmark its reputation and to find out the best way to involve them in its work. A third public opinion survey was due to take place in 2011 but as a result of Cabinet Office regulations it was not possible to commission a survey. A provisional timetable for a survey in September 2012 has been included in the Communications Business Plan for 2012/13 but is subject to Department of Health approval.

This benchmarking process has informed the development of the agency's model of involvement and has grown in popularity with the number of people signing up to join the People's Panel going up from 333 in 2007 to 905 in 2011.

The public involvement programme has continued to develop over challenging periods, first during the swine flu pandemic in 2009 and then in 2011 with the on-going transition to Public Health England. Since the end of 2010, 91 members of the panel have taken part in discussion groups, workshops or committees and working groups organised by the HPA. There have been five discussion groups, three workshops, seven working group meetings and one stakeholder engagement event for the People's Panel. These activities break down as follows: biomonitoring, antibiotic awareness, electromagnetic fields, public health white paper consultation, working group recruitment, development of equality objectives and disability involvement.

In total since 2008, 303 members of the People's Panel have taken part in public involvement activities organised by the HPA. Overall there have been 30 discussion groups or workshops and one online community pilot.

In the last year, public participation in the agency's committees and working groups has been healthy. In 2011, the membership of the Health Protection and Society Advisory Group (HPSAG) was refreshed with the recruitment of five new members from the People's Panel and the membership of the Equality Forum expanded to 18.

There is good evidence to show that public involvement has provided a positive contribution on key decisions and policy development. For example, a workshop was conducted as part of the public consultation for the development of the agency's draft equality objectives as part of its statement of

commitment to equality and diversity. On the advice of Internal Audit, a system has been developed to evaluate the effectiveness of public involvement tools such as focus groups and surveys. As a result staff who commission the public involvement team to conduct research are required to complete evaluation forms and an annual review of public involvement activities is reported to HPSAG.

The agency continues to explore new and innovative ways of engaging with the public and its stakeholders. In the last year, the agency launched a Twitter profile as means of providing public health information via social media. After six months, the People's Panel were asked to review the service and provide suggestions for other forms of online engagement such as Facebook.

Environmental management and sustainability

The HPA has set targets to reduce its carbon emissions and water consumption in line with the 'Greening Government' initiative, as well as targets for landfill waste reduction. Suitable monitoring processes are in place allowing management to evaluate and develop reduction strategies. This has led to a significant reduction in carbon emissions during 2011/12.

Details of the HPA's sustainability activities are below. At the time this report was prepared, not all data for the final quarter of 2011/12 were available and a number of parameters have therefore been estimated. Full data and analysis will be included in the HPA's Annual Sustainability Report.

GREENHOUSE GAS EMISSIONS

The HPA has set a target to reduce its carbon emissions by 15% (to 27,681 tCO_2e) by March 2015, and by 34% (to 24,102 tCO_2e) by March 2020 compared to our 2007/08 baseline levels, in line with the Government's 'Greening Government' initiative. An initial review of data for the past financial year indicates that the HPA's carbon emissions were 33,175 tCO_2e; this is a 16% decrease compared to the previous year's emissions and means that the HPA is well placed to meet government targets.

The main direct impacts for the HPA are in its electricity and gas consumption. The agency's carbon reduction delivery plan identifies a number of strategies that will be enacted to reduce the carbon burden of the agency. The HPA has mandatory staff training on sustainability and carbon management; staff are made aware of their commitment to reduce their carbon burden and therefore influence the carbon footprint of the organisation. Work is also underway to influence the procurement of equipment. A carbon-calculating tool and life cycle analysis tool have been introduced to help project sponsors identify the environmental impact of their capital business cases.

The HPA remains fully committed to sustainable development in all its activities. In line with the commitments made in the HPA's environmental policy, a new carbon reduction delivery plan sets out the organisation's plans for future work. A number of capital projects intended to improve the efficiency of the organisation's future energy usage have been initiated at the HPA's major owned sites and new methods of monitoring energy usage on the half-hourly metered market have been introduced.

The HPA owns eight of its buildings and has a direct relationship with the utility provider at a further four; these buildings have been taken into account in the reporting boundary. We also have shared facilities embedded in government-owned property, hospitals and tenanted accommodation. As there is no direct relationship with the utility provider in these premises and no sub-metering is undertaken, and in order not to double account for the carbon emitted there is a separate section for these premises. The HPA has no properties within SSSI or AONB boundaries.

The HPA has been taking part in a government-led sustainable procurement programme named EPOW. This programme analyses various contracts to ensure sustainability is embedded into them and highlights any possible risks to the agency from not following a particular procurement process to address sustainable issues. The HPA has also introduced a carbon-calculating tool to assess the carbon saving, where possible, of the purchase of both new and replacement equipment.

The HPA has an active programme to reduce paper usage in line with government targets. The government's 2011/12 target was published part way through the year and therefore achieving the 10% reduction has been difficult. The moratorium on external printing also led to the HPA's reprographics department being subject to significant additional requests to print training and other documents. This department therefore saw a rise in paper usage during the year.

A third-party provider was engaged to recycle and reuse, wherever possible, all ICT equipment that is no longer of use to the agency. In 2010/11, all redundant IT equipment was disposed of in this way.

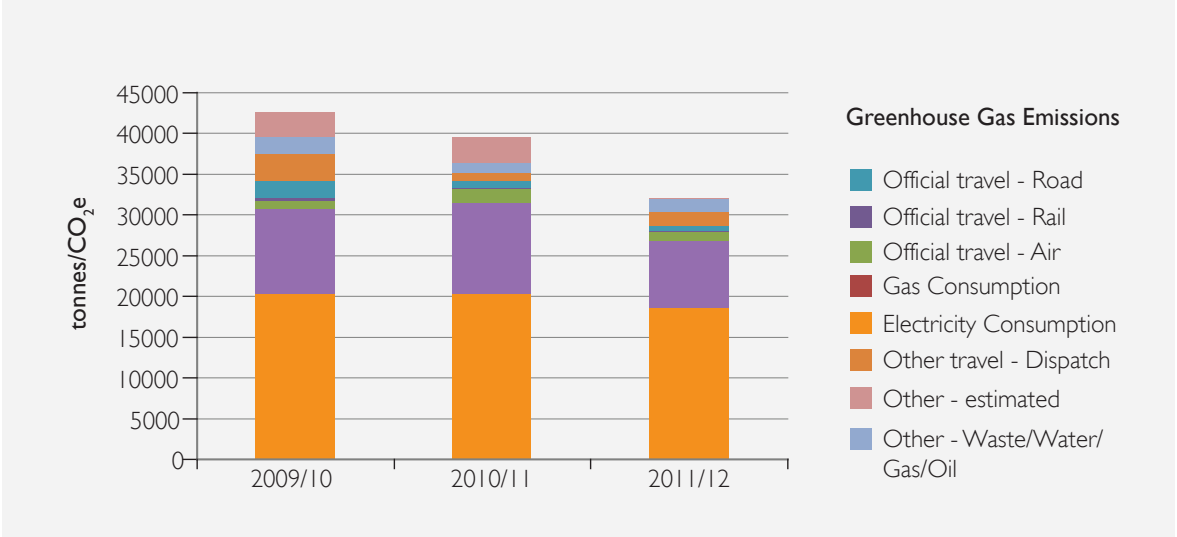
Steps were taken to reduce domestic air travel by staff. The chief executive emphasised to managers the importance of putting in place measures to monitor and control domestic flights for business purposes. In support of this, a new sustainable travel policy was produced, which also gives guidance to staff who need to travel on business.

WATER CONSUMPTION

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

GREENHOUSE GAS EMISSIONS		2009/10	2010/11	2011/12
Non-Financial Indicators (tCO_2)	Total Gross Emissions for Scope 1+2	35,322	33,250	26,549
	Total Gross Emissions for Scope 1+2 (non-reportable sites)	*	2,456	2,968
	Total Net Emissions for Scope 1+2 (i.e. less reductions - e.g. green tariffs)	35,322	35,589	29,517
	Gross Emissions Scope 3 (Business Travel)	3,445	2,828	1,856
	Other Scope 3 emissions measured	3,802	1,151	1,802
Related Energy Consumption (kWh)	Electricity Non-Renewable (reportable sites)	33,054,886	33,182,260	31,924,147
	Electricity Non-Renewable (non-reportable sites)	*	4,596,875	3,678,655
	Gas (reportable sites)	56,813,730	55,235,365	42,833,004
	Gas (non-reportable sites)	0	4,848,910	2,235,629
	Gas Oil (reportable sites)	5,469,799	2,318,642	2,582,956
	Gas Oil (non-reportable sites)	*	1,080,917	1,270,233
	Steam (reportable sites)	584,699	584,699	1,414,208
Financial Indicators (£)	Expenditure on Electricity	3,192,438	4,267,111	3,098,230
	Expenditure on Gas	1,798,649	1,211,828	1,212,274
	Expenditure on Gas Oil	218,746	284,730	392,612
	CRC License Expenditure (2011 onwards)	321,510	345,000	345,000
	Expenditure on official business travel	2,557,368	2,607,503	2,107,234

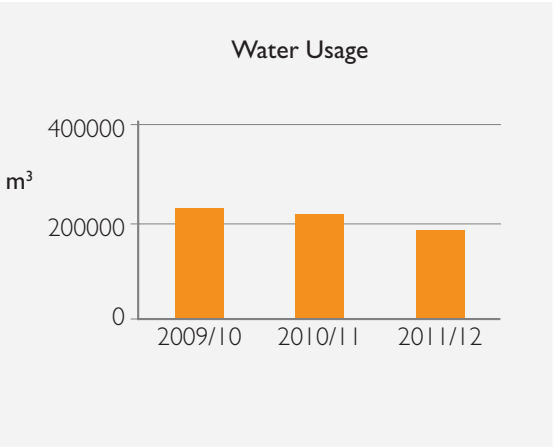
* Data not available in HMT reporting format



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

The HPA's major impacts in terms of water consumption are through our main centres, where a large number of laboratories are housed. The large demand for demineralised water at two such sites is another factor. One site also houses a manufacturing process which requires a large amount of water for its production processes to operate.

Water that is consumed at offices and laboratories embedded in tenanted accommodation has been estimated using the Carbon Trust's benchmarking algorithm.



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

FINITE RESOURCE CONSUMPTION - WATER			2009/10	2010/11	2011/12
Non-Financial Indicators (m^3)	Water Consumption	Supplied (reportable)	215,040	187,743	171,425
		Supplied (non-reportable)	*	11,123	6,612
		Abstracted	0	0	0
Financial Indicators (£)	Water Supply Costs		206,695	179,611	157,665

* Data not available in HMT reporting format

WASTE

The HPA has 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. Provided the current waste reduction trend is maintained, the HPA will meet this target.

Due to the nature of the work carried out at the majority of the HPA's sites, a significant quantity of hazardous waste is produced and a number of controls are in place to manage this. The majority of this waste is sent for incineration, in compliance with government waste guidelines. The HPA has an aggressive programme in place to reduce, wherever practicable, its waste to landfill and to increase its level of recycling. In 2011/12, a new reporting template was introduced requiring more comprehensive records to be kept on waste management, including details of the associated costs. A number of sites already estimate the weight of the waste that is being disposed of, either to landfill, by incineration or to energy-from-waste facilities.

Figures for 2011/12 include estimates for the month of March because accurate data were not available from the waste contractors. When the data are available, further analysis will be included in the HPA's Annual Sustainability Report.

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 are in place to reduce waste at all of our locations covering both offices and laboratories. Contractors working at our sites are informed of the requirement to reduce their waste wherever possible, in line with the HPA's waste policy and the associated management arrangements.

WASTE			2009/10	2010/11	2011/12
Non-Financial Indicators (tonnes)	Total Waste (Minimum Requirement)		693	187	1,009
	Hazardous Waste	Total	*	*	299
	Non-Hazardous Waste	Landfill	693	187	72
		Reused/Recycled	*	*	436
		Incinerated/Energy from Waste	*	*	202
Financial Indicators (£)	Total disposal cost (Minimum Requirement)		*	*	334,623
	Hazardous Waste - Total Disposal Cost		*	*	227,698
	Non-Hazardous Waste - Total disposal cost	Landfill	96,618	44,732	8,796
		Reused/Recycled	*	*	51,600
		Incinerated/Energy from Waste	*	*	46,529

* Data not available in HMT reporting format

HEALTH PROTECTION AGENCY LOCATIONS

For more information see www.hpa.org.uk

www.hpa.org.uk

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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 2012.

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's Financial Reporting Manual 2011/12* (FReM).

COMMITTEE MEMBERSHIP

The Remuneration and Terms of Service Committee consists of five non-executive Board members. The members for 2011/12 were:

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 are attended by Justin McCracken, HPA chief executive, and Tony Vickers-Byrne, the director of human resources, other than when their own remuneration is being discussed.

APPOINTMENT AND APPRAISAL OF MEMBERS OF THE BOARD

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 is assessed by the chairman of the Board through an annual appraisal process. The appraisal process for the chairman is conducted by the Department of Health senior sponsor.

REMUNERATION OF NON-EXECUTIVE BOARD MEMBERS

The table on p57 lists all persons who served on the Board during the year ended 31 March 2012. A summary of their appointment is accompanied by the total remuneration due to each individual during their tenure in post in 2011/12.

ACCOUNTABILITY

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

The current terms of reference require 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 are appropriate and take 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 witha 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

	Date of first appointment	Expiry date of current appointment	Total salary, fees and allowances	
			Year ended 31 March 2012 £'000	Year ended 31 March 2011 £'000
Non-executive Board members				
Professor David Heymann	1 May 2009	30 April 2013	60-65	60-65
Dr Barbara Bannister[1,4]	1 April 2008	31 March 2014	5-10	5-10
Michael Beaumont[4]	1 April 2005	31 March 2013	10-15	10-15
James Brown[3]	1 October 2005	30 September 2014	5-10	5-10
Michael Carroll[2]	1 April 2009	31 March 2015	5-10	5-10
Professor Charles Easmon	1 April 2005	31 March 2013	5-10	5-10
Helen Froud[2]	1 April 2009	31 March 2015	5-10	5-10
Professor William Gelletly	1 April 2010	31 March 2013	5-10	5-10
Martin Hindle[2]	1 April 2009	31 March 2015	10-15	5-10
Deborah Oakley[2]	1 April 2009	31 March 2015	5-10	5-10
John Wyn Owen	1 February 2006	31 January 2016	5-10	5-10
Dr Dipti Patel	1 April 2010	31 March 2013	5-10	5-10
Professor Debby Reynolds[4]	1 April 2008	31 March 2014	10-15	5-10
Dr Timothy Wyatt	1 April 2010	31 March 2013	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 18 'Related party disclosures' in the notes to the financial statements.

[2] Reappointed with effect from 1 April 2012 for a further term of three years.

[3] Reappointed with effect from 1 October 2011 for a further term of three years.

[4] Reappointed with effect from 1 April 2011 for a further term.

[5] If the current appointment is due to end after the abolition date of the HPA the appointment will end on the abolition date.

MEMBERS OF THE EXECUTIVE GROUP

The Remuneration and Terms of Service Committee determines the policy for the appointment of the members of the Executive Group that report directly to the chief executive. The members of the Executive Group employed by the HPA hold employment contracts that are open-ended with notice periods of three months, with the exception of the chief executive which is six months. Early termination by the HPA, other than for misconduct, would result 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 be agreed by the Remuneration and Terms of Service Committee with reference to the Department of Health and HM Treasury guidelines.

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

REMUNERATION OF THE EXECUTIVE GROUP MEMBERS

The table below lists all persons who served on the Executive Group during the year ended 31 March 2012. A summary of their employment contract is accompanied by the total remuneration due to each individual during their tenure in post in 2011/12.

COMPENSATION FOR LOSS OF OFFICE

During the year ended 31 March 2012 no compensation payments were made to any past or present member of the Board or the Executive Group.

www.hpa.org.uk

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 2012 £'000	Year ended 31 March 2011 £'000
Chief executive					
Justin McCracken[1]	7 April 2008	Open	6 months	210-215	210-215
Members of the Executive Group					
Lis Birrane	6 October 2003	Open	3 months	100-105	100-105
Dr John Cooper	4 June 2009	Open	3 months	120-125	120-125
Dr Paul Cosford[3]	6 September 2010	31 March 2013	1 month	-	-
Dr Stephen Inglis	1 April 2009	Open	13 weeks	165-170	165-170
Professor Anthony Kessel[2]	16 March 2009	Open	3 months	170-175	170-175
Dr Christine McCartney	1 September 2006	Open	3 months	140-145	140-145
Dr Tony Sannia[1]	1 April 2003	Open	3 months	140-145	140-145
Dr John Stephenson*	1 October 2007	31 January 2012	3 months	95-100	110-115
Tony Vickers-Byrne	1 April 2008	Open	3 months	100-105	100-105

[1] Denotes members of the Executive Group who were members of the Board during the year ended 31 March 2012.
[2] The remuneration of these members of the Executive Group includes a clinical excellence award that is funded by the Department of Health.
[3] Dr Paul Cosford provided services to the HPA on secondment as an employee of the East of England Strategic Health Authority as detailed below.
*denotes part year.

REMUNERATION POLICY

Non-executive and advisory Board members

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

Members of the Executive Group

The Remuneration and Terms of Service Committee determines the policy for the remuneration of the members of the Executive Group.

There are no performance-related bonuses payable to members of the Executive Group. Their remuneration package consists of a salary and pension contributions. In determining the package, the Remuneration and Terms of Service Committee has 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 are reviewed annually, having regard to the remuneration policy which takes into account the NHS Very Senior Managers Pay Framework.

For the 2011/12 financial year, members of the Executive Group received no cost of living increase (2010/11: 0%). 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 (2010/11: 0% and 2.25% respectively).

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 2012. He is 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 £199,000. This total included a clinical excellence award that is funded by the Department of Health.

Salary, fees and allowances

Salary, fees and allowances covers both pensionable and non-pensionable amounts, and includes any allowances or other payments to the extent they are subject to UK taxation. It does not include amounts that are 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 have been published on the HPA website.

Benefits in kind

During the year ended 31 March 2012 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 advisory Board member remuneration is not pensionable. The members of the Executive Group (with the exception of Dr Cooper) are 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 Pension Scheme. Details of both pension schemes, including benefits payable, are included in the notes to the financial statements.

The pension entitlements of the members of the Executive Group who were in post at 31 March 2012 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 has accrued as a consequence of their total membership of the pension scheme, not just their service in a senior capacity to which disclosure applies. The CETV figures include the value of any pension benefit in another scheme or arrangement which the individual has transferred to the NHS Pension Scheme (or in the case of Dr 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

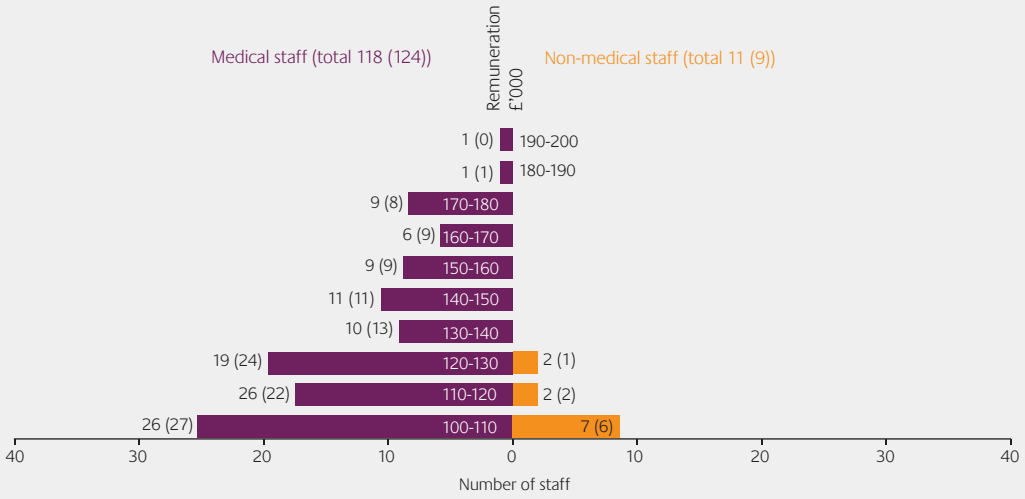
The real increase in the value of the CETV takes account of the increase in accrued pension due to inflation and contributions paid by the employer and employee (including the value of any benefits transferred from another pension scheme or arrangement), and uses common market valuation factors for the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

PENSION ENTITLEMENTS OF EXECUTIVE GROUP MEMBERS

	Real annual increase in accrued pension Bands of £2,500	Real annual increase in lump sum Bands of £2,500	Pension value as at 31 March 2012 Bands of £5,000	Lump sum value as at 31 March 2012 Bands of £5,000	Cash equivalent transfer value as at 31 March 2011 To nearest £1,000	Cash equivalent transfer value as at 31 March 2012 To nearest £1,000	Real annual increase in cash equivalent transfer value To nearest £1,000
Chief executive							
Justin McCracken	0.0-2.5	5.0-7.5	15.0-20.0	55.0-60.0	353	417	64
Executive directors							
Lis Birrane	0.0-2.5	2.5-5.0	10.0-15.0	30.0-35.0	184	216	32
Dr John Cooper[1]	(0.0-2.5)	(0.0-2.5)	50.0-55.0	150.0-155.0	-	-	-
Dr Stephen Inglis	5.0-7.5	(20.0-2.5)	45.0-50.0	95.0-100.0	877	791	(86)
Professor Anthony Kessel	0.0-2.5	5.0-7.5	30.0-35.0	90.0-95.0	399	499	100
Dr Christine McCartney[1]	(0.0-2.5)	(2.5-5.0)	70.0-75.0	215.0-220.0	-	-	-
Dr Tony Sannia	0.0-2.5	5.0-7.5	25.0-30.0	85.0-90.0	599	664	65
Tony Vickers-Byrne	0.0-2.5	0.0-2.5	30.0-35.0	100.0-105.0	611	662	51

[1] There is no CETV (cash equivalent transfer value) for those members who are over the age of 60

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



Note: figures in brackets are for 2010/11

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 (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 2011/12. The earnings of both medical and non-medical staff are determined by the application of nationally agreed NHS terms and conditions of employment.

COMPARISON OF MEDIAN PAY TO HIGHEST EARNER'S REMUNERATION

The table below shows a comparison between the median workforce remuneration and the remuneration of the highest paid executive director, which for the HPA is the chief executive, who is also the highest earner.

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 p63.

COMPARISON OF MEDIAN PAY TO HIGHEST EARNER'S REMUNERATION

	Year ended 31 March 2012	Year ended 31 March 2011
Highest earning executive director's total remuneration (£'000)	210-215	210-215
Median total remuneration*	£33,940	£33,539
Ratio of median remuneration and remuneration of highest earning executive director	6.2	6.3

*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.

Justin McCracken
Chief Executive
11 June 2012

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) has 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 2012 under the Health Protection Agency Act 2004. The financial statements comprise the Statement of Comprehensive Net Expenditure, the Statement of Financial Position, the Cash Flow Statement, the Statement of 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 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 recorded 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 recorded 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 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 2012 and of the 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 Agency 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 in the light of the planned abolition of the Health Protection Agency. As the Health Protection Agency's functions are transferring to other government bodies, it remains appropriate for the Health Protection Agency to continue to prepare the financial statements on a going concern basis in accordance with the Government Financial Reporting Manual issued by HM Treasury.

Amyas C E Morse
Comptroller and Auditor General
National Audit Office
157-197 Buckingham Palace Road
Victoria
London SW1W 9SP
22 June 2012

Statement of comprehensive net expenditure

FOR THE YEAR ENDED 31 MARCH 2012

	Note	2012 £'000	2011 £'000
Gross operating costs			
Employee costs	4	184,066	190,144
Other operating charges	6	108,392	110,383
Amortisation and depreciation	7	25,028	23,203
Total gross operating costs		**317,486**	323,730
Operating income	3	(156,649)	(146,298)
Net operating costs before interest		**160,837**	177,432
Interest receivable		(19)	(924)
Net operating cost for the financial year	16	**160,818**	176,508

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.

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 49% (2011: 45%) 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 2012

	Note	2012 £'000	2011 £'000
Net operating costs for the financial year		160,818	176,508
Net loss/(gain) on revaluation of property, plant and equipment	8	939	(182)
Total comprehensive expenditure for the financial year		**161,757**	176,326

The notes on pages 70 to 95 form part of these accounts. All operations are continuing.

Statement of financial position

AS AT 31 MARCH 2012

	Note	2012 £'000	2011 £'000
Non-current assets			
Property, plant and equipment	8	278,057	280,626
Intangible assets	9	8,746	4,771
Financial assets	10	95	286
Total non-current assets		**286,898**	285,683
Current assets			
Inventories	11	13,037	11,254
Trade and other receivables	12	36,942	36,789
Cash and cash equivalents	13	57,757	43,125
Total current assets		**107,736**	91,168
Total assets		**394,634**	376,851
Current liabilities			
Trade and other payables	14	(59,746)	(52,311)
Provisions	15	(1,790)	(435)
Total current liabilities		**(61,536)**	(52,746)
Non-current assets plus net current assets		**333,098**	324,105
Non-current liabilities			
Provisions	15	(4,519)	(6,946)
Assets less liabilities		**328,579**	317,159
Taxpayers' equity			
Revaluation reserve		56,417	57,133
General reserve		272,162	260,026
Total taxpayers' equity		**328,579**	317,159

The notes on pages 70 to 95 form part of these accounts. All operations are continuing.
The financial statements on page 65 to 69 were approved and signed on behalf of the Board by:

Justin McCracken
CHIEF EXECUTIVE
11 June 2012

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 the year	(160,818)	-	(160,818)
Total recognised income and expenses for the year	**(161,541)**	**(716)**	**(162,257)**
Grants from the Department of Health:			
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 has been 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 £15,013K (2011: £15,326K; 2010: £12,283K).

The notes on pages 70 to 95 form part of these accounts. All operations are continuing.

Statement of changes in taxpayers' equity

FOR THE YEAR ENDED 31 MARCH 2011

	General reserve	Revaluation reserve	Total
	£'000	£'000	£'000
Restated balance at 1 April 2010	244,002	56,445	300,447
Net gain on revaluation of property, plant and equipment	-	182	182
Realised gain on inventories – biological standards (note 11)	-	(186)	(186)
Realised gain on inventories laboratory consumables (note 11)	-	227	227
Transfers between reserves (realisation of revaluation reserve)	(465)	465	-
Capital grants received (note 16)	559	-	559
Release of reserves	(484)	-	(484)
Net operating costs for the year after interest	(176,508)	-	(176,508)
Total recognised income and expenses for the year	**(176,898)**	**688**	**(176,210)**
Grants from the Department of Health:			
Revenue grant-in-aid (note 16)	153,573	-	153,573
Capital grant-in-aid (note 16)	39,349	-	39,349
Total grants from the Department of Health and the devolved administrations	**192,922**	**-**	**192,922**
Balance at 31 March 2011	**260,026**	**57,133**	**317,159**

Cash flow statement

FOR THE YEAR ENDED 31 MARCH 2012

	Note	2012 £'000	2011 £'000
Cash flows from operating activities			
Net operating cost before interest		(160,837)	(177,432)
Adjustments for non-cash transactions:			
Loss/(gain) on de-recognition of property, plant and equipment	6	896	(228)
Amortisation and depreciation	7	23,804	23,203
Realised gain on inventories – biological standards	11	(187)	(186)
Realised gain on inventories – laboratory consumables	11	-	227
Release from reserves	7	(1,152)	(484)
Impairment in value of assets written off to the statement of comprehensive net expenditure	7	1,224	-
(Increase)/decrease in trade and other receivables	12	(153)	9,503
(Increase)/decrease in inventories	11	(1,783)	2,163
Increase/(decrease) in trade and other payables	14	7,435	(5,802)
Decrease in capital payables		3,137	2,130
Expenditure charged to provisions	15	(347)	(1,265)
(Decrease)/increase in provisions	15	(725)	1,001
Net cash (outflow) from operating activities		**(128,688)**	(147,170)
Cash flows from investing activities			
Purchase of property, plant and equipment	8	(20,844)	(26,966)
Purchase of intangible non-current assets	9	(7,425)	(3,516)
Decrease in capital payables		(3,137)	(2,130)
Receipts from de-recognition of property, plant and equipment		-	409
Interest received		19	924
Decrease in non-current financial assets	10	191	-
Net cash (outflows) from investing activities		**(31,196)**	(31,279)
Cash flows from financing activities			
Government revenue grant-in-aid received	16	146,177	153,573
Government capital grant-in-aid received	16	27,500	36,381
Other capital grants received	16	839	3,527
Net cash inflows from financing activities		**174,516**	193,481
Net increase in cash and cash equivalents in the period		**14,632**	15,032
Cash and cash equivalents at the beginning of the period		**43,125**	28,093
Cash and cash equivalents at the end of the period		**57,757**	43,125

The notes on pages 70 to 95 form part of these accounts. All operations are continuing.

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 2011/12* (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.

The Health and Social Care Bill received Royal Assent on 27 March 2012 and now becomes an Act of Parliament (Law). As a result, all of the Health Protection Agency's functions will continue in Public Health England as an excecutive agency to be 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 will transfer to the Medicines and Healthcare Products Regulatory Authority at the same time.

Having considered the circumstances described above, and in line with the Department of Health, management's expectation is that the Health Protection Agency will continue to operate in its current form until 31 March 2013 when the agency will be abolished. Subsequently, all of its functions will transfer and continue within the Department of Health and its agencies. As a result, management considers it appropriate to continue to adopt the going concern basis in preparing the 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. Under the *Government Financial Reporting Manual 2011/12,* the requirement for a capital grant reserve has been removed. The impact of this charge is to transfer the capital grant reserve to the general reserve.

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 2010. 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.

Capital grants receivable from bodies other than the Department of Health for the purchase of specific capital assets are recognised as income as they are recieved 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.

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.

Notes to the financial statements Continued

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.

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.

Notes to the financial statements Continued

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 2011/12* (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.

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 (Segmental Reporting) 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 Agency 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

	2012 £'000	2011 £'000
Products and royalties	51,764	35,033
Laboratories and other services	68,537	71,429
Research and related contracts and grants	35,853	39,374
Other operating income	495	462
Total operating income	**156,649**	**146,298**

The total operating income for research and related contracts and grants above included grants received from the European Union of £5,049,000 (2011: £6,047,000).

4 EMPLOYEES

	2012 £'000	2011 £'000
Employee costs		
Salaries and wages	145,926	149,961
Social security costs	12,801	12,707
Other pension costs (note 5)	19,194	19,840
Total costs of staff employed	177,921	182,508
Agency and seconded staff	6,267	7,323
Redundancy and early retirement costs	917	915
Total costs of employed and other staff	185,105	190,746
Manufacturing staff costs transferred (to) / from finished goods	(217)	697
Employee staff costs transferred to Porton Down reprovision	(822)	(1,299)
Total staff costs	184,066	190,144

Notes to the financial statements Continued

Employee numbers

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

	2012	2011
Medical	237	239
Nursing	174	179
Professional, administrative and operational support	1,146	1,227
Scientific and technical	1,936	2,056
Total employee numbers	3,493	3,701

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 2012, 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 121 (2011: 152) 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
	2012	2012	2012	2011	2011	2011
<10,000	15	-	15	10	-	10
10,000-25,000	17	-	17	11	-	11
25,000-50,000	3	-	3	6	1	7
50,000-100,000	1	-	1	5	-	5
100,000-150,000	1	1	2	-	-	-
Total number of exit packages by type	37	1	38	32	1	33
Total resource cost (£000)			839			749

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 (2011: 14%).

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

	2011/12 Annual pensionable pay banding	2011/12 Employee Contribution
Tier 1	Up to £21,175	5.0%
Tier 2	£21,176 - £69,931	6.5%
Tier 3	£69,932 – £110,273	7.5%
Tier 4	More than £110,274	8.5%

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 2011/12* (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 2012, employees were required to pay contributions of 5% (2011: 5%) of pensionable pay. The employer's contribution amounted to 17.3% (2011: 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 2011/12* (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:

	2012 £'000	2011 £'000
The National Health Service Pension Scheme (NHSPS)	17,568	18,159
The UKAEA Combined Pension Scheme (CPS)	1,538	1,565
Other pension schemes	88	116
Total contributions by the Health Protection Agency	**19,194**	19,840

There were no contributions in respect of the March 2012 contribution for the Combined Pension Scheme and other pension schemes outstanding as at the statement of financial position date; there were no prepaid contributions as at the statement of financial position date.

e) Retirements due to ill health

During 2011/12, there was 1 (2011: 5) early retirement from the agency on the grounds of ill-health. The NHS Pension Agency estimated the additional liabilities of this ill-health retirement to be £11,021 (2011: £388,756).

6 OTHER OPERATING CHARGES

	2012 £'000	2011 £'000
Laboratory consumables and services	40,856	39,251
Supplies and services	36,119	37,008
Accommodation	24,756	25,987
Travel and subsistence	5,461	5,137
Foreign exchange losses	28	195
Auditor's remuneration	130	130
Charge/(release) of provision for impairments	15	(49)
Net release of other provisions (note 15)	(725)	(264)
Loss/(gain) on de-recognition of property, plant and equipment	896	(228)
Porton Down re-provision costs	856	3,216
Total other operating charges	**108,392**	**110,383**

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. The proposals for this re-provision are being considered by the Department of Health. 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 include payroll costs (note 4).

Notes to the financial statements Continued

7 AMORTISATION AND DEPRECIATION

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

	2012 £'000	2011 £'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)	19,496	20,121
Impairment (note 8)	1,224	-
Non-current assets – intangible assets (note 9)	3,156	2,598
	23,876	**22,719**
Charge in respect of other non-current assets – property, plant and equipment (note 8)	1,152	484
Total charge to operating costs	**25,028**	**23,203**

8 NON-CURRENT ASSETS – PROPERTY, PLANT AND EQUIPMENT

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
Revaluation 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

Notes to the financial statements Continued

FOR THE YEAR ENDED 31 MARCH 2011

	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 2010	198,080	7,740	72,555	13,784	27,777	319,936
Reclassification of assets	21	-	(42)	21	-	-
Additions	-	-	78	-	30,404	30,482
Transfer of AUC	18,698	1,848	11,207	1,711	(33,464)	-
Transfer of AUC to intangible assets	-	-	-	-	(3,516)	(3,516)
Revaluations	-	21	257	-	-	278
De-recognition	-	(1,593)	(3,029)	(295)	-	(4,917)
At 31 March 2011	**216,799**	**8,016**	**81,026**	**15,221**	**21,201**	**342,263**

	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 2010	-	2,734	33,195	9,760	-	45,689
Reclassification of assets	5	-	(14)	9	-	-
Charge for year	9,754	1,069	8,083	1,699	-	20,605
Revaluations	-	8	88	-	-	96
De-recognition	(280)	(1,797)	(2,364)	(312)		(4,753)
At 31 March 2011	**9,479**	**2,014**	**38,988**	**11,156**	**-**	**61,637**
Net book value						
At 31 March 2011	**207,320**	**6,002**	**42,038**	**4,065**	**21,201**	**280,626**
At 31 March 2010	198,080	5,006	39,360	4,024	27,777	274,247

Additions
All 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 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.

During 2010/11, assets previously incorrectly classified as plant and equipment with a total net book value of £28,000 had £16,000 reclassified to land and buildings and £12,000 to information technology in the year.

Land and buildings
The net book values of land and buildings are as follows:

	2012 £'000	2011 £'000	2010 £'000
Freehold buildings	174,068	175,045	165,805
Freehold land	28,225	28,225	28,225
Long leasehold land	4,050	4,050	4,050
	206,343	**207,320**	**198,080**

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 £4,141,000 (2011: £4,141,000 2010: £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 of £2,149,000 (2011: £2,149,000 2010: £2,149,000) and plant and equipment of £1,992,000 (2011: £1,992,000 2010: £1,992,000).

Notes to the financial statements Continued

9 NON-CURRENT ASSETS – INTANGIBLE ASSETS

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

FOR THE YEAR ENDED 31 MARCH 2011

	Licences £'000	Software £'000	Total £'000
Cost or valuation			
At 1 April 2010	86	9,000	9,086
Transfer from AUC	36	3,480	3,516
De-recognition	-	(79)	(79)
At 31 March 2011	**122**	**12,401**	**12,523**
Amortisation			
At 1 April 2010	33	5,183	5,216
Charge for year	42	2,556	2,598
De-recognition	-	(62)	(62)
At 31 March 2011	**75**	**7,677**	**7,752**
Net book value			
At 31 March 2011	**47**	**4,724**	**4,771**
At 31 March 2010	53	3,817	3,870

10 NON-CURRENT ASSETS: FINANCIAL ASSETS

	2012 £'000	2011 £'000
Advances to UKAEA Combined Pensions Scheme	70	261
Leasehold premium prepayment	22	22
Investments	3	3
Total non-current assets: financial assets	**95**	**286**

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 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 £131,000 (2011:nil).

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 (2011: 5.1%). The holding was acquired for a cash consideration of £2,565 (2011: £2,565), and is made up of 100 Series B preferred shares of £1 each (2011: 100 Series B preferred shares of £1 each) and 2,465,000 ordinary shares of 0.1p each (2011: 2,465,000).

The agency holds a 1% interest in Proacta (2011: 1%) and is made up of 25,052 shares (2011: 25,052) 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 (2011: 3.1%) and is made up of 3,125 (2011: 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

	2012 £'000	2011 £'000
Raw materials	580	258
Finished goods	3,516	1,859
Biological standards	6,051	6,082
Laboratory consumables and other stores	2,890	3,055
Total inventories	**13,037**	11,254

The agency holds inventories of biological reference materials ('biological standards') which are used in regulatory control, diagnosis and research. The agency estimates their economic value at 31 March 2012 to be £6,051,000 (2011: £6,082,000) at the lower of cost or net realisable value.

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 2012 was £187,000 (2011: £186,000).

During the year, laboratory consumables with a value of £nil (2011: £227,000) were acquired at no cost to the agency. The value of these has been credited to the revaluation reserve.

12 CURRENT ASSETS: TRADE AND OTHER RECEIVABLES

	2012 £'000	2011 £'000
Trade receivables	17,203	12,355
Accrued income	11,151	13,253
Prepayments	4,458	4,307
Other receivables	4,130	6,874
Total trade and other receivables	**36,942**	36,789

Intra-government balances

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

	2012 £'000	2011 £'000
Balances with the Department of Health	2,803	3,067
Balances with NHS trusts	3,202	6,661
Balances with other central government bodies	1,518	2,290
Balances with local authorities	185	107
Total intra-government balances	**7,708**	12,125

13 CURRENT ASSETS: CASH AND CASH EQUIVALENTS

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**

Analysis of changes in net funds 2011

	31 March 2011 £'000	31 March 2010 £'000	change in year £'000
Cash at bank and in hand	43,125	28,093	15,032
Overdraft (note 14)	(693)	(406)	(287)
Net funds	**42,432**	**27,687**	**14,745**

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

	2012 £'000	2011 £'000
Government Banking Service	52,015	39,373
Commercial bank accounts	5,524	3,059
Net funds	**57,539**	**42,432**

Notes to the financial statements Continued

14 CURRENT LIABILITIES: TRADE AND OTHER PAYABLES

	2012 £'000	2011 £'000
Trade payables	8,631	8,959
Overdraft	218	693
Deferred income	17,371	16,728
PAYE and social security	14	13
Accruals	30,301	21,837
Other payables	3,211	4,081
Total trade and other payables	**59,746**	52,311

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:

	2012 £'000	2011 £'000
Balances with the Department of Health	1,010	2,984
Balances with NHS trusts	3,892	4,351
Balances with other central government bodies	121	1,295
Balances with local authorities	29	1,069
Total intra-government balances	**5,052**	9,699

15 PROVISIONS FOR LIABILITIES AND CHARGES

Movement in provisions 2012

	Legal claims £'000	Future costs of early retirement £'000	Other provisions £'000	Total provision £'000
Provision at 1 April 2011	4,034	1,374	1,973	7,381
Expenditure during the year	(114)	(179)	(54)	(347)
Reversal of unused provisions	(1,352)	-	(970)	(2,322)
Additional provisions	59	72	1,466	1,597
Provision at 31 March 2012	**2,627**	**1,267**	**2,415**	**6,309**

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

	2012 £'000	2011 £'000
Current liabilities		
Legal claims	200	62
Future costs of early retirement	132	153
Other provisions	1,458	220
Total provisions classed as current liabilities	**1,790**	435
Non-current liabilities		
Legal claims	2,427	3,972
Future costs of early retirement	1,135	1,221
Other provisions	957	1,753
Total provisions classed as non-current liabilities	**4,519**	6,946
Total provisions	**6,309**	7,381

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.

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 2012 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 £487,000 (2011: £1,310,000) 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 £438,000 (2011: £482,000) 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 £24,000 (2011: £31,000) for the estimated costs of the agency's liabilities in respect of the future costs of life assurance premiums for 5 staff (2011: 5) up to their retirement dates to equalise the benefits provided to them under a former pension scheme.

- A provision of £125,000 (2011: £nil) 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 (2011: £150,000) for the future rental costs for a property which can not be occupied due to high levels of radon gas. The radon gas threat has been removed and the property disposed of.

- A provision of £1,341,000 (2011: £nil) 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.

16 GOVERNMENT FINANCING

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

	2012 £'000	2011 £'000
Department of Health	169,759	188,958
Scottish Government	607	631
National Assembly for Wales	1,073	1,097
Northern Ireland Assembly	340	377
Consultants' Clinical Excellence Award	1,898	1,859
Total government grant-in-aid received	173,677	192,922
Less non-cash capital grant-in-aid allocation	-	(2,968)
Less government grant-in-aid in respect of general capital expenditure	(27,500)	(36,381)
Total revenue government grant-in-aid received	146,177	153,573

The Health Protection Agency has UK-wide responsibilities. In addition to the formal grant-in-aid reported above, the agency received income from the devolved administrations of £392,000 (2011: £215,000) 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.

The capital grant-in-aid does not include an allocation of £nil (2011: £8,500,000) relating to the reprovision of facilities at Porton Down which by agreement from the Department of Health was not drawn down during the year.

Notes to the financial statements Continued

The capital grant-in-aid includes a non-cash allocation of £nil (2011: £2,968,000) relating to refurbishment costs associated with Department of Health property, occupied by the Health Protection Agency.

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:

	2012 £'000	2011 £'000
Total revenue government grant-in-aid received	146,177	153,573
Depreciation on assets funded by capital grant-in-aid from the Department of Health (note 7)	22,652	22,719
Loss/ (gain) on de-recognition of assets funded by capital grant-in-aid from the Department of Health (note 6)	896	(228)
Impairment of assets (note 7)	1,224	-
Total revenue government grant-in-aid relating to net operating cost for the financial year	**170,949**	176,064
Less: net operating cost for the financial year	(160,818)	(176,508)
Government grant-in-aid less net operating cost for the year	**10,131**	(444)

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:

	2012 £'000	2011 £'000
Total capital government grant-in-aid relating to the capital expenditure for the financial year	27,500	36,381
Capital grants received for specific projects (Department of Health non-cash)	-	2,968
Capital grants received for specific projects	839	559
Total capital financing for the financial year	**28,339**	39,908
Less: capital expenditure for the financial year	(28,269)	(30,482)
Capital financing less capital expenditure for the year	**70**	9,426

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 2012, 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	Director of health protection services/ regional director of public health	104 (82)	366 (259)	- (146)	- (3)
London School of Hygiene & Tropical Medicine	1. Dr David Heymann 2. Professor Anthony Kessel 3. Dr John Stephenson	1. Chairman/ lectures 2. Director of public health strategy and medical director coordinator 3. Director, research and development/ appointed to the Council	159 (149)	462 (659)	- (27)	23 (2)
The Royal Free Hospital	1. Dr Barbara Bannister 2. Mrs Deborah Oakley	1. Non-executive Board member, Audit Committee/ employee 2. HPA non-executive Board member/ non-executive	86 (114)	364 (163)	1 (44)	11 (68)
University Hospitals of Leicester NHS Trust	Mr Martin Hindle	Non-executive Board member, Finance Committee (chair)/chairman	164 (271)	59 (209)	- (-)	23 (23)

Notes to the financial statements Continued

18 CAPITAL COMMITMENTS

The contracted capital commitments at 31 March 2012 not provided for in the accounts amounted to £8,006,000 (2011: £5,768,000). There were no other financial commitments at 31 March 2012 (2011: 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 2012 are given in the table below reported according to the period 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:	2012 £'000	2011 £'000
Land and buildings:		
- Not later than one year	4,106	4,673
- Later than one year and not later than five years	3,170	1,136
- Later than five years	607	116
Other leases:		
- Not later than one year	1,229	1,345
- Later than one year and not later than five years	90	84
- Later than five years	4	-
Total obligations under operating leases at 31 March	9,206	7,354

The total operating lease payments recognised as an expense in the period were £5,671,000 (2011: £7,546,000).

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 2012, the agency received Euro income equivalent to £6,219,000 (2011: £9,188,000) and US Dollar income equivalent to £7,061,000 (2011: £7,230,000) upon which there was some currency risk.

The only other currency risk is that of a Euro currency bank balance, valued at £261,000 (2011: £226,000), and a US Dollar bank balance valued at £278,000 (2011: £227,000). 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 2012, 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 HPA can be held jointly and severally liable for the remaining 50% which is estimated at £2,461,000 (2011: £3,423,000)

There were no other contingent liabilities as at 31 March 2012 (2011:nil).

22 LOSSES AND SPECIAL PAYMENTS

Losses and special payments requiring disclosure during the year ended 31 March 2012 totalled £68,000 (2011: £114,000).

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.

There are no other events after the reporting period that would require reporting under International Accounting Standard 10.

The Accounting Officer authorised these financial statements for issue on 22 June 2012.

Five year financial summary

STATEMENT OF COMPREHENSIVE NET EXPENDITURE

	2007/08 £'000	2008/09[1] £'000	2009/10 £'000	2010/11 £'000	2011/12 £'000
Gross operating costs					
Employee costs	153,983	180,438	199,080	190,144	184,066
Other operating costs	100,845	117,119	134,974	110,383	108,392
Amortisation and depreciation	14,777	21,280	28,888	23,203	25,028
Total operating costs	**269,605**	**318,837**	**362,942**	**323,730**	**317,486**
Operating income	(109,188)	(128,483)	(140,433)	(146,298)	(156,649)
Interest receivable	(400)	(291)	(18)	(924)	(19)
Net operating cost for the financial year	**160,017**	**190,063**	**222,491**	**176,508**	**160,818**

GOVERNMENT FUNDING

	2007/08 £'000	2008/09[1] £'000	2009/10 £'000	2010/11 £'000	2011/12 £'000
Total revenue government grant-in-aid relating to net operating cost for the financial year	160,299	190,370	221,846	176,064	170,949
Net operating costs	(160,017)	(190,063)	(222,491)	(176,508)	(160,818)
Gross (deficit) or surplus	**282**	**307**	**(645)**	**(444)**	**10,131**

STATEMENT OF FINANCIAL POSITION

	2007/08 £'000	2008/09[1] £'000	2009/10 £'000	2010/11 £'000	2011/12 £'000
Non-current assets					
Property, plant and equipment	167,177	249,468	274,247	280,626	278,057
Intangible assets	594	2,247	3,870	4,771	8,746
Financial assets	496	287	286	286	95
Total non-current assets	168,267	252,002	278,403	285,683	286,898
Current assets					
Inventories	3,419	10,594	13,417	11,254	13,037
Trade and other receivables	30,058	35,527	46,292	36,789	36,942
Cash and cash equivalents	30,415	29,756	28,093	43,125	57,757
Total current assets	63,892	75,877	87,802	91,168	107,736
Total assets	232,159	327,879	366,205	376,851	394,634
Current liabilities					
Trade and other payables	(56,359)	(56,754)	(58,113)	(52,311)	(59,746)
Provisions	(2,192)	(2,656)	(2,092)	(435)	(1,790)
Total current liabilities	(58,551)	(59,410)	(60,205)	(52,746)	(61,536)
Non-current assets plus net current assets	173,608	268,469	306,000	324,105	333,098
Non-current liabilities					
Provisions	(6,367)	(3,462)	(5,553)	(6,946)	(4,519)
Assets less liabilities	**167,241**	**265,007**	**300,447**	**317,159**	**328,579**
Taxpayers' equity					
Revaluation reserve	18,179	50,950	56,445	57,133	56,417
General reserve[2]	149,062	214,057	244,002	260,026	272,162
Total taxpayers' equity	**167,241**	**265,007**	**300,447**	**317,159**	**328,579**

Years prior to 2008/09 were reported under UK Generally Accepted Accounting Principles (UK GAAP); these have not been restated for the requirements of International Financial Reporting Standards (IFRS) as adjustments are immaterial in value but where terminology has changed under IFRS, this is reflected in the narrative content under the most appropriate category.

[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 2011/12*, 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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