Health Protection Agency

ANNUAL REPORT AND ACCOUNTS | 2010/11

Health Protection Agency
Annual Report and Accounts 2010/11

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Preparing, preventing, responding

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 general public, to health professionals such as doctors and nurses, and to national and local government and devolved administrations.

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 2010/11 the HPA raised £146m from such activities, representing 45% 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.

In 2010 the coalition government announced that subject to legislation the HPA will be abolished as a statutory body and its functions transferred to a new public health service called Public Health England, part of the Department of Health. The HPA has welcomed this proposal and will work with the Department of Health to support it in managing the risks associated with the transfer.

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 advice to the public on how to stay healthy and avoid health hazards, provides data and information to government, and advises people working in healthcare.

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 within one organisation – and works at international, national and local levels.

It also supports and advises other organisations that play a part in protecting health.

The HPA's evidence-based advice, information and services are all underpinned by specialist research. It also uses its research to develop new vaccines and treatments that directly help patients.

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 general public.
- The NHS.
- Government departments and the governments of Scotland, Wales and Northern Ireland.
- Other government agencies.
- Local authorities.
- Industry.
- International health organisations.
- Academia.

STAFF AND STRUCTURE

The HPA's expertise is provided by around 3,850 staff, which includes doctors and nurses, scientists, technicians, emergency planners and administrators.

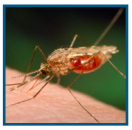
Around half the agency's staff are based at four major centres in north London, Oxfordshire, Wiltshire and Hertfordshire. The agency also has staff based locally, working with the NHS to provide health protection expertise for the community, and in a network of microbiological laboratories. There is also a small central office in London.

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.

Some significant events from 2010/11

APRIL

The HPA advises that the plume of **volcanic ash** trapped in the atmosphere above the UK is not a significant risk to public health, and monitors the plume's movement.



MAY

New figures from the HPA show that UK people of African descent who travel to Africa to visit friends and relations continue to be those most likely to acquire **malaria.**

The HPA advises people to take care when visiting areas where ticks are present, to prevent tick bites and reduce the risk of catching **Lyme disease.**

The HPA reveals that **hepatitis C** infection in England has increased by 4.5% from 8,196 cases reported in 2008 to 8,563 cases in 2009.

JUNE

As people travel to the football World Cup in South Africa the HPA issues travel health guidance, particularly on how to reduce the risk of **HIV** infection.

A preliminary HPA study finds an association between not using car windscreen wash in wiper fluid and the risk of contracting **Legionnaires' disease**. The study shows two exposures associated with vehicle use where there is an increased risk of Legionnaires' disease: driving through industrial areas and driving or being a passenger in a vehicle without screenwash in its wiper fluid. These associations have not been previously identified.

The HPA welcomes the report of the independent investigation led by Professor George Griffin of St George's Medical School, London into the outbreak of ***Escherichia coli* O157** infection among children at Godstone Farm in Surrey in 2009. The investigation report provided a series of recommendations to reduce the risk of those who visit open farms from contracting *E. coli* O157 and to improve the health protection response to further outbreaks caused by this organism.

A multi-agency committee, chaired by the HPA, will oversee the implementation of the recommendations by August 2011.

As the fly fishing season begins, the HPA warns anglers not to handle any bats that they might accidentally hook as there is a small risk of catching a **rabies**-like virus.

The HPA, in conjunction with NHS London, holds a major exercise to train London's emergency services and prepare and practise the health-led response to potential **major incidents.** The exercise, held at a London conference centre and at the Homerton Hospital, was based on a chemical incident at a major sporting event for disabled athletes.

JULY

Scientists at the HPA join forces with the British Paediatric Surveillance Unit to investigate **lead poisoning** levels among children in the UK and the Republic of Ireland.

The HPA issues advice on **malaria** for travellers. More than 1,500 people are diagnosed with malaria in the UK each year, having acquired the disease abroad.

A new initiative to reduce concentrations of **radon** in UK homes is launched by the HPA. The gas is the biggest source of human exposure to ionising radiation in the UK and is responsible for an estimated 1,100 lung cancer deaths a year.

HPA's innovative **swine flu** 'response centres' win an emergency planning award given by the Cabinet Office for their role in containing the 2009 outbreak.

New HPA figures for England and Wales show a 35% yearly reduction in cases of **meticillin-resistant *Staphylococcus aureus*** (MRSA) infections and a 29% reduction in cases of ***Clostridium difficile*** infection.

The HPA reveals that **HIV** infections diagnosed in the over-50s have more than doubled over a period of seven years. The findings are published in the

journal *AIDS* and presented at an international AIDS conference.

New data published by the HPA reveals a complex profile of the health and welfare of **injecting drug users.**

AUGUST

Research from the HPA shows a higher incidence of **listeriosis** in pregnant women from ethnic minority groups and in people living in more deprived areas.

The HPA reports on the emergence of a new type of **antibiotic resistance** in India, Pakistan and the UK, and calls for good infection control in hospitals both in the UK and overseas, and the need for new antibiotic development.

Sexually transmitted infections data from the HPA shows a total of 482,696 new STI diagnoses were reported to the agency in 2009. This is almost 12,000 more cases than were reported in 2008.

The data release coincides with the official launch of the HPA's new Genitourinary Medicine Clinic Activity Dataset (GUMCAD), which for the first time provides **surveillance data** on STIs by area of residence.

The STI data is part of a wider project to produce **health protection profiles** on a range of health issues at a local level using maps, tables and graphs. It allows users to compare areas and to show any changes over time. The profiles also help commissioners of services and local authorities to set priorities and track the performance of initiatives to improve health.

SEPTEMBER

As summer draws to a close the HPA issues advice on the potential health effects of domestic **heating oil leaks.** About 1.2 million homes across England and Wales have oil fired heating systems.

Experts at the HPA develop a predictive model to help clinicians diagnose **bacterial meningitis** more quickly.

Experts at the HPA say that current methods of reporting the health effects of **air pollution** are outdated and need to be reviewed if they are to more accurately reflect environmental risks in the 21st century.

The HPA creates a new test that will identify positive **tuberculosis** cases within one hour, meaning more rapid and effective treatment is possible.

Research by the HPA reveals that over half the cleaning cloths used in restaurant and take-away kitchens contain unsatisfactory levels of **bacteria** – a sign of poor hygiene and cross-contamination.

HPA poisons experts issue a safety message for people considering picking and eating **wild mushrooms.**

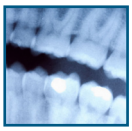
The HPA confirms nine cases of **dengue fever** diagnosed in the UK associated with travel to the Commonwealth Games in Delhi. The agency provides guidance for travellers going to India on how to avoid insect bites.

OCTOBER

Public health minister Anne Milton MP opens the **Influenza Resource Centre** and **UK Stem Cell Bank** building at the agency's National Institute for Biological Standards and Control in Hertfordshire.

The HPA's National Poisons Information Service reports a large increase in enquiries related to the recreational drug **mephedrone.**

The HPA provides **health protection advice** for travellers going to Makkah (Mecca) for the Hajj pilgrimage.



NOVEMBER

Radiation protection guidance for dentists on the use of scanners is published by the HPA.

Cases of **tuberculosis** in the UK have reached 9,040 in 2009 – the highest number in the UK for nearly 30 years – while the number of new drug-resistant tuberculosis has nearly doubled in the past 10 years, according to HPA figures.

To coincide with **Carbon Monoxide** Awareness Week, the HPA advises people to have their fossil fuel and wood burning appliances checked by an appropriately registered engineer before the winter sets in.

The agency launches new web pages designed to help children learn at home about infections such as **seasonal influenza**, to coincide with European Antibiotic Awareness Day.

The WHO approves 14 biological standards for international use, which have been created by the HPA's National Institute for Biological Standards and Control. These standards are needed for the accurate measurement and dosing of biological medicines throughout the world.

The number of people living with **HIV** in the UK reached an estimated 86,500 in 2009, but more than a quarter of these (almost 22,500) were unaware of their infection, according to HPA figures.

DECEMBER

HPA weekly figures show that levels of **seasonal flu** are increasing across the UK. The predominant strain is the H1N1 'swine flu' virus, which was the cause of the 2009 flu pandemic. The HPA urges people in at-risk groups to have the seasonal flu vaccine.

A new vaccine, which the HPA had a key role in developing, is launched to combat the epidemics of **group A meningitis** that regularly sweep across sub-Saharan Africa. The campaign will immunise 20 million people aged 1-29 years in Burkina Faso, Mali and Niger, three of the worst-affected countries in Africa's meningitis belt.

The HPA urges chefs and consumers to thoroughly cook chicken livers, after noticing an increase in the number of outbreaks of **campylobacter** infections associated with the consumption of poultry liver pâté/parfait.

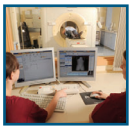
The agency publishes advice for healthcare staff on how to use the chemical compound **Prussian Blue** to remove radioactive caesium from the body.

Research by the HPA shows that cancer patients are five times more at risk of developing **listeria** than people with other underlying conditions.

HPA figures show that levels of **seasonal flu** are increasing across the UK.

There were 55 outbreaks of **gastrointestinal disease** linked to petting farms between 1992 to 2009 in England and Wales, according to HPA research. Although the overall risk of infection is low in light of the millions of farm visits each year, these outbreaks led to 1,328 people becoming infected over the 17-year period, of whom 113 were hospitalised.

Egypt, India, Thailand, Pakistan and Morocco are the top five countries where travellers from England, Wales and Northern Ireland are most likely to acquire **gastrointestinal infection,** according to HPA figures.



JANUARY

Greater use of **X-rays** over the last ten years, including a 140% increase in CT scans, has raised the annual radiation dose the UK public receives from this source, according to HPA research.

The agency launches a free online resource to help healthcare professionals care for patients who have come to live in the UK from abroad. The Migrant Health Guide helps to support GPs and nurses in assessing and treating **migrant patients**, as these patients sometimes have more complex health needs.

The HPA issues new guidance to advise on the management of patients who are infected with **bacteria resistant to carbapenem antibiotics.** Carbapenems are powerful drugs that are often the last line of effective treatment for patients with infections such as pneumonia, urinary infections and blood poisoning caused by bacteria that are already resistant to more widely used antibiotics.

Figures from the HPA indicate that the levels of **seasonal flu** may be starting to peak in England, Wales and Scotland. However, the agency urges caution as the rate of consultations will have decreased through school and GP surgeries closing over the holiday period.

FEBRUARY

Lovers across the nation are reminded of the importance of safe sex in the run up to Valentine's Day, following rises in cases of common **sexually transmitted infections.**

Reported cases of **Panton-Valentine Leukocidin** (PVL), a toxin associated with the bacteria *Staphylococcus aureus*, increased tenfold in England in the last six years, according to HPA figures. The number of cases referred to the agency rose from 224 in 2005 to 2,227 in 2010.

HPA figures show that **flu** activity has returned to baseline levels across the UK. The number of people who are reported to have died from flu in the UK since the season began in October reaches 395.

MARCH

A new HPA report gives millions of households across England and Wales access to details about **radon** measurements in their area.

Following the Fukushima nuclear facility incident in Japan the HPA's **radiation protection** experts keep the situation under close review and advise the UK government accordingly.

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PROFESSOR DAVID L HEYMANN
CHAIRMAN

Chairman's foreword

It gives me great pleasure to introduce the Health Protection Agency's eighth annual report and accounts.

The HPA's role is to improve public health by protecting the population from a range of threats. It provides first-class expertise, skills, analysis, information and advice on infectious disease, radiation, chemicals and poisons, and ensures the safety and quality of biological medicines.

This vital activity is achieved by working with a wide range of partners including the Department of Health, other government departments and agencies, the devolved administrations, organisations in the not-for-profit and private sector, and the general public.

This report sets out the agency's achievements and performance in what has proved to be a highly significant year in its short yet eventful life.

A CHANGING LANDSCAPE

The public health landscape is changing. In May 2010 the new Secretary of State for Health outlined his top five priorities, one of which was a focus on public health.

In July 2010, following a review of arms-length bodies, the coalition government announced that the HPA would become part of the Department of Health.

In November 2010 the public health white paper *Healthy Lives, Healthy People* set out the government's commitment to establish Public Health England, a new national service that will include the functions of the HPA alongside some public health activities carried out by strategic health authorities plus the functions of the public health observatories, cancer registries and the National Treatment Agency for Substance Misuse.

The HPA is fully committed to ensuring the successful establishment and transition to Public Health England, and to continuing to protect the population from health threats.

The HPA supports the Department of Health's priority to produce an operating framework for Public Health England.

This will set out at a high level the role and organisational requirements for the new service and outline the role of the HPA's network of health protection units within the local delivery arm of Public Health England as indicated in the white paper.

It is encouraging to see the government's commitment to health protection and to integrating and strengthening existing public health functions. In Public Health England, HPA staff will continue their current functions which are so crucial in protecting the nation's health.

VALUING OUR STAFF

Organisational changes, however far-reaching, have not distracted us from the day-to-day business of delivering excellent health protection services.

This is testament to the hard work and professionalism of our staff, who are the nation's greatest asset for health protection.

I would like to express my gratitude to everyone in the agency for their efforts over the past year.

It is an honour to be part of such a skilled, effective and dynamic organisation – qualities that will ensure a strong and robust Public Health England.

> "The HPA's expertise will ensure that Public Health England is equally successful"

JUSTIN McCRACKEN
CHIEF EXECUTIVE

Chief executive's statement

As you will see from the pages of this year's annual report, the HPA has once again faced a multitude of threats that have tested its health protection capabilities and demonstrated its value.

The year may not have brought one stand-out challenge of the scale of the 2009 swine flu pandemic, but rather many smaller incidents requiring effective response – alongside the important day-to-day work of preparing for and preventing health threats.

The main developments in the UK public health sphere were political, as the coalition government announced its plan to repeal the Health Protection Agency Act and transfer the agency's functions into a new service, Public Health England.

FINANCIAL CHALLENGES

The financial landscape has changed considerably in the last financial year. The uncertain global financial environment and subsequent measures taken by government means the UK public health system must be efficient and achieve more with the resources it has.

Along with much of the public sector, the HPA has been operating under expenditure controls for much of the financial year and our staff have risen to this challenge, ensuring that all our spending is reviewed to ensure it is as responsible, efficient and effective as possible.

The HPA embraces its duty to maximise efficiency in developing expertise and transforming it into action, and to continue its health protection work through the fundamental activities of preparing, preventing and responding to threats and challenges.

This cost-effective approach will continue as part of the new organisation Public Health England.

ORGANISING FOR DELIVERY

The HPA has made some important internal changes this year to ensure it is structured in the optimum way to deliver a strong and efficient service, both now and in the future.

This has meant a move away from the previous centre-based management structure to one based on functional lines, with greater alignment of related services.

The creation of a new division focusing on microbiological services channels all of the HPA's laboratory expertise to provide enhanced protection against microbial diseases.

The other new division of health protection services brings together the agency's local, regional and national surveillance and epidemiology expertise, with the local and regional response services. This will enhance the nation's ability to identify health protection incidents as – or even before – they arise and to continue an efficient and rapid response, while strengthening the vital link between national and local delivery.

Overall the changes will create an environment where combining skills and resources across different parts of the HPA is made easier, to improve efficiency and effectiveness.

AN EXPERT ORGANISATION

As ever, it has been an honour and a privilege to lead the staff of the agency this year. In particular, I would like to thank the chairman and members of the HPA Board and Executive Group for their invaluable support and advice.

Most importantly, I want to thank the staff of the HPA for continuing to provide their specialist expertise and their dedication to protecting the health of the public, particularly through uncertain times of change.

I am proud of our achievements in 2010/11 and look forward to the challenges of the coming year with confidence.

> "I want to thank the staff for their dedication to protecting the public"

Strategic framework

INTRODUCTION

The purpose and nature of the Health Protection Agency is summarised on page 3.

During the years since its formation in 2003 the Health Protection Agency has worked to develop a strategy for its unique role in the public health system in the UK and the world. This built on the particular expertise of the individuals, facilities and organisations which 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 makes its contributions to public health protection through the expertise and experience of its staff, and through well-tested patterns of service. These contributions are also influenced by the state of development 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 CHANGING OUTLOOK

The health landscape in the UK will change in the years ahead with the proposed transfer of the HPA's functions to Public Health England. The HPA has welcomed the commitment to public health set out in the white paper *Healthy Lives, Healthy People* and will work with the Department of Health to support it in managing the risks associated with the transfer. This annual report however reflects the plans and achievements in the system as it prevailed in 2010/11.

THE HPA VISION

The Health Protection Agency formulated a vision statement *Leading the Way in Health Protection* in 2008 consistent with its statutory functions. This identified its ambitions in terms of public health outcomes and strategic aims for developing each important aspect of the HPA as an organisation.

These high-level public health ambitions were in turn divided up between the HPA's 'key health protection programmes'. These key health protection programmes formulate strategies for their particular area of public health, which are published on the HPA's website. These include the HPA Strategic Plan for 2008-13 covering the period under review.

During the year the HPA *Strategic Overview 2010-15* was published giving an updated outline of the agency's ambitions prior to the announcement of the creation of Public Health England.

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.

OPERATING REVIEW

The operating review section of this annual report sets out some of the key objectives of the organisation for 2010/11 and how they have been achieved. They are divided up between the key health protection programmes and the strategic aims.

The relationship between these elements of the HPA's strategic framework is set out in the table on page 11.

You can find further information about our strategic plans by visiting our website:

www.hpa.org.uk

The HPA's strategic pathway

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 2010/11

1. Healthcare-associated infections
2. Respiratory infections
3. Bloodborne infections
4. Gastrointestinal infections
5. Sexually transmitted infections
6. Vaccine-preventable infections
7. New and emerging infections and other infections of public health importance
8. Environmental hazards (chemicals, poisons and radiation)
9. Reduction in harm from incidents, emergencies and outbreaks
10. Ensuring biological medicines are safe and effective in reducing disease

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

During 2010/11, the HPA's services were provided by an average of 3,852 full-time equivalent staff. They were based in a number of centres (Colindale in north London, the Centre for Radiation, Chemical and Environmental Hazards in Oxfordshire, Porton in Wiltshire and the National Institute for Biological Standards and Control (NIBSC) in Hertfordshire) and throughout the country working at a local level and in a network of microbiology laboratories. There is also a small headquarters in London. A location map of HPA sites is shown on page 61.

In 2010/11 the HPA reorganised its management structure. The organisation now has four frontline operational divisions:

1. Microbiology Services
This division consists of the laboratory groups that are located at the HPA sites at Colindale and Porton, plus the national network of microbiology laboratories.

2. Health Protection Services
This division consists of two elements: teams of health protection experts working at a local level and a nationally organised integrated epidemiology service.

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

4. Biological Standards and Control
This division assures the quality and safety of biological medicines.

There is also a small corporate support function, which is an integrated part of the frontline operations and ensures effective working and use of resources.

2 Operating review

Key health protection programmes

In this section, some of the key objectives for 2010/11 from each of the ten Key Health Protection Programmes as shown on page 11 are described, together with how they have been achieved.

Healthcare-associated infections

The HPA works with the Department of Health, the NHS and others to reduce healthcare-associated infections (HCAIs) and antimicrobial resistance (AMR), providing expert advice, surveillance information, specialist laboratory services and extensive research.

Concerted efforts to reduce HCAI episodes resulted in a 15% fall in *Clostridium difficile* infections in 2010/11 compared with 2009/10 and a 22% fall in bloodstream infections caused by meticillin-resistant *Staphylococcus aureus* (MRSA) in 2010/11 compared with 2009/10*.

The agency offers practical and scientific advice, covering issues such as recalcitrant and emerging pathogens, treatment options for multi-resistant organisms and antimicrobial stewardship.

Staff help to prevent and control HCAI outbreaks in hospitals and care homes, and serve on infection control committees. They collect and interpret surveillance data to monitor the rates and distribution of HCAI, the spread of resistance, emerging hazards and the success of intervention measures.

Microbiologists from specialist diagnostic and reference laboratories undertake molecular investigation and strain typing of HCAIs and unusual resistances, and carry out research to improve detection methods and patient safety.

* (provisional data)

Key objective	Why this is important	Outcome	Reference
Provide improved information for action by the reporting of *C. difficile* infection (CDI) in a specified format.	To maintain the current reduction in hospital cases, identify cross-infection, reduce transmission, optimise the management of outbreaks and determine the epidemiology of *C. difficile* and gain a better understanding of community cases.	A new community focused random sampling scheme has been developed and is due to commence in 2011/12.	*C. difficile* reporting: www.hpa.org.uk/web/HPAweb&HPAwebStandard/HPAweb_C/1179746015058 CDRN: www.hpa.org.uk/ProductsServices/InfectiousDiseases/LaboratoriesAndReferenceFacilities/ClostridiumDifficileRibotypingNetworkService How to deal with CDI: www.hpa.org.uk/web/HPAwebFile/HPAweb_C/1232006607827
Provide improved information for action by reporting of MRSA infection in a specified format.	To maintain the current reduction in hospital cases.	The surveillance programme supports the Department of Health in providing data for the 'MRSA Objective.'	MRSA reporting: www.hpa.org.uk/Topics/InfectiousDiseases/InfectionsAZ/StaphylococcusAureus MRSA Objective: www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_109951

Key objective	Why this is important	Outcome	Reference
Introduce training for HPA staff in healthcare epidemiology and establish core competencies.	To support the NHS and strengthen field epidemiology, in particular to characterise risk factors and evaluate interventions. To develop a cadre of HPA experts to advise and support the NHS.	Delivery of the European Centre for Disease Prevention and Control prevalence surveillance training programme in healthcare epidemiology. Support an EU initiative to improve infection control teams.	Internal report on competencies for healthcare epidemiologists.
Provide data on surgical site infection (SSI) and reduce rates across a broader range of surgical specialties.	To support the NHS in reducing rates of SSI across a range of surgical specialties. To review clinical practice and make changes that improve patient care.	New surgical specialties, such as breast surgery, cardiac surgery and cranial surgery, were added to the surveillance programme in April 2010. A pilot study of post-discharge surveillance following caesarean section has been completed.	Sixth report of the mandatory surveillance of surgical site infection in orthopaedic surgery: www.hpa.org.uk/web/HPAweb&HPAwebStandard/HPAweb_C/1287147493305
Early detection of novel resistance of actual or potential concern.	To reduce the number of outbreaks caused by novel resistance types and/or undetected dissemination.	Surveillance via the HPA LabBase system, which detects unusual trends, and the British Society for Antimicrobial Chemotherapy. Reports provided for the HCAI and AMR programme board. Ongoing epidemiological work for outbreak investigation.	Kumarasamy KK et al. *Lancet Infect Dis* 2010; 10: 597-602 Antibiotic resistance: www.hpa.org.uk/Topics/InfectiousDiseases/InfectionsAZ/AntimicrobialResistance
Roll out antimicrobial resistance surveillance (AmSurv) and improve laboratory surveillance with automated systems (AST).	To match antimicrobial usage with resistance patterns and produce reports on drug-bug combinations to reduce the inappropriate use of antimicrobials and the impact of emerging resistance.	Pilot project complete. Implementation in progress and some regions beginning to report.	Internal report produced by the HPA team in West Midlands.
Improve knowledge in the community (in schools) about the inappropriate use of antibiotics.	To teach children about the benefits of antibiotics, when used wisely, and the consequences of inappropriate use, such as the spread of antibiotic resistance in the community.	Schools are using the e-Bug website and other resources, including an education pack on antibiotics and hygiene.	e-Bug website: www.e-bug.eu

Key objective	Why this is important	Outcome	Reference
Support the Department of Health in the introduction of the Health and Social Care Act 2008: Code of Practice on the prevention and control of infections and related guidance.	To help reduce the incidence and consequences of infections in adult care homes.	The HPA is providing a specialist telephone advice service to help care home providers deal with suspected outbreaks. Information about HCAI episodes in care homes is also being collected. A senior infection control nurse has been seconded for six months from February 2011 to assess whether further support is required by HPUs.	The Health and Social Care Act 2008: Code of Practice on the prevention and control of infections and related guidance: www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_122604 The HPA and Infection Prevention Society contributed-to the Department of Health-funded roadshows to help care homes meet the new requirements. A DVD for care homes can be found at: www.hpa.org.uk/carehomesdvd
Develop and apply models and tools designed to improve efficacy of cleaning and decontamination processes. Complete the development of the first thermostable adenylate kinase (tAK) indicator product for improving performance of washer disinfectors.	The emergence of variant Creutzfeldt-Jakob disease highlighted the need to improve the decontamination of surgical instruments. tAK indicators provide a method for routine monitoring and validation of cleaning and decontamination processes to support NHS professionals in managing their procedures.	The first tAK indicator product has been in field trials in NHS hospitals. Methods have been reviewed and published in peer-reviewed journal.	Ungurs M et al, *J Hosp Infect*. 2010; 74:144-51. Hesp JR et al, *J Hosp Infect* 2010; 72:65-70. Ungurs M et al, *American J Inf Cont* 2011. Vassey M, *Brit Dent J* 2011.

Other achievements

The HPA continued to improve HCAI surveillance by updating and developing software to assist the NHS with data collection. Epidemiology reports on MRSA, *C. difficile* (including a new surveillance scheme to assist in the reduction of community-associated cases of *C. difficile* infection (CDI)), surgical site infections and antimicrobial resistance were produced for use by the health service.

Work continued to support England's participation in the European Centre for Disease Prevention and Control's point prevalence survey of HCAI and antimicrobial use in acute hospitals, with the HPA leading on the development and delivery of Europe-wide training for this.This survey will allow comparisons within and across countries in a standardised fashion. It will help in analysing the syndromic patterns of HCAI, device use, antimicrobial use and governance in hospitals.

Carbapenems are invaluable for the treatment of infections due to multi-resistant Gram-negative bacteria, including those with extended-spectrum ß-lactamases. While carbapenem-resistant Enterobacteriaceae remain rare, they are emerging. The agency continued to collect and analyse data to understand the characteristics and pathogenesis in order to provide the most up-to-date guidance to the NHS.

An alternative to antibiotics for treating patients with CDI (immunotherapeutics) is in the early stages of development. This treatment uses antibodies to neutralise the toxins produced by *C. difficile*. The research could, in time, provide a therapy for treating patients whose infection

does not respond to antibiotics and reduce the current reliance on antibiotics.

More than 50 peer-reviewed papers about HCAIs and AMR were published during 2010/11. Specialists also contributed to international publications, such as the World Health Organization's *Guidelines on Hand Hygiene in Health Care.*

Key future plans

In January 2011 NHS trusts began to report information on meticillin-sensitive *Staphylococcus aureus* (MSSA) bacteraemia to the HPA. The Department of Health is adding mandatory surveillance for *Escherichia coli* bacteraemia, from June 2011. *E. coli* has overtaken *S. aureus* as the most frequent cause of bloodstream infections, and it is hoped that the new surveillance scheme will shed some light on the cause of the increase.

The feasibility of offering post-operative caesarean section surgical site infection surveillance as an ongoing service to the NHS after a successful pilot has been investigated. The resource implications are being considered.

TACKLING MRSA AND CLOSTRIDIUM DIFFICILE

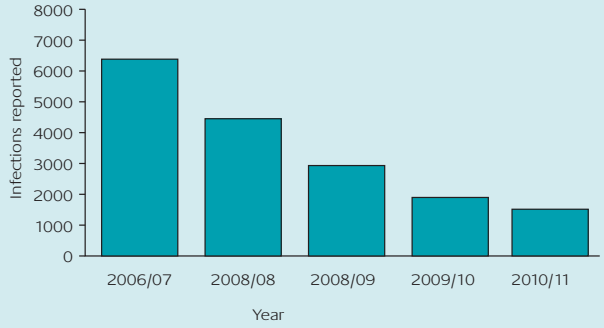
The HPA works to reduce episodes of healthcare-associated infections, such as meticillin-resistant *Staphylococcus aureus* (MRSA) and *Clostridium difficile*, by running surveillance schemes and giving advice and support to the NHS.

HPA figures on MRSA bloodstream infections show there were 1,481 cases reported in England in 2010/11*. This represents a 22% fall on the 1,898 total for 2009/10.

There were 21,694 *C. difficile* infections in patients aged two years and over reported in England in 2010/11*, which represents a 15% fall from the 25,604 total for 2009/10.

* (provisional data)

MRSA BLOODSTREAM INFECTIONS IN ENGLAND



Respiratory infections

Influenza, tuberculosis and other respiratory infections present serious challenges to public health.

The H1N1 influenza virus that caused the 2009 'swine flu' pandemic circulated widely again during the winter of 2010/11, causing severe illness and deaths particularly among children and young adults. More than 14 million doses of seasonal flu vaccine were distributed in the UK to protect people in risk groups.

Tuberculosis case numbers, which have been increasing steadily since the late 1980s, continue at high levels with a provisional total of 8,587 cases reported in 2010.

The HPA's activities to combat these infections include comprehensive surveillance to monitor levels of infection; specialist microbiological diagnosis and strain typing; expert advice on the use of vaccines; horizon scanning and preparedness (including pandemic influenza planning); assistance with the investigation and management of outbreaks; information for the public, professionals and government; and research to develop better vaccines, diagnostic tests and treatments, particularly against multi-drug resistant disease.

Key objective	Why this is important	Outcome	Reference
Evaluate the efficacy of late stage and early stage vaccines and therapeutics to pandemic influenza in the biological challenge model.	To provide information about the efficacy of novel vaccines and antiviral influenza therapeutics with a biologically relevant model to influenza challenge. Also to provide information on the levels of cross-protection available, and to determine the efficacy of different treatment regimes within a relevant biological model.	A relevant biological influenza model has been established. Links are being developed to generate commercial partners interested in utilising the model for future studies. The biological model has been used in the evaluation of a licensed H1N1 flu vaccine. Evaluation of a novel flu therapeutic is due to start at the end of March 2011.	The biological model study has recently been submitted for publication. It has also been presented orally at several international flu/vaccine conferences.
Evaluate the aerosolisation and spread of pandemic influenza in the hospital intensive care setting.	To provide information about potential aerosol transmission of influenza in intensive care settings and establish an evidence-based rationale for the use of personnel protective equipment such as face-masks.	Twenty-six patients were sampled during the 2009/10 influenza season. Preliminary results indicate that chest physiotherapy combined with nebulisation could be a risk for aerosol transmission of influenza. Sampling of patients continued during the 2010/11 influenza season.	A number of presentations have been delivered at national and international meetings and a scientific publication is currently being drafted.
Evaluate the effectiveness of the H1N1 programme.	Vaccines were rapidly developed to mitigate the global spread of the H1N1 pandemic. Vaccine programmes were implemented in the UK in 2009. Observational epidemiological studies were rapidly undertaken to evaluate the effectiveness of the vaccine.	H1N1 vaccine effectiveness papers have been published and reports produced.	Hardelid P et al. *Eurosurveillance,* 2011; 16: 2. Waddington C et al. *Health Technol Assess,* 2010; 14(46): 1-130. Andrews N et al. *J Infect Dis*, 2011; 1; 203(1): 32-9 .
Provide clinical trial data to DH/Joint Committee on Vaccination and Immunisation (JCVI) to inform vaccine decisions.	To determine the most effective and cost-effective strategy for mitigating an evolving pandemic by targeting vaccination at the population groups that would most benefit from protection.	The modelling unit and the Immunisation, Hepatitis and Blood Safety Department evaluated the effectiveness and likely cost-effectiveness of H1N1 immunisation policy. Analyses presented to JCVI were helpful in deciding national policy in 2009 when vaccines became available.	Baguelin M et al. *Vaccine*, 2010; 28(12): 2370-84.

Key objective	Why this is important	Outcome	Reference
Review the HPA's Pandemic Influenza Contingency Plan.	This revised document will provide the oversight needed for the HPA to organise a response to any future pandemics, taking account of lessons learnt from the 2009 pandemic.	Deferred until after publication of the Department of Health national framework on pandemic influenza and clarity about Public Health England. This will be revised in the next financial year.	
Complete evaluation of new tuberculosis drugs preclinical models.	Improved therapies for tuberculosis are required. Many groups are developing new approaches to treat tuberculosis and are collaborating with the HPA to evaluate therapies in their specialist preclinical models.	Two novel compounds that are proposed to repair a host defence mechanism that is subverted by *Mycobacterium tuberculosis* have been provided by an academic group and evaluated in a tuberculosis model.	A confidential report has been prepared for the academic group. Data will be submitted for publication in a scientific journal.
Work towards preventing tuberculosis transmission by identifying and managing tuberculosis clusters.	National strain typing provides valuable data about the transmissibility, virulence and molecular characteristics of different tuberculosis strains. It will improve the epidemiological investigation of local clusters and outbreaks that cross regional boundaries, as well as enhancing national epidemiology.	National prospective tuberculosis typing using 24-loci Mycobacterium Interspersed Repetitive Units-Variable Number Tandem Repeats (MIRU-VNTR) is progressing well. Results are immediately available to laboratories, HPUs, clinicians and national databases and are used to improve the detection and management of previously unidentified tuberculosis clusters.	The tuberculosis surveillance report for 2010, *Tuberculosis in the UK*, is available at: www.hpa.org.uk/web/HPAwebFile/HPAweb_C/1287143594275
Support better management of infections due to tuberculosis in England by increasing the number of strains which are analysed in detail for resistance.	Assessing the drug resistance profile of a patient's *M. tuberculosis* strain is essential for proper management of their disease. This is particularly important for MDR and XDR resistant strains.	Rapid culture-based second-line/reserve drug analysis has been implemented. The target of analysing 95% of samples was achieved.	The tuberculosis annual report for 2010, *Tuberculosis in the UK*, is available at www.hpa.org.uk/web/HPAwebFile/HPAweb_C/1287143594275.

Key objective	Why this is important	Outcome	Reference
Improve the understanding of resistance of tuberculosis in England by increasing the number of strains which are analysed in detail for resistance.	Monitoring drug resistance in *M. tuberculosis* strains is essential to determine the extent of resistance problems within the UK, including the distribution and the risk factors for resistance.	A national report on tuberculosis surveillance, including information on species and drug susceptibility, was completed. An integrated web-based surveillance system that combines strain typing, laboratory and epidemiological data is in progress. This will assist in the detection of recent transmission and the commissioning of local control measures.	The tuberculosis annual report for 2010, *Tuberculosis in the UK*, is available at www.hpa.org.uk/web/HPAwebFile/HPAweb_C/1287143594275
To reduce the incidence and consequences of tuberculosis.	Standardised materials for the management of tuberculosis incidents are essential to ensure a collective approach and good practice.	Guidance on managing incidents and clusters of tuberculosis was produced along with other resources. Tuberculosis incidents were appropriately managed in all HPUs in England.	HPZone standardised supporting material has been produced for tuberculosis. Available on QPulse.

Other achievements

The HPA submitted extensive documentation and commentary to the independent review of the UK response to the 2009 influenza pandemic. The review, led by Dame Deirdre Hine, will provide lessons for future planning and management of pandemic influenza.

Four scientific reviews were completed to provide evidence for the Department of Health's national framework for responding to pandemic influenza. The systematic reviews analysed the effectiveness of influenza-specific antiviral drugs; facemasks and respirators; school closures, and measures to restrict mass gatherings, in reducing or preventing the transmission of influenza. The findings will be published in peer-reviewed journals.

The HPA and NHS received an award for innovation from the Cabinet Office for the nine regional 'flu response centres' that were established in a short time to provide advice to health professionals during the pandemic.

HPA scientists developed a new diagnostic test for tuberculosis that can identify positive cases within an hour. The highly sensitive technique, which uses real-time polymerase chain reaction, is undergoing trials. Rapid detection of tuberculosis will ensure patients start treatment quickly and reduce the risk of onward transmission of infection.

Reports and publications

The 2010 report on tuberculosis calls for greater efforts to control the infection. It highlights how national surveillance has been improved to include, for the first time, information on social risk factors, the use of directly observed therapy and the outcome of treatment for patients with multi-drug resistant disease. See www.hpa.org.uk/web/HPAweb&HPAwebStandard/HPAweb_C/1287143581697

Key future plans

A National Strain Typing Project is being implemented. Strain typing of tuberculosis

isolates enables the identification of clusters of cases that share a common source. This enables not only more effective control of local outbreaks, but also contributes to a fuller understanding of the local and national epidemiology of the disease. A protocol for strain typing reporting will be issued as a national standard method.

The recently produced *Strain Typing Project Handbook* outlines to local HPA teams how to use strain typing data to support the detection, investigation and management of tuberculosis clusters. A preliminary evaluation of the National Strain Typing Project will be carried out in 2012.

Research activities will focus on drug tolerance in *M. tuberculosis*, the development and evaluation of more effective tuberculosis vaccines, new methods to diagnose tuberculosis and novel approaches to improve the management and control of tuberculosis in children and hard-to-reach groups.

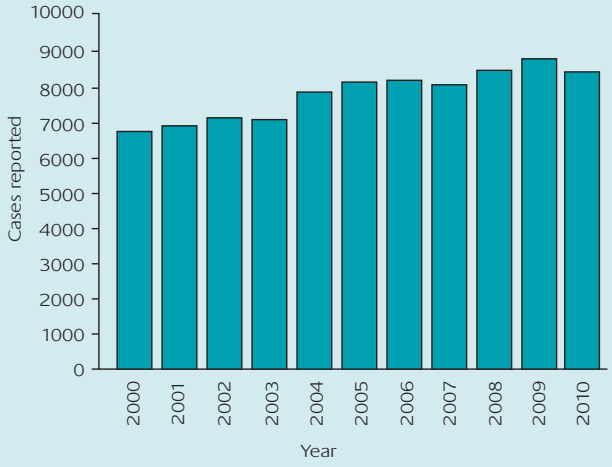
TUBERCULOSIS: NUMBERS REMAIN HIGH

Tuberculosis is one of the leading causes of death worldwide, and is a growing and serious problem in the UK. The number of new cases has risen steadily over the past two decades and in some areas, such as London, rates of infection are particularly high.

HPA provisional figures show there were 8,587 cases of tuberculosis reported in the UK in 2010. Although this is a decrease of 5% compared to the 9040 cases reported in 2009, numbers remain high. At this stage it is too early to determine whether the observed decrease represents a reversal of the increase seen over the past two decades.

Rates of disease also remain high at 13.9 per 100,000 nationally and 42.7 per 100,000 in London.

TUBERCULOSIS IN THE UK, 2000-2010



Sexually transmitted infections

The HPA works with partners to reduce the incidence of sexually transmitted infections (STIs). In 2009, an estimated 86,500 people in the UK were living with HIV and there were around 0.5 million STIs diagnosed, including infections such as genital chlamydia, gonorrhoea, syphilis, genital warts and genital herpes, among others. Chlamydia diagnoses increased to 217,570, gonorrhoea rose to 17,385 and syphilis diagnoses decreased slightly to 3,273.

The HPA continues to improve its surveillance activities to provide high-quality 'information for action' to inform the development of prevention strategies, the targeting of interventions and the commissioning of NHS services. The agency provides expert advice to NHS trusts and other organisations, and supports, or where appropriate, leads, the investigation and management of STI outbreaks.

Reference laboratories provide specialist services for identifying and typing causal organisms, molecular diagnostics and the detection of antimicrobial resistance for a number of STI pathogens. Development work will improve the speed and sensitivity of routine isolation of STI pathogens.

Key objective	Why this is important	Outcome	Reference
Extend uptake of recent infection test algorithm (RITA) to cover 80% of all new HIV diagnoses.	RITA testing will ascertain whether a patient has recently acquired HIV (within the previous 4-5 months). This information can be linked to the 'new diagnosis' database that includes risk factor information on newly diagnosed patients. This will improve the tracking of transmission patterns in groups at greatest risk of HIV.	Although optimal coverage has yet to be reached, for the first time the HPA can provide robust estimates of incident cases of HIV by risk group among newly diagnosed cases. The HPA is currently focusing on improving data quality, coverage and linkage with epidemiological information.	Some early data are reported in *HIV in the United Kingdom: 2010 Report:* www.hpa.org.uk/hivuk2010
Support the delivery of an improved chlamydia screening programme and progress the National Chlamydia Screening Programme, taking account of the National Audit Office, Public Accounts Committee and Hussey reports.	Mandatory reporting by all NHS laboratories of the results of chlamydia testing will increase completeness of laboratory testing data and ensure that the performance of the National Chlamydia Screening Programme can be measured accurately. The HPA is supporting this by developing the reporting system – called the Chlamydia trachomatis Activity Dataset (CTAD).	CTAD reporting has been successfully piloted and some laboratories have begun to submit data ahead of full roll out.	More information on monitoring chlamydia screening coverage in England is available in *Health Protection Report,* June 2010; 4(23):11 www.hpa.org.uk/hpr/archives/2010/news2310.htm
To improve the timeliness of syphilis diagnosis to facilitate earlier treatment and public health action.	The HPA is auditing its regional laboratories to ensure use of National Standard Methods for confirmation of syphilis diagnoses, which includes targets for provision of results and treatment in a timely manner.	An audit of regional laboratories has been completed. The HPA has analysed the results and prepared an options appraisal for providing syphilis serology service across the agency, an audit of NHS laboratory activity is being conducted in early 2011/12.	The National Standard Method for the Serological Diagnosis of Syphilis (VSOP 44) is available here: www.hpa-standardmethods.org.uk/documents/vsop/pdf/vsop44.pdf
Support world-class commissioning of sexual health services through focusing on quality of outputs and combining sexual health indicators, sexual health promotion and local commissioning of health promotion.	Part of the role of HPUs is to proactively provide local commissioners with evidence-based public health advice on what services are needed locally. To ensure consistency in the provision of advice on sexual health services, the HPA has agreed a number of standards for HPUs and is undertaking an audit to ensure HPUs are meeting those standards.	The audit response rate was excellent and 74-97% of HPUs partly or fully met all six standards.	Preliminary analysis of audit results presented at the HPA Sexual Health conference on 30 March 2011.

Other achievements

Reports and publications

UK data on new HIV diagnoses in 2010 were press released and linked to publication of new guidance on expanding HIV testing from NICE. The press release highlighted the rise in the number of cases of HIV infection acquired in the UK (rather than abroad) over the past decade
www.hpa.org.uk/NewsCentre/National PressReleases/2011PressReleases/110323UKacquiredHIVnearlydoubles

Nearly half a million diagnoses of STIs were reported in the UK in 2009. Young people aged 15 to 24 continue to be the group most affected by STIs, with about one in ten becoming re-infected within a year.
www.hpa.org.uk/NewsCentre/NationalPressReleases/2010PressReleases/100825STI

HIV in the United Kingdom: 2010 Report contained a series of key recommendations for commissioners and providers of sexual health services.
www.hpa.org.uk/hivuk2010

Time to test for HIV: Expanded healthcare and community HIV testing in England, reported the results of eight projects, funded by DH, to test people for HIV who were previously undiagnosed. The results suggest that offering HIV tests in primary care, hospital and community settings is successful in identifying hidden infections.
www.hpa.org.uk/web/HPAwebFile/HPAweb_C/1287145497243

Treating gonorrhoea has been complicated by the prevalence of antimicrobial resistance. *Gonococcal Resistance to Antimicrobials Surveillance Programme in England and Wales (GRASP): Report of 2009 data* highlighted how treatment options will dwindle if decreased susceptibility to cephalosporins continues to grow.
www.hpa.org.uk/hpr/archives/2010/hpr3410.pdf

Surveillance enhancements

The new Genitourinary Medicine Clinic Activity Dataset (GUMCAD) provided, for the first time, data on STIs by area of residence. The data highlighted the considerable geographic and demographic variation in the distribution of STIs. This information will help the NHS and other bodies to improve the targeting of public health services.
www.hpa.org.uk/Topics/InfectiousDiseases/InfectionsAZ/SexualHealth/SexualHealthProgramme/hivsti_sexhealth_GUMCAD

Conditional approval was granted by the NHS Information Standards Board to extend GUMCAD to cover sexual health services outside the traditional genito-urinary medicine setting, for example, community contraceptive services and enhanced general practices. Similarly, conditional approval was granted for the Chlamydia trachomatis Activity Dataset (CTAD) to monitor the performance of the National Chlamydia Screening Programme.

High quality service delivery

As part of the HPA's High Quality Service Delivery Programme, *Guidance for Managing STI Outbreaks and Incidents* was revised and updated.
www.hpa.org.uk/web/HPAwebFile/HPAweb_C/12145530002033

Research and development

To help inform the choice of vaccine for use in the National Human Papillomavirus (HPV) immunisation programme, a study of the cost (and health loss) associated with genital warts was completed and submitted to DH. This paper has now been submitted for peer-reviewed publication together with a paper on the burden and costs of genital warts diagnoses in England.

The pilot phase of a chlamydia prevalence survey is in progress. This survey will contribute to the evaluation of the National Chlamydia Screening Programme.
www.chlamydiascreening.nhs.uk/ps/assets/pdfs/publications/newsletters/NCSP_newsletter_Dec10.pdf

A costing tool was developed for sexual health commissioners to obtain better value for money from chlamydia screening. Spending on screening varies widely at a local level. The costing tool will be a benchmark for costs across England.
www.chlamydiascreening.nhs.uk/ps/commissioners/remuneration.html

Key future plans

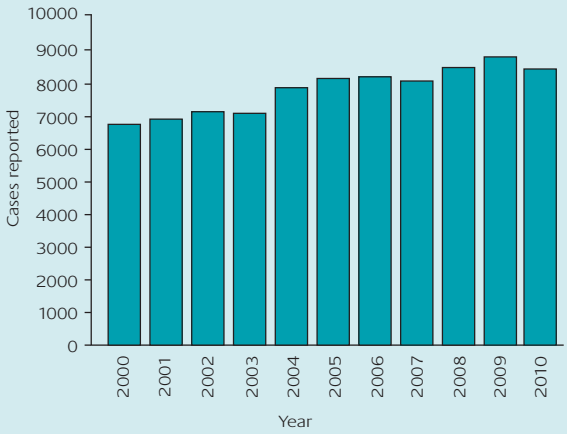
Addressing the threat of untreatable gonorrhoea is important. The emergence of antimicrobial-resistant strains of *Neisseria gonorrhoeae* is a global concern. The HPA will develop an action plan to improve monitoring of antimicrobial resistance, particularly among those at greatest risk (e.g. men who have sex with men).

In response to detection of emerging cephalosporin resistance through HPA surveillance systems, the agency has recently advised the British Association for Sexual Health and HIV to change its recommendation for first line gonorrhoea therapy to ensure available treatments remain effective. This recommendation is currently subject to consultation (www.bashh.org/guidelines).

To assess the quality of HIV care received by patients, the HPA will undertake development work to support national roll out of clinical outcome indicators.

HIV IN THE UK

HPA figures show that an estimated total of 6,630 individuals were newly diagnosed with HIV in the UK in 2010. However, new diagnoses among men who have sex with men remains high (2,760 in 2010 compared with 2,800 in 2009). Of the people newly diagnosed in 2009, 1,130 probably acquired their infection heterosexually within the UK, accounting for a third of heterosexuals diagnosed.



Bloodborne infections

The hepatitis viruses (A, B, C, D and E) and other bloodborne infections can be life-threatening, and hepatitis B and C can become long-term chronic infections. The HPA works to reduce harm by supporting the prevention, diagnosis and treatment of bloodborne infections.

An estimated 185,000 people in the UK are chronically infected with hepatitis C (HCV). Rates of infection are high among injecting drug users (IDUs), some ethnic minority groups and prison populations. Many people living with HCV are unaware of their infection. Efforts to increase awareness and encourage testing among risk groups are important so that infected people are identified and treated. The HPA works with other agencies that target hard-to-reach and high-risk groups on initiatives that will prevent the spread of infection and improve access to treatment. It also aims to increase the detection of undiagnosed people, improve reporting methods, provide data to inform policy on vaccination and screening, and monitor the emergence of antiviral resistance.

Key objective	Why this is important	Outcome	Reference
Contribute to reducing the incidence of hepatitis B by working with commissioners and providing local and regional epidemiological information to help commissioners to plan, implement and evaluate prevention and control measures.	The HPA has a remit to provide surveillance data that determine the incidence and trends of disease, the contribution of relevant exposures and evidence that prevention and control measures are effective.	Data on acute hepatitis B was recorded by Health Protection Units (HPUs) in line with a minimum dataset agreed in 2007, with 90% of reports at HPU level including designation of acute versus chronic. The results were collated and published nationally. In 2009, the incidence of acute hepatitis B was 1.15 per 100,000; 57% of HPU reports had information on exposure; the most common risk factor was heterosexual exposure (63% of cases with known exposure).	Reports published in *Health Protection Report*; 2009 data: www.hpa.org.uk/hpr/archives/2010/hpr3410.pdf

Other achievements

The HPA worked with the NHS to ensure that babies born to hepatitis B positive mothers are vaccinated at their first and second birthdays. In England, the proportion of infants, born to positive mothers, who received three doses by the age of 12 months increased from 67.6% in 2007/08 to 79.1% in 2009/10. Data completeness is a concern, with just under 50% of PCTs sending full returns in 2009/10. www.hpa.org.uk/hpr/archives/2010/hpr4710.pdf

Hepatitis B transmission among IDUs in England has declined in recent years. The Unlinked Anonymous Monitoring Survey of IDUs showed that the proportion of participants ever infected with hepatitis fell from 29% in 2000 to 18% in 2009. Reported uptake of hepatitis B vaccine increased from 35% in 2000 to 73% in 2009. www.hpa.org.uk/web/HPAwebFile/HPAweb_C/1254510660636

Specialists contributed to the national liver strategy being prepared by the National Clinical Director for Liver Disease. The strategy follows increased mortality from liver disease as a result of alcohol, obesity and viral hepatitis.

Following a review of local and regional surveillance of hepatitis C, standard procedures for recording laboratory and clinical data were introduced. Each hepatitis lead now has a standard template for recording region-wide data. This will ensure a consistent approach to local/regional annual reports, while allowing for the inclusion of local/regional initiatives.

The Immunisation, Hepatitis and Blood Safety Department contributed to a DH review of the support available to people who were infected with HCV and/or HIV by NHS-supplied blood transfusions or blood products. As part of this work, the HPA prepared a paper outlining the different stages of HCV infection, the rates of progression and the reduction in quality of life for people living with the disease. Two HPA experts were members of the DH working group that made final recommendations.

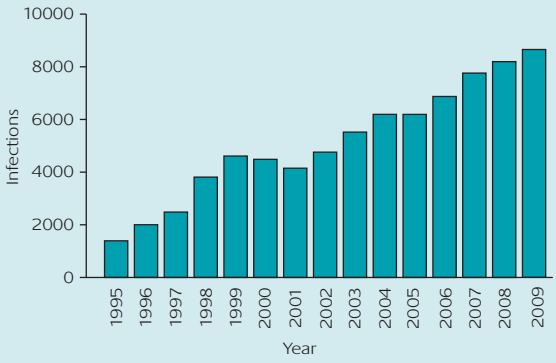
The HPA was involved in several incidents, including an investigation into hepatitis C polymerase chain reaction testing in the South West regional laboratory, and outbreaks of hepatitis A among men who have sex with men in Bristol, and in the orthodox Jewish community of north east London.

HPA staff helped to revise standards for antenatal screening of infectious disease (including hepatitis B). Detailed responses were submitted about a draft handbook on antenatal screening and draft standards for screening. HPA operational guidelines for hepatitis E were published.

TRACKING HEPATITIS

Hepatitis B and C are significant causes of long-term ill health. The number of laboratory confirmed cases of hepatitis C infection in England reported to the HPA in 2009 (the most recent year for which figures are available) was 8,563 – a rise of 4.5% on the 8,196 cases reported in the previous year.

HEPATITIS C INFECTIONS IN ENGLAND



Key future plans

Infants born to hepatitis B surface antigen (HBsAg) positive mothers are at high risk of acquiring HBV infection. Without intervention, the risk of transmission from an HBeAg positive mother is 70–90% compared with a risk of about 10% from an HBeAg negative mother. A combination of hepatitis B vaccine and human anti-HBs immunoglobulin (HBIG) has been shown to be highly effective at reducing this risk, but a minority of infants are tested to ensure that the vaccine has been effective at preventing infection. The HPA plans to strengthen the surveillance of this high-risk group by offering testing for HBsAg at one year of age.

Work to develop assays to improve the differentiation between acute and chronic HBV infections will be undertaken. Hepatitis B virus (HBV) anti-core avidity testing will be improved and offered to combat the continuing problem of the misdiagnosis of HBV infections. This will contribute to improved management of the patient and to public health control and surveillance. With accurate differentiation, resources can be targeted at groups contributing to current UK transmission, rather than infection acquired many years in the past or in other countries. Improved data on chronic infection can contribute to better planning and commissioning of treatment services at a local level.

Gastrointestinal infections

Gastrointestinal infections affect about one in five people each year. The HPA improves the detection and characterisation of the key pathogens causing gastrointestinal infections, thereby reducing the harm they cause.

This work is underpinned by high quality, real-time surveillance databases, accessible across the agency, which include human (clinical) samples and where appropriate food, water and environmental samples (FW&E). Such databases help to link clinical disease with food or water-borne contamination, which in turn will prevent or minimise outbreaks.

The HPA continues to focus on the Food Standards Agency's key bacterial infections – salmonella, VTEC (verocytotoxin-producing *Escherichia coli*, including O157), campylobacter and listeria – and also norovirus and rotavirus, while maintaining a watching brief on other recognised or potential gastrointestinal pathogens.

The aim is to reduce diarrhoeal diseases and other diseases transmitted through food and water, and to develop scientific evidence to inform and determine priorities for national disease prevention and research.

Key objective	Why this is important	Outcome	Reference
Improve the contribution of NHS trusts to the web-based surveillance scheme, in collaboration with the Infection Prevention Society and the British Infection Society.	Norovirus infections in hospitals cause severe disruption to delivery of hospital services, resulting in ward closures and failure to meet NHS targets. Surveillance also helps the NHS plan for winter bed pressures.	This is a voluntary reporting scheme. However, the contribution of NHS trusts has been maintained.	Data is reported by the HPA on a weekly basis to trusts, HPUs and others. The data is used as a key indicator in the HPA's Winter Pressures Weekly Report.
Develop the most appropriate assays for detection of rotavirus.	Rotavirus is the major cause of viral gastroenteritis in children. Accurate diagnosis is important.	A molecular assay has been developed and evaluated as part of the IID2 Study.	The performance of this assay in comparison to traditional methods has been assessed and reported to the Food Standards Agency.
Ensure that high quality, real-time surveillance systems are further developed, so that they are fit for purpose for monitoring gastrointestinal infections to rapidly detect increasing trends, incidents and outbreaks.	The development of real time web-based enhanced surveillance systems for enteric infections enables epidemiologists to rapidly identify outbreaks and provide early information to expedite investigations so that preventive measures can be introduced at the earliest stage possible.	Enhanced surveillance for Vero cytotoxin-producing *Escherichia coli* (VTEC) is in place. Access to data for all appropriate health protection practitioners is reducing the lead-time in investigations and also providing more information on the epidemiology of VTEC. National outbreak detected in February 2011, hypotheses for transmission rapidly generated.	*Review of the major outbreak of E. coli in Surrey, 2009. Report of the Independent Investigation Committee June 2010.* National increase in VTEC O157 PT 8 VT1+2 infection in England and Wales. To be published in *Health Protection Report*.

Key objective	Why this is important	Outcome	Reference
Develop the most appropriate and more timely assays for detection, and identification for *E. coli.*	Rapid recognition of outbreaks of gastrointestinal infection is important to instigate public health actions and to reduce the spread of infection.	Molecular assays for detecting and confirming *E. coli* O157 in clinical specimens and FW&E samples have been developed. They are being rolled out to front line HPA laboratories. They will be part of the response capability for the London 2012 Olympic and Paralympic Games.	The need for research to assist clinicians in rapid diagnosis was highlighted by the *Review of the major outbreak of E. coli O157 in Surrey, 2009* led by Professor George Griffin.
Develop the most appropriate and more timely assays for detection, identification and strain characterisation for salmonella.	Rapid recognition of outbreaks of gastrointestinal disease is important to instigate public health actions and to reduce spread of infection.	Molecular typing assays for detecting and confirming salmonella infection in clinical specimens and FW&E samples have been developed. They are being rolled out to laboratories and will be part of the response capability for the Olympics.	
Complete the involvement of the HPA in the FSA-funded IID2 project to inform the burden of gastrointestinal disease.	This study was important to establish the burden of gastrointestinal disease in the UK and to assess if there have been any changes since the last report in the early 1990s.	The study has determined the burden of disease for the major GI pathogens. Significant among these are the burden of disease caused by norovirus and campylobacter.	The final report has been submitted to the FSA. Several publications are in press.

Other achievements

Reports and publications

The *Zoonoses Report 2009*, summarising the trends and sources of zoonotic infection in humans, animals, food and feedstuffs in the UK, was compiled by the HPA and published by the Department for Environment, Food and Rural Affairs.

The HPA collated UK data for the European Food Safety Authority (EFSA) *Report on Trends and Sources of Zoonoses and Zoonotic Agents and Food-borne Outbreaks in the European Union in 2008,* which was published in April 2010.

An HPA microbiologist serves on the EFSA Panel on Biological Hazards and chaired a group that produced Risk Assessment of Parasites in Fishery Products. See: www.efsa.europa.eu/en/scdocs/scdoc/1543.htm

National outbreak investigations

The HPA led six investigations into national outbreaks of salmonellosis during 2010, including:

- 429 cases of tetracycline-resistant *Salmonella* Typhimurium DT 191a. A case control study found an association between infection and contact with pet reptiles. Further investigation linked the cases to an importer of mice, fed to reptiles.
- 231 cases of *Salmonella* Bareilly. A case-control study implicated beansprouts.
- 130 cases of *Salmonella* Java PT 3b Var9. Salad vegetables were implicated.
- 81 cases of *Salmonella* Typhimurium DT8. A case control found an association between infection, duck eggs and duck products. Environmental and microbiological examinations confirmed contamination of products.

The HPA investigated a national upsurge in illness associated with Listeria monocytogenes 1/2a XIV.6a. Sliced cooked meats from a particular producer were found to be contaminated with the outbreak strain.

The HPA Hospital Norovirus Outbreak Reporting Scheme demonstrated that outbreaks of viral gastroenteritis have a major impact on hospitals. Data collected in 2010 showed that:

- 1,772 outbreaks were reported.
- 17,580 patients affected.
- 4,481 staff affected.
- 8,754 reported days of outbreaks.
- 10,939 reported days of ward closure.
- 20,537 reported bed-days lost.

Surveillance enhancements

Three new databases were developed and implemented: VTEC enhanced surveillance; gastro-data warehouse and undiagnosed serious infectious illness surveillance.

HPA epidemiologists contributed to two EFSA working groups: to revise the food-borne outbreak reporting system and to develop a food classification and description system for exposure assessment.

Food surveillance studies by the HPA and local government regulation included listeria contamination of pre-prepared sandwiches; hygiene practices in mobile food vendors at large events including markets; hygiene practices in retail/catering premises and local authority enforcement responses; and listeria monocytogenes contamination in ready-to-eat foods linked to listeriosis.

High quality service delivery

New guidance to help staff dealing with VTEC was produced. The VTEC Operational Manual will assist staff dealing with incidents. The VTEC Support Document provides background evidence on public health management.

Research and development

More than 80 papers on gastrointestinal infection and food surveys were published. Two new laboratory techniques were developed: FAFLP for sub-typing Listeria and a real-time molecular assay for sub-typing salmonella spp. Grants were confirmed for research into rotavirus; fluoroquinolone resistance in *Salmonella* Paratyphi A; the impact of rotavirus vaccination; the genetic diversity of VTEC in the UK, and norovirus evolution.

Key future plans

The HPA is developing a response capability to improve the laboratory diagnosis of gastrointestinal infections during the Olympics. This will include improved pathogen detection and rapid response to potential incidents of gastrointestinal infections/intoxications.

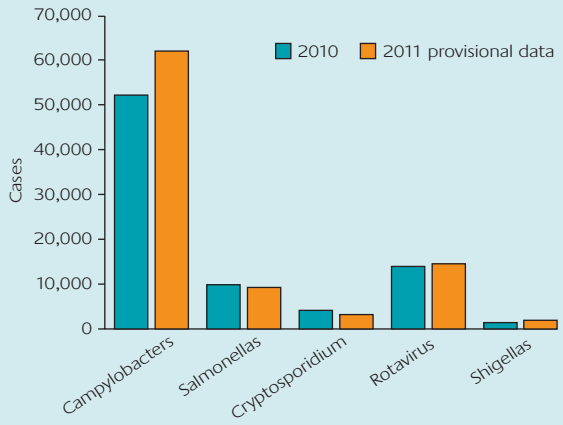
The HPA will support the FSA's five-year strategic plan to reduce food-borne disease using a targeted approach. The main priority is to reduce gastrointestinal infections caused by *Campylobacter jejuni*, particularly infection associated with handling or consumption of chicken. The HPA will update the epidemiological typing and surveillance of campylobacter.

A comprehensive set of evidence-based guidance for the investigation of key gastrointestinal pathogens will be produced. Guidance for food poisoning and typhoid infections will be reviewed along with guidance for the management of acute bloody diarrhoea potentially caused by VTEC in children.

GASTROINTESTINAL DISEASE

Infectious intestinal disease affects as many as one in five of the population each year. The symptoms, which can include diarrhoea and vomiting, are caused by the organisms, the toxins they produce and the body's reaction to these.

COMMON GASTROINTESTINAL INFECTIONS



Vaccine-preventable infections

Vaccination provides the most effective and enduring method for preventing infectious disease. The national immunisation programme has reduced illness and death from a range of diseases.

Vaccines are routinely offered to protect against diphtheria, whooping cough, tetanus, polio, measles, mumps, rubella, *Haemophilus influenzae* type b, meningococcal and pneumococcal diseases, influenza, and human papillomavirus. People in certain risk groups may be offered vaccination against hepatitis B, tuberculosis and chickenpox.

The HPA assists the NHS to implement new vaccine programmes, providing expert advice, best practice, guidance and training. It works with partners to increase uptake of vaccination among hard-to-reach or excluded groups. As well as providing epidemiological data and modelling information, it carries out seroprevalence surveys to identify under-protected groups and inform intervention.

At a national level, the agency provides evidence to the Joint Committee on Vaccination and Immunisation (JCVI) that informs the recommendations it then makes to the Department of Health about national immunisation policy.

Key objective	Why this is important	Outcome	Reference
Describe the measles susceptibility in the English population.	Knowing how many people in each age group are susceptible to measles can be used to predict where outbreaks of measles may occur. Sustained low uptake of the MMR vaccine over the past 10 years means that many children remain unprotected.	HPA immunisation experts combined different data sources to estimate the proportion of the population susceptible to measles by age group and region in England and Wales. Their analysis suggested that susceptibility to measles is sufficient to result in large outbreaks. Work to ensure older children are offered MMR at all opportunities is required to reduce the likelihood of measles outbreaks.	These findings were presented for discussion at the JCVI meeting in October 2010.
Provide data to inform decisions as to the optimal UK meningococcal C (MenC) vaccine schedule.	To ensure that children remain adequately protected by the MenC vaccines they have received and to inform decisions as to what the optimal primary schedule is and whether further booster doses are required, vaccine studies which examined antibody persistence were performed. Seroprevalence studies (which examine the level of MenC antibodies in the blood in different age groups) and studies examining antibody persistence following two primary doses of MenC vaccine and a booster in the second year of life were carried out. The possible co-administration of MenC/Hib, pneumococcal and MMR vaccines at 12 to 13 months was also studied.	The studies showed that there was a decline in MenC antibody levels following a 2, 3 or 2, 4 plus 12 month booster schedule of MenC with best antibody persistence if the MenC-tetanus conjugate vaccine was used for priming. They also confirmed that the MenC/Hib, Pneumococcal and MMR vaccines could be administered at one visit at 12 to 13 months of age. The seroprevelance study demonstrated that children vaccinated in the second year of life appear to have very low levels of protection 10 years on. Further studies are now being carried out to inform which MenC-containing vaccine could potentially be offered as a booster in adolescence.	Perrett KP et al. *Clin Infect Dis,* 2010 15;50(12):1601-10. www.ncbi.nlm.nih.gov/pubmed/20459323 Borrow R et al. *Clin Vaccine Immunol*, 2010; 17: 154-9. Miller E et al, *Clin Vaccine Immunol*, 2010. [Epub ahead of print] www.ncbi.nlm.nih.gov/pubmed/21191076 Serogroup C seroprevalence study using sera from 2009 submitted to JCVI meningococcal subgroup, Feb 2011.

Key objective	Why this is important	Outcome	Reference
Monitor the HPV vaccine immunisation programme.	Knowing how many girls have completed a course of HPV vaccine in England provides invaluable information to inform whether interventions are required to improve vaccine uptake. It also allows the vaccine's effectiveness to be calculated. This information is critical for monitoring and evaluating this relatively new vaccine.	An HPA analysis of HPV vaccine coverage for 2009/10 shows the high coverage achieved in 2008/09 has been maintained with 76.4% of females aged 12 to 13 completing the three-dose course. During the first two years of the HPV programme over 60% of all females born between 1 September 1990 and 31 August 1997 completed the three-dose course of HPV vaccination, with the highest coverage in the youngest cohorts. More than three million doses of vaccine were given during 2009/10.	Sheridan A, White J. *Annual HPV vaccine coverage in England in 2009/10.* Commissioned and published by DH. www.dh.gov.uk/prod_consum_dh/groups/dh_digitalassets/documents/digitalasset/dh_123826.pdf
Ensure consistent adoption of evidence-based standards, guidance and best practice in immunisation across the HPA.	The HPA provides advice on immunisation against, and management of, the many different vaccine-preventable diseases. To ensure that advice is as up-to-date, evidence-based and as consistent as possible, several of the vaccine-preventable disease guidelines were revised in the past year.	The HPA *Pertussis, Meningococcal and Viral Rash in Pregnancy Guidelines* were revised and made available on the HPA website. HPA National Measles Guidelines for Local and Regional Services have also been developed, as have vaccine-preventable disease protocols for HPZone, the HPA's web-based case management tool.	*Guidance on Viral Rash in Pregnancy: Investigation, Diagnosis and Management of Viral Rash Illness, or Exposure to Viral Rash Illness in Pregnancy* (Jan 2011). Available at: www.hpa.org.uk *HPA Guidelines for the Public Health Management of Pertussis* (Feb 2011). Available at: www.hpa.org.uk *Guidance for Public Health Management of Meningococcal Disease in the UK* (Feb 2011) Available at: www.hpa.org.uk Measles guidelines: www.hpa.org.uk/web/HPAwebFile/HPAweb_C/1274088429847
Support the NHS in increasing uptake of vaccination.	Immunisation is one of the most important public health interventions available for protecting both individuals and the community from serious diseases. It is vital that health professionals work together to achieve the highest possible vaccine uptake and ensure vaccines are accessible to all. The HPA works closely with NHS colleagues to improve access to immunisation services.	HPU immunisation leads worked with the NHS at local level to identify what needs to be done to improve vaccine coverage. Particular attention was given to improving vaccine uptake among certain travelling communities after the 2010 measles outbreak. The HPA conducted a survey of provision of vaccination services for travellers and will draw up recommendations for the HPA, NHS and local authorities.	

Key objective	Why this is important	Outcome	Reference
Assess current levels of *Haemophilus influenzae* type b (Hib) protection in the population to inform the vaccine programme.	A resurgence in Hib disease from 2000-2003 led to two booster uptake campaigns and the introduction of an additional booster dose of Hib vaccine into the national vaccination schedule in 2006.	The sero-epidemiology unit is measuring Hib antibody levels in blood samples taken from all age groups to assess levels of protection to Hib in order to prevent another resurgence of Hib disease. The study will show whether changes to the Hib vaccine programme have been successful or whether further modification is required.	Laboratory testing has been completed. A report will be written for JCVI by June 2011.

Other achievements

In response to cases of mumps among 16–30 year olds, the HPA wrote to all UK universities and colleges during 'freshers' week' urging them to ensure that all students were vaccinated against measles, mumps and meningitis C. Universities and colleges were asked to ensure that they have good contacts with HPUs and plans for incidents such as meningococcal outbreaks.

To mark European Immunisation Week in April 2010, a factsheet on the success of immunisation in the UK was published. See: www.hpa.org.uk/web/HPAweb&HPAwebStandard/HPAweb_C/1271257419156

The HPA supported training at national and local level by developing training materials, delivering lectures and organising training sessions across the country. An immunisation conference 'Scientific Issues in Immunisation' was held at HPA, Colindale. The HPA's Vaccine Programme Board organised four sessions on vaccines at the agency's annual conference in Warwick.

Vaccine cover data collated by the HPA showed that MMR coverage at 24 months remained at 89% in the UK, with Scotland reporting the highest coverage of 93%; Northern Ireland, Wales and five English regions achieved at least 90%. In the English MMR sentinel surveillance scheme, coverage of MMR at 16 months rose to 81%, the highest coverage at this age since November 1999. Further improvement in routine 24-month MMR coverage is expected during 2011.

At 12 months of age, UK coverage for DTaP/IPV/Hib3 was 94% and 93% for MenC2 and PCV2. Northern Ireland reported at least 97% coverage for all three of these immunisations; Scotland at least 96%; Wales at least 95%, and five English regions reported at least 94% coverage. At 24 months, UK coverage for DTaP/IPV/Hib3 was 96.1% – above the WHO target of 95% for the fifth successive quarter.

Key future plans

The HPA will continue to carry out clinical trials, disease surveillance, modelling and cost-effectiveness analysis to inform JCVI vaccine decisions. In 2011/12, this work will focus on whether adolescent booster doses of some vaccines are required, e.g. pertussis, varicella, meningococcal and MMR vaccines. The HPA will also evaluate the effectiveness of currently used vaccines and vaccine schedules, such as carrying out enhanced surveillance of pneumococcal disease to examine the effect of the 13-valent pneumococcal vaccine, introduced into the infant schedule in April 2010, on the different pneumococcal serotypes.

Supporting the NHS in delivering the immunisation programme is a high priority for the HPA. Staff will continue to provide immunisation advice, contribute to training and look at ways of improving vaccine uptake, particularly in hard-to-reach and under-vaccinated groups. Specific work this year will look at improving immunisation services for certain travelling communities and provision of MMR vaccine to women who are discovered not to be immune to rubella during pregnancy.

New and emerging infections

The HPA works to minimise the threat from emerging infections and other infections of public health importance. To ensure that potential threats are rapidly identified, prevented or controlled, the HPA has in place rigorous horizon scanning and risk assessment processes, which are underpinned by mechanisms to share intelligence across the agency and externally.

Close medical, scientific and veterinary cooperation is essential to protect the UK population from new zoonotic diseases and contaminated foods, particularly of imported origin. HPA activities are linked to those of the Department of Health, Department for Environment, Food and Rural Affairs (DEFRA), Veterinary Laboratories Agency (VLA), the Food Standards Agency and other partners.

When a major disease outbreak occurs, the HPA is responsible for advising and supporting the UK public health response – coordinating national surveillance, providing reference laboratory support, developing advice and guidance and undertaking research to inform decisions about vaccination or antiviral strategy.

Key objective	Why this is important	Outcome	Reference
Identify all new and emerging infections.	Newly emerging infectious diseases can have a dramatic effect on the health of the UK and its economic viability. Recent examples include HIV/AIDS, BSE/vCJD and pandemic swine flu. It is important to identify the emergence of these diseases quickly and accurately in order to put in place plans to mitigate them.	The HPA has an integrated reporting system to rapidly identify all new viral infections that could have an impact upon the UK. The agency also serves on the cross-government Human, Animal Infections Risk Surveillance Group (HAIRS), set up to identify zoonotic diseases that could threaten the UK and assess the risk they present.	
To fulfil all the TSE contractual requirements from DH and other government departments and agencies.	The HPA has contracts from DH and other bodies for the surveillance of subclinical cases of vCJD and for research to develop and assess new diagnostic technologies, decontamination protocols and blood filters.	Several publications in peer-reviewed scientific journals have documented this work.	Vassey M et al. *Brit Dent*, 2010; in press. Ungurs M et al. J Hosp Infect, 2010; 74:144-51. Hesp JR et al. *J Hosp Infect*, 2010; 72: 65-70. de Marco MF et al. *J Pathol*, 2010; 222: 380-7.

Other achievements

A monthly surveillance report, detailing incidents from around the world that are of significance to public health, is produced by the HPA in conjunction with DEFRA and the VLA.

Environmental hazards

The HPA works to reduce potential adverse effects on health from chemical hazards, poisons, radiation, and environmental threats.

Scientists provide expert advice on the health risks of environmental exposure and how to mitigate those risks – whether from acute incidents or long-term, low-level exposures. Their expertise spans environmental and occupational ionising radiation, mobile phones and Wi-Fi, medical radiation exposures, nuclear power, domestic and industrial chemicals, contaminated land, waste disposal and radon.

The agency is the UK's foremost authority on radiological protection, formulating guidance and advising government. It assists the NHS in optimising radiation exposures to patients undergoing medical examination and treatment. Laboratory and technical services include dosimetry for measuring occupational exposure in the workplace, biodosimetry, whole body monitoring, instrument testing, and radiochemical analysis of environmental and clinical samples.

The HPA commissions and manages the 24/7 advice for the NHS from clinical toxicologists in the National Poisons Information Service network. HPA experts provide specialist support to government, agencies, the devolved administrations, the NHS and emergency services. They also have resources to coordinate people and environmental radiation monitoring in emergencies.

Key objective	Why this is important	Outcome	Reference
To improve understanding of the health effects of radiation, HPA will coordinate SOLO, a multinational EU-funded project on epidemiology studies of Southern Urals populations exposed to various types of radiation.	This four-year project will help to improve understanding of the health effects of both external and internal radiation exposures. This will contribute to the development of advice, legislation and regulation.	Tasks completed in 2010/11 included a successful kick-off meeting as well as six-month work project review meetings in Russia. Plans for training activities are being developed in partnership with the EU-sponsored DoReMi network of excellence.	Information on this project can be found at: www.solo-fp7.eu/en/home.html
Work in collaboration with the Environment Agency to contribute to the understanding of public exposure in the UK by monitoring environmental levels of radioactivity in air and rainwater.	Radioactivity is discharged from 39 nuclear and other non-nuclear sites in the UK. There is also radioactivity in the environment from sources overseas (e.g. residues from Chernobyl) plus natural radioactivity. This work measures radioactivity in the environment and provides a baseline to assess the impact of future radiological events.	Results are likely to show that, in the UK, regulatory control of radioactivity in the environment keeps it well within safe levels and the public's exposure to authorised discharges and direct radiation around the UK is within legal limits. Consequently, radionuclide concentrations in the environment and food and the consequent doses to people are likely to be low.	www.environment-agency.gov.uk/homeandleisure/110353.aspx
To improve understanding of the benefits and disadvantages of exposure to optical radiation, levels of exposure will be determined at various UK locations in collaboration with the University of Surrey.	This research aims to investigate whether the beneficial effects of light exposure, such as circadian entrainment, are being compromised by aspects of lighting and to identify whether simple changes in the way light is used could lead to improvements in health, especially for people who may have no direct control over their exposure conditions.	Measurements have been carried out in a number of care homes for the elderly, private homes of retired people and in one new-build hospital.	Project in progress and meeting milestones to schedule. www.icepure.eu

Key objective	Why this is important	Outcome	Reference
To provide a central source of authoritative advice to government on the health aspects of environmental chemicals and ensure frontline toxicology response to incidents and exposures.	To reduce the impact of chemical exposure – at the premarketing and testing of chemical products as well as potential exposure from chemicals in the environment. Provision of critical review of toxicological data, development of advice and briefing notes to support the HPA's core objectives and DH.	Consistent and authoritative advice is given. The agency responded to more than 200 incidents and enquiries in 2010. Input to international activities on toxicity testing.	Chemical compendia on the HPA website: www.hpa.org.uk/Topics/ChemicalsAndPoisons
Reduce radiation exposures in patients by developing a methodology for assessing doses from modern multidetector CT scanners.	Medical exposures of ionising radiation are the largest artificial source of radiation for the UK population and CT scanning accounts for 68% of this dose. Developing tools for calculating these doses will help to monitor them and keep them as low as reasonably practicable and lower than countries with comparable healthcare systems.	The HPA has completed calculations for two current scanners from each of four major manufacturers.	Hart D et al. Frequency and collective dose for medical and dental X-ray examinations in the UK, 2008: www.hpa.org.uk/Publications/Radiation
To improve understanding of the effects on human health of chemical agents that could be used illicitly.	It is important to understand how very toxic chemicals are absorbed across the skin in order to ensure that the emergency services can rapidly decontaminate individuals using the most appropriate technology and methods.	The HPA has identified a number of potential improvements that will further optimise the response of UK and EU emergency services during an incident involving the deliberate release of toxic chemicals, e.g. through refining current mass casualty decontamination procedures.	Information on a collaborative EU project (ORCHIDS 1), which forms part of this key objective, can be found at www.orchidsproject.eu
For future new nuclear build, provide authoritative evidence-based advice on the health effects of ionising radiation and on the application of the system of radiation protection.	The UK government has announced plans to allow the construction of new nuclear power stations. Nuclear power generation will lead to the exposure to ionising radiation during routine operation to staff operating machinery and to the population as a whole. There is also the potential for exposure if there was an accident at the plant and due to the storage and disposal of waste, including that from the ultimate decommissioning of the site. Such exposures to ionising radiation have an associated health risk so it is important for HPA to provide authoritative advice related to the plans for new nuclear build.	Advice has been provided to the Department for Energy and Climate Change (DECC), the Environment Agency (EA), the Nuclear Installations Inspectorate (NII) and potential operators on the radiological implications and health impacts associated with new nuclear build. Advice was given to DECC and EA on the radiation protection and health-related points made by respondents to the public consultations on the regulatory justification and National Policy Statement for nuclear energy with associated Appraisals of Sustainability of the proposed new reactor designs. Work has also been carried out for the Office for Nuclear Regulation on accident consequence assessment as input to the generic design assessment phase 4.	HPA advice to the DECC on the justification of radiological health implications of two nuclear reactor designs was included in the Secretary of State's report on new nuclear power stations in the UK. The justification of practices involving ionising radiation regulations 2004. Published October 2010. HPA advice on main points made in studies cited. www.decc.gov.uk/en/content/cms/what_we_do/uk_supply/energy_mix/nuclear/new/reg_just/reg_just.aspx

Other achievements

The Chemical Incident Response Handbook was produced to assist the NHS and emergency services in the early management of incidents and casualties involving the release of highly toxic chemicals.

A new version of the PC-CREAM radiological impact assessment software was released. PC-CREAM 08 is designed to assess the radiation doses received by individuals and populations following routine discharges of radionuclides to the environment. The software includes models for calculating dispersion of radionuclides following releases to atmosphere, rivers and the marine environment. Some 30 single (cost £1,000 each) and 13 multiple user licences (cost £3,000 each) have been sold worldwide and more than 50 users have attended training courses. The software is commercially available from www.hpa-radiationservices.org.uk/pccream.

Key future plans

The HPA will continue to provide a central source of authoritative advice to government including, for example, guidance on the health effects of air pollutants.

The HPA will continue to provide evidence-based advice to government to ensure that in the event of a terrorist attack, the health effects are kept to a minimum through the implementation of safe and effective interventions.

The HPA continues to provide expert toxicological advice and information for front line response to acute incidents and chronic exposure.

The agency is developing a nationwide surveillance system to support a comprehensive environmental public health tracking system.

A new Key Health Protection Programme on climate change has been established for 2011/12.

The HPA will publish the results of the investigation into WiFi exposures from the systems used in schools.

An experimental model has been developed for studying the possibility that ionising radiation could cause cardiovascular disease.

Incidents and emergencies

To ensure the UK is ready for future threats to health, the HPA takes steps to prepare for incidents and emergencies that could arise from conventional hazards, such as disease outbreaks or industrial explosions, or the deliberate release of chemical, biological, radiological or nuclear substances.

The HPA has well-rehearsed response plans, systems and procedures, ready to respond promptly and effectively to a wide range of health threats and minimise the harm caused to people. Emergency plans and operating procedures are regularly tested through simulated, multi-agency exercises.

When emergencies occur, the agency provides strategic and tactical advice and practical resources to support government, the NHS, the emergency services and other responders. It does this by mobilising staff expert in infectious disease and chemical, biological and radiation incidents in a co-ordinated response with other organisations.

The agency provides specialist epidemiological and microbiological services for identifying and controlling dangerous pathogens including anthrax, tularemia, viral haemorrhagic fevers, rickettsia and a wide range of arboviruses.

Key objective	Why this is important	Outcome	Reference
Continuously improve in-house diagnostic tests and design and introduce new tests for relevant emerging diseases.	Diagnostic tests need to keep pace with rapidly changing and newly emerging pathogens.	New and updated assays for tickborne encephalitis and Crimean-Congo haemorrhagic fever, rickettsia and orientia have been introduced. New anthrax serological assays have been deployed.	Unpublished. Developmental work available in relevant laboratory notebooks.
Establish a range of assays for characterisation, authentication and detection of filoviruses.	Rapid and simple identification of select pathogenic species of the family required for bio-defence and key research and diagnostic reagents.	Antibody and molecular reagents are in development for Ebola and Marburg genus.	Unpublished. Developmental work available in relevant laboratory notebooks.
Ensure surveillance systems are fit for purpose for the Olympics.	During the Olympics, it will be important to address public health issues with more urgency. The systems and capacity need to be in place to receive, rapidly analyse and react to surveillance or intelligence information about potential health threats.	A surveillance strategy and plan for the 2012 Olympics has been developed. The plan and communications were tested in exercise Bucephalus in February 2011. The initial findings from the exercise were presented to the London Regional Management Team and a debrief and a 'lessons identified' report was presented to the Emergency Response Development Group in April 2011.	London RMT minutes.
Ensure manpower resources, capacity and capability are met for emergency response.	The agency has statutory duties to meet the training and welfare needs of staff. These principles also apply when the agency is required to respond to incidents, outbreaks and emergencies.	A human resources strategy for emergencies has been drawn up that includes job descriptions and person specifications for the majority of National Emergency Coordination Centre roles. A workforce planning group for the Olympics has drafted a rota, which includes shift patterns, to provide a template for the Olympic Coordination Centre. It will be tested in exercises leading up to 2012.	
Establish quality improvement systems for the safe management of acute incidents and outbreaks including standard operating procedures and related guidance, audit programme and quality improvement training for programme leaders.	It is important to have a clear set of agreed guidelines to support health protection professionals in managing incidents and outbreaks. It is also important that such professionals are actively engaged in evaluating and improving the service that they offer.	A code of practice for record keeping and communications in incidents and outbreaks has been completed. A toolkit for operational guidance development and document control has also been created. This is being piloted and rolled out through the key health protection programmes in May and June 2011. Quality and service improvement training has been provided to a cohort of 30 staff across all HPA divisions.	

Other achievements

The agency's arrangements for responding to health protection emergencies were tested in response to real incidents and exercises throughout 2010/11.

An assessment of the agency's emergency preparedness and response capability, including business continuity, was carried out as part of the government's National Capability Survey 2010. The report has been published and was presented to the Emergency Response Development Group and the HPA Audit Committee in March 2011.

Key future plans

The agency's emergency response arrangements will be reviewed during the formation of the new Public Health England. The HPA is involved in discussions regarding the redesign of the health system.

Biological medicines

Biological medicines are increasingly important in the prevention, diagnosis and treatment of disease worldwide. They include viral and bacterial vaccines; human blood products; hormones, cytokines, and growth factors, and cell-based and gene-based therapies. Their clinical benefits depend on standardisation, testing and control to ensure the products are safe and effective.

The National Institute for Biological Standards and Control (NIBSC), which is part of the HPA, is the world authority on developing biological standards and other reference materials against which producers and regulators can make accurate measurements of potency and safety.

It is the leading WHO International Laboratory for Standards, developing and producing more than 90% of the International Standards in use around the world.

To ensure consistent quality, NIBSC provides independent testing of products through the Official Control Authority Batch Release (OCABR) system. It is the UK's Official Medicines Control Laboratory (OMCL) and an OMCL for the EU.

HPA scientists conduct research to support existing and novel biological medicines and procedures. They advise governments, regulators, manufacturers and health professionals, and respond to emerging issues associated with the quality of biological medicines that threaten public health.

Key objective	Why this is important	Outcome	Reference
Meet national and international demand for biological standards and reference materials needed for accurate measurement and dosing of biological medicines.	This is part of NIBSC's national and international role in assuring the quality of biological medicines. It is a growing task as biological medicines increase in number and diversity. The aim is to maintain world leadership in this field due to the importance to human health.	Customers received 96% of all requested reference materials within the six-day target.	Details of all biological reference materials available from NIBSC can be obtained from: www.nibsc.ac.uk
Establish new/replacement biological standards and reference materials needed for accurate measurement and dosing of biological medicines.	Advances in biological medicines require the constant development of standards, with considerable demand for new materials and replacement of existing stocks. Establishment of new international standards is carried out by WHO's Expert Committee on Biological Standardisation (ECBS).	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 ECBS committee; in fact 14 new standards were accepted.	Details of WHO's ECBS and summaries of decisions made related to biological standardisation can be found at www.who.int/biologicals/expert_committee/en
Develop new reference standards to improve the accuracy of infectious disease diagnosis, leading to better disease surveillance and patient treatment.	Developing these new reference materials will help to improve the quality of clinical diagnosis through the accurate process of nucleic acid testing.	The target was to have 30 nucleic acid techniques (NAT) standards by year end. The outcome was a total of 26 standards in the catalogue this year.	
Support influenza vaccine production to ensure the timely supply of effective products for the 2010/11 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. This means immediate action can be taken should new strains emerge. It is hoped to improve resilience by extending the library of vaccine strains and accelerating distribution around the world.	Timeliness and quality of supply are essential. Once seasonal flu strains were determined, suitable strains with satisfactory growth properties were produced within four weeks. New calibrated reagents were produced within two months of receipt of materials. Two new strains have been added to the strain library this year, improving preparedness for the possible emergence of these potential pandemic strains in the future.	This work is carried out at the Influenza Resource Centre: www.nibsc.ac.uk/spotlight/influenza_resource_centre.aspx
Support the pneumococcal vaccination programme through the development of a reference standard for measuring antivaccine immune responses.	An improved vaccine for prevention of pneumococcal disease will require a suitable reference material to use in serological assays. The development of this new standard is urgent to support pneumococcal vaccine development.	A new candidate serum to produce the standard was identified. Work with the US Food and Drug Administration has been carried out to ensure it is suitable and stable. Stability studies were completed successfully. It is hoped the new standard will be agreed by WHO at its ECBS meeting in autumn 2011.	

Key objective	Why this is important	Outcome	Reference
Carry out independent batch release of vaccines, blood products and immunologicals according to regulatory requirements to ensure safety and effectiveness.	NIBSC is the UK's Official Medicines Control Laboratory (OMCL) responsible for the control of biological medicines under EU batch release regulations. This role is essential to ensure biological medicines meet appropriate quality standards.	NIBSC has targets to test all products within 60 days of receipt, within 30 days for blood products and within 10 days for 80% of influenza products. These were met throughout the year.	The Official Control Authority Batch Release (OCABR) testing carried out by NIBSC as an OMCL is outlined at: www.nibsc.ac.uk
Establish independent batch release testing for the new quadrivalent meningococcal vaccine.	Meningococcal disease is principally a problem among infants and, to a lesser extent, young adults. Five serotypes A, B, C, W and Y cause the majority of infections. A MenC vaccine introduced a decade ago has reduced cases, but no vaccine has been licensed to protect against the other serotypes. Two new conjugate vaccines for A, C, W and Y have been developed. A type B vaccine is still under development.	One of the tetravalent meningococcal vaccines has now been successfully established and is being batch released by NIBSC as the principal OMCL for testing of this product.	
Support for decision making on the introduction of variant Creutzfeldt-Jakob disease (vCJD) testing of blood and other tissues.	NIBSC plays a key role in assessing new tests that are in development for diagnosis of prion-based diseases such as vCJD. Development of tests that are sufficiently robust has been a challenge and few have gone further than the initial phase of assessment.	NIBSC has looked at the most encouraging lead candidate for the test in order to make a recommendation on its suitability. The test was not considered adequate and further work is now under way to evaluate other possible tests.	
Develop a wider customer/projects base.	The HPA Culture Collections (HPACC) manufactures, and supplies internationally, reference material cell lines and microbial pathogens critical to the assurance of laboratory health science. HPACC is wholly funded from commercial sales income. Continuous growth of the customer and products/services base is essential to sustainability and maintenance of HPACC's strategic role.	HPACC has significantly extended its customer base internationally through an active programme of developing a network of distributors. This has been supported by parallel development of the HPACC website, to which an e-commerce facility has recently been added.	See the HPACC website: www.hpacultures.org.uk
Manufacture and release of Erwinase to meet customer requirements.	Erwinase is the only second line treatment available for acute lymphoblastic leukaemia – the most common childhood cancer. The HPA has a royalty-bearing licensing agreement (RBLA) in place with EUSA Pharma for the sales and distribution of the product for the marketplace.	Erwinase saves the lives of approximately 48 children per year in the UK and 1,440 lives globally. The health benefits to the UK equate to some £77m per annum. The manufacture of Erwinase generates significant revenue for the HPA.	Vrooman, L. M et al, *Pediatric Blood & Cancer* 2010; 54: 199–205. doi: 10.1002/pbc.22225 RBLA agreement with EUSA Pharma.

Key objective	Why this is important	Outcome	Reference
Manufacture and release of anthrax vaccine to meet MSA and Department of Health requirements.	Anthrax vaccine manufactured at the HPA is the only licensed vaccine available in Europe. The HPA has a five-year supply agreement in place with the Department of Health and the Ministry of Defence.	The stocks of anthrax vaccine are part of the government strategic stockpile which must be maintained. The manufacture of anthrax vaccine generates significant revenue for the HPA.	Five-year supply agreement with the Department of Health and the Ministry of Defence.
Evaluation of protective efficacy of lead third party vaccines in preclinical models.	There is a global need for a more effective vaccine against tuberculosis. Prospective vaccine candidates are evaluated in a hierarchy of preclinical models to determine whether they have potential utility.	Five novel priming vaccines to replace conventional BCG are under evaluation as part of an EU-funded study. Another vaccine (a recombinant BCG) is being evaluated for Aeras Global TB Vaccine Foundation. The data will help in progressing effective candidates towards clinical trials.	Confidential reports on vaccine efficacy relative to standard BCG will be provided to EU collaborators and to Aeras. Data will be published in peer-reviewed papers, and on the EU Programme website: www.tbvi.eu
Standardisation of opsonophagocytosis and antibody-mediated complement binding assays for meningococcal disease.	For these assays to have value in vaccine assessment standard protocols must be defined and their reproducibility must be determined. These assays may be valuable in providing an additional assessment of vaccine strain coverage to that provided by serum bactericidal assays.	Assay protocols have been defined and the linearity and precision of the assays has been determined together with the stability of key assay components. Good inter and intra assay precision was observed.	Publication in preparation.
Development of safe polio vaccines for post-eradication era.	Although the eradication of polio moves closer, vaccination will need to continue at least for the foreseeable future. To prevent the risk of a disease outbreak from using live vaccine, it is essential that all vaccination programmes are using inactivated vaccine.	Even current inactivated vaccines are made using live virus and therefore continue the risk of virus escape during manufacture. NIBSC has been involved in developing new production strains that are attenuated to the point where they cannot cause disease. Evaluation of these continued in 2010/11 with manufacturers showing interest in further development.	
Passive immunisation studies completed for *Clostridium difficile* in models and assessment of pre-clinical *C. difficile* immunotherapeutics approaches with the preparation of an onward development plan.	Current antibiotic treatments for *C. difficile* infection (CDI) are not effective in all cases and the rate of disease recurrence is unacceptably high (20-30%). There is therefore an urgent need to develop new, more effective therapies for CDI.	In vivo studies have demonstrated that passive immunisation with anti-toxins affords protection from CDI induced by a range of key *C. difficile* disease isolates. An initial draft of a product development plan will be available in March 2011.	Three patent applications have been filed in support of this research programme, one of which WO2010094970 (A1) has been published.

Other achievements

In the US, the HPA Biologics License Application (BLA) for Erwinase (L-asparaginase derived from *Erwinia chrysanthemi*) was accepted for filing and awarded 'priority review' status by the FDA. The FDA has previously awarded Erwinase orphan drug designation, which provides a seven-year period of market exclusivity upon approval.

The award of 'priority review' status for Erwinase is another step towards making this life-saving therapy available in the US. Erwinase has the potential to enhance the treatment of acute lymphoblastic leukaemia greatly. It is hoped that the 'priority review' will shorten the period before US oncologists can offer this key therapeutic alternative to patients.

Key future plans

Through development activities, the HPA will continue to improve Erwinase and anthrax vaccine. These are mature products and it is essential to ensure that the manufacturing processes associated with them continue to meet the exacting expectations of regulatory authorities.

Significant progress has been made in developing a possible meningitis B vaccine, based on *Neisseria lactamica* antigens, leading to proof of concept studies. This work will continue.

Key objectives related to the ten strategic aims

Cross-cutting objectives for systems and infrastructure have been set to support the objectives from the key health protection programmes. They are derived from the HPA's ten strategic aims. Some of the strategic objectives are described below. These have been selected because they were identified as particularly important in enabling health outcomes to be successfully achieved.

Key objective	Why this is important	Outcome	Reference
Strategic aim: Primary expert force To have progressed implementation of the HPA's epidemiology review.	Implementation of the agency's epidemiology review has been superseded by internal reorganisation and the creation of the Health Protection Services division. One aspect of the epidemiology review is focused on here – the introduction of a new HPA field epidemiology training programme.	A full time coordinator has been seconded to implement the training programme by September 2011. A business case has been agreed by the Executive Group, and funding secured for a cohort of five fellows each year. The programme goals are agreed and governance arrangements established.	*Review of Epidemiology in the Health Protection Agency. A Report for the Health Protection Agency Board* (October 2008).
Strategic aim: Primary expert force To conduct a process of priority-setting within the health outcomes in the HPA vision, initially in pilot form.	The process enables the HPA Board (and others) to compare the benefit to the population of particular public health programmes and effectively prioritise these into a suitable hierarchy. This facilitates discussion about funding and commissioning priorities.	The Board agreed that a priority-setting exercise should be carried out in order to rank health topic areas. A prioritisation exercise in October informed the Executive Group in setting priorities. The results enabled ranking scores and HPA expenditure to be linked. The process was therefore used to inform the allocation of HPA funding.	EG (EG09-195), HPA Board paper (enc. 09/110).

Key objective	Why this is important	Outcome	Reference
Strategic aim: Trusted by all Maintain a 24/7 media response and support service across the agency and achieve clear proactive coverage for activities and comments.	A strong media presence helps to promote the agency's activities and to deliver clear public health messages to healthcare professionals and the general public. It also helps to safeguard the organisation's reputation.	Across the agency, hundreds of media calls were and are answered per week, which can rise to thousands during a major incident. Press officers also responded to dozens of reactive media enquiries on a daily basis, providing timely and accurate health protection advice to the media and the wider public. Proactive press releases are issued by the national centres and across the regions along with numerous position statements and the management of media interviews and briefings. Over the last year, advice was given for the public on avoiding infectious diseases and environmental hazards, information about outbreaks and investigations, new data to help inform policy and encourage behaviour change and evidence base scientific research to inform the public of advancements in health protection.	www.hpa.org.uk/news
Strategic aim: Effective partnership working Effective engagement of the HPA at strategic and operational levels in the major changes to the provision of NHS services and in particular the reconfiguration of pathology service provision in England	Engagement in this process is essential to ensure that public health outputs from the NHS are maintained and to ensure that the HPA is co-located in major centres of excellence.	Regional microbiologists have engaged with strategic health authorities. Consultant microbiologists and other senior laboratory staff have been involved locally in discussions about the modernisation of pathology.	An independent review of NHS pathology services in England was chaired by Lord Carter of Coles. Two reports, commissioned by the Department of Health, have been published.
Strategic aim: Excellence in relevant sciences Facilitate the translation of research and development findings into health interventions.	Publicly funded research and development cannot be carried out in isolation. It must be targeted at improving the health of the UK.	The HPA has a business development group to capture intellectual property rights and exploit them through registering patents and commercial collaborations.	Patents, commercial collaborations and income generated through licences and royalties are recorded elsewhere in this report.
Strategic aim: Recognised internationally To implement the HPA's global health strategy and to have invested the Global Health Fund.	The HPA was awarded £1.9m in 2008 by the government as part of the Health is Global strategy to improve UK and global health security. It was also tasked with contributing to global health protection.	The HPA Global Health Fund is supporting two workshops, four secondments (South Africa, Australia and India) and six further significant international projects. In addition, the first ever HPA workshop bringing together all its WHO collaborating centres was held and links have been strengthened through particular initiatives with the WHO and Commonwealth Secretariat.	The annual review of the Health is Global strategy is available at: www.dh.gov.uk/en/Publicationsand statistics/Publications

Key objective	Why this is important	Outcome	Reference
Strategic aim: One cohesive organisation Implementation of the new strategy for public health microbiology services, including new arrangements for strengthening Regional Microbiology Network public health microbiology services.	To improve efficiency, effectiveness and resilience of public health microbiology services in the current laboratory network. To develop a modern network of laboratories that are fit for purpose as part of the HPA's new Microbiology Services division.	Consultation process completed with agreement to consolidate services in the regional laboratories. Final plans for implementation and development of the new public health microbiology structure were completed in February 2011.	Consolidation is in line with pathology modernisation as outlined in the review of NHS pathology services in England and changes to the delivery of public health services set out in the 2010 public health paper.
Strategic aim: One cohesive organisation. The HPA's capital funding is invested wisely and operational benefits to the HPA's activities are maximised.	There is limited capital funding available from the Department of Health which therefore needs to be prioritised to ensure that the operational objectives of the HPA are achieved.	A detailed capital budget has been created for 2010/11.	Capital budget 2010/11. Notes to the Annual Accounts.
Strategic aim: One cohesive organisation The HPA delivers its business plan objectives within the revenue resources available.	The Department of Health requires the agency to achieve a break-even position.	The delivery of the business plan objectives is summarised within the Operating Review.	Operating Review. Notes to the Annual Accounts.
Strategic aim: State-of-the-art facilities Provide a field incident management system making use of a nationwide epidemiological overview of all HPZone installations in the HPA.	The HPZone information system, implemented in all 26 health protection units in 2010 provides them with a case and incident management system. However, there is currently no means of viewing or analysing data from several or all HPUs to detect emerging problems at an early stage, such as a geographically dispersed infection outbreak. This is important for everyday purposes but will be of particular use during the 2012 Olympics.	A business case for the development of a 'dashboard' display facility for the HPZone system has been produced. This has been agreed within the HPA and has recently received support from the Department of Health. Work has begun on a contract to commission the development.	
Strengthen laboratory-based surveillance for detecting and monitoring infectious diseases.	All microbiology laboratories contribute routine data for the monitoring of infections. National datasets from these sources are used to provide information on current and past trends in specific infections and can detect changes in trends, signalling an emerging problem. The importance of this data has been recognised in new regulations making reporting by all laboratories mandatory.	Replacement of the existing reporting system. This will mitigate risks associated with obsolete software provide increased flexibility for addressing new surveillance priorities through the use of web-based technology; streamline reporting and reduce the demands on laboratories through the integration of separate surveillance systems (CoSurv and AmSurv); reduce the duplication of data processing and improve the consistency of corporate data.	

Key objective	Why this is important	Outcome	Reference
Strengthen syndromic surveillance systems for detecting and monitoring infectious disease and other threats to health.	Syndromic surveillance is the collation and analysis of data on clinical symptoms and signs, or other potential proxies of disease, in order to identify emerging problems or incidents at an earlier stage than might be possible through reporting of laboratory confirmed cases. Syndromic systems have also been used to monitor the impact of major incidents, such as floods and heat waves, and because of their 'real time' availability, have particular use in reassuring the public about the lack of impact on morbidity. Developing further streams of data collection will build up a more comprehensive syndromic surveillance.	A new syndromic surveillance system involving out-of-hours providers has been piloted and is now rolled out to cover London out-of-hours services. Following validation of the data, it is anticipated that weekly bulletins will be produced from summer 2011. A new Emergency Department Surveillance System has been piloted and, with the agreement of the College of Emergency Medicine, is being rolled out to sentinel emergency departments across England.	Current weekly syndromic surveillance bulletins are available at: www.hpa.org.uk/hpr/infections/primarycare.htm Publications on syndromic surveillance at: www.hpa.org.uk/Topics/InfectiousDiseases/ReferenceLibrary
Progressing a major 10-year re-provision of the agency's Porton facilities by moving from an outline business case to a full business case.	Re-provision of the ageing research facilities at Porton is critical for continuing and developing the research, diagnostic and emergency response capability for some of the most dangerous infectious diseases. Such a complex and costly programme requires an extremely thorough analysis and review in the form of a series of business cases. Approval to proceed from outline to full business case allows progress on design, costs and procurement of construction suppliers. Approval of the full business case allows construction to commence.	An outline business case was submitted to the Department of Health in June 2010, with an HPA Board recommendation that re-provision should be at a site in Harlow. This has the strategic advantages of a) proximity to two other HPA sites, b) being in the London/Cambridge concentration of biomedical research and c) having the space and facilities to accommodate other parts of the HPA. The use of existing laboratories and infrastructure on the Harlow site also means a significant reduction in required capital outlay compared with a green field site. A decision is anticipated in 2011.	

Key objective	Why this is important	Outcome	Reference
Assist operational managers to achieve business benefits by co-locating health protection teams, thereby continuing the reduction in the agency's portfolio of offices to accord with its operational needs, while ensuring the overall estate remains efficient.	Rationalising the office portfolio reduces annual running costs. Co-locating health protection teams in flexible and modern facilities that are capable of meeting future service demands and changes in working practices, and which comply with statutory requirements, enables service continuity and improves service resilience.	An active accommodation programme of rationalisation and co-location projects. A reduction of nine sites was achieved between 1 April 2010 and 31 December 2010, generating savings in the order of £345,000.	
Reduce carbon emissions by the HPA estate and staff activity to meet the agency's 10-year target of 30% reduction.	This will mitigate the HPA's impact on global climate change; help to meet the targets set by government for carbon reduction, and minimise the HPA's purchase of carbon credits under the Government's Carbon Reduction Scheme.	Although detailed data for 2010/11 will not be available until mid-2011, early indications are that the HPA has exceeded its in-year targets for carbon saving by a comfortable margin.	Some early data has been reported in the sustainability annual report for directors. Data for the 2010/11 year will be collated in order to meet the timeline set by the Environment Agency for CRC reporting in Q2 of 2010/11. It is not yet possible to fully estimate CRC footprint or overall footprint carbon savings for 2010/11, but early indications are that the HPA will have exceeded its target savings by a reasonable margin.
Strategic aim: Employer of choice Increase managerial and employee confidence in the efficiency of the operational human resources systems. Payroll, occupational health, recruitment and human resources administration operate as increasingly consistent, efficient and cost-effective processes and systems.	It is essential to ensure that staff are recruited and paid correctly. It will assist in recruitment, retention, motivation and adherence to legal requirements.	A recent internal report confirmed that this aim had been met. A new human resources shared services model is being developed with the Department of Health and other arms-length body colleagues.	Individual pay issues of staff handled by internal payroll team. Regular meetings with SBS, the external provider. Recruitment activity all handled centrally through human resources and chief executive/divisional director. Regular audit reports considered by Board audit and human resources committees.

Financial review

INTRODUCTION

The financial statements on pages 71 to 99 cover the period 1 April 2010 to 31 March 2011 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 2010/11* (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 which the agency provided to customers. The HPA obtains additional funding from various public and private sector contracts.

The funding received by the HPA in relation to the expenditure in 2010/11 decreased to £340.7m (2009/10: £392.1m), which represents a 10% decrease, after adjusting for the additional £16.8m swine flu pandemic funding in 2009/10 and the non-cash capital grant-in-aid allocation of £3.0m in 2010/11. National Institute of Health Research (NIHR) and other research funding totalling £12.9m was transferred from Department of Health revenue grant-in-aid to research contracts and grants during 2010/11. Government grant-in-aid accounted for 57% (2009/10: 62%) of total funding, and this limits the agency's exposure to liquidity risk.

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 2010/11, which resulted in an overall reduction in revenue grant-in-aid from the Department of Health of £9.7m. Pay and inflationary pressures, placed a similar burden on the agency as the funding cut.

The Department of Health has also included efficiency savings of 6% within the funding for 2011/12, which has resulted in an overall reduction in revenue grant-in-aid from the

Source of funding	2010/11 £'000	2009/10 £'000
Total funding	**340,703**	**392,059**
Less: Capital grant-in-aid from the Department of Health	36,381	50,000
Less: Non-cash capital grant-in-aid from the Department of Health	2,968	-
Less: Other capital grants	559	8,494
Total revenue funding	**300,795**	**333,565**
Less: Products and royalties	35,033	39,238
Less: Laboratory and other services	71,429	74,293
Less: Research and related contracts and grants	39,374	26,161
Less: Other operating income	462	741
Less: Interest receivable	924	18
Less: Revenue grant-in-aid from the devolved administrations	2,105	2,276
Less: Department of Health pandemic flu incremental funding	-	16,804
Revenue grant-in-aid from the Department of Health	**151,468**	**174,034**

You can find further information about our 2010/11 funding within the notes to the financial statements, on pages 76 to 99; or by visiting our website at www.hpa.org.uk.

www.hpa.org.uk

Department of Health of £9.0m. In addition to inflationary pressures, the indications are that funding will come under increasing pressure in both revenue and capital in future years requiring appropriate responses and prioritisation in the national interest.

The 2010/11 capital funding from the Department of Health of £39.3m reflects the continued investment in public health, including the re-provision of Porton Down and the rationalisation of laboratory and regional accommodation.

The agency is pleased to report that customer sales income increased by 4.2% in 2010/11, from £140.4m to £146.3m, which provided a substantial contribution to fixed costs. Included within this total were royalties of £18.6m (2009/10: £15.8m), earned mostly on sales of Dysport, which were £2.1m ahead of budget for the year.

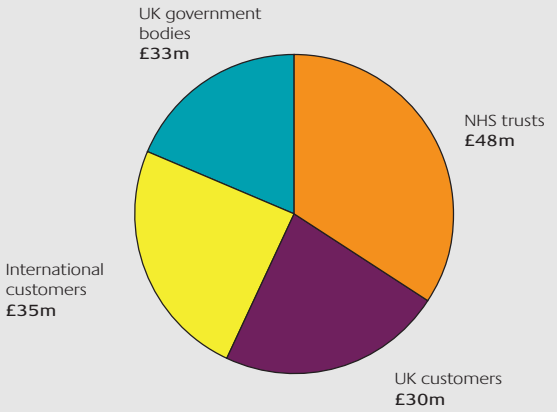
REVENUE EXPENDITURE IN 2010/11

Gross operating costs decreased from £362.9m in 2009/10 to £323.7m in 2010/11, which represents a 4.5% decrease, after adjusting for the one-off items during the year. Internal efficiencies helped control operating charges this year and recruitment controls reduced staff costs.

There were a number of one-off items during 2009/10 and 2010/11:

- Flu pandemic incremental expenditure 2009/10 £16.8m (see note 16 to the accounts).
- Porton Down re-provision costs classified as revenue 2009/10 £10.0m, 2010/11 £3.2m (note 6).
- Impairment costs 2009/10 £4.2m (note 8).
- VAT refund 2009/10 £3.7m (note 6).

SALES BY CUSTOMER TYPE

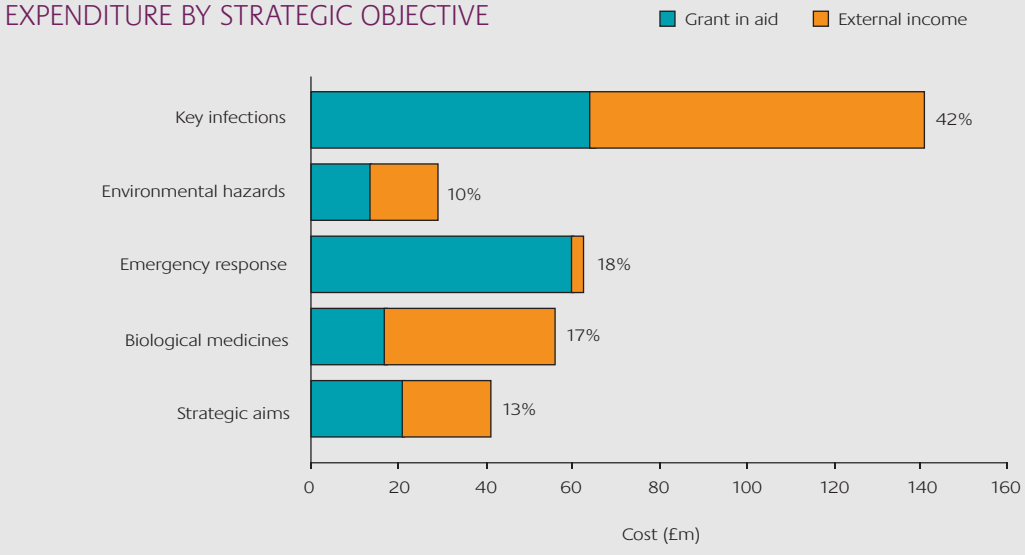


The chart below shows the agency's expenditure for the 2010/11 financial year by public health outcome plus strategic aims. The bars represent total expenditure, while the brown sections represent the receipt of external income and the blue sections therefore represent the grant-in-aid allocated to the public health outcome.

CAPITAL INVESTMENT IN 2010/11

During 2010/11 £30.5m (2009/10: £48.9m) was invested in some 256 capital projects, with the 20 highest value schemes accounting for £16.3m of the total. The agency spent £2.5m

EXPENDITURE BY STRATEGIC OBJECTIVE



on preparing a US Food and Drug Administration licence for the life-saving childhood leukaemia drug Erwinase, £5.4m on equipment, £18.3m on estates and £4.3m on IT.

2010/11 FINANCIAL RESULTS

The agency met its principal financial target for 2010/11, which was to deliver a balanced budget, within 1% of the total revenue funding received. Reduced grant-in-aid, combined with pay and inflationary pressures, exerted significant cost pressures this year.

However, internal cost savings and efficiencies, royalty gains and the increase in operational sales and services limited the HPA deficit to £0.4m, which represents -0.2% of its total revenue funding (2009/10: -0.2%).

RELATIONSHIPS WITH SUPPLIERS

It is the agency's policy to pay suppliers in accordance with the Better Payments Practice Code and settle 90% of undisputed supplier invoices on time, while striving to pay small and medium-sized entities within five working days. For the year ended 31 March 2011, 98% (2010: 96%) of invoices, which amounted to 97% (2010: 95%) of the total value of payments, were paid within 30 days of the invoice being registered.

FINANCIAL POSITION

During this year, the agency added property, plant and equipment and intangible assets to the value of £30.5m. With depreciation and disposals of £23.5m, and a small valuation increase of £0.3m, the total value of non-current assets was £285.4m on 31 March 2011 (2009: £278.1m).

Only 11% of the agency's £60.0m 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 it returns leased buildings to their owners. The Revaluation Reserve increased by £0.7m, reflecting a small increase in asset valuation. The Capital Grant Reserve increased by £3.0m, as a result of Department of Health funding for the move to the London Victoria office of the agency.

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 page 60 for further details).

In parallel with the government efficiency measures, the agency has initiated a performance improvement programme to identify areas where gains can be made. This will be one of the main vehicles to ensure reductions in the agency's budget can be accommodated with minimal adverse effect on its key objectives.

NEXT STEPS

The public health white paper confirmed that, subject to legislation, the agency will be abolished as a non-departmental public body at the end of March 2012 and its functions absorbed into the newly created Public Health England within the Department of Health from April 2012 (now July 2012). The agency will continue to ensure that it delivers its public health functions during 2011/12 while contributing to the creation of Public Health England.

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 that 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 2011, the continuing support of government and the Health Protection Agency Act 2004. Taking all of these factors into consideration, the Board believes it appropriate for the accounts to be prepared on a going concern basis.

Justin McCracken
CHIEF EXECUTIVE
8 June 2011

3 Governance

Governance report

HISTORY OF THE HPA

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 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 moved into Public Health England within the Department of Health. A Health and Social Care Bill to enact these changes is being considered by Parliament.

PUBLIC HEALTH ROLE

The HPA provides impartial advice and authoritative information on health protection issues to the public, to professionals and to government. It prepares for a wide range of threats to public health and helps to prevent them materialising, but when incidents arise it works with others to protect the public and reduce their impact.

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 provides an integrated approach to protecting UK public health through the provision of support and advice to the NHS, local authorities, emergency services, other arms-length bodies, the Department of Health and the devolved administrations.

STATUTORY POSITION

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 and the current HPA plans are available on the website www.hpa.org.uk.

The Department of Health determines the HPA's performance framework in the light of the department's wider strategic aims. 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.

The HPA Act sets out the 'membership of the agency' to be the chairman, the chief executive, non-executive members and executive members.

HPA LEADERSHIP

The HPA Board

The Board is committed to the highest standards of corporate governance and complies with the best practice provisions of the Code of Good Practice on Corporate Governance in Central Government Departments issued by HM Treasury.

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. This process is conducted by the independent Appointments Commission on behalf of the Secretary of State.

Board 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 on nine occasions in 2010/11. 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). During the year there was one Board adviser, whose term expired during the year. 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 and the Executive Group. The roles of the chairman, the chief executive and the 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.

www.hpa.org.uk 

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 of the Board. Three of these were created during the year: the Infections Committee, The Environmental Hazards Committee and the Biological Medicines Committee. These replaced earlier Board sub-committees on technical matters. The Global Health Committee continued as a fourth Technical Committee.

REGULATORY OVERSIGHT COMMITTEE

A regulatory oversight committee has been 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 NIBSC 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 United Kingdom 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 member's 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. Changes to the Board membership that have occurred since 1 April 2010 are shown on page 64.

The Executive Group

The HPA's Executive Group consists of executive directors and is chaired by the chief executive. It is responsible for the strategic and operational management of the organisation and for implementing the policies and strategies agreed by the Board. The chief executive is also the accounting officer for the agency, and has responsibility to government for the management of the organisation.

The Executive Group meets monthly and members also communicate through a weekly teleconference. The members who served on the Executive Group since 1 April 2010 are shown on page 55.

Responsibilities and accountability for risk management

The HPA Board is responsible for the overall risk strategy and for monitoring and reviewing the level of risk borne by the HPA. The chief executive 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 chief executive, 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 chief executive, 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 advise on where improvements are necessary and desirable for good governance.

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.

ADDITIONAL CORPORATE INFORMATION

Staff communications and engagement

As part of a major consultation launched in March 2010, the HPA set up a small central organisational change office.

The Communication division devised a communications strategy that built on the communications and engagement already undertaken following the 2009 vision roadshows and the HPA's storytelling events workshops on the strategic plan.

It is an evolving strategy, subject to both the external and internal environment, and continues to be monitored and amended subject to evaluation and feedback received from employees and their representatives. Specific activities have included:

- Regular weekly communications to all employees on organisational change.
- A cadre of 'change agent' volunteers who have been sought from all parts of the agency to ensure that the organisational change programme reaches all areas of the HPA successfully.
- Visits and roadshows at HPA locations over

the summer on how the change programme affects staff.
- Quarterly staff opinion surveys on perceptions to change, from May 2010.
- An HPA team briefing, which started in December 2010, to ensure that all staff received consistent and accurate information agreed each month by the Executive group.
- A dedicated email address box for comments on organisational change and consultation documents issued.

A series of workshops were held in all parts of the agency following the publication of the public health white paper *Healthy Lives, Healthy People* to enable staff to contribute to the HPA's response to the white paper consultation exercise.

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, namely: age; disability; marriage and civil partnership; gender reassignment; pregnancy and maternity; race; religion or belief (including lack of belief); sex and sexual orientation plus trade union membership.

During 2009/10, the HPA published a Single Equality Scheme, including an action plan. Good progress has been made during 2010/11 against the agreed actions and the agency is on target to complete the remaining activities during the 2011/12 reporting period.

Key equality impact assessments, together with accompanying action plans, are making steady progress and it is anticipated that positive evidence of cultural change and progress on under-representation issues will be seen in the workforce statistics over the next 24 months.

A number of staff support groups have been set up in the following areas – black and minority ethnic (BME); lesbian, gay, bisexual and transgender (LGBT); employees with disabilities and women. The focus of these groups is to provide a point of contact for and support to members of under-represented groups and feedback to the HPA on policies and other changes within the organisation.

A number of individuals from BME backgrounds have been allocated mentors within the HPA to assist them to fulfil their potential and the ongoing training of all staff in the benefits to be derived from equality and diversity continues.

Health and safety

Consistent with the vision to protect the health of everyone in the UK, the HPA protects the health, safety and well-being 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 continued to decrease with nine in 2010/11 compared to 16 in 2009/10 and 19 in 2008/09.

Environmental management and sustainability

The HPA has continued to take forward its programme on sustainability and 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 development plan sets out the organisation's plans for future work, including:
- Reduction of carbon emissions from energy use.
- Carbon footprint calculation and reduction.
- Sustainable procurement.
- Strengthening of the organisation's waste strategy.

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.

A revised programme of environmental compliance audits has been introduced across the sites owned by the HPA and action plans put in place to address any issues identified. There have been two reportable incidents notified to the Environment Agency during the year, relating to emissions gases from the incinerator at the HPA's site in Wiltshire and to an overflow caused by a blocked drain on an HPA site in Leeds.

During the year, the HPA has participated in the Central Government Carbon Management Pilot Scheme operated by the Carbon Trust, and early figures indicate good progress over the full year against the HPA's carbon reduction targets. Work has continued to reduce business travel in the organisation and there has been a concomitant increase in teleconferencing.

A new sustainability training programme has been introduced for staff and the HPA has also produced its first annual report on sustainability.

Statutory information access requests

During 2010/11 the HPA received 302 (2009/10: 331) 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, six (2009/10: nine) requests were handled under the Environmental Information Regulations and 47 (2009/10: 54) 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 2010/11 the HPA received 9,500 (2009/10: 8,150) online enquiries from members of the public, healthcare professionals, patients and service users.

Parliamentary questions

A total of 204 parliamentary questions were referred to the HPA during 2010/11 (2009/10: 196).

Complaints

A total of 22 complaints (2009/10: 28) 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

The HPA has been tracking awareness and understanding of health protection issues since 2007. 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.

These findings have informed the agency's public involvement programme which has been identified as a high level priority and is part of the HPA's communications strategy. The agency's model of involvement continues to grow in popularity with the number of people signing up to join the People's Panel going up from 333 in 2007 to 909 in 2010.

In the last year public participation in the agency's committees and working groups expanded again. There are now members of the public who sit on the Equality and Diversity Working Group.This is in addition to the five public members of the Health Protection and Society Advisory Group (HPSAG) and the eight members of the Equality Forum.

The HPA has good evidence to show that it has involved the public in its work and that it seeks their input on key decisions and policy development. For example, a series of workshops and online surveys were conducted as part of the public consultation for the development of the agency's Single Equality Scheme.

The HPA is also mindful of the need to engage with hard-to-reach or seldom-heard communities. The agency hosted a seminar for people from hard-to-reach communities, their advocates and support groups at which there were 46 delegates.

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. The results of these reviews will be 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 ran an online community for its

People's Panel, which included real-time voting, comment and debate.

Reporting of personal data related incidents

The HPA's corporate adverse incident management policy and procedures provide a framework for the management of incidents involving personal data as well as other types.

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.

Expenditure controls

On 24 May 2010 the chancellor of the exchequer and the chief secretary to the Treasury announced the action that the government would be taking to secure some £6 billion of efficiency savings in the 2010/11.

As part of this package of savings, the government set out a range of priority measures affecting the civil service and the work that departments and arms-length bodies do.

These involved the Department of Health placing controls on external recruitment, new consultancy spend, new information communications technology (ICT) projects over £1 million, and paid-for communications, advertising and marketing activity, and the introduction of tighter controls over these areas as well as procurement, property, pay and business travel. These measures had an immediate effect and represented a change to the HPA's delegated authorites from HM Treasury.

As well as controls over what we spend, there are also new transparency rules:

- In line with HM Treasury guidance, the HPA is publishing all payments over £25k for 2010/11.
- The agency is reporting how well it is performing against the Department of Business Innovation & Skills target of paying suppliers within five days for 2010/11.
- From 1 September 2010 all new purchases, including renewals and extensions, where the total contract value is greater than £10k, have been published, in line with the Department of Health controls.
- The HPA has published information, in line with Cabinet Office guidelines, about its organisational structure and pay arrangements. This information can be seen on the HPA website and at www.data.gov.uk.

www.hpa.org.uk

Sickness absence data

During the year ended 31 March 2011 the total number of whole time equivalent days (WTE) lost to sickness absence was 36,808 days. This information is disclosed in accordance with the *Government Financial Reporting Manual* (FREM) and equates to an average of 9.83 days per WTE; and a sickness absence rate of 4.03%. This is an increase of 0.06 days per employee per year from the previous year.

The following persons served on the Board during the year:

Professor David L Heymann CBE (chairman)
Professor Charles Easmon CBE (deputy chairman)
Dr Barbara Bannister
Michael Beaumont CBE
James Brown CBE
Michael Carroll
Helen Froud
Professor William Gelletly OBE (appointed 1 April 2010)
Martin Hindle
Justin McCracken (chief executive)
Deborah Oakley
John Wyn Owen CB
Dr Dipti Patel (appointed 1 April 2010)
Professor Debby Reynolds CB
Dr Tony Sannia (director of finance and resources)
Dr Tim Wyatt (appointed 1 April 2010)

Professor Alan Maryon Davis served as a Board adviser until 31 May 2011 to coincide broadly with the expiry of his term as president of the Faculty of Public Health.

Changes to the Board since 31 March 2011

On 1 April 20011 Dr Barbara Bannister, Michael Beaumont and Professor Debby Reynolds were re-appointed for further terms of the lesser of four years and the remaining life of the HPA.

Statement on internal control

SCOPE OF RESPONSIBILITY

As accounting officer, I have responsibility for maintaining a sound system of internal control that supports the achievement of the HPA's policies, aims and objectives, while safeguarding the public funds and agency's assets for which I am personally responsible, in accordance with the responsibilities assigned to me in *Managing Public Money*.

The relationship between the HPA and its sponsoring department, the Department of Health and the devolved administrations, is specified in the management statement. The agency's business plan, objectives and associated risks are discussed at the annual accountability meeting, and at the quarterly review meetings with the Department of Health and the devolved administrations.

Accountability within the HPA is exercised through:

- The Board and the Audit Committee. The agency's Board has established an Audit Committee, under the chairmanship of a non-executive Board member, to support its corporate governance role and me in my responsibility for risk, controls and associated assurance.
- An Executive Group comprising all centre and divisional directors and with myself as the accounting officer. Executive directors are personally accountable to me for the management of the risks within their centres and divisions.

THE PURPOSE OF THE SYSTEM OF INTERNAL CONTROL

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

The system of internal control has been in place in the HPA for the year ended 31 March 2011 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 has been introduced which 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. The Integrated Governance Information system is used to manage adverse incidents, with lessons learnt being promulgated through the HPA's intranet.

Executive directors and management staff receive ongoing training in risk management and workshops are facilitated to assist them in identifying and assessing risks. 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 has been rolled out to relevant senior managers.

THE RISK AND CONTROL FRAMEWORK

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.

During 2010 the government indicated through its white paper on public health that subject to legislation the HPA would be abolished by April 2012 (now July 2012) and its functions moved into Public Health England (PHE) within 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 Executive 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 which cannot be managed locally must be escalated to the Executive Group.

The HPA's adverse incident management policy and procedure provides a formal mechanism for reporting and learning from incidents across the agency. This has now been revised to clarify the arrangements for handling serious untoward incidents. A real-time 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). 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.

The agency is registered with the Care Quality Commission as required by the Health and Social Care Act 2008 (regulated activities). An assurance register is also available on the HPA intranet.

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 maintain access to the NHS National Network and related systems by providing a statement of compliance (SoC) 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 Caldicott guardians, 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 agency has adopted the HM Treasury's toolkit for assessing its performance at 'Managing Risk of Financial Loss' (whether from error or misappropriation). 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. During the current year, the Executive Group undertook 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 which it carries. The first end-to-end process review was also commenced to cover the standard 'accounts payable' financial process. An action plan is being used to monitor any remedial actions that may arise from any element of the assessment.

The HPA has undertaken an assessment against the requirements of the Cabinet Office Security Policy Framework. The HPA's overall level of compliance has increased over the previous year and there were no areas where the agency's internal assessment identified critical weaknesses.

The HPA will continue to work over the coming year to increase compliance across the organisation, and to further strengthen its security practices. There have been no significant security incidents during the year ended 31 March 2011.

REVIEW OF EFFECTIVENESS

As accounting officer, I have responsibility for reviewing the effectiveness of the system of internal control. My review of the effectiveness of the system of internal control is informed by the work of the internal auditors and executive managers 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.

I have been advised on the implications of my review of the effectiveness of the internal control system by the Board and the Audit Committee and a plan to address weaknesses and ensure continuous improvement of the system is in place.

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

The Integrated Governance Group (IGG) reviews governance activities within the agency and identifies the actions necessary for improvement. The appropriateness, effectiveness and progress of the risk management strategy, policy and approach are monitored by the IGG. The IGG reports and makes recommendations to the Audit Committee. Cross-attendance between the IGG, the Audit Committee and the Health and

Safety Strategy Group helps to ensure that a consistent approach is taken. A system for gathering and monitoring assurances is under development and in future this will be used to inform the agency's response to 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 governmental 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 me with an annual written statement setting out a formal opinion on the adequacy, reliability and effectiveness of the systems and controls in place across the agency.

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 also 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.

CONTROL ISSUES DURING THE YEAR

During 2010 the government indicated through its white paper on public health that subject to legislation the HPA would be abolished and its functions moved into Public Health England within the Department of Health. A Health and Social Care Bill to enact these changes is being considered by Parliament. The HPA recognises that there are risks inherent in the changes to healthcare and public health systems. The HPA's response to the Department of Health's consultation on the public health white paper *Healthy Lives, Healthy People* included sections on the risks of not addressing the issues covered by the response. These ten risks have been incorporated into an HPA Strategic Risk summary. The new structure of the summary distinguishes HPA strategic risks, transition risks which the HPA Executive Group has some control over, and a third group of risks in relation to the creation of Public Health England which belong primarily to the Board of the Department of Health.

In May 2010 the Chancellor of the Exchequer and the chief secretary to the Treasury announced the action that the government would be taking to secure some £6 billion of efficiency savings in 2010/11. As part of this package of savings, the government set out a range of priority efficiency measures affecting the civil service and the work that departments and arms-length bodies do. These involved the Department of Health placing controls on external recruitment, new consultancy spend, new information communications technology (ICT) projects over £1 million, and paid-for communications, advertising and marketing activity, and the introduction of tighter controls over these areas as well as procurement, property, pay and business travel. These measures had immediate effect and represented a change to our delegated authorities from HM Treasury. The imposition of additional controls and constraints has led to some operational difficulties. The HPA worked closely with the Department of Health to ensure there was no disruption to its service delivery.

In June 2010 a Committee chaired by Professor George Griffin published its independent report on the outbreak of *E. coli* O157 at Godstone Farm. The report made 43 recommendations including an overarching recommendation that a multi-agency implementation committee be established, coordinated by the HPA, to ensure that the recommendations were implemented. In addition Professor Charles Easmon led an HPA internal enquiry that produced a report with 27 recommendations, the majority of which concerned the HPA systems which came into play during the outbreak. The HPA Executive Group approved an action plan to cover both reports, and progress has been monitored by the Board throughout 2010/11. In particular:

- The multi-agency implementation committee has succeeded in establishing a 'community of interest' across all relevant sectors which is

facilitating the development and introduction of standards of good practice to protect the public's health.
- The HPA has more robust systems in place for the investigation and management of *E. coli* O157 cases and clusters.

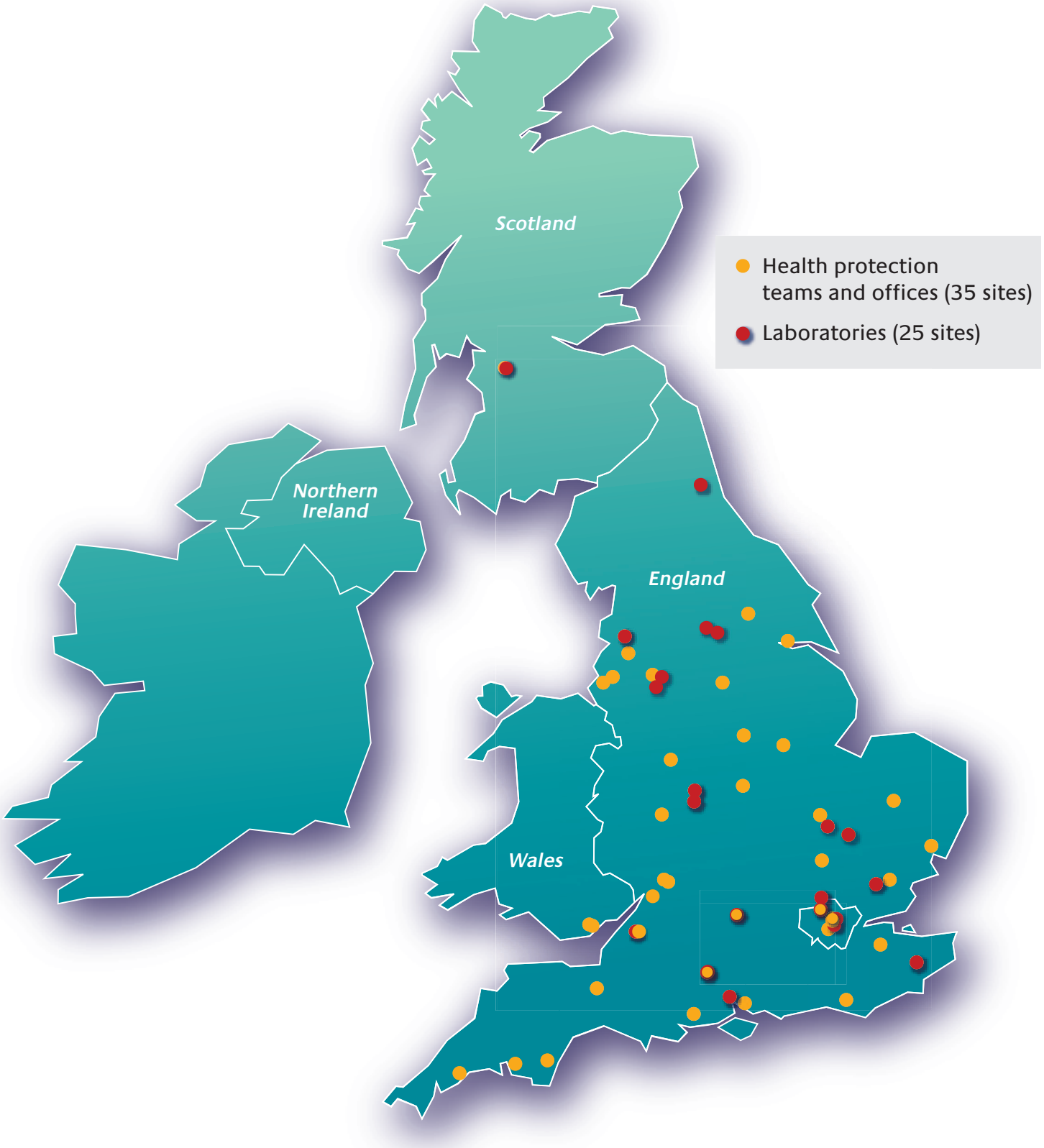
The HPA has submitted proposals to the Department of Health for the re-provision of the facilities currently located on the agency's Porton Down site in Salisbury. During 2010 an Internal Audit review concluded that in retrospect, appropriate procurement procedures were not followed for the engagement of a number of persons within the programme team. The overall conclusion however was that daily fee rates charged for staff were consistent with those available through the Office of Government Commerce frameworks, and value for money was achieved. The recommendations from the report have been implemented by the Programme Management Team.

The HPA has identified an issue relating to the use of a test, developed and used by one HPA laboratory, for the diagnosis of active hepatitis C infection. During 2010 a discrepancy was noted between the results obtained with this in-house test and those obtained with a commercial assay. The public health implications are considered to be limited because the test is only one part of the assessment pathways and patients often have repeated tests. However, the HPA has contacted the clinicians of approximately 700 patients who had a negative test to offer them a repeat test.

The HPA has informed the Care Quality Commission, as required under regulation 18 of the Care Quality Commission (Registration) Regulations 2009, and will inform CQC of the outcome of the re-testing exercise.

Justin McCracken
CHIEF EXECUTIVE
8 June 2011

HEALTH PROTECTION AGENCY SITES



For more information see www.hpa.org.uk

www.hpa.org.uk

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 2011.

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 2010/11.*

COMMITTEE MEMBERSHIP

The Remuneration and Terms of Service Committee consists of four non-executive Board members. The members serving during 2010/11 were:

Members
Professor David Heymann
Professor Charles Easmon
Michael Beaumont
Martin Hindle
Helen Froud (appointed 1 August 2010)

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 AND THE EXECUTIVE GROUP

Non-executive and advisory Board members

All non-executive Board members are appointed by the Secretary of State for Health as advised by the Appointments Commission, or by the ministers of the devolved administrations, for a defined term. Advisory Board member appointments are made by the chairman of the Board and are endorsed by the Board.

You can find further information about the Appointments Commission by visiting their website at www.appointments.org.uk.

The HPA applies the same appraisal arrangements to non-executive and advisory Board members. Performance is assessed by the chairman of the Board through an annual appraisal process. The appraisal process for the chairman is conducted by the HPA's Appointments Commission observer and the Department of Health senior sponsor.

Members of the Executive Group

The Remuneration and Terms of Service Committee determines the policy for the

ACCOUNTABILITY

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

ROLE

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 with a total cost of £100,000 or more.
- The approval of any premature retirement applications on the grounds of 'in the interests of the efficiency of the service'.

appointment of the members of the Executive Group that report directly to the chief executive. The members of the Executive Group hold employment contracts that are open-ended until they reach the normal retirement age of 65 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 POLICY

Non-executive and advisory Board members

Non-executive and advisory 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 2010/11 financial year, members of the Executive Group received no cost of living increase (2009/10: 1.5%). The cost of living increases for other employees within the HPA was an annualised 0% for medical consultants and 2.25% for all other staff (2009/10: 1.50% and 2.40% respectively).

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

Dr Paul Cosford has been a member of the Executive Group since 6 September 2010 and his contract is due to expire on 5 September 2011. 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 £112,000.

Professor Stephen Palmer was a member of the Executive Group for part of the year until 30 June 2010. He is an employee of Cardiff University. The amount paid by the HPA to the university to cover his salary and employer on–costs during this year up to 30 June 2010 totalled £35,000 (2009/10 £141,000). 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 2011 no benefits in kind were made available to any non-executive member of the Board or any member of the Executive Group.

REMUNERATION OF NON-EXECUTIVE BOARD MEMBERS AND EXECUTIVE GROUP MEMBERS

The table below lists all persons who served on the Board or Executive Group during the year ended 31 March 2011. A summary of their employment contract is accompanied by the total remuneration due to each individual during their tenure in post in 2010/11.

REMUNERATION OF NON-EXECUTIVE BOARD MEMBERS AND EXECUTIVE GROUP MEMBERS					
				Total salary, fees and allowances	
	Date commenced, reappointed or extended	Expiry date of appointment or current contract	Notice period	Year ended 31 March 2011 £'000	Year ended 31 March 2010 £'000
Non-executive Board members					
Professor David Heymann	1 May 2009	30 April 2013	†	60-65	55-60*
Dr Barbara Bannister[1,2]	1 April 2008	31 March 2011	†	5-10	5-10
Michael Beaumont[3]	1 April 2008	31 March 2011	†	10-15	10-15
James Brown	1 October 2008	30 September 2011	†	5-10	5-10
Michael Carroll	1 April 2009	31 March 2012	†	5-10	5-10
Professor Charles Easmon	1 April 2010	31 March 2013	†	5-10	10-15
Helen Froud	1 April 2009	31 March 2012	†	5-10	5-10
Professor William Gelletly	1 April 2010	31 March 2013	†	5-10	5-10
Martin Hindle	1 April 2009	31 March 2012	†	5-10	5-10
Deborah Oakley	1 April 2009	31 March 2012	†	5-10	5-10
John Wyn Owen	1 February 2011	31 January 2016	†	5-10	5-10
Dr Dipti Patel	1 April 2010	31 March 2013	†	5-10	-
Professor Debby Reynolds[2]	1 April 2008	31 March 2011	†	5-10	5-10
Dr Tim Wyatt	1 April 2010	31 March 2013	†	5-10	-
Advisory Board members					
Professor Alan Maryon Davis	1 June 2007	31 May 2010	1 month	0-5*	5-10
Chief executive					
Justin McCracken[4]	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
Professor Eric Bolton	10 March 2010	31 August 2010	3 months	55-60*	10-15*
Dr Miles Carroll	28 November 2009	31 August 2010	3 months	55-60*	45-50*
Dr John Cooper	4 June 2009	Open	3 months	120-125	95-100*
Dr Paul Cosford[5]	6 September 2010	5 September 2011	1 month	-	-
Dr Ruth Gelletlie[6]	6 April 2009	5 September 2010	3 months	75-80*	175-180
Dr Stephen Inglis	1 April 2009	Open	13 weeks	165-170	165-170
Professor Anthony Kessel[6]	16 March 2009	Open	3 months	170-175	170-175
Dr Christine McCartney	1 September 2006	Open	3 months	140-145	125-130
Dr Tony Sannia[4]	1 April 2003	Open	3 months	140-145	140-145
Dr John Stephenson	1 October 2007	Open	3 months	110-115	110-115
Tony Vickers-Byrne	1 April 2008	Open	3 months	100-105	100-105
Professor Maria Zambon[6]	1 March 2009	31 August 2010	3 months	75-80*	180-185
Professor Stephen Palmer[7]	25 August 2006	30 June 2010	6 months	-	-

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

[2] The appointment of these members was extended on 1 April 2011 for a term ending 31 March 2014 or the date of abolition of the HPA if sooner.

[3] The appointment of this member was extended on 1 April 2011 until 31 March 2013 or the date of abolition of the HPA if sooner.

[4] Denotes members of the Executive Group who were members of the Board during the year ended 31 March 2011.

[5] Dr Cosford provided services to the HPA on secondment as an employee of the East of England Strategic Health Authority as detailed on page 63.

[6] The remuneration of these members of the Executive Group includes a clinical excellence award that is funded by the Department of Health.

[7] Professor Palmer provided services to the HPA on secondment as an employee of Cardiff University as detailed on page 63.

* Denotes payment for a part year.

† Notice period not applicable as these are public appointments.

Compensation for loss of office

During the year ended 31 March 2011 no compensation payments were made to any past or present member of the Board or 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 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 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.

2010-11 PENSION: EXECUTIVE DIRECTORS

	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 2011 Bands of £5,000	Lump sum value as at 31 March 2011 Bands of £5,000	Cash equivalent transfer value as at 31 March 2010 To nearest £1,000	Cash equivalent transfer value as at 31 March 2011 To nearest £1,000	Real annual increase in cash equivalent transfer value To nearest £1,000
Chief executive							
Justin McCracken[1]	0.0-2.5	2.5-5.0	15.0-20.0	50.0-55.0	343	342	(1)
Executive directors							
Lis Birrane	0.0-2.5	2.5-5.0	5.0-10.0	25.0-30.0	178	178	-
Professor Eric Bolton[2]	0.0-2.5	0.0-2.5	65.0-70.0	195.0-200.0	-	-	-
Dr Miles Carroll[3]	0.0-2.5	-	5.0-10.0	-	35	47	12
Dr John Cooper	0.0-2.5	0.0-2.5	45.0-50.0	145.0-150.0	1,167	1,173	6
Dr Ruth Gelletlie[2]	2.5-5.0	0.0-2.5	40.0-45.0	125.0-130.0	-	-	-
Dr Stephen Inglis	5.0-7.5	17.5-20.0	35.0-40.0	110.0-115.0	767	851	84
Professor Anthony Kessel[1]	0.0-2.5	0.0-2.5	25.0-30.0	80.0-85.0	439	388	(51)
Dr Christine McCartney[2]	2.5-5.0	10.0-12.5	70.0-75.0	210.0-215.0	-	-	-
Dr Tony Sannia[1]	0.0-2.5	0.0-2.5	25.0-30.0	75.0-80.0	602	581	(21)
Dr John Stephenson[2]	0.0-2.5	0.0-2.5	35.0-40.0	105.0-110.0	-	-	-
Tony Vickers-Byrne[1]	0.0-2.5	0.0-2.5	30.0-35.0	100.0 -105.0	664	593	(71)
Professor Maria Zambon[1]	0.0-2.5	0.0-2.5	40.0-45.0	125.0-130.0	866	777	(89)

[1] The Government Actuaries Department have revised transfers values and the value of CETVs for some members has fallen since 31 March 2010.

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

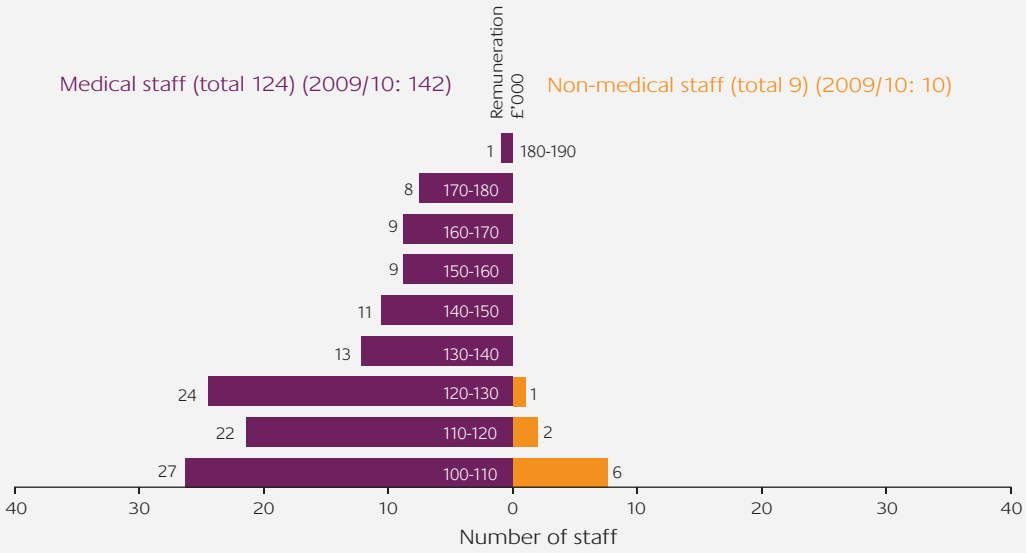
[3] Members of the 2008 NHS Pension Scheme are not automatically entitled to a lump sum payment on retirement..

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

The diagram below shows the number of employees, excluding the Executive Group, that had gross taxable remuneration of £100,000 or more during 2010/11.

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

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



Real increase in CETV

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

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

AUDITABLE AND NON-AUDITABLE ELEMENTS OF THIS REPORT

The tables in this remuneration report, as well as the details of amounts payable to third parties for the services of senior managers, have been subject to audit and are referred to in the Certificate and Report of the Comptroller and Auditor General to the House of Commons. The auditor's opinion is included within the Auditor's Report on page 69.

Justin McCracken
CHIEF EXECUTIVE
8 June 2011

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 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 the Accounting Officers' Memorandum issued by the Department of Health.

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 2011 under the Health Protection Agency Act 2004. These 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 being audited.

RESPECTIVE RESPONSIBILITIES OF THE CHIEF EXECUTIVE 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 Act 2004. I conducted my audit in accordance with International Standards on Auditing (UK and Ireland). Those standards require me and my staff to comply with the Auditing Practices Board's Ethical Standards for Auditors.

SCOPE OF THE AUDIT OF THE FINANCIAL STATEMENTS

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

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

OPINION ON REGULARITY

In my opinion, in all material respects, the expenditure and income have been applied to the purposes intended by Parliament and the financial transactions 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 2011 and of its net operating cost for the year then ended; and

- the financial statements have been properly prepared in accordance with the Health Protection Act 2004 and Secretary of State directions issued thereunder.

EMPHASIS OF MATTER

Without qualifying my opinion, I draw attention to the disclosures made in note 1.1 to the financial statements concerning the application of the going concern principle in light of the proposal to abolish the Health Protection Agency. This is subject to legislation and there is therefore uncertainty over the Health Protection Agency's ability to continue to operate in its current form and with its current functions.

OPINION ON OTHER MATTERS

In my opinion:

- the part of the remuneration report to be audited has been properly prepared in accordance with Secretary of State directions issued under the Health Protection Act 2004; and

- the information given in the 'Financial Review' and 'Governance' 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 or returns; or

- I have not received all of the information and explanations I require for my audit; or

- the Statement on Internal Control does not reflect compliance with HM Treasury's guidance.

REPORT

I have no observations to make on these financial statements.

Amyas C E Morse
Comptroller and Auditor General
National Audit Office
157-197 Buckingham Palace Road
Victoria
London SW1W 9SP
16 June 2011

Statement of comprehensive net expenditure

FOR THE YEAR ENDED 31 MARCH 2011

	Note	2011 £'000	Restated 2010 £'000
Gross operating costs			
Employee costs	4	190,144	199,080
Other operating charges	6	110,383	134,974
Amortisation and depreciation	7	23,203	28,888
Total gross operating costs		**323,730**	362,942
Operating income	3	(146,298)	(140,433)
Net operating costs before interest		**177,432**	222,509
Interest receivable		(924)	(18)
Net operating cost for the financial year	16	**176,508**	222,491

The net operating cost reported above represents 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 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.

In line with the *Government Financial Reporting Manual 2010/11* (FReM), a notional cost of capital charge is not included for the year ended 31 March 2011 (2010: £8,770,000). In accordance with International Accounting Standard 1, retrospective restatement of the prior year comparative figures has taken place.

Other comprehensive expenditure

FOR THE YEAR ENDED 31 MARCH 2011

	Note	2011 £'000	2010 £'000
Net operating costs for the financial year		176,508	222,491
Net gain/(loss) on revaluation of property, plant and equipment	8	182	6,621
Total comprehensive expenditure for the financial year		**176,690**	229,112

The notes on pages 76 to 99 form part of these accounts. All operations are continuing.

Statement of financial position

AS AT 31 MARCH 2011

	Note	2011 £'000	2010 £'000
Non-current assets			
Property, plant and equipment	8	280,626	274,247
Intangible assets	9	4,771	3,870
Financial assets	10	286	286
Total non-current assets		**285,683**	278,403
Current assets			
Inventories	11	11,254	13,417
Trade and other receivables	12	36,789	46,292
Cash and cash equivalents	13	43,125	28,093
Total current assets		**91,168**	87,802
Total assets		**376,851**	366,205
Current liabilities			
Trade and other payables	14	(52,311)	(58,113)
Provisions	15	(435)	(2,092)
Total current liabilities		**(52,746)**	(60,205)
Non-current assets plus net current assets		**324,105**	306,000
Non-current liabilities			
Provisions	15	(6,946)	(5,553)
Assets less liabilities		**317,159**	300,447
Taxpayers' equity			
Capital grant reserve		15,326	12,283
Revaluation reserve		57,133	56,445
General reserve		244,700	231,719
Total taxpayers' equity		**317,159**	300,447

The notes on pages 76 to 99 form part of these accounts. All operations are continuing.
The financial statements on pages 71 to 75 were approved and signed on behalf of the Board by:

Justin McCracken
CHIEF EXECUTIVE
8 June 2011

Statement of changes in taxpayers' equity

FOR THE YEAR ENDED 31 MARCH 2011

	General reserve	Revaluation reserve	Capital grant reserve	Total
	£'000	£'000	£'000	£'000
Restated balance at 1 April 2010	231,719	56,445	12,283	300,447
Net gain on revaluation of property, plant and equipment	-	182	-	182
Realised loss 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 capital grant to offset depreciation	-	-	(484)	(484)
Net operating costs for year after interest	(176,508)	-	-	(176,508)
Total recognised income and expenses for year	**(176,973)**	**688**	**75**	**(176,210)**
Grants from Department of Health:				
Revenue grant in aid (note 16)	153,573	-	-	153,573
Capital grant in aid (note 16)	36,381	-	2,968	39,349
Total grants from Department of Health	**189,954**	**-**	**2,968**	**192,922**
Balance at 31 March 2011	**244,700**	**57,133**	**15,326**	**317,159**

In line with the *Government Financial Reporting Manual 2010/11* (FReM), the notional cost of capital charge is not required for the year ended 31 March 2011. In accordance with International Accounting Standard 1, retrospective restatement of the prior year comparative figures has taken place.

The notes on pages 76 to 99 form part of these accounts. All operations are continuing.

Statement of changes in taxpayers' equity Continued

FOR THE YEAR ENDED 31 MARCH 2010

	General reserve	Revaluation reserve	Capital grant reserve	Total
	£'000	£'000	£'000	£'000
Balance at 1 April 2009	209,881	50,950	4,176	265,007
Net gain on revaluation of property, plant and equipment	-	6,621	-	6,621
Realised loss on inventories – biological standards (note 11)	-	(196)	-	(196)
Realised gain on inventories – laboratory consumables (note 11)	-	285	-	285
Transfers between reserves (realisation of revaluation reserve)	1,215	(1,215)	-	-
Capital grants received (note 16)	-	-	8,494	8,494
Release of capital grant to offset depreciation	-	-	(387)	(387)
Net operating costs for year after interest	(222,491)	-	-	(222,491)
Total recognised income and expenses for year	**(221,276)**	**5,495**	**8,107**	**(207,674)**
Grants from Department of Health:				
Revenue grant in aid (note 16)	193,114	-	-	193,114
Capital grant in aid (note 16)	50,000	-	-	50,000
Total grants from Department of Health	**243,114**	**-**	**-**	**243,114**
Restated balance at 31 March 2010	**231,719**	**56,445**	**12,283**	**300,447**

In line with the *Government Financial Reporting Manual 2010/11* (FReM), a notional cost of capital charge is not included for the year ended 31 March 2011. In accordance with International Accounting Standard 1, retrospective restatement of the prior year comparative figures has taken place.

The notes on pages 76 to 99 form part of these accounts. All operations are continuing.

Cash flow statement

FOR THE YEAR ENDED 31 MARCH 2011

	Note	2011 £'000	2010 £'000
Cash flows from operating activities			
Net operating cost before interest		(177,432)	(222,509)
Adjustments for non-cash transactions:			
(Gain)/loss on de-recognition of property, plant and equipment	6	(228)	231
Amortisation and depreciation	7	23,203	28,888
Realised gain on inventories – biological standards	11	(186)	(196)
Realised gain on inventories – laboratory consumables	11	227	285
Release from capital grant reserve to offset depreciation		(484)	(387)
Decrease/(increase) in trade and other receivables		9,503	(10,765)
Decrease/(increase) in inventories (adjusted for amounts transferred from assets – note 8)		2,163	(2,793)
(Decrease)/increase in trade and other payables		(5,802)	1,359
Decrease in capital payables		2,130	592
Expenditure charged to provisions	15	(1,265)	(448)
Increase in provisions	15	1,001	1,975
Net cash (outflow) from operating activities		**(147,170)**	(203,768)
Cash flows from investing activities			
Purchase of property, plant and equipment	8	(26,966)	(45,974)
Purchase of intangible non-current assets	9	(3,516)	(2,956)
Decrease in capital payables		(2,130)	(592)
Receipts from de-recognition of property, plant and equipment		409	-
Interest received		924	18
Decrease in non-current financial assets		-	1
Net cash (outflows) from investing activities		**(31,279)**	(49,503)
Cash flows from financing activities			
Government revenue grant in aid received	16	153,573	193,114
Government capital grant in aid received	16	36,381	50,000
Other capital grants received	16	3,527	8,494
Net cash inflows from financing activities		**193,481**	251,608
Net increase/(decrease) in cash and cash equivalents in the period		**15,032**	(1,663)
Cash and cash equivalents at the beginning of the period	13	**28,093**	29,756
Cash and cash equivalents at the end of the period	13	**43,125**	28,093

The notes on pages 76 to 99 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 2010/11* (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 financial statements have been prepared on a going concern basis.

In July 2010 the government announced its intention to close the Health Protection Agency and to transfer its function to the Department of Health. The closure is dependent on the passage of legislation and therefore whether the Health Protection Agency will close, and any resulting timetable for closure has yet to be decided. After the closure it is proposed that all the Health Protection Agency's functions will continue in Public Health England within the Department of Health.

At the point of closure it is proposed that the Health Protection Agency, in its current legal form, will be abolished. As abolition arrangements have yet to be confirmed there is a material uncertainty that casts significant doubt upon the Health Protection Agency's ability to continue to operate in its current form and with its current functions.

Having considered the circumstances described above, and from discussion with the Department of Health, management's expectation is that the Health Protection Agency will continue to operate in its current form for at least the next 12 months. 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 accounts 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 Cost of capital

In line with the *Government Financial Reporting Manual 2010/11* (FReM), the notional cost of capital charge is not included for the year ended 31 March 2011. HM Treasury have advised that the removal of cost of capital is material by nature. Therefore, in line with International Accounting Standard 1,

retrospective restatement of prior year comparative figures has been made where necessary. As the notional cost of capital was charged and reversed directly through the statement of comprehensive net expenditure and had no impact on the reserves, only this primary statement and relevant related notes have been restated.

1.5 Government grants

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. Other government grants received are treated in the same manner unless they are revenue grants provided in return for specific goods or services, which are credited to operating income, or capital grants to finance specific assets, which are credited to the capital grants reserve.

1.6 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 assets 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 as 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 is 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 both government and non-government bodies for the purchase of specific capital assets (see note 1.5) are credited to a capital grants reserve and released to operating income to match the depreciation charged over the life of the capital assets concerned.

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.

Notes to the financial statements Continued

1.7 Non-current assets: intangible assets

Intangible non-current assets comprise software 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.

1.8 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 1.17.

1.9 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.

1.10 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.

1.11 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.

1.12 Income and corporation tax

The agency, as a body corporate, is subject to the provisions of the Income and Corporation Tax Act 1988. As the majority of operations are funded by government grant in aid, no provision has been made in these accounts for Corporation Tax liability. Any potential liability from a future event is set out in note 21.

1.13 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.

1.14 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.

1.15 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

1.16 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 2010/11* (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.

1.17 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 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

The total operating income for research and related contracts and grants above included grants received from the European Union of £6,047,000 (2010: £3,693,000).

	2011 £'000	2010 £'000
Products and royalties	35,033	39,238
Laboratories and other services	71,429	74,293
Research and related contracts and grants	39,374	26,161
Other operating income	462	741
Total operating income	**146,298**	140,433

4 EMPLOYEES

	2011 £'000	2010 £'000
Employee costs		
Salaries and wages	149,961	154,351
Social security costs	12,707	13,092
Other pension costs (note 5)	19,840	19,603
Total costs of staff employed	182,508	187,046
Agency and seconded staff	7,323	13,404
Redundancy and early retirement costs	915	288
Total costs of employed and other staff	190,746	200,738
Manufacturing staff costs transferred from/(to) finished goods	697	(842)
Employee staff costs transferred to Porton Down reprovision	(1,299)	(816)
Total staff costs	190,144	199,080

The total staff costs for 2010 include pandemic flu incremental costs of £8,345,000 funded by the Department of Health (note 6, 16).

Notes to the financial statements Continued

Employee numbers

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

	2011	2010
Medical	239	245
Nursing	179	201
Professional, administrative and operational support	1,227	1,235
Scientific and technical	2,056	2,110
Total employee numbers	3,701	3,791

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 2011, 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 152 (2010: 317) whole time equivalents.

Redundancy and other depature 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
	2011	2011	2011	2010	2010	2010
<10,000	10	-	10	13	-	13
10,000-25,000	11	-	11	7	-	7
25,000-50,000	6	1	7	3	-	3
50,000-100,000	5	-	5	1	-	1
100,000-150,000	-	-	-	-	-	-
Total number of exit packages by type	32	1	33	24	-	24
Total resource cost (£000)			749			323

Redundancy costs have been calcultated 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 (2010: 14%).

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

	2010/11 Annual pensionable pay banding	2010/11 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 2010/11* (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 2011, employees were required to pay contributions of 5% (2010: 5%) of pensionable pay. The employer's contribution amounted to 17.3% (2010: 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 2010/11* (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:

	2011 £'000	2010 £'000
The National Health Service Pension Scheme (NHSPS)	**18,159**	17,898
The UKAEA Combined Pension Scheme (CPS)	**1,565**	1,575
Other pension schemes	**116**	130
Total contributions by the Health Protection Agency	**19,840**	**19,603**

There were no contributions in respect of the March 2011 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 2010/11 there were five (2010: nil) early retirements from the agency on the grounds of ill-health. The NHS Pension Agency estimated the additional pension liabilities of these ill-health retirements to be £388,756 (2010: nil). These retirements represented 1.44 per 1,000 active scheme members (2010: nil).

6 OTHER OPERATING CHARGES

	2011 £'000	2010 £'000
Laboratory consumables and services	39,251	44,084
Supplies and services	37,008	48,741
Accommodation	25,987	27,115
Travel and subsistence	5,137	6,399
Foreign exchange losses / (gains)	195	395
Auditor's remuneration	130	148
Release of provision for impairments	(49)	15
Net charge / (release) of other provisions	(264)	1,527
Gains on de-recognition of property, plant and equipment	(228)	231
Impairment of non-current assets	-	-
Porton Down re-provision costs	3,216	10,027
Valued Added Tax refund	-	(3,708)
Total other operating charges	**110,383**	**134,974**

The total other operating charges for 2010 include pandemic flu incremental non-staff costs of £8,459,000 funded by the Department of Health (note 4, 16).

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).

Value Added Tax refund

In 2009/10 HM Revenue and Customs agreed to the repayment of VAT plus interest in respect of the partial exemption rules relating to the National Biological Standards Board for the period between 1992 and 1997.

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:

	2011 £'000	2010 £'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)	20,121	22,447
Impairment (note 8)	-	4,247
Non-current assets - intangible assets (note 9)	2,598	1,807
	22,719	28,501
Charge in respect of other non-current assets - property, plant and equipment (note 8)	484	387
Total charge to operating costs	**23,203**	**28,888**

8 NON-CURRENT ASSETS – PROPERTY, PLANT AND EQUIPMENT

FOR THE YEAR ENDED 31 MARCH 2011

	Land and buildings	Fixtures and fittings	Plant, equipment and vehicles	Information technology equipment	Assets under construction	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 tangible assets	21	-	(42)	21	-	-
Additions	-	-	78	-	26,888	26,966
Transfer of assets under construction	18,698	1,848	11,207	1,711	(33,464)	-
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**

NON-CURRENT ASSETS – PROPERTY, PLANT AND EQUIPMENT Continued

	Land and buildings	Fixtures and fittings	Plant, equipment and vehicles	Information technology equipment	Assets under construction	Total
	£'000	£'000	£'000	£'000	£'000	£'000
Depreciation						
At 1 April 2010	-	2,734	33,195	9,760	-	45,689
Reclassification of tangible 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 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

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

Freehold land has a net book value of £28,225,000 (2010: £28,225,000). Freehold buildings have a net book value of £175,045,000 (2010: £165,805,000). Long leasehold land and buildings have a net book value of £4,050,000 (2010: £4,050,000).

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 (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 £2,149,000 (2010: £2,149,000) and plant and equipment £1,992,000 (2010: £1,992,000).

Notes to the financial statements Continued

FOR THE YEAR ENDED 31 MARCH 2010

	Land and buildings	Fixtures and fittings	Plant, equipment and vehicles	Information technology equipment	Assets under construction	Total
	£'000	£'000	£'000	£'000	£'000	£'000
Cost						
At 1 April 2009	217,586	19,826	52,049	13,076	36,474	339,011
Reclassification of assets to intangible non-current assets and inventories	-	-	(100)	(1,237)	-	(1,337)
Reclassification of assets	14,664	(14,642)	(22)	-	-	-
Impairment	(3,396)	-	-	-	(851)	(4,247)
Additions	-	-	110	-	45,864	45,974
Transfer of assets under construction	26,662	2,671	22,298	2,079	(53,710)	-
Elimination of accumulated depreciation	(64,237)	-	-	-	-	(64,237)
Revaluations	6,801	(112)	(677)	-	-	6,012
De-recognition	-	(3)	(1,103)	(134)	-	(1,240)
At 31 March 2010	**198,080**	**7,740**	**72,555**	**13,784**	**27,777**	**319,936**
Depreciation						
At 1 April 2009	50,086	3,659	27,452	8,346	-	89,543
Reclassification of assets to intangible non-current assets and inventories	-	-	(29)	(804)	-	(833)
Reclassification of assets	1,940	(1,937)	(3)	-	-	-
Charge for year	12,211	1,050	7,224	2,349	-	22,834
Elimination of accumulated depreciation	(64,237)	-	-	-	-	(64,237)
Revaluations	-	(37)	(572)	-	-	(609)
De-recognition	-	(1)	(877)	(131)	-	(1,009)
At 31 March 2010	**-**	**2,734**	**33,195**	**9,760**	**-**	**45,689**
Net book value						
At 31 March 2010	**198,080**	**5,006**	**39,360**	**4,024**	**27,777**	**274,247**
At 31 March 2009	167,500	16,167	24,597	4,730	36,474	249,468

Reclassification to intangible non-current assets and inventories

Laboratory and finance software and systems with a net book value of £474,000 and previously classified as property, plant and equipment were reclassified to intangible non-current assets during the year. Assets with a net book value of £30,000 and previously classified as plant and equipment were transferred to inventories during the year.

Impairment

The impairment of £4,247,000 has been charged to the statement of comprehensive net expenditure (note 7). It comprises £3,396,000 in respect of the Influenza Resource Centre construction at South Mimms and £851,000 in respect of Porton Down re-provision capital expenditure carried forward from 2008/09.

Land and buildings

A professional evaluation of land and buildings was carried out on 31 March 2010. In line with International Accounting Standard 16, accumulated depreciation has been eliminated against the carrying amount of the asset with the net amount restated to equal the revalued amount.

9 NON-CURRENT ASSETS – INTANGIBLE ASSETS

FOR THE YEAR ENDED 31 MARCH 2011

	Software £'000
Cost or valuation	
At 1 April 2010	9,086
Additions	3,516
De-recognition	(79)
At 31 March 2011	**12,523**
Amortisation	
At 1 April 2010	5,216
Charge for year	2,598
De-recognition	(62)
At 31 March 2011	**7,752**
Net book value	
At 31 March 2011	**4,771**
At 31 March 2010	3,870

FOR THE YEAR ENDED 31 MARCH 2010

	Software £'000
Cost or valuation	
At 1 April 2009	4,843
Reclassification of assets	1,307
Additions	2,956
De-recognition	(20)
At 31 March 2010	**9,086**
Amortisation	
At 1 April 2009	2,596
Reclassification of assets	833
Charge for year	1,807
De-recognition	(20)
At 31 March 2010	**5,216**
Net book value	
At 31 March 2010	**3,870**
At 31 March 2009	2,247

Notes to the financial statements Continued

Reclassification from non-current assets: property, plant and equipment

Laboratory and finance software and systems previously classified as property, plant and equipment were reclassified to intangible non-current assets during the year.

10 NON-CURRENT ASSETS: FINANCIAL ASSETS

	2011 £'000	2010 £'000
Advances to UKAEA Combined Pensions Scheme	261	261
Leasehold premium prepayment	22	22
Investments	3	3
Total non-current assets: financial assets	**286**	**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.

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 (2010: 9.3%). The holding was acquired for a cash consideration of £2,565 (2010: £2,565), and is made up of 100 Series B preferred shares of £1 each (2010: 100 Series B preferred shares of £1 each) and 2,465,000 ordinary shares of 0.1p each (2010: 2,465,000).

The agency holds a 1.0% interest in Proacta (2010: 1%) and is made up of 25,052 shares (2010: 25,052) of the US$ 0.001 common stock of Proacta, for which there was no cash consideration.

The agency also holds a 3.1% interest in Spectrum (2010: 3.1%) and is made up of 3,125 (2010: 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.

11 CURRENT ASSETS: INVENTORIES

	2011 £'000	2010 £'000
Raw materials	258	303
Finished goods	1,859	3,701
Biological standards	6,082	6,268
Laboratory consumables and other stores	3,055	3,145
Total inventories	**11,254**	13,417

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 2011 to be £6,082,000 (2010: £6,268,000) 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 2011 was £186,000 (2010: £196,000).

During the year, laboratory consumables with a value of £ 227,000 (2010: £285,000) 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

	2011 £'000	2010 £'000
Trade receivables	12,355	14,148
Accrued income	13,253	15,318
Prepayments	4,307	4,722
Other receivables	6,874	12,104
Total trade and other receivables	**36,789**	46,292

Intra-government balances

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

	2011 £'000	2010 £'000
Balances with the Department of Health	3,067	4,166
Balances with NHS trusts	6,661	8,553
Balances with other central government bodies	2,290	877
Balances with local authorities	107	1,429
Total intra-government balances	**12,125**	15,025

Notes to the financial statements Continued

13 CURRENT ASSETS: CASH AND CASH EQUIVALENTS

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

Analysis of changes in net funds 2010

	31 March 2010 £'000	31 March 2009 £'000	Change in year £'000
Cash at bank and in hand	28,093	29,756	(1,663)
Overdraft (note 14)	(406)	(598)	192
Net funds	27,687	29,158	(1,471)

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

	2011 £'000	2010 £'000
Government Banking Service	39,373	26,789
Commercial bank accounts	3,059	898
Net funds	42,432	27,687

14 CURRENT LIABILITIES: TRADE AND OTHER PAYABLES

	2011 £'000	2010 £'000
Trade payables	8,959	9,022
Overdraft	693	406
Deferred income	16,728	15,325
PAYE and social security	13	-
Accruals	21,837	29,691
Other payables	4,081	3,669
Total trade and other payables	**52,311**	58,113

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:

	2011 £'000	2010 £'000
Balances with the Department of Health	2,984	6,726
Balances with NHS trusts	4,351	5,552
Balances with other central government bodies	1,295	1,746
Balances with local authorities	1,069	777
Total intra-government balances	**9,699**	14,801

15 PROVISIONS FOR LIABILITIES AND CHARGES

Movement in provisions 2011

	Legal claims	Future costs of early retirement	Agenda for Change	Other provisions	Total provision
	£'000	£'000	£'000	£'000	£'000
Provision at 1 April 2010	4,102	1,514	208	1,821	7,645
Expenditure during the year	(906)	(140)	(3)	(216)	(1,265)
Reversal of unused provisions	(13)	-	(205)	(282)	(500)
Additional provisions	851	-	-	650	1,501
Provision at 31 March 2011	**4,034**	**1,374**	**-**	**1,973**	**7,381**

Notes to the financial statements Continued

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

	2011 £'000	2010 £'000
Current liabilities		
Legal claims	62	1,190
Future costs of early retirement	153	233
Agenda for Change	-	208
Other provisions	220	461
Total provisions classed as current liabilities	**435**	2,092
Non-current liabilities		
Legal claims	3,972	2,912
Future costs of early retirement	1,221	1,281
Agenda for Change	-	-
Other provisions	1,753	1,360
Total provisions classed as non-current liabilities	**6,946**	5,553
Total provisions	**7,381**	7,645

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.

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 that took early retirement before 31 March 2011 which, in accordance with the terms of the agency's pension schemes (note 5) fall to the agency. The provision relates entirely to members of the UKAEA CPS.

Agenda for Change

The Agenda for Change provision related to the estimated increase in the non-medical staff costs from 1 April 2009 for former staff of the National Biological Standards Board. Actual increases in pay were based on formal job evaluations and were completed during the financial year ending 31 March 2011.

Other provisions

A provision of £1,310,000 (2010: £1,275,000) 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 on dilapidations.

A provision of £482,000 (2010: £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 £31,000 (2010: £64,000) for the estimated costs of the agency's liabilities in respect of the future costs of life assurance premiums for 5 staff up to their retirement dates to equalise the benefits provided to them under a former pension scheme.

A provision of £150,000 (2010: £nil) for the future rental for a property which cannot be occupied due to high levels of radon gas.

16 GOVERNMENT FINANCING

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

	2011 £'000	2010 £'000
Department of Health	188,958	222,190
Department of Health pandemic flu incremental funding	-	16,804
Scottish Government	631	722
National Assembly for Wales	1,097	1,174
Northern Ireland Assembly	377	380
Consultants' Clinical Excellence Award	1,859	1,844
Total government grant in aid received	192,922	243,114
Less non-cash capital grant in aid allocation	(2,968)	-
Less: Government grant in aid in respect of general capital expenditure	(36,381)	(50,000)
Total revenue government grant in aid received	153,573	193,114

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 £215,000 (2010: £663,000) 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 £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.

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

Notes to the financial statements Continued

Comparison of government grant in aid with results for the year

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

	2011 £'000	Restated 2010 £'000
Total revenue government grant in aid received	153,573	193,114
Depreciation on assets funded by capital grant in aid from the Department of Health (note 7)	22,719	24,254
(Gain)/loss on de-recognition of assets funded by capital grant in aid from the Department of Health (note 6)	(228)	231
Impairment of assets (note 7)	-	4,247
Total revenue government grant in aid relating to net operating cost for the financial year	176,064	221,846
Less: net operating cost for the financial year	(176,508)	(222,491)
Government grant in aid less net operating cost for the year	(444)	(645)

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:

	2011 £'000	2010 £'000
Total capital government grant in aid relating to the capital expenditure for the financial year	36,381	50,000
Capital grants recieved for specific projects (Department of Health non-cash)	2,968	-
Capital grants received for specific projects	559	8,494
Total capital financing for the financial year	39,908	58,494
Less: capital expenditure for the financial year	(30,482)	(48,930)
Capital financing less capital expenditure for the year	9,426	9,564

The under-spend on capital in 2010 relates to the Porton Down re-provision costs as referred to in note 6; this was carried forward into the 2010/11 financial year.

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 agency has had various material transactions with the Department of Health itself and with other entities for which the Department of Health is regarded as the parent entity. These include many NHS and primary care trusts, the NHS Litigation Authority and others.

In addition, the Health Protection Agency 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, the Department of Health, Social Services and Public Safety (NI), and the Medical Research Council.

During the year ended 31 March 2011, 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:

- Professor David Heymann is the chairman of the Health Protection Agency and acts as a Professor at the London School of Hygiene and Tropical Medicine, Mr Justin McCracken is the chief executive of the HPA and a member of the Court of Governors of the London School of Hygiene and Tropical Medicine, Professor Alan Maryon Davis was an advisor to the HPA Board until 31 May 2010 and also a governor of the London School of Hygiene and Tropical Medicine, Professor Anthony Kessel is a member of the agency's Executive Group and acts as a coordinator at the London School of Hygiene and Tropical Medicine, and Dr John Stephenson is a member of the agency's Executive Group and is appointed to the Council of the London School of Hygiene and Tropical Medicine. During the year to 31 March 2011 the agency both purchased goods and services from the London School of Hygiene and Tropical Medicine of £659,000 (2010: £633,000), and also provided goods and services of £149,000 (2010: £85,000).

- Dr Barbara Bannister is an employee of the Royal Free Hospital, and a non-Executive member of the HPA board. During the year to 31 March 2011, the agency purchased £163,000 (2010: £115,000) of goods and services from the Royal Free Hospital, of which £10,000 (2010: £10,000) related to the salary costs of Dr Bannister recharged to the agency in respect of each financial year. The agency also provided £114,000 (2010: £46,000) of goods and services to the Royal Free Hospital.

- Dr Paul Cosford is an employee of the East of England SHA and has been seconded to the HPA in the role of interim executive director of the Health Protection Services division since September 2010. During the year ended 31 March 2011 the agency purchased £259,000 (2010: £142,000) of goods and services from the East of England SHA, of which £112,000 (2010: £nil) related to the salary costs of Dr Cosford recharged to the agency. The agency also provided £82,000 (2010: £121,000) of goods and services to the East of England SHA.

- Mr Martin Hindle is a non-executive member of the agency's Board and chairman of the University Hospitals of Leicester NHS Trust. During the year to 31 March 2011, the agency both purchased £209,000 (2010: £578,000) of goods and services from the University Hospitals of Leicester NHS Trust, and also provided £271,000 (2010: £192,000) of goods and services.

- Mrs Deborah Oakley is a member of the Governing Body of the Royal Free Hospital, and is also a non-Executive member of the HPA board. During the year to 31 March 2011, the agency both purchased £163,000 (2010: £115,000) of goods and services from the Royal Free Hospital, and also provided £114,000 (2010: £46,000) of goods and services.

- Professor Stephen Palmer is an employee of the University of Cardiff and acted as a member of the Executive Group for the period 1 April to 30 June 2010. During the year ended 31 March 2011, the agency purchased £145,000 (2010: £224,000) of goods and services from the University of Cardiff, of which £35,000 (2010: £141,000) related to the salary costs of

Notes to the financial statements Continued

Professor Palmer recharged to the agency in respect of each financial year. The agency also provided £57,000 (2009: £16,000) of goods and services to the University of Cardiff.

- The agency has a minor shareholding in Syntaxin Limited (see note 10). During the year ended 31 March 2011, Syntaxin Limited paid £36,000 (2010: £36,000) for goods and services provided by the agency.

18 CAPITAL COMMITMENTS

The contracted capital commitments at 31 March 2011 not provided for in the accounts amounted to £5,768,000 (2010: £8,806,000). There were no other financial commitments at 31 March 2011 (2010: 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 2011 are given in the table below reported according to the period in which the total future minimum lease payment arises. The obligations are as at the date of the statement of financial position.

Obligations under operating leases comprise:	2011 £'000	2010 £'000
Land and buildings:		
- Not later than one year	4,673	4,353
- Later than one year and not later than five years	1,136	1,239
- Later than five years	116	104
Other leases:		
- Not later than one year	1,345	1,575
- Later than one year and not later than five years	84	314
- Later than five years	-	4
Total obligations under operating leases at 31 March	7,354	7,589

The total operating lease payments recognised as an expense in the period were £7,546,000 (2010: £7,843,000).

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 Dollars ($). 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 2011, the agency received Euro income equivalent to £9,188,000 (2010: £7,349,000) and US Dollar income equivalent to £7,230,000 (2010: £8,313,000) upon which there was some currency risk.

The only other currency risk is that of a Euro currency bank balance, valued at £226,000 (2010: £257,000), and a US Dollar bank balance valued at £227,000 (2010: £309,000). 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 2011, 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 at 31 March 2011 HMRC has commenced an initial review of the taxation affairs of the HPA to better understand activities of the agency, and with reference to the merger with the National Biological Standards Board.

There were no other contingent liabilities as at 31 March 2011 (2010: nil).

22 LOSSES AND SPECIAL PAYMENTS

Losses and special payments requiring disclosure during the year ended 31 March 2011 totalled £114,000 (2010: £190,000).

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 16 June 2011.

Five year financial summary

STATEMENT OF COMPREHENSIVE NET EXPENDITURE

	2006/07 £'000	2007/08 £'000	2008/09[1] £'000	2009/10 £'000	2010/11 £'000
Gross operating costs					
Employee costs	145,672	153,983	180,438	199,080	190,144
Other operating costs	91,543	100,845	117,119	134,974	110,383
Amortisation and depreciation	10,747	14,777	21,280	28,888	23,203
Total operating costs	247,962	269,605	318,837	362,942	323,730
Operating income	(93,887)	(109,188)	(128,483)	(140,433)	(146,298)
Interest receivable	(228)	(400)	(291)	(18)	(924)
Net operating cost for the financial year	**153,847**	**160,017**	**190,063**	**222,491**	**176,508**

GOVERNMENT FUNDING

	2006/07 £'000	2007/08 £'000	2008/09[1] £'000	2009/10 £'000	2010/11 £'000
Total revenue government grant in aid relating to net operating cost for the financial year	156,135	160,299	190, 370	221,846	176,064
Net operating costs	(153,847)	(160,017)	(190,063)	(222,491)	(176,508)
Gross (deficit) or surplus	**2,288**	**282**	**307**	**(645)**	**(444)**

STATEMENT OF FINANCIAL POSITION

	2006/07 £'000	2007/08 £'000	2008/09[1] £'000	2009/10 £'000	2010/11 £'000
Non-current assets					
Property, plant and equipment	153,958	167,177	249,468	274,247	280,626
Intangible assets	700	594	2,247	3,870	4,771
Financial assets	265	496	287	286	286
Total non-current assets	154,923	168,267	252,002	278,403	285,683
Current assets					
Inventories	4,261	3,419	10,594	13,417	11,254
Trade and other receivables	34,979	30,058	35,527	46,292	36,789
Cash and cash equivalents	22,914	30,415	29,756	28,093	43,125
Total current assets	62,154	63,892	75,877	87,802	91,168
Total assets	217,077	232,159	327,879	366,205	376,851
Current liabilities					
Trade and other payables	(58,538)	(56,359)	(56,754)	(58,113)	(52,311)
Provisions	(3,084)	(2,192)	(2,656)	(2,092)	(435)
Total current liabilities	(61,622)	(58,551)	(59,410)	(60,205)	(52,746)
Non-current assets plus net current assets	155,455	173,608	268,469	306,000	324,105
Non-current liabilities					
Provisions	(4,329)	(6,367)	(3,462)	(5,553)	(6,946)
Assets less liabilities	**151,126**	**167,241**	**265,007**	**300,447**	**317,159**
Taxpayers' equity					
Capital grant reserve	1,154	3,013	4,176	12,283	15,326
Revaluation reserve	11,614	18,179	50,950	56,445	57,133
General reserve	138,358	146,049	209,881	231,719	244,700
Total taxpayers' equity	**151,126**	**167,241**	**265,007**	**300,447**	**317,159**

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.

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