Item 4b(x) –
Appendix 10

Protecting our communities from harm: Hertfordshire Health Protection Plan

2014 -2017

Version 7 (19th May 2014)

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Contents

Preface

Healthier Herts: A Public Health Strategy for Hertfordshire committed the County Council to working with Partners on improving and protecting the health of our population. Priority 4 in the strategy is to "protect our communities from harm."

Priority 4 has a number of actions and this Health Protection Plan contributes to those. It is – alongside the Resilience Plans for the County - concerned with protecting the population's health from major incidents and other threats, while reducing health inequalities. The 'threats' include infectious diseases, environmental hazards and contamination (whether chemical, biological, radiological or nuclear) and extreme weather events.

Not all major incidents such as pandemic flu, flooding and all outbreaks of disease can be prevented. However, through proper surveillance of infectious disease and potential hazards (e.g. low food hygiene standards and air pollution) combined with very cost effective interventions (e.g. immunisation and regular food outlet inspections by our district Environmental Health departments), we can improve the health and wellbeing of the residents of Hertfordshire

Others actions within Priority 4 are about community safety (drugs, alcohol, offender health) and are not included within this strategy.

This Plan is our attempt to capture the work needed to deliver the health protection aspects of Priority 4 and the local work which is being undertaken to protect the population of Hertfordshire.

This Health Protection strategy aims to protect the residents of Hertfordshire from a variety of threats including

- infectious diseases,
- certain cancers which can be detected early and effectively treated
- air and other pollution

This complex set of challenges will require effective partnerships between many organisations and communities in Hertfordshire.

I am extremely grateful to all the partner organisations, all of them members of the Hertfordshire Health Protection Committee who have contributed to this Health Protection Plan.

Teresa Heritage
Executive Member – Public Health and Localism

1 Introduction

1.1 Background

This plan is about assurance. The Director of Public Health is responsible for assurance of health protection. His role includes challenging others in planning and delivery of measures to protect the population of Hertfordshire.

1.1.a **Definition**

Health protection is concerned with protecting the health of the population from a range of potential hazards and harms, using population-wide surveillance and interventions. In this respect it differs from other domains of public health, where the focus is often on the individual.

Health protection is one of the three key domains of Public Health and is one of the four domains of the Public Health Outcomes Framework, alongside improving wider determinants of health, health improvement and health services.

1.1.b **Scope**

The key national priorities for health protection are as outlined in the Public Health Outcome Framework (PHOF) under Domain 3. These are:

- Fraction of mortality attributable to particulate air pollution
- Chlamydia diagnosis
- Population vaccination coverage
- People presenting with HIV at a later stage of infection
- Treatment completion of Tuberculosis
- Public sector organisations with board-approved sustainable development management plan
- Comprehensive, agreed inter-agency plans for responding to healthy protection incidents and emergencies

Added to these are key priorities on:

- Effective surveillance of communicable disease, and management of communicable disease outbreaks
- Effective infection control in health and social care settings
- Effective food hygiene and regulation
- Effective control of infection in public venues like sports venues and schools

Whilst key priorities may be the responsibility of individual organisations, e.g. Public Health England: surveillance and management of communicable disease and outbreaks, and Environmental Health within district and borough councils: effective food hygiene and regulation, the Director of Public health within Hertfordshire County Council has responsibility for assurance and challenge in health protection.

Hertfordshire Health Protection Committee will provide a local forum for stakeholder organisations to share outcomes and plan improvements across organisational boundaries, reporting to Hertfordshire Local Health Resilience Partnership, Hertfordshire Local Resilience Forum and Hertfordshire County Council.

In addition, the Health Protection function in Hertfordshire will take on the oversight of the population based screening programmes for both cancer and non-cancer conditions such as neonatal and antenatal screening (within domain 2 of the PHOF) and oversight for mortality from communicable diseases (within domain 4 of the PHOF) as well as the new Public Health responsibility of assurance of infection control within care homes.

1.2 Purpose

Clear and integrated strategic plans are necessary to deliver the Public Health Strategy. The health protection strategic plan describes measures to protect the health of populations and prevent disease. After publication of the NHS White Paper, Equity and excellence: Liberating the NHS in 2010 the healthcare sector has undergone significant organisational change. It is recognised that successful implementation of this strategy will require effective relationships and partnerships, led by Public Health in Hertfordshire County Council, including the 10 district councils, Clinical Commissioning Groups, NHS England and the local Public Health England centre.

As the structure, functions, roles and relationships are being defined, the key challenge for agencies is to maintain the health of the population through the period of change and in the future.

Hertfordshire has a long history of effective relationships and collaborative approaches to delivery of services for health protection. This is most effectively demonstrated in the highly effective county-wide response to the Buncefield Fire incident in 2005 and the pandemic in 2009/10, and more recently, the current MMR vaccination catch up programme. We are confronted with new challenges to population health, such as the health effects of climate change; emerging epidemics and drug resistance; changing environments and demographics as well as the escalated risks of chemical and biological incidents. It is therefore necessary to develop and regularly review a strategy for health protection which focuses the coordinated efforts of all the relevant partners in Hertfordshire. The purpose of developing this plan is to produce a shared vision and an integrated three year strategy for health protection for the Hertfordshire population. The strategy is structured around the remit of the Hertfordshire Health Protection Committee which was established in August 2013 (Figure 1 – see page 6).

The plan sets out the priorities agreed by the Committee in terms of the areas of health protection that, if achieved, will bring the biggest benefits to the populations of Hertfordshire, and it is the responsibility of the Health Protection Committee to monitor its progress against this strategy and the subsequent action plans from the specialist groups.

1.3 Aims

- Provide assurance and oversight of the four key priority areas, as indicated in figure1:
- Reduce avoidable health inequalities and the burden of disease.
- Provide strategic direction for the planning and provision of high quality and evidence based services that meet the needs locally.
- Guide involvement and education of people from across all sectors and communities, to improve the provision of health protection information and to promote empowerment among communities.
- Regularly review and appropriately modify the strategy to maintain quality and relevance.

Figure1 – Overview of health protection strategy priorities

Infectious Diseases, inc immunisation	**Screening**	**Environmental Hazards**	**Resilience**
Blood-borne viruses • Hepatitis B • Hepatitis C • HIV - late diagnosis	**Cancer** • Breast • Cervical • Bowel	**Air Quality** • Particulates • Nitrogen Dioxide	**Emergency Planning** • Major Incidents • Pandemic
Respiratory • Seasonal Flu • Tuberculosis	**Non-cancer** • Ante-natal • Newborn • Diabetic retinopathy • Adult aortic aneurism	**Water Quality** • Cryptosporidium • Legionella	**Response** • Command and Control • Scientific & Technical Advisory Cell
Gastrointestinal • Norovirus • Campylobacter		**Food Safety** • Inspections • Food poisoning	
Healthcare Associated inc Care Homes • MRSA & MSSA • Clostridium *difficile* • E. coli		**Housing** • Infestation • Warm homes	

1.4 Who is the Plan for?

Members of Hertfordshire County Council, Executive Teams of Hertfordshire County Council, the 10 District and Borough Councils, Hertfordshire Local Health Resilience Partnership, NHS organisations including the two Clinical Commissioning Groups and NHS England, voluntary sector partner organisations and Public Health England. The delivery of this strategy also depends on its effective communication and engagement of the local residents, local communities and businesses in its implementation.

1.5 Accountability & Governance arrangements

Health Protection arrangements within Hertfordshire are overseen by the Hertfordshire Health Protection Committee. The Committee has agreed Terms of reference (appendix 1).

The breadth of the task is reflected by the Committee's primary accountability to Hertfordshire County Council and its need for agreement by all relevant partner organisations. The Health Protection Strategic Plan will be agreed by Hertfordshire County Council Cabinet.

Its role is to:

- Provide quality and risk assurance of health protection plans on behalf of Hertfordshire County Council and partner organisations
- Provide annual reports to Public Health and Localism Panel and Local Health Resilience Partnership, including health protection public health outcomes
- Agree local health protection strategy and influence local commissioning through Joint Strategic Needs Assessment process, to be approved by Hertfordshire County Council.
- Provide recommendations (to Hertfordshire County Council, Hertfordshire Local Health Resilience Partnership and Hertfordshire Resilience Forum) regarding the strategic/operational management of health protection risks; complementing and feeding into current accountability structures of Health Protection Committee organisations
- Coordinate the transition of health protection functions to partner organisations and to mitigate associated risks
- Escalate concerns where necessary
- Provide a forum for professional discussion of health protection plans, risks and opportunities for joint action

1.6 Key partners and implementation framework

To effectively implement the health protection priorities will require joint working with key partners who will be responsible for either commissioning or providing services to prevent and mitigate against the risks to the residents of Hertfordshire. These key partners are listed in the terms of reference and include:

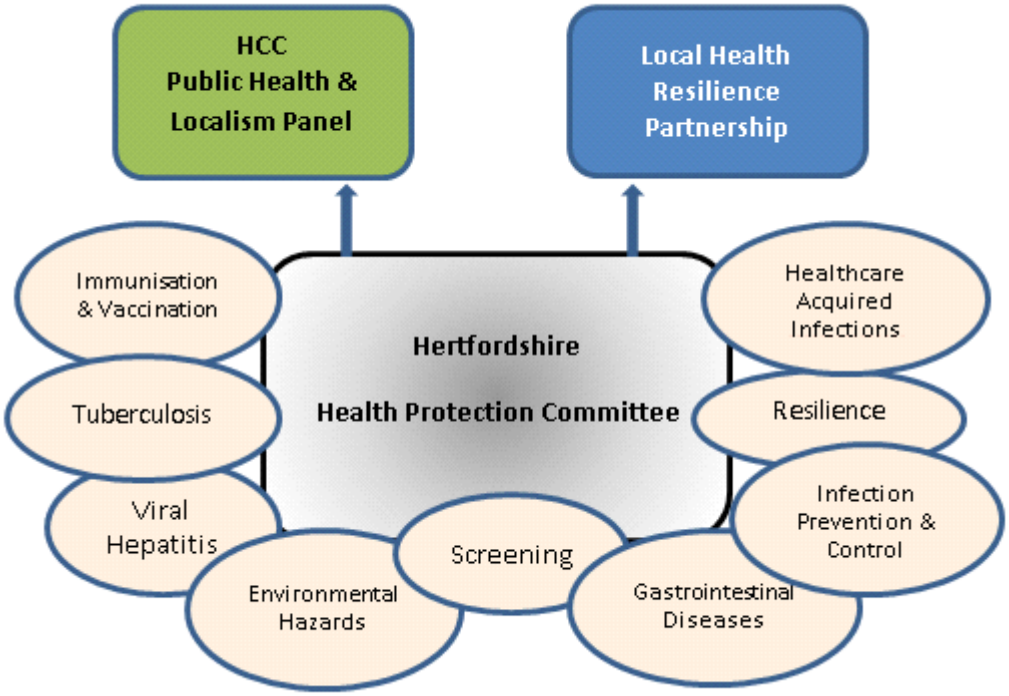
- Herts Valley and East and North Herts Clinical Commissioning Groups (CCGs) who commission the majority of health care, including quality issues such as Health Care Associated Infections (HCAIs) in Hertfordshire. They also have a role for Emergency Planning and Resilience within the NHS
- The Public Health England Centre (PHEC) team based in Letchworth who have key responsibilities to support the DPH and the Public Health team based in Hertfordshire County Council in the health protection function. They are required to provide robust surveillance and evidenced based practice to both prevent and respond to all the 4 main priorities areas of infectious disease, population based screening, environmental hazards and resilience. This

includes the screening and immunisation Public Health leads who are co-located with the Hertfordshire and South Midlands Team to ensure effective delivery and performance management of the relevant population based screening and immunisation programmes

- The District and Borough councils, through their Environmental Health Departments, have a key role in leading and delivering on environmental health priorities of air and water quality as well as food safety. They are also in a key position to promote other relevant health protection strategies such as the uptake of both population based screening and immunisation programmes.
- The Emergency Planning and Resilience team together with other partners of the local Hertfordshire Local Health Resilience Partnership (LHRP) are key in ensuring effective planning and response to major incidents.

In addition, all partners will be encouraged to support the four main priorities areas within Hertfordshire in an integrated approach to nine themes as outlined below in Figure 2.

Figure 2 - An integrated model for Health Protection in Hertfordshire



Established groups are already in place, which manage some elements of Health Protection. To provide assurance on the delivery of the health protection strategy, it is proposed to harness the following groups, each leading one of the four priority areas:

- <u>Infectious diseases</u>
  There is already a Hertfordshire Health Economy Infection Control and Outbreak Group which is co-chaired by the Directors of Infection Prevention and Control (DIPC) for the two CCGs. This group already leads on HCAI and will provide quarterly reports to the Health Protection Committee.

The Care Homes community infection and control programme group will continue to be chaired by the Assistant Director of Health Protection to provide assurance about infection control and prevention in care homes in Hertfordshire, reporting quarterly to the Health Protection Committee.

TB and Hepatitis B and C are addressed by the existing PHE-led networks which shall provide feedback and advice to the Hertfordshire Health Protection Committee.

Immunisation will continue to be led by the PHE-led immunisation network, reporting quarterly to the Health Protection Committee.

- Screening
  There is currently a Local Area Team group which will lead on screening for Hertfordshire Health Protection Committee.

- Environmental Hazards
  There is currently a Hertfordshire Environmental Health Public Health group which is leading on environmental health. It has representation of the environmental health departments in the districts and provides quarterly updates to the Health Protection Committee.

- Resilience
  Currently there are the Local Resilience Forum which is chaired by the Chief Fire officer and also the Local Health Resilience Partnership (LHRP) which is co-chaired by the Director of Operations and Delivery from the Hertfordshire and South Midlands team (AT) and the Director of Public Health. These both lead on resilience for the resilience planning and response for the whole of Hertfordshire and the NHS in the county respectively. Minutes of the Health Protection Committee will be submitted to the Local Health Resilience Partnership.

1.6 What are the key deliverables?

To provide assurance of delivery against the four key priorities, a Hertfordshire Health Protection dashboard has been drafted (appendix 2). The first priority is to identify and access the outcomes data for Hertfordshire and to set local targets for improvement compared with baseline data. Outcomes for each deliverable will be displayed as green (outcome achieved or on track), amber (on track to achieve by year end) or red (outcome not achieved or not expected by year end).

Quarterly reporting of outcomes by this method will be supported by narrative context, including improvement plans, for poor performing deliverables.

Section A - Infectious diseases including population based vaccination programmes

2 Immunisation and Vaccination

2.1 Why is this important?

Where available, immunisation offers the best possible opportunity of preventing infectious diseases in individuals and of containing spread of infections within local communities. Worldwide vaccination and immunisation programmes are the second most effective public health intervention after clean water and have saved many lives. It is important to emphasise the need to achieve high uptake of vaccines in order to prevent the re-emergence of vaccine-preventable diseases in our local communities. National evidence shows that inequalities in immunisation uptake are persistent. Evidence shows that children with incomplete immunisations are more likely to live in disadvantaged areas and are less likely to use primary care services.

Post April 2013 local leadership for improving and protecting public health lies with Hertfordshire County Council and the Director of Public Health (DPH), whose role is to work with the commissioners (NHS England Area Team) to improve uptake, to challenge commissioners where appropriate as part of an assurance role that ensures local services meet local needs and to protect the public in the event of an outbreak of infectious disease. The NHS England Area Team (AT) is responsible for commissioning all vaccination programmes and the performance monitoring of commissioned providers. The AT responsibility includes contract management, the dissemination of relevant Patient Group Directions (PGD) to practices for the new vaccination programmes. Public Health England (PHE) staff working within the AT provide clinical input to the commissioning of programmes, and a local link to practices for information, advice and support on new programmes and performance improvement. Local PHE centre staff provides an on-call clinical support service and nationally PHE provides system leadership and direction.

2.2.1 What the data tells us

Childhood immunisations

The Immunisation uptake rate in Hertfordshire is over 95% in 8 antigens. Up take in the remaining 4 antigens are above 90%. The 12 month Men C vaccine uptake in Q3 demonstrates a fall of over 2% from Q2 slipping to under the target.

The immunisation rates in Hertfordshire are higher than the rates for England and the National Average in all but one antigen (5YR MMR 1). The uptake data for each of the routine childhood vaccination programmes is shown in table 1. The target for these vaccination programmes are 95%. The data shows that uptake is generally good for primary immunisations but booster uptake is lower. In addition given that the second dose of Measles Mumps Rubella vaccine (MMR 2) is administered at the same time as the booster primary immunisations, some parents are still choosing not to have their child vaccinated with the MMR jab.

The following data is taken from COVER returns for quarters 1-3 4 2012/13 (January to March 2013) and provisional figures for quarter 1 2013/14 (April to June 2014). Hertfordshire tends to perform better than the England average.

Table 1: The uptake of childhood immunisation in Hertfordshire

Percentage uptake	**Herts**				**England**
12 months	**Q4 12/13**	**Q1 13/14**	**Q2 13/14**	**Q3 13/14**	**Q3 13/14**
DTaP/IPV/Hib	96.7	96.6	97.2	97.4	94.4
MenC2	96.6	96.2	96.2	94.1	91.8
PCV2	96.7	96.3	96.3	97.0	94.1
24 months					
DTaP/IPV/Hib	96.5	97.3	96.9	97.2	96.3
Hib MenC	95.7	96.5	96.3	96.4	92.7
PCV booster	94.8	95.6	95.7	96.6	92.8
MMR	93.8	95.0	95.4	95.8	92.9
5 years					
DT/Pol Primary	94.4	94.9	95.8	95.5	95.6
MMR 1st Dose	92.8	93.3	94.5	94.6	94.4
MMR 2nd Dose	91.6	92.2	92.5	93.7	88.4
DTaP/IPV Booster	93.7	93.3	94.0	94.8	88.8
Hib/MenC Booster	94.4	93.4	94.8	95.2	91.2

DTaP/IPV/Hib – Diphtheria tetanus and Pertussis (whooping cough)/ Polio/Haemophilus Influenza vaccine
MenC2 – two doses of Meningococcal C vaccine
PCV2 – two doses of Pneumococcal Vaccine
Hib MenC - Haemophilus Influenza and Meningococcal C vaccine

Seasonal flu

The following table summarises uptake for 2012/13; (the targets last year were 75% for those aged 65 and over, and 70% for those 'at risk' or pregnant), and compares progress up to 31st December 2013 in the 2013/14 campaign.

Table 2: Hertfordshire uptake of NHS flu vaccination

Year	All 65 and over	Under 65 at risk only	Pregnant and NOT IN a clinical risk group	Pregnant and IN a clinical risk group	All pregnant women	Healthy 2-3 year olds
12/13	77.4	52.6	39.1	61.6	40.6	n/a
13/14	>75.0 ⇩	53.9 ⇧	44.0 ⇧	65.6 ⇧	44.8 ⇧	45.0

Table 1 shows improved performance in Hertfordshire in 2013/14, when compared with 2012.13. Hertfordshire also compares well with England.

Table 2 shows that Hertfordshire continues to exceed the World Health Organisation target of 75% over-65 receiving flu vaccination and improvements in other groups since the previous year. Hertfordshire has achieved the highest seasonal flu rates overall compared with other areas in South Midlands and Hertfordshire.

Priority groups for seasonal flu vaccination in 2014/15 will be healthy children and under-65s at risk.

Measles, Mumps and Rubella: MMR Catch-up

Recent outbreaks of measles in other parts of England has prompted a catch-up programme of MMR vaccination, to increase rates of MMR immunity that were lessened in response to earlier, now proven unwarranted, concerns about links with autism. The programme encourages MMR vaccination of unvaccinated children and under-vaccinated, including those aged ten to sixteen. The optimal immune response requires two doses of MMR. By September 2013, Hertfordshire had achieved 87% of 10-16 yr olds with at least one dose of MMR.

A recent data validation exercise in Hertfordshire as part of the MMR catch up programme showed that data flows between GP Practices and CHIS are still not robust and many children who are immunised are not reported. Some children are missing out on immunisation because demographic data is not routinely updated to CHIS.

2.3 Strategic Plan

Hertfordshire is performing well when compared with other counties in South Midlands and Hertfordshire; however, there is potential for further improvements in some areas to reduce the risk of vaccine-preventable disease:

- Reduce inequalities in relation to accessibility to vaccine services.
- Ensure that the uptake of new immunisation programmes is maximised.
- Improve rates of influenza vaccination among health and social care workers, healthy children and groups at higher risk from complications of flu.

Effective immunisation programmes rely upon the accurate identification of eligible populations, efficient call and recall systems and well informed immunisers. Health Protection partners' organisations can raise awareness of the importance of vaccination, using consistent messages and existing lines of influence and communications.

2.4 Local Action

- The Area Team immunisation coordinators will deliver their action plan, including involvement of community pharmacists, to optimise performance for seasonal flu vaccination.
- The Area Team immunisation co-ordinators will Child Health Information Systems to clean and update data and data flows for childhood immunisations.
- Members of Hertfordshire Health Protection Committee will use their communications contacts to raise public awareness and encourage uptake of NHS immunisation by eligible groups, e.g. through Children's Services in Hertfordshire County Council.
- Potential to increase uptake of vaccination by care staff in residential homes, using existing Health and Safety regulations will be the topic of a new working group, led by Environmental Health Officers.

3 Tuberculosis (TB)

3.1 Why is it important?

TB is an important public health issue and has been identified as a priority by Public Health England. An effective TB control programme has many social elements and requires good multiagency working.

While both nationally and locally TB has declined in the indigenous population in the last sixty years, the proportion of cases has increased in specific high risk groups. About 70% of patients with TB in the UK were born abroad and other high risk groups include patients with HIV/AIDS, patients on treatment which suppresses their immune system such as cancer chemotherapy, very high doses of steroids and homeless people.

Although immigrants undergo screening for active TB infection before entering the UK, PHE says nearly half of cases among immigrants occur within five years of arrival, suggesting they have latent TB infection contracted overseas. PHE advises the best way to 'reverse the tide' is for GP practices to start screening for latent TB in at-risk groups, particularly immigrants from areas with a high incidence of the disease. PHE submitted the proposal to the National Screening Committee for evaluation and a decision on whether to adopt the programme. (Pulse, Oct 2013)

In 2005, following a continued decline in TB rates in the indigenous UK population; the schools programme was stopped as part of national policy. The BCG immunisation programme is now a risk-based programme which aims to target those in groups with the greatest risk. In the England, the BCG vaccination programme is focused on offering BCG vaccination to unvaccinated children with a parent or grandparent who was born in a high prevalence country (where TB rates are greater than 40/100,000 of the population).

Whilst currently there is no national target for achieving an annual decline in the UK, the WHO Millennium Development Goals have set a target of halving TB prevalence and mortality by 2015, compared to their level in 1990, and eliminating TB as public health problem by 2050.

3.2 What the local data tells us

In 2010 there were 319 cases of TB notified from South Midlands and Hertfordshire, with an overall rate of 11.9 (10.6 -13.3) per 100,000 population. The number of TB cases in Hertfordshire has remained relatively stable over the last 6 years. In 2005 there were 101 cases and annual incidence of 9.6 per 100,000 population. A total of 109 cases of TB were reported from Hertfordshire in 2011 representing a rate of 9.8 per 100,000 population. This rate remains lower than the UK average of 14.4 per 100,000, but has seen no significant change since 2005. Hertfordshire is designated a low prevalence County as its incidence is less than 40 per 100,000 of the population.

The treatment completion rates for TB have increased in Hertfordshire from 72% in 2004 to 82% in 2010, this compares to treatment completion rate of 80% in East of England and 86% in London during this time period. It is lower than the national target of 85%

In East of England there were 26 (8.8%) cases of TB with resistance to the drug Isoniazid and 11 (3.7%) cases with multidrug resistant TB; data is not available for Hertfordshire.

3.3 Strategic Plan

PHE has established a National TB oversight Group and have published a National Strategy for Tuberculosis (TB) control for consultation by June 2014. Until the national strategy is ratified TB prevention and treatment in the UK is guided by NICE Clinical Guidance 117: Tuberculosis: *Clinical diagnosis and management of tuberculosis, and measures for its prevention and control*

- To reduce the risk of new infections
- To provide high quality treatment and care for people with tuberculosis
- To maintain low levels of drug resistance.

The long term goal is to reduce and ultimately eliminate TB in England. The Stopping Tuberculosis in England (2004) action plan set outs steps to be taken by the NHS, wider government and health communities to tackle TB.

3.4 Local Action

- To provide regular timely local TB epidemiological data for the local health economy, including TB resistance data for Hertfordshire.
- To continue early identification and prompt treatment and follow-up of cases and close contacts, including the Hertfordshire screening pilot for latent TB.
- To engage with the South Midlands and Hertfordshire multi-agency TB group/network
- To manage local TB incidents and outbreaks
- To advise NHS commissioners with regard to improving TB treatment completion rates.
- To co-ordinate a County response to the TB Strategy consultation.

4 Viral Hepatitis B and C

4.1 Why is it important?

4.1.1 Hepatitis B

Hepatitis B is 100 times more infectious than HIV. Hepatitis B virus (HBV) can cause acute and chronic disease; acute infection results in inflammation of the liver (hepatitis) and in rare cases liver failure due to fulminant hepatitis. Chronic or lifelong infection leads to liver damage, and in some cases liver cirrhosis and cancer.

In the UK there are around 180,000 people in the UK suffering from chronic liver infection. In addition there are around 1300 new cases with acute infection and 7,700 with chronic infection each year. Of the new cases with chronic infection around 300 are infected in this country and the remaining 96% have entered the UK from parts of the world with high prevalence of hepatitis.

Ninety per cent of babies born to mothers with acute or chronic hepatitis B infection during pregnancy, or living with household contacts of infected individuals, can be prevented from becoming infected hepatitis 'carriers' by appropriate vaccination. In the final quarter of 2012/13 vaccine coverage was 8/8 (100%) for 3 doses at 12 months of age and 8/9 (88.9%) for 4 doses at 24 months. In the first quarter of 2013/14 coverage was 10/10 (100%) at 12 months and 10/10 (100%) at 24 months.

4.1.2 Hepatitis C

Like HBV, Hepatitis C causes inflammation of the liver and if left untreated results in chronic liver disease, liver failure and death over a course of many years**.** Although the number of confirmed Hepatitis C virus (HCV) infections has increased over the years, the number of chronically infected cases who remain unaware of their diagnosis remains high. Despite the availability of effective antiviral therapies for HCV it is estimated that only 3% of those with chronic infections receive them each year.

An estimated 160,000 people in England have chronic Hepatitis C infection in England, many of whom are unaware of the infections. In 2012 there were 2,266 hospital admissions, 326 deaths and 114 liver transplants due to end stage HCV infection.

Currently the Public Health team in HCC is leading a review of the pathway for Hepatitis C infections to ensure that a comprehensive service is being both commissioned and provided to the residents in Hertfordshire.

4.2 What the data tells us

Targeted Hepatitis B vaccination is an important measure to reduce the number of cases.

National data suggests that more cases of Hepatitis C should be identified in order to provide treatment and reduce long-term health problems associated with chronic infection.

4.2 Strategic Plan

The overall aim is to reduce burden of Hepatitis B and C by focusing on reducing the pool of unidentified cases, increasing the number of cases receiving treatment and being monitored, and ending onward transmission. This will also improve the quality of life for people living with infection.

4.3 Local Action

- Review Hertfordshire arrangements for viral hepatitis B and C, in comparison with national standards, including provision of robust data.
- Identify areas of good practice and areas for improvement to inform a locally managed clinical Hepatitis Network which includes all care providers
- Advise service commissioners of patient pathway requirements and proposed quality indicators.

5 Gastrointestinal Infections

5.1 Why is this important?

There are a number of bacteria, viruses, parasites and toxin-producing agents which cause gastrointestinal (gut) infections. The most common symptoms of gastrointestinal infections are vomiting and diarrhoea varying from mild to severe. These can at times result in chronic conditions and complications of the kidneys, nervous system and the gut.

Nearly one fifth of the population in the UK is affected by gastrointestinal infections each year. In addition to causing significant suffering and disability to the individual gastrointestinal infections have significant economic impact on health care services and on society due to absenteeism from work. Gastrointestinal infections also account for nearly two thirds of all travel-associated infections in the UK. However, most cases of gastrointestinal infections are not reported. It is estimated that there are 147 cases and 10 GP consultations for every case reported to national surveillance. It is estimated that nationally there are 17 million sporadic cases of gastrointestinal infections annually.

5.1.1 Norovirus

The most common viral organism for gastrointestinal infection in the UK is Norovirus, with an incidence of 4.7 per 1000 person years. It occurs most commonly during the winter months, so is also known as 'winter vomiting virus'. It is transmittable from person to person and spreads easily in shared living environments such as care homes and hospitals.

5.1.2 Campylobacter

Campylobacter is the most common bacterial organism for gastrointestinal infection in the UK, with an incidence of 9.3 cases per 1000 person years. It is usually ingested with infected food and is not transmitted directly from person to person.

5.1.3 Salmonella

Probably the best known organism causing gastrointestinal infection, Salmonella is less common than norovirus or campylobacter. In the last quarter of 2013 (July-September 2013) 29 cases of Salmonella were reported from Hertfordshire which is a crude rate of 2.58 per 100,000 population.

Surveillance and public health management of gastrointestinal infections is within the remit of Public Health England (PHE). The local Health Protection Team of PHE works closely with the Local Authority Environmental Health officers in the 10 District Councils to control food-borne gastrointestinal infections. Public Health in Hertfordshire County Council works closely with commissioners and providers to prevent and control transmissible gastrointestinal infections.

5.2 What the data tells us

Gastrointestinal infections that resolve without treatment, and often have milder symptoms, such as Norovirus are under-reported.

'Food poisoning' from Campylobacter is reported to individual district and borough councils, limiting early opportunities to identify possible cross-boundary outbreaks.

Gastrointestinal infections are the most frequently occurring type of infectious outbreaks.

5.3 Strategic Plan

To improve and widen the reporting of gastrointestinal infection surveillance data in Hertfordshire, to better understand the local situation.

Given the under-reporting of Norovrus (and probably other mild forms of infection) it would be helpful to raise awareness; providing advice for prevention and self-help, for the population. To further increase awareness, local schools will be encouraged to teach infection prevention and hygiene in the science and PHSE parts of the curriculum.

Gastrointestinal infections should be a scenario topic when testing the Joint Outbreak Control Plan (PHE)

5.4 Local Action

- To add incidents of campylobacter to regular surveillance reports, to help identify cross-boundary outbreaks.
- To disseminate weekly updates on Norovirus outbreaks to partner organisations
- To update and exercise the Outbreak Control Plan with partner agencies
- To organise teaching and training for Environmental Health Officers
- To work with local Hertfordshire CC and the public health team to increase public awareness for preventing gastrointestinal infections, e.g. infections associated with travel abroad, food storage and hand hygiene
- To support use of E-Bug teaching resources in Hertfordshire Schools.

6 Community Infection Prevention and Control

6.1 Why this is a priority

Community Infection Prevention and Control (CIPC) is concerned with preventing the spread of infection in primary and community care settings. A wide variety of health and social care is delivered in these settings; therefore it is increasingly important that CIPC is embedded in local service delivery to protect patients and staff.

Healthcare-associated infections arise across a wide range of clinical conditions and can affect patients of all ages. Poor prevention and management of healthcare-associated infections can result in spread of infection or outbreaks, particularly gastrointestinal and respiratory infections. During the winter of 2012/13 there were 97 residential care closures due to gastrointestinal infections.

There is a significant need for effective CIPC outside the healthcare sector, for example in closed environments such as residential schools, prisons and residential care. Accountability for CIPC arrangements in residential care homes sits with the Director of Public Health.

Other infections may spread rapidly in open environments such as day schools and nurseries. These include infections such as Chicken Pox and Scarlet Fever, neither of which is preventable by vaccination.

6.2 Strategic Approach

The multiagency Hertfordshire Health Economy Infection Control and Outbreak Group provides strategic leadership for the prevention and control of healthcare-associated infections including Clostridium difficile (C. diff) and methicillin resistant staphylococcus aureus (MRSA). The Hertfordshire C. diff Task and Finish Group has been set up as a subgroup of the Hertfordshire Health Economy Infection Control and Outbreak Group to implement measures to reduce the incidence of C. difficile infections. The Hertfordshire Health Economy Infection Control and Outbreak Group provides reports to the Health Protection Committee.

Infection Prevention and Control in HMP The Mount is the responsibility of NHS England, which commissions prison healthcare. Assurance is provided through communication between the NHS England Lead officer and the Hertfordshire Offender Health Group, chaired by Public Health.

Infection Prevention and Control in care homes is the subject of a dedicated project to assess the effectiveness of current standards and to make recommendations for improved governance through commissioning. The project is overseen by the Health Protection Committee and is accountable to the Director of Public Health.

Increased incidence of infectious ‘childhood’ diseases is alerted by Public Health England surveillance. The key role of partners is to disseminate appropriate advice to parents and schools as quickly as possible, through existing trusted channels, with the aim of containing the spread of infection and ensuring children receive appropriate treatment.

6.3 Local Action

- Implementation and evaluation of the Hertfordshire multi-agency C. *difficile* Improvement Plan
- Building on evaluation of a pilot, to establish a scheme for enhanced quality standards for infection prevention and control in care homes
- Ensure a joined-up approach to Communications for infectious outbreaks.

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7 HIV Population Screening Programme

7.1 Why this is a priority

HIV is now a treatable disease and, if identified soon enough, people with HIV can anticipate near-normal life expectancy; however, an estimated one in four people with HIV is unaware of their infection. Currently we rely on a testing system that expects people to come forward and ask for a test, with the result that many people are tested for the first time after they feel unwell, and in these cases treatment is less successful. HIV tests are usually done by a specialist sexual health service (GUM), or related health clinic such as tuberculosis, dermatology or drugs misuse. At least 76% of people diagnosed with HIV will have visited their GP surgery in the previous 12 months – potentially a wasted opportunity to diagnose HIV sooner.

Screening is usually offered to healthy people who show no signs of illness but may be at increased risk of a disease or condition. Guidance and data from the Department of Health advises of higher-risk groups in the population; such as people from sub-Saharan Africa, men who have sex with men, those using unsterile injecting equipment, and those receiving unlicensed piercings and tattoos.

The Department of Health recommends that local authorities with an HIV prevalence rate greater than 2 per 1,000 should consider HIV screening in non-traditional settings, such as GP surgeries, with the aims of reducing the rate of late diagnoses and improving treatments outcomes.

Table 3: HIV Prevalence per 1,000 population in Hertfordshire Districts 2012.

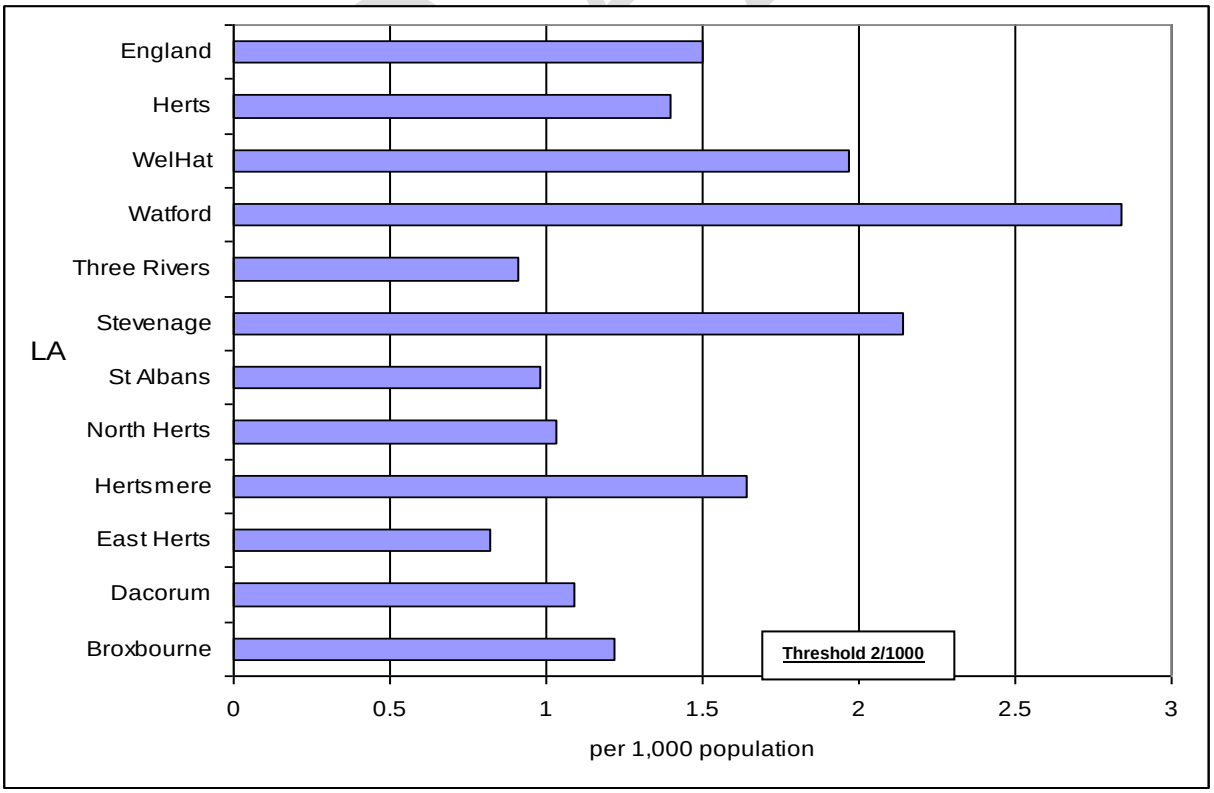
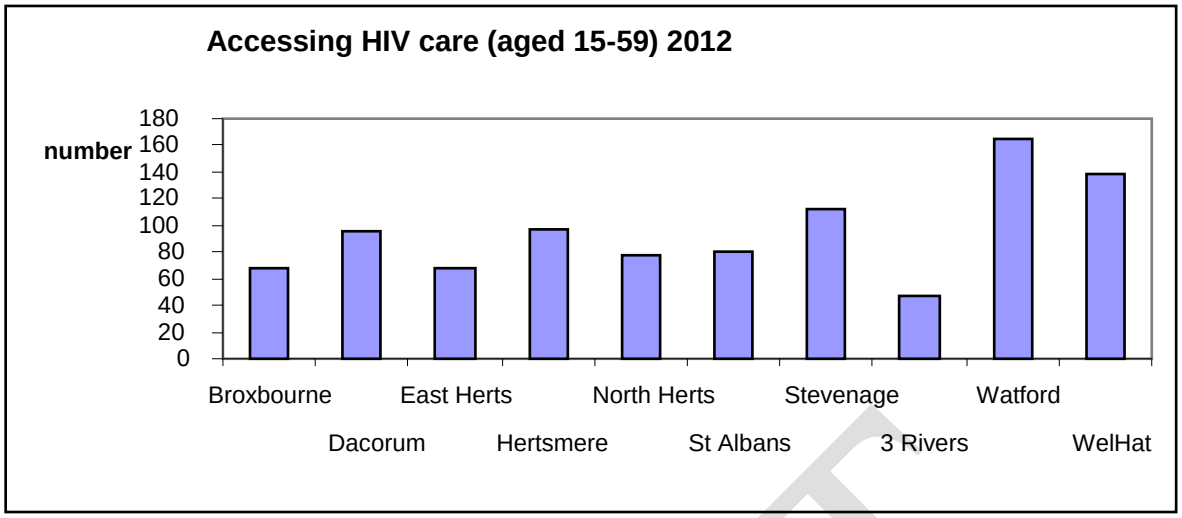


Table 4: Number of HIV+ people in Hertfordshire Districts accessing HIV care



7.2 What does the local data tell us?

Hertfordshire has two boroughs above the Department of Health threshold for wider HIV testing (Watford and Stevenage) and a third fast approaching the threshold (Welwyn Hatfield). The discrepancies across Hertfordshire appear to be associated with demographic differences, particularly the country of origin of residents, including the student population in Hatfield.

Evaluation of pilots in London and Brighton indicate approximately 1% reactive rate for tests targeted to higher-risk individuals (reference range 0.7-1.3%) or 0.4% for wider population screening (reference range 0.31-0.48%), which makes the testing cost-effective. HertsAid has identified four new diagnoses in Hertfordshire.

7.3 Strategic approach

Through reducing the number of people with HIV who are undiagnosed and reducing the rate of HIV diagnoses that are made at a late stage of infection, effective treatments can begin sooner and enable people to live longer lives without complications of HIV.

7.4 Local action

- Increased testing opportunities in the three boroughs affected: Watford, Stevenage and Welwyn Hatfield, using selected testing models in each area according to the population profile
- HertsAid is commissioned to support HIV screening in non-traditional settings
- Depending on outcomes achieved, testing may be rolled out to other settings such as hospital admission wards, community pharmacies and University of Hertfordshire.

8 Healthcare-associated Infection

8.1 Why this is a priority

Healthcare associated infections (HCAIs) are infections that result from healthcare procedures within hospitals and other health and care settings. They can sometimes be transmitted between patients and/or healthcare workers. These infections can cause significant illness, not least because those affected tend to be older and frail with pre-existing health problems. All hospital cases of healthcare associated infection have the potential to lead to extended stays in hospital and, in the case of an outbreak, may lead to the closure of a ward or department.

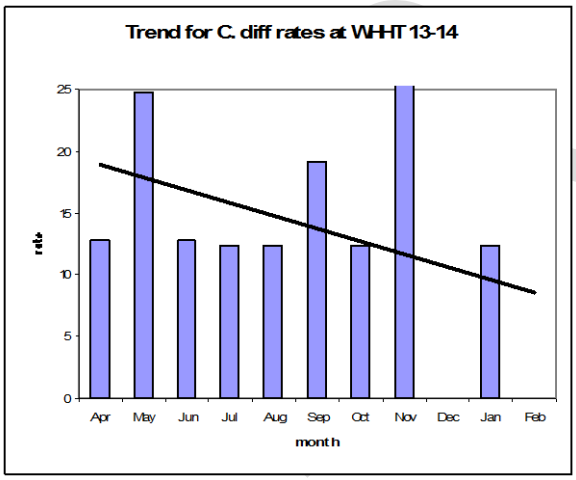
Over recent years the incidence of both MRSA and C. *difficile* has reduced dramatically in hospitals, based upon surveillance, training and, most importantly infection prevention and control procedures. However there is no cause for complacency, because Hertfordshire still sees occasional C. *difficile* outbreaks in both hospitals and care homes, often in people who have been cared for by their GP.

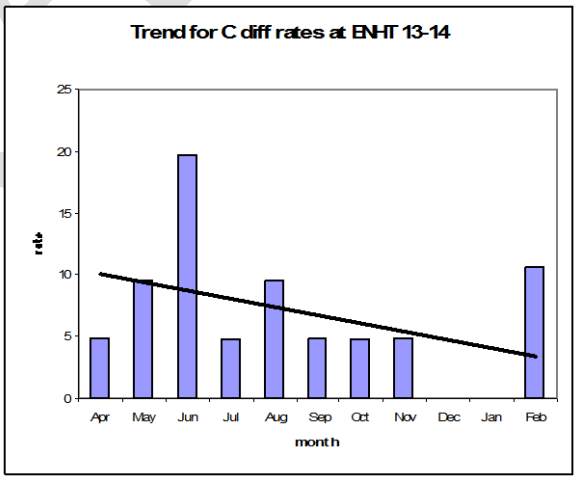
Table 5: – C. difficile cases apportioned to CCGs in South Midlands and Herts 2013/14

Count of all CCG cases per month

CCG Code	CCG Name	Trajectory	2013									2014			Total
			April	May	June	July	August	September	October	November	December	January	February	March	
06F	NHS Bedfordshire CCG	85	5	2	6	12	2	7	6	6	6	4	7		63
03V	NHS Corby CCG	13	3	2	0	0	3	5	3	0	0	0	1		17
06K	NHS East and North Hertfordshire CCG	75	10	9	13	15	6	4	11	9	8	7	10		102
06N	NHS Herts Valleys CCG	108	11	10	7	10	10	12	8	17	9	8	8		110
06P	NHS Luton CCG	25	2	3	3	4	4	5	1	2	3	0	2		29
04F	NHS Milton Keynes CCG	44	2	4	1	9	5	7	10	6	9	7	4		64
04G	NHS Nene CCG	153	17	15	17	13	11	12	15	21	11	14	11		157
	South Midlands and Hertfordshire	**503**	**50**	**45**	**47**	**63**	**41**	**52**	**54**	**61**	**46**	**40**	**43**		**542**

Source: Eastern England Field Epidemiology Unit





8.2 What the data tells us

The cases attributed to Hertfordshire represent local residents, regardless of where the infection originated or was confirmed. The criteria for apportioning cases to hospital or community are set at national level. Both acute general hospitals in Hertfordshire show a downward trend in rates of C. *diff*. As hospital cases have reduced progressively in recent years, an increasing proportion of infections occur in community settings; however, many of these patients have a recent history of hospital admission.

Hertfordshire exceeded the C. *difficile* trajectory for 2013/14; however, cases analyses show few lapses in preventative measures. Trajectories for 2014/15 in Hertfordshire are:

	Objective 13/14	Performance 13/14	Objective 14/15
East and North Herts CCG	75	102 to Feb	97
Herts Valleys CCG	108	110 to Feb	123
Hertfordshire total	**183**	**212** to Feb	**220**
East and North Herts Hospitals Trust	14	13 to Jan	15
West Herts Hospitals Trust	24	24 to Jan	31
Hertfordshire Community Trust	14	13 to Jan	13

8.3 Strategic approach

Application of the basic principles of infection prevention and control:

- Reducing risk factors such as limiting use of indwelling devices (e.g. catheters and feeding tubes) and compliance with antimicrobial prescribing guidance
- Appropriate testing to identify cases
- Rapid isolation of infectious cases
- Timely deep cleaning regimes
- Recommended treatment of infected patients
- Communication among all stakeholders
- Understanding and sharing required improvements to practice.
- Continuing surveillance.

8.4 Local action

- Working together across the whole health economy, and into social care provision, to identify vulnerable patients who may be at risk as they move between care providers.
- Summary analysis of individual case investigations (RCAs) to fill gaps in current good practice.
- Inclusion of PHE predictive risk tool in the IPC in Care Homes project (see Section A.5)

Section B - Population Screening Programmes

9.1 Why this is a priority

Screening has a significant effect on population health by identifying cases of illness at an early stage when treatment is more likely to be successful, thus preventing complications and death. Screening is offered to healthy people who show no signs of illness, but may be at increased risk of a disease or condition. The current UK population screening programmes include antenatal and newborn, as well as young person and adult screening programmes (i.e. cancer and vascular screening).

The screening programme pathways involve multiple service providers including call and recall services providers, primary care, secondary care laboratory and pathology services and secondary care assessment and diagnostics services. These programmes are provided to very large population cohorts and therefore require very considered and diligent coordination and assurance re programme specific failsafe procedures at multiple pathway points.

All national programmes have recently undergone transition as commissioning responsibilities transferred from local PCTs to NHS England and quality assurance responsibilities are taken up by Public Health England. Oversight of programmes, to identify any HCC support requirements is undertaken through the Health Protection Committee on behalf of the DPH.

Cancer screening programmes have well established programme performance and quality measures in place as defined in the NHS England / Department of Health service specifications. No screening test is 100% accurate and therefore programme performance is carefully monitored by Cancer Screening Quality Assurance Reference Centres to ensure the screen positive and screen negative rates are within the anticipated range for the population being screened and concordant with other screening programme providers. Colposcopy and endoscopy performance is monitored in a similar way.

Cancer screening programmes are offered to defined population age and gender cohorts. Screening rounds vary according to the level of risk (for example the bowel cancer screening programme invites men and women aged 60 - 74 years for screening every 2 years) so programme performance is measured by coverage rather than uptake.

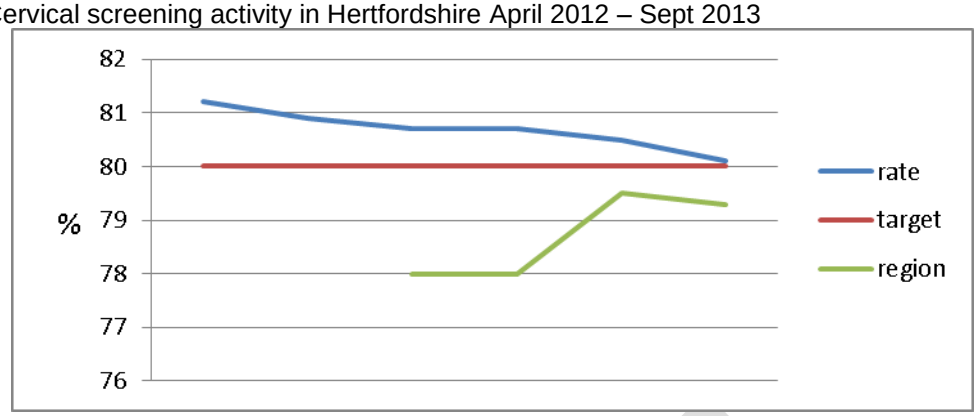
There are a number of possible measures to assess performance, all of which are reviewed at quarterly Programme Board meetings.

9.1.1 What the data tells us

***Cervical screening*:** Hertfordshire achieves the 80% target for coverage of cervical screening for the whole, eligible, age range (25 – 64). Nationally and locally there is a decline in uptake of the first screening invitation amongst women aged 25 years. Performance in this younger age group (25 – 49) remains a challenge. Although rates

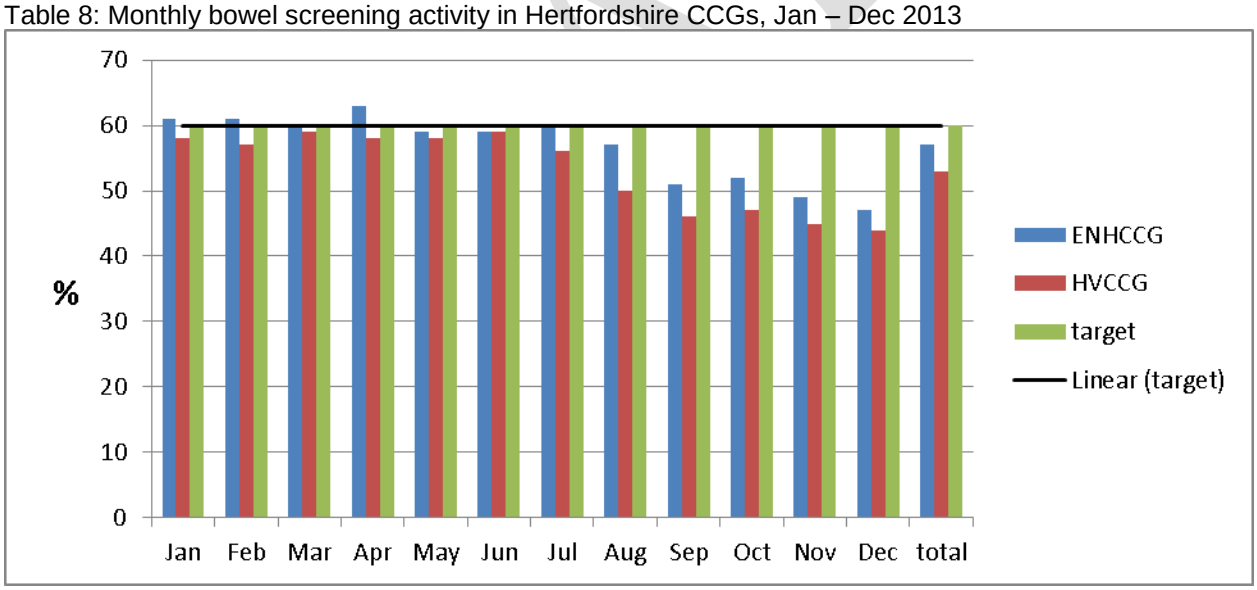
have reduced slightly, Hertfordshire has maintained its ranking of number one in the region since October 2012.

Table 7: Cervical screening activity in Hertfordshire April 2012 – Sept 2013



***Bowel cancer screening*:** Providers are required to achieve 60% coverage. Hertfordshire has two screening programmes, the West Hertfordshire Screening Programme and the East & North Hertfordshire Screening Programme. Both units are below this target, with reducing activity since July. Other programme indicators show a high level of performance locally.

Table 8: Monthly bowel screening activity in Hertfordshire CCGs, Jan – Dec 2013



***Breast screening*:** There are two breast screening units which screen the Hertfordshire population. The Bedfordshire and Hertfordshire Breast Unit screens approximately two thirds of the Hertfordshire population and the remainder is screened by the North of London screening service. The North of London service meets all standards shown however the Beds and Herts Service does not meet 21 day target from screen to assessment.

Table 9: Breast screening activity in Hertfordshire Mar – Aug 2013.

Description	National Target	Hertfordshire (12/13)	Comments
Uptake of breast screening in 53-70 yr olds	>70%	73.4%	National figures range 62.3 – 77.1%

For non-cancer screening the current Key Performance Indicators (KPIs) are still under development and a national KPI process group has been reviewing the measures and targets to ensure they are realistic, achievable and measuring what they are supposed to measure. As a result of this we anticipate further changes during 2013-2014.

Antenatal & Newborn Screening

Table 10: national performance indicators

KPI	Description	Data Source
ID1	Antenatal Infectious Disease Screening – HIV coverage	Maternity Unit
ID2	Antenatal Infectious Disease Screening – Timely referral of Hepatitis B positive women for specialist assessment	
FA1	Down's Syndrome Screening – Completion of laboratory request forms	Down's Screening Lab or Ultrasound Department
ST1	Antenatal Sickle Cell & Thalassaemia Screening – Coverage	Maternity Unit & Antenatal Screening Lab
ST2	Antenatal Sickle Cell & Thalassaemia Screening – Timeliness of Test	
ST3	Antenatal Sickle Cell & Thalassaemia Screening – Completion of Family Origin Questionnaire (FOQ)	
NB1	Newborn Bloodspot Screening – Coverage	Child Health Record Departments
NB2	Newborn Bloodspot Screening – Avoidable Repeat Tests	Newborn Bloodspot Screening Lab
NB3	Newborn Bloodspot Screening – Timeliness of result availability	Child Health Record Departments
NH1	Newborn Hearing Screening – Coverage	Newborn Hearing co-ordinators via eSP
NH2	Newborn Hearing Screening – Timely assessment for screen referrals	
NP1	Newborn Infant Physical Examination – Coverage (newborn)	Maternity Units/SMART system
NP2	Newborn Infant Physical Examination – Timely assessment of developmental dysplasia of the hip	

Table 11: East & North Hertfordshire ANNB Screening Programme KPI performance for 2013/14

KPIs (2012-2013)	ID1	ID2	FA1	ST1	ST2	ST3	NB1	NB2	NB3	NH1	NH2	NP1	NP2
Acceptable Level	≥90%	≥70%	≥97%	≥95%	≥50%	≥90%	≥95%	<2.0%	≥95%	≥95%	≥90%	≥95%	≥95%
Achievable Level		≥90%	≥100%	≥99%	≥75%	≥95%	≥99.9%	<0.5%	≥98%	≥99.5%	≥100%	≥99.5%	≥100%
Q1	99.8%↑	75% ↑	97.6% ↑	100%↑	63% ↓	100%↑	97.4% ↑	2.18%	100%↑	99.8%↑	97.2%↑	n/a	

Table 12: West Hertfordshire ANNB Screening Programme KPI performance for 2013/14

KPIs (2013-2014)	ID1	ID2	FA1	ST1	ST2	ST3	NB1	NB2	NB3	NH1	NH2	NP1	NP2
Acceptable Level	≥90%	≥70%	≥97%	≥95%	≥50%	≥90%	≥95%	<2.0%	≥95%	≥95%	≥90%	≥95%	≥95%
Achievable Level		≥90%	≥100%	≥99%	≥75%	≥95%	≥99.9%	<0.5%	≥98%	≥99.5%	≥100%	≥99.5%	≥100%
Q1	99.3%=	0% =	98.6%↑	99.7%↑	n/a	99.2%↓	96.9%↑	3.88%	99.7%↑	99.5%=	97.0%↑	n/a	

Diabetic Eye Screening: There have been data quality problems but the required migration of software has now occurred and from Q2 data will be both reliable and timely thus allowing improved performance monitoring.

Table 13: Hertfordshire Diabetic Eye Screening Programme KPI performance for Q1 2013/14

KPI Description	Uptake of digital screening encounter	Uptake of digital screening encounter
	East & North Herts	West Herts
Uptake of digital screening encounter *(Achievable Level)*	≥80%	≥80%
	87.3% ↑	79.4% ↓

Abdominal aortic aneurysm screening: This new screening programme for men commenced in Hertfordshire in July 2013 and implementation was overseen by a programme management group which will continue to monitor performance.

Table 14: Hertfordshire AAA Programme KPI and performance for 2013/14 (8th October 13)

KPI Description – *Data source: PHE AAA Programme Extranet (reports)*	Acceptable Level	Achievable Level	Performance
The proportion of men eligible for Abdominal Aortic Aneurysm screening to whom an initial offer of screening is made	≥90.0%	100.0%	100%

9.3 Strategic approach

Performance for all of the screening programmes is the responsibility of NHS England, which chairs the South Midlands and Hertfordshire programme management boards. Delivery is led by the NHS England Area Team Screening and Immunisation Manager, supported by stakeholders including PHE Quality Assurance leads, clinical leads and acute sector programme managers. The Boards produce an annual work plan led by the Screening and Immunisation Manager and supported by Screening Coordinators. The boards monitor performance and operational issues as well as develop plans and detail actions to address areas of poor performance, quality assurance and health inequalities and any required programme developments.

9.4 Local Plan

- The Public Health England team, embedded in the Area Team is leading a collaborative approach to identify and resolve any performance and quality issues that arise in the programmes.
- The Herts & South Midlands screening team is working to raise awareness of the low uptake in the younger age group for cervical cytology and is establishing links with colleagues in primary care and local authorities to develop a collaborative approach to the issue.
- Members of Hertfordshire Health Protection Committee will, through communications colleagues, raise local awareness and encourage uptake of NHS screening programmes by eligible residents.

Section C - Environmental Health

10.1 Why this is a priority

Environmental hazards are usually outside the control of the individual or local population. Environmental health aims to protect against environmental factors that may adversely impact on human health or the ecological balances essential to long term human health, environmental quality and quality of life. Such factors include, but are not limited to, air, food, water, radiation, toxic chemicals, noise, housing, psychosocial factors, safety hazards and habitat alteration. These are monitored and problems addressed through a range of tools and techniques including promotion, behavioural change and enforcement.

In Hertfordshire, environmental health services are provided by the 10 district and borough councils which have agreed the following environmental health priorities for this strategy:

Each district and borough will set its own corporate priorities, agreed with their local Members. The issues described below represent cross cutting health protection issues which are important for all authorities.

10.2 Pollution of Air, Land and Water

The Environment around us has an important influence on our lives in terms of our health and wellbeing. Poor air quality, contaminated land and water pollution can lead to serious acute and chronic disease.

Air pollution is responsible for a range of respiratory conditions , cardiovascular disease, cancers and birth defects. Approximately 29,000 people in the UK die of air pollution related causes. Air pollution is currently estimated to reduce the life expectancy of every person in the UK by an average of 7-8 months with estimated equivalent health costs of up to £20 billion each year. Air pollution deaths in Hertfordshire rose from 5.8% in 2010 to 6.05% in 2011and is now the worst performing area outside London (Department of Health's 2011 data on its public health indicator for the fraction of mortality attributable to man-made particulate air pollution in England).

In Hertfordshire the main pollutants of concern are fine particulate matter (measured as PM 2.5 and/or PM10) and nitrogen oxides (NOx) including nitrogen dioxide (NO2). The main source in Hertfordshire is road traffic, i.e. combustion of fossil fuels.

Where possible, air quality monitoring is undertaken by local authorities at sites that represent public exposure in proximity to busy roads. As at 2012 eight local authorities within Hertfordshire have designated Air Quality Management Areas (AQMA). All the 14 AQMA's have been determined as a result of elevated concentrations of NO2 in the vicinity of residential properties.

The eight local authorities with AQMAs are:

Broxbourne Borough Council

Dacorum Borough Council
East Hertfordshire District Council
Hertsmere Borough Council
North Hertfordshire District Council
St Albans City and District Council
Three Rivers District Council
Watford Borough Council

10.2.1 What the data tells us

Poor air quality in Hertfordshire is linked with deaths. Air pollution is mostly linked with road traffic.

Also of relevance to Hertfordshire is ground level ozone. This is formed when pollutants such as nitrogen oxides and volatile organic compounds (VOCs) react in sunlight and is one of the major constituents of summer smog. High levels can cause breathing problems, reduce lung function and trigger asthma symptoms. Since 2001 the concentration of rural ozone monitored at the East Herts Rural site has exceeded the government objective.

10.2.2 Strategic Plan

An air quality strategy exists for each district/borough area, which is evidence based and will contain actions for that Local Authority.
Where possible, air quality monitoring is undertaken by local authorities at sites that represent public exposure in proximity to busy roads.

The identification of AQMA's helps prioritise mitigation strategies in areas where air quality is poor. With limited resources LA's tend to concentrate monitoring in AQMA's, which makes sense, but it is also important to monitor air quality outside these areas to determine the impact of new development locally and to obtain representative data on mean concentration levels.

Hertfordshire district/borough councils are reliant on nationally or London derived data about hospital admissions associated with respiratory disease, effect on mortality/premature deaths. It will be helpful to explore how more Hertfordshire specific data could be obtained.

Ensuring there is a robust monitoring network in place to inform the health impact database for Hertfordshire will allow the planners to make informed, robust health impact assessments of future infrastructure proposals which may impact adversely on the County. It will also provide additional information to allow effective prioritisation of the most disadvantaged areas for joint action.

10.2.3 Local Plan

For each Air Quality Management Area (AQMA) there is an Action Plan that identifies District/Borough specific actions that each local authority should be aiming to

implement in order to reduce air pollution levels within the AQMA. Key actions that are common to most if not all Action Plans are:

- Engagement with the planning regime at Local Plan and individual planning application level to ensure appropriate scales, locations and types of development and that where necessary air pollution mitigation is incorporated into any planning permissions.
- Support uptake of low emission vehicles. e.g. use of OLEV (Office of Low Emission Vehicles) funding to install electric vehicle re-charging infrastructure in local authority owned car parks
- Support initiatives to encourage modal shift, e.g. education projects, supporting walking and cycling and public transport initiatives

Plus:

- The district/borough councils will explore external funding schemes to enable additional monitoring stations across Hertfordshire.
- The district/borough councils will explore feasibility to identify funding to restart the Air Alert scheme which made air quality information available to people that signed up to it and was targeted at vulnerable sections of the population.
- Hertfordshire data will be sought to measure local health harms from air pollution.

10.3 Contaminated land and pollution of water supplies

10.3.1 Why this is a priority

Exposure to contamination is typically through inhalation of dust or gases, contact with the soil or through consumption of food grown on the land. Contamination of the land can also cause problems in the water supply. Acute and chronic disease can affect the respiratory, cardiovascular, the nervous system, and the brain although the overall impact on the UK populations is difficult to quantify.

There are no specific details about the total number of sites affected by contamination or the area that these would represent, however, estimates for England are that there is 64,000ha (158,000 acres) of brownfield land (DCLG 2005). There is a number of dedicated contaminated land sites in Hertfordshire deemed as requiring remedial action. There are areas that have particular problems usually due to previous industrial use, utilities such as gas works and there are certain parts of Hertfordshire where there are natural contaminates such as radon and arsenic.

The water quality standards laid down in the drinking water Directive apply to all public and private water supplies intended for drinking, cooking, food preparation and other domestic purposes. In the UK a high proportion of outbreaks of waterborne disease have been associated with public & private water supplies. Campylobacter,Cryptosporidium and Giardia are the most common pathogens associated with these outbreaks. Water can also have physical and chemical contamination including pesticides and metals that can be harmful to health.

Under the requirements of Part 2A of the Environment Protection Act 1990 all local authorities are required to inspect its area from time to time for the purpose of identifying contaminated land and must ensure that suitable remediation is undertaken to remove identified significant risks.

10.3.2 What the data tells us

The difficulty to relate or attribute harm to health associated with contaminated land is arguably more complex than attributing the equivalent harm to microbiological contamination of food, or to an unsafe work environment because the health impacts of the former would typically be chronic rather than acute and may in a similar way to air pollution represent a contributory risk factor to other underlying behaviours or health issues.

Nevertheless there are well publicised recent cases where land contamination has given rise to public health concerns, including psychological concerns for the local population. National standards are in place for chemical levels in soil; levels in excess of these standards are deemed to be 'contamination'.

10.3.3 Strategic approach

Each local authority is responsible for producing its own contaminated land strategy setting local approaches for dealing with contaminated land and for providing advice to planning colleagues on the development of brown field sites. This work is delivered in partnership with the environment agency, public health colleagues and the water authorities, to ensure actions and public information are proportionate, based on expert advice and consistent.

10.4 Housing Quality

10.4.1 Why this is a priority

Housing has a major role to play in maintaining and improving quality of life and contributes to a range of health outcomes. Poor quality housing can have significant negative effects on many health problems including respiratory illness, hypothermia, heart attacks and strokes. These negative effects have more significance to older vulnerable people; for example conditions such as arthritis can be exacerbated by cold and damp conditions increasing the risk of falls. Figures for Hertfordshire indicate that there are around 500 additional deaths during the winter. Many of these are associated with cold weather and can be avoided.

Much of the Housing EHP's work focuses on assessing homes using the statutory risk assessment system known as the Housing Health and Safety Rating System, or HHSRS. 29 hazards are assessed under the system, with those most commonly encountered including falls, excess cold, damp and mould, fire, entry by intruders, and overcrowding.

Much of the focus of the councils' proactive housing work is to identify and inspect Houses of Multiple Occupancy (HMOs), as this sector can present greater risks, resulting from sharing of amenities, less security and privacy, less space, and increased risk from fire.

There were estimated to be nearly 5000 HMOs in Hertfordshire in 2012, of which 515 HMOs had been licensed, and it was estimated that a further 115 HMOs may still require a licence.

10.4.2 What the data tells us

Exposure to damp and mould in domestic housing is linked to minor respiratory ailments, asthma, eczema and allergies. A warm home, especially in the winter months, is vital for the health of vulnerable people who have long-term conditions. Those with severe asthma or a chest or heart problem, face the additional risk of a stroke or heart attack in cold temperatures.

Fuel poverty is tackled by EHPs through specifying works requiring landlords to remedy excess cold hazards, and with partners through initiatives such as promoting and facilitating home energy efficiency improvements for home owners through national and local incentive schemes. The World Health Organisation recommends heating rooms to 21^{o}C in daytime and 18^{o}C for sleeping for older people, very young children and those with poor health.

10.4.3 Strategic approach

Districts and boroughs are responsible for ensuring appropriate standards in domestic housing and have a range of tools available to remedy substandard housing and overcrowded living conditions.

The Keep Warm, Stay Warm scheme is an annual campaign. Hertfordshire County Council joins with all 10 district councils, the NHS and key voluntary organisations to help those at risk from cold-related illness. It combines advice for help with paying fuel bills, advice for saving energy, emergency heaters, draught-proofing and emergency grants. In 2012/13, more than 10,000 residents were helped by the scheme.

East Herts Council found it was getting more requests for service from tenants about damp and mould than about any other housing issue. Most of these were found to be due to condensation. As well as damaging the property and possessions, condensation can lead to inhalation of mould spores and respiratory disease.

The Council produced a leaflet giving clear advice about ways to control condensation through reducing and removing airborne moisture, and effective use of heating and ventilation. Following interest from Hertfordshire colleagues, other councils in Hertfordshire and Bedfordshire now use the leaflet, which has their contact details included.

10.4.4 Local action

District councils approve Disabled Facilities Grants (DFGs) for adaptations to homes of people with disabilities. When DFG changes in 15/16 to become part of the Better Care Fund, adequate provision will be required within Local Plans.
In addition to the statutory responsibilities of District and Borough councils, partner organisations will come together to review the results of Keep Ward, Stay Warm in 2013/14 and to provide the scheme across Hertfordshire in 14/15.

The national alerts from Public Health England for cold weather will be shared with district councils, the NHS and key voluntary organisations, to trigger their planned actions, including advice to residents.

10.5 Outbreak management

10.5.1 Why this is a priority

Outbreaks are do not respect geographic boundaries and there is a need to provide assurance that following transition, arrangements the command, control and co-ordination for outbreaks derived from a variety of sources including food, environmental or animals are fit for purpose, rehearsed and understood by all partners.

The most common organism for gastrointestinal infection in the UK is Norovirus, with an incidence of 4.7 per 1000 person years. Campylobacter is the most common bacterial pathogen, with an incidence of 9.3 cases per 1000 person years.
The notification, investigation and control of infectious diseases are necessary to identify potential sources and vehicles of transmission, thereby preventing spread. In some cases notifications are used to monitor the development of community outbreaks or the success of immunisation programmes.

The following diseases are notifiable under the Health Protection (Notification) Regulations 2010:

Acute encephalitis
Acute meningitis
Acute poliomyelitis
Acute infectious hepatitis
Anthrax
Botulism
Brucellosis
Cholera
Diphtheria
Enteric fever (typhoid or paratyphoid fever)
Food poisoning
Haemolytic uraemic syndrome (HUS)
Infectious bloody diarrhoea
Invasive group A streptococcal disease and scarlet fever
Legionnaires' Disease
Leprosy
Malaria
Measles

Meningococcal septicaemia
Mumps
Plague
Rabies
Rubella
SARS
Smallpox
Tetanus
Tuberculosis
Typhus
Viral haemorrhagic fever (VHF)
Whooping cough
Yellow fever

The Public Health (Control of Disease) Act 1984, as amended by the Health and Social Care Act 2008, enables EHPs to respond to modern-day health hazards, including previously unknown hazards such as SARS and Polonium 210, as well as known infections and contamination that could result in significant harm to human health.

10.5.2 Local action

Environmental Health Practitioners have a role in the statutory process of the notification of infectious disease and its investigation in the community at local level with the aim of preventing spread and recurrence of disease. They will work with others not only across Hertfordshire but also nationally if so required, in the event of a major infectious disease occurrence. Public Health England will work in partnership with EHPs to assist in the investigation of an outbreak, collect samples, interview affected individuals and act as a liaison point for the community.

Multi-agency plans are in place and are being revised in light of changes in legislation. Co-ordination of a Joint Outbreak Plan, and exercises to test its effectiveness, is led by Hertfordshire Health Resilience Partnership.

10.6 Food Safety

10.6.1 Why this is a priority

Foodborne disease is a major cause of illness in the UK population and imposes a significant burden on both infected individuals and the economy. Although the majority of cases are mild, they are unpleasant and uncomfortable, result in absences from education or the workplace and place a significant demand on healthcare services. Occasionally cases can lead to serious or long-term conditions, or even death.
It is estimated that each year in the UK

- around a million people suffer a foodborne illness
- around 20,000 people receive hospital treatment due to foodborne illness
- there are around 500 deaths caused by foodborne illness
- it costs the economy nearly £1.5 billion

(Food Standards Agency Foodbourne Disease Strategy 2010-15)

10.6.2 What the data tells us

Hertfordshire has approximately 9000 food businesses, ranging from manufacturers, staff canteens, retail premises including butchers, and takeaway outlets to domestic caterers, restaurants and cafes and residential care homes. There were 1171 officially reported cases of food poisoning in Hertfordshire between 2010 and 2013 (PHE notifications of infectious diseases) and more than 6000 food hygiene interventions were made during 2012 in Hertfordshire.

Food Safety interventions are carried out on all commercial food premises within the 10 district/brought areas. The incidents of gastroenteritis still remain high see 5.1.

10.6.3 Local action

The purpose of these interventions is to try and reduce the risk of gastroenteritis through education, local liaison, and enforcement if necessary. Mobile traders that operate cross-boundaries are also included in intervention programmes.

The work of the EHP includes promoting and enforcing compliance with food safety legislation in food businesses, ensuring the production, transportation, storage, preparation and sale of food in hygienic conditions. EHPs also have a role in informing and educating the public to promote good practice in improving diet and nutrition.

Food sampling is carried out to support these food safety controls and investigations of food. Nearly 400 food samples were sent for microbiological testing from district councils in Hertfordshire in 2012.

All local authorities in Hertfordshire have now adopted the national Food Hygiene Rating Scheme which promotes good hygiene standards amongst food businesses by publicising a rating following inspection.

The sampling of high risk food in care setting environments, such as nursing homes and hospitals, is being undertaken in Stevenage, to assess the incidence of Listeria spp. A questionnaire is used to evaluate knowledge of the food handling staff and their awareness of Listeriosis, and the adequacy of their Food Safety Management Systems (FSMS). Each care setting is being provided with feedback and the results of sampling, which,contributes to the aim of improving health of the over 65s who may be particularly at risk from Listeriosis..

10.7 Health and Safety

10.7.1 Why this is a priority

Occupational Health and Safety is a cross disciplinary area concerned with protecting the safety, health and welfare of people at work. This also extends to members of the public who may be affected by a business's work activity.

There are two regulatory authorities that enforce Occupational Health and Safety within England and Wales. The Health and Safety Executive (HSE) is a government agency with enforcement responsibility for Hospitals, Factories, Mines, Quarries, and other higher risk sectors. District Councils are the regulatory authority for shops, offices, and similar lower risk premises to which the public have access.

In England and Wales last year (2012-13) 148 workers were killed whilst at work, and 423 members of the public died as a result of a work activity. Over 175,000 accidents leading to 7 days or more off work were reported [Labour Force survey]. In the previous year (2011-12) an estimated 27 million working days were lost as a result of work related illness and accidents. This costs the society an estimated £13.8 billion.

Across Hertfordshire last year there were in excess of 1200 reported accidents, of which 19% were severe enough to warrant an investigation.

10.7.2 Local action

Each district or borough council has its own planned interventions for Health and Safety each year. These concentrate on national campaigns released by the Health and Safety Executive and local issues identified by the Local Authority. This can include smoking in public places compliance checks. Other projects being rolled out across Hertfordshire in 2013-14 include enhanced infection control for tattooists and piercing establishments**.**

EHP's across Hertfordshire also work together to deliver countywide Health and Safety projects to engage with businesses, and promote good work practices and provide advice. Recent local projects have covered a diverse range of topics such as Noise at Work, Asbestos, Sun beds, and unlicensed tattooists.

Local Authorities also use EHP's to license and inspect non-medically supervised skin piercing procedures, for infection control and worker safety. These procedures include: Ear and Body Piercing, Tattooing, Acupuncture, Electrolysis, and cosmetic Laser procedures.

Currently 5 Local Authorities across Hertfordshire are working together with licensed tattoo parlours to identify unlicensed tattooists. These unlicensed businesses put their customers at greater risk of blood borne virus transmission and infection. (see Section A.4) They often operate out of domestic premises and reuse needles. The aim is to bring these unlicensed businesses up to the required standards, or close them down.

Awareness days have been taking place across Hertfordshire, and articles have been printed in local press, and council distributed magazines. Leaflet have also been produced for distribution to Doctors surgeries, Community Centres, Schools, and Housing Associations.

Section D – Resilience

12 Why is this important?

Resilience is an umbrella term that describes arrangements for emergency planning and business continuity. It can be applied to any circumstance that disrupts usual operations, such as consequences of severe weather, loss of power or water, infectious outbreak or major incident. Preparedness is a mandatory responsibility of a range of commissioning and providing organisations.

12.1 Strategic approach

Resilience may relate to an organisation, a function of a site. Each organisation has dedicated officers with responsibility for resilience planning and testing. Such plans are signed off by the Local Resilience Forum and, for health, the Local Health Resilience partnership.

The resilience role of the Health Protection Committee is to share information that may influence resilience planning, including expectations for provision of mutual aid.
The Health Protection Committee minutes are noted by both LRF and LHRP.

Members of the Health Protection Committee are consulted for their specialist understanding on topics such as Pandemic Flu Planning, which combines resilience and business continuity planning with a health and social care planned response

12.2 Local Plan

- To disseminate alerts to trigger actions in response to local Heatwave and Cold Weather plans.
- To review and update relevant resilience plans, e.g. Response Plan for Infectious Outbreaks, including Pandemic Flu
- To participate in exercises to test multi-agency response plans

Appendices

Appendix 1: Hertfordshire Health Protection Committee

Terms of Reference

1. Purpose:

To bring together the key individuals and organisation to provide assurance that there are safe and effective plans in place to protect the health of the local population.

It will provide both a strategic planning overview and a mechanism to respond to emerging events; to be assured that plans are delivered and effective and to challenge and influence stakeholders as required.

It will identify existing networks and develop a structure to link with them.

Topics for assurance, surveillance and oversight will include communicable disease control, infection prevention and control, emergency planning, sexual health, environmental health, and screening and immunisation programmes, which impact on service planning and business continuity.

2. **Objectives**:

- To provide a forum for effective multi-agency working with Hertfordshire County Council, Clinical Commissioning Groups, Commissioning Support Services, Health and Social Care Providers, National Commissioning Board and Public Health England relating to Health protection.
- To assess the risks to the health of the population of Hertfordshire in respect of the health protection function.
- To prioritise those risks and develop plans to prevent, mitigate and manage them.
- To ensure clear lines of communication in planning and response with multi-agency partners relating to health protection.
- To ensure that Health Protection issues are raised in the appropriate internal and external fora, including the Local Health Resilience Partnership, the Hertfordshire County Council Resilience Forum.
- To ensure that plans set out the key arrangements needed to respond to incidents and events, including the release of clinical resources, handover protocols, and clearly defined roles and responsibilities.
- To act as the single authoritative body within Hertfordshire County Council on matters relating to Health Protection.
- To ensure Health Protection is incorporated into the ways of working of all Departments and service areas across Hertfordshire County Council, through active engagement and education of staff.

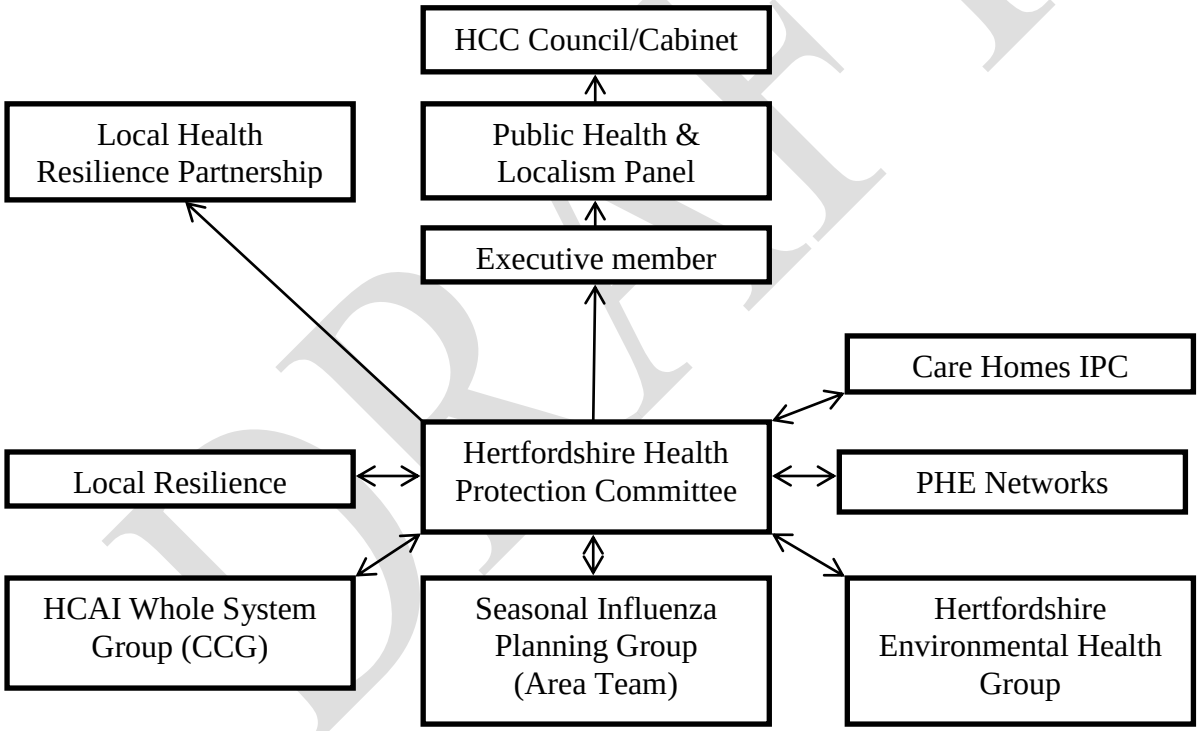
3. Accountability:

The Health Protection Committee will undertake the statutory assurance function on behalf of the DPH, through accountability via the Public Health and Localism Cabinet Panel to HCC Full Council.

Regular reporting to HCC Senior Management Team, Herts Health and Wellbeing Board, and Clinical Commissioning Groups' Boards will be undertaken by their representative at the Health protection Committee through existing reporting structures, for example the Hertfordshire HCAI Whole System Group and the S. Midlands and Hertfordshire Seasonal Influenza Planning Group.

The Health Protection Committee will act as a sub-committee of Hertfordshire Local Health Resilience Partnership, within its Terms of Reference and with delegated responsibilities.

3.a Relationships with other Groups:



4. Responsibilities:

- Agree a health protection strategy for Hertfordshire, approved by Members and partner organisations
- Provide strategic health protection input into the Joint Strategic Needs Assessment (JSNA)
- Act as a cross-boundary co-ordination group for emerging public health risks, including collaboration on communication.
- Hold regular meetings to consider for each topic: current situations, progress against health protection outcomes, planning and testing arrangements.

- To review incidents managed and lessons learned, and recommend to partners, commissioners and providers any necessary changes.
- Receive and review risk registers held by members.
- Produce quarterly reports, plus additional reports for health protection events as required by DPH.
- Provide an annual health protection report, for inclusion within The Annual Report of the DPH.
- Provide a forum for professional discussion of health protection plans, risks and opportunities for joint action
- Promote the importance of the health protection agenda.

5. Programme

The assurance function will be undertaken at quarterly meetings, timed to brief the Executive Member and Local Health Resilience Partnership

The response function will be by initial teleconference meeting, with frequency, method, participation and purpose of further meetings determined by circumstances.

6. Membership

The level of the Health Protection Committee would require membership at Assistant Director level or higher in the following disciplines.

Chair	Director of Public Health, or delegated responsible officer.
Clinical Commissioning Groups (2)	Director of Infection Prevention & Control, Emergency Planning Manager
Public Health England and NHS England Hertfordshire and South Midlands Area Team	Screening and Immunisation Lead(s)
Public Health England Hertfordshire and South Midlands Unit	Consultant in Communicable Disease Control
District & Borough Councils	Environment Health Leads
Hertfordshire County Council	Emergency Planning/Resilience Lead,
Other Organisations	Co-opted as appropriate

Appendix 2: Health Protection Dashboard (draft template for quarterly reports)

Headlines – quarterly summary of new or emerging themes

For example: *Cases of scarlet fever continue to rise. Information has been sent to all schools, nurseries and childminders about the treatment available from GPs and recommended absence from school.*

PHOF

2.20 Cancer Screening Coverage *(example for illustration)*

Overall performance against targets	Exceeded	On target	Below target
Comparison with previous report	Improved	Similar	Worse
Areas of concern. *The rate of younger women coming forward for cervical screening remains above the national target but is showing a slow decline.*			
Improvement plans. *We will work with NHS England and Public Health England to understand the underlying reasons and adopt any planned national campaigns. In the absence of national action, we will design a local programme to promote cervical screening among 25-49 year old women.*			

2.21 Access to Non-Cancer Screening Programmes

Overall performance against targets	Exceeded	On target	Below target
Comparison with previous report	Improved	Similar	Worse
Areas of concern			
Improvement plans			

3.1 Fraction of mortality attributable to particulate air pollution

Overall performance against targets	Exceeded	On target	Below target
Comparison with previous report	Improved	Similar	Worse
Areas of concern			
Improvement plans			

3.2 Chlamydia diagnoses (15-24 yrs)

Overall performance against targets	Exceeded	On target	Below target
Comparison with previous report	Improved	Similar	Worse
Areas of concern			
Improvement plans			

3.3 Population Vaccination Coverage

Overall performance against targets	Exceeded	On target	Below target
Comparison with previous report	Improved	Similar	Worse
Areas of concern			
Improvement plans			

3.4 People presenting with HIV at a late stage of infection

Overall performance against targets	Exceeded	On target	Below target
Comparison with previous report	Improved	Similar	Worse
Areas of concern			
Improvement plans			

3.5 Treatment completion for Tuberculosis

Overall performance against targets	Exceeded	On target	Below target
Comparison with previous report	Improved	Similar	Worse
Areas of concern			
Improvement plans			

4.8 Mortality rate from communicable diseases

Overall performance against targets	Exceeded	On target	Below target
Comparison with previous report	Improved	Similar	Worse
Areas of concern			
Improvement plans			

DH Number and rate of confirmed cases of Clostridium *difficile*

Overall performance against targets	Exceeded	On target	Below target
Comparison with previous report	Improved	Similar	Worse
Areas of concern			
Improvement plans			

Appendix 3: Hertfordshire Health Protection Activity Plan 2014/15

Health Protection Plan Reference	Objective	Activity/Output	Outcomes	Performance Indicators	Stakeholder agencies	Timescale	Comments
2.4 Immunisation and Vaccination	To achieve optimal levels of MMR vaccination	Multi-agency support for MMR catch-up and routine childhood immunisation programmes	Herd immunity for measles in Hertfordshire, preventing local outbreaks.	95% vaccinated at age 2.	NHS England Public Health England	Annual programme	Herd immunity is a level of immunised individuals that protects the unvaccinated also.
	To achieve national standards for uptake of seasonal flu vaccination	Implementation of combined and targeted communication plan	Increased protection of vulnerable groups. Reduced demands on services due to complications from flu.	75% uptake by eligible groups	NHS England Public Health England	Annual programme September to March.	NHS England is responsible for delivery of programme by providers. HPC will work to raise public awareness and demand for vaccination.
	To increase vaccination rates among residential home staff	Explore use of Health& Safety regulations to increase vaccination rate in care staff	Reduced risk to residents of preventable infections. Improved protection of staff from occupational risks	Establish a baseline in 14/15	EHO led HCC PH PHE HCPA	Inclusion in winter programme from Sept 14	
3.4 Tuberculosis	To provide timely local TB epidemiological data for the local health economy, including resistance data for Hertfordshire	*tba by PHE*			Public Health England		
	To progress Hertfordshire	Testing pilot for residents in high-	Early identification	Baseline to be established	Led by PHE GPs	Evaluation of pilot due summer 2014	

	screening pilot for latent TB	risk groups for latent TB	and prompt treatment, reducing risk of new infections.		TB Specialist Nurses		
4.2.1 Blood-borne Viruses	To review Hertfordshire arrangements for Hepatitis C, in comparison with national standards	Completion of self-assessment tool	Local knowledge to inform Hepatitis C pathway development	n/a	Led by HCC PH Advice to commissioners.	Report due September.	
	To raise standards within piercing and tattoo premises	Explore feasibility of enhanced quality standard for Hertfordshire business registration	Risk reduction for BBVs.	% tattoo parlours that are licensed.	Led by EHOs HCC PH PHE	Ongoing	A joined up approach across districts and boroughs
	To advise commissioners of patient pathway requirements and proposed quality indicators	Multi-agency (network) development of Hepatitis pathway and commissioning plan	Hertfordshire meets national standards for Hepatitis C	Link with NHS commissioning cycle.	CCGs NHS England HCC PH	November 2014	
5.2 Gastrointestinal Infections	To identify cross-boundary outbreaks	Incidents of campylobacter added to regular surveillance reports	Environmental Health departments enabled to identify and investigate outbreaks.	Inclusion in monthly/quarterly data reports	Data provision by PHE Response by EHOs	Quarterly/ongoing	Current management is within individual districts
	To increase public awareness of preventing gastrointestinal infections	Multi-agency communications plan for targeted dissemination of information and advice	Increased awareness of hand hygiene, food safety and travel health.	Activity: No and type of communications.	Led by HCC PH Communications HP Committee members	Annual programme	
	To increase knowledge of	Support and encouragement	Consistent learning, linked	% Increase in use in Herts schools	HCC PH HCC Children's		E-Bug is an accredited EU

	prevention and appropriate treatment of GI and other infections.	of E-Bug learning resource in primary and secondary schools	with national curriculum for science and PHSE		Services PHE		learning resource, disseminated in the UK by PHE.
6.3 Community Infection Prevention and Control	To obtain assurance of IPC governance systems in care homes	To roll out interim, opt-in, assessment and award scheme for IPC systems	Reduce risks of infection to care and residential home residents	Number of care homes registering with scheme	HCC PH CCGs PHE	Launch Sept 14 Assessments Dec 14 Certificates valid 2015	Based on results of pilot undertaken in 2013/14
7.3 HIV Population Screening	To establish population screening where prevalence exceeds 2/1,000	Commission rapid testing programme in local settings	Reduce late diagnoses and increase effectiveness of treatment	% diagnoses made at late stage of disease.	HCC PH 3rd Sector Primary Care		
8.3 Healthcare Associated Infections	To further reduce incidence of *c. difficile* disease in Hertfordshire	Ensure all relevant guidance is fully implemented	Fewer cases attributed to Hertfordshire	Ceilings for CCGs and local health providers	CCGs		
9.4 Population Screening Programmes	*tba by NHS AT/PHE*						
10 Environmental Health	To improve air quality	Support uptake of low emission vehicles.	Use of OLEV (Office of Low Emission Vehicles) funding to install electric vehicle re-charging infrastructure in local authority owned car parks	Number of recharging points	Local authorities	Annual	
		Support initiatives to encourage modal shift	Education projects, supporting	Activity.	Local authorities HCC Public Health	Annual	Links to Year of Cycling

			walking and cycling and public transport initiatives				
11. Resilience	Participation in local, regional and national resilience exercises	As directed by scenario	Testing health protection planning	Record of participation	LRF members LHRP members	As directed	Leading to updates of resilience plans