Nottinghamshire County Council

Report to Health and Wellbeing Board

11th January 2012

Agenda Item: 5

REPORT OF DIRECTOR OF PUBLIC HEALTH

HEALTH PROTECTION IN NOTTINGHAMSHIRE: NEEDS AND ARRANGEMENTS

Purpose of the Report

1. To highlight to the Board the importance of Health Protection, including evidence about the needs of the population in relation to Communicable Disease, Emergency Preparedness and Access to expert advice about environmental threats, and the arrangements in place to address these

Information and Advice

Background

2. Effective public health action requires organised efforts across three domains: health improvement (including people's lifestyles as well as inequalities in health and the wider social influences of health), health services (including service planning, efficiency, audit and evaluation) and health protection (including action to avoid and/or promote resilience to a range of threats).

3. Health protection involves surveillance of threats to the health of the population, prevention and control measures, as well as responding to specific incidents. This paper focuses on the prevention and control functions exercised by the Director of Public Health in respect to communicable diseases and preparedness for mitigating the health-related effects of key environmental hazards. The local and national arrangements for surveillance which provides the intelligence to direct prevention and control measures are also critical to the effectiveness of the overall system, but fall outside the scope of this paper.

4. The health protection functions of the Director of Public Health are integrated with other aspects of resilience planning through the Local Resilience Forum, of which the Director of Public Health is a board member. Many of the responsibilities of the Director of Public Health are discharged through the Health Protection Agency, with whom his team work closely. It should be noted that the effectiveness of the overall system also depends on local authorities and other statutory agencies, who are routinely engaged in aspects of health protection through their work to address communicable disease and other hazards related to (amongst other things) management of waste, housing and built environment, working environment, food standards, pollution prevention, and roads and transport.

Communicable Disease

5. In historical terms, there are now relatively few people in the UK who die of communicable diseases. This is due to improvements in a range of favourable environmental factors (e.g. standards of sanitation, nutrition, housing, working environment, and healthcare) as well as the kinds of prevention and control measures overseen by the Director of Public Health. Nevertheless, communicable disease continues to represent a significant burden of disability and death, much of which is avoidable. For some diseases, higher rates of infection are associated with deprivation.

6. **Appendix One** sets out some health protection measures relating to avoidable communicable disease over which the Director of Public Health has a direct responsibility: childhood vaccinations, seasonal flu, tuberculosis, viral hepatitis, HIV, sexually transmitted infections, and pandemic flu. These are some of the major threats and measures, but do not constitute an exhaustive list of all communicable disease. Furthermore, it should be noted that, other agencies (e.g. environmental health departments) have a critical role to play in the prevention and control of these and other communicable diseases, including various foodborne, airborne and bloodborne infections.

Emergency Preparedness

7. The Civil Contingencies Act 2004 requires Primary Care Trusts and other Category One responders[1] to assess the risks of emergencies occurring and maintain plans to mitigate their effects, and to maintain arrangements to ensure continuity of business. This duty is carried out in close partnership with other members of the Nottingham and Nottinghamshire Local Resilience Forum (LRF).

Key Risks

8. The key risks addressed by the Emergency Planning function are those identified by the LRF. These include: Local/urban flooding, Influenza type disease, environmental pollution and industrial type accidents, heat wave, severe weather, and terrorism attacks.

Current Arrangements

9. Through its Emergency Planning function, the Primary Care Trust (PCT) maintains in-house operational plans to deliver its part of overall LRF plans. These plans include:

   - A comprehensive suite of Major Incident Plans including a Generic Cluster PCT Major Incident Plan, together with a number of supporting plans (Emergency Accommodation Support Plan, Operational Fuel Shortage Plan and Severe Weather and Operational Flood Plan)

   - command and control arrangements for PCTs within Nottinghamshire (supported by a frequently tested on call system for internal strategic and tactical response)

[1] Local Authorities / Government Agencies / Emergency Services

- annual Emergency Planning exercises

- an established programme of work in place to provide support for the delivery of Business Continuity Planning arrangements for Primary Care Contractors (GPs, Pharmacist, Dentists and Optometrists).

10. It should be noted that most of the capacity to deliver a response to an emergency lies outside the immediate control of the PCT (e.g. with GPs, and with primary care and multiple other healthcare providers), therefore much of the role of the emergency planning function involves close liaison with these parties to deliver a coordinated response.

Access to Specialist Advice Regarding Environmental Threats

Integrated Pollution Prevention and Control (IPPC)

11. IPPC is the regulatory system for achieving an integrated approach to protecting the environment and human health from pollution. Under IPPC, operators of installations have to apply for a permit from the Regulator (the Environment Agency or Local Authority) prior to operation and are required to maintain this integrated approach throughout the lifetime of operation[2].

12. As a statutory consultee, the local primary care trust is formally involved in the process, which provides an opportunity to influence the management of the environment to minimise or prevent adverse health effects. The specialist expertise to assess the health risks associated with applications is provided to the Director of Public Health via an arrangement with the Centre for Radiation, Chemicals, and Environmental Hazards (CRCE) of the Health Protection Agency (HPA).

Expert Advise on Specific Hazards

13. Through its service level agreement with the HPA, the CRCE also provides specialist adhoc advice to the Director of Public Health which is accessed through the local Health Protection Unit.

Arrangements for Health Protection

14. The role of the Director of Public Health includes (amongst other things) responsibility for safeguarding the health of the population in relation to communicable disease (including delivery of immunisation targets) and non communicable environmental hazards.

15. The regional unit of the Health Protection Agency provides expert leadership, specialist advice and public health intelligence related to communicable disease and environmental threats. The Director of Public Health routinely accesses this support through the HPA's consultants in communicable disease, epidemiologists, and health protection nurses. The

[2] Health Protection Agency (2004). *Integrated Pollution Prevention and Control: a guide for Primary Care Trusts and Local Health Boards. Volume 1: Introduction to IPPC*

availability of this capacity is formalised in a service level agreement between the HPA and the Primary Care Trust[3].

16. The capacity of 'health' to deliver effective prevention and control measures is located across multiple independent organisations in addition to the Health Protection Agency. These include: general practices (GPs, practice nurses), primary care out of hours providers, community health providers (health visitors, community matrons, midwifes, school nurses, specialist nurses), secondary care hospital services, community hospitals and outreach services from hospitals (tuberculosis nurses, midwifes, infection control teams), community pharmacies, ambulance services, prison health teams, port health, drug treatment services (harm reduction nurses), primary care trusts and public health teams (infection control matrons, health promotion specialists, information intelligence). Health protection is also undertaken through the work of children's centres.

17. The effectiveness of these organisations' contributions needs to be maintained through intelligent commissioning, monitoring, promotion of best practice and through close collaboration with local authorities and other agencies involved in health protection.

18. Arrangements for managing some of these hazards may be affected by NHS Reforms, e.g. the organisational location of Emergency Planning function for local health economy.

Further action

- Provide the Board with an assessment of any implications for Nottinghamshire County which arise from guidance to be published about the governance, commissioning and delivery of health protection functions.

- Consider the forthcoming guidance from the Department of Health about the future organisational location of health's Emergency Planning function.

Statutory and Policy Implications

This report has been compiled after consideration of implications in respect of finance, equal opportunities, human resources, crime and disorder, human rights, the safeguarding of children, sustainability and the environment and those using the service and where such implications are material they are described below. Appropriate consultation has been undertaken and advice sought on these issues as required.

RECOMMENDATION/S

It is recommended that the Health and Wellbeing Board be invited to endorse the arrangements currently in place to address health protection needs in Nottinghamshire, and the following actions highlighted in the report and appendices:

1) **NHS reforms**

[3] Health Protection Agency (2008). *Framework specification for HPA Local and regional service provision 2008 - 2010*

- Provide the Board with an assessment of any implications for Nottinghamshire County which arise from guidance to be published about the governance, commissioning and delivery of health protection functions.

- Consider the forthcoming guidance from the Department of Health about the future organisational location of health's Emergency Planning function.

2) **Childhood Vaccination and Immunisation**

- Work with GPs, practice nurses and staff, health visitors, midwives and others to systematically promote best practice across the County.

- Closer working with Nottinghamshire County Council colleagues will provide an opportunity to secure more timely information about school roles, to support the HPV vaccine programme amongst school girls aged 12-14 years.

3) **Seasonal influenza**

- Work closely with general practice colleagues to promote best practice approach within primary care.

- Co-location with Nottinghamshire County Council will provide an opportunity for closer collaboration to secure a high level of uptake of the vaccine amongst colleagues in social care.

4) **Tuberculosis**

- Monitor implementation of the recently approved TB policy. Review arrangements for screening of neonates for BCG vaccination across Nottinghamshire.

5) **Hepatitis B and C Viruses**

- Maintain provision of targeted Hepatitis B harm reduction advice and prevention, pending publication in 2012 of NICE guidance on best practice for promoting testing.

- Address actions highlighted in the recently published East Midlands Hepatitis C Action Plan, including a review of access to treatment services in the north of the county.

6) **Human Immunodeficiency Virus (HIV)**

- Implement the recently developed Nottinghamshire County HIV Strategy.

7) **Sexually Transmitted Infections (STIs)**

- Monitor use of the recently launched sexual health service for young people (Beeston, and West Notts College).

- New National Strategy for Sexual Health is due Spring 2012; await this to prioritise further action. In the meantime, continue work with primary care to provide effective contraception in the community, including intra uterine devices and sub dermal implants.

8) **Healthcare Associated Infection**

- Execute the action plan which was developed recently in response to the increasing cases of *Clostridium difficile,* including rigorous monitoring of all cases to ensure effective management of the patient and that investigations into each case highlight common themes.

9) **Pandemic Flu**

- Review and update the Pandemic Flu Plan to incorporate the revised planning assumptions and escalation procedures which are set out in strategic guidance received from the Department of Health in November 2011.

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Constitutional Comments (SG 02/12/2011)

19. The Health and Wellbeing Board is the appropriate body to consider the matters set out in this report.

Financial Comments (RWK 09/12/2011)

20. None.

Background Papers

None.

Electoral Division(s) and Member(s) Affected

All.

HWB23

APPENDIX ONE

HEALTH PROTECTION FOR COMMUNICABLE DISEASES

Childhood vaccination & immunisation

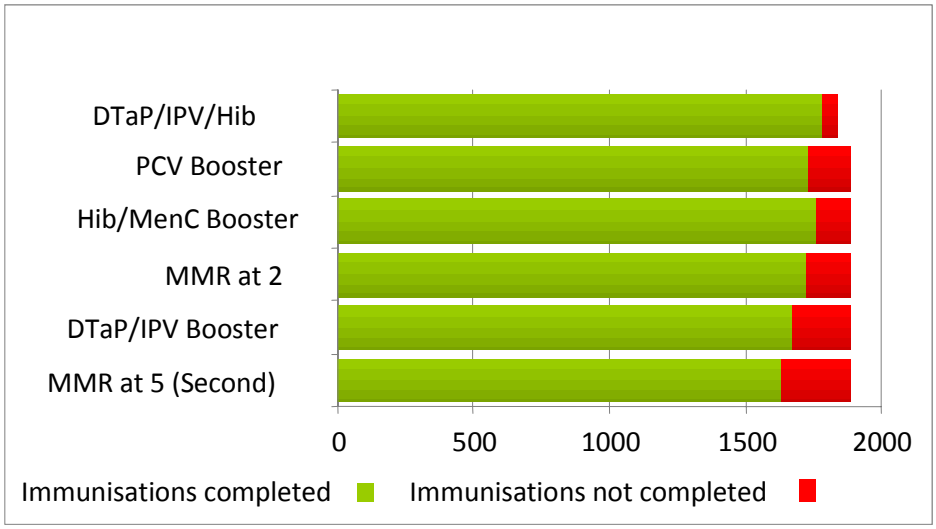
The national childhood vaccination programme is designed to protect the population against a range of infections and diseases including diphtheria, tetanus, pertussis (whooping cough), polio, haemophilus influenza type B, Group C meningococcal disease, measles, mumps, rubella. More recently a vaccination programme has been implemented amongst girls aged 12-14 years to protect against human papilloma virus. Each of these diseases is associated with avoidable death or disability. In global terms, immunisation during childhood against these vaccine-preventable diseases is said to be the most important public health intervention, after provision of clean drinking water.

It is important to maintain high rates of vaccination in order to prevent outbreaks of avoidable disease. In general, a 95% uptake rate is required to maintain "herd immunity". Achieving a high level of uptake will contribute to a reduction in inequalities in health outcome.

Distribution of uptake

Although vaccination levels are rising for most vaccines and are higher than in many parts of England, they have not risen sufficiently to meet all national goals. Current levels of uptake of preschool and school-leaving immunisation in Nottinghamshire County constitute a risk to unimmunised individuals and leads to reduced levels of herd immunity.

Chart 1 Rate of uptake in Nottinghamshire County for some key vaccinations in April - June 2011 (DTaP – diphtheria, tetanus & pertussis; IPV – polio; Hib – haemophilus influenza type B; PCV – pneumococcal vaccine; MenC – Group C Meningococcal; MMR – measles, mumps, rubella)



There is considerable inter-practice variability in uptake. Some of this may be explained by deprivation, but there are some practices with deprived populations which achieve high levels of

uptake. This suggests there are further opportunities to improve vaccine delivery in deprived communities.

What works?

Parental attitudes to immunisation and public awareness are important. But evidence suggests that it is system failure in delivery of vaccination which contributes most to creating barriers to uptake of childhood immunisation, e.g. missed opportunities, problems with appointment systems, poor arrangements for reminder calls, restricted/inflexible clinic hours, language barriers, lack of clear lead for immunisation within a practice, lack of coordinated approach.

Guidance published by National Institute of Health and Clinical Excellence (NICE) in 2009 outlines actions to address these issues[4].

Current arrangements

Most of these vaccines are delivered in primary care.

Further action

- Work with GPs, practice nurses and staff, health visitors, midwives and others to systematically promote best practice across the County.

- Closer working with Nottinghamshire County Council colleagues will provide an opportunity to secure more timely information about school roles, to support the HPV vaccine programme amongst school girls aged 12-14 years.

[4] NICE 2009. *Reducing differences in the uptake of immunisations (including targeted vaccines) among children and young people aged under 19 years*

Seasonal influenza

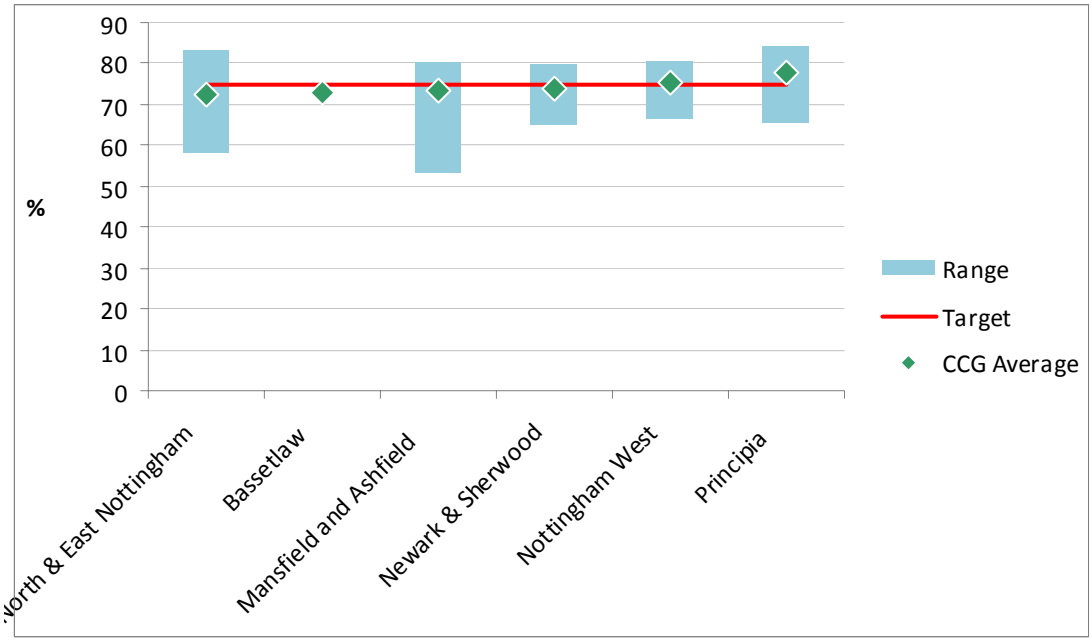
Influenza ('flu') is a highly infectious acute viral infection that affects people of all ages. It typically starts suddenly with fever, chills, headache, aching muscles and joints, cough, sore throat and general prostration or other respiratory symptoms. Although most people who are infected recover within 1-2 weeks, the disease can cause serious complications and death in those who are immunosuppressed, the very old and very young. Nevertheless, in the UK last year almost one third of the 607 people who died with a confirmed influenza infection were normally fit and well.

The increased demand for healthcare arising from patients with flu creates pressures which require specific planning.

Distribution of uptake

Since 2000/2001 there has been a national campaign to vaccinate patients aged over the age of 65 years, and certain high risk groups against the disease on an annual basis, e.g. at-risk groups aged 6 months to 65 years, carers and health and social care workers. Pregnant women were included from 2010/11. Data on the numbers of people aged over 65 who have been vaccinated is collected for each clinical commissioning group (CCG) on a monthly basis and is shown below.

Chart 2 Rate of uptake of seasonal flu vaccination in 2010/11 amongst people in Nottinghamshire aged 65 years or over, by Clinical Commissioning Group



This year there are also targets for the rate of uptake achieved amongst other groups including at-risk groups aged 6 months to 65 years, pregnant women, and amongst healthcare workers.

What works?

Routine vaccination provides best protection for groups at highest risk among the general population.

Current arrangements

Seasonal flu jabs to at-risk groups are delivered through general practices. The measures required to enable the healthcare system to cope with increased demand arising from seasonal flu are addressed in the annual Winter Plan which is overseen by the primary care trusts.

Further action

- Work closely with general practice colleagues to promote best practice approach within primary care.

- Co-location with Nottinghamshire County Council will provide an opportunity for closer collaboration to secure a high level of uptake of the vaccine amongst colleagues in social care.

Tuberculosis

Tuberculosis (TB) is an infectious bacterial disease which can affect a number of organs. Although only 10% of those infected will develop active disease, TB which is left untreated can be fatal. TB is transmitted by inhaling droplets containing the bacterium that have been coughed or sneezed out from someone with TB affecting their lungs.

Distribution of disease

TB in the UK, and other industrialised nations, declined rapidly last century but never went away. Most countries are now affected by a global resurgence of TB caused primarily by increasing poverty and poor access to health services, migration and HIV.

Although TB is increasing in the UK it remains quite rare and is predominantly confined to the major cities. Anyone can catch TB but those at most risk are: close contacts of an infectious case; those who have lived in places where TB is still common (e.g. parts of South Asia and Africa); those whose immune system is weakened by HIV or other medical conditions; people who experience chronic poor health through lifestyle factors such as homelessness, alcoholism and drug abuse; young children and the very elderly are more susceptible.

NHS Nottinghamshire County and NHS Bassetlaw both have relatively low incidences of TB, with rates of 4.0 and 4.5 per 100,000 per year respectively in 2007-2009. This compares to an incidence rate of 15.0 per 100,000 per year in the UK.

What works?

TB is curable if the correct drug regime is provided and adhered to. In addition, the BCG (Bacillus Calmette-Guérin) vaccination provides effective protection to individuals in high-risk groups, especially infants born in areas with a high incidence of TB, infants with a parent or grandparent born in a country with a high incidence of TB, older unvaccinated children with risk factors for TB.

Recommendations on the diagnosis and management of individuals with confirmed or suspected TB and on the vaccination and case-finding of individuals at risk from infection is set out in NICE Clinical Guidance[5].

Current arrangements

Within Nottinghamshire a local strategy has been developed that aims to reduce local rates of infection through raising awareness of TB, especially amongst high-risk group, and ensuring consistent, high quality screening, diagnosis and treatment services across Nottinghamshire. This is delivered through services commissioned from local NHS hospitals.

[5] NICE 2011. *Tuberculosis: Clinical diagnosis and management of tuberculosis, and measures for its prevention and control*

Further action

- Monitor implementation of the recently approved TB policy. Review arrangements for screening of neonates for BCG vaccination across Nottinghamshire.

Hepatitis B Virus & C Virus

Hepatitis is inflammation of the liver. In some cases it is associated with long-term damage to the liver. Common causes of hepatitis in the UK include infection with Hepatitis B or Hepatitis C virus which are transmitted through the blood of an infected person. Both viruses may affect the liver but cause distinct diseases.

Hepatitis B

Many people with Hepatitis B Virus have no symptoms while others experience a flu-like illness. Acute infection causes abdominal discomfort and jaundice. Chronic infection with Hepatitis B Virus can cause long term liver damage. For people infected during childhood the risk of death from HBV-related liver cancer and cirrhosis is approximately 25%.

Distribution of the disease

The virus may be transmitted by contact with infected blood or body fluids, e.g. through household or sexual contact with an infected person, by sharing or use of contaminated equipment during injecting drug use (IDU), vertical transmission (mother to baby) from an infectious mother to her unborn child, receipt of infected blood (via transfusion) or infected blood products (for example clotting factors), needlestick or other sharps injuries (in particular those sustained by hospital personnel), tattooing and body piercing. Overall in the UK, the prevalence in the general population is estimated to be 0.3%.

What works?

HBV infection can be prevented by vaccination. Offering the accelerated hepatitis B vaccination course to the most at risk groups is effective. Public health action includes targeted preventative work (e.g. harm reduction messages focussed on reducing injecting drug behaviour and support for safe injecting, promotion of safe sex), Hepatitis B screening for all pregnant women, safe handling and disposing of sharps and surgical instruments.

Current arrangements

Access to harm reduction advice and messages, and clean injecting paraphernalia, for IDU is available widely available across Nottinghamshire, through targeted outreach and pharmacy needle and syringe exchange programmes. Hepatitis B testing and vaccination is available within all Nottinghamshire drug treatment primary care and community settings and delivered by harm reduction nurses. Hepatitis B vaccination for defined at-risk groups, including babies born to infected mothers, is delivered through primary care.

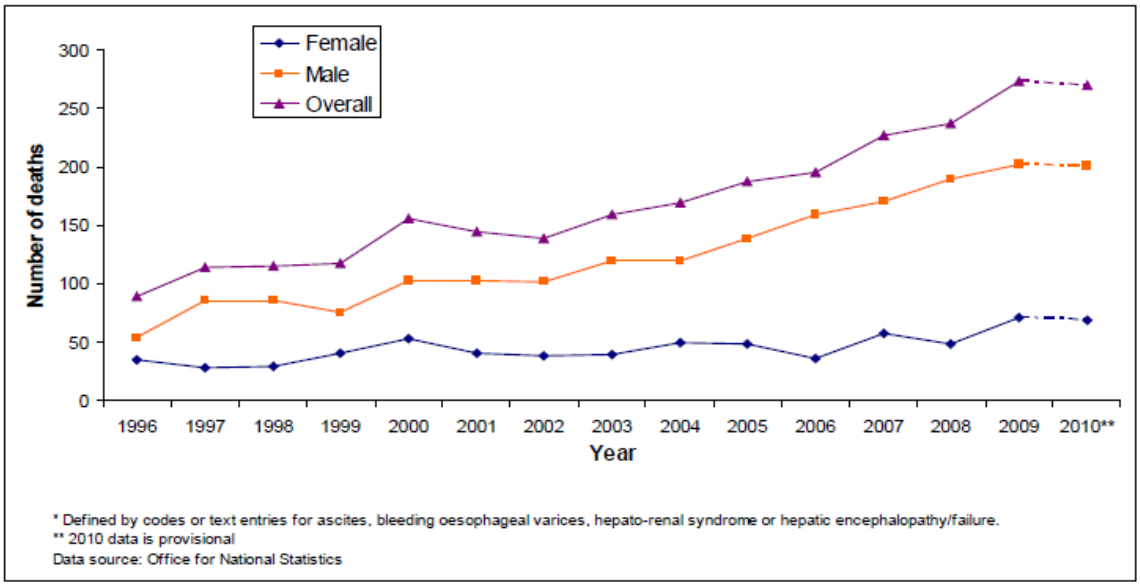
Further action

- Maintain provision of targeted harm reduction advice and prevention, pending publication in 2012 of NICE guidance on best practice for promoting testing.

Hepatitis C Virus

Some people infected with Hepatitis C virus clear the infection naturally. However, for the majority, Hepatitis C infection is a slowly progressive disease which, if left untreated, can develop into serious disease of the liver leading to liver failure or primary liver cancer. Nevertheless, many of those infected will not be aware of any symptoms. This means that a large proportion of the estimated 216,000 people in the UK currently infected with the virus will be unaware, so do not access the treatment which can reduce the risk of subsequent more serious disease.

Chart 3 Deaths from end-stage liver disease* or hepatocellular carcinoma, in those with HCV mentioned on their death certificate in England, 1996-2010 (Source ONS)



Distribution of disease

Transmission of the virus is through the blood of an infected person. This can take place where needles, razors, or other blood-contaminated equipment in shared. Unlike Hepatitis B, this virus is rarely transmitted by sexual contact. In the UK, most of those infected are past or present intravenous drug users or are members of ethnic populations with close links to areas of the world where the virus is most prevalent. In Nottinghamshire, the proportion of IDUs has remained at about 28%, which is lower than the rate for England as a whole (50%). In 2009 there were 76 HCV notifications in Nottinghamshire, with nearly two thirds of these from Mansfield district.

What works?

In many cases, Hepatitis C Virus is responsive to treatment. Public health action is focussed on the prevention of new infections (e.g. harm reduction messages focussed on reducing injecting drug behaviour and support for safe injecting), raising awareness in the population and amongst healthcare professionals of current risk and possible past exposure (especially amongst IDUs), and increasing diagnosis and access to treatment.

Current arrangements

Local action plans were developed to reduce the rate of HCV infection in NHS Nottinghamshire County and NHS Bassetlaw following a review of services in 2010. The action plans focus on increased screening of at-risk groups (including injecting drug users, migrants from countries with high prevalence and prisoners) and provision of consistent, high-quality treatment services. Access to harm reduction advice and clean injecting paraphernalia for IDU is widely available across Nottinghamshire, through targeted outreach and pharmacy needle and syringe exchange programmes. Hepatitis C testing is available within all Nottinghamshire drug treatment primary care and community settings and delivered by harm reduction nurses.

Nottingham University Hospitals are commissioned to provide HCV treatment services across north and south Nottinghamshire. Similar services are also commissioned from Doncaster and Bassetlaw Hospitals for NHS Bassetlaw. Next steps include improving access to treatment services addressing developing affordable options for ensuring effective provision in the north of the County.

Further action

- Address actions highlighted in the recently published East Midlands Hepatitis Action Plan, including a review of access to treatment services in the north of the county.

Human Immunodeficiency Virus (HIV)

HIV is the virus that causes people to develop AIDS. It damages the body's immune system, making the person vulnerable to certain infections. It may take several years for HIV to damage the immune system so much that a person becomes unwell. During that time a person with HIV can be well and live with the virus for many years without developing AIDS.

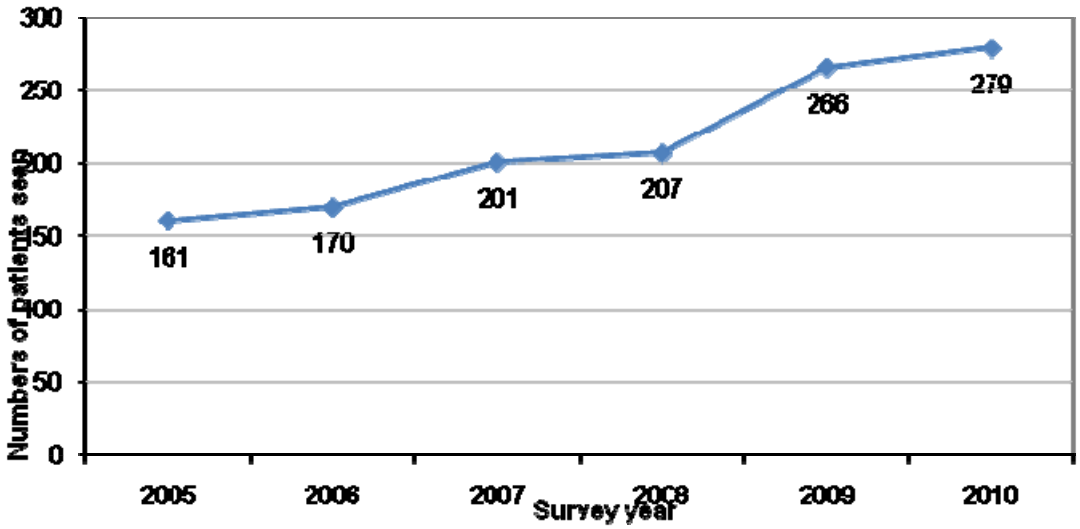
It is an infection associated with serious morbidity, high costs of treatment and care, significant mortality and high number of potential years of life lost. Each year, many thousands of individuals are diagnosed with HIV for the first time. The infection is still frequently regarded as stigmatising and has a prolonged 'silent' period during which it often remains undiagnosed. Highly active antiretroviral therapies have resulted in substantial reductions in AIDS incidence and deaths in the UK.

Distribution of disease

Transmission of HIV is via the blood or body fluids of an infected person. Usually this is a consequence of: having vaginal or anal sex without a condom with someone who has HIV, sharing of drug-injecting equipment that is contaminated with infected blood, from a woman with HIV to her baby during pregnancy, at birth or through breastfeeding, by injection or transfusion of blood from an infected person.

Recent sharp rises in Sexually Transmitted Infections (STI's) among gay men have given rise to concern that high risk sexual behaviour amongst gay men is increasing. There has also been an increase in the number of heterosexuals becoming infected by HIV reported in the UK. There is evidence that the majority of these cases (approximately 80%) are acquired abroad, particularly in sub-Saharan Africa. In recent years there has been an increase in the number of Nottinghamshire residents living with HIV.

Figure 1 Total number of Nottinghamshire residents living with a diagnosis of HIV, 2005-2010



The increase in the number of people diagnosed with HIV and seen in 2010 could be due to an increase in the number newly diagnosed people (data not available), migration of people into Nottinghamshire, uptake of treatment from those not previously known to services or a decrease in the numbers dying. No patient diagnosed with HIV in Nottinghamshire died in 2010.

What works?

Since the 1980s, the introduction of needle exchange programmes has decreased the frequency of transmission among intravenous drug users. Special treatment of blood products has reduced transmission to those receiving blood products. In the late 1980s and early 1990s, public awareness campaigns resulted in a decline in the number of newly diagnosed cases each year, and the development of anti-retroviral therapy has decreased the number of AIDS-related deaths.

Recently the rate of newly diagnosed HIV has begun to increase – in line with increases for other sexually transmitted infections.

Current arrangements

There are a range of health services provided for people living with HIV/AIDS including testing and clinical services, hospital care, psychological therapy, alternative therapy and health promotion.

Further action

- Implement the recently developed Nottinghamshire County HIV Strategy.

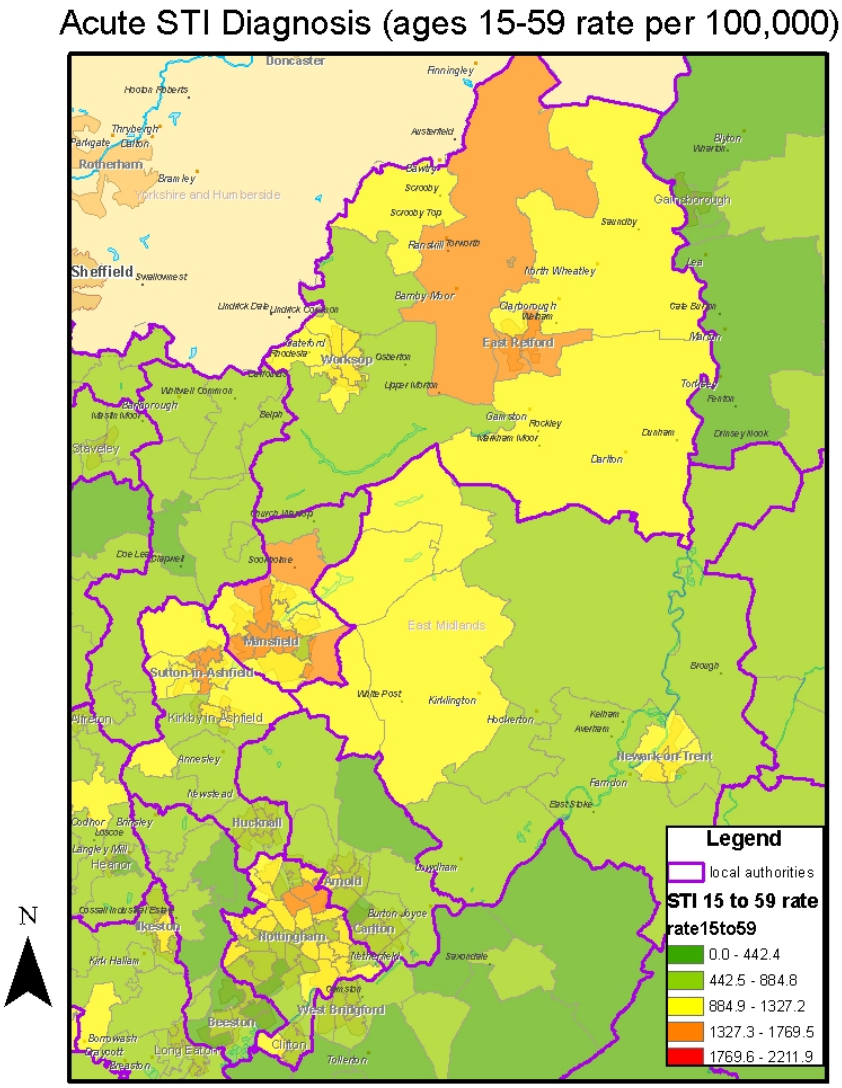
Sexually Transmitted Infections (STIs)

The term 'STIs' represents a number of infections including chlamydia, gonorrhoea, syphilis, genital herpes, genital warts, non-specific urethritis. In general terms, the public health significance of STIs is that they represent avoidable causes of ill-health, some of which is serious for the individual (e.g. chronic pelvic inflammatory disease, infertility) and in terms of costs to society.

Distribution of disease

The incidence of some STIs has increased in recent years. In general, the highest rates are found in urban areas.

Figure 2 Rate per 100,000 population per year of acute STIs in patients aged 15-59 years (by middle super output area) in Nottinghamshire, 2010 (Source: HPA)



What works?

The male latex condom is the single, most efficient, available protection to reduce the sexual transmission of HIV and other STIs. Nevertheless, the prevention and control of STIs is best addressed in the context of promoting all aspects of sexual health, including: improving professional and public knowledge of the most effective methods of preventing pregnancy, ensuring access to the full range of methods of contraception, maintaining and extending prompt access to testing and treatment for STIs, intensifying action to tackle stigma associated with sexual health and HIV, improving support to all young people and adults to acquire the knowledge and skills to stay healthy and to improve sexual health at all life stages.

Current arrangements

Services for the treatment of STIs specifically are provided in primary and secondary care. Prevention and control of STIs focuses on improving access to condoms and other contraception, and ensuring the delivery of good quality Personal, Social Health and Economic education in schools.

Further action

- Monitor use of the recently launched sexual health service for young people (Beeston, and West Notts College).

- New National Strategy for Sexual Health is due Spring 2012; await this to prioritise further action. In the meantime, continue work with primary care to provide effective contraception in the community, including intra uterine devices and sub dermal implants.

Healthcare associated infections

Healthcare associated infection (HCAI) is infection resulting from medical care or treatment provided in hospital, nursing homes, or a patient's own home. HCAIs can affect various parts of the body including the urinary system (urinary tract infection), the lungs (pneumonia or respiratory tract infection), the skin, surgical wounds (surgical site infection), the digestive (gastrointestinal) system, and the bloodstream (bacteraemia). Common HCAI include *Clostridium difficile* infection (C. diff/CDI), meticillin-resistant *Staphylococcus aureus* (MRSA).

The public health significance of HCAIs is their high prevalence in people who are already physically vulnerable, and the fact that the spread of HCAIs is largely avoidable.

Distribution of disease

The number of cases of C. Diff remains lower than last year (52 cases per 100,000 population per year), but we are not achieving the 30% reduction target set by the Department of Health; which is based on last year's performance. This year there are fewer C. Diff cases with the virulent strain (ribotype 027), which has resulted in lower mortality rates and fewer complications. MRSA bloodstream infections continue to fall across Nottinghamshire County.

What works?

Best practice includes rigorous hand hygiene, use of personal protective equipment, sharps safety, decontamination, waste management, and environmental cleaning. Maintenance of these standards protects patients, staff and other service users from cross-infection. Other measures include appropriate antimicrobial prescribing and clear and effective communication of the infectious status of the patient between healthcare providers[6].

Current arrangements

Infection control matrons in Nottinghamshire provide surveillance and monitoring of healthcare acquired infections across Nottinghamshire and the promotion of best practice through provision of specialist knowledge, advice, and education to 96 GP surgeries, 89 Dental practices, 67 contracted Care Homes, 131 Pharmacies, 67 Optometrists. The service also manages outbreaks and provides support to individual patients with infection that is potentially a risk to others e.g. clostridium difficile/MRSAs. Detailed prompt investigations are undertaken of community acquired MRSA bacteraemia cases and of deaths where C. diff is recorded as a contributory factor, and follow-up measures actioned.

Further action

- Execute the action plan which was developed recently in response to the increasing cases of *Clostridium difficile,* including rigorous monitoring of all cases to ensure effective management of the patient and that investigations into each case highlight common themes.

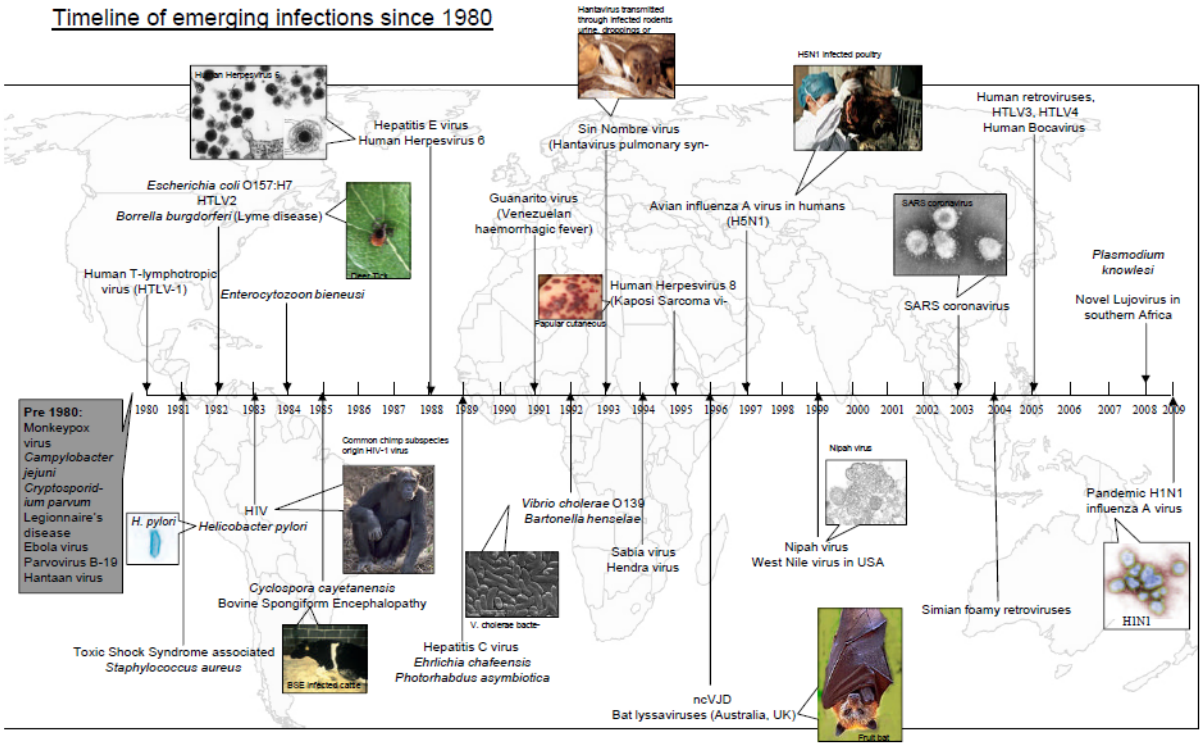
[6] Health and Social Care Act 2008. *Code of Practice for the NHS on the prevention and control of infections*

Pandemic influenza & other emerging infectious diseases

Pandemics arise when a new virus emerges against which the human population has little or no immunity and which is capable of spreading in the worldwide population. This can result in several, simultaneous epidemics worldwide with enormous numbers of deaths and illness (e.g. the influenza pandemic of 1918-19 in which a completely new influenza virus subtype emerged and spread around the globe in around four to six months, killing an estimated 40-50 million people in several waves of infection over two years). Unlike ordinary seasonal influenza that occurs every winter in the UK, pandemic flu can occur at any time of the year.

The H1N1 pandemic virus which emerged in Mexico in 2009 causing mild/asymptomatic disease in the majority of cases but severe illness and death in a small proportion of cases, particularly in more vulnerable groups .The threat of a more severe and disrupting pandemic along the lines of the 20th century pandemics remains and the UK has to be prepared for such an event.

Chart 4 Timeline of emerging infections since 1980



Current arrangements

NHS Nottinghamshire County maintains a board-approved Pandemic Flu Plan which was tested and updated following the outbreak of Swine Flu in 2009.

Through its national function the Health Protection Agency maintains surveillance of threats from Communicable disease arising in other parts of the world as a result of societal, environmental and microbiological changes.

Further action

- Review and update the Pandemic Flu Plan to incorporate the revised planning assumptions and escalation procedures which are set out in strategic guidance received from the Department of Health in November 2011.