A Guide to Health Protection

Health Protection
Health protection seeks to prevent or reduce the harm caused by diseases passed from person to person, local disease and infection outbreaks and responding to environmental hazards. The work programme is varied and includes the following topics:
- Screening programs for breast and bowel cancer
- Immunisation programmes – for example, seasonal flu
- Infection Prevention Control
- Communicable diseases including Tuberculosis
- Environmental Hazards, for example air quality and adverse weather
- Emergency planning to prepare and respond in the event of an incident or environmental hazard which has an impact on community or population health.

What is screening?
Screening is a way of identifying apparently healthy people who may have an increased risk of a particular condition. The NHS offers a range of screening tests to different sections of the population. The aim is to offer screening to save lives to those who are most likely to benefit from it. The benefits of having a screening test include:
- Screening can detect a problem early, before you have any symptoms.
- Finding out about a problem early can mean treatment is more effective.
- Finding out you if have a health problem or an increased risk of a health problem can help people make better informed decisions about their health.
- Screening can reduce the risk of developing a condition or its complications.

Further information is available from the NHS choices website on NHS screening programmes currently offered in England:

http://www.nhs.uk/Livewell/Screening/Pages/screening.aspx

Immunisation
The overall aim of the routine immunisation schedule is to provide protection against vaccine-preventable infections. The immunisation schedule of childhood vaccinations has been designed to provide early protection against infections that are most dangerous for the very young. This is particularly important for diseases such as whooping cough, and those due to pneumococcal. Providing subsequent immunisations and booster doses as scheduled should ensure continued protection. Further vaccinations are offered at other points throughout life to provide protection
against infections before eligible individuals reach an age when they become at increased risk from certain vaccine-preventable diseases.


**Tuberculosis (TB)**

Incidence of TB in England increased steadily from the 1980s and has remained at relatively high levels ever since.

- Tuberculosis (TB) is a bacterial infection spread through inhaling tiny droplets from the coughs or sneezes of an infected person. There is ‘active TB’ (with symptoms) and ‘latent TB’ (often without symptoms).
- It is a serious condition, but can be cured with treatment and prevented.
- TB mainly affects the lungs. However, it can affect any part of the body, including the glands, bones, and nervous system.
- There is a strong association between TB and social deprivation, however anyone can contract TB.

You can have TB in your body for many years, yet have no symptoms (latent TB infection). This is non contagious. If your circumstances change and your immune system is affected, such as by another illness or through stress such as through suffering a bereavement, loss of employment, latent TB can develop into active TB which has symptoms, is contagious and you will become ill.

**Resources**


**Hepatitis B & C**

- Hepatitis B & C are both viruses and are often referred to as BBVs (or Blood Borne Viruses)
- Both are carried in blood and body fluids
- Early diagnosis can prevent liver cirrhosis and liver cancer
- There is a simple blood test known
- Symptoms can be confused with mild illness so people do often not seek medical help
Resources
- Hep B - British Liver Trust [http://www.britishlivertrust.org.uk/liver-information/liver-conditions/hepatitis-b/]
- Hep C Trust - [http://www.hepctrust.org.uk/]

Excess Winter Deaths (EWDs)
- A current and important Public Health issue in the UK.
- Leeds has an Adverse Weather Plan that reduce the impact of cold weather
- Respiratory diseases are often caused or made worse by damp and cold conditions at home. Inefficient heating and insulation are factors driving the high level of winter deaths
- Many premature deaths can be avoided through encouraging fuel poverty referrals and also by supporting energy efficient housing interventions

Key Facts
- An estimated 18,200 excess winter deaths (EWDs) occurred in England and Wales in 2013/14
- The majority of deaths occurred among those aged 75 and over; there were an estimated 14,000 excess winter deaths in this age group in 2013/14 compared with 4,000 in people aged under 75.

Resources
- [https://www.nice.org.uk/guidance/ng6](https://www.nice.org.uk/guidance/ng6)
- [http://www.wmpho.org.uk/excesswinterdeathsinEnglandatlas/](http://www.wmpho.org.uk/excesswinterdeathsinEnglandatlas/)

Heatwave
The Leeds Adverse Weather Plan aims to reduce summer deaths and illness by raising public awareness and triggering actions in the NHS, public health, social care and other community and voluntary organisations to support people who have health, housing or economic concerns that increase their vulnerability to heat. Communities can also help their neighbours, friends and relatives to protect against avoidable harm to health this summer. The plan builds on many years of experience of developing and improving the ability of partners to deal with significant periods of hot weather.

Air quality
Children, the elderly and those with pre-existing respiratory and cardiovascular disease, are known to be more susceptible to the health impacts from air pollution. By improving air quality, the health of many people with asthma, COPD (chronic obstructive pulmonary disorder) and other heart and lung conditions would be greatly improved. This would also improve quality of life, reduce associated deaths and decrease hospital admissions. The major health risks are associated to:
- Nitrogen dioxide is known to cause inflammation of the airways, reduce lung function and exacerbate asthma.
Particulate matter - tiny invisible specks of mineral dust, carbon and other chemicals - are linked to heart and lung diseases as well as cancer. Some particulate matter lodges in the lungs, while the finest particles can enter the bloodstream, risking damage elsewhere.

The Leeds Air Quality Action Plan includes Public Health elements:
- raise awareness of the health impact of poor air quality
- warn and inform vulnerable individuals during periods of poor air quality
- encourage lifestyle adaptations to reduce the risk to individuals and to their families, such as active travel schemes such as cycle to work schemes


Emergency Planning and outbreak control
Emergency planning for health aims to protect the health of the population from hazards and threats ranging from relatively minor outbreaks and health protection incidents to full scale emergencies (e.g. Influenza pandemic, infectious disease outbreaks, flooding, major transport incidents, and terrorist attack) by ensuring relevant plans are in place e.g.:
- Major incident plans
- Mass casualty plan
- Pandemic Flu plan
- Excess death plan
- Severe weather plan

Infection prevention and control
The purpose of the infection prevention control function is to ensure that plans are in place and organisations are adhering to infection prevention practices to:
- Prevent Hospital acquired infections
  - MRSA (Methicillin-resistant Staphylococcus aureus)
  - C.Diff (Clostridium difficile)
- Prevent outbreak of infection
  - Food poisoning
  - Flu
- Ensure that Infection prevention standards are being following by health and social care providers
- Reduce antibiotic prescribing
- Inform the public about appropriate use of antibiotics.