

March 2015

## PSNC Briefing 011/15: Tuberculosis

This PSNC Briefing provides background information on tuberculosis (TB) and highlights the TB public health problem in the UK. The Briefing summarises the Public Health England (PHE) and NHS England 'Public Collaborative Tuberculosis Strategy for England 2015 to 2020' by highlighting elements of the document that are of most relevance to community pharmacy. In addition, the Briefing provides details on two different TB services that are currently being commissioned across two Local Pharmaceutical Committee (LPC) areas as well as details of useful resources to provide to patients and for pharmacists and their teams to access.

### What is TB?

TB is a disease which is caused by a bacterium called *Mycobacterium tuberculosis*. The disease is spread from person to person by the inhalation of tiny droplets from the coughs or sneezes of an infected person.

It is commonly spread when a person has repeated exposure to someone with TB, for example, it may spread within a family who live in the same house.

Most healthy people who are exposed to the bacteria do not present with symptoms as their immune system kills the bacteria. Sometimes though, the immune system cannot kill the bacteria but manages to prevent it from spreading around the body. It will, however, remain in the person's body and is known as latent TB.

If at a later date, the person's immune system becomes weakened by other medical problems, latent TB can develop into active TB, which is when the infection spreads. The main part of the body to be affected is the lungs but it can affect any part of the body including the glands, bones and nervous system. This is when a patient will present with symptoms.

The symptoms of TB usually develop slowly and may not appear until months or years after the patient has been infected.

Typical symptoms of TB include:

- a persistent cough that lasts for more than three weeks, which may bring up phlegm (this may be blood-stained) – typical in pulmonary TB (TB that affects the lungs);
- high temperature;
- loss of appetite;
- new swellings that have been present for more than a few weeks – typical in extrapulmonary TB (TB that develops in areas outside the lungs such as the lymph nodes);
- night sweats;
- tiredness and fatigue; and
- weight loss.

## BCG Tuberculosis vaccine

The BCG (Bacillus Calmette-Guérin) vaccine is no longer given as part of the NHS childhood vaccination schedule. Previously, all teenagers were offered the BCG at school. However, the BCG vaccination programme was changed in 2005 when public health experts decided the vaccination programme had little impact on TB control. Now, the vaccine is offered to babies who are thought to be at an increased risk of coming into contact with someone with TB, for example, babies born in some areas of inner-city London where there are high TB rates.

Older children may also be recommended to have the vaccination if they are at risk of developing TB, for example, a child may be offered the vaccine if they have recently arrived in the UK from a country that has a high incidence of TB or if they live in an area where TB is widespread.

The BCG vaccine is not normally given to anyone over the age of 16 years and never over the age of 35 years. This is because the vaccine does not work very well in adults. However, it may be given to patients between the age of 16-35 years who are at risk of catching the disease, for example, if they are a healthcare worker or work in a laboratory and are in contact with blood, tissue and urine samples.

## How is TB treated?

Patients with TB are treated with antibiotics over a number of months. The National Institute for Health and Care Excellence (NICE) has produced clinical guidelines on the treatment of TB, [CG117 – Tuberculosis: Clinical diagnosis and management of tuberculosis, and measures for its prevention and control](#), which details the recommended drug treatment for respiratory TB, non-respiratory TB and latent TB (updated guidance is expected to be published in October 2015).

## The TB public health problem in the UK

The statistics below provide a clear indicator that TB is a public health problem in the UK:

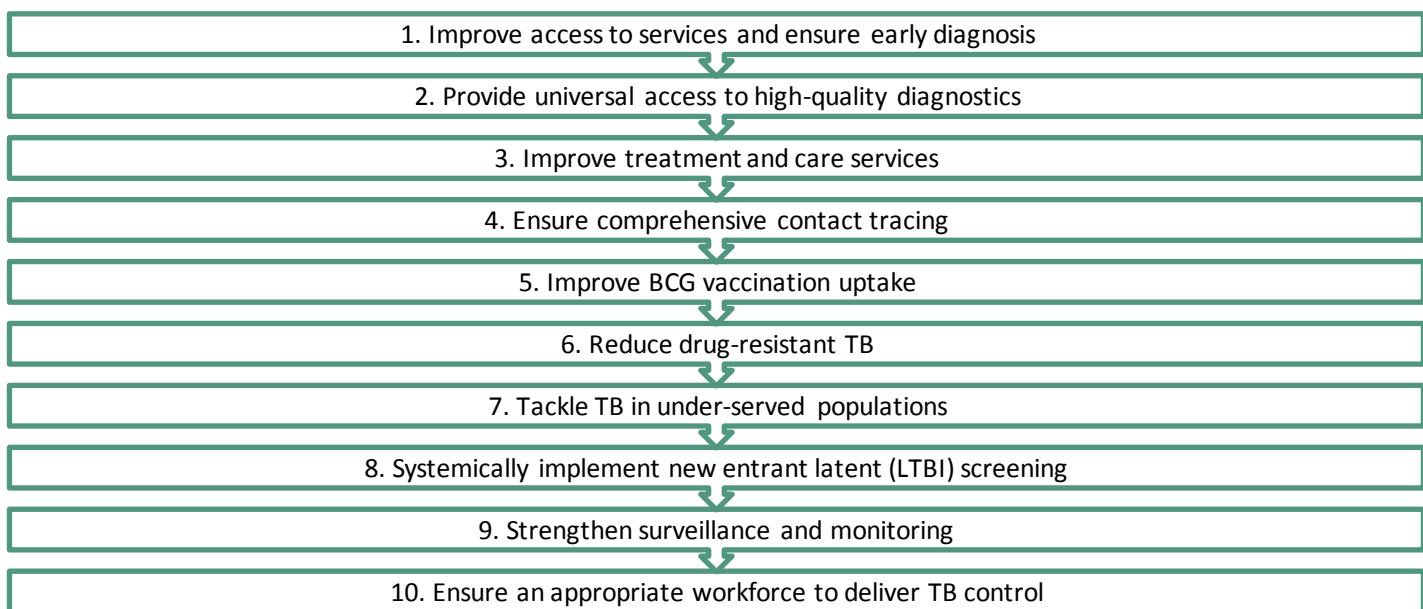
- In 2013, there were 7,290 cases of TB reported in England, an incidence of 13.5 cases per 100,000 of the population.
- The UK has the second highest rate of TB among Western European countries and rates are nearly five times higher than in the US.
- The figures are in marked contrast to the US, Germany and the Netherlands which have all seen consistent reductions by using concerted approaches to TB prevention, treatment and control.
- If current trends continue, England will have more TB cases than the whole of the US within two years.
- Drug resistant TB is also an increasing problem in England with cases of multi-drug resistant (MDR) TB increasing from 28 cases reported in 2000 to 68 in 2013.
- In England, TB is concentrated in large urban centres, with 'hot spots' in London, Leicester, Birmingham, Luton, Manchester and Coventry.
- TB clinics in London manage more cases a year than those in all other western European capital cities put together.

## What is being done about TB in England?

NHS England, along with PHE announced in January 2015, a £11.5m investment to decrease the number of TB cases and ultimately eliminate TB as a public health problem in England.

NHS England has worked with key stakeholders to develop a 10-point action plan for England which is published in their [Collaborative Tuberculosis Strategy for England 2015 to 2020](#).

The documents states that to achieve the strategy ambitions and make significant advances in TB control, improvements need to be made in the following key areas:



Pharmacists are specifically mentioned in the following key areas of the 10-point action plan:

- In key area 1 '**improve access to services and ensure early diagnosis**' it states as an action to 'facilitate alternative routes for accessing healthcare through training and resources for community pharmacists in high incidence areas'.

Key area 1 also talks about raising awareness of TB among professionals through: workforce development for healthcare professionals in primary and secondary care through basic and postgraduate training and continuing professional development; and raising awareness of GPs and other health and social care professionals in high incidence areas about the TB epidemiology in their locality and referral systems.

- In key area 3 '**improve treatment and care services**' it states as an action 'ensure appropriate staffing and to address case mix and complexity with more local, and flexible, access points for routine treatment by using community 'directly observed therapy' (DOT) workers, pharmacists and other providers of treatment, home-based contact tracing and DOT'.
- In key area 6 '**reduce drug-resistant TB**' it states as an action 'ensure patient compliance with treatment by providing case management support, including the flexible delivery of DOT involving community DOT workers, pharmacists and other suitable providers'.

In order to achieve success in these key areas NHS England and Public Health England have stated that five main steps will need to be taken, which are:

1. strengthen the co-ordination and oversight of all aspects of TB control by establishing formal TB control boards – Nine boards to be functional by April 2015 to broadly cover North West England, North East England, Yorkshire and Humber, East Midlands, East of England, West Midlands, London, South East England and South West England;
2. develop clear, evidence-based model service specifications of the clinical and public health actions required to control TB;
3. assess local services against the service specifications and develop plans to secure improvements;
4. establish arrangements to cover the cost of additional services to address specific gaps in current TB control arrangements; and
5. strengthen national support for local TB control arrangements.

## Community pharmacy TB services

Currently, there are not many LPC areas that have a commissioned service, which supports the Collaborative Tuberculosis Strategy for England. However, as highlighted in the Strategy document there are opportunities for community pharmacies to get involved as can be seen from the two schemes that are currently commissioned in City & Hackney LPC and Coventry LPC.

### Directly observed therapy of TB medicines

City & Hackney LPC has a DOT service for TB medicines in their area. DOT has been used in many countries to improve compliance and a comparison of self-treatment versus forms of DOT has shown that completion of treatment is significantly higher when the treatment is supervised.

The service requires the pharmacist to supervise and register the consumption of antituberculosis medicines at the point of dispensing in the pharmacy, ensuring the dose has been taken by the patient. The pharmacy team is also required to provide support and advice to the patient, including advice on potential side effects and referral to primary care or specialist centres where appropriate.

In addition, if the patient fails to attend for a dose, the pharmacist will try to contact the patient and arrange for the patient to attend later that day or the next following day (depending on the regimen they are on). If the patient is unable or unwilling to attend the pharmacist will notify the prescriber. If consecutive doses are missed then the patient may need to be referred back to the prescriber for a review of their prescribed regimen.

Further details on this service can be found on the PSNC [Services Database](#).

### On demand availability of antituberculosis drugs

Coventry LPC has a service in their area where pharmacy contractors stock the agreed range of specialist antituberculosis medicines and make a commitment to ensure that users of the service will have prompt access to these medicines during core and supplementary hours as agreed. Pharmacy contractors involved in the service will then dispense prescriptions for these medicines and will provide information and advice to the patient, carer or clinician. They may also refer to specialist centres, support groups or other health and social care professionals where appropriate.

Further details on this service can be found on the PSNC [Services Database](#).

## Resources

### Resources for patients

- The [British Lung Foundation](#) has a patient information leaflet on TB, which patients can download from their website. Patients with TB can also be referred to the British Lung Foundation helpline on 03000 035 555 where specialist nurses and advisors can answer questions patients may have about their illness.
- [TB Drug Monographs](#) has a section on their website where patient information leaflets can be downloaded on:
  - Drugs used for the treatment of multi-drug resistant TB; and
  - Home isolation: a patient guide and practical advice on how to prevent the spread of TB
- There is a patient support group called [TB Alert](#) which provides support and information for people affected by TB in the UK. They can be contacted on 01273 234029.

### Resources for pharmacists and their teams

- As mentioned above, the [British Lung Foundation](#) has a patient information leaflet on TB, which can be downloaded and provided to patients.
- As well as having downloadable patient information leaflets [TB Drug Monographs](#) is a useful resource for healthcare professionals. It is a UK based resource to support the monitoring and safe use of antituberculosis medicines and second line treatment of multidrug-resistant TB. The website also links to further resources on TB.
- TB Alert also has a health professional's page on their website:
  - There is an online TB training course which is free for all healthcare professionals in the UK and aims to provide healthcare professionals with the knowledge they need to make swift and appropriate referrals of suspected TB cases, for diagnosis within specialist services. The course also supports primary care professionals to work alongside TB services to care for patients through their treatment lasting a minimum of six months.
  - There are nine downloadable patient information leaflets which provide a useful overview of key issues in TB. These are available in 21 different languages.
- The Centre for Pharmacy Postgraduate Education (CPPE) has an e-learning programme [Tuberculosis \(TB\): 10 ways to make a difference](#). This programme aims to provide users with the learning, skills and confidence so that you can make a difference for people living with TB. There are ten areas of learning in this programme. Each area of learning covers a different TB related issue where pharmacists can have a positive impact and help people with TB to improve their quality of life.

If you have any queries on this PSNC Briefing or you require more information, please contact [Rosie Taylor, Pharmacy and NHS Policy Officer](#).

