BIRMINGHAM CITY COUNCIL

REPORT OF THE ACTING DIRECTOR OF REGULATION AND ENFORCEMENT TO THE LICENSING AND PUBLIC PROTECTION COMMITTEE

18 NOVEMBER 2015
ALL WARDS

TUBERCULOSIS IN BIRMINGHAM – AN UPDATE

1. Summary

1.1 Following a request from the Chair at the Licensing and Public Protection Committee meeting on 18th July 2015 this report updates the committee on the latest situation regarding the levels of Tuberculosis (TB) in Birmingham, and the role of Regulation and Enforcement in managing cases.

2. Recommendation

2.1 That outstanding minute no. 538(ii) be discharged and the report be noted.

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3. Background

3.1 Tuberculosis, or TB, is an infectious bacterial disease caused by Mycobacterium tuberculosis, which most commonly affects the lungs. It is transmitted from person to person via droplets from the throat and lungs of people with the active respiratory disease.

3.2 In healthy people, infection with Mycobacterium tuberculosis often causes no symptoms, since the person's immune system acts to “wall off” the bacteria.

3.3 The symptoms of active TB of the lung are coughing, sometimes with sputum or blood, chest pains, weakness, weight loss, fever and night sweats. Tuberculosis is treatable with a six-month course of antibiotics.

3.4 About one-third of the world's population has latent TB, which means people have been infected by TB bacteria but are not (yet) ill with the disease and cannot transmit the disease. People infected with TB bacteria have a lifetime risk of falling ill with TB of 10%. However, persons with compromised immune systems, such as people living with HIV, malnutrition or diabetes, or people who use tobacco, have a much higher risk of falling ill.

3.5 When a person develops active TB (disease), the symptoms (cough, fever, night sweats, weight loss etc.) may be mild for many months. This can lead to delays in seeking care, and can result in transmission of the bacteria to others. People with infectious TB can infect up to 10-15 other people through close contact over the course of a year. Without proper treatment up to two thirds of people ill with TB will die.

3.6 Tuberculosis mostly affects young adults, in their most productive years. However, all age groups are at risk. Over 95% of cases and deaths are in developing countries. People who are infected with HIV are 26 to 31 times more likely to become sick with TB. Risk of active TB is also greater in persons suffering from other conditions that impair the immune system. Worldwide, over half a million children (0-14 years) fell ill with TB, and 80,000 HIV-negative children died from the disease in 2013. Tobacco use greatly increases the risk of TB disease and death. More than 20% of TB cases worldwide are attributable to smoking.

3.7 TB is a treatable and curable disease. Active, drug-sensitive TB disease is treated with a standard six-month course of four antimicrobial drugs that are provided with information, supervision and support to the patient by a health worker or trained volunteer. Without such supervision and support, treatment adherence can be difficult and the disease can spread. The vast majority of drug sensitive TB cases can be cured when medicines are provided and taken properly.

3.8 Standard anti-TB drugs have been used for decades, and resistance to the medicines is widespread. Disease strains that are resistant to a single anti-TB drug have been documented in every country surveyed. Multidrug-

resistant tuberculosis (MDR-TB) is a form of TB caused by bacteria that do not respond to, at least, isoniazid and rifampicin, the two most powerful, first-line (or standard) anti-TB drugs. The primary cause of drug-resistant TB is improper use of anti-TB drugs, such as from failure to support patients to complete the course of treatment, or from prescribing the inappropriate treatment (drugs, doses, duration of treatment, etc.).

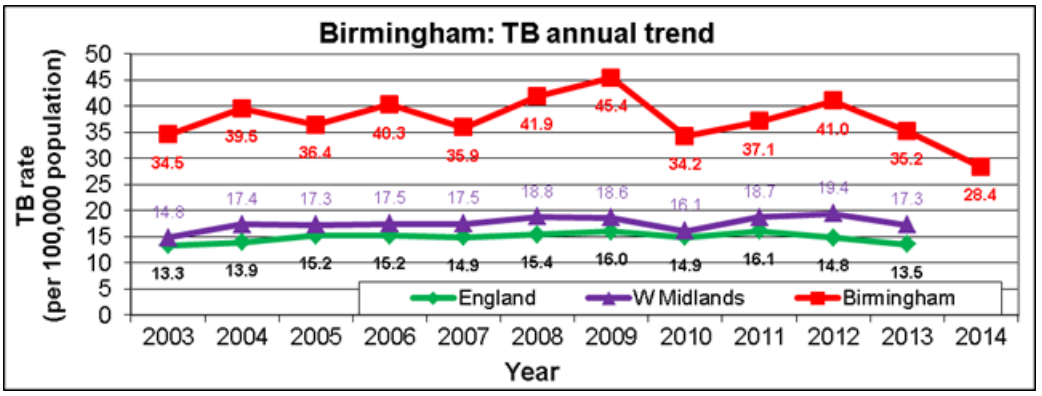
3.9 MDR-TB is treatable and curable by using second-line drugs. However, second-line treatment options are limited in some countries and recommended medicines are not always available. The extensive chemotherapy required (up to two years of treatment) is more costly and can produce severe adverse drug reactions in patients.

3.10 In some cases more severe drug resistance can develop. Extensively drug-resistant TB, XDR-TB, is a form of multi-drug resistant tuberculosis that responds to even fewer available medicines, including the most effective second-line anti-TB drugs.

3.11 About 480,000 people developed MDR-TB in the world in 2013. More than half of these cases were in India, China and the Russian Federation. It is estimated that about 9.0% of MDR-TB cases had XDR-TB.

4. TB in Birmingham up to 2014

4.1 TB incidence decreased for the second consecutive year in Birmingham with the total number of cases decreasing in 2014 to 312 (TB incidence 28.4 per 100,000 population), from 385 the previous year and 445 in 2012. The rate though is still considerably higher than the West Midlands and for England.



- **Treatment completion for active and latent tuberculosis**
  Completion of TB treatment is essential for control of TB and the Chief Medical Officer has set a target of 85% treatment completion rates. The proportion of cases of active TB disease who complete treatment was already >85% and has increased further to 93-94% (Quarter 1-4, 2013). Treatment completion rates for latent TB infection have also been excellent with rates of 95-98% for the four quarters in 2013. Assessment and delivery of directly observed treatment (DOT) has improved for patients less likely to

complete TB treatment with 97-100% of TB patients risk assessed for DOT and 92-99% of patients assessed as eligible being offered the service.

- **Latent TB Infection – detection and management**
  Approximately 70% of TB cases occur in people born abroad of whom around 45% entered the UK within five years of diagnosis. Therefore, establishing a robust system to detect and treat latent infections in migrants from high incidence countries, a priority identified in the recently published national TB strategy, should be an important part of the programme to control TB in Birmingham. A pilot was successfully completed to test and treat college ESOL (English for Speakers of Other Languages) students. More than 450 students, most from high incidence countries, were tested and two cases of active disease and over 65 cases of latent infection identified.

- **Poorly adherent TB patients**
  There is a lack of appropriate facilities in the UK for treatment of poorly adherent (and drug-resistant) cases that present a risk to public health, with the resulting risk of increasing spread of (drug resistant) infections. There is also a need for a coordinated multi-agency public health strategy to manage local patients with (drug resistant) TB who have complex social needs.

5. Regulatory Powers available in dealing with TB

5.1 Whilst the treatment and control of TB is a multi-agency function, Regulation and Enforcement's role is in the application of relevant legislation to deal with difficult and complex cases when the public's health is at risk. The measures are contained in the Public Health (Control of Disease) Act 1984 (as amended) together with the Health Protection (Local Authority Powers) Regulations 2010 and the Health Protection (Part 2A Orders) Regulations 2010. This legislation is not only used for TB, but for any infection that poses a risk to public health and control is required, however most incidences do relate to TB cases.

5.2 The main control available to authorities when dealing with non-compliant cases is a Part 2A Order. A Local Authority can apply to a JP for an order that imposes restrictions or requirements on a person(s) or in relation to a thing(s), a body or human remains, or premises. Provided the JP is satisfied that relevant criteria are met, an order can be made for the purposes of protecting against infection or contamination that presents, or could present, significant harm to human health. There are safeguards to protect the interests of individuals who may be the subject of an application for an order.

5.3 A JP can make a Part 2A Order requiring a person(s) to:

- undergo medical examination (NOT treatment or vaccination);
- be taken to hospital or other suitable establishment;
- be detained in hospital or other suitable establishment;
- be kept in isolation or quarantine;
- be disinfected or decontaminated;

- wear protective clothing; (e.g. facemasks in the case of TB patients);
- provide information or answer questions about their health or other circumstances;
- have their health monitored and the results reported;
- attend training or advice sessions on how to reduce the risk of infecting or contaminating others;
- be subject to restrictions on where they go or who they have contact with;
- abstain from working or trading.

5.4 In addition, a JP can make a Part 2A Order requiring that:

- A thing(s) is seized or retained; kept in isolation or quarantine; disinfected or decontaminated; or destroyed or disposed of;
- A body or human remains be buried or cremated, or that human remains are otherwise disposed of;
- premises are closed; premises are disinfected or decontaminated; a conveyance or movable structure is detained, or a building, conveyance or structure is destroyed.

5.5 To make an application for a Part 2A Order, the Local Authority must first determine through a risk assessment that an order is necessary to protect human health, that the required evidence is available and that the relevant criteria appear to be met.

5.6 The 1984 Act sets out the criteria that a JP, and the Local Authority, must be satisfied about before they can make an order. These are:

- that the person is, or may be, infected or contaminated; and
- that the infection or contamination presents, or could present, significant harm to human health; and
- there is a risk that the person might infect or contaminate others; and
- an order is necessary to remove or reduce the risk.

5.7 An application for a Part 2A Order is an uncommon step to take, and on average less than one incident per year in Birmingham in extreme cases results in such an outcome. In most cases of infectious TB the patients fully adhere to prescribed treatment and no action is required by the Local Authority.

6. Management of Cases

6.1 In circumstances where recourse to statutory powers are considered, strenuous efforts are made to encourage treatment adherence such as provision of psychosocial support and financial incentives, and arrangements to facilitate easy access to health care. But variable adherence to anti-TB drug therapy can result in the development of increasing drug resistance, and an incident management team is formed involving key partners.

6.2 The strategic aims of any incident management team, of which officers from Regulation and Enforcement are key member, will be as follows.

i) To minimise risk to the public's health.

ii) To maximise the health and safety of staff, as far as is reasonably practicable.

iii) To maximise the opportunity for the patient to receive effective treatment.

iv) To minimise any disruption and/or alarm to the local community.

v) To ensure there is a robust communications strategy in place, for both internal and external stakeholders, which is proportionate and balanced.

vi) To ensure lessons are identified, shared and acted upon.

7. Consultation

7.1 The report is for information only and has been shared with partner agencies. The management of complex cases of infectious diseases illustrates the effective working between the Local Authority and NHS hospitals, the ambulance service, the Police and Public Health England.

8. Implications for Resources

8.1 It is anticipated that the core elements of the Act that are enforced through Regulation and Enforcement will be delivered within the Committee's existing budget.

9. Implications for Policy Priorities

9.1 The work of Environmental Health identified in this report supports the City Council's strategic outcomes of 'Stay Safe' and 'Be Healthy.

10. Implications for Equality and Diversity

10.1 The incidence of TB is greater in young adults, and is concentrated in deprived inner city areas with the overwhelming majority (88%) among ethnic minority groups – 35% Pakistani; 19% Indian; 19% Black African. As reported around 70% of cases occur in people born overseas of whom around 45% entered the UK within five years of diagnosis.

ACTING DIRECTOR OF REGULATION AND ENFORCEMENT

Background Papers: West Midlands Health Protection Report 2014