

## The Management of the Infection Prevention and Control Risk of Patients with TB within LPT

This policy describes the process for managing patients who are suspected to have or diagnosed with tuberculosis. It identifies the specialist support and input requires by the TB specialist nursing services.

Key words:	Infection Prevention and Control, Tuberculosis, TB	
Version:	9.2	
Adopted by:	Trust Policy Committee	
Date this version was adopted:	12 February 2021	
Name of Author:	Mel Hutchings	
Name of responsible committee:	Infection Prevention and Control Group	
Please state if there is a reason for not publishing on website:	n/a	
Date issued for publication:	November 2022	
Review date:	July 2023	
Expiry date:	1 February 2024	
Target audience:	All LPT staff	
Type of policy	Clinical <input checked="" type="checkbox"/>	Non-clinical <input type="checkbox"/>
Which Relevant CQC Fundamental Standards?	8	

## Contents

Version Control	3
Definitions that apply to this Policy	4
1.0 Purpose of the policy	5
2.0 Summary and scope of the policy	5
3.0 introduction	6
4.0 The management of the infection prevention and control risk of Patients with tuberculosis within the organization	7
4.1 Symptoms of tuberculosis	7
4.2 Diagnosis of tuberculosis	7
4.3 Treatment for patients with tuberculosis	8
4.4 Notification	9
4.5 Infectious status	9
4.6 The management of patients with suspected or confirmed Pulmonary tuberculosis whilst an in-patient in a community hospital	10
4.7 The management of patients with suspected or confirmed Pulmonary MDR-TB whilst an in-patient in a community hospital	12
4.8 The management of patients with suspected or confirmed pulmonary tuberculosis and nursed in their own homes	13
4.9 The management of patients with suspected or confirmed Pulmonary tuberculosis that require emergency/out-patient appointments	13
4.10 Contact tracing	14
5.0 Staff exposure	14
6.0 Training	15
7.0 References and associated documents	16
Appendix 1: List of contacts for advice	17
Appendix 2: Contribution List	18

## Version Control and Summary of Changes

Version number	Date	Comment
Version 1	January 2009	NP0171 Guidelines for the Care of Patients with Tuberculosis in the Community and (Interim Policy) Infection Control Guidelines for the Management of Patients with Tuberculosis and combined.  Reviewed to meet NHSLA requirements
Version 2	May 2010	Document forwarded to Clinical Governance Committee for approval. Clinical Governance committee requested an insert relating to the role/responsibility of the Tuberculosis Specialist Nurse(s) and information relating to how staff will be informed that a patient may have a diagnosis of TB
Version 3	June 2010	Reviewed to meet LPT Clinical Governance Committee requirements
Version 4	August 2011	Harmonised in line with LCRCHS, LPT, LC CHS (Historical organisations)
Version 5	March 2013	Inserted paragraph concerning precautions required if caring for patients with suspected pulmonary tuberculosis whilst an inpatient in a community hospital. Document forwarded to LPT Policy Group for agreement in April 2013
Version 6	May 2015	Review of policy in line with expiry date
Version 7	April 2016	Review of policy in line with updated NICE guidelines (January 2016)
Version 8	November 2018	Review of policy in line with updated NICE NG33 guidelines (2016)
Version 9	November 2019	Review of policy in line with updated PHE TB data
Version 9.1	September 2022	Review of policy in line with current Infection prevention and control guidance issued August 2022
Version 9.2	October 2023	Occupational health phone amended

**For further information contact:** Infection Prevention and Control Team

## Definitions that apply to this policy

<b>Acid Fast Bacilli (AFBs)</b>	Microscopic appearance of members of the mycobacterium genus and certain other bacteria. The staining methods to demonstrate this 'Acid Fast' uses strong acid solutions and either carbol fuchsin (Ziehl-Neelsen) or auramine as a diagnostic tool.
<b>Aerosol generating procedure</b>	A procedure carried out on a patient that can induce the production of aerosols of various sizes, including droplet nuclei. Examples include: non-invasive positive pressure ventilation (BIPAP, CPAP); endotracheal intubation; respiratory/airway suctioning; high-frequency oscillatory ventilation; tracheostomy care; chest physiotherapy; aerosolized or nebulized medication administration; diagnostic sputum induction; bronchoscopy procedure, autopsy of lung tissue.
<b>Bacillus Calmette-Guérin (BCG)</b>	The BCG vaccine provides protection against tuberculosis (TB).  The BCG vaccine is not given as part of the routine childhood vaccination schedule unless a baby is thought to have an increased risk of coming into contact with TB.
<b>Closed pulmonary TB</b>	TB infection of the lung where 3 or more sputum samples are taken on separate days and are negative on microscopy for ARBs. This form of pulmonary TB can be confirmed by culture of sputum. It is far less infectious than open TB.
<b>Congregate setting</b>	A place where people congregate or an institutional setting such as a workplace, prison, hostel, or childcare or educational setting, where social contacts might have had significant exposure to TB
<b>Extra-pulmonary TB</b>	TB infection of any site within the body outside of the lungs. It includes TB infection of the pleural cavity.
<b>FFP3 mask</b>	A respiratory protection device (respirator) which resembles a surgical mask in appearance but which reduces the wearer's exposure to airborne particles due to its filtration efficiency.
<b>Haemoptysis</b>	The coughing up of blood from the lungs or bronchi. It is bright red and frothy because it is aerated.
<b>Latent TB infection (LTBI)</b>	In most people, once the TB bacteria are inhaled, the immune system kills the bacteria and they are removed from the body. In a small number of people, TB causes no immediate illness, but remains dormant in the body which is called LTBI.
<b>Multi-drug resistant TB (MDR-TB)</b>	MDR-TB is caused by strains of mycobacterium tuberculosis which is resistant to both rifampicin and isoniazid with or without resistance to other anti-TB antibiotics (eg, streptomycin, ethambutol, ethionamide, macrolides and quinolones).
<b>Open pulmonary TB</b>	TB infection of the lung tissue where the causative organisms erode into the airways and AFBs are visible on microscopic examination of the sputum. (This does not apply to respiratory samples obtained by bronco-scopic lavage). Such 'smear positive' individuals are infectious. Open TB is more infectious than closed TB.
<b>Productive cough</b>	A cough which produces expectoration of mucus or foreign body.

## 1.0 Purpose of the policy

This policy provides organisation-wide guidance for the management of patients with tuberculosis (TB) and describes procedures to be followed to control and minimise the spread of TB in order to reduce the risks of transmission.

The provision of healthcare carries with it inherent risks to the healthcare worker. The purpose of this policy is to ensure that all staff are aware of their responsibilities for safe practice when caring for patients with TB and take the appropriate precautionary measures to protect themselves, their co-workers and their patients. The policy identifies staff's responsibilities and provides them with the information they require to enable them to minimise the risk of transmission of infection.

The policy details outside organisations that will also be involved in the care of a patient with TB.

## 2.0 Summary scope of the policy

TB is caused by a bacterium called *Mycobacterium tuberculosis*. Infection with TB most commonly affects the lungs (pulmonary TB), although it can affect any part of the body (non-pulmonary TB). The incidence of TB is influenced by risk factors such as exposure to, and susceptibility to, TB and levels of deprivation (poverty, housing, nutrition and access to healthcare) and differs in different parts of England and Wales (NICE 2016).

In most people, once the bacteria are inhaled the immune system kills the bacteria and they are removed from the body. In a small number of people TB causes no immediate illness, but remains dormant in the body. This is called Latent TB infection (LTBI) and may develop into active disease many years after the original infection, particularly if the body is weakened by other medical problems (British Lung Foundation 2004). In some people, the initial infection will progress on to cause TB. If this infection is in the lungs, then these people may be a risk to others. Healthcare workers should be aware that certain groups of people with LTBI are at increased risk of going on to develop active TB, including people who:

- Are HIV positive
- Are injecting drug users
- Have had a solid organ transplantation
- Have a haematological malignancy
- Have had a jejunoileal bypass
- Have chronic renal failure or receive haemodialysis
- Have had a gastrectomy
- Are receiving anti-tumour necrosis factor-alpha treatment
- Have silicosis

(NICE 2016)

(In 2018, 4,655 people were diagnosed with TB in England, an 8.2% decline compared to 5,070 in 2017. The rate of TB reached an all-time low of 8.3 per 100,000 population in 2018 (Figure 1), and has been below the 10 per 100,000 WHO definition of a low incidence country since 2017. . (PHE Tuberculosis in England: 2019 Presenting data to end of 2018)

Between 2017 and 2018, the number of TB notifications and rates for people born outside the UK remained stable or declined across all PHECs, with the exception of the East Midlands, where there was an increase in the number and rate of 15.1% and 18.1%, respectively (Figure 1.9, Table Ai.1.5). The largest proportional decline in numbers was seen in the South West (-20.5%), and the largest decline in the rate was also seen in the South West as well as the West Midlands (-13.4% and -13.5%, respectively).

(PHE Tuberculosis in England: 2019 Presenting data to end of 2018)

Although anyone can contract TB, for most people in the UK the risk of contracting the disease is very small. However, some specific groups of the population are at heightened risk (NICE 2016). Those groups at particular risk include:

- Close contacts of infectious cases
- Those who have lived in, travel to, or receive visitors from places where TB is still very common. For a list of high prevalence countries please see Public Health England web site address – <https://www.gov.uk/government/organisations/public-health-england>
- People who live in communities originating from places where TB is very common. Please refer to Public Health England web site as detailed above.
- Those with immune systems weakened by Human Immunodeficiency Virus (HIV) infection or other medical problems
- The very young and the elderly as their immune systems are less robust, also those with chronic poor health and malnutrition because of lifestyle problems such as homelessness, drug abuse or alcoholism
- The prison population
- Those living in poor or crowded housing conditions, including those living in hostels
- New entrants to the UK- including immigrants, refugees, asylum seekers, Students & those on who may be on work permits.

This policy provides guidance on the management of the infection prevention and control risk of patients with TB within the organisation. The policy has been produced and reviewed in accordance with published evidence and NICE guidelines. As a duty of care LPT must ensure that staff are given guidance as to the appropriate steps they need to undertake to ensure that they can protect the patients within their care.

### **3.0 Purpose Introduction**

LPT needs to ensure that all staff employed by LPT are providing evidence based care which is in accordance with the Health & Social Care Act ( 2015) and

Department of Health (DH) guidance.

The purpose of this policy is to provide staff employed by Leicestershire Partnership Trust (LPT), with clear and robust infection prevention and control guidance in the management of a patient with a confirmed or suspected diagnosis of infective TB.

This policy applies to all staff, including those working on the bank, agency or honorary contracts either at the community hospitals, mental health inpatient establishments or within the community. All health professionals should ensure they work within the scope of their professional code of conduct.

#### **4.0 The management of the infection prevention and control risk of patients with TB within the organisation.**

##### **4.1 Symptoms of TB**

A persistent cough that can be either dry or productive, lasting three weeks or longer is the most common symptom (pulmonary TB). A productive cough can sometimes be accompanied with hemoptysis.

Other symptoms (pulmonary and non-pulmonary) include:

- Loss of appetite and weight for no obvious reason
- General lethargy and a sense of being unwell
- Night sweats and intermittent fever
- Pain at the site of infection (eg, joint/spine or chest pains)

##### **4.2 Diagnosis of TB**

Where there is a suspicion of TB, advice should be sought from any of the following:

- TB Specialist Nursing Service (based at Glenfield Hospital)
- Department of Infectious Diseases (based at Leicester Royal Infirmary)
- Public Health England (PHE)

Please refer to Contacts for Advice (Appendix 1)

Diagnosis of active respiratory TB is by chest X-ray and microscopic evidence of acid-fast bacilli (AFB) in sputum. Culture of the sputum is necessary to confirm *Mycobacterium tuberculosis*. Sputum microscopy will detect acid-fast bacilli (smear- positive result) within 24–48 hours; however, sputum culture (considered the 'gold standard' test for active pulmonary TB) may take up to 6 weeks (NICE Clinical Knowledge Summary: Tuberculosis 2015)

If a diagnosis of pulmonary TB is being considered for any patient, a chest x-ray should be undertaken and if the result is suggestive of pulmonary TB then further diagnostic investigations in the form of sputum samples should be obtained.

(NICE 2016)

3 deep cough sputum samples, (preferably with 1 early morning sample) for TB should be sent for TB microscopy and culture as soon as possible (NICE 2016). The specimens should be sent to the laboratory at the Leicester Royal Infirmary, University Hospitals of Leicester. The samples should not be placed in formalin (or any other fixative agent) when sending for TB Culture (NICE 2016).

The samples should be taken before commencing treatment if possible, or failing that within 7 days of starting treatment in people with life-threatening disease. However, once samples have been sent, if there are clinical signs and symptoms consistent with a diagnosis of TB; consideration should be given to commence treatment without waiting for the culture results.

A rapid diagnostic nucleic acid amplification test should be requested for the *M. tuberculosis complex* (*M. tuberculosis*, *M. bovis*, *M. africanum*) on primary specimens if there is clinical suspicion of TB disease, and:

the person has HIV  
or  
rapid information about mycobacterial species would alter the person's care or  
the need for a large contact-tracing initiative is being explored.

If there are clinical signs and symptoms of TB consideration should also be given to complete the standard recommended regimen even if subsequent culture results are negative (NICE 2016).

People with TB at any stage of the disease should not be admitted to hospital for diagnostic tests or for care unless there is clear clinical or socio-economic need, such as homelessness, (NICE 2016). Any necessary test or investigations can be undertaken as an outpatient. Further advice can be sought from the TB specialist nurse.

### **4.3 Treatment for patients with TB**

TB treatment is complex; guidelines recommend that physicians and nurses who have substantial experience in dealing with such patients undertake the treatment and management of TB patients (NICE 2016). Hence, treatment advice should be sought from the TB Specialist Teams (Please refer to Appendix 1)

Once a diagnosis of active TB is made:

- The clinician responsible for care should refer the person with TB to a clinician with training in, and experience of, the specialized care of people with TB
- Active TB in children should be managed by a TB specialist and by pediatric trained nursing staff, where possible (NICE 2016)



Once a patient has been diagnosed with active TB, the diagnosing physician should inform relevant colleagues so that the need for contact tracing can be assessed without delay. Contact tracing should not be delayed until notification (NICE 2016).

Healthcare professionals and staff involved with anyone newly diagnosed with active TB will usually be identified as part of the routine TB contact tracing process. If screening is considered necessary, the TB service or occupational health department will contact people on an individual basis to arrange this. Healthcare workers who care for patients who are already on established treatment are not considered to be at risk of infection. It is the responsibility of the patient to inform other healthcare professionals if their TB treatment impacts on the management of pre-existing co-morbidity e.g., anticoagulation therapy; renal disease; diabetes; epilepsy; pregnancy. The TB Specialist Nurse case manager will normally facilitate this and ensure that the patient is aware of their responsibility in this matter.

#### **4.4 Notification**

TB, whether infectious or not, is a notifiable disease. It is a statutory requirement in England, Wales and Northern Ireland for the diagnosing clinician to notify all cases of clinically diagnosed TB, whether or not microbiologically confirmed (NICE 2016). Notification must be made by telephone to the consultant in Health Protection at PHE, who acts as the 'Proper Officer' to all of the local authorities within Leicestershire. Please refer to Contact for Advice (Appendix 1).

#### **4.5 Infectious status**

##### **Multi-Drug Resistant TB (MDR TB)**

MDR-TB is not more virulent or more infectious than any other forms of TB, but the consequences of acquiring the disease are much more serious because of the complexities and duration of the required treatment regimens. The same precautions need to be applied as for non MDR-TB.

All patients with TB should have a risk assessment completed by the physician who is suspecting the disease within the patient for drug resistance and for HIV, Based on the risk factors listed below:

- History of prior TB drug treatment: prior TB treatment failure
- Contact with a known case of drug-resistant TB
- Birth in a foreign country, particularly high-incidence countries
- HIV infection
- Residence in London
- Age profile, with highest rates between 25 and 44
- Male gender

(NICE 2016)

##### **Smear Positive Pulmonary TB (Active TB)**

People with TB are considered to be infectious if they have smear positive pulmonary disease. The smear is positive when sufficient tubercle bacilli are present in the

sputum so that they can be seen on direct microscopic examination.

Following two weeks of effective treatment and clinical improvement patients are considered to be non-infectious as long as the treatment course continues to be taken. The effectiveness of treatment is decided in consultation with the consultant in Health Protection, microbiologist, infectious diseases doctor/respiratory physician and specialist TB teams. Consideration needs to be given to whether the patients is likely to be rifampicin resistant (ie, do they have risk factors for MDR-TB).

The following factors need to be considered when deciding if source isolation can be discontinued:

- Is the patient showing tolerance to the prescribed treatment?
- Is the patient in agreement to adherence to treatment?
- There is a resolution of cough
- There is a definite clinical improvement on treatment; for example the patient has remains afebrile for a week
- The other patients on the ward are not immunocompromised (for example transplant recipients, people with HIV, patients with cancer - note this list is not exhaustive)
- The patients initial smear grade was not high (e.g., was 2 or less)
- There is not extensive pulmonary involvement, including cavitation
- There is no laryngeal TB.

As already mentioned the decision to discontinue source isolation precautions needs to be made in consultation with the consultant in Health Protection, microbiologist, infectious diseases doctor/respiratory physician and specialist TB team even when the above factors are present, but having knowledge of the above can help influence the decision (NICE 2016).

### **Smear Negative, Culture Positive Pulmonary TB**

People who have sputum samples in which no tubercle bacilli are seen on direct microscopy but in whom tubercle bacilli are eventually cultured from their sputum are still infectious although less infectious than those with smear positive disease.

### **Non-Pulmonary TB**

People with non-pulmonary and LTBI e.g. Bone, lymph node are not infectious.

## **4.6 The management of patients with suspected or confirmed pulmonary TB whilst an in-patient in a community hospital**

A patient who is currently in a community hospital and is diagnosed during that admission with suspected pulmonary TB will be assigned a specialist TB nurse. The TB nurse will provide the specialist advice regarding their care and will liaise with the ward and the TB physicians (respiratory consultants) at UHL with regards to their need to transfer to UHL and will also facilitate their transfer to UHL as required.

Whilst the patient is on the ward within the community hospital, source isolation precautions must be commenced and the patient placed in a single room. Surgical masks as well as single use nitrile gloves and a single use plastic apron must be worn by staff when undertaking prolonged close care, or if specifically undertaking procedures with the patient that will induce sputum production.

Patients should be cared for in a single room until they have completed 2 weeks of the standard recommended regime, or they are discharged from hospital. If patients have to leave the isolation room they should be requested (with explanation given), to wear a surgical mask until they have had 2 weeks effective treatment (NICE 2016).

Patients should be encouraged to adhere to simple respiratory hygiene measures and advice given where necessary (NICE 2016).

For patients where TB is diagnosed or is being considered, aerosol-generating procedures, such as bronchoscopy, sputum induction or nebuliser treatment should be carried out in an appropriately engineered and ventilated area (ideally a negative pressure room) (NICE 2016). Advice should be sought from the TB nurse specialist team and/or the infection prevention and control team.

Consideration should be given to reduce the psychological impact of prolonged isolation. For example, through providing free access to internet, telephone and television and accompanied walks in the open air, with the correct safeguards in place (NICE 2016).

If they have previously been nursed in an area with other patients, then the infection prevention and control team must be informed and the ward staff must record the names of the other patients in the area. This information must be stored for future reference in the event that future screening of (close) inpatient contacts may be required. The decision to screen will be taken by PHE and the TB specialist team. The names of the staff members that have had prolonged close contact, or who have been involved in activating sputum production with the patient should also be recorded and stored for future reference. Any decision to screen will be taken by PHE and the TB specialist team.

If sputum specimens are requested three specimens should be collected of which one should be an early morning specimen. An early morning specimen refers to the first specimen that can be collected during the day. All specimens should be sent to the laboratory in a biohazard bag and using the yellow stickers or marking the request form to indicate that it is a high risk specimen.

Patients should be considered for discharge if they are medically fit and do not have a continuing clinical or public health need for admission with pulmonary TB and do not have risk factors for MDR-TB or who have negative rifampicin resistance on nucleic acid amplification test or culture.

If patients are discharged they should be advised to avoid congregate settings for the first 2 weeks of their treatment. (NICE 2016).

Consideration should be given to the appropriateness of discharge to a care home or other communal setting if they have not completed 2 weeks of treatment.

#### **4.7 The management of patients with suspected or confirmed pulmonary MDR-TB whilst an in-patient in a community hospital**

Patients with suspected or known infectious MDR-TB who are admitted to hospital, should be admitted to a negative-pressure room.

Currently LPT has no negative pressure rooms. The nearest negative pressure rooms are located within UHL.

Patients with suspected or known infectious MDR-TB will be assigned a specialist TB nurse. The TB nurse will provide the specialist advice regarding their care and will liaise with the ward and the TB physicians (respiratory consultants) at UHL with regards to their need to transfer to UHL and will also facilitate their transfer to UHL as required.

Patients with infectious MDR-TB should not be nursed within a community hospital, but if a patient is suspected of infectious MDR-TB whilst an in-patient within a community hospital, and prior to their transfer to UHL; staff and visitors should wear FFP3 masks during contact with the patient (NICE 2016). The patient must be nursed in a single room with source isolation precautions commenced.

Whilst awaiting transfer, patients should be encouraged to adhere to simple respiratory hygiene measures, such as hand washing, and using paper handkerchiefs which are immediately disposed of, and advice given where necessary (NICE 2016).

Staff should wear an FFP3 mask, for which they have been appropriately fit tested, during contact with the patient who has suspected or known MDR-TB whilst they are considered infectious (NICE 2016). If any visitors require to wear an FFP3 mask they will also need to be appropriately fit tested.

For patients where MDR-TB is diagnosed or is being considered, aerosol-generating procedures, such as bronchoscopy, sputum induction or nebuliser treatment should be carried out in an appropriately engineered and ventilated area (ideally a negative pressure room), (NICE 2016). If patients are awaiting transfer to UHL and require such procedures it is imperative that discussions are held with the TB nurse specialist team and Infection Prevention and Control Team.

Consideration should be given to reduce the psychological impact of prolonged isolation. For example, through providing free access to internet, telephone and television and accompanied walks in the open air, with the correct safeguards in place (NICE 2016).

If patients are otherwise fit for discharge and would comply with, and be able to accommodate, home isolation then early discharge could be considered

If patients have confirmed MDR-TB but do not have a productive cough and have clinically improved, then a decision for discharge, if thought appropriate, should be taken in consultation with the Tb specialist teams, and health protection team. Infection prevention and control must be informed of the decision made. (NICE 2016)

#### **4.8 The management of patients with suspected or confirmed pulmonary TB and nursed in their own homes**

Unless there is a clear clinical or public health need, such as homelessness, people with suspected or confirmed pulmonary TB should not be admitted to hospital for diagnostic tests or for care (NICE 2016).

Patients with TB can be treated at home. It is not necessary to isolate an infectious person on treatment from other household members.

However, patients should avoid congregate settings, such as workplace, prison, hostel, childcare or educational settings for the first 2 weeks of their treatment (NICE 2016).

If staff are visiting a patient with active pulmonary TB for a reason other than their TB, for example to treat a wound or pressure sore advice should be sought from the TB specialist nurse as to any further precautions that might be required.

Individual advice regarding socialising, working or receiving visitors should be sought from the TB nursing service. Fumigation of houses is not necessary. Disposal of waste can be done through the normal waste streams. Patients should be encouraged to minimise aerosol production by covering the mouth and nose when coughing with tissues that should be discarded as domestic waste. The patient should then be encouraged to wash their hands.

If the patient is showing any respiratory symptoms then staff visiting are advised to wear a Fluid resistant surgical Mask (FRSM).

Linen in a patient's own home should be placed directly into the washing machine and washed on the hottest temperature the linen will allow

Further advice should be sought from the TB Specialist Nursing Service or Public Health England if required.

Staff should ensure that effective hand decontamination practices are adhered to at all times. Please refer to the LPT hand hygiene policy and the 5 moments for hand hygiene at the point of care for further information

#### **4.9 The management of patients with suspected or confirmed TB who require emergency/out-patient appointments.**

Patients who require emergency or outpatient appointments must be cared for in a single room. The receiving department must be informed of the potential or actual infectious status. If it is not possible to nurse the patient in a single room the patients waiting time must be kept to a minimum. This may involve prioritising their care above that of other patients (NICE 2016).

The number and duration of visits a patient makes to an outpatient department whilst they are still infectious must be minimised as much as is possible. To minimise the risk of infection, people with infectious TB should be seen at times or in places away

from other patients (NICE 2016). The patient should be encouraged/offered a FRSM to wear if showing any respiratory symptoms during their visit to an outpatient department

#### **4.10 Contact tracing**

Once a patient has been diagnosed with pulmonary TB, the diagnosing medic must ensure that relevant colleagues are informed so that contract tracing can be implemented where required. Public Health England and the TB specialist teams can offer support with this process.

Where TB is first diagnosed in a patient within an inpatient setting staff on the ward need to undertake a risk assessment to include the following:

- The degree of infectivity of the index case
- The length of time before the infectious patient was isolated
- Whether the other patients are unusually susceptible to infection
- The proximity of contact

Contact tracing is only necessary for patients for whom the risk is regarded as significant. If it is found to be necessary the specialist services will advise of the protocols required.

Patients should be regarded as at risk of infection if they have spent over 8 hours in the same bay as a patient who has smear-positive TB and also has a cough.

Patients who have been exposed to a patient who has smear-positive TB that is of a time period equivalent to close contacts or an exposed patient is known to be particularly susceptible to infection, the TB risk should be managed in the same way as close contacts.

If an inpatient with smear-positive TB is found to have MDR-TB or if the exposed patients are HIV positive then further advice should be sought from Public Health England and the Tb specialist teams.

#### **5.0 Staff exposure**

All staff in contact with patients or clinical specimens must attend Occupational Health on commencement of employment for TB screening. The purpose of this is:

- To prevent staff with infectious TB from infecting patients
- To identify staff requiring BCG vaccination and educate about symptoms of TB

Any staff with symptoms suggestive of TB should report to Occupational Health. Healthcare workers who know they are HIV positive at the time of recruitment or who are found to be HIV positive during employment should inform Occupational Health. This is to allow a medical and occupational assessment of TB risk to take place (NICE 2016).

Staff who have a known TB infection should consult the Consultant in Health protection, TB services or the Infection Control Team if they are planning to undertake aerosol-generating procedures as these procedures can increase the likelihood of droplet nuclei being expelled into the air.

If a member of staff is diagnosed with pulmonary TB and has been

symptomatic whilst at work, an incident meeting must be called. The persons present at the meeting should include:

- Consultant in Public Health
- Consultant in infectious diseases/respiratory diseases
- TB specialist nurse
- Occupational Health
- Infection Prevention and Control Nurse
- Line Manager or equivalent of the staff member identified

The purpose of the meeting is to undergo a scoping exercise to establish if any staff members or patients as necessary require screening for TB. Further actions may be required following the results of any screening which will be decided upon the results. Any other actions necessary will be decided at the meeting.

Any concerned staff members should be directed to Occupational Health for information and advice.

Confidentiality for the staff member/s concerned is the same for any patients.

## **6.0 Training**

There is a need for training identified within this policy.

It is a legal requirement that anybody who might be required to wear an FFP3 respirator be fit tested in order to check that an adequate seal can be achieved with each specific model; it is also important that the user carries out a fit check each time an FFP3 respirator is worn (see PHE and NHS England guidance)

There are persons around the trust who have been assessed as competent to carry out this training. Individual wards/departments/teams have records of persons employed in their area that have this competency.



## 7.0 References and bibliography

British Lung Foundation 2004. <http://www.lunguk.org/>  
British Thoracic Society. Control and prevention of tuberculosis in the United Kingdom: Code of Practice 2000 (Thorax 2000; 55:887-90)

Department of Health 2007 Tuberculosis prevention and Treatment: A toolkit for planning, commissioning and delivering high-quality services in England  
Department of Health, Health and Social Care Act (2015). Health Protection Agency <http://www.hpa.org.uk>  
*England: London.*

LPT Infection Prevention and Control policies  
NICE, Tuberculosis (NG33): Clinical diagnosis and management of tuberculosis, and measures for its prevention and control, (January 2016)

PHE (2019): Tuberculosis in England 2019 report (presenting data to end of 2018)

<https://www.gov.uk/coronavirus>

## Appendix 1

# Infection Prevention and Control Team

Contact Details		
Name	Address	Telephone Number
TB Nursing Service	TB Service The Gatehouse Glenfield Hospital Site Groby Road Leicester LE3 9QP	0116 2583767  Rapid Access: 0116 2502619  Fax: 0116 2563766
Consultant in Public Health England	Dr Lauren Ahyow Consultant in Health Protection Public Health England East Midlands Seaton House, City Link, London Road, Nottingham, NG2 4LA	0344 2254524
Consultant in Infectious Diseases	Infectious Diseases Unit Leicester Royal Infirmary Leicester	0116 2586951
Occupational Health Department	Baldwin Lodge Glenfield Hospital Site Leicester	0116 2585307
Infection Prevention and Control Team for LPT	Loughborough Hospital Epinal Way Loughborough	0116 2951668

## Appendix 2

### Contribution List

#### Key individuals involved in developing the document

<b>Name</b>	<b>Designation</b>
Mel Hutchings	Infection Prevention and Control Nurse
Helen Thuraisingham	Clinical Nurse Manager – TB Service, Leicester, Leicestershire and Rutland TB Nursing Service

#### Circulated to the following individuals for consultation

<b>Name</b>	<b>Designation</b>
Amanda Hemsley	Lead Nurse Infection Prevention and Control
Andrew Moonesinghe	Pharmacy Service Manager
Andy Knock	Infection Prevention and Control Nurse
Anne Scott	Director of Nursing
Anthony Oxley	Head of Pharmacy
Antonia Garfoot	Senior Nurse Infection Prevention and Control
Bernadette Keavney	Head of Trust Health and Safety Compliance
Claire Armitage	Deputy Head of Nursing AMH Community
Emma Wallis	Associate Director of Nursing and Professional Practice
Greg Payne	Training and Development Manager
Helen Walton	Estates and Facilities Property Manager
Jane Martin	Matron, LD and Rehabilitation
Jude Smith	Head of Nursing, CHS
Kam Palin	Occupational Health Nurse
Katie Willetts	Nurse Specialist FYPC
Laura Belshaw	Deputy Head of Nursing, MHSOP
Laura Brown	Senior Nurse Infection Prevention and Control
Liz Compton	Senior Matron AMH In-patient Services
Louise Evans	Deputy Head of Nursing, FYPC
Michelle Churchard-Smith	Head of Nursing AMH and MHSOP
Sarah Latham	Deputy Head of Nursing, CHS inpatients
Sue Arnold	Lead Nurse, Patient Safety
Tejas Khatau	Lead Pharmacist FYPC
Tracy Yole	Lead Nurse for Community Services CHS
Zayad Saumtally	Deputy Head of Nursing MHSOP