Doncaster and Bassetlaw Teaching Hospitals
NHS Foundation Trust

Tuberculosis
Care of the Patient with
Pulmonary or Laryngeal Tuberculosis in Hospital

This procedural document supersedes: PAT/IC 23 v.7 – Tuberculosis - Care of the Patient with Pulmonary or Laryngeal Tuberculosis in Hospital

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Executive Sponsor(s):	Karen Jessop, Chief Nurse
Author/reviewer: (this version)	Bala Subramanian Consultant Microbiologist
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Target audience:	Trust-wide

Amendment Form

Version	Date Issued	Brief Summary of Changes	Author
Version 8		• Clarification of criteria and process for notification • Change from PHE to UKHSA • Recommendation for prompt initiation of anti TB treatment for both patient management and IPC • Change in terminology from CCDC to CPHI • Updated references • Updated contact telephone numbers/ contacts • Change from the Health and wellbeing Department to occupational Health Team • Updated Hospital Infection prevention and Control • Discarded previous appendix 7 due to duplication of Appendix 1 contact list.	Bala Subramanian Consultant in Infection
Version 7	22 June 2020	• Change of Title • Amended in line with NICE guideline 2016 (updated Sept 2019) and WHO guidelines 2019 • Amended Table 1 to include additional outpatient isolation recommendations • New table inserted: Table 2 summarising face mask recommendations in various settings • Appendix 1 phone numbers updated • Throughout the policy taken out nebuliser treatment as an Aerosol generating procedure. • Added section/s Patients Lacking Capacity and Data Protection • Updated roles and responsibilities on monitoring Compliance section 12. • Updated associated Procedural section 15 • Added appendix on Protocol for Homeless Patients diagnosed with Smear positive TB	Bala Subramanian Consultant Microbiologist

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Table 1 summarises the isolation recommendations for patients with suspected or confirmed Pulmonary Tuberculosis.

Table 1

	Inpatient	**Outpatient**
• **Suspected TB,** • **Low risk for MDR-TB or** • **Confirmed drug sensitive TB**	• Single room with door closed for 2 weeks after starting TB treatment • Single rooms should have en suite facilities • If there are immunocompromised patients on the ward, the patient should be transferred to a single room on another ward (discuss with IPC team if advice required)	• Should not be seen in the same outpatient clinic as known immunocompromised patients (including HIV) • Minimise the number and duration of visits to outpatient clinic whilst still 'infectious' and ask patient to wear a fluid repellent surgical mask when attending • Avoid common waiting areas (move straight to clinic room where possible)
• **High risk or confirmed MDR-TB**	• Negative pressure isolation rooms, minimum of 15 air changes/hour. (Not available at DBTH – need to transfer to an appropriate facility) • Maintain isolation until smear negative from 3 sputum samples on weekly intervals or ideally until patient is culture negative (NICE 2016).	• Should not be seen in same outpatient clinic as known immunocompromised patients (including HIV) • Minimise the number and duration of visits to outpatient clinic whilst still 'infectious' and ask patient to wear a non-valved FFP3 mask when attending • Avoid common waiting areas (move straight to clinic room where possible)
• **Non-pulmonary TB**	• Assess for any evidence of co-existing pulmonary disease. • If not present, then no special precautions needed.	• Assess for any evidence of co-existing pulmonary disease. • If not present, then no special precautions needed.

1. INTRODUCTION

Tuberculosis (TB) is caused by a bacterium called *Mycobacterium tuberculosis (MTB).* TB is usually acquired by inhaling infected droplets from a person with TB of the lung, particularly when the patient is 'smear positive' Transmission of TB in hospitals can be prevented by simple infection control measures.

The probability that TB will be transmitted depends on a number of factors:

- Susceptibility of the exposed person
- Infectiousness of the person with TB (i.e. the numbers of TB bacilli that the patient expels into the air)
- Proximity, frequency and duration of exposure (e.g. close contacts)

The risk is greatest in those with **prolonged** close household exposure to a person with infectious TB. Therefore, health care workers giving transient care are generally not exposed to significant risk.

2. PURPOSE

It is the aim of this policy to encourage an effective treatment and control programme to reduce the transmission of tuberculosis (TB) in hospital. This policy is based on the NICE Tuberculosis Guideline (NG33 published 2016, updated 2019) and World Health Organisation WHO Guidelines (2019)

3. DUTIES AND RESPONSIBILITIES

This policy covers infection prevention and control management issues for Trust staff this includes:-

- Employees
- Volunteers
- Agency/Locum/Bank Staff
- Contractors whilst working on the Trust premises

Each individual member of staff, volunteer or contracted worker within the Trust is responsible for complying with the standards set out in the Policy. They need to be aware of their personal responsibilities in preventing the spread of infection. It is the responsibility of Directors and Managers to ensure compliance with this standard.

All staff working on Trust premises, outreach clinics and community settings, including Trust employed staff, contractors, agency and locum staff are responsible for adhering to this policy, and for reporting breaches of this policy to the person in charge and to their line manager.

- **3.1 Trust Board**

The Board, via the Chief Executive, is ultimately responsible for ensuring that systems are in place that effectively manage the risks associated with Infection Prevention and Control. Their role is to support implementation of a Board to Ward culture to support a Zero Tolerance approach to Health Care Associated Infections.

The Director of Infection Prevention and Control will provide assurance to the board that effective systems are in place.

- **3.2 Director of Infection Prevention and Control:**

Is responsible for developing infection prevention and control strategies throughout the Trust to ensure best practice.

- **3.3 The Infection Prevention and Control Team:**

Is responsible for providing expert advice in accordance with this policy, for supporting staff in its implementation, and assisting with risk assessment where complex decisions are required.

- **3.4 Managers:**

It is the responsibility of Divisional managers and senior nurses to ensure compliance with this standard.

- **3.5 Consultant Medical Staff:**

Are responsible for ensuring their junior staff read and understand this policy, and adhere to the principles contained in it at all times.

PATIENTS LACKING CAPACITY

Sometimes it will be necessary to provide care and treatment to patients who lack the capacity to make decisions related to the content of this policy. In these instances, staff must treat the patient in accordance with the Mental Capacity Act 2005 (MCA 2005).

- A person lacking capacity should not be treated in a manner which can be seen as discriminatory.
- Any act done for, or any decision made on behalf of a patient who lacks capacity must be done, or made, in the persons Best Interest* see definitions.
- Further information can be found in the MCA policy, and the Code of Practice, both available on the intranet.

4. DIAGNOSIS OF TB

A posterior–anterior chest X-ray should be taken; chest X-ray appearances suggestive of TB should lead to further diagnostic investigation.

For suspected respiratory infection, multiple sputum samples (at least three, with one early morning sample) should be sent to microbiology, specifically requesting TB microscopy and culture before starting treatment, if possible. In children where spontaneously produced sputum samples are not possible, 3 x gastric lavages or 3 x induced sputum can be sent (NICE 2016). In adults who are unable to expectorate, consider induced sputum or bronchoalveolar lavage specimens (NICE 2006, amended 2016). For non-respiratory TB, biopsy or aspiration should be considered to obtain material for diagnosis. The samples must be labelled 'danger of infection'.

Positive sputum smears should be reported immediately to the referring clinician, the TB Respiratory Lead for the Trust and the TB specialist nurse. (See Appendix 1 for list of contact numbers).

AAFB / TB screening must be specifically requested when sending the samples to the Microbiology lab. In DBTH, samples are cultured using both a rapid liquid culture system and solid culture methods. All positive isolates are referred to a Mycobacterium Reference Unit for further identification and susceptibility testing.

Preliminary cultures usually take approximately 2 weeks to become positive, although a negative culture result is not reported until the sample has been cultured for 6 weeks. Positive samples which are sent to the Mycobacterium Reference Unit usually take a further 1 – 2 weeks for identification and sensitivity results to be issued.

Rapid diagnostic methods, such as PCR for MTB complex, may enable a more rapid diagnosis to be made, but these are only useful for smear positive samples, where the sensitivity and specificity is approximately 90 – 95%. **If there is a clear indication for M.TB PCR testing, it needs to be discussed with the Consultant in Infection on the same day that the sample is being sent to the lab.**

Multi-Drug resistant TB (MDR TB)

MDR TB is defined as high level resistance to both Rifampicin and Isoniazid with or without additional drug resistances. Although the levels remain low in the United Kingdom (< 2%) it should be considered if the following risk factors are present:

Factors to consider for increased risk of MDR-TB

- Previous drug treatment for TB, particularly if there was a history of incomplete or poor adherence to treatment
- Contact with case of known MDR-TB or XDR-TB
- Poor clinical response to standard anti-TB treatment
- Birth or residence in a country in which the World Health Organisation reports that a high proportion (5% or more) of new TB cases are multidrug-resistant e.g. ex-Soviet block and certain countries in Eastern Europe, Africa, Asia and Latin America
- HIV infected
- Prolonged sputum smear or culture positive while on treatment (smear positive at 4 months or culture positive at 5 months)

More stringent infection control measures than are recommended in general are required for all patients with MDR-TB because of more serious consequences of transmission of infection in these circumstances. In any patient with suspected or confirmed TB, an urgent risk assessment should be made as to likelihood of infection with MDR-TB (Appendix 4). This should include discussion with a Respiratory Physician, Infection specialist / IPC team (including out of hours) to facilitate:

- Specimens to be sent to the Reference Laboratory for rapid diagnostic tests (TB PCR and rifampicin resistance probe) if found to be smear positive.
- Decision-making regarding the need for nursing in a negative pressure facility (not available at DBTH), therefore will need urgent transfer to STH upon instruction by the Respiratory Physician responsible for the patient's care.

UKHSA and the TB Nurse Specialist should be informed immediately if a drug resistant organism is suspected or confirmed.

5. NOTIFICATION AND REPORTING

Tuberculosis is a notifiable disease in the UK. Notification is the statutory responsibility of the clinician making the diagnosis and should be undertaken for 1) cases of suspected TB where treatment is being initiated or 2) microbiologically confirmed TB. The TB Specialist Nurse should be informed on the day of the decision to treat where possible (by telephone or email). This should be followed by electronic notification to UKHSA via the Enhanced TB Surveillance system (ETS) within 3 working days.

Should the diagnosis of tuberculosis be later excluded then the clinician should ensure that the patient is de-notified by informing UKHSA and TB Nurse Specialist either by telephone or letter.

TB cases should be reported if appropriate to:

- The clinician (Chest Physician/ID Physician)
- Consultant in Public Health Infection (CPHI)
- Community TB Nursing Service
- The Hospital Infection Prevention and Control Team
- Health and Wellbeing Department

6. HOSPITAL INFECTION PREVENTION AND CONTROL

- Patients with suspected or confirmed pulmonary or laryngeal TB should be nursed in a single room with the door closed, and on a separate ward from immunocompromised patients (e.g. transplant recipients, HIV positive patients, patients on anti-TNF alpha drugs or other biologics) (NICE 2016).
- Prompt initiation of effective anti-TB treatment should be initiated for the benefit of the patient and for reducing onward transmission.
- If a patient has smear positive pulmonary TB while on the open ward, the IPC team must be informed and a contact risk assessment conducted by the clinicians and Infection specialists.
- Patients who are defined as being at significant risk following exposure are generally those in the same bay as a patient coughing with smear positive pulmonary TB for more **than 8 hours** (NICE, 2011). Such patients should have the contact documented in their notes. It is the responsibility of the Consultant to inform the patient and the GP using standard template (appendix 2), there should be a risk assessment in conjunction with UKHSA regarding any further action required**.** It is advisable to keep records of admissions and which bed was occupied by which patient in open bays for contact tracing purposes.
- Staff who have been involved in the care of patients with TB, should be informed of their exposure to TB and given advice on symptoms/signs to look out for. Once notified of a positive TB result via the laboratory system, it is the responsibility of the IPC team to inform Occupational Health to initiate warn and inform letter (Appendix 5). It is the responsibility of the Occupational Health team to liaise with the Ward Manager/Matron for the clinical area(s) where the patient with TB has been cared for, to identify staff who require a warn and inform letter.

6.1 Smear Positive Pulmonary Disease or those with strong clinical suspicion of pulmonary or laryngeal TB (including those awaiting sputum microscopy)

Healthcare settings

Hospital admission is not always required, even for patients with sputum smear positive disease, but it may be indicated for medical or social reasons. Patients who are admitted to hospital with TB should be managed according to the isolation & IPC protocols contained in this policy.

For patients who require care in a hospital setting (including emergency, outpatients or inpatient care), ensure they are managed in a single room (NICE 2016).

Whilst a patient is still infectious, minimise the numbers of outpatient clinic visits where possible and do not allow patients to wait in a common waiting room.

Explain to patient that they will need to wear a surgical mask in the hospital whenever they leave their room. Ask them to continue wearing it until they have had at least 2 weeks of treatment.

Patients should be educated to cover their mouths and noses fully when coughing or sneezing (even when in isolation rooms) and to cough into tissues or a sputum pot. This reduces aerosol generation.

After 2 weeks of appropriate treatment, most patients are non-infectious and can be removed from isolation (providing this is the only reason for isolation). This should be discussed with the clinician in charge of the patient. De-escalation from isolation can be considered after 2 weeks of appropriate multiple drug therapy provided the following criteria are met:

- the patient is tolerating and adhering to the prescribed treatment
- there is resolution of cough
- there is definite clinical improvement on treatment; for example, remaining afebrile for a week
- there are no immunocompromised people, such as transplant recipients, people with HIV and those on anti-tumour necrosis factor alpha or other biologics, on the same ward
- there is no extensive pulmonary involvement, including cavitation
- there is no laryngeal TB.

Visitors
Limit to next-of-kin or those in close-contact prior to diagnosis.
They must not visit other hospital patients especially immunocompromised patients. Children are discouraged from visiting.
Assess any visitors to a child with suspected active TB in hospital for symptoms of infectious TB. Keep them separate from other patients until they have been excluded as a source of infection (NICE 2016).

Inform
Consultant in Public Health Infection (CPHI), TB Community Nursing Service & Infection Prevention and Control.

Type of Isolation
Single room with door closed. Respiratory precautions – use FFP3 mask for prolonged patient contact e.g. >5 minutes. Where able encourage the patient to wear a Fluid Repellent Surgical Mask (FRSM) until culture/smear results available if patient coughing and staff in the room for prolonged periods.

Aerosol generating procedures such as bronchoscopy, sputum induction should be carried out in an appropriately ventilated area with **FFP3 mask** adopted until TB excluded.

Duration
If there is an ongoing clinical or social need for hospital admission, then patients with smear positive pulmonary disease must remain in a side room (as a minimum):
1) Until 2 weeks of appropriate treatment is completed AND
2) Patient is clinically responding to treatment AND
3) There are no risk factors for MDR-TB (OR negative rifampicin resistance on rapid testing)

Protective Clothing
Standard Principles

Staff routinely caring for patients are not at increased risk and routine wearing of masks or gowns is **not** necessary. For known or **suspected MDR TB**, an **FFP3** particulate filter respirator

must be worn because of the more serious consequences of infection. Staff should also use an FFP3 respirator if performing aerosol generating procedures on a patient with suspected pulmonary tuberculosis. Following a Trust local risk assessment, it has been agreed staff/patients must wear a FFP3 mask for prolonged contact e.g. greater than 5 minutes. (refer to Section 6.4)

Pathology Specimens
All specimens to be labelled as 'danger of infection'.

Disposal of faeces/urine
En-suite toilet, or macerator.

Cutlery/crockery
No special precautions – machine-wash in central kitchen or ward dishwasher if available
Jugs and Glasses may be washed at ward level.

Linen
Treat as infected

Clinical Waste
Dispose using an orange bag.

Room Cleaning
Twice daily clean with approved agent.

Comment
Doors to be kept shut at all times if in isolation
Encourage patient to cough into tissue if expectorating.
If the patient is transported outside of the room they should wear a surgical mask.

2 Smear Negative Pulmonary Disease

Visitors
Limit to next-of-kin or those in close-contact prior to diagnosis.
They must not visit other hospital patients' especially immunocompromised patients. Children are discouraged from visiting.

Inform
The TB Nurse Specialist & Infection Prevention and Control.

Type of Isolation
Single room with door closed and respiratory precautions until three separate smear negative sputum samples.

Pathology Specimens
All specimens to be labelled with 'Danger of Infection'.

Protective Clothing

Standard precautions.

6.3 Non-Pulmonary Disease

General
Patients with non-pulmonary TB are generally non-infectious and no special precautions are required. An individual risk assessment may be required in certain circumstances e.g. presence of a draining sinus.
It is also important to consider the possibility that a patient with TB in one part of their body may also have TB at other sites. Therefore, it is prudent to assess for any evidence of respiratory tract involvement prior to deeming a patient to be non-infectious.

Visitors
No restrictions.

Inform
TB Nurse Specialist & Infection Prevention and Control.

Type of Isolation
Isolation not required unless performing aerosol-producing procedures e.g. wound irrigation.

Protective Clothing
Standard precautions.

6.4 The use of face masks

Table 2 summarises the face mask recommendations for patients with suspected or confirmed Pulmonary Tuberculosis.

Table 2

	Inpatient	**Outpatient**
• **Suspected TB,** • **Low risk for MDR-TB or** • **Confirmed drug sensitive TB**	*HCW:* • FFP3 masks **must** be worn if >5 minutes patient contact and during cough inducing/aerosol generating procedures until 2 weeks of appropriate treatment has been given. • Wear FFP3 masks whilst caring for any patient in critical care with known or suspected infectious TB • For patients who have a productive cough and the HCW is directly exposed to respiratory secretions; following a risk assessment and	• Discourage suspected infectious TB patients from attending outpatients other than for supervised TB treatment and ask them to wear a Fluid Repellent Surgical Mask (FRSM). • If suspected infectious TB patient does come to outpatients they must not be in a communal waiting area.

	direction from the patient's physician or an Infection Prevention and Control Nurse, use a surgical mask as directed when entering the room for short periods (less than 5 minutes). *Patient:* • Infectious patients transported to other areas of hospital should wear a surgical mask	• Isolate any suspected infectious TB patients: the patient should wear a surgical mask at all times if they leave isolation.
• **High risk or confirmed MDR-TB**	*HCWs:* • Staff and visitors should wear FFP3 masks during all patient contact while the patient is considered potentially infectious *Patient:* • Infectious patients transported to other areas of the hospital should wear a non-valved FFP3 mask	• Discourage suspected infectious TB patients from attending outpatient clinics other than for supervised TB treatment and ask them to wear a non-valved FFP3 mask • If suspected infectious TB patient does come to an outpatient clinic they must not be in communal waiting area. • Isolate any suspected infectious TB patients: the patient should wear a mask (FFP3) at all times if they leave isolation.

Please note:

- It is imperative that all staff using these masks should have received training in their correct use and maintain competency by undertaking fit testing. How to Fit and Fit check and FFP3 Respirator can be seen in appendix 3

Visitors

- Only those persons, including small children who have been in close contact with the patient before the diagnosis will be allowed to visit patients with smear positive pulmonary disease whilst they are in isolation. Close contacts should have been screened first and active tuberculosis excluded.

- When masks are being recommended to visitors to an individual patient, visitors need to be instructed on how to use them and comply with other infection control procedures. A guide to

wearing PPE must be displayed in the patients' antechamber or if in a standard single room beside the patients' washbasin (Appendix 3)

- People visiting patients with tuberculosis may themselves be immunocompromised due to their own medical conditions which could make them more susceptible to infection. In conjunction with the physician in charge, staff will need to assess the likely risk of transmission from the index case and advise an immunocompromised visitor not to visit. It is therefore essential a thorough risk assessment is undertaken (Appendix 4) by the physician to determine level of infectivity and to exclude multi-drug resistant strain.

6.5 Surgical Procedures and visiting departments

Infectious patients should not leave isolation, including visiting communal washrooms or other hospital areas, except for essential investigations or procedures.
In such situations, patients must wear a surgical mask and the relevant department must be informed in advance.
Ward must notify the receiving area e.g. X Ray department or theatre, of the open Tuberculosis risk.

- Patient must be last on the list where possible.
- Arrange with departments best time for patient to visit e.g. end of session or day.
- Restriction of staff where possible, only essential staff to deal with the patient.
- Remove extraneous equipment out of the area send linen to the laundry as infected.
- Immediate cleaning and disinfection of contaminated equipment/environment following each use with approved disinfectant.
- Recover patient in Theatre if possible to avoid recovery room exposure to TB.
- Used Instruments will be collected by 'Steris Collection' and sent to Sheffield Hospital Sterilisation and Disinfection Unit (HSDU) as per usual, special bagging is not required.
- Dispose of ventilator tubing / filter and replace with new after machine thoroughly decontaminated.

6.6 Last Offices

Deceased patients with tuberculosis represent a risk to mortuary staff and therefore the deceased patient should be placed in a body bag. They should be labelled conspicuously on the body identification tag and on the body bag with 'Danger of Infection' labels. The same precautions should be followed during last offices as were followed when the patient was alive.

6.7 Specimens

Sputum and other respiratory specimens, these should be safely packaged and labelled 'DANGER OF INFECTION'.

7. STAFF EXPOSURE AND IMMUNITY

As soon as possible after starting work (NICE, 2011) all staff should have an assessment by Health and Wellbeing department for evidence of prior BCG Vaccination with a pathway to follow if not, i.e.

mantoux or quantiferon blood test. Clinical Directors, via delegation to Divisional Line Managers are responsible for ensuring that all members of staff attend.

BCG immunisation will be given to those with no demonstrable immunity in accordance with current guidelines.

It is uncommon for staff to acquire pulmonary TB from patients. If staff develop symptoms that are suspicious of pulmonary TB i.e. Prolonged cough, weight loss, haemoptysis, night sweats, they should report to the Occupational Health Team immediately (Appendix 5).

The Occupational Health Team will send out a memo to the clinical area involved with confirmed pulmonary TB to remind staff of their roles and responsibilities (Appendix 5).

8. PATIENT DISCHARGE FROM HOSPITAL

In cases where the patient has MDR-TB, the decision to discharge must be discussed with:

- Hospital Infection Prevention and Control Team/ Consultant in Infection
- Consultant in Public Health Infection (CPHI)
- TB Nurse Specialist

If the patient lives in a hostel or communal establishment, outpatient management may not be appropriate. Please see Protocol for Homeless Patients Diagnosed with Smear Positive Pulmonary/ Laryngeal Tuberculosis provided by NHS Doncaster IPC NHS Doncaster CCG. (Appendix 6).

Prior to discharge, arrangements for directly observed therapy should have been made, if required and agreed with the patient and carers.

The TB Nurse Specialist should be informed of the discharge date in order to make arrangements for follow up.

9. TRANSFER OF PATIENTS BY AMBULANCE

Ambulance staff transporting an infectious patient need sufficient information for their own protection while maintaining patient confidentiality.

10. THE MANAGEMENT OF OUTBREAKS

Outbreaks

An outbreak is defined as two or more associated cases. Most linked cases of tuberculosis are those which occur in close contacts and family members. These cases are dealt with by the normal contact tracing process, and are not normally considered as “outbreaks”.

Two or more cases which are associated with a grouping other than the family circle, may be considered an outbreak. Examples would be two or more cases occurring in a school, in a Care Home, or hospital. In these cases, screening of the wider community would need to be considered.

The investigation of a suspected outbreak of tuberculosis requires the input of a multidisciplinary team. The outbreak team would normally be convened and chaired by the CPHI, and would include all relevant specialist staff including clinicians, infection specialists, Health Protection Nurse Specialists, TB specialists, infection prevention staff, Health & Wellbeing and a representative from the Clinical Commissioning Group. Where TB is suspected/confirmed in staff, the investigation will be led by the Trust Occupational Health Team with support from above.

11. TRAINING AND SUPPORT

The training requirements of all staff will be identified through a training needs analysis. Role specific education will be delivered by the service lead or nominated person. Please refer to the Mandatory and Statutory Training Policy (CORP/EMP 29) for details of the training needs analysis, as staff will require different levels of training.

It is recommended that Infection Prevention and Control should be included in individual Annual Development Appraisal and any training needs for IPC addressed.

12. MONITORING AND COMPLIANCE WITH POLICY

Monitoring	**Who**	**Frequency**	**How Reviewed**
The policy will be reviewed in the following circumstances:-	Approved Procedural Document Process Group IPCT	Every three years routinely, unless: • When new national or international guidance are received. • When newly published evidence demonstrates need for change to current practice. • Action required from Root Cause Analysis Serious Incident Investigation Report	Approved Procedural Document (APD) database Policy will be approved and ratified by the Infection Prevention and Control Committee
Compliance with policy to negate cross-infection	The Infection Prevention and Control Practitioners	Weekly	"Alert organism review" to monitor adherence with the policy.

13. DEFINITION OF TERMS

Best Interest - There is no single definition of Best Interest. Best Interest is determined on an individual basis. All factors relevant to the decision must be taken into account, family and friends should be consulted, and the decision should be in the Best interest of the individual. Please see Section 5 of the Mental Capacity Act code of practice for further information.

Infectious tuberculosis: active tuberculosis disease which presents a risk of transmission of infection to others. For most practical purposes, this means sputum smear-positive pulmonary tuberculosis i.e. pulmonary tuberculosis in which acid fast bacilli (AFB) are present on direct microscopy of sputum. Disease of other parts of the respiratory tract or the oral cavity, though rare, must also be considered infectious. Factors which increase infectiousness include the presence of cavities in the lungs, laryngeal tuberculosis and cough.

More stringent criteria need to be applied if the patient is in contact with immunocompromised individuals or has drug-resistant disease, because of the more serious consequences for the recipient if transmission of infection occurs. For infection control purposes, therefore, patients can be divided into:

Infectious:

- All new patients with suspected or confirmed pulmonary or other respiratory tract tuberculosis until the sputum status is established or the diagnosis is excluded. At least three consecutive smears of good quality sputum specimens taken on different days must be examined before concluding a patient with pulmonary disease is **not** infectious.

- Those with confirmed sputum smear-positive pulmonary disease;

- those with active disease of the bronchi or larynx;

Potentially infectious:
Those with sputum smear-negative pulmonary disease in whom one or more cultures are positive, or the culture results are not yet known.

14. EQUALITY IMPACT ASSESSMENT

As part of its development, this policy and its impact on equality, an Equality Impact Assessment (EIA) has been conducted in line with the principles of the Equality Impact Assessment Policy CORP/EMP 27.

The Purpose of EIA is to minimise and if possible remove and disproportionate impact on employees and or patients on the grounds of race, sex, disability, age, sexual orientation or religious belief. No detriment was identified. A copy of the EIA can be seen in appendix 7.

15. ASSOCIATED TRUST PROCEDURAL DOCUMENTS

This policy should be read in conjunction with other Trust Policies and protocols for the prevention and control of HCAI in line with the Health and Social Care Action 2008. In particularly:

- Control of Substances Hazardous to Health (COSHH) Guidance – CORP/HSFS 7
- Pathology Specimens - Collection and Handling of Pathology Specimens – PAT/IC 11
- Glove Use Policy (Latex) - CORP/HSFS 13
- Hand Hygiene - PAT/IC 5
- Health and Safety at Work - Medical Surveillance - CORP/HSFS 2
- Management and Control of Incident/Outbreak of Infection- PAT/IC 20
- Isolation Policy - PAT/IC 16
- Mental Capacity Act 2005 - Policy and Guidance, including Deprivation of Liberty Safeguards (DoLS) – PAT/PA 19
- Privacy and Dignity Policy - PAT/PA 28

- Selection and Procurement of Medical Devices Policy - CORP/PROC 3
- Spillage of Blood and other Body Fluids - PAT/IC 18
- Standard Infection Prevention and Control Precautions Policy - PAT/IC 19
- Fair Treatment For All Policy - CORP/EMP 4
- Equality Analysis Policy - CORP/EMP 27.

16 DATA PROTECTION

Any personal data processing associated with this policy will be carried out under 'Current data protection legislation' as in the Data Protection Act 2018 and the General Data Protection Regulation (GDPR) 2016.

For further information on data processing carried out by the Trust, please refer to our Privacy Notices and other information which you can find on the Trust website.

17. REFERENCES

Guidance on the use of respiratory and facial protection equipment (2013) Available from https://www.journalofhospitalinfection.com/article/S0195-6701(13)00279-X/fulltext

National Institute for Health and Clinical Excellence (2016) **Tuberculosis** (NG33, published Jan 2016, updated Sept 2019) Available from https://www.nice.org.uk/guidance/ng33/

WHO guidelines on tuberculosis infection prevention and control 2019 update. Available from https://apps.who.int/iris/bitstream/handle/10665/311259/9789241550512-eng.pdf

APPENDIX 1 – LIST OF CONTACT NUMBERS

List of contact numbers

1	**Consultant in Public Health Infection (Doncaster)**	
	UKHSA, South Yorkshire	Tel: 0113 3860300
	Out of office hours:	Tel: 0113 3860300
	Consultant in Public Health Infection (Bassetlaw)	
	UKHSA, East Midlands North	Tel: 03442254524
	Out of office hours via EMAS	Tel: 03442254524
2	**Community TB Nursing Service**	
	Rotherham Doncaster & South Humber NHS Trust Cantley Heath Centre Middleham Road Cantley, Doncaster DN4 6ED	Tel: 01302 379564 Mobile 07775591213
3	**Consultant Chest Physicians (Secretary)**	
	Doncaster	Tel: 01302 366666 Ext: 642505
	Montagu	Tel: 01709 585171 Ext: 649021
	Bassetlaw	Tel: 01909 500990 Ext: 2954
4	**Paediatrician with an interest in Respiratory Medicine**	
		Tel: 01302 366666 Ext: 642288
5	**Consultants in Infection**	
	Doncaster	Tel: 01302 642831 Or via the hospital switchboard
6	**Lead Nurse – Infection Prevention and Control**	
		Tel: 01302 366666 Ext: 644489
7	**Hospital Pharmacy**	
	Pharmacist on duty	Tel: 01302 366666 Ext: 644339
8	**Occupational Health Department**	
		Tel: 01302 366666 Ext: 642582

APPENDIX 2 – DRAFT LETTERS

DRAFT LETTER FOR GENERAL PRACTITIONERS AND CONSULTANTS

Dear Dr X

Your patient Y was an inpatient at Z hospital at the same time as another patient with potentially infectious tuberculosis.

We do not think it likely that your patient is at significant risk of infection, and no specific action need be taken unless you are aware that they are unusually susceptible to infectious disease.

In the very unlikely event of your patient consulting you in the future with persistent symptoms which are consistent with the diagnosis of tuberculosis, then you will wish to keep this possible exposure to the disease in mind. The patient has been advised of the exposure.

Yours sincerely

DRAFT LETTER FOR PATIENTS PRESENT ON THE SAME WARD AS A CASE OF INFECTIOUS TUBERCULOSIS

Dear Sir/Madam,

We have recently identified an individual on ward XXX who has been diagnosed with tuberculosis (TB). According to our hospital records you were a patient on ward XXX during this period of time. I would like to reassure you that any health risk is low. TB does not spread easily and you usually need a period of prolonged close contact with an affected person to be at risk. TB is treatable and can be cured with a course of special antibiotics.

The individual concerned is being treated, is recovering and no longer presents an infection risk to others.

When a case of TB is confirmed it is routine procedure for us to inform individuals like yourself who may have potentially come into contact with the person with tuberculosis, and this information has also been passed on to your consultant and general practitioner. We do not believe that you are at any significant risk and, as a result, **no further action need be taken.**

If you do have any particular concerns or develop weight loss, cough up blood, have a persistent cough or fever or swollen glands in the neck, which lasts for over four weeks or believe yourself to be at particular risk of infectious disease, you should discuss this with your GP and show them this letter.

For further information about TB can be found on the Public Health England website: https://www.gov.uk/government/publications/tuberculosis-the-disease-its-treatment-and-prevention--2

Yours sincerely,

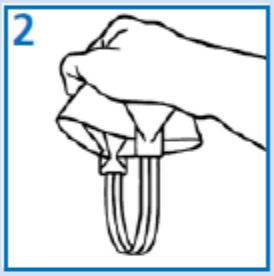
APPENDIX 3 – FITTING A MASK

HOW TO FIT AND FIT CHECK AN FFP3 RESPIRATOR

FOLLOW THESE FIVE STEPS TO FIT YOUR RESPIRATOR CORRECTLY

Tip: It may be helpful to look in the mirror when fitting your respirator

Hold the respirator in one hand and separate the edges to fully open it with the other hand. Bend the nose wire (where present) at the top of the respirator to form a gentle curve.



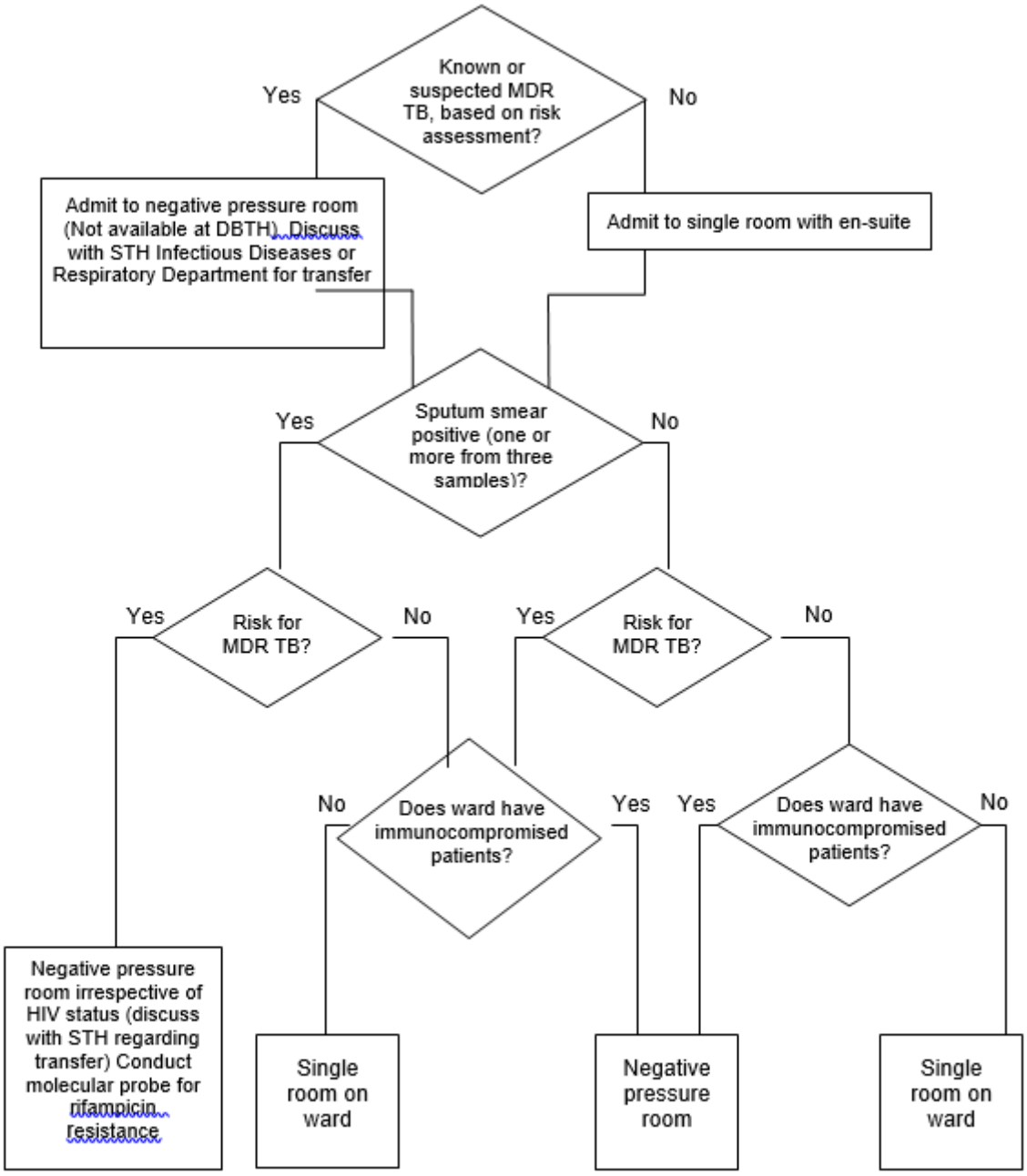
Turn the respirator upside down to expose the two headbands, and then separate them using your index finger and thumb. Hold the headbands with your index finger and thumb and cup the respirator under your chin.

Position the upper headband on the crown of your head, above the ears, not over them. Position the lower strap at the back of your head below your ears.

Ensure that the respirator is flat against your cheeks.

Mould the nosepiece across the bridge of your nose by firmly pressing down with your fingers until you have a good facial fit. If a good fit cannot be achieved, try another size or design of FFP3.

APPENDIX 4 – RISK ASSESSMENT



APPENDIX 5 – HEALTH AND WELLBEING MEMO

DONCASTER AND BASSETLAW TEACHING HOSPITALS NHS FOUNDATION TRUST

MEMORANDUM

From: **Health and Wellbeing Department**

To:

Date**:**

Subject: **Contact with Pulmonary Tuberculosis**

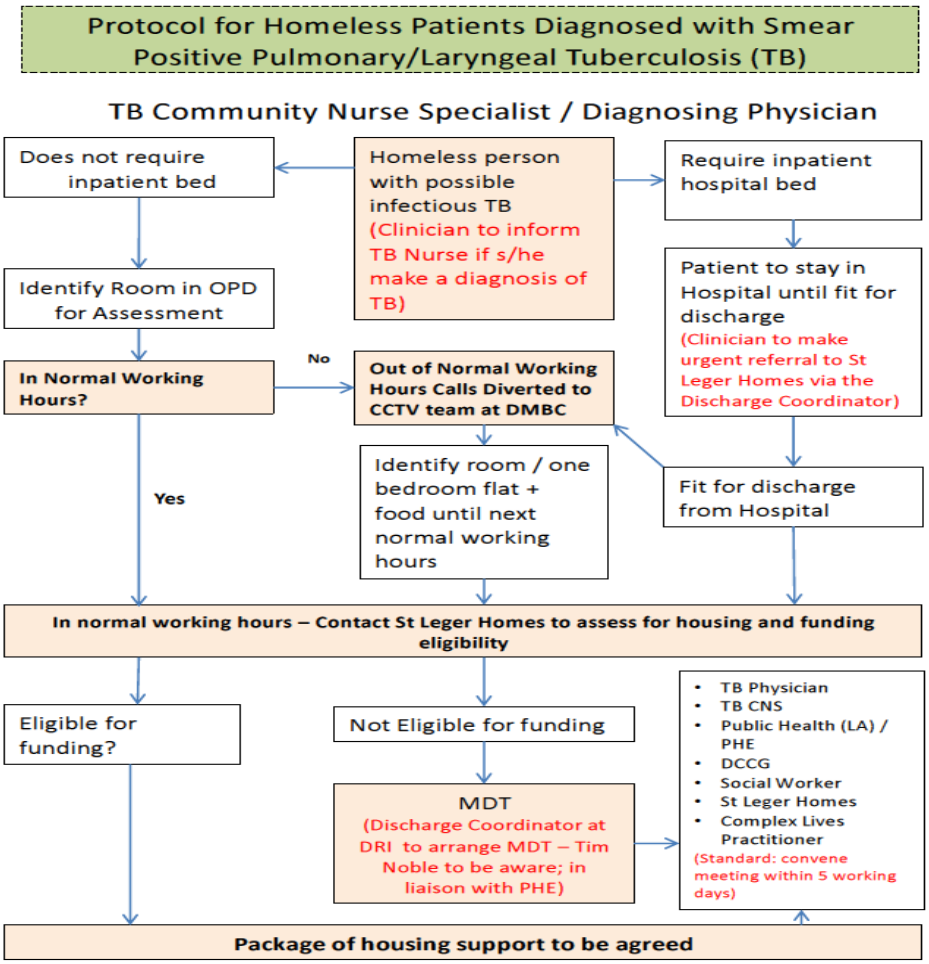
The Health and Wellbeing Department has been informed that staff in your department may have recently been in contact with a case of Pulmonary Tuberculosis.

No further action is needed at present. Staff should inform Health and Wellbeing if they experience any of the following;

- unexplained weight loss,
- a cough of more than 3 weeks' duration,
- night sweats,
- any other long-standing chest symptoms

All staff should have had their TB immunity checked during pre-employment screening. If anyone is unsure of their TB status, or if they are immunocompromised for any reason, e.g. taking high doses of steroids, HIV positive, or undergoing radiotherapy or chemotherapy, please contact Occupational Health for advice.

Health and Wellbeing Lead


Protocol for Homeless Patients Diagnosed with Smear Positive Pulmonary/Laryngeal Tuberculosis (TB)
TB Community Nurse Specialist / Diagnosing Physician
Does not require inpatient bed
Homeless person with possible infectious TB (Clinician to inform TB Nurse if s/he make a diagnosis of TB)
Require inpatient hospital bed
Identify Room in OPD for Assessment
Patient to stay in Hospital until fit for discharge (Clinician to make urgent referral to St Leger Homes via the Discharge Coordinator)
In Normal Working Hours?
No
Out of Normal Working Hours Calls Diverted to CCTV team at DMBC
Yes
Identify room / one bedroom flat + food until next normal working hours
Fit for discharge from Hospital
In normal working hours – Contact St Leger Homes to assess for housing and funding eligibility
Eligible for funding?
Not Eligible for funding
MDT (Discharge Coordinator at DRI to arrange MDT – Tim Noble to be aware; in liaison with PHE)
TB Physician
TB CNS
Public Health (LA) / PHE
DCCG
Social Worker
St Leger Homes
Complex Lives Practitioner
(Standard: convene meeting within 5 working days)
Package of housing support to be agreed

APPENDIX 7 - EQUALITY IMPACT ASSESSMENT

Policy	Division	Assessor (s)	New or Existing Service or Policy?	Date of Assessment
Tuberculosis - Care of the Patient with Pulmonary or Laryngeal Tuberculosis in Hospital Care - PAT/IC 23 v.7	Corporate Nursing Infection Prevention and Control	Bala Subramanian	Existing Policy	June 2023

1. Who is responsible for this policy? Infection Prevention and Control Team

2. Describe the purpose of the policy? To encourage an effective treatment and control programme to reduce the transmission of tuberculosis (TB) in hospital

3. Are there any associated objectives? This policy is based on NICE guidelines (published Jan 2016, updated Sept 2019) and recommendations following a local hospital outbreak

4. What factors contribute or detract from achieving intended outcomes? None

5. Does the policy have an impact in terms of age, race, disability, gender, gender reassignment, sexual orientation, marriage/civil partnership, maternity/pregnancy and religion/belief? No

- **If yes, please describe current or planned activities to address the impact**

6. Is there any scope for new measures which would promote equality?

7. Are any of the following groups adversely affected by the policy?

a. Protected Characteristics	Affected?	Impact
b. Age	No	
c. Disability	No	
d. Gender	No	
e. Gender Reassignment	No	
f. Marriage/Civil Partnership	No	
g. Maternity/Pregnancy	No	

h. Race	No	
i. Religion/Belief	No	
j. Sexual Orientation	No	

8. Provide the Equality Rating of the service/ function/policy /project / strategy

Outcome 1 ✓	**Outcome 2**	**Outcome 3**	**Outcome 4**

9. Date for next review June 2026

Checked by: Infection Prevention and Control Practitioner **Date June 2023**