Policy for the Prevention of Tuberculosis (TB) In Hospital

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APPROVED BY:
Infection Prevention and Control Committee

TARGET AUDIENCE:
All Staff

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Strategy Category
Infection Control (IC)

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<th>Version No</th>
<th>Details</th>
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1 Introduction

The National Institute of Clinical Excellence (NICE) produced guidelines for the Clinical diagnosis and management of tuberculosis, and measures for its prevention and control in 2005, clinical guideline 33, and reviewed them in again in 2011, clinical guideline 117.

The Joint Tuberculosis Committee of the British Thoracic Society produced an updated Code of Practice for the Control and Prevention of Tuberculosis in the United Kingdom in 2000\(^1\). This Code of Practice takes into account evidence in relation to control of infection in hospitals, protection of health care workers, contact tracing, multidrug-resistant disease and the possible effects of HIV on tuberculosis. In 1998 the Interdepartmental Working Group on Tuberculosis produced guidance on the control and transmission of HIV related tuberculosis and multiple drug resistant tuberculosis\(^2\). The guidance given in this document is taken from these two Codes of Practice.

Since the publication of the previous British Thoracic Society guidelines in 1994 the epidemiology of tuberculosis in Britain has continued to change with increases in the number of notifications, mostly in large urban areas. While the rates of tuberculosis in HIV cases have continued to rise the rate for drug resistant tuberculosis has not risen but resistance remains an important issue.

2 Purpose

To provide Southend University Hospital NHS Foundation Trust staff with a policy to provide practical guidance for the control and prevention of Tuberculosis (TB) within our facilities following NICE Guidelines (2011).

3 Definitions

<table>
<thead>
<tr>
<th>Term</th>
<th>Description</th>
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<tr>
<td><strong>Open pulmonary TB</strong></td>
<td>the term used to describe tuberculosis in an individual whose sputum is positive for AFB (Acid Fast Bacilli). Patients whose bronchial lavage specimens alone are ZN stain-positive are not considered to have open TB provided sputum specimens are negative on microscopy</td>
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<td><strong>Closed TB</strong></td>
<td>the term used to describe pulmonary TB where acid fast bacilli are not seen in the sputum. This term also sometimes applied to TB at other body sites, e.g.: lymph nodes</td>
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<td><strong>Smear positive</strong></td>
<td>organisms of the mycobacterium group have been demonstrated by the use of an Auramine stain of sputum or clinical specimens. This is the initial indication of possible TB</td>
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<tr>
<td><strong>AFB (acid fast bacilli)</strong></td>
<td>a type of bacillus that resists decolorizing</td>
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### Culture positive

<table>
<thead>
<tr>
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<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIV</td>
<td>Human Immunodeficiency Virus</td>
</tr>
<tr>
<td>MDR TB</td>
<td>Multi Drug Resistance tuberculosis</td>
</tr>
<tr>
<td>HPA</td>
<td>Health Protection Agency</td>
</tr>
<tr>
<td>CCDC</td>
<td>Consultant for Communicable Disease Control</td>
</tr>
<tr>
<td>ICE</td>
<td>Integrated Communications Engine</td>
</tr>
<tr>
<td>DOT</td>
<td>Directly observed therapy</td>
</tr>
<tr>
<td>NICE</td>
<td>The National Institute of Clinical Excellence</td>
</tr>
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</table>

### Duties

It is the responsibility of individual health care workers to ensure they follow this policy.

#### Duties within the Trust (Committee’s)

Infection Prevention and Control Committee (IPCC) is responsible for the review of this policy at least every two years, but more frequently if there are changes to Infection Prevention and Control Legislation or guidance.

#### Duties of Individuals within Trust

- The Chief Executive has overall responsibility for the implementation of this policy. The Chief Executive delegates this responsibility to the Director for Infection Prevention and Control.

- The Director for Infection Prevention and Control (DIPC) has the responsibility to ensure there are adequate resources available to manage TB infection within Southend University NHS Trust.

- Employees have the responsibility to:
  - Adhere to this policy and procedures
  - Attend relevant training as appropriate to their individual role
  - Participate in any relevant audit as part of the Infection Prevention and Control Audit Programme
  - Identify to their line manager any problems or failings associated with the management of TB
  - Promptly report all incidents concerning the risks or exposure to TB in accordance with the Trust's Incident Reporting Policy

- Infection Prevention and Control Team (IPCT) responsibilities are to:
- Promote evidence based infection prevention and control practices in line with Trust policies
- Be responsible for the production of the policy and management procedures
- Liaise with the Occupational Health Department at STHFT in the screening of staff if screening is required

- Occupational Health Department have responsibility to:
  - Screen and monitor staff as clinically necessary
  - Appropriate management of care of staff members
  - Liaise with the IPCT as and when required

5 Tuberculosis

TB is caused by a bacterium called *Mycobacterium tuberculosis* (‘*M. tuberculosis*’ or ‘*M.Tb*’). It is spread by one person inhaling the bacterium in droplets coughed or sneezed out by someone with infectious tuberculosis. Not all forms of tuberculosis are infectious. Those with TB in organs other than the lungs are rarely infectious to others, and nor are people with just latent tuberculosis (see below). Some people with respiratory tuberculosis are infectious, particularly those with bacteria which can be seen on simple microscopy examination of the sputum, who are termed ‘smear positive’. The risk of becoming infected depends principally on how long and how intense the exposure to the bacterium is. The risk is greatest in those with prolonged, close household exposure to a person with infectious TB. (NICE 2011).

Once inhaled the bacteria reach the lung and grow slowly over several weeks. The body’s immune system is stimulated, which can be shown by a Mantoux test, a common diagnostic technique. In over 80% of people the immune system kills the bacteria and they are removed from the body. In a small number of cases a defensive barrier is built round the infection but the TB bacteria are not killed and lie dormant. This is called latent tuberculosis; the person is not ill and is not infectious. Sometimes at the time of the initial infection, bacteria get into the blood stream and can be carried to other parts of the body, such as bones, lymph glands or the brain, before the defensive barrier is built. One third of the world’s populations, two billion people, have latent tuberculosis. If the immune system fails to build the defensive barrier, or the barrier fails later, latent tuberculosis can spread within the lung (pulmonary tuberculosis) or into the lymph glands within the chest (intrathoracic respiratory tuberculosis) or develop in the other part(s) of the body it has spread to (extra pulmonary tuberculosis). Only some of those with latent tuberculosis will develop symptoms (‘active tuberculosis’). About half the cases of active tuberculosis develop within a few years of the original infection, particularly in children and young adults. The other half of active TB cases arises from reactivation of the latent infection many years later. (NICE 2011).

Because TB can affect many sites in the body, there can be a wide range of symptoms, some of which are not specific and may delay diagnosis. Typical symptoms of pulmonary TB include chronic cough, weight loss, intermittent fever, night sweats and coughing blood. TB in parts other than the lungs has symptoms which depend on the site, and may be accompanied by intermittent fever or weight
loss. TB is a possible diagnosis to be considered in anyone with intermittent fever, weight loss and other unexplained symptoms. Latent tuberculosis without disease, however, has no symptoms. (NICE 2011).

Patients with sputum smears positive for AFB (acid fast bacilli) are infectious and must, be isolated in single rooms until they have been adequately treated. They should not be nursed with immunocompromised patients e.g. those who are HIV positive. Pulmonary smear-negative patients may also be infectious although less so than those with positive smears.

Resistance to TB drug treatment can develop, and in some cases there is multi drug resistance (MDR TB), particularly if patients are not compliant with medication.

A risk assessment for drug resistance should be made for each patient with TB, 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 as defined by the HPA on its website
- HIV infection
- residence in London
- age profile, with highest rates between ages 25 and 44
- male gender

MDR TB can be acquired by contact with other cases in the same way as ordinary TB. Patients with suspected or known infectious MDR TB who are admitted to hospital should be admitted to a negative-pressure room. If none is available locally, the patient should be transferred to a hospital that has these facilities and a clinician experienced in managing complex drug-resistant cases. Care should be carried out in the negative-pressure room until the patient is found to be non-infectious or non-resistant, and ideally until cultures are negative. Currently the Southend University Hospital’s negative pressure rooms are not operational; the nearest provider is Basildon Hospital on Florence Nightingale ward. (The Royal London and Addenbrooks Hospital in Cambridge also have negative pressure room facilities)

TB is a notifiable disease and the clinician in charge of the patient is responsible for notification to the Consultant for Communicable Disease Control (CCDC) and to a TB Specialist of all forms of suspected or confirmed TB cases in accordance with the Public Health (Control of Disease Act 1984). If the patient is later found to be negative they can be de-notified.

Contact tracing will be carried out by the TB Nurse Specialist.

All suspected TB cases should also be notified to the Infection Prevention and Control team. Staff cases should be referred to Occupational Health.

Anyone can contract TB. Those at particular risk are those that have been exposed, and those that are less likely to fight infection. Those people are:
• Close, prolonged contacts of infectious cases
• Those who have lived in, or have travelled to or received visitors from places where TB is still endemic of high incidence
• Those who live in ethnic minority communities originating from places where TB is endemic or of high incidence
• Those who have a weakened immune system i.e. those with medical problems or HIV
• The very young and the very elderly, as their immune systems are less robust
• Those with chronic poor health and nutrition because of lifestyle problems such as homelessness, drug abuse or alcoholism
• Those living in poor or crowded housing conditions, including those living in hostels (NICE 2011)

5.1 Occupational Health Protocols

Refer Immunisation and Health Screening Policy OH-02

5.2 Diagnosis

Please see appendices 1 & 2 for Care Pathways.

The diagnosis of TB is suspected from a combination of context, symptoms, clinical signs and investigations. A diagnosis is rarely made from a single piece of evidence. If respiratory TB is suspected patients should have the following investigations carried out:

• Chest x-ray
• At least 3 sputum specimens (one early morning) for AFB TB microscopy and culture. (Smear positive rates are higher for spontaneously produced sputum than for induced sputum, and the diagnosis of a positive sputum microscopy is improved by an adequate sputum sample, i.e. 5ml or more)

Rapid diagnosis using molecular techniques can be carried out whenever indicated for clinical or public health purposes (contact laboratory to discuss).

Note that all TB specimens should not be sent via the Pneumatic Tube System.

Antipsychotic medication that causes night sweats and cough may mask TB symptoms. Patients who have TB and that are severely immunocompromised may not exhibit all of the signs and symptoms of TB or react to a Mantoux test.

For patients presenting at A&E with suspected pulmonary Tuberculosis please refer to Appendix 3

5.3 Isolation

The method of isolation and precautions used for patients with TB depends on the type of TB diagnosed. However, in some circumstances it may be desirable or essential for patients to remain on specialist wards e.g. maternity cases or those requiring intensive care. Following discussion with Infection Control Nurse and the
Specialist Nurse for TB patients may remain in those wards providing suitable accommodation is available.

Confirmed or suspected smear-positive TB cases are nursed in a single room, ideally negative pressure room if there are immune compromised patients on the ward. An ‘isolation precaution’ sign placed on the outer door. Therefore all patients diagnosed as having smear positive TB should be transferred to Westcliff Ward for isolation and treatment.

MDR TB is important because the infection is resistant to both the main bactericidal drug isoniazid, and to the main sterilising drug Rifampicin. Patients with MDR TB must be nursed in a negative pressure room and an ‘isolation precaution’ sign placed on the outer door. Therefore, as soon as the patient is identified s/he must be transferred to the nearest provider with facilities for a negative pressure room. (Please refer to 5.0)

Patients with non-pulmonary TB normally present minimal or no risk of infection and should be managed using Standard Precautions.

5.4 Further Isolation Requirements

• Patients should receive active training and supplies of tissues to cough into. A hazardous waste bag should be supplied for the disposal of used tissues

• Staff must follow standard respiratory precautions for isolated patients. (See 10.0 for mask use). Hands must be washed and thoroughly dried before leaving the room and alcohol hand sanitizer used outside of the room

• Equipment used to care for these patients should be single use wherever possible

• Equipment should not leave the immediate area of the patient without being decontaminated using Clinell Universal Wipes

• All waste from side rooms of suspected and confirmed cases must be treated as hazardous waste

• The linen of all suspected and confirmed pulmonary TB cases should be treated as infected and disposed of appropriately. Linen to be placed into a pink alginate bag within a red plastic linen bag

• Special crockery and washing up facilities are unnecessary
5.5 Masks

A fine filter particulate 3 (FFP3) mask should only be worn by healthcare workers when carrying out cough producing procedures.

Patients with smear positive respiratory TB should be asked (with explanation) to wear a fluid repellent surgical mask whenever they leave the room until they have had 2 weeks of drug treatment.

If the patient is suspected to be drug resistant, this must be agreed by the TB team and infection control. The ward will be notified and arrangements made as necessary to transfer patient to the nearest provider with facilities for a negative pressure room.

5.6 Transfers of Patients

When requests are made for radiology or other investigations, the request form (ICE) should contain details which make clear the infectious condition of the patient. This will enable departments to make appropriate arrangements in advance. The patient with smear positive TB should not be left with other patients.

Some patients may require transfer to another hospital while still infectious. The nurse in charge of the ward must inform the receiving unit of the patient’s infectious status before the transfer is agreed. The ambulance staff must be informed that the patient is infectious when the request for transport is made to ensure appropriate control measures are taken. The Clinical Nurse Specialist for Infection Control and the Tuberculosis Nurse Specialist must be informed of the transfer.

5.7 Advice to Patients, Staff and Visitors

Staff should explain to the patient why they are in isolation and why they will require antibiotic therapy. For those patients who have difficulty understanding the English language, the switchboard can be contacted to arrange for a translator.

Only staff with evidence of BCG vaccination should nurse the patient. Immuno-compromised staff should not look after patients with TB.

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**USE OF MASKS IN RELATION TO TUBERCULOSIS**

- Tuberculosis: NICE guidelines (March 2011)
  
  “Healthcare workers caring for people with tuberculosis should not use masks, gowns or barrier nursing techniques unless: *Multi-Drug Resistant –Tuberculosis (MDR-TB) is suspected Cough inducing procedures are being performed.*”

- If staff do wear a mask it should be FFP3 (red strap) type and staff member must be “fit” tested.

- It may be appropriate to ask patients with suspected open TB to wear a **Standard Surgical Mask** during transfers.
Visitors will need to check with the nurse in charge before they enter the patient’s room. In the case of smear positive TB; visitors should be restricted to adults who have been in close contact with the patient in the period immediately prior to a diagnosis (i.e. those who have already had considerable exposure).

5.8 Respiratory Intervention

If a patient with smear positive or MDR TB requires assisted ventilation in either Critical Care or Theatre, the ventilator must be fitted with a disposable bacterial HEPA filter.

Suction via an endotracheal tube or tracheostomy should be undertaken using a closed suction system. All respiratory equipment must be disposable, single use or autoclavable.

Disposable products should be placed inside an orange hazardous waste bag, the bags sealed and tagged before being sent for incineration.

Heat sensitive non-disposable items such as bronchoscopes should be decontaminated according to the Decontamination of Endoscopes Policy (CM60) after use.

*Mycobacterium* spp are more resistant to disinfection than most other microorganisms; however, thorough cleaning has been shown to reduce most of the risk. All equipment must be decontaminated and disinfected in accordance with the Trust Decontamination Policy (CM60).

5.9 Children

Most children with pulmonary TB are not a high risk of infection to others. However, they may have acquired their TB from someone who is a parent or close relative. To reduce the chance of this (unidentified) adult passing on the infection, children with or suspecting of having TB should be isolated in all cases. No masks or other protective clothing are needed unless MDR TB is suspected or confirmed or another medical condition warrants otherwise.

Only the immediate next-of-kin should visit or stay with the child, as the index case may be unknown. Visitors should stay in the room during their visit. Extended family and friends should not visit until the Tuberculosis Nurse Specialist has undertaken contact tracing, and liaised with the Consultant Physician / Paediatrician.

5.10 Drug Treatment

A six month, four drug initial regime should be used to treat active pulmonary TB.

The regime consists of 6 months of Isoniazid and Rifampicin supplemented in the first 2 months with Pyrazinamide and Ethambutol. This is referred to as ‘Standard Treatment’.
Smear positive TB patients without risk factors for MDR TB can be taken out of isolation after they have completed 2 weeks of the standard treatment, or they are discharged from hospital.

Directly observed therapy (DOT), if required, is usually carried out in the community setting to ensure that patients are compliant with the six month treatment regime. The Tuberculosis Nurse Specialist can give more information if a patient requires this therapy. The Tuberculosis Nurse Specialist can be contacted on 01268 366815

5.11 Discharge of a Patient from Isolation

Smear-positive TB patients without risk factors for MDR TB should be cared for in a single room, until:

- They have completed two weeks of the standard treatment regimen or
- They are discharged from hospital

Before the decision is made to discharge a patient with suspected or known MDR TB from hospital;

- Care should be carried out in the negative-pressure room until the patient is found to be non-infectious or non-resistant, and ideally until cultures are negative

- Secure arrangements for the supervision and administration of all anti-TB therapy should have been agreed with the patient, carers and DOT supervisor.

- The decision to discharge a patient with suspected or known MDR TB should be discussed with the infection control team, the microbiologist, the TB team, and the consultant in communicable disease control

6 Monitoring Compliance

<table>
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<tr>
<th>Aspect of compliance or effectiveness being monitored</th>
<th>Monitoring method</th>
<th>Individual/department responsible for the monitoring</th>
<th>Frequency of the monitoring activity</th>
<th>Group/committee/ forum which will receive the findings/monitoring report</th>
<th>Committee/individual responsible for ensuring that the actions are completed</th>
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<td>Audit</td>
<td>Infection Prevention and Control Team</td>
<td>Yearly</td>
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7 Associated Documents

This policy is linked to the following policies:
8 Equality Impact Assessment

This policy has been the subject of an Equality Impact Assessment. The output of the assessment demonstrates that no one as a consequence of this policy is placed at a disadvantaged over others.

9 References

Clinical Diagnosis and Management of Tuberculosis, and Measures for its Prevention and Control: March 2011: (CG117). NICE

Clinical Diagnosis and Management of Tuberculosis, and Measures for its Prevention and Control: March 2006: (CG33). NICE


Health Protection Agency www.hpa.org.uk


Appendix 1 Tuberculosis (Tb) Pathway

Complete for all suspected TB cases

TUBERCULOSIS (TB) PATHWAY

Date ..............

Name ........................................... DOB .............. Hospital Number ..............

Initial presentation of TB Site of Disease .......................... Smear Positive / Negative

Symptoms
- Persistent cough or
- Productive cough
- Fevers/night sweats
- Weight loss
- Haemoptysis
- Pleural effusion
- Abnormal CXR
- Enlarged Lymph nodes
- Social history known exposure to TB
- Previous TB
- Immunosuppression
- Other identify

Pre treatment investigations
- CXR
- Bloods FBC, U+E, LFT, CRP
- Sputum x 3 for AFB C+S (phone microbiology lab for urgent AFB stain)
- Other microbiology/histology as indicated
- Mycobacterial blood culture (if severely immunocompromised)
- Weight
- Eye test pre-ethambutol

Commence quadruple therapy treatment.
- Discuss with Dr Ansari / Dr Day
- See Tuberculosis Treatment Guide for dosage reference and patient information leaflets.
  (These are kept with the nurses in the Heart and Chest clinic, treatment guide also on Westcliff ward.)

  Rifater Dose .................. Date commenced .................
  Ethambutol Dose .................. Date commenced .................
  Other

Educate patient
- Treatment duration and prognosis
- Side effects and action
- Drug interactions including Contraceptive Pill
- Contact screening organised yes / no

Complete Enhance TB Surveillance Notification form. Date completed ..............

Inform Infection Control Team

See infection control TB policy

Are they at significant risk of MDRTB?
Please discuss with Dr Ansari / Dr Day

Symptoms
- Persistent cough or
- Productive cough
- Fevers/night sweats
- Weight loss
- Haemoptysis
- Pleural effusion
- Abnormal CXR
- Enlarged Lymph nodes
- Social history known exposure to TB
- Previous TB
- Immunosuppression
- Other identify

Is patient in patient or outpatient?

Do they require admission to side room? yes/no?

Inform Infection Control Team

See infection control TB policy

Are they at significant risk of MDRTB?
Please discuss with Dr Ansari / Dr Day

Symptoms
- Persistent cough or
- Productive cough
- Fevers/night sweats
- Weight loss
- Haemoptysis
- Pleural effusion
- Abnormal CXR
- Enlarged Lymph nodes
- Social history known exposure to TB
- Previous TB
- Immunosuppression
- Other identify

Inform Infection Control Team

Are they at significant risk of MDRTB?
Please discuss with Dr Ansari / Dr Day
Inform TB Nurse. Telephone 01268 366815 Date informed By whom

Assess for Directly Observed Therapy (DOT) see South Essex DOT protocol

HIV Status:
positive ☐ negative ☐ declined ☐ date tested

On discharge 2 week follow up in Heart and Chest Clinic for Dr Ansari, Dr Day or TB nurse (according to discharging Doctor)

Follow Up

At 2-8 weeks

Confirm culture and sensitivities

Culture

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<th>Isoniazid</th>
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<thead>
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<td>no ☐</td>
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</table>

Mycobacterium Tuberculosis (MTB)

Drug tolerance
Repeat prescription
Urine for anti staph
Review medication at 8 weeks or before re sensitivities if known
Seek specialist advice change medication if MDRTB

Opportunistic Mycobacterium

Clinical review
Review CXR
Review Treatment
Drug tolerance
Urine for anti staph

Environmental Mycobacterium

Clinical review
If CXR abnormal reassess and investigate further as required

Confirm length of treatment duration to patient; (expected) end of treatment date

Date of continuation phase

Follow up appointment every 4 weeks unless indicated otherwise.
(Alternating between Doctor and TB nurse)

All prescriptions for antituberculosis treatment to be issued from Chest Clinic
Every Clinic visit check
- Drug tolerance
- Urine for anti staph
Repeat bloods if clinically indicated (see guidelines)

Repeat LFT’s if
- Abnormal base line LFT’s
- Persistent nausea and vomiting
- Current alcohol abuse
- Remains unwell despite treatment
- Jaundice (stop treatment and follow recommended guidelines)

CXR if pulmonary TB as indicated

On completion of treatment

If sputum smear positive, repeat sputum for AFB to confirm conversion. (required for enhanced TB surveillance)
Repeat CXR if originally abnormal

J Keane. Dr S Ansari  Dr JH Day  November 2011 to be reviewed Nov 2013
Appendix 2 Paediatric Tuberculosis (Tb) / Latent (Ltbi) Pathway

Complete for all suspected TB cases

PAEDIATRIC TUBERCULOSIS (TB) / LATENT (LTBI) PATHWAY

Date seen: ....................

Name ....................... DOB ............... Hospital Number .........

Source Case. .....................
Site of Disease. .................... Smear  positive / negative

Initial presentation of TB INFECTION;

Site of Disease. .................... Smear  positive / negative

| Previous BCG  yes / no / scar seen | Is patient in patient yes | outpatient | yes |
|-------------------------------------|--------------------------|------------|
| Mantoux result . . . mm positive / negative | Do they require admission to hospital yes | No |
| T spot test reactive / non reactive if indeterminate repeat 6 weeks | Have the infection control team been notified yes | No |

Pre treatment investigations

- CXR
- Bloods FBC, U+E, LFT, CRP
- Sputa or gastric washings x 3 for AFB C+S Other microbiology/histology as indicated
- Weight
- Eye test pre Ethambutol, age dependent

Commence triple / quadruple therapy treatment for TB disease (as per NICE guidelines 2005)

See BNF for dosage guidelines.

- Ethambutol
- Rifampicin
- Isoniazid
- Pyrazinamide

Commence dual therapy treatment for latent TB infection (3 months dual therapy, 6 months single therapy)

- Rifampicin
- Isoniazid

Educate child and parents

Treatment duration and prognosis
Side effects and action
Drug interactions including Contraceptive Pill
Contact screening. Organised yes no

Complete Enhance TB Surveillance Notification form. Date completed

Inform TB Nurse. Telephone 01268 366815 Date informed By whom

Assess for Directly Observed Therapy (DOT) see South Essex DOT protocol

**HIV Status:** Known / unknown

On discharge 2 week follow up with either Dr Ranasinghe or TB Nurse

**At 2-8 weeks follow up**

Confirm microbiology and sensitivities

**Culture**

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**Mycobacterium Tuberculosis (MTB)**

- Drug tolerance
- Repeat prescription
- Urine for anti staph
- Review medication at 8 weeks
- Seek specialist advice change medication if MDRTB

** Opportunistic Mycobacterium**

- Clinical review
- Review CXR
- Review Treatment
- Drug tolerance
- Urine for anti staph

**Environmental Mycobacterium**

- Clinical review
- If CXR abnormal reassess and investigate further as required

**Follow up appointment every 4 weeks** unless indicated otherwise.
(Alternating between Doctor and TB nurse)

**All prescriptions for antituberculosis treatment to be issued from Hospital Clinic**

Every Clinic visit check
- Drug tolerance
- Repeat bloods if clinically indicated (see guidelines)

Repeat LFT’s if
- Abnormal base line LFT’s
- Jaundice
- Persistent nausea and vomiting
- Current alcohol abuse
- Remains unwell despite treatment
- Hepatitis B/C, Liver disease
On completion of treatment

If sputum smear positive, repeat sputum for AFB to confirm conversion. (required for enhanced TB surveillance)
Repeat CXR if originally abnormal

A Hare/ J Keane / T Ranasinghe November 2011   to be reviewed Nov 2013
Appendix 3 Flowchart for Patients Presenting to A & E With Known / Suspected Pulmonary Tuberculosis

Patient presents with confirmed/strongly suspected pulmonary tuberculosis.

**Admit to side room in a/e**

Are they at risk of multi drug resistant TB?

**Day 1**

Patient presents with symptoms that could be extra pulmonary tuberculosis, no respiratory symptoms, or radiological evidence,

Ideally nurse in side room can be nursed in bay

**NO**

**YES**

Patient should be admitted to a negative-pressure room. If none is available locally, the patient should be transferred to a hospital that has these facilities (see 5.0)

**Day 2**

Admit to single side room on Westcliff ward if possible or other side room (not Elizabeth Loury ward)

**Normal working hours:**
Inform Infection Control Nurse on Ext. 6986 or page via switchboard who will carry out risk assessment for patient placement and advise on mask use as necessary and liaise with TB Services 01268 366815

**Out of hours:**
Inform site co-ordinator who will liaise with Infection Control who will advise on appropriate placement and mask use.

Infection Control Nurse
Record advice on use of masks etc. in patient’s notes.

Ward Staff
Ensure early referral to; Dr Ansari or Dr Day (adults) Dr Ranasinghe (paediatrics)

USE OF MASKS IN RELATION TO TUBERCULOSIS

- Tuberculosis: NICE guidelines (March 2011)
  “Healthcare workers caring for people with tuberculosis should not use masks, gowns or barrier nursing techniques unless:
  **Multi-Drug Resistant –Tuberculosis (MDR-TB) is suspected Cough inducing procedures are being performed.”**

- If staff do wear a mask it should be FFP3 (red strap) type and staff member must be “fit” tested.

- It may be appropriate to ask patients with suspected open TB to wear a **Standard Surgical Mask** during transfers