Health
Justice Health &
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# Tuberculosis – Surveillance and Management of Confirmed and Suspected Cases

**Policy Number** 1.422

**Policy Function** Continuum of Care

**Issue Date** 24 October 2016

**Summary** This policy provides a framework for the surveillance and management of tuberculosis in NSW Correctional and Juvenile Justice Centres and the Forensic Hospital by preventing the spread of tuberculosis through early diagnosis and effective treatment and managing infectious individuals.

**Responsible Officer** Executive Director Clinical Operations (Custodial Health)

**Applicable Sites**

- ☐ Administration Centres
- ☐ Community Sites (e.g. Court Liaison Service, Community Integration Team, etc.)
- ☒ Health Centres (Adult Correctional Centres or Police Cells)
- ☒ Health Centres (Juvenile Justice Centres)
- ☒ Long Bay Hospital
- ☒ Forensic Hospital

**Previous Issue(s)** Policy 1.422 (Dec 2012; Dec 2008)

**Change Summary**

- Changes to notification requirements to Population Health
- Change to policy title
- Clarity on patient management
- Update published surveillance data, links and references
- Revision of terminology to ensure consistency and currency

**TRIM Reference** POLJH/1422

**Authorised by** Chief Executive, Justice Health & Forensic Mental Health Network

# 1. Preface

This policy outlines key principles for the management of a patient with suspected or confirmed tuberculosis (TB) in NSW Correctional Centres, Juvenile Justice Centres, Long Bay Hospital and the Forensic Hospital. The objectives of the policy are to:

- Implement a system for the identification and management of suspected and confirmed TB cases;
- Prevent the spread of TB by early diagnosis, effective treatment and management of infectious patients;
- Identify infected contacts and reduce their risk of developing disease; and
- Minimise the risk of people in custody introducing and transmitting TB into health / correctional / detention facilities.

# 2. Policy Content

## 2.1 Mandatory Requirements

- Every patient must be screened at reception for the symptoms of TB using the Reception Screening Assessment form in Justice Health electronic Health Systems (JHeHS).
- Forensic Hospital patients will be assessed on admission as per Forensic Hospital Procedure Physical Health Assessment and Care of Mental Health Patients in the Forensic Hospital.
- Population Health must be notified as soon as possible of any suspected case of TB. Clinical staff must contact the Clinical Nurse Consultant (CNC) Infection Prevention & Communicable Diseases on (02) 6331 6011 or 0428 780 781 (during business hours); or after hours contact the After Hours Nurse Manager on 13000 ROAMS / 13000 76267 or Forensic Hospital After Hours Nurse Manager on 0408 243 113.
- TB is a notifiable condition to NSW Ministry of Health (MoH) and the CNC Infection Prevention & Communicable Diseases will notify NSW TB services of any patient with a suspected or confirmed diagnosis of TB. In accordance with MoH, Population Health will liaise closely with NSW TB services to ensure the implementation of appropriate treatment strategies and public health actions including contact screening.
- When a patient is suspected or confirmed as having active TB disease, in addition to Standard Precautions, all staff must implement Airborne Precautions (refer to section 3.4.1 in this policy), and advise Corrective Services NSW (CSNSW), Juvenile Justice NSW (JJNSW) and other contract staff to comply with Airborne Precautions.
- All cases of active TB must be referred to a specialist in respiratory / TB medicine for appropriate TB treatment.
- Prescribed treatment must be given in accordance with relevant NSW MoH policies. In Justice Health & Forensic Mental Health Network (JH&FMHN) all chemotherapeutic regimens for TB are prescribed by a physician with specialised training in TB to ensure accordance with NSW MoH policy directives for treatment of TB.
- All patients on TB chemotherapy must have their drug administration fully supervised and directly observed as per NSW MoH Policy Directives and the JH&FMHN *Medication Guidelines 2016*.

- No change to their medication regime may occur unless directed by the treating respiratory / TB specialist.
- Contact tracing is commenced to identify potentially infected contacts. The CNC Infection Prevention & Communicable Diseases will coordinate contact tracing.
- All negative pressure ventilation rooms must have preventative maintenance carried out according to the contract.
- NSW MoH requires all negative pressure ventilation rooms to be checked daily and this documentation must be retained for retention purposes.

# 3. Procedure Content

## 3.1 TB Background

TB is an infectious disease caused by the bacterium *Mycobacterium tuberculosis* complex**.**

### 3.1.1 Mode of Transmission

TB is transmitted by airborne droplet nuclei from cases of pulmonary or laryngeal disease produced by expiratory efforts such as coughing.

### 3.1.2 Time Line

The typical incubation period from infection to demonstrable primary lesion or significant tuberculin reaction is 2 to 10 weeks.

TB typically occurs in two phases – initial infection and progression to active disease.

Initial infection with *Mycobacterium tuberculosis* usually goes unnoticed. TB infection is said to be latent and at this stage the individual is **not** infectious (transmission cannot occur to other people). This latent infection can however be detected by demonstration of a positive tuberculin skin test (TST).

In contrast, a confirmed case of TB disease (active TB) is an individual with clinical symptoms **and** with bacteriological, radiological and/or immunological evidence of the causative agent *Mycobacterium tuberculosis*.

The risk of initial infection is higher in people who have had close contact with a case of active pulmonary or laryngeal TB. Such people include:

- household contacts of cases;
- persons born in countries with a high prevalence of TB; and
- persons living in close proximity to others, particularly in congregate settings.

Newly infected people have about a 10% chance of developing active TB disease in their lifetime and approximately half of those who develop TB disease do so within 2 years of infection.

The lungs are most commonly affected. TB occurring in parts of the body other than the lungs or larynx is generally non-infectious.

The risk of progressing to disease is higher in people who are or have:

- immune compromised (e.g., HIV infection, transplantation, immune-suppression therapies, specific malignancies);

- infants under 12 months;
- chronic renal failure;
- diabetes;
- low weight, malnutrition;
- previous gastric surgery;
- silicosis; and
- some haematological disorders.

## 3.2 Clinical Presentation

Every patient must be screened at reception or admission for the symptoms of TB using the Reception Screening Assessment form in JHeHS. Screening questions include:

- Was the patient born overseas in a high TB-burden country? [1]
- Has the patient had residence for 3 or more months in a high-risk country (that was not the person's country of birth)?
- Has the patient had a health condition causing immunosuppression, or been on immunosuppressive therapy?
- Has the patient come from an immigration detention centre, overseas prison or refugee camp in the last 2 years?
- Has the patient come directly from an international airport?
- Has the patient a temperature / fever?
- Has the patient had a cough which has lasted more than 2 weeks, associated with night sweats and/or unexplained weight loss or blood-stained sputum?

Individuals presenting with such a history at any stage of their incarceration / admission should be considered as a suspected TB case and should be assessed urgently by a medical officer (at the correctional health centre or inpatient unit). Increase your level of suspicion if any of the following apply:

- a history of living in a country with a high prevalence of TB,
- household-like contact with a known case of TB disease,
- a history of previous treatment for TB,
- any of the factors which increase the risk of progression to disease (see above in 3.1.2).

For a list of countries with a TB incidence of 40 cases per 100,000 persons or greater refer to *NSW Health List of Countries with a Tuberculosis Incidence of 40 cases per 100,000 Persons or Greater, 2015*

## 3.3 Notification of Suspected or Confirmed Cases of TB

Population Health **must** be notified of any suspected or confirmed TB case. Contact the CNC Infection Prevention & Communicable Diseases (during business hours) or the After Hours Nurse Manager on 13000

[1] [1] South-East Asian countries and Western Pacific Regions – India, Vietnam, Philippines, China, Nepal, Indonesia, Cambodia, Thailand, Afghanistan, New Zealand, Sri Lanka (2015)

ROAMS / 13000 76267 for patient management advice. Within the Forensic Hospital, the relevant Nursing Unit Manager (NUM) must be contacted (during business hours) or the Forensic Hospital After Hours Nurse Manager (after hours). The NUM or Forensic Hospital After Hours Nurse Manager must contact the Deputy Director of Nursing to advise.

Airborne Precautions **must** be implemented without delay.

## 3.4 Infection Prevention and Control

When a patient is suspected or confirmed with active TB disease all staff must implement Airborne Precautions (in addition to Standard Precautions). Airborne Precautions are designed to interrupt the airborne transmission route.

- The CNC Infection Prevention & Communicable Diseases will advise CSNSW, JJNSW and other staff about patient management including diagnostic work-up, appropriate placement or accommodation and implementing Airborne Precautions. For patients in the correctional environment, use the Health Problem Notification Form (HPNF) and write 'respiratory infection' and tick the Airborne Precautions box on the adult form. On the adolescent Health Problem Notification and Escort Form (HPNEF) write 'Airborne Precautions'.

### 3.4.1 Airborne Precautions:

- The CNC Infection Prevention & Communicable Diseases will advise about appropriate placement or accommodation requirements for patients.
- Appropriate placement or accommodation for adult correctional patients must be discussed with the CNC Infection Prevention & Communicable Diseases before possible transfer or placement or accommodation in a negatively pressurised single room with ensuite bathroom located at the Long Bay Hospital (Medical Subacute Unit) and Silverwater Women's Correctional Centre.
- Appropriate placement or accommodation for young people with suspected TB must be discussed with the CNC Infection Prevention & Communicable Diseases and negotiated with the Local Health District.
- Appropriate placement or accommodation for Forensic Hospital patients must be discussed with the CNC Infection Prevention & Communicable Diseases before possible transfer to an outside health facility.
- Display the 'Airborne Precautions' signage at entrance to the patient's room.
- Every person entering the room must wear a properly fitted P2 mask (particulate filtration mask).
- If clinically able, the patient should wear a surgical mask when outside the room.
- Transport of the patient should be restricted. If it is deemed necessary to transport the patient, the patient must be transported in a single-person transport vehicle. Any request to move the patient from the negative pressure room must be done in consultation with the CNC Infection Prevention & Communicable Diseases in the first instance.
- Airborne Precautions must remain in place until pathology results document absence of the pathogen or until effective treatment has been commenced and maintained for the appropriate period of time or until the patient's signs and symptoms indicate that he or she is no longer infectious. Airborne Precautions may be ceased only when the patient's status is documented as

no longer infectious. This must be done in consultation with the CNC Infection Prevention & Communicable Diseases.

### 3.4.2 Monitoring and Maintenance of Negative Pressure Ventilation Rooms

Preventative maintenance must be carried out according to the contract for all negative pressure ventilation systems. The Nursing Unit Manager (NUM) must ensure that this occurs and that clinical staff working in the area understand the appropriate actions to take if the system alarm is activated.

## 3.5 Transport of Suspected and Confirmed (Infectious) TB Cases

Transport of patients must be done in consultation with the CNC Infection Prevention & Communicable Diseases. For patients in the correctional or juvenile detention setting, the NUM will advise the General Manager (GM) or Manager of Security (MOS) when a patient needs to be transferred to the Long Bay Hospital or Silverwater Women's Correctional Centre. The NUM must also notify the GM or MOS of the transport requirements and Airborne Precautions required on the *Health Problem Notification Form* (Refer to JH&FMHN policy 1.231 *Health Problem Notification Form* or JH&FMHN policy 1.235 *Health Problem Notification and Escort (Adolescents)* for details. The particular disease must not be disclosed, but the need for Airborne Precautions must be disclosed.

For patients within the Forensic Hospital transfer to an outside facility via ambulance should occur as soon as possible. The NUM (during business hours) or the Forensic Hospital After Hours Nurse Manager (after hours) must follow the guidance outlined in the Forensic Hospital Procedure Medical Emergencies regarding transport and notification processes.

If a vehicle with separate air-conditioned compartments or with separate ventilation is not available, then the escorting officers must also wear a P2 mask.

The infection prevention and control precautions also apply to the transport arrangements for the Forensic Hospital patients and young people in custody.

## 3.6 Investigations

Prior to any initial investigations and/or diagnostic work-ups being undertaken, advice must be sought from the CNC Infection Prevention & Communicable Diseases in the first instance regarding appropriate location and the necessary precautions.

### 3.6.1 Sputum Examination

Sputum microscopy for *Mycobacterium TB* is a specific test for diagnosing pulmonary TB disease. However, it is only useful in patients with a productive cough. Three sputum specimens are required to confirm diagnosis. Specimens should be taken in the early morning over three consecutive days prior to the patient having anything to eat, drink or cleaning their teeth. Due to the unique situation in correctional health environments, sputum specimens must be taken in the presence of clinical staff, to validate the source of the specimen. While observing the sputum collection staff must comply with Airborne Precautions including wearing a P2 mask.

### 3.6.2 X-Ray

Chest x-ray is one of the most widely used tools in the diagnosis of TB. However, its value is limited by the fact that other chest conditions may be accompanied by radiographic abnormalities and be misread as TB. In patients with suggestive symptoms and negative tuberculin skin test result, a plain chest x-ray is indicated which must be reviewed and reported by a radiologist.

### 3.6.3 Other Investigations

In situations where suspected cases are unable to produce sputum, other procedures such as induction of sputum, bronchoscopy and/or fine needle aspiration may be indicated. Invasive techniques will be conducted in a public hospital or Chest Clinic. The CNC Infection Prevention & Communicable Diseases will advise staff about other procedures and investigations when indicated.

## 3.7 Treatment

Demonstration of *Mycobacterium TB* in sputum (by culture or PCR) establishes a definitive diagnosis of pulmonary TB disease.

In JH&FMHN, to ensure accordance with MoH policy directives for treatment of TB, all chemotherapeutic regimens for TB are prescribed by a physician with specialised training in TB.

All diagnosed cases are required to promptly commence on effective multi-drug anti-TB therapy.

The individual can usually be considered non-infectious after two weeks' fully supervised treatment – although the treatment course can be expected to continue for six to eight months. The patient can be released from Airborne Precautions **only** after discussion and approval by the CNC Infection Prevention & Communicable Diseases. Ceasing Airborne Precautions must be documented in the Health Record.

A combination of medications is used to treat TB and all may potentially cause adverse effects, and may interact with other medications, including non-prescription drugs such as paracetamol. Monitoring of treatment is required and includes monitoring of potential side effects, regular blood tests and follow-up visits to the patient's treating specialist and Chest Clinic.

Staff must refer to the JH&FMHN Medication Guidelines to follow the clinical protocol for management of patients receiving anti-TB medication.

### 3.7.1 Directly Observed Treatment (DOT) – Anti-TB Medication

Every dose of every anti-TB medication in the correctional / detention / health environment **must** be fully and directly observed by a healthcare worker. This directly observed treatment principle is applied to ensure compliance with therapy, observe for reactions therapy, and prevent interrupted treatment.

### 3.7.2 Inadequate or Interrupted Treatment

Inadequate or interrupted treatment can result in relapse, continued transmission and the development of drug-resistant disease. Therefore, after effective therapy has commenced, continued treatment without interruption is critical until the entire course of treatment is completed.

If treatment lapses for any reason, prompt action should be taken to ensure recommencement of therapy. If treatment cannot be resumed, the CNC Infection Prevention & Communicable Diseases **must** be informed.

### 3.7.3 Patients on Both Opioid Substitution Therapy (OST) and Anti-TB Medication

Patients on OST, who also receive anti-TB medications (especially Rifampicin), **must** have their methadone dosage assessed by a Drug and Alcohol Specialist, as Rifampicin induces metabolism of methadone reducing its concentration and activity.

## 3.8 Transfer of Patients on Anti-TB Medication

Transfer of patients must be done in consultation with the CNC Infection Prevention & Communicable Diseases. When a correctional patient is transferred to another correctional or detention centre, the Medical

Alert Form must advise the receiving staff that the patient is on anti-TB treatment. All medication that the patient is prescribed must be sent with the patient to ensure continuation of treatment.

If a patient is due for release or discharge before completing TB treatment, including preventative treatment for a known contact, the CNC Infection Prevention & Communicable Diseases **must** be advised (and should be advised as far in advance as possible) to enable coordination of discharge planning and transfer of care on release to community Chest Clinic staff.

## 3.9 Other Issues

### 3.9.1 Reception of People from Immigration Detention Centres or from Overseas Prisons

Patients received into the custodial or inpatient environment from overseas may be at greater risk of presenting with TB disease. At reception / screening, a full history regarding TB must be taken. The CNC Infection Prevention & Communicable Diseases **must** be notified of the reception of people from immigration detention centres or from overseas prisons, regardless of history.

### 3.9.2 Attendance at Court

The question of attendance at court will arise in some persons with suspected, or confirmed and infectious, TB. The court must be advised that the patient requires respiratory isolation and, although the patient and those in contact with him or her could wear masks, it is not desirable for this to occur. However, in cases of active TB disease, after two weeks of anti-TB medication a person is usually considered to be non-infectious. This scenario should be discussed with the CNC Infection Prevention & Communicable Diseases (or the After Hours Nurse Manager) or the Deputy Director of Nursing Forensic Hospital (during business hours) or After Hours Nurse Manager Forensic Hospital (after hours) for appropriate advice and notification to the Executive Director, Clinical Operations (Custodial Health) or Service Director Adolescent Health & Diversion Program.

### 3.9.3 Contact Tracing and Management

Contact tracing is an essential aspect of the management of infectious TB patients. A 'contact' of an infectious case of TB is a person who is closely associated with the index case in terms of proximity and/or duration during the infective period.

All contact tracing will be initiated by JH&FMHN Population Health, in accordance with MoH policy and in conjunction with NSW TB Services. The CNC Infection Prevention & Communicable Diseases will inform the senior management in CSNSW / JJNSW of the confirmed case and will coordinate any contact tracing of patients and/or staff as required by MoH.

JH&FMHN staff who have been exposed to a patient with confirmed TB should be referred to Employee Services and a Chest Clinic. CSNSW / JJNSW must be contacted if any of their staff have been exposed to a patient with confirmed TB.

### 3.9.4 Non-Cooperation with Treatment or Management

Most patients will cooperate by taking medications and conforming to measures needed to stop the risk to others whilst they are infectious or are suspected of having active TB. However, if a patient is not cooperative, the MoH provides guidelines on the management of people with TB who place others at risk. In addition, authority under the *Public Health Act 2010* as it applies to uncooperative persons in the community could also be invoked.

If, after counselling, the patient continues to decline treatment, the CNC Infection Prevention & Communicable Diseases & Communicable Diseases and/or the Service Director Population Health must be advised. The Service Director Population Health will then advise the Chief Executive, the Executive Director, Clinical Operations (Custodial Health), the Service Director Forensic Hospital or the Service Director Adolescent Health & Diversion Program.

At all times the patient must be fully informed of treatment and management plans so as to facilitate their consent and cooperation.

Occasionally, a patient with infectious TB may threaten to cough on staff. If this occurs, the patient must remain isolated in his or her cell / room (that is, cannot leave the cell / room for medical appointments, attend court or be transported to another correctional centre) until the situation is resolved and a joint custodial / health staff management plan (correctional / detention centre) or treatment and risk management plan (Forensic Hospital) is devised. The administration of medication may be delayed until the management plan for this behaviour has been formulated under agreed protocols with the relevant facility manager and NUM.

### 3.9.5 TB Alert Posters

TB alert posters titled 'Think TB' must be displayed in prominent, accessible locations in every Health Centre or Unit. Refer to Appendix 1.

# 4. Definitions

**Must**

Indicates a mandatory action or requirement that must be complied with**.**

**Should**

Indicates a recommended action that needs to be followed unless there are sound reasons for taking a different course of action.

# 5. Legislation and Related Documents

| | |
|---|---|
| NSW MoH Policy Directives and Manuals | PD2008_017 *Tuberculosis Contact Tracing*<br>PD2014_050 *Principles for the Management of Tuberculosis in New South Wales*<br>PD2015_012 *Tuberculosis Management of People Knowingly Placing Others at Risk of Infection*<br>*Tuberculosis NSW 2012-2014* |
| JH&FMHN Policies and Guidelines | 1.231 *Health Problem Notification Form (Adults)*<br>1.235 *Health Problem Notification and Escort Form (Adolescents)*<br>1.395 *Transfer and Transport of Patients*<br>*Medication Guidelines 2016* |
| Other Documents | *CDNA National Guidelines for the Public Health Management of TB* |

# Appendix 1 – TB Alert Poster

# THINK TB

## ➔ Be Clinically Suspicious

- Was the patient born overseas in a high TB-burden country? [1]
- Has the patient had residence for 3 or more months in a high-risk country (that was not the person's country of birth)?
- Has the patient a health condition causing immunosuppression, or been on immunosuppressive therapy?
- Has the patient come from an immigration detention centre, overseas prison or refugee camp in the last 2 years?
- Has the patient come directly from an international airport?
- Has the patient a temperature / fever?
- Has the patient a cough which has lasted more than 2 weeks, associated with night sweats and/or unexplained weight loss or blood-stained sputum?

## ➔ Notify

- Contact the CNC Infection Prevention & Communicable Diseases on (02) 6331 6022 or 0428 780 781 during business hours OR After Hours Nurse Manager on 13000 ROAMS / 13000 76267 OR Forensic Hospital After Hours Nurse Manager on 0408 243 113

## ➔ Priority First Action – isolate and contain

- **Implement and maintain Airborne Precautions** without delay and **restrict patient movement.**

  Advise CSNSW, JJNSW and contract staff to implement Airborne Precautions; write 'respiratory infection' on HPNF and tick Airborne Precautions box.

- **Accommodate patient in a single room** with door closed, window open, turn off room air-conditioning (if it circulates to other areas) while awaiting transfer to a negatively pressurised room in a single-person transport vehicle. Patient to wear a surgical mask if coughing.

  The patient must never wear a P2 mask.

- **P2 mask must be worn** by every person entering the room.
- **Transport of patients –** patient must wear surgical mask if / when leaving the room. Notify the area receiving the patient.

[1] South-East Asian countries and Western Pacific Regions – India, Vietnam, Philippines, China, Nepal, Indonesia, Cambodia, Thailand, Afghanistan, New Zealand, Sri Lanka (2015)