Tuberculosis Case Management in Prisoners

Joint Protocol for Corrections Facilities and TB Treatment Supervising Services (Regional Public Health Services and/or Clinical TB Services) in New Zealand

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1 Introduction

Tuberculosis (TB) is an important and complex public health issue. When prisoners are diagnosed with TB, personal health services, prison health services and public health services all play essential and complementary roles in TB control. This Protocol provides general information about TB, as well as more specific guidance on the practical aspects of TB case management of prisoners in corrections facilities.

1.1 Scope

This Protocol provides guidance for the staff of corrections facilities (prisons), public health services and clinical TB services in New Zealand, to enable them to carry out tasks relating to the case management of prisoners with active TB disease or with latent TB infection (LTBI) in corrections facilities. The Protocol does not cover the management of prisoners with TB while they are hospitalised in a public hospital, which usually occurs only at the commencement of TB treatment, or if complications requiring re-hospitalisation occur during the course of TB treatment. The Protocol also omits discussion of the TB screening of new prisoners received into corrections facilities. For guidance on the screening of new prisoners, refer to the section on screening in corrections facilities in the current version of the Ministry of Health’s Guidelines for Tuberculosis Control in New Zealand (see ‘Further Information’ at the end of this document).

1.2 Aim

The aim of the Protocol is to provide guidance to enable:
- an appropriate public health and clinical response to notified TB cases in prisoners
- the complete treatment of TB cases in prisoners
- follow-up and management of contacts of TB cases in corrections facilities
- treatment of LTBI in infected contacts, where indicated and when possible.

1.3 Relevant legislation

The following legislation is relevant to this Protocol:
- Tuberculosis Act 1948
- Tuberculosis Regulations 1951
- Corrections Act 2004
- Corrections Regulations 2005.

1.4 Abbreviations

The following abbreviations are used in this Protocol.

- AIDS: acquired immune deficiency syndrome
- BCG: Bacille Calmette-Guérin
- DOT: directly observed therapy
- HIV: human immunodeficiency virus
- LTBI: latent tuberculosis infection
- MDR-TB: multi-drug resistant TB
- PHN: public health nurse
- TB: tuberculosis
2 Background Information about TB

2.1 General information

TB is a bacterial infection, usually caused by *Mycobacterium tuberculosis* and occasionally by *Mycobacterium bovis*. TB disease usually affects the lungs (pulmonary TB), but can also affect other parts of the body, such as the lymph nodes, brain, kidneys, bowel or bones (extrapulmonary TB). TB disease is usually curable, but requires 6 to 12 months of multi-drug therapy to achieve a cure.

The initial infection with TB bacteria is called latent TB infection (LTBI). People with LTBI have dormant or inactive TB bacteria in their bodies. Only 10% of people who have LTBI go on to develop active TB disease at some stage in their lives, which means 90% of people with LTBI will never develop active TB disease. Note, however, that this statement applies only to healthy HIV-negative adults: the risk of progression to active TB disease is much higher for children, for adults with certain medical risk factors, and (especially) for people who are HIV-positive.

People with LTBI are not infectious to others and do not have symptoms of TB disease. However, because of the risk of developing TB disease in the future, LTBI is often treated, in order to reduce the person’s chance of developing TB disease. This risk is higher within the first two years of becoming infected, and also for people who are immunosuppressed (eg, people with HIV/AIDS, cancer, kidney disease, diabetes, or who are taking chemotherapy or long-term steroid treatment).

People with TB disease (active TB) have active TB bacteria in their bodies. They usually have symptoms of TB disease, although these may be non-specific and may occur late in the course of the disease. Only people with TB disease of the lungs (pulmonary TB) or larynx are capable of spreading the bacteria by producing aerosols (droplets), mainly during coughing, and might therefore be infectious to others. People with TB disease outside the lungs (extrapulmonary TB) are not infectious to others.

BCG (Bacille Calmette-Guérin) is the only available TB vaccine. BCG does not prevent infection with TB, but it has been shown to be effective at preventing serious extrapulmonary TB disease (miliary TB and TB meningitis) in young children. BCG vaccination is now only offered to newborn infants (and children under five years of age who missed vaccination at birth) from families or population groups at high risk of TB disease. BCG vaccination of adults (including prisoners and staff of corrections facilities) is not recommended because the value of vaccinating adults is unclear.

2.2 Incubation period, transmission and communicability

The period from infection to a demonstrable primary lesion or a significant tuberculin reaction is between 4 and 12 weeks. As noted above, only about 10% of healthy adults with LTBI will then go on to develop active TB disease at some stage during their lifetime. The risk of progression to active TB is higher within the first two years following infection and in people who are immune-compromised.

Transmission of TB is via aerosols (droplets). Aerosols containing TB bacteria are expelled into the air when a person with infectious TB disease of the lungs or larynx coughs, sneezes, speaks or sings. The aerosols produced by a person with TB can remain in the air for several hours, especially in enclosed spaces. People breathing in air containing TB aerosols can become infected. However, TB is not easy to catch: to become infected it usually takes many hours of close contact with a person who has infectious TB, such as occurs among household members.
People with TB who are on anti-TB drug treatment are generally not considered infectious after the first two weeks of treatment because their infectivity is markedly reduced after this period. However, in some circumstances, even if they are being treated a person with TB can be infectious for a period longer than two weeks, in which case the TB specialist physician and the Medical Officer of Health can provide appropriate advice on infection control.

2.3 Clinical picture

People with LTBI are well and have no symptoms caused by their LTBI. The general symptoms of TB disease include:
- unexplained weight loss
- unexplained fever
- loss of appetite
- sweating (especially at night)
- feeling tired or weak all the time.

In addition to these general symptoms, symptoms of pulmonary TB may also include:
- prolonged coughing (a persistent cough lasting three weeks or more, and not getting better)
- haemoptysis (coughing up blood, or bloody sputum)
- chest pain and shortness of breath.

The symptoms of TB disease elsewhere in the body depend on the part of the body affected (eg, enlarged lymph nodes in lymph node TB; or hoarseness, sore throat and cough in the fortunately rare but very infectious cases of laryngeal TB). People with TB disease may have no symptoms early on in the course of the disease but usually develop at least some or all of the symptoms above as the disease progresses.

2.4 Diagnosis, treatment, supervision and follow-up

Tuberculosis is a notifiable disease. Any doctor who strongly suspects or who has diagnosed a case of TB disease is required to notify the Medical Officer of Health at their local public health service. Direct laboratory notification of positive diagnostic tests for TB has also occurred since December 2007.

Diagnosis of active TB disease is made on the basis of some or all of the following:
- clinical findings on history and examination
- chest X-ray
- sputum tests (TB bacteria or acid-fast bacilli in the sputum)
- urine tests
- blood tests
- histology.

The major role of tuberculin skin tests (Mantoux tests) and interferon gamma release assays (a new type of blood test) is the diagnosis of LTBI, not active TB disease.

TB treatment is prescribed by a TB specialist (a respiratory physician or infectious diseases physician). The Medical Officer of Health at the local public health service has legal duties under the Tuberculosis Act 1948 (the TB Act) to ensure that:
- appropriate examinations are carried out on people suspected of suffering from TB
- contact tracing is carried out
- people who are found to have TB disease obtain medical treatment.
• action is taken to prevent the spread of TB.

In most regions of New Zealand the responsibility for assisting and supervising all patients with TB to complete their treatment, and for following up any close contacts who may need testing, usually falls to the local public health service. However, other arrangements for supervision of treatment are in place in a few regions around New Zealand; for example, the TB specialist from the clinical TB service or a clinical TB service outreach team may be responsible for the overall supervision of a person’s TB treatment.

2.5 Epidemiology

An annual report summarising the descriptive epidemiology of TB notifications in New Zealand is available on the Institute of Environmental Science and Research Limited (ESR) website at http://www.surv.esr.cri.nz/surveillance/AnnualTBReports.php.

Around 300 cases of active TB disease are notified annually to public health services in New Zealand, with around half of all the notified cases notified in the greater Auckland region. There are marked ethnic and socioeconomic differences in TB rates in New Zealand. People who were born or have lived for more than three to six months of their lives in an overseas country with a high incidence of TB are at increased risk of TB. Over 70% of TB cases in New Zealand occur in people born outside New Zealand. Multi-drug-resistant TB (MDR-TB) cases are rare in New Zealand.

In many countries in the world disproportionately high rates of TB have been reported in prisoner populations compared with civilian populations (TB rates for current or recent prisoners up to 50 times higher than national TB rates for the general population of the country). In New Zealand, from 1997 to 2001 the TB rate among current or recent prisoners was approximately six times higher than the average national TB rate for the same period. However, case numbers were small, and the rate may be an underestimate due to possible failures in recording a period in prison on the TB notification case report forms. The New Zealand Ministry of Health’s 2005 Prisoner Health Survey contained a specific question about TB. Overall, 1 in 50 prisoners (1.9%) reported ever being told by a doctor that they had tuberculosis or TB (see ‘Further Information’).

* Countries with a high incidence of TB are countries except the following low incidence countries: Australia, Austria, Belgium, Canada, Czech Republic, Denmark, Finland, France, Germany, Greece, Holland, Iceland, Ireland, Israel, Italy, Luxembourg, Malta, Monaco, New Zealand, Norway, Slovakia, Sweden, Switzerland, the UK and US.
3 TB Case Management in Prisoners

For further information on managing TB in prisons, refer to the section on TB in prisons/correctional facilities in the current version of the Ministry of Health’s *Guidelines for Tuberculosis Control in New Zealand*. Refer to the *Handbook for Health Services Providers Working in Prisons* for information for external health services providers (such as public health service staff and/or clinical TB service staff) who need to go into corrections facilities to provide services.

3.1 Treating TB in prisoners is challenging

Active TB disease is treated with multiple anti-TB medications for a minimum of six months. Successful adherence to and completion of a TB treatment course is challenging for any person with TB, and for staff managing the treatment. In the case of prisoners with TB, additional challenges include a short duration of imprisonment (with prisoners subsequently ‘hard to reach’ upon release into the community), transfer of prisoners from one corrections facility to another (frequently at short notice), and release into the community directly after a court appearance.

In an ideal situation, a prisoner with TB would remain in the same corrections facility for the entire duration of their TB treatment. This allows for continuity of care by the same clinical service and TB treatment supervising service (public health service and/or clinical TB service), and provides the best chance of curing their TB disease. If a prisoner with TB disease must be transferred to a different corrections facility, sufficient warning ideally of at least one week should be given to the relevant TB treatment supervising service to allow for liaison with the currently responsible clinical service (if necessary), and for referral to the clinical service and public health service in the new location.

3.2 Infection control

New prisoners may, during their screening process on admission to a corrections facility, give a history of being on current treatment for active TB disease (diagnosed in the community), past treatment for active TB disease or treatment for LTBI, or past diagnosis of LTBI without treatment. Infectious TB may also be suspected and diagnosed for the first time in a prisoner already being held in a corrections facility.

Prisoners who have been treated in the past for active TB disease or diagnosed with LTBI (treated or untreated) do not pose an infectious risk to others unless they have current symptoms and/or signs suggestive of active pulmonary TB disease.

In all of the above situations, the corrections facility health centre staff, regional public health service staff and DHB specialist clinician caring for the TB case (if the person currently has active TB disease) must communicate promptly and liaise closely regarding whether or not any infection control precautions are needed, as well as regarding case management (if relevant).

As a general rule (as recommended in the *Guidelines for Tuberculosis Control in New Zealand*), where an infectious TB case has been diagnosed for the first time in a prisoner already being held in a corrections facility, the prisoner should be transferred immediately to a hospital with a negative pressure isolation room until at least two weeks of appropriate anti-TB treatment have been completed. Depending on the extent of their disease, some TB cases can be infectious for a longer period even if they are being treated, and so the period of isolation might be longer than two weeks in some cases.

At all times, all staff at corrections facilities and public health services/clinical TB services must take adequate precautions to prevent the spread of infectious TB disease to themselves or others while investigating and managing TB cases in corrections facilities. These precautions...
include the use, if appropriate, of various forms of personal protective equipment (such as N95 particulate respirators or masks), the safe management of clinical samples (such as sputum samples), and providing advice to others to reduce the risk of transmission.

3.3 Directly observed therapy (DOT)

Prisoners with TB must always be given their anti-TB medication via directly observed therapy (DOT). The definition of DOT is that the patient is given the prescribed anti-TB medication by a nominated health care worker and is observed while swallowing the tablets. The observer must remain until all the tablets have been swallowed and ensure that no tablets have been concealed.

In general, prisoners with TB should be prescribed daily anti-TB medication, to be given by daily DOT. If anti-TB medication is prescribed as intermittent DOT, DOT should be thrice (three times) weekly, as recommended by the World Health Organization. Each DOT dose must be documented (given/not given), both in the prisoner's clinical records (MedTech) and on a purpose-designed manual (paper) DOT record.

3.4 Adherence

It is essential that adherence to anti-TB medications is closely monitored throughout the course of TB treatment, which has a minimum duration of six months (but which in some circumstances needs to continue for up to 12 months or longer). Adherence is defined as reliable consumption of anti-TB medication according to a predetermined plan. This increases the chance of curing a person's TB.

Adherence is particularly important in the treatment of TB in order to:
- increase the likelihood of cure for individual patients
- prevent the spread of TB to others in the community (both within and outside prison)
- prevent the development of multi-drug-resistant TB (MDR-TB).

3.5 Shared case management of prisoners with TB

Note on terminology for users of this Protocol

This Protocol generally refers to public health nurses (PHNs) in the overall supervisory role, because in most regions of New Zealand the PHN, acting for the local public health service's Medical Officer of Health, has overall responsibility for the case management of a TB case. However, as noted in section 2.4 above, in a few regions around New Zealand other arrangements for the supervision of TB treatment are in place. Therefore, if necessary, the terms ‘PHN’ and ‘public health service’ should be replaced by the relevant TB treatment supervising service or staff member’s designation (the TB specialist from the clinical TB service, or a clinical TB service outreach team member), as appropriate for local arrangements, and tasks should be adapted accordingly.

A public health nurse (PHN) from the local public health service maintains overall responsibility for the case management of a TB case, including prisoners with TB. Arrangements for DOT for each new TB case in a prisoner must be made on a case-by-case basis, taking the individual clinical circumstances of each case into account. Usually a registered nurse at the corrections facility health centre (a prison nurse) will administer DOT to prisoners with TB, but in some circumstances a PHN may administer DOT. In general, once the following conditions have been met, daily DOT should be given by a prison nurse, with ongoing training, support and supervision provided by a PHN.

1. The prisoner has accepted the need for treatment.
2. The prisoner has been stabilised on treatment.
3. The prisoner has already had a period of at least a month on DOT (administered by hospital staff if still in hospital, and administered by the PHN, or under the close supervision of the PHN following discharge from hospital) and has displayed no side-effects.

Training and education must be provided for the prison nurse by the PHN, including:
- education about TB disease and LTBI
- the definition of DOT and instructions on delivery and documentation
- information about the prisoner’s medication
- medication side-effects
- clear guidelines for the prison nurse to contact the PHN immediately if there are any problems or issues (all deviations from and exceptions to the straightforward administration of DOT must be documented by the prison nurse and communicated immediately by phone to the PHN).

3.6 Responsibilities and tasks in TB case management of prisoners

3.6.1 PHN responsibilities and tasks

The PHN, a registered nurse working for the local public health service, is responsible for overall case management of each prisoner with TB assigned to them. The PHN is responsible for:
- facilitating or providing ongoing training, support and supervision, preferably on-site at the corrections facility, to the prison nursing staff who will be administering DOT to the prisoner with TB
- maintaining regular communication with the prison nursing staff regarding the prisoner with TB
- becoming familiar with and adhering to the necessary corrections facility rules/regulations, as detailed in the Handbook for Health Services Providers Working in Prisons (including entry/search procedures, escort, bringing the minimum equipment necessary, no cellphones)
- visiting the corrections facility weekly to: meet with the prison nurse; give, or observe, the daily DOT dose for that day being given to the prisoner with TB; and discuss and review the prisoner’s TB case management, including adherence, medication side-effects, medication safety issues, laboratory test results, forthcoming outpatient clinic appointments and any other issues arising (note: if weekly visits are not possible in certain circumstances/regions, weekly telephone discussions or reviews are strongly recommended, with visits if/when possible)
- obtaining the prescription from the prescribing clinician, checking that prescriptions are correct (the right medicines, at the right doses, to the right clients, at the right times), and if not, alerting the prescribing clinician to potential errors
- ensuring an uninterrupted supply of medication is available for the prisoner with TB, and delivering one week’s blister-packed medication supply to the prison nurse at least one week before the supply in current use is exhausted (so that the prison nurse always has between one and two weeks’ supply of medication in stock)
- checking drug sensitivities to ensure the medication for the prisoner with TB is changed appropriately by the responsible clinician as soon as possible (eg, as soon as mono- or multi-drug resistance is reported by the laboratory; or conversely, as soon as the organism is found to be fully sensitive, at which point ethambutol can be stopped), and delivering the appropriately changed medication supply to the prison nurse
- supplying the prison nurse with a copy of the current prescription, list of medication side-effects or adverse effects, and any other necessary documentation
• immediately reporting any concerns regarding medication side-effects to the prescribing clinician
• immediately reporting any TB medication administration errors to the prescribing clinician and to the Medical Officer of Health
• immediately reporting any missed clinic or chest X-ray appointments to the prescribing clinician and to the Medical Officer of Health (eg, if the prisoner refuses to attend)
• providing the relevant TB health education to the prisoner with TB, and briefing the prison nurse on the content of the education provided
• notifying or reminding the prison nurse regarding pending/due outpatient clinic appointments, laboratory tests (eg, liver function tests), changes to the medication regimen, changes to the expected duration of TB treatment, etc
• keeping accurate documentation at the public health service relating to each interaction with the prisoner with TB and/or the prison nurse (all telephone calls, text messages, visits, etc must be documented accurately, whether or not the prisoner with TB or the prison nurse was spoken to or seen)
• keeping originals or copies, in manual files at the public health service, of all required manual (paper) documentation (eg, prescriptions, signed medication administration or DOT records) relating to the prisoner with TB
• ensuring that, in order to collect accurate surveillance data for TB, all necessary changes/updates are made to the prisoner’s TB case report form in the national notifiable diseases surveillance system (Episurv), including a final update at the end of TB treatment.

3.6.2 Prison nurse responsibilities and tasks
The appendix contains a flowchart outlining the prison nurse’s day-to-day responsibilities and tasks relating to TB case management for prisoners. The prison nurse (a registered nurse working within the corrections facility) is responsible for:

• undertaking ongoing TB training/training updates as necessary, and accepting training by, support from and supervision by the PHN, who is responsible for overall case management of the prisoner with TB
• maintaining regular communication with the PHN regarding the prisoner with TB
• meeting with the PHN weekly at the corrections facility, when the PHN can give or observe the daily DOT dose being given to the prisoner with TB, and the prison nurse and PHN should discuss and review the prisoner’s TB case management, including adherence, medication side-effects or medication safety issues, laboratory test results, forthcoming outpatient clinic appointments and any other issues arising (note: if weekly meetings are not possible in certain circumstances/regions, weekly telephone discussions or reviews are strongly recommended, with meetings if/when possible)
• administering DOT doses to prisoners with TB, always checking the current prescription against the medication (drugs, doses) before administering each dose
• immediately reporting to the PHN by phone if any DOT dose is not given (eg, if refused by the prisoner)
• accurately documenting each DOT dose given/not given, both in the prisoner’s clinical records (MedTech) and on the manual (paper) DOT record
• supplying a copy of the manual DOT record to the PHN during the PHN’s weekly visit
• documenting the PHN’s visits and all phone calls/emails to and from the PHN in the prisoner’s clinical records
• maintaining continued awareness of medication safety issues at each DOT visit (giving the right medicines, at the right doses, to the right clients, at the right times; enquiring about symptoms and signs of medication side-effects; and reminding the prisoner to report side-effects immediately)

• immediately reporting any concerns about medication side-effects to the PHN by phone, and documenting this in the prisoner’s clinical records

• immediately reporting any TB medication administration errors to the PHN by phone, and documenting this in the prisoner’s clinical records

• arranging for the prisoner to be escorted and transported to clinic or chest X-ray appointments, as necessary or requested

• immediately reporting to the PHN by phone if the prisoner misses or will miss a clinic or chest X-ray appointment (eg, if the prisoner refuses to attend)

• immediately reporting to the PHN by phone, with as much advance warning as possible (a minimum of one day or 24 hours prior) if the prisoner is due to appear in court, is being moved to another corrections facility or is due to be released

• arranging for the collection or delivery of laboratory specimens, as necessary or requested.

3.7 TB contact investigation

TB contact investigation is a specialised task. In addition to having responsibility for the overall case management of each prisoner with TB assigned to them, the PHN working for the local public health service is responsible for the investigation and management of all associated exposed contacts of the TB case, both inside and outside the corrections facility.

The aim of the investigation and follow-up of contacts in a corrections facility setting is to minimise current or future ill health in individuals, and transmission of TB to others by:

• educating contacts about TB disease and LTBI

• identifying infected contacts who require treatment of active TB disease, or management of LTBI (including, as appropriate, treatment of LTBI, follow-up with chest X-rays, or education and discharge).

3.8 LTBI case management in prisoners

Prisoners might be found to have LTBI either as a result of screening the contacts of an infectious pulmonary TB disease case in a fellow prisoner, or they might be imprisoned after having been diagnosed with LTBI in the community. The aim of treating LTBI is to reduce the risk of the future development of active TB disease in a person with LTBI. Treatment of LTBI would generally be considered in prisoners who are at high risk of developing TB disease because they fall into one or more of the following groups:

• recently acquired infection (particularly if the source case is a smear-positive pulmonary TB case)

• predisposing medical conditions that cause immune suppression (HIV, diabetes, alcoholism, drug addiction, end-stage renal disease, leukaemia, lymphoma, etc)

• immunosuppressive treatment (current or recent high-dose oral steroid therapy, some cancer chemotherapies, etc).

Prisoners with LTBI do not have symptoms due to their LTBI and are not infectious to others. Therefore infection control precautions are not required. However, LTBI can progress to active TB disease, so the prison nurses and PHNs should always be alert to the development of
symptoms and signs of active TB disease in a prisoner with LTBI, even if the prisoner is currently on LTBI treatment or has been treated for LTBI in the past.

If the decision is made to treat LTBI in a prisoner, anti-TB medication must be given via DOT, and sections 3.3, 3.4, 3.5 and 3.6 of this Protocol are applicable and should be followed.

3.9 Communication

Regular communication is essential for the successful shared case management of prisoners with TB and LTBI. Prompt communication of issues and information is integral to many of the responsibilities and tasks of PHNs and prison nurses. The public health service and the PHN or clinical TB service (depending on local arrangements) allocated to each corrections facility should have contact details for the following people at each corrections facility in the public health service’s geographic area:

- regional health manager, Department of Corrections
- health centre manager
- team leader
- nurses.

The health centre staff at each corrections facility should have contact details for the following people (or their equivalent) at the regional public health service or clinical TB service (depending on local arrangements) that covers the geographic area in which the corrections facility is situated:

- manager, communicable diseases team
- PHN(s) allocated to that corrections facility
- Medical Officer of Health
- after-hours public health service staff contact phone number(s)

or

- the TB specialist (respiratory physician or infectious diseases physician) for the TB case
- the clinical TB service staff member or outreach team member allocated to the TB case.

3.10 Issues that might require management/reporting after hours

Some TB-related issues can arise in prisoners with TB after normal working hours (after about 5 pm on weekdays, and on the weekend between about 5 pm on Friday and 8 am on Monday). The following examples are intended as a general guide for prison nurses regarding which issues need to be managed and/or reported to the public health service’s on-call staff after hours, and which issues can wait until normal business hours.

3.10.1 Prisoner refusing to take the Saturday or Sunday daily DOT dose

- After documenting the missed DOT dose, the prison nurse should contact the PHN on the next working day to report a prisoner’s missed DOT dose.
- However, if more than two DOT doses have been missed (eg, over a long weekend), the prison nurse should contact the public health service’s on-call staff after hours to report this, in addition to contacting the PHN on the next working day.

3.10.2 Anti-TB drug side-effects or adverse drug reactions

- If the prisoner is having a significant adverse drug reaction, with serious systemic symptoms such as swelling of the lips or difficulty breathing, they must receive emergency medical attention immediately.
If the prisoner is experiencing signs and symptoms that could indicate potentially severe adverse reactions or hepatotoxicity (jaundice, dark urine, vomiting, abdominal pain, fever, visual changes, marked clinical rash), urgent action is necessary and cannot wait until the next day. The prison nurse should phone the relevant clinical department (respiratory or infectious diseases) at the treating hospital immediately for advice (and, if relevant in that region, should inform the public health service’s on-call staff regarding the severe adverse reaction, or inform the usual PHN at the public health service on the next working day). Advice in this situation would be that the anti-TB medication must be stopped immediately, and urgent medical assessment and liver function testing must be arranged.

If the prisoner is experiencing less severe signs and symptoms (anorexia, nausea, malaise, tingling or burning sensation in hands or feet, rashes and/or skin itching), these do not usually necessitate stopping the anti-TB drugs. These less severe signs and symptoms occur fairly frequently in patients on anti-TB drugs (especially early during the course of treatment). Patients are frequently given antihistamines to take for rashes and/or itching. If in doubt, the prison nurse should phone the relevant clinical department (respiratory or infectious diseases) at the treating hospital for advice.

3.10.3 Prisoner transferred to another corrections facility

If the prisoner is transferred to another corrections facility over a weekend, the prison nurse should phone the public health service’s on-call staff to report the transfer, as the case will need to be referred to the relevant regional public health service that covers the new corrections facility’s area.

3.11 Legal aspects of TB control

Under the Tuberculosis Act 1948 (the TB Act) the Medical Officer of Health has a legal duty to ensure that:

- appropriate examinations are carried out on people suspected of suffering from TB
- contact tracing is carried out
- people who are found to have TB disease obtain medical treatment
- action is taken to prevent the spread of TB.

Frequently used sections of the TB Act include:

- section 7: ‘Duties and powers of medical officers of health’
- section 9: ‘Power, in certain cases, to require medical examination’ (used when the Medical Officer of Health requires someone who is suspected of having TB to undergo examinations, including attendance at a specified hospital or outpatient clinic in order to undergo chest X-ray and bacteriological tests)
- section 10: ‘Power, in certain cases, to give directions as to precautions necessary to prevent the spread of infection’ (used when the Medical Officer of Health requires someone who has been diagnosed with TB to take reasonable precautions to prevent the spread of TB, including attendance at a specified hospital or outpatient clinic in order to undergo chest X-ray and bacteriological tests, and instructions to do certain things or stay in a particular place).

The following is a rarely used but important section of the TB Act:

- section 16: ‘Provision for isolation, in certain cases, of persons likely to spread infection’ (this is used very rarely, and only as a last resort, for an infectious non-compliant TB patient, in which situation the Medical Officer of Health may apply to a district court judge for a detention order).
Note that in New Zealand, although a person can be isolated, they cannot be forced to take medication of any kind (including anti-TB medication) against their will.

The Tuberculosis Act 1948 and the Tuberculosis Regulations 1951 will be revoked when the Public Health Bill comes into force. It is anticipated that similar powers will be available to the Medical Officer of Health under the new legislation.

If the Medical Officer of Health is concerned about a person who might have or does have TB, the Medical Officer of Health has a duty to ensure the person is appropriately managed and does not spread TB infection, and therefore must issue the relevant order if necessary. Corrections facility health centre staff must inform the Medical Officer of Health at the local public health service if:

- a prisoner who is suspected of having TB because they have symptoms and signs suggestive of active TB disease refuses to be examined or to have a chest X-ray or other tests related to the diagnosis of TB disease
- a prisoner with already-diagnosed TB disease refuses to attend clinic or to have a chest X-ray or other tests related to progress monitoring of their TB disease treatment.
Appendix: Prison Nurse’s Responsibilities and Tasks Relating to TB Case Management in Prisoners

(With overall supervision/case management by PHN/TB treatment supervisor.)

Note: This flowchart is a tool that must be used together with the full Protocol.

### Prison nurse’s responsibilities throughout a prisoner’s TB treatment:
- Attend/receive TB training/updates when necessary.
- Maintain regular two-way communication with PHN/supervisor.
- Weekly meetings with PHN/supervisor (or phone call if meeting impossible).
- Additional meetings/phone calls with PHN/supervisor as necessary.

### Prison nurse’s daily tasks relating to directly observed therapy (DOT):
- Check medication is ‘right’ (right medicines, doses, patient, time).
- Ask prisoner about symptoms/signs of medication side-effects.
- Administer daily DOT dose to prisoner.
- Watch until all tablets have been swallowed.
- Document daily DOT dose given on paper DOT record.
- Document daily DOT dose in prisoner’s electronic health record.

### Prison nurse’s weekly tasks relating to TB treatment:
- Weekly meeting (or phone call) with PHN to review TB case management.
- Discuss adherence, side-effects, lab tests, appointments due, any issues.
- Administer daily DOT dose to prisoner/watch PHN administer the DOT.
- Give PHN a copy of last week’s paper DOT record (doses given/not given).
- Receive next week’s medication supply from PHN.
- Document weekly meeting, discussion and outcomes in health record.

### Prison nurse’s ‘when necessary’ tasks relating to TB treatment:
- Document all PHN’s visits, phone calls, emails in health record.
- Arrange for laboratory tests as requested.
- Arrange for prisoner to be escorted/transported to clinic/X-ray as requested.
- Inform PHN of prisoner’s court appearance/transfer/release (≥ 1 day prior).

### Prison nurse must report ASAP by phone to PHN if:
- Any DOT dose was refused by prisoner/not given.
- Any concerns regarding medication side-effects.
- Any medication administration errors.
- Prisoner misses/refuses to attend clinic/X-ray appointment.
- Prisoner due to appear in court/be transferred/be released.

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PHNs in most regions of New Zealand, but other TB treatment supervisors in a few regions.
Further Information

Key New Zealand sources
Department of Corrections. *Handbook for Health Services Providers Working in Prisons (HS 6-11-6).* Wellington: Department of Corrections.


Other useful sources