PRACTICE GUIDELINE	**Practice Guideline:** Home Isolation for Persons (Adult and Pediatric) with Respiratory Tuberculosis Disease		
	Approved by: Integrated Tuberculosis Services Oversight	**Target review date:** January 2026	*Pages: 1 of 10*
	Approval Date: Updated: October 24, 2023	**Supersedes:** Home Isolation of Adults with Active Tuberculosis Disease, 2009	

1. PURPOSE

1.1 To offer direction to healthcare providers involved in the care of clients with active tuberculosis (TB) disease who are infectious and are potential candidates for treatment in their homes during their infectious period.

1.2 The aim is to:

1.2.1 Offer home isolation as an alternative to hospital-based care.
1.2.2 Ensure that individuals in community settings with active TB disease have access to prompt effective TB treatment and supports/resources for them to remain on home isolation in the community.
1.2.3 Facilitate communication between healthcare providers working with TB clients who are on home isolation
1.2.4 These guidelines apply to outpatients only. For inpatient isolation - see Infection Control Guidelines.

2. SCOPE AND GOAL

2.1 This guideline applies to the Winnipeg Regional Health Authority (WRHA), Population and Public Health (PPH), Tuberculosis Services. This guideline will articulate the delivery of home isolation practices.

2.2 Home isolation is a treatment option for individuals 10 years of age or older that require treatment for clinical or confirmed respiratory TB disease. This also applies to children younger than 10 years of age who present with adult-like active TB disease and are considered infectious as per the TB Clinician.

2.3 To be eligible for home isolation, a client must:

2.3.1 Reside in the Winnipeg Health Region.
2.3.2 Have been assessed by a Medicine Program Specialist as clinically well enough to receive care as an outpatient.
2.3.3 Not require hospitalization for additional diagnostic tests, procedures, or co-existing medical conditions.
2.3.4 Have been referred to Public Health for home isolation by the TB Clinician via the Population and Public Health Referral to Tuberculosis Services
2.3.5 Have been assessed by the Public Health Nurse (PHN) as suitable for home isolation.

2.3.6 Have a plan that supports them to be successful with home isolation including the ability to attend necessary follow up appointments, tests and resources to remain at home.

3. DEFINITIONS

Acid Fast Bacilli (AFB): Microorganisms that retain acid staining solution for the purpose of microbiology examination. The majority of AFB organisms are mycobacteria, including Mycobacterium tuberculosis complex. Microbiology examination includes visual microscopic assessment of specimen (reported as smear positive or negative) and an attempt to grow colonies of AFB (reported as culture positive or negative).

AFB Smear Positive: Clinical specimens (e.g., sputum, bronchial washings, pleural fluid) found to be positive for AFB on direct microscopic examination. Clients who are sputum smear positive and culture positive are able to transmit TB to others.

AFB Smear Negative: Clinical specimens (e.g., sputum) found to be negative for AFB on direct microscopic examination. Clients who are sputum smear negative and culture positive are able to transmit TB to others. Respiratory TB could be considered in all clients with a smear negative result who present with highly suspicious clinical findings (e.g., chest x-ray consistent with TB disease, signs and symptoms, epidemiological risk factors).

Congregate settings: A mix of institutional settings where people live in close proximity to each other such as correctional facilities e.g., prisons, jails, homeless shelters, refugee camps, military barracks, dormitories and nursing homes. (Source: http://www.stoptb.org/wg/tb_hiv/assets/documents/tbicimplementationframework1288971813.pdf)

Directly observed treatment (DOT): A strategy to support a TB client to successfully complete their TB treatment by having a health care worker (HCW) or another designated person watch them swallow all prescribed TB medication.

Home isolation therapy for TB disease: Care given to a client with active TB disease that occurs in a non-hospital, community setting (e.g., a home or alternate location), while the client is still considered infectious to others. The client is

requested to remain in one location and is restricted from going into other buildings or public places unless approved by their TB Clinician or Public Health. Client to wear a loop mask if requested to enter public places/buildings.

Isolation: For the purpose of this guideline refers to the separation of a person with infectious TB disease from other people to prevent transmission of TB.

Tuberculosis: Tuberculosis (TB) is an infectious disease caused by the bacteria, *Mycobacterium tuberculosis* (MTB).

Active tuberculosis: A client with clinical or culture confirmed disease caused by *Mycobacterium tuberculosis* complex or any subspecies that cause TB.

Infectious tuberculosis: TB disease that can be transmitted to others under normal circumstances. This includes respiratory TB that has not been adequately treated.

Respiratory tuberculosis: Refers to tuberculosis involving respiratory systems (e.g.: pulmonary, miliary, pleural, laryngeal).

Non-respiratory tuberculosis: Refers to tuberculosis involving other areas of the body outside of the respiratory system.

Tuberculosis Clinician: A physician with expertise in the area of tuberculosis; this is a respirologist or infectious disease specialist experienced in TB.

Tuberculosis culture: Microbiology testing that attempts to grow colonies of AFB (reported as culture positive or negative).

4. BACKGROUND

4.1 Manitoba continues to have TB rates that are greater than the Canadian average. The health system needs to ensure that health care resources are utilized effectively and efficiently. The practice of isolating clients in hospital from time of their TB diagnosis to the end of their infectivity, regardless of their overall health, puts a strain of the individual client, their families, communities and the health care system.

4.2 The first priority of TB control programs is the early identification and successful treatment of all TB cases. Treatment rapidly reduces the risk of TB transmission to others (Canadian Tuberculosis Standards, p 294).

4.3 The most effective means of reducing TB transmission is to start effective TB therapy and immediately isolate clients who are infectious. People with culture positive respiratory TB pose a risk for the transmission of TB disease (Peterson, et al., 2017).

4.4 Infection prevention and control measures are important to reduce the risk of transmission to all contacts (Petersen, et al., 2017).

4.5 Home isolation does not pose a significantly increased risk of TB transmission to other household members because they have already been exposed to TB prior to the client's diagnosis. Starting a client on effective TB treatment as soon as possible significantly lowers their ability to continue to transmit TB.

4.6 Despite the absence of documented evidence informed guidelines, home isolation of clients with infectious TB has been undertaken in developed countries for decades (Canadian Agency for Drugs and Technologies in Health [CADTH], 2014).

4.7 After reviewing the literature, CADTH reported that PHAC provided the most detailed guidance on home isolation.

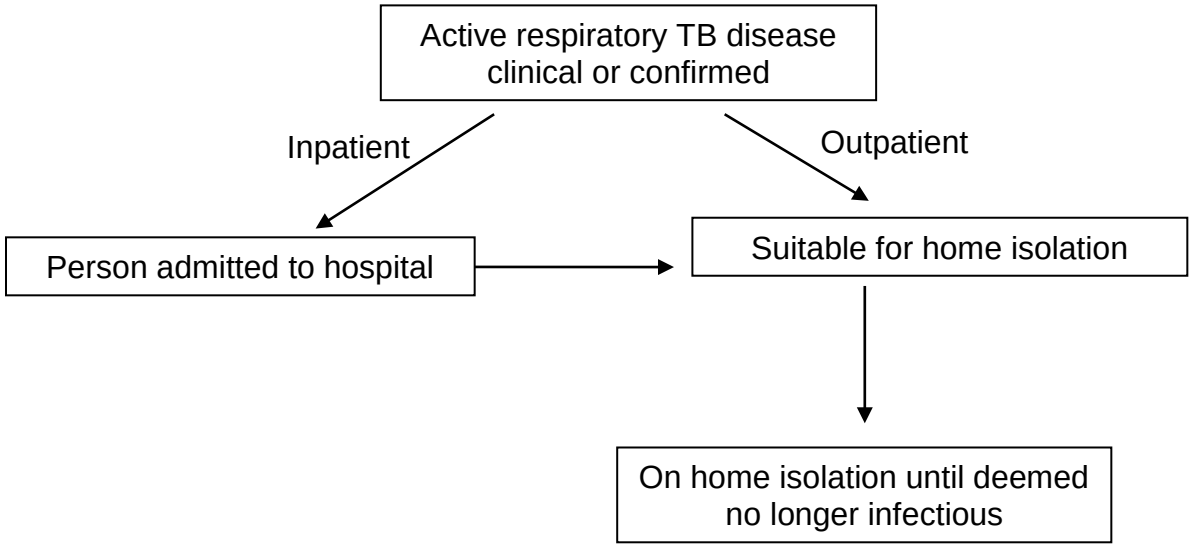
4.8 PHAC (2014) recommends that a home visit be undertaken to assess the suitability of isolation at home, to identify household contacts, to explore barriers to home isolation and identify necessary supports for the client to be successful with home isolation. The specific supports required to succeed while being on home isolation were not found in the literature. Clients acknowledged the important role of health care staff in providing ongoing education and support during their TB treatment (Mutch, 2016).

4.9 Public Health has been successfully facilitating home isolation for medically stable infectious clients who reside within the Winnipeg Health Region.

5. PROCEDURE

5.1 Steps for Home Isolation

Recommended steps for isolation for clinical or confirmed respiratory TB disease in the home (Adapted from PHAC, 2014 p. 378).



5.2 Suitability for Home Isolation

All of the following criteria are necessary for home isolation (adapted from PHAC, 2014):

5.2.1 The client must live in a suitable dwelling such as a single-family home, apartment or suite without shared ventilation. Congregate settings are not suitable for home isolation (e.g., shelters, Main Street Project, rooming houses and hotels with shared facilities such as bathroom/kitchen).

5.2.2 The client and household members have received education about what home isolation involves.

5.2.3 TB Clinician and the PHN determine that the client is able to follow the home isolation plan.

5.2.4 The client has adequate supports to maintain home isolation (e.g., help with grocery shopping, access to a phone).

5.2.5 The PHN has made arrangements for Directly Observed Treatment (DOT).

5.2.6 Children younger than five years of age, living in the home, have been referred to a TB Clinician for Window Period Prophylaxis (WPP) assessment.

5.2.6.1 It is recommended that a plan be in place to start children younger than five years of age on WPP as soon as possible.

5.2.6.2 Alternative living arrangements may be considered for the children or the client, if WPP will not be starting promptly.

5.3 Home Isolation Plan

5.3.1 The role of the PHN is to support the client and their household members to be successful with home isolation. This includes education, problem solving, planning, addressing client concerns, and overall support to the client and household members.

5.3.2 Key features of a home isolation plan:

5.3.2.1 Client has agreed to allow HCWs into their home to observe them taking their TB medication.

5.3.2.2 Client advised that they do not need to loop face mask or isolate themselves in a separate room while in their home.

5.3.2.3 Client and household members have agreed not to have visitors into the home.

5.3.2.4 Client has agreed not to attend indoor public places, including work, school, shopping or other homes.

5.3.2.5 Client is encouraged to spend time outdoors and advised that a loop face mask is not required.

5.3.2.6 Client to wear a loop face mask when taking a taxi or ride share services to healthcare appointments.

5.3.2.7 Client wears a loop face mask to attend essential healthcare appointments.

5.3.2.8 Client has agreed not to use public transportation.

5.4 Process to request and establish home isolation

5.4.1 TB Clinician faxes a referral to Public Health TB Services indicating home isolation request via the Population and Public Health Referral to Tuberculosis Services form.

5.4.2 PHN contacts the client within two business days to assess suitability for home isolation (refer to 5.2 Suitability for Home Isolation).

5.4.3 PHN faxes referral back to TB Clinician indicating outcome of suitability assessment.

5.4.4 PHN completes WRHA Safety Assessment Form Tool (SAFT) for all clients.

5.4.4.1 Safe visit plan (SVP) is required for all clients on home isolation due to the potential biohazardous risk to employees providing care in the home. Staff are required to wear N95 respirators.

5.4.4.2 SVP to be communicated to all WHRA services staff going into the home where the client is being isolated. Services will also need to be notified when the SVP changes and N95 respirators are no longer necessary.

5.4.5 PHN notifies TB Resource Coordinator or Outreach Worker to arrange DOT services.

5.4.6 PHN provides the client with the necessary health education, home isolation expectations, treatment plan, DOT plan and follow-up plan.

5.4.7 A client does not need to sign a consent form indicating they agree to home isolation.

5.4.8 The PHN works with the client and their household members to address any questions or concerns regarding home isolation.

5.4.9 PHN refers or assists as needed with:

5.4.9.1 Children younger than 5 years of age requiring Window Period assessment.

5.4.9.2 Taxi vouchers for necessary TB related care (e.g., blood work, appointments with TB Clinician).

5.4.9.3 Other community supports (e.g., Employment and Income Assistance, mental health services, Health Outreach and Community Supports, Indigenous Health Program, Social Work, housing supports).

5.4.10 PHN provides ongoing assessment of a client on home isolation to monitor for treatment related issues, identify signs of clinical improvement and arrange for sputum collection to determine when home isolation can be safely discontinued.

5.4.11 All sputa collected must be transported as per Safe Work Practice procedure.

5.4.12 PHN to communicate with TB Clinician any issues with client's treatment or home isolation plan.

5.4.13 In some uncomplicated cases, the client will have their first dose of TB treatment at the Respiratory Outpatient Department then be expected to start home isolation immediately. Such assessments for suitability for home isolation are done by the TB Clinician at the time of the client's first appointment in the outpatient clinic without prior referral to Public Health TB Services. In these cases:

5.4.13.1 The TB Clinician will specify that the dose was received in clinic and reflect this in both the prescription as well as documenting in the clinic note that is forwarded to the PHN

5.4.13.2 Given the necessary 2 working days' notice needed by the Public Health TB Services to arrange for DOT, the client may be prescribed an appropriate number of doses to take home immediately after clinic visit and will be instructed by the TB Clinician to take these self-administered (i.e., not directly observed) until DOT is arranged. These take-home doses are arranged by the TB Clinician and are reflected in the full prescription and documented in the clinic note that is forwarded to the PHN. PHN will document these doses were taken self-administered accordingly.

6. Discontinuation of TB Home Isolation

6.1 If **sputum smear negative** at time of diagnosis the client must meet the following criteria:

6.1.1 Completed 14 doses of effective TB treatment.

6.1.2 Tolerating treatment.

6.1.3 Shows symptom improvement or the PHN has consulted the TB Clinician if client's symptoms worsen and discontinuation was approved.

6.1.4 Isolation discontinuation may be considered for smear negative at time of diagnosis after only 5 doses of effective TB treatment in discussion with the TB Clinician, provided:

6.1.4.1 The patient does not work or reside in a congregate setting or with highly susceptible, previously unexposed contacts

6.1.4.2 The time to culture positivity (in the microbiology lab) is 9 or more days

6.1.4.3 There is very low suspicion of Multi-Drug Resistance (MDR)-TB.

6.1.5 The TB Clinician will document whether isolation is to be 5 or 14 days in the clinic note faxed to PPH- TB Services.

6.1.6 For clients admitted to hospital, the TB Clinician will provide a written order at time of discharge for home isolation and fax the order to PPH TB Services. Isolation will be until 14 doses completed unless TB Clinician specifies otherwise.

6.1.7 For clients whose isolation is discontinued after 5 doses, the period of infectivity ends after the fifth dose. Health care providers do not need to wear N95 respirators after isolation is discontinued, but may choose to do so if they prefer until the client has completed 14 doses of treatment.

6.2 If **sputum is smear positive** at time of diagnosis the client must meet the following criteria:

6.2.1 Completed at least 14 doses of effective TB treatment.

6.2.2 Tolerating treatment.

6.2.3 Shows symptom improvement or the PHN has consulted the TB Clinician if client's symptoms worsen and discontinuation was approved.

6.2.4 Smear status:

6.2.4.1 Smear negative on three consecutive samples collected a minimum of 8 hours apart, (often day 12, 13, and 14).

6.2.4.2 Isolation discontinuation may be considered for clients who remain sputum smear positive after 21 (7/7 dosing) doses of effective therapy in discussion with the TB Clinician, provided:

6.2.4.2.1 There is very low suspicion of Multi-Drug Resistance (MDR)-TB or

6.2.4.2.2 The patient does not work or reside in a congregate setting or with highly-susceptible, previously unexposed contacts or who is remaining in hospital

6.2.4.2.3 There is evidence of reduced sputum smear burden

6.2.4.2.4 Where clients reside in settings that 7/7 dosing is not possible then the alternative schedule for 5/7 dosing is 20 doses of effective therapy (equivalent to 4 weeks on home isolation)

6.2.5 Isolation discontinuation may be considered for a client who meets above criteria but is no longer able to produce sputum; PHN will fax communication form to the TB Clinician for collaborative decision-making.

6.2.6 For clients admitted to hospital, the TB Clinician will provide a written order at time of discharge of the home isolation plan (e.g., length of home isolation) including determination for ending of home isolation and fax the order to PPH TB Services.

6.3 A client with suspected MDR-TB will require ongoing consultation with the TB Clinician to determine when home isolation can be discontinued. Sputum samples should be collected weekly until 3 consecutive culture negative.

7. VALIDATION / REFERENCES:

Canadian Agency for Drugs and Technologies in Health (2014). *Home isolation to prevent Tuberculosis transmission: A review of the clinical evidence and guidelines* [Rapid Response Report: Summary with Critical Appraisal]. ON: Ottawa, Retrieved from https://www-ncbi-nlm-nih-gov.uml.idm.oclc.org/books/NBK264094

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