

GUIDELINES FOR HOME AND HOSPITAL ISOLATION OF INFECTIOUS TUBERCULOSIS PATIENTS^{a,b}

Patient Characteristics at Diagnosis	Hospitalized under AII and being released to:	Discharge Criteria for Release from AII for Adults and Children with Pulmonary Disease
<p style="text-align: center;">AFB smear positive NAA test positive Patient is suspected of having active TB</p>	<ul style="list-style-type: none"> • General hospitalization • Outpatient congregate setting • Home or setting with high-risk contacts 	<ol style="list-style-type: none"> 1) Received the standard four drug regimen for at least 2 weeks if original AFB smear positive OR is on therapy for 5-7 days if original AFB smear was negative; AND 2) Demonstrates clinical improvement and adherence to DOT; AND 3) Three consecutive negative AFB smears collected at least 8 hours apart with at least 1 early morning specimen; AND 4) No risk factors for drug resistance.
<p style="text-align: center;">AFB smear negative, TB is not suspected NAA test is negative and/or another diagnosis is likely</p>	<ul style="list-style-type: none"> • General hospitalization • Returning to school • Returning to work • Use of public transportation 	<ol style="list-style-type: none"> 1) Three consecutive negative AFB smears collected at least 8 hours apart with at least 1 early morning specimen; AND 2) TB is not likely and another diagnosis has been identified.
<p style="text-align: center;">AFB smear negative AND <i>TB is suspected or confirmed through NAA testing</i></p>	<p style="text-align: center;">Return to normal activities including:</p> <ul style="list-style-type: none"> • General hospitalization • Returning to school • Returning to work • Use of public transportation 	<ol style="list-style-type: none"> 1) Received the standard four drug regimen for at least 5-7 days; AND 2) Demonstrates clinical improvement and adherence to DOT; AND 3) Three consecutive negative AFB smears collected at least 8 hours apart with at least one early morning specimen; AND 4) No risk factors for drug resistance.
<p style="text-align: center;">Confirmed MDR- or XDR-TB infection</p>	<p style="text-align: center;">Return to normal activities including:</p> <ul style="list-style-type: none"> • Returning to school • Returning to work • Use of public transportation 	<ol style="list-style-type: none"> 1) Receiving and tolerating appropriate MDR-TB regimen; AND 2) Demonstrates clinical improvement and adherence to DOT; AND 3) Three consecutive negative AFB cultures*. <p style="text-align: center;"><i>*Expert opinion varies; some experts satisfied with negative smears</i></p>

^aIndividuals who are returning to work or live in environments with immunocompromised individuals (neonates, HIV+, transplant recipients, etc.) should be considered individually; more conservative measures should be considered

^bA person suspected of/confirmed of TB may be released from hospital to home setting if there are no high risk individuals in the home, even if they do not meet the criteria for release from isolation. Clinical judgement and consultation with public health is recommended.

AFB - Acid-fast bacilli **AII** - airborne infection isolation **DOT** - Directly Observed Therapy **MDR** - Multi-drug resistant **NAA** - Nucleic Acid Amplification
TB - Tuberculosis **XDR** - Extensively-drug resistant

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Factors that Predict Transmission

Susceptibility	Immune status of the exposed individual; ie. HIV infection, organ transplant, immunosuppressive therapy, diabetes, kidney disease, IV drug use, etc.)
Infectiousness	A patient who expels many tubercle bacilli are more infectious than a patient who expel few or no bacilli
Exposure	The longer, more frequent and close in proximity an individual is to an infectious person, the higher the chance for transmission
Clinical Factors	Presence of cough, failure to cover mouth and nose when coughing, respiratory tract disease, inappropriate or inadequate treatment (drugs, duration), high sociability of a patient. <i>*This list is not all-inclusive</i>
Anatomical site	The following are the most infectious: pulmonary TB disease, extrapulmonary TB in addition to pulmonary tb, disease located in the oral cavity or the larynx or disease in an open abscess or lesion
Radiographic	Most infectious: cavitation (vs. noncavitary disease) on chest radiograph, positive AFB sputum smear and positive culture
Age	Transmission from children <10 years is unusual unless the chest radiograph is similar to adult pulmonary disease and/or shows cavitary changes
Adherence	Inadequate treatment can prolong the period of infectiousness and put the patient at risk for drug-resistant TB disease. Some patients with severe disease will remain smear and culture positive after several weeks of treatment however, isoniazid and rifampin are associated with a more rapid conversion.

References

1. *Guidelines for the Investigation of Contacts of Persons with Infectious Tuberculosis: Recommendations from the National Tuberculosis Controllers Association and CDC.* Centers for Disease Control and Prevention. MMWR: December 16, 2005; Volume 54 (RR-15); p1-37.
2. *Guidelines for Preventing the Transmission of Mycobacterium tuberculosis in Health-Care Settings.* Centers for Disease Control and Prevention. MMWR: December 30, 2005; Volume 54 (RR17).
3. *Controlling Tuberculosis in the United States.* Centers for Disease Control and Prevention. MMWR: November 4, 2005; Volume 54 (RR12s).
4. *Introduction to the Core Curriculum on Tuberculosis: What the Clinician Should Know.* Centers for Disease Control and Prevention. 6th Edition, 2013.

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Frequently Asked Questions

Is an AII room the same as a negative-pressure isolation room?

An AII room is a special negative-pressure room for the specific purpose of isolating persons who might have suspected or confirmed infectious TB disease from other parts of the setting. Not all negative-pressure rooms are AII rooms because they might not have the required air flow or differential pressure.

When can airborne precautions in a healthcare or congregate setting be discontinued?

When a patient has been on adequate therapy for 2 weeks or longer, symptoms improve, and there have been three consecutive, negative AFB sputum smear results with at least one being an early morning specimen.

Can a patient on home isolation go out as long as he wears a mask?

Patients with infectious disease should stay in the home unless travelling to a necessary medical appointment. A patient may engage in outdoor activities while avoiding close face-to-face contact.

What if the patient remains smear positive but cultures come back negative?

Negative cultures contain nonviable organisms. The mycobacteria are dead and not capable of spreading disease. HCW's may consider this patient for release from isolation when accompanied with other factors.



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