

To: NYC clinicians and infection control practitioners

From: Joseph Burzynski, MD, MPH

Assistant Commissioner and Director Bureau of Tuberculosis Control

Re: Updated Respiratory Isolation and Restrictions Recommendations

Date: March 28, 2025

Dear Colleagues,

We are writing to announce updated New York City Department of Health and Mental Hygiene (NYC Health Department) isolation recommendations for individuals with respiratory tuberculosis (TB) in community settings, based on new guidelines from the National TB Coalition of America (NTCA).¹

While these guidelines do not affect hospital-based isolation policies, they may impact the duration of hospital stays. These updates should result in less time spent in isolation for many people with highly suspected or confirmed respiratory TB disease. Providers still need to follow New York City Health Code requirements before discharging hospitalized TB patients.

Summary of Isolation Guidelines:

- 1) Respiratory isolation and restrictions should be implemented for people with highly suspected or confirmed respiratory TB prior to starting effective therapy.
- 2) Many people with respiratory TB can be considered non-infectious after receiving five days of effective therapy, even if respiratory smears remain acid-fast bacilli (AFB) positive. Individuals with extensive TB disease, drug resistance, or other clinical characteristics may require longer isolation periods in consultation with the NYC Health Department.
- 3) Discharge from a hospital is based on a number of considerations, including clinical characteristics, public health concerns, and other factors.
- 4) A Hospital Discharge Approval Request Form must be submitted to the NYC Health Department for people with potentially infectious TB. The NYC Health Department must review and approve discharge plans for these individuals prior to their discharge.

In April 2024, the NTCA published Guidelines for Respiratory Isolation Requirements for people with respiratory TB outside of a health care setting, which were endorsed by the Infectious Disease Society of America.¹ The NTCA guidelines reflect an improved understanding of TB infectiousness and the importance of minimizing the negative impacts of prolonged isolation on people with TB, such as loss of income, potential loss of housing, and increased anxiety and depression, while continuing to protect the public health.

The NYC Health Department agrees with the principles outlined in the new NTCA guidelines. The guidelines apply to people who have uncomplicated respiratory TB; they do not apply to people who remain admitted to a hospital or are in a prison or jail. Guidance for patients while they remain in the hospital has been made elsewhere.²

Studies have provided evidence that support the concept that people with respiratory TB rapidly become less infectious once they start effective anti-TB therapy. This makes respiratory smear and culture results ineffective tools to measure infectiousness after a person begins TB treatment. In considering when patients can be discharged from a hospital or when non-hospitalized patients can have isolation restrictions removed, most people can be considered non-infectious with at least five days of effective therapy (at least two drugs to which the person's TB is likely susceptible). Decisions about infectiousness should not be based on smear or culture results for someone who has been started on effective therapy. Effective therapy rapidly diminishes the burden of viable TB bacteria and leads to changes in gene expression and therefore characteristics of the TB bacteria that remain.

Extension of isolation beyond five days of therapy should be considered for individuals who start with a heavy burden of respiratory disease, as evidenced by a cavitary chest x-ray and sputum AFB smear positive 4+. People found to have confirmed or suspected drug-resistant TB may also require extended isolation until an effective treatment regimen can be initiated.

Many people with respiratory TB present to emergency rooms with symptoms such as cough and fever and are then subsequently admitted to the hospital. Patients with highly suspected or confirmed respiratory TB can usually be discharged from the hospital as soon as they are reported to the NYC Health Department, an effective TB therapy is initiated, and a discharge plan approved by the NYC Health Department is in place. If a patient returns home prior to the end of their isolation period, the risk of new TB exposures at home is low, as people in the home have likely already been exposed and will need to be evaluated for TB. Assessment for removing respiratory isolation restrictions should include an assessment of the person's living and working environments. Outdoor environments greatly diminish the risk of TB transmission. Brief interactions in an indoor setting are generally safe as transmission usually occurs only after prolonged interactions in shared air space.

Patients who are discharged from the hospital prior to receiving a full five days of effective therapy should complete the remainder of the recommended isolation period at home. People who are diagnosed and start TB treatment as outpatients should isolate at home until at least five days of effective therapy are completed unless an extended isolation period is indicated, as noted above.

People admitted to a hospital with respiratory TB can usually be discharged back to a shelter or congregate living site once it is determined by the treating physician and the NYC Health Department that the patient is responding to therapy, the patient has had at least five days of effective therapy, and a plan for Directly Observed Therapy is in place. Continued adherence to treatment after discharge is critical to this plan.

A Hospital Discharge Approval Form must be submitted to the NYC Health Department for review and approval for any individual with potentially infectious TB. This form and more information regarding guidelines for hospital discharge can be found at <u>Tuberculosis: Provider Resources</u>. Providers can also call the NYC Health Department's TB Hotline at 844-713-0559 during business hours for clinical consultation on hospital discharge or ending isolation.

Citations:

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- 3. Dawson JJY, Devadatta S, Fox W, et. Al. A 5-year study of patients with pulmonary tuberculosis in a concurrent comparison of home and sanatorium treatment for one year with isoniazid plus PAS. *Bull World Health Organ* 1966; 34(4):533-51.
- 4. Jindani A, Dore CJ, Mitchison DA. Bactericidal and sterilizing activities of anti-tuberculosis drugs during the first 14 days. *Am J Respir Crit Care Med* 2003; 167(10): 1348-54.
- 5. Acuna-Villaorduna C, Ayakaka I, Schmidt-Castellani LG, et al. Host determinants of infectiousness in smear-positive patients with tuberculosis. *Open Forum Infect Dis* 2019; 6(6):ofz184.
- 6. Theron G, Limberis J, Venter R et al. Bacterial and host determinants of cough aerosol culture positivity in patients with drug-resistant versus drug-susceptible tuberculosis. *Nat Med* 2020; 26(9):1435-43.
- 7. Riley RL, Mills CC, O'Grady F, Sultan LU, Wittstadt F, Shivpuri DN. Infectiousness of air from a tuberculosis ward. *Am Rev Respir Dis* 1961; 85:511-25.
- 8. Dharmadhikari AS, Mphahlele M, Venter K, et al. Rapid impact of effective treatment on transmission of multidrug-resistant tuberculosis. *Int J Tuberculosis Lung Dis* 2014; 18(9):1019-25.
- 9. Walter ND, Dolganov GM, Garcia BJ, et al. Transcriptional adaptation of drug-tolerant Mycobacterium tuberculosis during treatment of human tuberculosis. *J Infect Dis* 2015; 212(6):990-8.
- 10. Gunnels J, Bates J, Swindoll H. Infectivity of sputum-positive tuberculosis patients on chemotherapy. *Am Rev Respir Dis* 1974; 109(3):323-30.