

Guidelines for Hospitalization and Returning Tuberculosis Patients to the Community

Table of Contents

	Page
Effective Date	3
Purpose	3
Background	3
Definitions	4
Elements of the Protocol	4
1.0 Guidelines for Admitting Patients with Suspected or Confirmed TB to the Hospital	4
1.1 When is it necessary to admit a patient with suspected or confirmed TB?.....	4
1.2 Initiating airborne isolation.....	5
1.3 Requirements prior to discharge from the emergency room or clinic.....	6
Figure 1: Criteria for Admitting Patients with Suspected or Confirmed TB to the Hospital	8
2.0 Guidelines for Returning TB Patients to home	9
2.1 For non-MDR TB patients, discharge of AFB smear-positive individuals before AFB smear conversion	9
2.2 Additional circumstances	9
2.3 Exceptions to discharging individuals while still AFB smear-positive.....	10
2.4 Discharge of an AFB smear-negative individual directly from hospital.....	10
2.5 Discharge of AFB smear-negative hospitalized patient with positive nucleic acid amplification (NAA) test or <i>M. tbc</i> culture.....	10
2.6 Discharge of AFB smear-positive hospitalized patient with negative nucleic acid amplification (NAA) test	11
2.7 Patients who leave against medical advice or elope.....	11
3.0 Guidelines for returning patients to work, school, or other congregate settings	11
3.1 When an individual with TB (class III) or suspected TB (class V) can safely return to work or school.....	11
3.2 Situations when culture conversion should be confirmed.....	12
3.3 AFB smear-positive patients.....	12
3.4 AFB smear-negative patients.....	12
4.0 Guidelines for discharging suspected or known MDRTB patients from airborne isolation and returning them to home, school, work, or other congregate settings	12
4.1 Patients with known or suspected MDRTB who should remain hospitalized on airborne isolation.....	13
4.2 Returning MDRTB patients to work, school, and other congregate settings.....	13
5.0 Home Isolation	13
5.1 HEPA filter guidelines.....	14
Figure 2: Criteria for Discharging Patients with Suspected or Confirmed TB from the Hospital	15

6.0 Roles of the Medical Providers and of the BTBC Staff.....16

 6.1 The role of hospital staff/treating physician.....16

 6.2 The role of BTBC staff.....17

 6.3 How to refer patients to a BTBC chest center.....18

7.0 Evaluation of Protocol19

8.0 Implementation of the Protocol.....19

List of Chest Centers.....20

References.....21

Appendices

I. Discharge Instructions for Patients with Potentially Infectious TB23

II. Information for Persons Who Live with Patients with TB.....24

Guidelines for Hospitalization and Returning Tuberculosis Patients to the Community

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PURPOSE

1. To provide guidelines to Bureau of TB Control (BTBC) staff and other health care providers to manage the public health aspects of infectious TB patients.
2. To work collaboratively with providers in hospitals and communities to reduce hospitalizations of TB patients in New York City (NYC).

BACKGROUND

Requirements for successful treatment of tuberculosis (TB) are that (1) correct medications are given, (2) compliance to the prescribed medications be assured, i.e., patient be on directly observed therapy (DOT), and (3) the patient completes a minimum number of doses considered necessary for cure. The entire diagnostic work-up and treatment of TB can be done in an outpatient setting for most individuals.

An individual with suspected pulmonary TB may present in a wide variety of settings, such as an outpatient clinic or the emergency room. The decision to admit a patient to the hospital under isolation should not rest solely on the suspected diagnosis of TB. It should take into account all relevant aspects of clinical evaluation, medical care, and public health implications.

There is a pervasive perception among providers that treating patients with TB on an outpatient basis will lead to increased TB transmission. With the advent of modern antituberculosis chemotherapy, admission to the hospital has been shown not to be necessary for effective treatment of TB. Studies have shown that, not only does outpatient treatment of TB achieve cure rates comparable to inpatient care, outpatient therapy is not associated with an increase in TB transmission in the community. The risk of transmitting TB to others is related to prolonged exposure to a case with undiagnosed, *untreated*, infectious TB. By the time a case of TB is identified and the patient is placed on treatment, virtually all the transmission to close contacts has already occurred. Treatment of TB as an outpatient is less disruptive for the patient.

Appropriate treatment of smear-positive cases can render most of them noninfectious rapidly, generally within two weeks. Generally, infectivity decreases many fold in the first 2 days in most individuals on standard short course chemotherapy. Therefore, the most effective intervention for reducing infectiousness is treatment of the case, and institution of a mechanism which will guarantee provision of the medications, i.e. the patient will be on DOT. Under these circumstances, it is perfectly reasonable to treat most patients as an outpatient with a plan to ensure treatment completion.

Furthermore, outpatient treatment of TB is more cost effective since the main determinant of cost in treating TB is hospital stay. If a patient is already admitted when the diagnosis of TB is made, it

may not be necessary to keep the patient in the hospital while waiting for sputum to convert to negative. Smear/culture positive patients may be discharged from the hospital as long as certain criteria are met.

The requirements for discharging known or highly-suspected multi-drug resistant TB (MDRTB) patients are more stringent. Since the number of new MDRTB patients in NYC has decreased by over 90% since 1992, the likelihood that a patient whose susceptibility results are not yet available upon discharge will have MDRTB is very small.

The NYC Department of Health and Mental Hygiene (DOHMH) maintains an excellent infrastructure of ambulatory care clinics to diagnose and treat TB patients and to provide supporting services such as DOT, all free of charge to the patient. These clinics are staffed by knowledgeable healthcare professionals with vast experience in diagnosing and treating TB. Outpatient management will reduce costs that are generated from unnecessary admissions.

DEFINITIONS

- 1.0 Smear conversion** is defined as three consecutive negative acid fast bacilli (AFB) smears in specimens collected over 48-72 hours which are done during the initial diagnostic evaluation for tuberculosis. Once the patient is AFB smear-positive and the physician is awaiting smear conversion, it is not cost efficient, and may even be inappropriate in patients with high bacillary loads, to send daily sputum specimens.
- 2.0 Culture conversion** is defined as two consecutive negative cultures at least two weeks apart.

ELEMENTS OF THE PROTOCOL

1.0 Guidelines for Admitting Patients with Suspected or Confirmed TB to the Hospital

1.1 When is it necessary to admit a patient with suspected or confirmed TB?

The following patients with TB should be admitted to the hospital until they are stable for discharge:

- Patients with severe forms of TB
 - CNS and meningeal
 - pericardial
 - disseminated or miliary TB
- Patients with hemodynamic instability
- Patients with severe hemoptysis
- Patients who are severely debilitated with weight loss, severe cough, high fevers and inability to care for themselves
- Patients with advanced AIDS or other major immunodeficiency
- Patients with comorbid medical conditions that require treatment in the hospital

Patients without the aforementioned forms of TB generally can be diagnosed and treated as outpatients. An individual who is clinically stable medically and psychiatrically (i.e., not hypotensive, able to care for themselves) **and** meets ALL of the following **EIGHT** criteria **does not need** to be admitted to the hospital for work-up or treatment of TB:

- 1.1.1 Has a stable residence at a verified address (form of identification with address such as a valid driver's license and state-issued personal ID cards may be used to reasonably verify an address; a phone call to the number given by the patient may also be used to indirectly verify an address). The hospital or clinic provider must verify that the patient lives at the address given.
- 1.1.2 Does not reside in a congregate setting such as shelter, nursing home, or single room occupancy hotel.
- 1.1.3 Does not have significant contact with immunosuppressed individuals.
- 1.1.4 Is not actively abusing drugs or alcohol.
- 1.1.5 Is ambulatory and can take care of himself or herself, and does not need professional home care, e.g., visiting nurse services or a home attendant.
- 1.1.6 Is able and willing to observe risk-reduction behaviors such as covering his/her mouth when coughing and staying at home until a physician says the patient is no longer infectious for TB.
- 1.1.7 Is competent and willing to follow up with outpatient care, (i.e., appointments, and necessary tests) and can acknowledge the instructions for follow-up.
- 1.1.8 If there are children in the home < 5 years old, there is an expeditious plan in place to evaluate them for latent TB infection (LTBI) and window-period prophylaxis, i.e. able to evaluate them by the next business day.

If an individual does not satisfy these criteria, admitting the patient may be a reasonable initial approach. The physician should admit the patient if any uncertainty exists. If there is going to be a delay in the evaluation of children in the household or the home situation seems unreliable, it is prudent to consider admitting the patient until the evaluation can occur.

1.2 Initiating airborne isolation

Any individual suspected of having infectious pulmonary or laryngeal TB, and who is admitted to a hospital, should be placed in airborne infection isolation (AII) (formerly called negative pressure or AFB isolation) room.

- 1.2.1 Adult patients admitted with any of the following must be placed into airborne isolation:
 - 1.2.1.1 Patients with or without symptoms of TB and an abnormal chest x-ray consistent with TB (i.e. upper lobe infiltrates, miliary pattern, intrathoracic adenopathy, nonresolving infiltrate, pleural effusion; however almost any abnormality can be seen);
 - 1.2.1.2 Cavitory chest x-ray with or without symptoms;
 - 1.2.1.3 AFB smear positive from a pulmonary source;
 - 1.2.1.4 Suspected laryngeal involvement (i.e. hoarseness);
 - 1.2.1.5 Extrapulmonary TB with abnormal chest x-ray;
 - 1.2.1.6 Extrapulmonary TB that includes an open abscess or lesion in which the concentration of organisms is high, especially if drainage from abscess or lesion is extensive, or if aerosolization of drainage fluid is performed;
 - 1.2.1.7 Extrapulmonary TB with a normal chest-x-ray, if immunocompromised. i.e AIDS, transplant patients, patients on chemotherapy, prolonged steroids, TNF-alpha blockers, methotrexate and azathioprine

- 1.2.2 Most children with TB are not contagious, however, if admitted with any of the following they must also be put into airborne isolation:
 - 1.2.2.1 Cavitory chest x-ray;
 - 1.2.2.2 AFB smear positive;
 - 1.2.2.3 Suspected laryngeal involvement;
 - 1.2.2.4 Extensive pulmonary infection;
 - 1.2.2.5 Congenital TB and undergoing procedures that involve oropharyngeal airway.

Plans must immediately be set in motion to facilitate eventual outpatient care and follow-up.

The DOHMH must be notified of this patient and participate in the discharge planning, ideally early in the patient's hospital course. An individual does not necessarily have to be AFB smear-negative to be released from the hospital to home. There is no minimum number of days the patient needs to be on treatment prior to discharge if the patient is being discharged to an appropriate setting. If arrangements can be made for outpatient follow-up, the patient may be discharged to his home if the 8 criteria above are met. The patient will need to be discharged on home isolation on DOT. If a patient is admitted over the weekend, the patient should remain hospitalized until plans can be made for follow-up and discharge to an appropriate clinic and DOT.

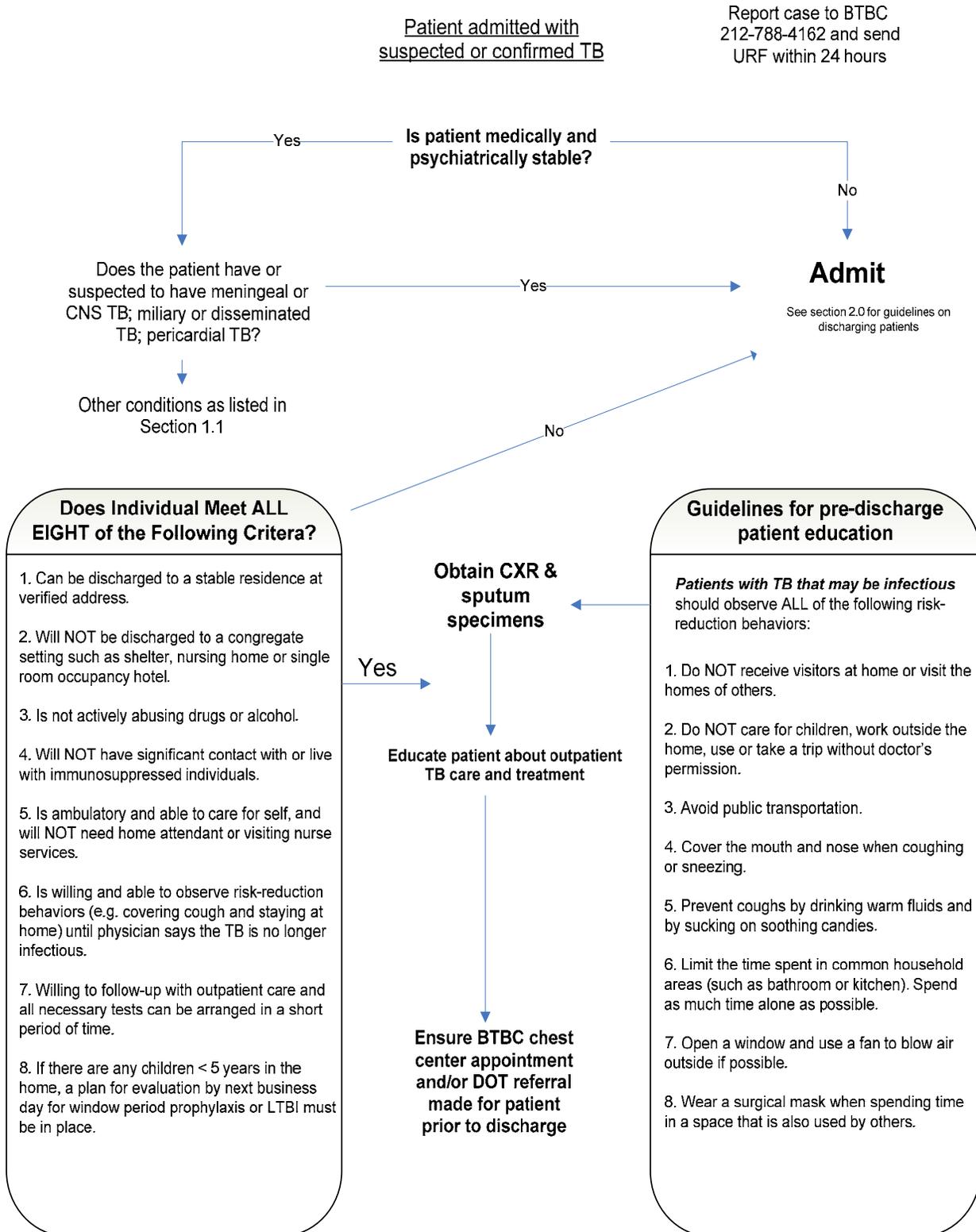
Since other hospitalized individuals may be especially vulnerable to TB infection, the criteria for discharging an individual who is AFB sputum-smear positive from the hospital to home are generally less restrictive than criteria for discharge from airborne isolation to a non-isolation hospital bed.

1.3 *Requirements prior to discharge from the hospital emergency room or clinic:*

- 1.3.1 Clinics, individual health care providers, and hospitals should contact the DOHMH **within 24 hours of diagnosis** to report suspected or confirmed TB cases. The Universal Reporting Form is available online at www.nyc.gov/health/tb. Click "Information for Health Care Providers." Forms are also available by mail. Call the TB Hotline at (212) 788-4162 to request hard copies.
- 1.3.2 The patient should have sputa obtained for AFB smear and culture, and chest x-ray. A discharge plan should be in place. A public health advisor should see the patient prior to discharge if feasible, and follow the "Guidelines for pre-discharge patient education" (see Figure 2).
- 1.3.3 Patient should be given a mask(s) to use while in transit. Public transportation should be avoided.
- 1.3.4 A referral should be made to a DOHMH clinic for the same day for medical evaluation and initiation of DOT. Do not start any medications for treatment of TB if patient is being referred to a BTBC chest center. Medications will be started in the chest center.
- 1.3.5 Refer to section 2.0, "Guidelines for returning suspected or known TB patients to home" for deciding when to discharge patients who are admitted.

- 1.3.6 Refer to section 3.0, “Guidelines for returning patients to work, school, or other congregate settings” for deciding if and when it is safe to return patients with active TB to school or work.

Figure 1
Criteria for admitting patients with suspected or confirmed TB to the hospital



2.0 Guidelines for Returning Suspected or Known TB Patients to Home

2.1 *For non-MDRTB patients, discharge of an AFB smear-positive individual directly from airborne isolation in a hospital to home before AFB smear conversion*

The decision to discharge from the hospital an individual who is smear-positive for AFB must be made by the hospital staff in consultation with the Bureau of TB Control (BTBC). The patient should not be discharged unless the provider has been in contact with a BTBC staff to discuss discharge planning and referral for DOT.

There is no minimum number of days that an individual must be on antituberculosis treatment before he or she is discharged from the hospital. The decision to discharge an individual who is AFB-smear positive from the hospital should be made by hospital staff based on the following criteria in consultation with their infection control personnel and BTBC staff:

2.1.1 There is clinical improvement, i.e., improvement of fever and resolution or near-resolution of cough;

AND

2.1.2 The patient is tolerating an antituberculosis regimen of isoniazid, rifampin or rifabutin, pyrazinamide and ethambutol;

AND

2.1.3 The patient agrees to directly observed therapy (DOT) and this has been arranged in conjunction with NYC DOHMH or a New York State designated DOT program;

AND

2.1.4 The patient is willing, able, and motivated to cover his/her mouth when coughing, and has agreed to observe home isolation until certain criteria are met (see section 5.0).

2.2 *In addition it must be established that:*

2.2.1 The patient lives alone, or is going back to a living environment where the other cohabitants are immunocompetent and wish to have the patient home (*See below for exceptions*);

AND

2.2.2 Children in the home who are < 5 years old or immunocompromised persons have been evaluated or have an expeditious plan in place to evaluate them for window-period prophylaxis or LTBI. If there is going to be a delay in the evaluation or the home situation seems unreliable, it is prudent to delay the discharge of the patient until the evaluation can occur.

AND

2.2.3 All 8 of the criteria listed in Figure 2 are met.

In compliance with State Sanitary Code, Part 2, Section 2.6©, the patient and family members should be given written instructions to follow in order to reduce the risk of TB transmission. See Appendices. These instructions are also available in several languages at <http://healthweb.health.nycnet/pdf/tb/cpm/tb-cpm-protocol-1.04.pdf>.

2.3 *Exceptions to discharging individuals from the hospital while still AFB smear-positive*

An individual who is AFB smear-positive should not be moved to a non-airborne isolation room in the hospital or directly discharged from the hospital to any of the following locations **until at least two weeks of treatment is administered, there is clinical improvement, and AFB smear conversion is documented.**

- 2.3.1 A congregate living site (shelter, single room occupancy hotels (SROs), nursing home, jail, prison, group home, another hospital, etc.);
- 2.3.2 A living situation where infants and young children also reside, if those children have not been placed on “window period” prophylaxis or treatment for LTBI or there is not an expeditious plan to have them evaluated;
- 2.3.3 A living situation where persons who are immunocompromised (HIV-infected, person receiving cancer chemotherapy, etc.) also reside, if those persons have not been placed on “window period” prophylaxis or treatment for LTBI or there is not an expeditious plan to have them evaluated;
- 2.3.4 A living situation where home health aides or visiting nurses will be present in the home for several hours a day to care for the person or family member.

In those situations where an individual will have visitors in the home, refuses to wear a mask or cover his/her mouth when coughing, and/or is less likely to adhere to an anti-TB treatment regimen because of drug or alcohol addiction, it may be prudent to be more conservative and keep the patient in the hospital until sputum is AFB smear-negative.

The individual may be transferred to another facility while still AFB smear positive, as long as it is to an AII room. The individual should be transported with appropriate respiratory precautions.

2.4 *Discharge of an AFB smear-negative individual directly from the hospital (Suspected non-MDRTB)*

- 2.4.1 Suspected and confirmed TB patients should not be discharged to a congregate setting such as a nursing home or a shelter until the following criteria are met:
 - 2.4.1.1 There has been clinical improvement, i.e., resolution of fever and resolution or near-resolution of cough;
 - AND**
 - 2.4.1.2 The individual has been on an antituberculosis treatment regimen for at least two weeks.
- 2.4.2 Patients with AFB-smear negative pulmonary TB can be discharged to home anytime once clinically stable.

2.5 *Discharge of an AFB smear-negative hospitalized patient with positive nucleic acid amplification (NAA) test or Mycobacterium tuberculosis complex (M. tbc) culture from a respiratory source (Suspected non-MDRTB)*

- 2.5.1 If such an individual requires hospitalization, he/she should remain in airborne isolation, until the following criteria are met:
 - 2.5.1.1 There has been clinical improvement, i.e., resolution of fever and resolution or near-resolution of cough;

AND

2.5.1.2 The individual has been on an antituberculosis treatment regimen for at least two weeks.

Patients may and should be discharged to home before two weeks of treatment is completed if appropriate criteria are met as in Section 2.1, or the individual is not going to be discharged to one of the congregate settings listed in Section 3.2 where culture conversion is required.

2.6 Discharge of an AFB smear-positive hospitalized patient with negative nucleic acid amplification (NAA) test

In such situations, the patient may have been colonized with or have disease due to a nontuberculous mycobacterium (NTM). This decision needs to be made by the provider. If the patient is still suspected of having TB and is being treated for the disease, the same guidelines should be followed as for AFB smear-positive TB patients.

2.7 Patients who leave against medical advice or elope

If a person with confirmed or suspected TB leaves the hospital AMA or elopes, notify the BTBC via the TB Hotline at 212-788-4162 during the weekday or Poison Control during the evenings and on weekends. Please provide patient's name, address, date of birth, emergency contacts, and telephone numbers. The BTBC staff will attempt to contact the patient and bring them back into care.

3.0 Guidelines for Returning Patients to Work, School, or Other Congregate Settings

3.1 Determining when an individual with TB (class III) or suspected TB (class V) can safely return to work or school is made after reviewing the following components:

- 3.1.1 The characteristics of the individual with TB disease, e.g., whether the individual has followed instructions, especially adherence to the anti-TB regimen;
- 3.1.2 The characteristics of TB disease itself, e.g., multidrug-resistant vs. drug-susceptible TB, respiratory AFB smear-positive vs. smear-negative, cavitary vs. non-cavitary; pulmonary vs. extrapulmonary
- 3.1.3 The work or school environment to which the person will be returning (outdoor work, congregate setting)
- 3.1.4 The characteristics of those who may be exposed. (i.e., immunocompromised, or on chemotherapy)

3.2 Situations where culture conversion should be confirmed:

The following is a list of work sites where individuals with both **drug susceptible and drug resistant TB** should be excluded until culture conversion is confirmed:

- 3.2.1 School or work where HIV positive or other immunocompromised patients are present;
- 3.2.2 Neonatal intensive care units;
- 3.2.3 Hospitals;
- 3.2.4 Nursing homes;
- 3.2.5 Daycare, schools or other settings where there are young children.

3.3 *Returning AFB smear-positive patients to work, school, or other congregate settings*

Individuals with suspected or confirmed pulmonary TB that is AFB smear positive may return to work or school when there is both bacteriologic and clinical evidence that there has been good response to anti-TB treatment. This includes:

3.3.1 Clinical improvement i.e., resolution of fever and resolution or near-resolution of cough;

AND

3.3.2 Evidence that the number of AFB on consecutive AFB smears taken on different days is consistently decreasing (for example, if a person's sputum goes from 3+ to consistently rare or negative over a two-week period);

AND

3.3.3 The individual has been on antituberculosis treatment regimen for at least two weeks (in hospital or via DOT) to which the organism is known to be susceptible;

AND

3.3.4 The work site to which they are returning is appropriate (See 3.2 for list of work sites where culture conversion should be confirmed). Patients who work outdoors or alone may return earlier.

3.4 *Returning AFB smear-negative patients to work, school, or other congregate settings*

Individuals with suspected or confirmed smear-negative pulmonary TB may return to work or school if:

3.4.1 There has been clinical improvement, i.e., resolution of fever and resolution or near-resolution of cough;

AND

3.4.2 The individual has been on an antituberculosis treatment regimen for at least two (2) weeks. If a patient works outdoors or alone, it is not necessary to wait two weeks before allowing the patient to return to work.

4.0 Guidelines for Discharging Suspected or Known MDRTB Patients from Airborne Isolation and Returning Them to Home, School, Work, or Other Congregate Settings

4.1 *For individuals with known or suspected MDRTB, the patients should remain hospitalized in airborne isolation until:*

4.1.1 Three (3) consecutive sputum smears are AFB-negative;

AND

4.1.2 There is clinical improvement, i.e., improvement of fever and resolution or near-resolution of cough;

AND

4.1.3 An appropriate treatment regimen has been devised, initiated, and tolerated;

AND

4.1.4 The patient agrees to directly observed therapy (DOT) and this has been arranged in conjunction with NYCDOHMH or a New York State designated DOT program;

AND

- 4.1.5 Suitable arrangements have been made for the treatment regimen to be continued and properly monitored on an outpatient basis, specifically by directly observed therapy (DOT).

AND

- 4.1.6 All 8 of the criteria listed in Figure 2 are met.

4.2 *Returning MDRTB patients to work, school or other congregate settings*

For a known or suspected case of pulmonary MDRTB, the patient should be kept from returning to work or school, or transferring to another congregate setting such as a shelter or nursing home until culture conversion is confirmed (i.e. two consecutive negative cultures at least two weeks apart). Culture conversion is necessary unless the patient will be transferred to an airborne infection isolation (AII) room in the congregate setting.

However, exceptions can be made for certain types of work settings, if all the criteria in section 4.1 are met. This should be decided in consultation with BTBC Office of Medical Affairs staff.

5.0 Home Isolation

The patient who is at home while still AFB smear-positive should be on home isolation **until at least two weeks of treatment is administered, there is clinical improvement, and decrease in AFB is shown on smear.** Criteria for return to work or school may be more stringent than the criteria for removal of home isolation. However, for MDRTB patients, home isolation is usually prolonged until culture conversion (see Section 4.2).

The purpose of home isolation is to provide an alternative to voluntary or compulsory hospitalization (while continuing to prevent transmission of the disease) for infectious patients on appropriate treatment. Such patients should also be on home DOT until no longer infectious. Patients should wear a mask when going for medical visits. Exceptions can be made for patients to do clinic based DOT while infectious if they use personal transportation and utilize a mask while in public. Patient should be educated about home isolation, follow the same guidelines for pre-discharge patient education (see Figure 2), and sign the Home Isolation Contract. The original should be placed in the patient's medical record and copy should be given to the patient.

For patients who remain infectious for prolonged periods of time, the BTBC can make arrangements to have environmental controls installed in their home. This is particularly useful for patients with MDRTB who may remain infectious for very long periods of time and for whom isolation is often necessary until culture conversion is documented. The environmental control makes the home safer for any individuals living with the patient as well as staff performing the DOT.

5.1 *In order to be on home isolation with a HEPA filter the following requirements must be met:*

- 5.1.1 Patient should be capable of self-care and should not require hospitalization for other medical condition(s).

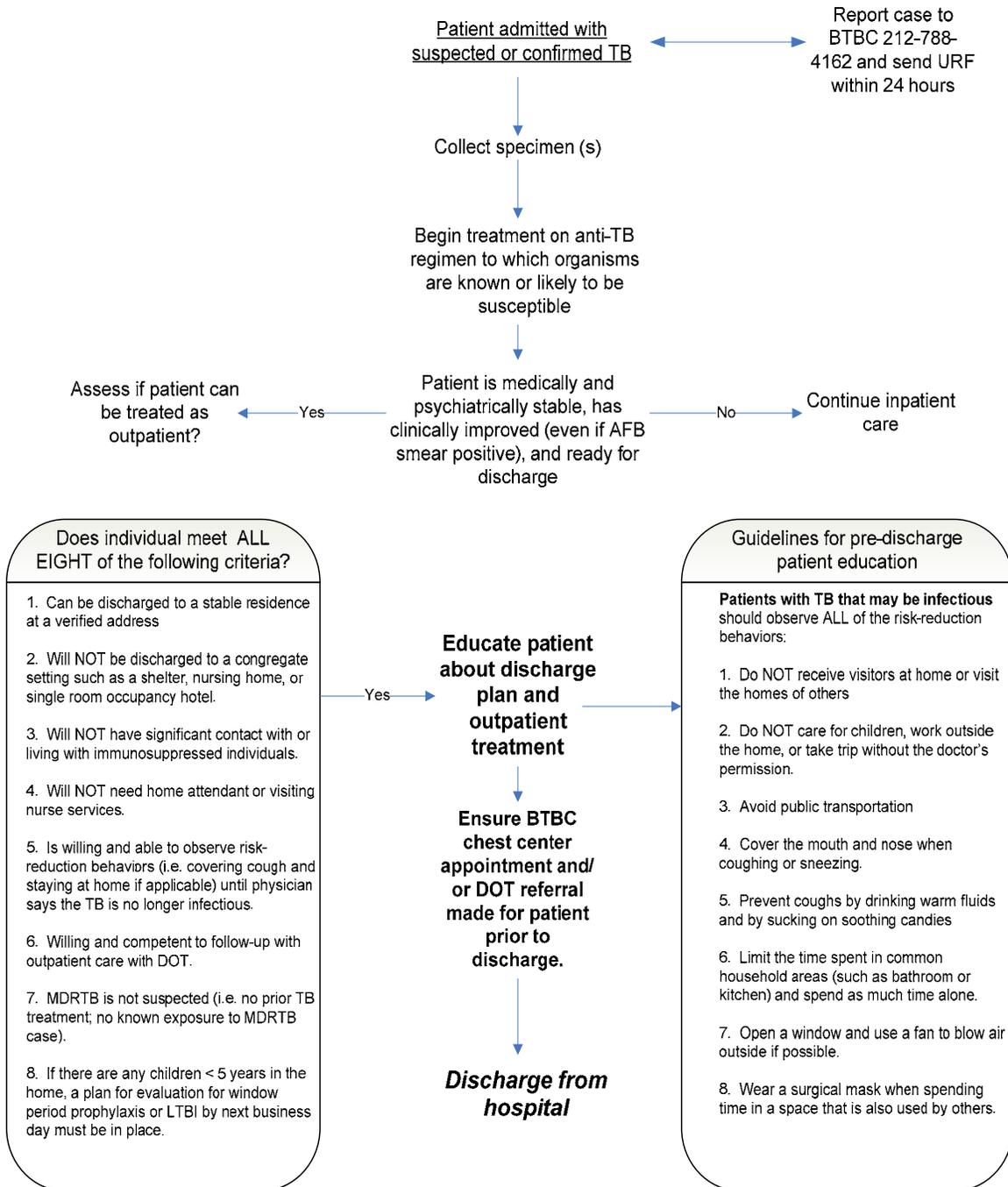
CLINICAL PRACTICES
SECTION: MGMT. OF PATIENTS WITH SUSPECTED
OR CONFIRMED TB DISEASE

NYCDOHMH – BTBC
No. 1.04

- 5.1.2 Patient should be cooperative and be willing to follow infection control practices.
- 5.1.3 Patient should not be sharing living quarters with immunocompromised persons or children who are negative for TB infection as determined by a tuberculin skin test (TST) or a blood-based TB test. If children with a negative TST or blood-based test are present, there still needs to be a plan for close follow-up.
- 5.1.4 Environmental assessment by the BTBC environmental consultant should indicate that effective isolation would be feasible in the home.
- 5.1.5 Patient agrees to receive DOT in the home
- 5.1.6 Patient should agree to sign the “Home Isolation Patient Agreement” and to adhere to the conditions included in the Agreement (this can be found in the Home isolation protocol 6.01.2).

Adhering to the preceding guidelines will ensure that patients do not remain hospitalized unnecessarily and that members of the public at large are protected from infection with TB. (Please refer to the Home Isolation protocol 6.01.2 for more details on this topic).

Figure 2 Criteria for discharging patients with suspected or confirmed TB from the hospital



6.0 Roles of the Medical Providers and of the BTBC Staff

Reducing rates of hospitalization for TB patients will require a coordinated effort between the BTBC and the various medical providers in the city. This section describes the roles of the medical providers and the roles of the BTBC in this process.

6.1 *The role of hospital staff/treating physician*

Clinics, individual health care providers, and hospitals should contact the DOHMH **within 24 hours of diagnosis** to report suspected or confirmed TB cases. The Universal Reporting Form is available online at nyc.gov/health/tb. Click “Information for Health Care Providers.” Forms are also available by mail. Call the TB Hotline at (212) 788-4162 to request hard copies.

For all suspected and confirmed cases of TB, clinicians and hospitals must report:

- 6.1.1 A smear from any site that is positive for acid-fast bacilli (AFB)
- 6.1.2 A nucleic acid-based assay positive for *M. tuberculosis* complex [e.g., *M. tb* Direct Test (MTD) or Amplicor]
- 6.1.3 A positive culture for *M. tb* complex
- 6.1.4 Biopsy, pathology, or autopsy findings consistent with active TB
- 6.1.5 A patient being treated with 2 or more anti-TB medications for suspected or confirmed TB
- 6.1.6 Clinical suspicion of TB
- 6.1.7 Any child < 5 years of age with a positive test for TB infection

When a suspected case of TB is identified, but does not require hospitalization, the hospital staff must contact the BTBC to arrange for follow-up at a BTBC chest center, if there are no other satisfactory follow-up arrangements. The BTBC should evaluate the patient’s living situation prior to the patient’s discharge from the hospital or immediately upon patient’s diagnosis as an outpatient.

Follow-up should be arranged at a chest center that is convenient to the patient. (See section 6.3 for how to refer patients, and the List of Chest Centers.)

The provider may call the BTBC at (212) 442-9968 (M-F, 8:30am – 5pm) and ask to speak with the physician on call. The physician on call can review the guidelines with the provider and assess their applicability to individual patients.

The hospital staff should make every attempt to verify patients’ identifying information in order to reduce the likelihood of loss to follow-up; the hospital staff should inquire about patients’ addresses and verify this information by requesting to see proof of residence documentation such as a driver’s license or other government-issued identification card. If this is not possible, one can also call the telephone number given by the patient to verify that the patient indeed lives at the given address.

Before transferring care to a BTBC chest center, the hospital staff or private provider must forward all medical information to the referral facilitator at the receiving chest center. This minimizes confusion about what has already been done and what needs to

be done for the patient. Whenever possible, sputum smear for AFB and culture for *M. tbc* and a chest x-ray should be obtained from the patient prior to discharge.

Requests to the BTBC for reimbursements for hospitalization for these patients will be assessed for compliance with the guidelines as stated in section 1.1. In addition, the guidelines for financial reimbursement will be taken into consideration. Hospital admissions that do not comply with these guidelines may not be reimbursed.

6.2 *The role of BTBC staff*

BTBC staff will facilitate follow up of TB patients and/or suspects at BTBC chest centers. In order for BTBC to accomplish the referral process, BTBC staff must have information about a patient.

For patients who are not already hospitalized and need a referral to BTBC chest centers, BTBC should take the necessary steps to ensure that criteria for outpatient care of suspected TB are met. Patients must not live in domiciliary conditions where transmission of TB to others is likely to occur. This criterion can sometimes be verified only after a home visit has been done. For patients who are not yet admitted and are being referred for outpatient care, it may not be possible to do a home visit immediately. Indirect verification of address (driver's license, etc.) done by the hospital staff or by private physicians must be verified by doing a home visit by BTBC staff. BTBC staff will do the home visits as part of the initial evaluation process.

If a referral is being made after a patient has already been admitted to the hospital, a home visit can be arranged prior to the time of discharge. The public health assistant assigned to the hospital must see the patient and evaluate him or her to ensure a smooth transition into a BTBC chest center. Remember, DOT is considered the standard of care for outpatient management of TB.

The BTBC physician on call will be available during working hours to clarify BTBC policies and procedures as they pertain to the guidelines. The physician on call can be reached at 212-442-9968.

Discharging potentially infectious TB patients will require certain responsibilities on the part of the patient. The patient should be given specific instructions on how to reduce the risk of TB transmission. If the patient does not live alone, household members should also be given a set of written instructions. (See Section 2.2 and Appendices for instructions for patients and household members). This is a requirement under state law (NYS Sanitary Code 10N.Y.C.R.R, Ch.1, Sect. 2.6c)

If a patient fails to keep an appointment, BTBC staff will follow the proper protocols and procedures to try to get that patient back to medical care.

6.3 *How to refer patients to a BTBC chest center*

The BTBC operates chest centers incorporating the most advanced environmental

controls, e.g., high efficiency ventilation and climate-control systems with high rates of air exchange, negative pressure in all rooms that may have infectious patients, strategically placed germicidal ultraviolet light fixtures, as well as a well-trained, courteous and professional staff.

The chest centers have isolation rooms that have independent ventilation systems. The isolation rooms are used to segregate other patients and staff from potentially infectious patients.

Patients can be referred for their TB care to the chest centers by telephoning the chest center that is convenient for them. (See List of Chest Centers for the telephone numbers and locations of the chest centers or call 311.) A well-coordinated effort between the referring hospital/physician and the BTBC needs to be in place in order to ensure continuity of patient care.

Each chest center has a *referral facilitator* who ensures that the referral process works according to BTBC protocols and that adequate information has been collected to facilitate patient follow-up. The referral facilitator will give patients appointments based on priorities set by the BTBC. For example, a patient known to be AFB sputum smear positive may be seen in a BTBC clinic on the same day the referral is made. (Please see the Referral Facilitator Protocol.)

If the patient fails to keep the appointment, the referring provider will be notified as appropriate. For certain patients, an attempt will be made to find them and bring them to care if they fail to show up for their initial appointment. These include patients known to be smear and/or culture positive (especially if known to be MDR) or highly suspected of having infectious TB, and children under the age of five. All efforts must be made to ensure that the patient is entered into treatment. (Please see Case Management Protocol re: home visits and referral back to provider.)

It is essential that the referring physician/facility ensure relevant medical records, including copies of radiological reports and laboratory results complying with HIPAA regulations are forwarded to the chest center, preferably by fax. The fax number can be obtained by calling the referral facilitator at the chest center. If the chest center has not received the information when the patient comes for evaluation, the provider will be contacted for the information while BTBC initiates its own evaluation.

7.0 Evaluation of Protocol

7.1 *Effectiveness of the protocol will be evaluated by the following measures:*

- 7.1.1 Decrease in the number of hospitalizations for diagnosing and treating TB patients (registry)
- 7.1.2 Decrease in the payment of hospitalizations for TB by the BTBC (finance)
- 7.1.3 No increase in the transmission of TB in the hospital or community (epidemiology)
- 7.1.4 Reporting of cases on time as described (registry)
- 7.1.5 Verification of address/home visits/appropriate case management

List of Chest Centers

BROOKLYN

Bedford Chest Center

485 Throop Avenue
Phone: 718-574-2462, 63, 64

Brownsville Chest Center

259 Bristol Street
Phone: 718-495-7258, 8281

Bushwick Chest Center

335 Central Avenue
Phone: 718-573-4886, 4889, 91

Fort Greene Chest Center

295 Flatbush Avenue Extension
Phone: 718-643-8357, 6551, 4808, 2778

MANHATTAN

Chelsea Chest Center

303 Ninth Avenue
Phone: 212-239-1749, 57, 58, 90

Washington Heights Chest Center

600 West 168th Street
Phone: 212-368-4500

QUEENS

Corona Chest Center

34-33 Junction Blvd.
Phone: 718-476-7635, 36, 37

Jamaica Chest Center

90-37 Parsons Blvd., 4th Floor
Jamaica, NY 11432-6032
Phone: 718-262-5593, 5504

BRONX

Morrisania Chest Center

1309 Fulton Avenue
Phone: 718-579-4157, 61

STATEN ISLAND

Richmond Chest Center

51 Stuyvesant Place, Room 480 & 415
Phone: 718-983-4529, 30

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The City of New York

DEPARTMENT OF HEALTH AND MENTAL HYGIENE
Michael R. Bloomberg
Mayor

Thomas R. Frieden, M.D., M.P.H.
Commissioner

nyc.gov/health

Discharge instructions for patients with potentially infectious TB

You are being discharged from the hospital although your sputum tests indicate that you may still infect other people with TB or you are advised to be evaluated as an outpatient while you may have infectious TB.

You are being discharged because you said that either you live alone or will be going back to a living arrangement where the other people living there are healthy and wish to have you home. We are required by law to notify them that they have been exposed to TB and to evaluate them.

You may have been placed on medication to treat TB already or are waiting to start medications after you have been evaluated as an outpatient.

The following instructions will help reduce the spread of TB germs to other people and you should follow them carefully:

- If you return to a home that has other people, you should always:
 - Limit the time spent in common household areas (such as bathroom or kitchen) and keep your bedroom door closed.
 - Wear a surgical mask when spending time in a space that is also used by others to reduce the number of TB germs that you put in the air when you cough or talk.
- You should always cover your mouth when coughing or sneezing
- You should not be around infants, young children or, to the best of your knowledge, persons who have weakened immunity such as people with HIV/AIDS. (If there are young children at home, you may still be discharged to the home if the children have been evaluated for latent TB infection and are on “preventive” medication, as determined by their physician)
- You should participate in a program of directly observed therapy (DOT), about which you have been educated by an employee of the NYC health department
- You should avoid going to public places or return to work or school until your doctor, working with the health department, says it is OK for you to do so. Use a mask if you need to be out in public places for any reason.
- You should keep your doctor’s or clinic appointments to ensure that treatment for TB is not interrupted
- Some of these restrictions will be removed once your physician, along with the health department, determines that you are no longer infectious
- Your TB treatment and DOT will continue even after these restrictions are removed.

Following these instructions will help in limiting the spread of TB germs to your family and others. If you have questions about your treatment please call your physician or health department at 311.

You can also find more information about TB on our website at nyc.gov/health/tb.



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Information for persons who live with patients with TB

*A family member or someone in your household was recently diagnosed with or is suspected of having active TB. TB is a preventable and treatable disease. TB is transmitted through the air when a patient with the disease coughs or sneezes without covering his or her mouth. People with the active form of the disease must take their medication and must follow certain rules to prevent the spread of TB germs to people they live or work with. **We are required by state law to inform you of this information.***

If there are children in your home they should be evaluated by their doctor and they should be placed on “preventive” therapy if appropriate. They can also be evaluated and treated at the health department’s chest centers.

If a family member or someone in your household has been diagnosed with TB:

- You should get tested to see if you have already been infected with the germs that cause TB
- If you have been infected with the germs that cause TB, you should have a medical evaluation and a chest x-ray to make sure that you have not progressed to active TB
- If you have TB infection, you should take medicine to prevent the development of active TB.
- **The member of your household with TB should stay at home until his or her physician and the health department says he/she can go out.**
- He/she should not go to work or school during this time period and should avoid going to any public areas during this time period.
- Please assist the TB patient by doing their errands, such as grocery shopping.
- Your household member with TB should cover his/her mouth with a tissue whenever he/she coughs or sneezes; he/she should put the used tissue in the regular garbage.
- When around other people, the patient should wear a surgical mask that covers the nose and mouth.
- While at home, limit your contact with the TB patient as much as possible; the patient should sleep in a separate room until advised by their physician.
- It is OK to share eating utensils (spoons, forks, cups or glasses) and other household items.

Following these instructions will help in limiting the spread of TB germs to your family and others. If you have questions about your treatment please call your physician or health department at 311.

You can also find more information about TB on our website at nyc.gov/health/tb.