CURRY
INTERNATIONAL
TUBERCULOSIS
CENTER

Shelters and TB:
What Staff Need to Know

VIEWER'S GUIDE

SECOND EDITION, 2011

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Feedback and comments related to this product are welcome, please email: tbcenter@nationaltbcenter.ucsf.edu.

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Document prepared by:
Jeannie Fong, James Sederberg, Lily Lam, Curry International Tuberculosis Center

Graphic design:
Edi Berton Design

Cover photo provided by:
Casa Esperanza Homeless Shelter, Santa Barbara, California
Helen Wong, R.N., P.H.N.

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About This Video and Viewer's Guide

The Curry International Tuberculosis Center is pleased to develop this video and viewer's guide to help your shelter create a healthy and safe environment. Our goal is to help address concerns and reduce fears that you may have about working with clients, or staff, who may have tuberculosis (TB).This fundamental TB infection control information can help you and your staff prevent the spread of TB.

Target Audience

- Homeless shelter staff: frontline staff, managers, volunteers, and others
- Staff of congregate group home settings

How to Use These Materials

The video and viewer's guide can be used either as an independent self-study or in a group setting. This video has two parts which allows for flexibility so staff can view the entire video at one time or, depending on specific needs, a part at a time. Although the first part is geared towards frontline shelter staff and the second part is geared towards shelter administrators, both groups can benefit from watching the entire video. A sample TB curriculum can be found in the Appendix section to help a trainer or facilitator plan a TB training.

Video

- The first part of this video is for frontline shelter staff who work directly with clients. You will learn about TB, how it is spread and what to do when you suspect someone has TB.
- The second part of this video is for shelter managers. You will learn about TB infection control policies and procedures and how these policies help create a healthy and safe shelter environment for staff and clients. This section also shows how you and your local health department can work together to prevent the spread of TB.

Viewer's Guide

- The accompanying viewer's guide expands on the content covered in the18-minute video and serves as a reference guide containing additional information, resources, templates, and checklists to help establish your shelter's TB infection control policy. To maximize your learning experience, we recommend that you read the viewer's guide after watching the video.

A Word About Recommendations

Efforts have been made to ensure that this video and viewer's guide includes applicable recommendations from the Centers for Disease Control and Prevention. However, it may not address every issue of interest to all regulatory agencies. Since regulations and guidelines may vary by county and state, facilities should review local, state, and federal guidelines when applying this information to their programs.

Learning Objectives

After viewing the video and viewer's guide, you will be able to:

1. Identify 3 steps to take if you suspect someone has Tuberculosis (TB)
2. Explain how TB is spread
3. Explain 2 differences between TB disease and TB infection
4. List 3 risk factors for developing TB disease
5. Describe 3 ways to prevent the spread of TB
6. List 2 reasons why patients need to complete treatment for active TB disease

Introduction

By using this video and viewer's guide to learn about Tuberculosis (TB) and infection control, you can help reduce or eliminate the spread of TB in homeless shelters. Homeless shelters provide an important safety net for homeless people and are an important player in ensuring that homeless people are in the healthcare system. As an employee of a shelter, you work with clients who face a variety of needs that include social, physical, mental and health challenges. Although TB may not be at the top of your priority list, it is an important issue.

TB outbreaks occur at homeless shelters throughout the United States because shelters are an ideal setting for this airborne disease. The spread of TB disease is affected by overcrowded living conditions, poor nutrition, and lack of regular healthcare which puts homeless clients at risk for TB.

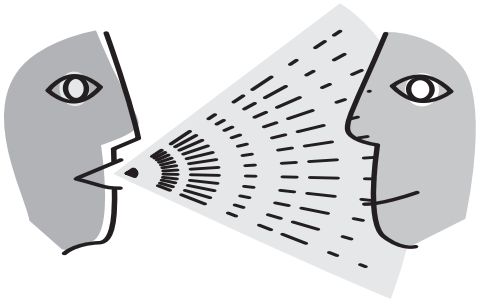
You can create a healthy and safe environment for your clients and staff by reassuring them that TB can be identified. It is preventable, treatable and it is curable. You do not need to be afraid to work with your clients or staff who may have TB. You can do something about TB and prevent an outbreak from happening at your shelter.

What is Tuberculosis (TB)?

WHAT IS TB?

- TB is a disease caused by a bacteria, or germ, called *Mycobacterium tuberculosis*
- It usually attacks the lungs but it can affect any part of the body
- If TB is in the lungs, it usually is contagious
- It can cause sickness and even death if left untreated
- With proper diagnosis and treatment, TB is almost always curable

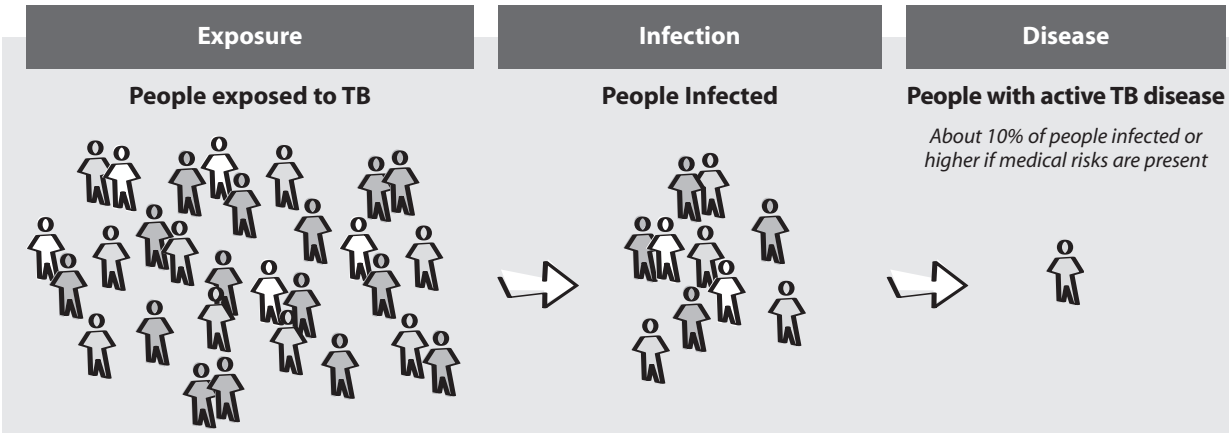
HOW IS TB SPREAD?



The TB germ is spread through the air when someone with contagious TB coughs or sneezes. Anyone nearby can breathe in these germs and become infected. Your chance of catching TB is low if you are around that person for just a short time. Usually you have to be around them for awhile, and they have to be coughing a lot.

WHAT ARE THE RISK FACTORS FOR TB?

Healthy people who have TB infection may never develop TB disease. About 10% of all people who have TB infection will develop TB disease at some point during their lifetime. The remaining 90% will stay infected, but free of disease for the rest of their lives. However, special medical conditions may increase the risk for TB disease.



For INFECTION… These are some factors that cause the spread of TB	For DISEASE… These are some factors that determine whether an infected person will develop active TB disease
■ Overcrowded living conditions ■ Poor ventilation in living area ■ Repeated exposure to TB germ	■ HIV infection ■ Injection drug use ■ Malnutrition *(often seen in alcohol & substance users)* ■ Recent TB infection *(within past 1-2 years)* ■ Diabetes or other health condition that weakens immune system

WHAT'S THE DIFFERENCE BETWEEN TB INFECTION AND TB DISEASE?

It's important to know the difference between TB infection and TB disease – just because someone has TB infection does not necessarily mean they have TB disease.

TB Infection (also referred to as "latent TB infection" - LTBI)

TB infection occurs when you breathe in the TB bacteria into your body. If your body's immune system is able to prevent the TB germs from growing, it will keep you healthy and although you are infected, you stay healthy.

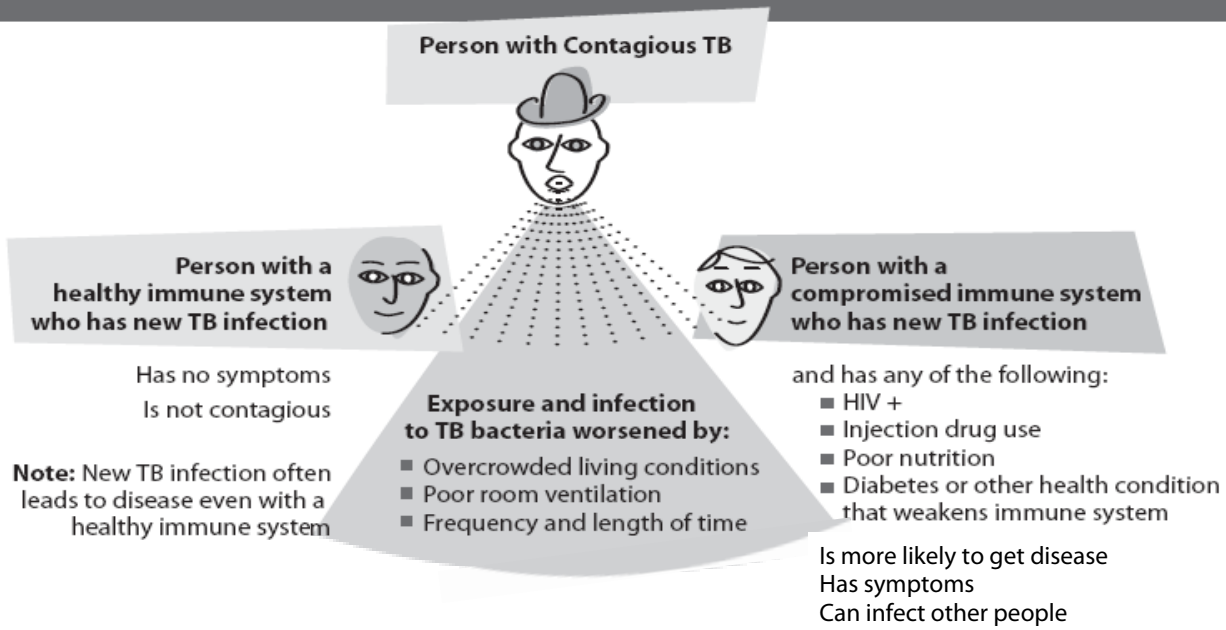
TB INFECTION needs to be medically treated and is not contagious at this stage.

TB Disease

Infection can turn into disease when the TB bacteria becomes active and grows. This often happens if your immune system breaks down or is compromised by a health condition such as HIV, diabetes, injection drug use, or poor nutrition. Some people develop TB disease soon after becoming infected, before their immune system can fight the TB bacteria. Other people may get sick later, when their immune system becomes weak.

TB DISEASE can be contagious. It is treatable and can usually be cured if the person is diagnosed and receives medical treatment right away.

The following illustration shows how exposure can lead to infection and how infection can lead to disease.



WHAT ARE THE CAUSES, SIGNS, AND SYMPTOMS FOR…

TB Infection (or Latent TB Infection – LTBI)	**TB Disease**
You breathe TB germs into your body from the coughing or sneezing of someone who has TB disease	You breathe TB germs into your body from the coughing or sneezing of someone who has TB disease
You have positive TB test (+)	You have a positive TB test (+)
You have a normal chest x-ray (-)	You have an abnormal chest x-ray (+) or TB bacteria are found in your cough or sputum
You have no symptoms	You have symptoms that include: ▪ a cough that is not getting better after 3 weeks ▪ pain in the chest ▪ coughing up blood or phlegm ▪ feeling very tired for no reason *(lasting more than 2 weeks)* ▪ weight loss without trying ▪ no appetite ▪ chills ▪ fever *(lasting more than 1 week)* ▪ sweating at night
You can not spread TB to others	You can spread TB to others if: ▪ you have TB disease in the lung ▪ and you are not treated with antibiotics for TB disease

Chart adopted from Homeless Health Care Los Angeles and Centers for Disease Control and Prevention's "Questions and Answers About TB 2002"

HOW DO I KNOW IF I HAVE TB?

For TB Infection

To find out if someone has TB, a TB test can be taken. The most common test for TB infection is the TB skin test. A new blood test is also available. Both of these tests are used to find out if a person has been infected with TB.

The Mantoux tuberculin skin test (TST) is also known as "PPD" which stands for "Purified Protein Derivative." This protein material is injected into the skin of a person's arm. It is read 48-72 hours later by a trained healthcare provider. If the skin test result is positive, it means that the person has, at some time, been infected with TB. However, it does not mean that the person also has TB disease.

Another test that detects TB infection is a blood test, known as the Quantiferon-TB test. The advantages of this test, compared with the Mantoux tuberculin skin test, are that test results can be obtained after a single patient visit and it can be more consistent because the results are automated. A newer generation of this test is expected soon and promises better accuracy than the skin test and the current Quantiferon test. Other new TB blood tests are on the horizon.

For TB disease

To find out if someone has TB disease, several additional steps are needed. TB disease cannot be detected with just one step. The first step is to conduct a complete medical history, physical exam, and symptom review of the person and then the following tests and exams are used:

- a TB test
- sputum/phlegm samples
- a chest x-ray

It is important to complete treatment to get well and prevent further spread of TB. If patients with TB disease do not complete treatment, some of the TB germs will survive and usually cause TB at a later date. This can turn into what is called "drug-resistant" TB which is much more difficult to treat. If it is drug resistant TB, treatment will be with different medicines and may take up to 2 years or longer to complete.

TB AND HIV, DOUBLE TROUBLE

TB is a serious concern for people with HIV. In developing countries where TB treatment may not be available, TB can often result in death for people with HIV. Because HIV infection weakens or compromises the body's immune system, people with HIV infection are at high risk for developing TB disease once they have been exposed to the TB bacteria.

So it is important for all persons with HIV or who are at risk for HIV infection, to receive a PPD skin test. HIV infection may affect the TB skin test results. People with HIV/AIDS may have a false negative TB skin test even if they have TB infection. Combining HIV medication with TB medication is complicated and that is why it is important that healthcare providers with knowledge of TB and HIV treatment should be the ones prescribing TB treatment for persons with HIV and TB. Healthcare providers often recommend that these individuals undergo treatment for latent TB infection.

Although TB may be more complicated to treat in people with HIV, it is treatable and curable. It is important for people with HIV who have recently been exposed to TB to receive a skin test. They may also need to receive the INH antibiotic for several months even if they have a negative skin test. This is another reason why it is very important for these individuals with HIV to see a healthcare provider who is knowledgeable about both TB and HIV.

CONFIDENTIALITY AND COOPERATION WITH LOCAL HEALTH DEPARTMENT

When it comes to handling clients' and staff's personal information, confidentiality must always be maintained to ensure the privacy of the client and staff. However, in cases where a disease is of public health importance, such as TB, shelter staff and the health department need to share information and work together to help prevent the further spread of TB.

Frequently Asked Questions (FAQs)

Q: Why should I be concerned about TB at my shelter?

A: Tuberculosis (TB) is the world's leading infectious disease. TB outbreaks occur at homeless shelters throughout the United States because shelters are an ideal setting for this airborne disease. The spread of TB disease is affected by overcrowded living conditions, poor nutrition and lack of regular healthcare which puts homeless clients at risk for TB. This also puts people who work in such settings at risk. By learning about TB and knowing what you can do if you suspect someone with TB, you can help prevent the spread of TB.

Q: What if we suspect a client has TB but we can't get the client to the clinic because it is closed for the night?

A: The goal is to get a client who is suspected of having TB into a clinic for a medical evaluation right away. However, that's not always possible. If the clinic is closed, try to get the client to the clinic when it re-opens. Meanwhile, whenever possible, ask the client to wear a mask to cover his/her cough and separate the client from others by placing the client in an isolated area until a medical check-up has been performed. This helps prevent the possible spread of TB. In extreme cases, you may want to get client to the emergency room (e.g., severe weakness, coughing and shortness of breath).

Q: What if a client is reluctant to get examined?

A: Try and understand how the client feels and respect his/her wishes. However, TB is a disease of public health importance and shelter staff need to work together with the health department to help prevent the further spread of TB. If your client is reluctant, the health department is always happy to help. You may want to contact your TB clinic point person and ask them for assistance.

Q: Where can I get help?

A: Contact your local health department and/or TB clinic point person. For a list of TB control programs for each state in the country, check the Centers for Disease Control and Prevention's website at http://www.cdc.gov/tb/pubs/tboffices.htm.

Q: How long do we wait to use a room again after a client with TB has used it?

A: That depends on your shelter's ventilation system – the size of the room and amount of ventilation it receives (e.g., air exchange). The Curry International TB Center (www.nationaltbcenter.ucsf.edu) has produced the "Tuberculosis Infection Control: A Practical Manual for Preventing TB" that shows how to calculate the proper amount of air exchange per size of a room and other helpful suggestions. Be sure the space has sunlight, fans, or opened windows to ventilate the area. Sunlight and ventilation help kill the bacteria. You can also contact your local health department for assistance in assessing your ventilation system.

Q: How long is "awhile" before you can catch TB from someone?

A: It depends on how often and how frequently you are exposed to someone with active TB. For example, if you are in the elevator with someone coughing, it is highly unlikely you will get TB from a one-time encounter. However, if you are around someone on a regular basis, such as living with a family member or roommate who has TB, then the chances of exposure increase and TB infection is more likely.

Q: Is TB seasonal - like the flu season?

A: TB can be seasonal. It's more likely to happen in winter when shelters are more crowded. But it can happen at any time and anywhere.

What Shelter Staff Can Do to Prevent the Spread of TB

By establishing a TB infection control program and policy at your shelter, you can help create a healthy and safe shelter. The following describes what frontline staff and managers can do.

WHAT FRONTLINE STAFF CAN DO

You are the best resource for stopping TB in its tracks by observing clients' coughs and reporting clients with symptoms to your manager or onsite healthcare workers so they can refer the client for appropriate care.

CHECKLIST FOR FRONTLINE STAFF

Plan and prepare BEFORE an active TB case appears at your shelter.

- **Request to attend a TB training** to learn about TB and what to do if you suspect someone has TB. Know your shelter's TB control policy and procedure
- **Get tested for TB** and participate in regularly scheduled TB screenings at the shelter
- **Implement the "Cough Alert" policy** by observing and being aware of clients who cough. Refer clients with TB symptoms to the shelter manager and/or on-site medical staff for evaluation
- **Check shelter environment for:**
  - Open windows and fans
  - Placements of beds
  - Offer tissues and surgical masks to cover coughs

LEARN ABOUT TB

Ask your supervisor or manager for a TB training. Ask them where you can find resources and information about TB. You can use this video and viewer's guide or refer to the Resources and Appendix section of this guide for more information. Your manager can arrange for TB trainings on-site. By learning what TB is, you can also help educate your clients about TB and reduce their fears.

If your client has TB, be sensitive to your client's feelings.

- Reassure them that getting TB was not their fault
- Explain that with proper medical treatment, TB is almost always curable
- Treat them with respect, kindness, and understanding
- Remind them that you are there to help them

Clients with TB can return to the shelter when they are no longer infectious, and this is usually within a few weeks of starting medical treatment. However, you will still need the client's clearance status from the health provider or TB program.

GET TESTED FOR TB

Participate in regularly scheduled TB screenings at your shelter to know your own TB status.

IMPLEMENT THE COUGH ALERT POLICY

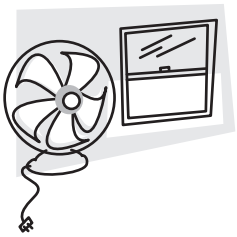
Be aware of the signs and symptoms for TB. Observe and monitor clients who cough. Refer clients with symptoms to the shelter manager and/or on-site medical staff for evaluation. For a sample Cough Alert policy, please refer to the Appendix section of this guide.

If you see or hear a client coughing throughout the night or coughing for more than 3 weeks without improvement, especially if the cough is accompanied by weight loss, night sweats, and fever—follow these steps:

- Ask the client to cover his/her coughs and sneezes and offer surgical masks and/or tissues for the client to use. (Be sure you know where masks and tissues are stored at the shelter.)
- Record the date, client name, bed number, and give the information right away to your onsite healthcare workers. If your shelter has no healthcare providers onsite, then give the information to your supervisor who can refer the client for a medical check-up. Your supervisor will contact the local health department's TB point person immediately.
- If the client is unable to get medical services right away, separate him/her from the other clients by placing him/her in an isolated area, if possible, until a medical check-up has been performed. This helps prevent the possible spread of TB.

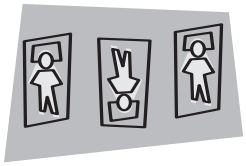
CHECK YOUR SHELTER ENVIRONMENT

The TB bacteria can spread due to poor ventilation and overcrowded living conditions.



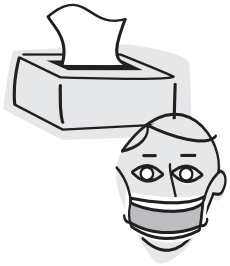
Open windows and turn on fans

Be sure to check your ventilation and lighting system for adequate air flow and light in your environment. Fresh air and sunlight will kill the TB germs. Re-circulated air is not effective in removing the TB germs from the air.



Arrange beds

Beds/mats that are placed too close together in a "head-to-head" arrangement can increase the spread of TB bacteria because of the close proximity and breathing in the same shared air space. Be sure that the beds/mats are approximately 36-48 inches apart and arrange them in a "head-to-toe" format.



Offer tissues and surgical masks to cover coughs

TB is spread when people with TB in their lungs cough or sneeze. Keep plenty of surgical masks and tissues on hand and offer them to clients and staff. "Cover your cough" posters should be posted throughout the shelter to remind people to cover their mouths when they cough or sneeze. Although the use of surgical masks is encouraged, wearing a mask may create fear among staff and clients and it may stigmatize the wearer. If you find that a client may be reluctant to wear a mask, ask that they use a tissue to cover their coughs and sneezes. Another solution would be to isolate the client by providing a separate sleeping area.

For more information on venilation systems and environmental controls, refer to Tuberculosis Infection Conrol: A Practical Manual for Preventing TB (www.nationaltbcenter.ucsf.edu).

WHAT MANAGERS AND ADMINISTRATORS CAN DO

Plan ahead! Have a TB control policy or plan ready BEFORE an active case of TB arrives at your shelter!

Be prepared. By establishing a TB infection control policy and procedure at your shelter in advance, your staff will know what to do if a client is suspected of having TB. This can prevent the further spread of TB and help create a healthy and safe shelter.

CHECKLIST FOR MANAGERS

Here is a brief checklist of steps to take BEFORE an active TB case appears at your shelter.

→ **Assess the TB risk at your facility**

→ **Develop and implement a TB infection control plan policy that includes the following steps:**

- Educate your staff, volunteers, and clients about TB and about the shelter's infection control policy so they know what to do if they suspect someone has TB and implement the Cough Alert policy
- Coordinate with local health department to provide TB screening and assess client's TB symptoms with questionnaire
  - For staff and volunteers
  - For clients
- Refer clients with symptoms for medical evaluation if you suspect client has TB
- Keep accurate and complete client records

→ **Examine your facility and make changes to prevent the spread of TB**

- Assess the ventilation and lighting
- Arrange beds in head-to-toe arrangement and at least 36-48 inches apart
- Offer tissues and surgical masks to cover coughs

→ **Identify local resources and coordinate with the health department**

- Work together with the health department

ASSESS THE TB RISK AT YOUR FACILITY

Assessing the risk for TB at your facility helps you determine how extensive a TB infection control policy to develop. Work with your local health department to develop your shelter's TB control policy. Be prepared and have a policy in place but how extensive that plan depends of the level of risk for TB at your shelter. See a sample TB control plan in the Appendix section of this viewer's guide.

For example, if your county reports very few or no cases of TB, your shelter may be at a low risk for TB and can implement a basic TB control plan. However, if your county reports a lot of TB cases per year, your shelter may need to implement a more extensive TB control plan to address the higher risk for TB. Check with your public health department to find out the TB rates in your county.

To prevent an outbreak, some shelters require mandatory screening and TB clearance cards for their clients when registering for their beds. It is important to realize that some shelters may be at more risk for TB than others. Because each shelter is set up differently and with a variety of client characteristics and needs, each shelter will have its own TB control policies based on its resources and TB risks.

The following are some guidelines to help you assess your shelter's level of risk for the spread of TB.

Risk Classification	Definition	Factors That Can Increase or Decrease the Likelihood of Transmission
Potential Ongoing Transmission	This means that there is a "moderate to high risk" of TB in your county or you have had a case of TB in your shelter in the last year AND your shelter has no TB infection control policy.	■ Crowded living conditions (e.g., clients sleep close together) ■ Clients spend a lot of time in close quarters (e.g., sleeping or visiting in common rooms) ■ Poor ventilation, closed windows; and/or ineffective air system ■ Staff are not educated about TB ■ Clients are not educated about TB ■ Clients are not asked to cover their coughs
Low-risk	This means that there is "no TB or a very low rate" in your county and you have not had a case of TB in your shelter AND your shelter has a TB infection control policy.	■ Separate dwelling units ■ Clients are in and out of program quickly ■ Good ventilation and environmental conditions that prevent spread of TB ■ Managers require all staff to participate in regular TB trainings and screenings ■ Clients are educated about TB (e.g., pamphlets and posters) ■ Clients use masks and tissues to cover coughs

For the complete PDF of the "Guidelines for preventing the transmission of *Mycobacterium tuberculosis* in health-care settings, 2005," please visit the Centers for Disease Control and Prevention (CDC) website: *http://www.cdc.gov/mmwr/PDF/rr/rr5417.pdf*

Chart adapted from the Seattle-King County TB Control Guidelines for Homeless Service Agencies

DEVELOP AND IMPLEMENT A TB INFECTION CONTROL POLICY

Plan in advance to develop and implement a TB infection control policy and procedure at your shelter. Make sure shelter staff know about the plan. Do not wait until an active case of TB occurs at your shelter—that may be too late. Planning is the best prevention. By training staff about TB, conducting TB screenings, assessing and referring clients who have symptoms, and checking the shelter's physical environment, you can help create a healthy and safe shelter. You can also help educate others, reduce their fears, and calm any panic.

Your shelter's TB infection control policy and procedures should include the bullet points shown below. If you need any assistance or materials to develop your TB control policy, contact your local heath department's TB program—they are happy to help. See a sample TB control plan in the Appendix section of this viewer's guide.

- **Educate your staff, volunteers, and clients about TB. And educate staff about your shelter's TB infection control policy so they know what to do if they suspect someone has TB**

  Shelter managers should arrange and provide ongoing TB education for all staff, volunteers, and clients. For assistance in developing a TB curriculum, contact your local health department, who can provide you with training resources. This video and viewer's guide can also help. For more information about TB resources and a sample TB training curriculum, see the Appendix and Resources section of this guide.

- **Provide TB screenings**

  If your shelter has healthcare workers on site, they can conduct TB screenings which includes completion of a TB symptoms assessment questionnaire and a skin or blood test. If there are no healthcare workers on site, arrange with your local health department to come to the shelter and conduct the screening.

SCREENING FOR STAFF AND VOLUNTEERS

It is recommended that shelters schedule regular TB screening of shelter staff and volunteers every 6-12 months, depending on the number of possible exposures and clients served at your facility. Written proof of TB screening results should be required of all staff. (See sample *Employee's Annual Tuberculosis Screening Questionnaire* in Appendix section.)

Work with your local TB clinic in developing TB testing procedures for:

- Staff whose skin test is positive
- Staff who are symptomatic or suspected of having TB disease
- Staff who have HIV/AIDS or compromised immune system

If a staff member has tested positive for TB in the past, he/she should not be re-tested. Instead, he/she should be screened with a chest x-ray and TB symptoms assessment questionnaire to identify any symptoms of active TB (see Appendix). Anyone with symptoms should be referred for medical evaluation to rule out active TB.

It is also recommended that staff who have not had a prior TB skin test within the last 12 months undergo **two-step baseline TB skin testing**. This entails a second test conducted one week after the first test on all staff whose first test result was negative. This second test helps to ensure that the staff member with an old TB infection is identified.

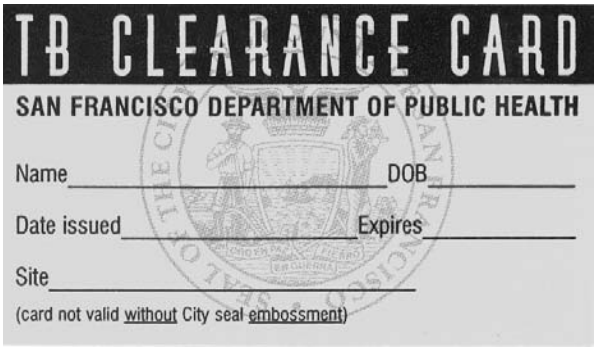
SCREENING FOR CLIENTS

Be ready and plan ahead to have a procedure in place with the health department for how to handle clients with TB.

Work with your local health department and/or TB clinic to develop policies, procedures and a communications system for managing coughing clients, updating client records, confirmation and screening tests, and medical treatment of active TB cases.

Some shelters may choose to screen clients during admission to shelter.

Clients who have a cough and are seeking shelter or services should not be turned away because they are coughing. To assist clients in meeting their health needs, staff should ask all clients if they have been screened for TB during their admission to the shelter. A TB symptoms assessment questionnaire can be used during these screenings. (See a sample *TB Assessment for Clients—Questions and Procedures* in the Appendix.)


TB CLEARANCE CARD

SAN FRANCISCO DEPARTMENT OF PUBLIC HEALTH

Name_____ DOB_____

Date issued_____ Expires_____

Site_____

(card not valid without City seal embossment)

Mandatory screening may be required for some shelters that have experienced TB outbreaks and/or are in counties with a lot of reported TB cases per year. With this mandatory screening, some shelters may require clients to show evidence of "TB clearance" within days of admission to the shelters. This sample identification card shows results of TB test that is verified by the local health department and can be shown to shelter staff when clients register for their beds.

- **Supply your shelter with surgical masks or tissues**

  Let staff know where they are stored and train staff to offer them to clients while explaining the importance of covering their coughs and sneezes.

- **If a client has symptoms, do the following:**

  Refer the client to a healthcare provider for evaluation right away and contact your local health department.

  Provide a back-up plan for clients with TB symptoms when the TB clinic is closed. Get the client to the clinic when it opens and, if possible, separate the client from other shelter clients until a medical check-up has been performed. This helps prevents the possible spread of TB. If this is not possible, ask the client to wear the surgical mask and/or use the tissue to cover their cough and sneezes.

- **If the medical evaluation has confirmed that a client has TB, do the following:**

  Continue to communicate with the health department and/or TB clinic to check on the clients' health status.

The client can return to the shelter after starting TB treatment and having a negative sputum/phlegm test. However, this needs to be confirmed with the health department before the client can return to the shelter.

Cooperate with the health department in any screenings and/or contact investigations that they may need to conduct to identify any other person who may be infected.

- **Train staff to keep client records accurate, updated, and complete**

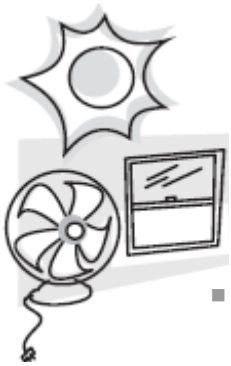
  The following record-keeping logs can be helpful should a TB contact investigation become necessary. If possible, keep records for 6 months. (See sample logs in the Appendix section.)

  - Clients' attendance – record clients' full names and exact dates of length of stay
  - Bed numbers – record clients' assigned beds and any observations
  - TB test results – record clients'/staff's TB test results

EXAMINE YOUR ENVIRONMENT AND MAKE CHANGES TO PREVENT THE SPREAD OF TB

In addition to your local health department and/or TB clinic, there are a variety of environmental consulting resources available to shelters should you have questions about the health and safety of the environment within the shelter. Shelters can request a formal assessment and/or smoke test. For more information, please refer to the Resources section of this guide.

- **Assess the ventilation and lighting**

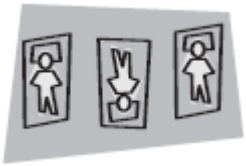


The TB bacteria can spread due to poor ventilation and overcrowded living situations. Be sure to check your ventilation and lighting system to ensure adequate air flow and light in your environment. Fresh air and sunlight will kill the TB germs. Opening windows and using fans will help. Re-circulated air, if not properly filtered or cleaned, is not effective in removing the TB germs from the air.

The following are recommended:

- **Ultraviolet Germicidal Irradiation (UVGI)**
  UVGI lighting is effective at getting rid of the TB bacteria. You can install UVGI lighting or make use of portable floor units.
- **High-Efficiency Particulate Air (HEPA) filters**
  HEPA filters can be a useful alternative to installing a costly mechanical ventilation system or UVGI lighting systems.
- **Pleated ASHRAE 25% efficient filters (MERV 7 or 8) and regular maintenance**

- **Arrange beds**



Beds/mats that are placed too close together in a "head-to-head" arrangement can increase the spread of TB bacteria because of the close proximity and breathing in the same shared air space. Be sure that the beds/mats are approximately 36-48 inches apart and arrange them in a "head-to-toe" format.

- **Offer tissues and surgical masks to cover coughs**

TB is spread when people with TB in their lungs cough or sneeze. You should have plenty of surgical masks and tissues on hand to offer to clients and staff. "Cover your cough" posters should be posted throughout the shelter to remind people to cover their mouths when they cough or sneeze. Although the use of surgical masks is encouraged, wearing a mask may create fear among staff and clients and it may stigmatize the wearer. If you find that a client is reluctant to wear a mask, ask that they use a tissue to cover their coughs and sneezes. Another solution would be to isolate the client by providing a separate sleeping area.

IDENTIFY LOCAL RESOURCES AND COORDINATE WITH THE HEALTH DEPARTMENT

It is important to establish a relationship with your local health department's TB program BEFORE any active TB cases occur at your shelter. Be prepared. Know your TB point person in advance. Contact them if you suspect a client has TB. If a case of TB occurs at your shelter, it is important that you work together with the health department to prevent the further spread of TB.

- **The health department's role**

  The health department will assure treatment and may provide housing and case management for clients with TB disease.

  The health department may conduct contact investigations to identify and find people who may have been exposed by clients with TB. You may be asked to help to locate specific clients so the health department can test them to determine whether they are infected.

  The health department may request your cooperation to review shelter's logs and other documents that may help the contact investigations (e.g. attendance log, cough log).

  In some cases, the health department may need to conduct more extensive testing at your shelter (e.g. screening, sputum collections, chest x-rays).

  The health department may deliver TB medicine daily to clients at your shelter to ensure that they are taking their medicine and to monitor treatment. This procedure is called "directly observed therapy" (DOT). This ensures clients are taking their medicine to get well and prevent any further spread of TB.

Summary

It is important to have a TB infection control policy before a case of active TB disease appears at your shelter. TB is a fact of life in many homeless populations. However, you can do a lot to prevent the spread of TB and help create a healthy and safe shelter environment for your staff and clients.

Start by establishing a relationship with your local health department. Work together to develop a TB policy, and make sure staff know and implement the TB policy.

- Shelter staff are an important link between your client and the health department to coordinate all referrals for TB care in a timely manner
- Assist your clients in getting TB care and other necessary healthcare
- Provide the medical referrals and work with your local health department to provide client transportation assistance, follow-up for healthcare appointments, and provide incentives for clients to complete treatment
- Most importantly, let your clients know that their TB needs are being met along with their other healthcare needs

Train your staff and clients about TB, especially what to do if they suspect someone has TB.

- Implement a Cough Alert policy
- Make sure your staff and clients are TB screened
- Check your environment for adequate ventilation and lighting
- Refer clients with symptoms for medical evaluation right away

This all may sound like a lot of work, but if you have a TB infection control plan/policy in place and staff is aware of it, you can help prevent TB outbreaks. Remember, TB can be identified. It is treatable and it is curable. And you can create a healthy and safe environment for your staff and clients.

Glossary

Close contacts

People who spend time with someone who has contagious TB disease

Contact investigation

A procedure for interviewing a person who has TB disease to determine who may have been exposed to TB. People who have been exposed to TB are screened for TB infection and disease.

Directly Observed Therapy (DOT)

A method of helping patients take their medicines for TB. A health care worker delivers TB medicine to patients and observes them taking it.

Exposure to TB

Time spent with someone who has contagious TB disease

HEPA filters

Special filters that can be used in ventilation systems to help remove TB germs from the air

HIV

Human immunodeficiency virus, the virus that causes AIDS

Immune system

Cells and tissues in the body that protect the body from foreign substances

Infection control procedures

Measures to prevent the spread of TB

Infectious

Capable of spreading infection; a person who has contagious TB disease expels droplets containing *M. tuberculosis* into the air when he/she coughs or sneezes

TB test

This test can determine if someone has been infected with TB. It can be a skin test (called the Mantoux tuberculin skin test, or the tuberculin skin test - TST, or purified protein derivative - PPD) or a blood test (Quantiferon).

Sputum

Phlegm or fluid from deep in the lungs which is tested for the presence of TB bacteria

TB disease

An illness in which TB bacteria are multiplying and attacking different parts of the body. The symptoms of TB disease include weakness, weight loss, fever, no appetite, chills, and sweating at night. Other symptoms of TB disease depend on where the bacteria are growing in the body. If TB disease is in the lungs (pulmonary TB), the symptoms may include a bad cough, pain in the chest, and coughing up blood.

TB infection (or latent TB infection – LTBI)

A condition in which TB bacteria are alive but inactive in the body. People with TB infection have no symptoms, do not feel sick, cannot spread TB to others, and usually have a positive skin test reaction. However, they may develop TB disease later in life if they do not receive treatment for latent TB infection.

TB screening program

A program in which staff and residents of a facility are periodically given TB tests; done to identify people who have TB infection and possibly TB disease and to determine whether TB is being transmitted in the facility

Transmission

The spread of an organism, such as *M. tuberculosis*, from one person to another; depends on the contagiousness of the patient, the type of environment, and the length of exposure

Tubercle bacilli

Another name for *Mycobacterium tuberculosis* organisms, which cause TB disease

Tuberculous mycobacteria

Mycobacteria that can cause TB disease or other diseases very similar to TB; the tuberculous mycobacteria are *M. tuberculosis*, *M. bovis*, and *M. africanum*

Ultraviolet germicidal irradiation (UVGI)

The use of special lamps that give off ultraviolet light, which kills the tubercle bacilli

Adapted from CDC's Self Study Modules on TB #1-5 and San Francisco TB Infection Control Guidelines for Homeless Shelters

Resources: **READING MATERIALS**

- *Curry International Tuberculosis Center. Tuberculosis Infection Control: A Practical Manual for Preventing TB. 2007 [inclusive page numbers].*
- *Homeless Health Care Los Angeles. Tuberculosis Prevention Guide for Homeless ServiceProviders, Eighth Edition. 2007. Los Angeles, CA.*
- *Hudson J, Van Zetta S, Brisette B, Driver C, et. al. Tuberculosis Transmission in a Homeless Shelter Population – New York, 2000-2003. MMWR 2005;54(06):149-152.*
- *Public Health - Seattle & King County. Tuberculosis Prevention and Control Guidelines for Homeless Service Agencies in Seattle-King County, Washington, Fourth Edition. October 2010.*
- *San Francisco Department of Public Health, Tuberculosis Control Division, Tuberculosis & Homeless Task Force. Tuberculosis Infection Control Guidelines for Homeless Shelters: For Shelter Staff, Clients, Fourth Edition. 2005. San Francisco, CA.*
- *U.S. Department of Labor. Occupational Safety & Health Administration (OSHA). Occupational Exposure to Tuberculosis. 1999.*

Resources: **ORGANIZATIONS**

The American Lung Association (ALA) National Headquarters
1301 Pennsylvania Avenue, NW, Suite 800, Washington, DC 20004
Phone: 212-315-8700
To contact the ALA nearest you, call: 1-800-LUNGUSA
To speak to a lung health professional, contact the ALA Lung Helpline at 1-800-548-8252
http://www.lungusa.org

Centers for Disease Control and Prevention, Division of Tuberculosis Elimination
1600 Clifton Road, MS E-10, Atlanta, GA 30333
TB Education & Resources Web Site
Phone: 800-232-4636
Resources: **http://www.findtbresources.org**
TB questions and answers: **http://www.cdc.gov/tb/publication/faqs/default.htm**

Department of Health and Human Services, The National Institute for Occupational Safety and Health (NIOSH)
Centers for Disease Control and Prevention
1600 Clifton Road, Atlanta, GA 30333
Phone: 1-800-232-4636
http://www.cdc.gov/niosh/

Curry International Tuberculosis Center
3180 – 18th Street, Suite 101, San Francisco, CA 94110-2028
Phone: 415-502-4600
Fax: 415-502-4620
www.nationaltbcenter.ucsf.edu

Health Insurance Portability and Accountability Act of 1996 (HIPAA)
Healthcare information privacy standards exempt reporting to public health agencies
http://www.hhs.gov/ocr/privacy

Heartland National Tuberculosis Center
2303 SE Military Drive, San Antonio, TX 78223
Phone: 1-800-TEX-LUNG (1-800-839-5864)
http://www.heartlandntbc.org

National Health Care for the Homeless Council, HCH Clinician's Network
P.O. Box 60427, Nashville, TN 37206-0427
Phone: 615-226-2292
Fax: 615-226-1656
http://www.nhchc.org

New Jersey Medical School Global Tuberculosis Institute
225 Warren Street, P.O. Box 1709, Newark, NJ 07101-1709
Phone: 973-972-3270
http://www.umdnj.edu/globaltb/home.htm

Southeastern National Tuberculosis Center
P.O. Box 103600, Gainesville, FL 32610-3600
Phone: 352-265-7682
http://www.sntc.medicine.ufl.edu

Web link to TB control programs for each state in the country
http://www.cdc.gov/tb/links/tboffices.htm

Appendix

The following are sample forms to be used as tools or templates to assist your shelter in developing and implementing your facility's TB control policy and procedure.

TB CONTROL PLAN

Annual Shelter Risk Assessment for the Year of: _____

Shelter managers should meet with their local health department's TB control program to assess risk for TB and determine an appropriate TB control policy/plan for the shelter. Assign a point person for each of the activities outlined below.

Activity	How Often	Date Done	Person Responsible
1. Assign responsibility ■ Designate staff liaison/committee to contact TB control program's point person ■ Establish relationship with point person at TB control program <Enter TB control contact's info here> _____			
2. Conduct risk assessment Community profile*: ■ Number of cases in county: _____ ■ Percent of homeless cases in county: _____ ■ Number of active TB cases diagnosed in the facility last year: _____ (includes staff & residents) ** annual State and County data are updated by Public Health Department*			
3. Review facility's written TB control plan ■ Includes Cough Alert policy			
4. Provide TB education and training for staff ■ Review basic TB information and TB Control Plan/Policy			
5. Screen staff and volunteers ■ Baseline screening ■ On hire/start of employees/volunteers is advisable but not required. It provides useful information should an exposure occur at the facility ■ Routine testing			
6. Screen all residents ■ Refer residents with symptoms of TB for medical evaluation to: <Enter name of medical evaluation site(s) here> _____			
7. Report and conduct a problem evaluation If a suspect or confirmed case of active TB disease is found, call your local health department to report the case and ask for guidance regarding management of the case and performing contact investigation, if necessary.	As needed	Includes dates of reports made to health dept.	

Adapted from the Oregon Guidelines for Homeless Shelters

TUBERCULOSIS (TB) CURRICULUM

This sample curriculum outlines a TB training for homeless shelter staff and was adapted from the San Francisco TB Infection Control Guidelines for Homeless Shelters. It uses this video and viewer's guide as part of the training. You can also work with your local health department and their resources to plan your training.

Notes to Facilitator

Materials: video, viewer's guide, TV and VCR, sign-in sheet

Total time for training: 45 minutes - 1 hour

5 minutes

To emphasize the importance of TB in shelters, the items listed below should be discussed before showing the video.

Background and Introduction to TB

- TB prevalence in your local area, U.S.
- TB prevalence among the homeless population
- Local TB policies

For information regarding the above, check with your local health department and/or the Centers for Disease Control and Prevention's website (www.cdc.gov).

25 minutes

Show videotape to cover the following topics.

Basic TB

- What is TB?
- How is TB spread?
- What are the risk factors for TB?
- What's the difference between TB infection and TB disease?
- What are the signs and symptoms of active TB disease?
- How do I know I have TB? (TB test)
- What's the treatment for TB?

Staff's Role

- Develop and implement a TB policy and procedure
- Attend a TB training
- Establish screening procedures and learn how to effectively ask a client about TB symptoms
- Evaluate and handle clients who are suspected of having TB
- Implement the Cough Alert policy to identify and refer clients for medical evaluation
- Establish client's TB clearance card (if applicable)
- Establish referral system with health department to get medical evaluation for client
- Check shelter environment - lighting, ventilation, bed placement
- Give surgical masks and tissues to clients to cover their coughs
- Keep client information and records confidential

If you do not plan to show the videotape, be sure to discuss the above listed topics.

10-15 minutes

After watching the video, allow opportunity for questions and answers. If there are no questions, ask a few of the "Basic TB" questions from above to see if viewers know answers.

5-15 minutes

Summarize and review key points. Thank staff for attending.

SIGN-IN SHEET

Course Name _____ **Date** _____

Name	Degree(s)	CME	CEU	License #	Signature	Comments

TB ASSESSMENT FOR CLIENTS - QUESTIONS AND PROCEDURES

This symptoms assessment questionnaire can assist staff and/or healthcare workers in interviewing clients and meeting their health needs. All clients should be interviewed regarding TB and other health concerns during admission to the shelter. This symptom assessment questionnaire can also be used during shelter's annual TB screenings for staff and volunteers.

Factors to consider include:

- History of a positive TB skin test
- Prior close contact with someone who has or is suspected of having active TB of the lungs or throat
- Diagnosis or treatment of prior active TB

Suggested questions to ask are:

1. **Have you ever been treated for tuberculosis, or ever had a positive skin test for TB?**
2. **Have you spent time with anyone who had TB?**
3. **Do you have a cough that produces mucus that has lasted for at least three weeks?**
4. **Have you coughed up any blood?** (timeframe: last week, last month…)
5. **Have you felt feverish or had chills or profuse sweating (night sweats) for more than one or two weeks?**
6. **Have you traveled outside the U.S.? If yes, where?**

If client responds with "yes" to any of the above questions, additional follow-up questions should be asked.

People with symptoms or a history of TB disease should be evaluated by a healthcare provider BEFORE being allowed into any common room or dormitory with other clients or staff.

- If possible, the individuals should be given a private room or area that does not share the same ventilation system with the rest of the building until they have a medical evaluation and are determined to be non-infectious.
- If that is not possible, provide a surgical mask and/or tissue and request the client use them to cover their coughs and sneezes. People who are obviously ill should be referred and/or transported to a medical facility.

Adapted from Homeless Health Care Los Angeles

EMPLOYEE'S ANNUAL TUBERCULOSIS SCREENING QUESTIONNAIRE

This form is used for employee TB screenings to document their TB status. When this is done on an annual basis, it can help determine if there has been any conversion to TB among staff.

Employee's Name: _____ Today's Date: _____

Birthdate: _____ Work Location: _____

Test Record

Skin Test Date: _____ MM Induration: _____

Name of who administered test _____ Location of Test: _____

Chest X-ray Date: _____ Result: Normal Abnormal

QFT Test Date: _____ QFT Results: ☐ Positive ☐ Negative

Name of who administered test _____ Location of Test: _____

Chest X-ray Date: _____ Result: Normal Abnormal

Treatment for TB Infection (LTBI)

Took_____months of INH [Other regimen: _____]

Refused treatment _____

Medical contraindication: _____

Ask employee

Have you experience any of the following symptoms recently? (Please check a box.)

YES	NO	
		Chronic cough *(more than three weeks duration)*?
		Bring up sputum every day for one week or more?
		Chronic feeling of fatigue, listlessness *(more than two weeks in duration)*?
		Fever *(more than one week in duration)*?
		Night sweats?
		Unexplained weight loss *(8 pounds or more)*?

For facility use

- ☐ Employee reminded to report symptoms if they occur
- ☐ TB clearance given
- ☐ Symptoms noted

Comments:_____

_____

Outcome of evaluation

- ☐ No active TB suspected after evaluation of employee.
- ☐ Active TB suspected. Employee not infectious, but placed on TB medications.
- ☐ Active infectious pulmonary TB suspected. Employee off work until non-infectious.
- ☐ Suspect case reported to TB control. Exposure follow-up initiated.

Reviewer's Signature:_____Date:_____

Adapted from the Oregon Guidelines for Homeless Shelters

TUBERCULIN SKIN TEST (TST) LOG

Shelter staff can use this log to record and track the TB test results of clients. All information is kept confidential.

Client Name	Date TST placed	Placed By (Name)	Date TST read	Read By (Name)	Result	Any prior TST results documented?			
						Yes	No	Date	ResutIt

COUGH ALERT POLICY AND PROCEDURES

The goal of this sample Cough Alert policy and procedure is to assist shelter staff in identifying and preventing the spread of Tuberculosis (TB). The Cough Alert policy is a tool to protect the safety of shelter clients and staff from TB. Staff play a key role in detecting communicable diseases because of their familiarity with the clients and the facility. This policy can be implemented by staff who work closely with clients and/or who monitor the sleeping rooms at night.

Purpose

To identify active TB cases before it can spread in homeless shelters, detox facilities, and other congregrate group settings.

Background

Congregate settings that house immunocompromised individuals pose risk for the spread of TB and disease progression.

- Unsuspected active TB can result in extensive spread to staff and shelter clients
- Malnutrition and other immune-weakening medical conditions are common among the homeless and substance users entering shelters and detox units. This puts them at an increased risk of TB exposure and disease progression.

Implementation

The Cough Alert policy should be implemented as defined below:

Definition

- Individuals coughing throughout the night **or**
- Client coughing for more than 3 weeks without improvement (especially if the cough is accompanied with >5 lbs weight loss, night sweats and fever) **or**
- Client coughing up blood

Procedures

1. Instruct client to cover nose and mouth when coughing and offer a mask to wear.
2. Record the date, client name, bed number, and give the information to assigned supervisor <Enter assigned supervisor name here…> _____
3. The assigned supervisor or designee will notify the TB Control liaison about the client needing an evaluation. < Enter contact info for TB Control liaison here…>
   _____
4. Assigned healthcare case management staff will notify the coughing client confidentially that a chest x-ray and urgent medical evaluation is needed and will provide information as to where and how the client can get the evaluation.
5. Evaluation should occur as soon as possible through the following mechanisms:
   <Enter medical evaluation site(s) and office hours here… >
   _____
   _____
6. Any client being referred to the medical evaluation site must bring a completed TB referral form from the shelter to the clinic.

Adapted from San Francisco's TB Infection Control Guidelines for Homeless Shelters

COUGH LOG

[<Enter Your Shelter's Information here>]

Shelter staff can use this log to record health observations of coughing clients.

Floor: _____ Area: _____

Bed #	Client Name	Observations

Date: _____ Staff Signature:_____

- Return this form each morning to your clinic's cough log binder
- Please note any other observations (e.g., sweating, chills, sputum color, etc.)

Adapted from the Pine St. Inn, Boston , MA

POSTER IDEAS

Tailor posters to meet your shelter's needs. Some shelters suggest changing posters periodically to give a different look because clients and staff get used to seeing the same poster and they may ignore the importance of its message.

For information about TB posters, contact:

Centers for Disease Control and Prevention, Division of TB Elimination
1600 Clifton Road, MS E-10, Atlanta, GA 30333
TB Education & Resources Web Site
Phone: 800-458-5231
www.findtbresources.org

Here are a few sample poster ideas that you can create.

POSTER IDEA #1

DO YOU HAVE TUBERCULOSIS (TB) SYMPTOMS?

A cough (that lasts for more than 3 weeks) with <u>one or more</u> of the following symptoms:

- Unexplained weight loss
- Night sweats
- A Fever (lasting for more than 1 week)
- Chronic fatigue/malaise (for more than 2 weeks)
- Coughing up phlegm or blood (everyday for one week or more)

If you have <u>one or more</u> of these symptoms please contact a staff member immediately.

TB is treatable and curable if it gets diagnosed and is treated right away.

POSTER IDEA #2

IF YOU ARE COUGHING A LOT…

….please ask a staff person for a surgical mask or tissue.

If your coughing does not stop, a staff person may provide a surgical mask and tissue for you to use.

Thank you for helping prevent the spread of colds, flu, and tuberculosis (TB).

POSTER IDEA #3

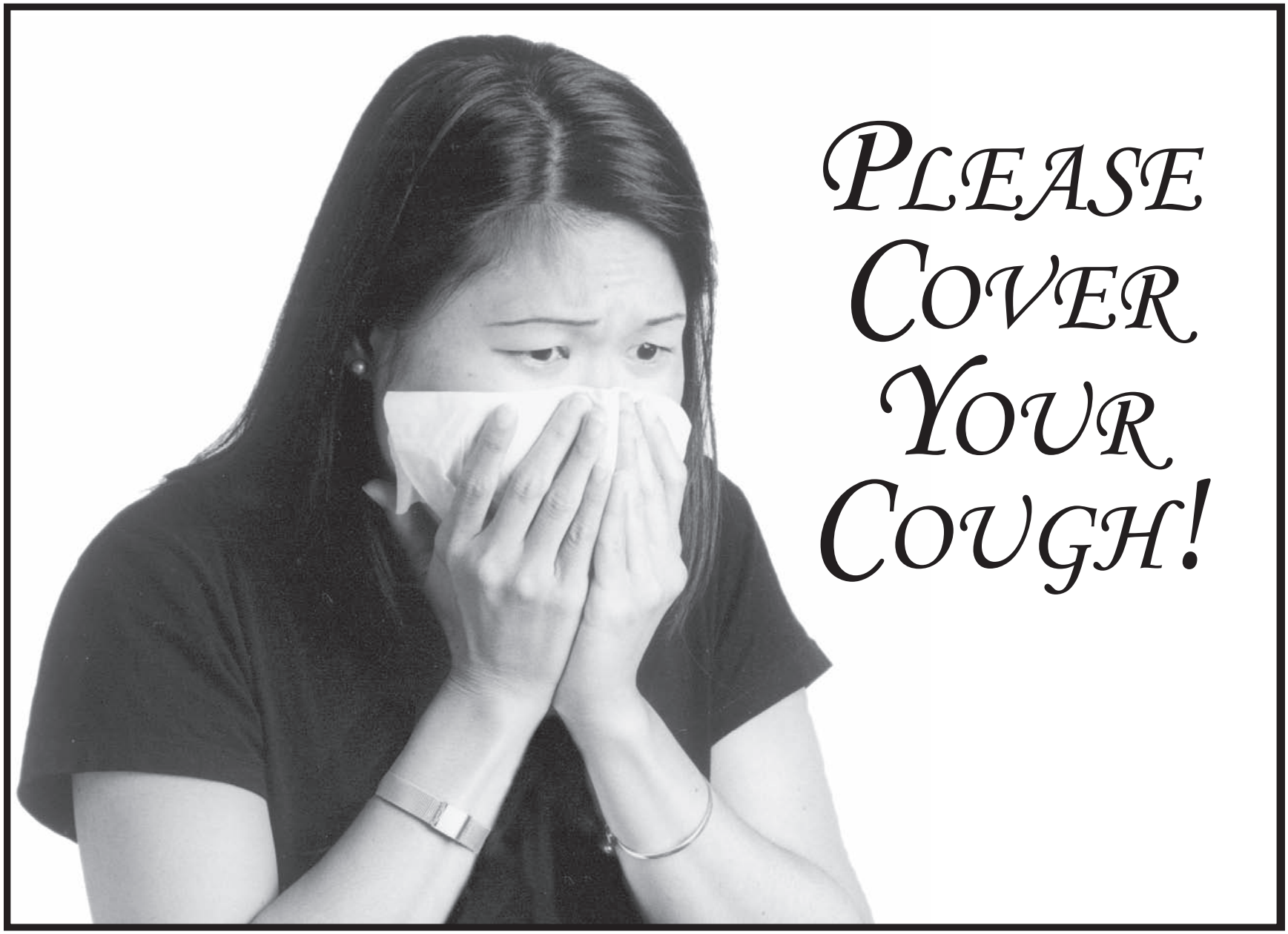
TB MYTHS

There's only ONE way you can get TB and that is:

You breathe in the TB germ while sharing the same air space with someone who has contagious TB.
The TB germ is spread by that person's coughs or sneezes.

You CANNOT get TB from …

- Touching a doorknob
- A syringe or needle
- A bird
- Sharing a cigarette, joint or crack pipe
- Having sex or kissing
- Shaking or holding hands
- Sharing a beer or wine
- Sharing clothes or food
- A mosquito


PLEASE
COVER
YOUR
COUGH!

POR FAVOR:

¡CUBRASE LA BOCA CUANDO TOSA!

GRACIAS

IMPORTANT TB CONTACTS

Be prepared before a case of Tuberculosis (TB) happens at your shelter. Identify your local TB health resources and have their contact information ready and available. Please complete the following contact sheet.

TB Screening & Prevention

Organization: _____

Address: _____

Phone: _____

Office Hours: _____

Contact Person: _____

TB Follow-Up Care and Intervention

Organization: _____

Address: _____

Phone: _____

Office Hours: _____

Contact Person: _____

TB Education

Organization: _____

Address: _____

Phone: _____

Office Hours: _____

Contact Person: _____

Other

Organization: _____

Address: _____

Phone: _____

Office Hours: _____

Contact Person: _____

CURRY
INTERNATIONAL
TUBERCULOSIS
CENTER

www.nationaltbcenter.ucsf.edu

UCSF
University of California
San Francisco
advancing health worldwide

The Curry International Tuberculosis Center is a joint project of the
San Francisco Department of Public Health and the University of California,
San Francisco, funded by the Centers for Disease Control and Prevention