

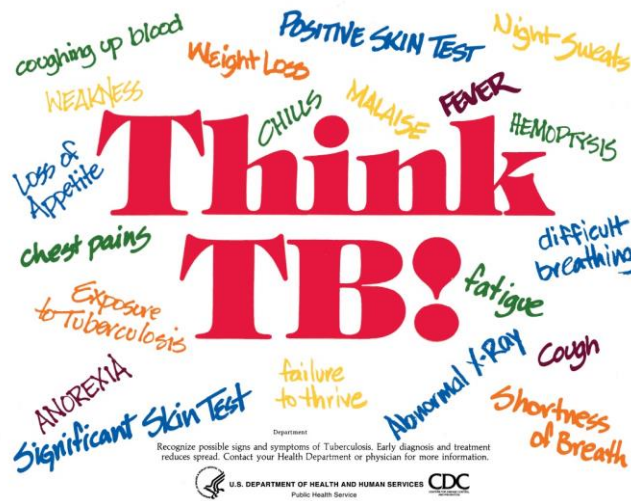
CHAPTER 11: INFECTION PREVENTION AND CONTROL FOR TB

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CHAPTER 11: INFECTION PREVENTION AND CONTROL FOR TB

11.1 Preventing TB Transmission

There are a few simple but very effective things that can be done to help prevent the spread of TB. The most important of these is to ‘think TB’¹.



When a client has TB signs or symptoms, ‘**airborne precautions**’ should be started immediately. Airborne precautions are a group of controls used to **in addition to** routine precautions to prevent transmission of organisms such as TB that are transmitted by the airborne route.

Respiratory protection is the first step in airborne precautions. More details on airborne precautions are outlined in [Table 11-1](#), at the end of this chapter.

11.1.1 Masking Clients to Limit the Spread of TB Bacteria

A client with TB signs or symptoms should be asked to put on a surgical mask (sometimes called a ‘procedure mask’, [Figure 11-1](#) and [Figure 11-2](#)). To decrease the risk of transmission, if possible, s/he should be moved to an area away from other clients and staff, and preferably to a room where the door can be closed.

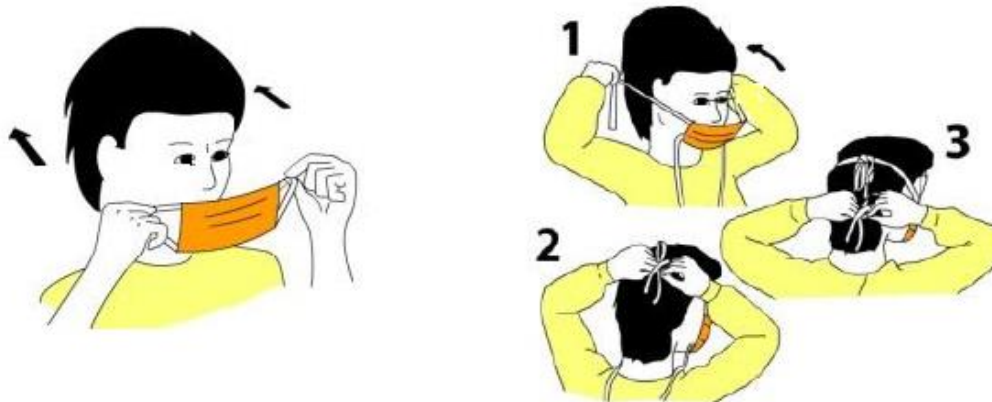
Surgical / procedure masks help to reduce the number of TB bacteria released into the air from people with infectious TB disease when they

cough, sneeze, etc. **Surgical / procedure masks are not designed to prevent people who wear them from breathing in TB bacteria.**

Figure 11-1, Examples of surgical (procedure) masks that should be worn by clients with TB signs or symptoms



Figure 11-2, How to put on a surgical (procedure) mask²



11.1.2 Respiratory Protection for Providers

Providers working with clients who have TB signs or symptoms should wear disposable N95 particulate respirators (N95's, [Figure 11-3](#)) while in shared or contaminated airspaces, and when transporting such clients.

N95's are designed to prevent people who wear them from breathing in TB bacteria. N95's should not be worn by clients with TB signs/symptoms

unless there is another indication to do so. **An N95 is worn by the provider even when the client is wearing a surgical/procedure mask.**

Figure 11-3, Examples of disposable N-95 particulate respirators



To be effective, there must be a tight and continuous seal between the edges of the N95 and the skin of the person wearing it. Refer to manufacturer's instructions for checking the seal (seal-checking) on the boxes N95's are supplied in, or refer to internal policy/procedure as appropriate.

When using an N95:

- Choose a type of N95 for which you have been fit-tested.
- Perform a seal-check each time you put on an N95.
- Do not enter the shared or contaminated airspace until you have put on an N95 and obtain a successful seal-check.
- Do not remove the N95 until you have left the shared or contaminated airspace.
- Change to a fresh N95 when the one you are wearing becomes wet or soiled.
- Remove the N95 correctly and discard it in an appropriate receptacle.
- Perform hand hygiene after removing the N95.

11.1.3 Safe Collection of Sputum Specimens for TB Testing

Minimizing the risk of TB transmission when clients collect sputum specimens for TB testing is extremely important.

Sputum specimen collection in health care facilities should occur in airborne infection isolation rooms (AIIR). When sputum specimens are needed from clients in the community, clients should be instructed to collect them:

- Outside and away from other people, **OR**
- At their residence, away from other people and preferably in a well-ventilated area (e.g., a room with the windows open).

Sputum Induction

When clients are unable to spontaneously expectorate sputum for TB testing, referral to a facility equipped with an AIIR for sputum induction might be necessary (e.g., Dawson City Hospital, Watson Lake Hospital, Whitehorse General Hospital). For clients in communities without access to AIIR, sputum induction in the home or at the health centre might be recommended by YCDC TB Control. Refer to Appendix F for information on sputum induction.

11.1.4 Home Isolation

In some situations, it might be appropriate and feasible for people with suspected or confirmed infectious TB disease to receive care at home instead of in the hospital.

During home isolation:

- The person must not go to work, school or any other public indoor places (e.g., church, shopping, restaurants).
- No visitors should be allowed in the home. Health care workers and others who provide care in the home must wear fit-tested and seal-checked N95's.
- The person should not use any form of public transportation.

Unless contraindicated for other reasons, it is usually safe for clients on home isolation to spend time outside. Masking is not necessary, but they should be advised to cover their coughs and sneezes, and not to spend time in close proximity to other people.

11.2 Preventing TB Transmission in Facilities

Current recommendations from the Canadian Tuberculosis Standards³ and Centers for Disease Control and Prevention⁴ for preventing TB transmission in health care and other settings are based on a hierarchical approach that involves three major components:

1. **Administrative controls** to reduce the risk of exposure to people with suspected or confirmed TB disease, such as effective work practices for identifying and managing patients who might have active TB disease.
2. **Environmental (engineering) controls** to prevent the spread of TB bacteria and/or reduce the concentration of TB bacteria in the air.
3. **Personal protection controls** to use in settings where administrative and environmental/engineering controls might not fully protect people from breathing in TB bacteria.

For an overview of each of these components, and additional information on infection control for TB, including a summary of recommendations for TB infection prevention and control measures in non-hospital settings, refer to the [Canadian Tuberculosis Standards \(2014\)](#). For TB infection prevention and control measures in hospital/acute care settings, please refer to internal facility policies/procedures.

11.3 Airborne Precautions

[Table 11-1](#) is a summary of precautions to be used **in addition to** routine precautions when caring for people with suspected or confirmed infectious TB disease. Refer to internal guidelines and policy/procedures for complete information on indications for and applications of airborne precautions within your workplace.

Table 11-1, Airborne precautions to be used in addition to routine practices during the care of patients/clients/residents with confirmed or suspected infectious TB disease.⁵

Element	Acute Care	Complex Continuing Care/Rehab	Long-term Care	Ambulatory/ Clinic Setting	Home Health Care
Accommodation	Either airborne infection isolation room or transfer			Airborne infection isolation room if available or alternate arrangements if necessary	Not applicable
Signage	Yes				Not applicable
N95 Respirator	For entry to room			For duration of visit	For entry to client's home
TB	Only immune staff to enter room. N95 respirator not required if immune.				
Measles, Varicella					
Equipment and items in the environment	As per Routine Practices				
Environmental Cleaning	Routine cleaning				Routine household cleaning
Transport	Client/patient/resident to wear a mask during transport			Not applicable	
	Transport staff to wear an N95 respirator during transport				
	Limit transport unless required for diagnostic or therapeutic procedures				
Communication	Effective precautions must be communicated to patient families, other departments, other facilities and transport services prior to transfer				

REFERENCES

1. Centers for Disease Control and Prevention. Think TB Poster. No date. Available at: <http://www.cdc.gov/tb/publications/Posters/ThinkTB.htm>
2. Ontario Agency for Health Protection and Promotion (Public Health Ontario), Provincial Infectious Diseases Advisory Committee. Infection Prevention and Control for Clinical Office Practice. Toronto, ON: Queen's Printer for Ontario; June 2013.
3. Ogunremi T, Menzies D, Embil J. Prevention and control of tuberculosis transmission in health care and other facilities. In: Menzies D. ed. *Canadian Tuberculosis Standards* (7th edition). Canada: Canadian Lung Association, 2014;361-404.
4. Centers for Disease Control and Prevention. Guidelines for preventing the transmission of Mycobacterium tuberculosis in health-care settings. *MMWR* 2005;54:1-142.
5. Ontario Agency for Health Protection and Promotion, Provincial Infectious Diseases Advisory Committee. Routine Practices and Additional Precautions in All Health Care Settings. 3rd edition. Toronto, ON: Queen's Printer for Ontario; November 2012.