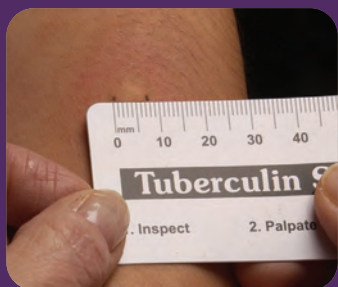




## Self-Study Modules on Tuberculosis

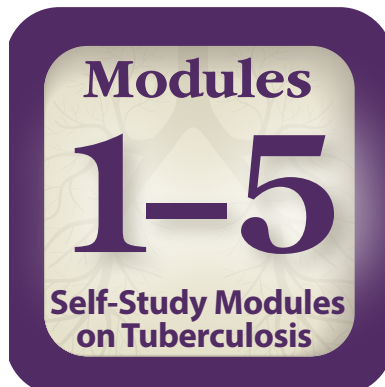


Modules  
**1–5**

# Introduction



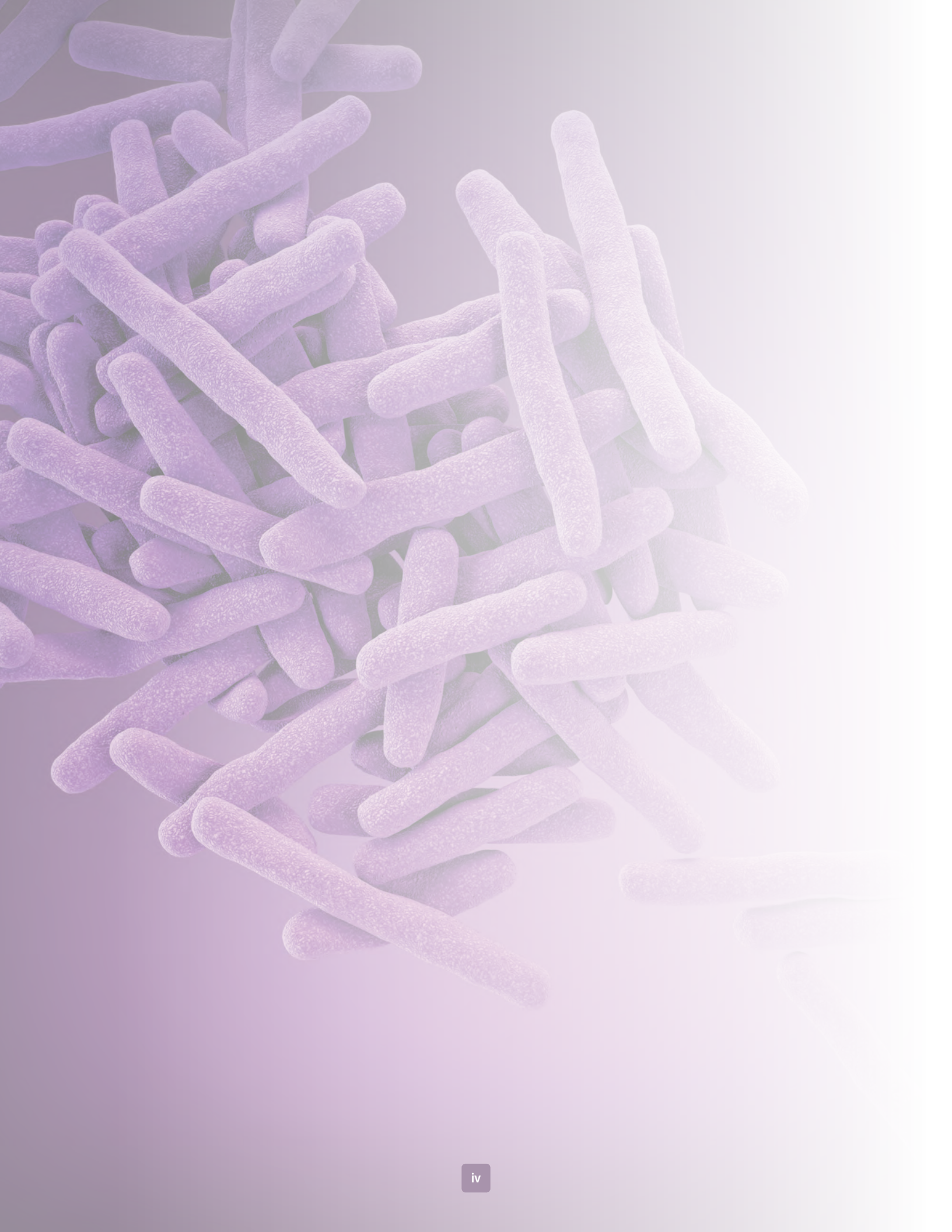




# Introduction

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES  
Centers for Disease Control and Prevention  
National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention  
Division of Tuberculosis Elimination

Atlanta, Georgia  
2016



## Self-Study Modules on Tuberculosis

The Self-Study Modules on Tuberculosis is a series of educational modules designed to provide information about tuberculosis (TB) in a self-study format. The series consists of nine modules that are separated into two parts. The first part, Modules 1–5, provides basic information on TB. The second part, Modules 6–9, provides more specific TB programmatic information. It is recommended that you work through Modules 1–5 before proceeding to Modules 6–9.

## Target Audience

The target audiences for this course are outreach workers, nurses, physicians, administrators, health educators, and students from a variety of settings, including

- TB programs
- Other public health agencies, such as HIV/AIDS, STD, and viral hepatitis programs
- Managed care organizations
- Correctional facilities
- Community-based organizations
- Homeless shelters
- Migrant clinics
- Substance abuse facilities
- Nursing and medical schools
- Other facilities and programs serving persons with or at risk for TB

## About Modules 1–5

The *Self-Study Modules on Tuberculosis, 1–5* package includes five modules, an introduction, and a glossary.

- **Introduction** (this booklet)
- **Module 1:** Transmission and Pathogenesis of Tuberculosis
- **Module 2:** Epidemiology of Tuberculosis
- **Module 3:** Targeted Testing and the Diagnosis of Latent Tuberculosis Infection and Tuberculosis Disease
- **Module 4:** Treatment of Latent Tuberculosis Infection and Tuberculosis Disease
- **Module 5:** Infectiousness and Infection Control
- **Glossary**

A few topics have been repeated in several of the modules to enable the modules to be used either as a complete course or as stand-alone booklets.

Each module contains the following sections:

- **Background:** Background information to help you understand the purpose of the module.
- **Objectives:** A guide to the information you should learn from the module.
- **New Terms:** A list of terms that are introduced in the module and listed in the glossary.
- **Reading Material:** The reading material for the module, including diagrams, charts, illustrations, and photographs.
- **Study Questions:** Sets of questions, spread throughout the reading material, designed to help you assess how well you have learned the content of the module. Be sure to take advantage of these valuable exercises because they will help you prepare for the final examination. Answers are provided at the end of the module so that you can check your work.
- **Case Studies:** Case studies designed to help you apply the concepts you have learned in the module. Answers are provided at the end of the module so that you can check your work.
- **Additional Resources:** A list of references for additional information.



## Objectives

After working through Modules 1–5, participants will be able to

### Module 1: Transmission and Pathogenesis of Tuberculosis

1. Briefly describe the history of TB.
2. Explain how TB is spread (transmission).
3. Define drug-resistant TB.
4. Explain the difference between latent TB infection (LTBI) and TB disease.
5. Explain how LTBI and TB disease develop (pathogenesis).
6. Describe the classification system for TB.

### Module 2: Epidemiology of Tuberculosis

1. Describe how the number of TB cases reported in the United States has changed over the last 60 years.
2. List five factors that contributed to the increase in the number of TB cases between 1985 and 1992.
3. List three improvements TB programs were able to make with increased federal, state, and other funds and resources that have contributed to a decrease in TB cases since 1993.
4. List the groups of people who are more likely to be exposed to or infected with *M. tuberculosis*.
5. List the groups of people who are more likely to develop TB disease once infected with *M. tuberculosis*.

### Module 3: Targeted Testing and the Diagnosis of Latent Tuberculosis Infection and Tuberculosis Disease

1. Identify high-risk groups for targeted testing.
2. Describe how to place, read, and interpret a Mantoux tuberculin skin test.
3. Describe how to interpret an interferon-gamma release assay.
4. Discuss considerations for using either the Mantoux tuberculin skin test or an interferon-gamma release assay for diagnosing LTBI.
5. Describe the components of a medical evaluation for diagnosing TB disease.

## **Module 4: Treatment of Latent Tuberculosis Infection and Tuberculosis Disease**

1. List the groups of people who should receive high priority for LTBI treatment.
2. Describe treatment regimens for LTBI.
3. Describe treatment regimens for TB disease.
4. Describe the principles of preventing drug resistance.
5. Describe patient monitoring during LTBI and TB disease treatment.
6. Describe TB treatment adherence strategies.
7. List the common adverse reactions to the drugs used to treat LTBI and TB disease.

## **Module 5: Infectiousness and Infection Control**

1. Describe the factors that determine the infectiousness of a TB patient.
2. Describe the main goals of a TB infection-control program.
3. Describe the three levels of control measures that are the basis of an effective infection-control program.
4. Describe the purpose and the characteristics of a TB airborne infection isolation room.
5. Describe the circumstances when personal respirators should be used.



## Companion Products

### Modules 1–5 Slide Set and Facilitator Guide

The Modules 1–5 slide set was developed as an accompaniment to the print-based *Self-Study Modules, 1–5* to aid in the presentation of module content for a facilitator-led training. The Facilitator Guide provides facilitator guidance and tips for leading a training using the *Self-Study Modules on Tuberculosis, 1–5* Slide Sets.

### Modules 6–9

*Self-Study Modules on Tuberculosis, 6–9*, includes four modules, an introduction, and a glossary.

- **Introduction**
- **Module 6:** Managing Tuberculosis Patients and Improving Adherence
- **Module 7:** Patient Rights and Confidentiality in Tuberculosis Control
- **Module 8:** Contact Investigations for Tuberculosis
- **Module 9:** Tuberculosis Outbreak Detection and Response
- **Glossary**

## To View or Order the Modules

To view or download the *Self-Study Modules on Tuberculosis, 1–5* and the *Self-Study Modules on Tuberculosis, 6–9*, visit [www.cdc.gov/tb/education/ssmodules/](http://www.cdc.gov/tb/education/ssmodules/).

If you would like to request a print copy of the *Self-Study Modules on Tuberculosis, 1–5* or *6–9*, please use the CDC Division of Tuberculosis Elimination’s online ordering system: <http://wwwn.cdc.gov/pubs/CDCInfoOnDemand.aspx>.

## Continuing Education

Continuing education (CE) is offered free of charge for various professions based on approximately 5 hours of instruction for *Modules 1–5*. In order to receive CE credit/contact hours, you must complete an exam and course evaluation. A minimum score of 70% is necessary to receive credit/contact hours. Upon successful completion of the course, exam, and evaluation, your CE certificate will be issued by CDC Training and Continuing Education Online.

**Prerequisites:** None

**Format:** Enduring material

**Origination Date:** April 25, 2016

**Expiration Date:** April 25, 2018

## Accreditation Statements

**CME:** The Centers for Disease Control and Prevention is accredited by the Accreditation Council for Continuing Medical Education (ACCME®) to provide continuing medical education for physicians.

The Centers for Disease Control and Prevention designates this **enduring material** for a maximum of **5.25 AMA PRA Category 1 Credits™**. Physicians *should claim only the credit commensurate with the extent* of their participation in the activity.

**CNE:** The Centers for Disease Control and Prevention is accredited as a provider of Continuing Nursing Education by the American Nurses Credentialing Center's Commission on Accreditation.

This activity provides **5.1** contact hours.

**CEU:** The Centers for Disease Control and Prevention is authorized by IACET to offer **0.5** CEU's for this program.

**CECH:** Sponsored by the Centers for Disease Control and Prevention, a designated provider of continuing education contact hours (CECH) in health education by the National Commission for Health Education Credentialing, Inc. This program is designated for Certified Health Education Specialists (CHES) and/or Master Certified Health Education Specialists (MCHES) to receive up to 5.0 total Category I continuing education contact hours. Maximum advanced level continuing education contact hours available are 0. CDC provider number **98614**.

**DISCLOSURE:** In compliance with continuing education requirements, all presenters must disclose any financial or other associations with the manufacturers of commercial products, suppliers of commercial services, or commercial supporters as well as any use of unlabeled product(s) or product(s) under investigational use.

CDC, our planners, content experts, and their spouses/partners wish to disclose they have no financial interests or other relationships with the manufacturers of commercial products, suppliers of commercial services, or commercial supporters. Planners have reviewed content to ensure there is no bias.

Content will not include any discussion of the unlabeled use of a product or a product under investigational use.

CDC does not accept commercial support.

## To receive Continuing Education (CE)

To receive continuing education, you must register for this specific course and submit an evaluation and posttest at the CDC Training and Continuing Education Online website.

- Go to [www2a.cdc.gov/TCEonline](http://www2a.cdc.gov/TCEonline)
- Log in as a participant. *(Note: If you are a first-time user of this online system, you will need to log in as a new participant and create a participant profile.)*
  - When you receive your reset password by e-mail, log in as a participant and change the password.
- At Participant Services, click on Search and Register, type a keyword from the course title into the keyword search, such as “TB,” and click View. You can also find the course by typing in the course number. The course number for this activity is **WB2556**.
- Click on the title, *Self-Study Modules on Tuberculosis, 1–5*, select the type of credit/contact hours you wish to receive at the bottom, and click Submit.
- Verify the demographic information and click Submit at the bottom.
- Complete the course evaluation.
- Complete the course posttest (must score **70% or higher** to receive CE).
- At Participant Services, click on Certificates and Transcripts and print your continuing education certificate.

**Fees:** No fees are charged for CDC’s CE activities.

## Other TB Education and Training Materials

- **CDC TB Education and Training Materials**—[www.cdc.gov/tb](http://www.cdc.gov/tb)

Please visit the CDC Division of Tuberculosis Elimination’s website for information on other available CDC-produced TB education and training materials.

- **The Find TB Resources Website**—<http://findtbresources.cdc.gov/>.

This site includes a searchable database of materials from numerous national and international organizations. This website is intended for use by TB and other health care professionals, patients, and the general public.

- **TB Regional Training and Medical Consultation Centers (RTMCCs)**

The CDC Division of Tuberculosis Elimination funds five TB Regional Training and Medical Consultation Centers (RTMCCs). The RTMCCs are regionally assigned to cover all 50 states and the U.S. territories. The primary purpose of each RTMCC is to

- ▢ Provide training and technical assistance to increase human resource development in TB programs;
- ▢ Develop TB educational materials; and
- ▢ Provide medical consultation to TB programs and medical providers.

### **Curry International Tuberculosis Center**

300 Frank H. Ogawa Plaza, Suite 520

Oakland, CA 94612

Phone: 510-238-5100

Fax: 415-502-4620

Email: [CurryTBcenter@ucsf.edu](mailto:CurryTBcenter@ucsf.edu)

Website: [www.currytbcenter.ucsf.edu](http://www.currytbcenter.ucsf.edu)

### **Heartland National Tuberculosis Center**

2303 SE Military Drive

San Antonio, TX 78223

Phone: 800-839-5864

Website: [www.heartlandntbc.org](http://www.heartlandntbc.org)

### **Mayo Clinic Center for Tuberculosis**

Centerplace Building 05

200 First St. SW

Rochester, MN 55905

Phone: 855-360-1466

Fax: 507-266-6098

Email: [tbcenter@mayo.edu](mailto:tbcenter@mayo.edu)

Website: <http://centerfortuberculosis.mayo.edu/>

**Global Tuberculosis Institute at Rutgers,  
The State University of New Jersey**

225 Warren Street  
Second Floor East Wing  
Newark, NJ 07103  
Phone: 973-972-3270  
Fax: 973-972-3268  
Information Line: 800-4TB-DOCS (482-3627)  
Website: <http://globaltb.njms.rutgers.edu/index.html>

**Southeastern National Tuberculosis Center**

2055 Mowry Road  
Gainesville, FL 32611  
Mailing Address:  
PO Box 103600  
Gainesville, FL 32610  
Phone: 352-273-7682  
Fax: 352-273-9275  
Website: <http://sntc.medicine.ufl.edu/>

- RTMCCs TB Training and Education Products Webpage—<https://sntc.medicine.ufl.edu/rtmccproducts.aspx>

This webpage includes all educational materials developed by the CDC-funded RTMCCs. Resources include print, video, and webinars.

## Additional Questions

For additional information on TB, visit the CDC Division of Tuberculosis Elimination's website at [www.cdc.gov/tb](http://www.cdc.gov/tb). If you have additional questions, you may also contact CDC-INFO at <http://wwwn.cdc.gov/dcs/RequestForm.aspx>.

If you have questions on state-specific TB guidelines, please contact your state TB control office. A list of state TB control offices can be found on the CDC Division of Tuberculosis Elimination's website at <http://www.cdc.gov/tb/links/tboffices.htm>.

## Acknowledgements

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