

Chapter 8

Community Tuberculosis Control

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Chapter Objectives

After working through this chapter, you should be able to

- Describe the roles and responsibilities for tuberculosis (TB) control and prevention in the public health sector; and
- Describe the roles and responsibilities for TB control and prevention in the private health sector.

Introduction

State and local health departments have the primary responsibility for preventing and controlling TB. However, TB control is a complex undertaking and requires the collaborative efforts of a broad range of persons, organizations, and institutions both inside and outside the public health sector. These various persons and organizations have a role in improving the detection of TB cases, one of the most important responsibilities of TB control, and include

- Clinicians;
- Community health centers;
- Hospitals;
- Academic institutions;
- Medical professional organizations;
- Community-based organizations;
- Correctional facilities;
- Civil surgeons; and
- Pharmaceutical and biotechnology industries.

State and local health departments have the primary responsibility for preventing and controlling tuberculosis (TB).

Roles and Responsibilities of the Public Health Sector Providers

The essential role of the public health sector in TB control is to plan, coordinate, and evaluate TB control and prevention efforts. This role requires that state and local health departments focus and provide oversight on the following critical elements:

- Planning and policy development;
- Contact investigation;
- Clinical and diagnostic services for patients with TB and their contacts;
- Training and education;
- Surveillance data and information management; and
- Monitoring and evaluation.

The essential role of the public health sector in TB control is to plan, coordinate, and evaluate TB control and prevention efforts.

Planning and Policy Development

State and local TB control programs have the responsibility for developing TB control policies and procedures. A TB control plan should be developed in collaboration with community stakeholders and experts in medical and nonmedical TB management. Laboratory directors and professional organizations also make excellent partners to collaborate with when developing TB control policies.

A TB control plan should be developed in collaboration with community stakeholders and experts in medical and nonmedical TB management.

The plan should be based on an understanding of local epidemiologic data and on the capabilities and capacities of clinical and support services for clients. Fiscal resources available for TB control also determine the plan's scope and direction, as well as ongoing indicators of program performance (program evaluation). Policies and procedures should reflect national, state, and local standards of care and should offer guidance in the management of LTBI and TB disease.

A written TB control plan should be updated regularly and distributed widely to partners. The TB control plan should

- Assign specific roles and responsibilities;
- Define essential pathways of communication between providers, laboratories, and the public health system;
- Assign sufficient resources, both human and financial, to ensure its implementation, including a responsible case manager for each suspected and verified case of TB disease;
- Provide provisions for expert consultation and oversight for TB-related matters to clinicians, institutions, and communities;
- Provide special guidance to local laboratories that process TB-related samples;
- Assist local authorities in conducting contact or outbreak investigations and directly observed therapy (DOT); and
- Provide culturally appropriate information to patients, persons at risk, and the community.

A written TB control plan should be updated regularly and distributed widely to partners.

Systems to minimize or eliminate financial and cultural barriers to TB control should be integral to the plan. Persons with TB disease and persons at high risk for TB should receive culturally appropriate education about TB and clinical services, including treatment, without consideration for their ability to pay.

The plan should be consistent with current legal statutes related to TB control. Relevant laws and regulations should be reviewed periodically and updated as necessary to ensure consistency with currently recommended clinical and public health practice (e.g., mandatory reporting laws, institutional infection control procedures, hospital and correctional system discharge planning, and involuntary confinement laws). The health department is legally responsible for ensuring that

a complete and timely contact investigation is done for the TB cases reported in its jurisdiction. Health departments should work closely with providers in the nonpublic health sector to ensure prompt reporting of suspected TB cases. They should understand the public health aspects of TB, including the need for prompt reporting and the facilitating role of the jurisdictional health agency in case management. Federal agencies should take the lead in resolving interstate TB-control issues, including movement of TB patients across state lines and multistate TB outbreaks.

The health department is legally responsible for ensuring that a complete and timely contact investigation is done for the TB cases reported in its area. Health departments should work closely with providers in the nonpublic health sector to ensure prompt reporting of suspected TB cases.

Clinical and Diagnostic Services for Patients with TB Disease and Their Contacts

TB control programs should ensure that patients with suspected or confirmed TB disease have ready access to diagnostic and treatment services that meet national standards. These services are often provided by state and/or locally supported TB specialty clinics and staffed by health department personnel or by contracted service providers. However, persons may seek medical care for TB infection or disease in the private medical sector. Regardless of where a person receives medical care, the primary responsibility for ensuring the quality and completeness of all TB-related services rests with state and local public health agencies. To ensure that standards of care are met, health departments should develop and maintain close working relationships with

- Local laboratories;
- Pharmacies; and
- Health-care providers.

Regardless of where a person receives medical care, the primary responsibility for ensuring the quality and completeness of all TB-related services rests with state and local public health agencies.

Clinical facilities should provide screening, diagnostics, and monitoring tests, including radiology services.

Radiology services include access to radiograph equipment, trained radiograph technicians, and radiograph interpretation by a qualified person. Radiograph findings and reports should be available within 24 hours.

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Coordinating care with other health-care providers and facilities is crucial to the prevention and control of TB. TB patients often receive care in a variety of settings, including

- Private practices;
- Hospitals;
- HIV clinics;
- Community clinics;
- Correctional facilities; and
- Nursing homes.

Treatment plans must be specific to individual patient needs. As patients move among these settings, continuity of care may be compromised unless a system is in place to provide coordination of care.

Expert medical consultation in TB should be available to the health-care community, especially for pediatric TB cases and for patients who have drug-resistant disease. Consultants may be health department employees or clinicians with TB expertise who are under contract with the health department.

Laboratory services should also be readily accessible to perform and provide results of AFB smear examinations within 24 hours of specimen collection. TB prevention and control programs should work closely with laboratories to ensure the rapid delivery of specimens to the laboratory and prompt reporting of AFB smear results, culture results, and results of drug-susceptibility tests to the clinician and health department. Laboratory services should also be available to provide monitoring of bacteriologic response to therapy.

Laboratory services should be readily accessible to perform and provide results of acid-fast bacilli (AFB) smear examinations within 24 hours of specimen collection.

Training and Education

TB control programs should provide education and training in the clinical and public health aspects of TB to all program staff. Staff members should receive education at regular intervals on their particular responsibilities in the program and should demonstrate proficiency in those areas. Based on the local epidemiology and needs, TB programs should also educate health-care providers (both public and private), community members, public health officials, and policy makers on TB prevention and control.

Based on the local epidemiology and needs, TB programs should educate health-care providers (both public and private), community members, public health officials, and policy makers on TB prevention and control.

To ensure the availability of a competent TB workforce that understands and meets the needs of its community, state TB programs should use resources from CDC, the CDC-funded Regional Training and Medical Consultation Centers (RTMCCs), National Institutes of Health (NIH)-supported TB curriculum centers, the National TB Controllers Association (NTCA), and other national and local agencies to create and implement education activities. State and local TB programs should develop education and training programs with groups such as those listed in Table 8.1.

Table 8.1
Groups Needing TB Education and Training Programs

Agencies and Other Organizations	Schools
<ul style="list-style-type: none"> • Local health-care providers • Community-based organizations • Health-care institutions 	<ul style="list-style-type: none"> • Medicine • Nursing • Pharmacy • Dentistry • Public health

Surveillance and Information Management

Surveillance and information management systems should be a priority of all TB control programs. Information technology can improve care of patients with TB disease through standardized collection of data and tracking of test results. Other benefits include ready access to details of treatment regimens, administration of DOT, and drug-drug interactions. Advancements in information technology allow for the analysis and rapid distribution of epidemiologic data, as well as management of individualized treatment plans.

Monitoring and Evaluation

The systematic monitoring and evaluation of TB program activities is a critical factor in enhancing program performance. Evaluation techniques provide TB programs with an evidence-based means of assessing and improving their TB-control strategies by helping them understand what causes good or bad program performance. Evaluation can also be used for the following:

- Program advocacy;
- Assessing staffing needs;
- Focusing training and capacity building;
- Directing limited resources to the most productive activities;
- Accounting for available resources;
- Generating additional resources; and
- Recognizing achievement.

TB control programs should develop priorities for program evaluation based on the TB issues or challenges in their jurisdiction and the way services are organized. In general, the first priority for evaluation efforts should be to focus on those activities and outcomes that relate most directly to the key strategies of TB control, which include:

- Identifying patients with infectious TB disease and administering a complete course of treatment;
- Finding TB patient contacts and other persons at high risk with LTBI and treating them; and
- Interrupting transmission of *M. tuberculosis* in high-risk settings.

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Targets for program performance have been established by CDC to assist TB control programs in treating TB patients, identifying and examining their contacts, and improving the quality of case reporting for national surveillance. In addition, national objectives have been set for completing treatment for LTBI among contacts of infectious cases of TB disease. These national objectives for program performance provide a starting point for state and local TB control programs to use for program evaluation, but each TB control program should establish methods to evaluate its performance; for additional information, go to www.cdc.gov/tb/.

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National objectives have been set for completing treatment for LTBI among contacts of infectious cases of TB disease.

Other program areas that should be monitored through formal evaluation methods are

- Timeliness and completeness of reporting of TB cases and suspected cases;
- How often a recommended treatment regimen for patients with TB disease and LTBI is used; and
- The quality of the program's databases for surveillance and case management.

Study Questions

8.1 What should a written TB control plan be based on?

(choose the one best answer)

- A. Local epidemiologic data and ongoing indicators of program performance.
- B. Fiscal resources available for TB control.
- C. Capabilities and capacities of clinical and support services for clients.
- D. A, B, and C are all correct.
- E. Only A and B are correct.

8.2 Which of the following is legally responsible for ensuring that a complete and timely contact investigation is done for the TB cases reported in its area/agency?

(choose the one best answer)

- A. Health department
- B. Hospitals
- C. Private physicians
- D. A, B, and C are all correct.
- E. Only A and B are correct.

8.3 What should clinical facilities provide for TB patients and their contacts?

(choose the one best answer)

- A. Screening, diagnosis, and monitoring tests.
- B. Radiology services including access to radiograph equipment, trained radiograph technicians, and radiograph interpretation by a qualified person.
- C. Radiograph findings and reports within 24 hours.
- D. A, B, and C are all correct.
- E. Only A and B are correct.

8.4 Laboratory services should provide results of AFB smear examinations within what time period? (choose the one best answer)

- A. 24 hours
- B. 72 hours
- C. 1 week
- D. 2 weeks

8.5 TB programs are responsible for educating health-care providers (both public and private), community members, public health officials, and policy makers on TB prevention and control. (choose the one best answer)

A. True

B. False

8.6 Surveillance data and information management systems should be a priority for all TB programs. (choose the one best answer)

A. True

B. False

Roles and Responsibilities of Specific Private Health Sector Providers

The private health sector plays an important role in TB prevention and control and includes the following stakeholders:

- Clinicians;
- Community health centers;
- Hospitals;
- Academic institutions;
- Medical professional organizations;
- Community-based organizations;
- Correctional facilities;
- Civil surgeons; and
- Pharmaceutical and biotechnology industries.

To the extent possible, this varied group of providers should look for new ways to educate medical practitioners, and promote clinical and public health expertise necessary for TB elimination.

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Clinicians

Clinicians in medical practice in the non-public health sector play a vital role in TB control throughout communities in the United States. Hospital or clinic-based medical practitioners, including those working in emergency departments, are usually the first source of medical care for persons with TB disease. These providers may also provide ongoing management of TB patients.

The role of medical practitioners in TB control will increase as TB morbidity in the United States decreases and jurisdictions reduce or even eliminate public health clinical services for TB. Private medical providers should strive for the following goals:

- Understand prevalent medical conditions, including those with public health implications, of populations within their practice;
- Be aware of applicable state laws and regulations for reporting diseases and the need to report TB cases;
- Recognize the range of responsibilities that arise when TB disease is suspected in a patient under medical evaluation, including the following:
 - » The need for prompt establishment of diagnosis;
 - » Use of consultants and hospitalization if indicated;
 - » Reporting the suspected TB case to the state and local public health agency and cooperating with subsequent public health activities; and
 - » Developing, in partnership with the public health agency, a treatment plan that optimizes the likelihood that the patient will complete the recommended course of therapy;
- Incorporate current recommendations for diagnosis, standard treatment of TB disease, and targeted testing and treatment of LTBI;
- Be able to place and read tuberculin skin tests or administer blood tests for TB infection, rule out suspected TB disease, and administer and monitor treatment for LTBI;
- Screen all new patients for symptoms of TB disease and risk factors for LTBI and give those with risk factors a TB skin or blood test; and
- For patients receiving treatment, review risk factors that can suppress the immune system

Expert medical consultation in TB should be available to the health-care community, especially for patients who have drug-resistant disease or medical diagnoses that might affect the course or the outcome of treatment. Consultants may be employees of the health department or clinicians with expertise who are under contract with the health department.

The role of medical practitioners in TB control will increase as TB morbidity in the United States decreases and jurisdictions reduce or even eliminate public health clinical services for TB.

Community Health Centers

Community health centers typically provide primary health-care services to populations that encounter barriers to those services at other sites in the health-care system, and include persons who are

- Low-income and their families;
- Immigrants and refugees;
- Uninsured;
- Homeless; and
- Poor women and children.

Patients at high risk for TB disease often receive primary and emergency health care in emergency rooms or in community health centers. For example, community health centers in certain inner-city areas might serve primarily homeless persons, whereas centers in neighborhoods in which certain racial and ethnic populations are concentrated might become predominant health-care providers for immigrants and refugees. Newly arriving refugee families are frequently directed to community health centers to receive federally supported health-screening services, which might include targeted testing and treatment for LTBI. Persons with symptoms of TB disease might go first for evaluation and care to a community health center. For these reasons, community health centers are a critical part of efforts to control and prevent TB disease, and, therefore, need to perform the following tasks:

- Provide their medical staff with the skills and knowledge needed to conduct a TB risk assessment of their clients, diagnose and initiate treatment for TB disease, and diagnose and treat LTBI;
- Develop close working relationships with consultant physicians, hospitals, and clinical laboratories;
- Develop close working relationships with the public health agency that serves their jurisdiction;
- Arrange for reporting patients with suspected TB disease, ensuring availability of diagnostic services (e.g., sputum smears for acid-fast bacilli, cultures for *M. tuberculosis*, and chest radiographs), and providing consultation and referral of patients for diagnosis, treatment, and hospitalization, as indicated;
- Understand federal and state programs that support screening, diagnostic, and treatment services for patients at high risk and make prevention, diagnosis, and treatment of TB disease a high priority;
- Educate patients about the personal and public health implications of TB disease and LTBI, and motivate them to accept prevention and curative services; and
- Establish recommended TB infection control practices to protect patients and staff.

Community health centers typically provide primary health-care services to populations that encounter barriers to receiving those services at other sites in the health-care system.

Community health centers are a critical part of efforts to control and prevent TB disease.

Hospitals

Hospitals play a critical role in TB control and prevention and provide multiple services that are instrumental to the diagnosis, treatment, and control of TB infection and disease. Hospitals with active outpatient and emergency room services often serve as sites of acute and primary medical care for homeless persons, inner-city residents, immigrants and refugees, and other persons at high risk for TB disease. Also, hospital staff members often provide medical consultation services for the diagnosis and management of TB disease by public health and community clinicians. Laboratory services provided by hospitals for community-based medical care providers might include key diagnostic tests for TB disease. To prevent further spread of infection, hospitals should perform the following tasks:

- Develop TB infection control policies to ensure that patients suspected of having infectious TB disease are isolated in airborne infection isolation (AII) rooms and that effective TB infection control measures are implemented;
- Report any patient with a suspected or confirmed diagnosis of TB disease to their state and local public health agency promptly;
- Develop a written policy and plan for prevention of the nosocomial transmission of TB disease in their facility;
- Provide training and ongoing education of their medical and house staff in the prevailing diseases of the populations to which they provide care; and
- Ensure patients with TB are discharged on a standard anti-TB regimen with advance arrangements coordinated between the hospital and the jurisdictional public health agency to enhance patient follow-up.

Hospitals with active outpatient and emergency room services often serve as sites of acute and primary medical care for homeless persons, inner-city residents, immigrants and refugees, and other persons at high risk for TB disease.

Academic Institutions

Academic institutions (including schools of medicine, pharmacy, public health, and nursing) have the obligation and the opportunity to contribute to TB control in the United States and worldwide. Students from diverse disciplines, including the clinical and laboratory sciences, nursing, epidemiology, and health services, should be introduced to applicable concepts of public health in general and, because TB is a major cause of preventable illness and death in developing countries, to TB in particular.

Academic institutions can provide benefits to other participants in TB control. Conferences, grand rounds, and other presentations are a source of continuing education for private medical practitioners and other community-based health-care workers. Also, trained specialists and researchers at academic institutions can provide clinical, radiographic, and epidemiologic consultation to medical practitioners and public health agencies. A majority of academic institutions manage university-based hospitals, which often serve populations at high risk for TB infection and

disease. University hospitals can become models for TB risk assessment of patients, inpatient care, and infection-control practice, and they can serve as tertiary care sites for an entire community or region. To aid communities in the fight against TB, academic institutions have a responsibility to perform the following tasks:

- Incorporate TB education into their curricula;
- Serve as repositories of expertise in the treatment and management of TB infection and disease, and as a resource for public health and community-based clinicians and other health-care workers;
- Partner with public health agencies to improve TB control, which can include providing additional sites for education and training, opportunities for clinical research, and, for patients with TB disease, a systematic transition from hospital to outpatient care, including DOT; and
- Provide leadership in conducting research in diagnostics, drugs, and vaccines for TB infection and disease.

University hospitals can become models for TB risk assessment of patients, inpatient care, and infection-control practice, and they can serve as tertiary care sites for an entire community or region.

Medical Professional Organizations

Medical professional organizations are critical partners in TB control efforts owing to their involvement with medical practice, research, education, advocacy, and public health. Greater participation of the nonpublic health medical sector is needed to maintain clinical expertise in the diagnosis and management of TB in an era of declining incidence. Organizations whose memberships include primary-care medical practitioners can make significant contributions to the control, prevention, and elimination of TB by performing the following tasks:

- Training and educating their members and other health professionals regarding the clinical and public health aspects of the risk assessment, diagnosis, treatment, control, and prevention of TB disease;
- Providing professional leadership on clinical practice and control of TB by participating in the development or endorsement of guidelines, influencing professional school curricula, and establishing and supporting fellowship training programs, as applicable;
- Providing support for adequate funding for TB control and research through public education campaigns; and
- Endorsing the importance of greater U.S. involvement in global control of TB by linking U.S.-based health professionals with those from other parts of the world.

Greater participation of the nonpublic health medical sector is needed to maintain clinical expertise in the diagnosis and management of TB in an era of declining incidence.

Community-Based Organizations

Community-based organizations (CBOs) can be particularly effective in providing information and education on TB disease to their constituencies. As part of the communities they serve, CBOs are often highly regarded, and their messages might be accepted more positively than those delivered by the state and/or local health department. Organizations providing services to populations at risk for TB disease should perform the following tasks:

- Partner with the state and local public health TB program and medical care providers from the community to facilitate access to diagnostic, treatment, and prevention services for the target population;
- Become involved in support initiatives, such as state and local TB advisory committees and coalitions; and
- Coordinate with public health agencies and educational institutions to develop education programs that are tailored culturally and linguistically to their populations.

As part of the communities they serve, CBOs are often highly regarded, and their messages might be accepted more positively than those delivered by the state and/or local health department.

Correctional Facilities

Correctional facilities are common sites of TB transmission. Prevalence of TB disease and LTBI are substantially higher in prisons and jails than in the general population. TB disease is believed to be the leading cause of death for prisoners worldwide.

Targeted testing and treatment of LTBI in correctional facilities have been demonstrated to have a substantial public health impact. Testing and treatment activities for LTBI are carried out more easily in prisons because the length of stay is generally sufficient to permit completion of a course of treatment. Jails are convenient sites for targeted testing, but subsequent treatment of LTBI has proved challenging.

Correctional facilities have the responsibility of limiting the transmission of TB within the institution and protecting their inhabitants and staff from exposure because of their communal living arrangements. This is a particular challenge in jails because of the short lengths of stay for the majority of detainees. Abrupt and unexpected transfers of detainees among institutions might occur with little consideration for health issues; therefore, correctional facilities have a responsibility in the community to perform the following tasks:

- Coordinate with the jurisdictional public health agency to develop and maintain an accurate epidemiologic profile of the risk for TB infection and disease in the inmate population;
- Develop written policies based on the local epidemiology of TB, establish effective programs to screen for TB disease, respond promptly when cases occur within the facility, provide targeted testing and treatment programs for inhabitants and detainees with LTBI, and provide ongoing, competency-based education for all staff members;

- Establish ongoing working relations with public health agencies, hospitals, and other community partners for policy development, consultation and referral;
- Develop firm linkages for referral of persons under treatment for TB disease and LTBI upon discharge;
- Develop TB infection control programs to protect inhabitants, detainees, staff, and visitors from exposure to TB disease following requirements of the Occupational Safety and Health Administration (OSHA) and other regulatory agencies;
- Evaluate, in coordination with the local health department, the effectiveness of the institutional TB-control program to eliminate transmission within the facility on a continual basis; and
- Develop ongoing education programs for staff and inmates regarding TB.

Correctional facilities have the responsibility of limiting the transmission of TB within the institution and protecting their inhabitants and staff from exposure.

Civil Surgeons

Civil surgeons are licensed physicians who are certified by the U.S. Citizenship and Immigration Services (CIS) to conduct a required health screening examination, including testing for LTBI and TB disease, of foreign-born persons living in the United States who apply for permanent residency. CDC has responsibility for providing guidance on screening and treatment, but has no regulatory role in monitoring the quality or outcomes of these examinations.

Civil surgeons are a critical component of TB control because of their access to a high-risk population. U.S.-based immigration screening can identify foreign-born persons with LTBI for whom treatment is indicated and detect TB disease. Although civil surgeons receive immigration-focused training, little information is available on the knowledge, attitudes, and practices of civil surgeons. To further the cause of TB elimination, civil surgeons should perform the following tasks:

- Understand current guidelines for the diagnosis and treatment of TB disease and LTBI;
- Establish a working relationship with state and local public health agencies, and report suspected and confirmed cases of TB; and
- Develop a referral mechanism for evaluation for TB disease and LTBI of persons seeking adjustment of immigration status.

Because of their access to foreign-born persons at high risk, civil surgeons are a critical component of TB control.

Pharmaceutical and Biotechnology Industries

Pharmaceutical and biotechnology industries are partners in TB control because of their essential role in developing new diagnostics, drugs, and vaccines. Although development of new tools for diagnosis, treatment, and prevention of TB has been deemed essential to the effort to combat the disease globally and to move toward its elimination, progress in these fields has been slow. New non-profit organizations are working with public and private partners to facilitate the development of essential new tools. These organizations include

- The Global Alliance for Tuberculosis Drug Development (www.tballiance.org);
- The Aeras Global Tuberculosis Vaccine Foundation (www.aeras.org); and
- The Foundation for Innovative New Diagnostics (www.finddiagnostics.org).

Although development of new tools for diagnosis, treatment, and prevention of TB has been deemed essential to the effort to combat the disease globally and to move toward its elimination, progress in these fields has been slow.

These organizations have provided venues for identifying and addressing obstacles to the development of new tools against TB among private industry, public and academic researchers, and philanthropic organizations. To further contribute to TB control and prevention efforts, the pharmaceutical and biotechnology industries should perform the following tasks:

- Understand the dimensions of the global TB epidemic and realize their key role in developing the necessary tools for diagnosis, treatment, and prevention of TB disease;
- Respond to the current surge of interest in TB globally by reexamining the costs of new product development and by considering potential new public and private funding and the markets for such products in developing countries;
- Contribute their perspectives and become involved in coalitions such as the Global Partnership to Stop Tuberculosis, the Global Alliance for Tuberculosis Drug Development, and the Foundation for Innovative New Diagnostics; and
- Coordinate with other stakeholders to ensure access to essential products for those whose lives are at stake.

Study Questions

8.7 The role of medical practitioners in TB control will decrease as TB morbidity in the United States decreases and jurisdictions reduce or even eliminate public health clinical services for TB.

(choose the one best answer)

- A. True
- B. False

8.8 Why do community health centers play a critical role in efforts to control and prevent TB disease? (choose the one best answer)

- A. They provide primary health-care services to populations that may encounter barriers to those services at other sites in the health-care system.
- B. Persons with symptoms of TB disease might go there first for evaluation and care.
- C. They have the primary responsibility for coordinating TB program integration in their area.
- D. A, B, and C are all correct.
- E. Only A and B are correct.

8.9 Which of the following tasks should hospitals perform to prevent the further spread of infection?

(choose the one best answer)

- A. Develop a written policy and plan for prevention of the nosocomial transmission of TB disease in their facility.
- B. Develop TB infection control policies to ensure that patients suspected of having infectious TB disease are isolated in AII rooms.
- C. Report any patient with a suspected or confirmed diagnosis of TB disease to their state and local public health agency promptly.
- D. A, B, and C are all correct.
- E. Only A and B are correct.

8.10 Which of the following is NOT a responsibility of academic institutions?

(choose the one best answer)

- A. Incorporate TB education into their curricula.
- B. Serve as repositories of expertise in the treatment and management of TB infection and disease.
- C. Develop questionnaires for screening all new patients in the community.
- D. Partner with public health agencies to improve TB control.
- E. Provide leadership in conducting research in diagnostics, drugs, and vaccines for TB infection and disease.

8.11 Why are medical professional organizations critical partners in TB control efforts?

(choose the one best answer)

- A. They are involved with medical practice and research.
- B. They provide TB education.
- C. They provide support for adequate funding for TB control and research.
- D. A, B, and C are all correct.
- E. Only A and B are correct.

8.12 Why are community-based organizations particularly effective in providing information and education on TB disease to their constituencies?

(choose the one best answer)

- A. They are often highly regarded by the populations they serve.
- B. Their messages might be accepted more positively than those delivered by the state and/or local health department.
- C. They have unlimited funds to purchase quality educational materials.
- D. A, B, and C are all correct.
- E. Only A and B are correct.

8.13 TB is believed to be the leading cause of death for prisoners worldwide.

(choose the one best answer)

- A. True
- B. False

8.14 Which of the following statements about civil surgeons is true?

(choose the one best answer)

- A.** Are a critical component of TB control because of their access to foreign-born persons at high risk for TB.
- B.** Conduct required health screening examinations, including testing for LTBI and TB disease in foreign-born persons living in the United States who apply for permanent residency.
- C.** Provide treatment for all TB patients that they identify.
- D.** A, B, and C are all correct.
- E.** Only A and B are correct.

8.15 Which of the following statements is true about pharmaceutical and biotechnology industries involved in TB?

(choose the one best answer)

- A.** Their essential role is to develop new diagnostics, drugs, and vaccines.
- B.** New public-private partnerships can help identify and address obstacles to developing new tools for TB.
- C.** New tools for diagnosis, treatment, prevention and elimination of TB are being developed quite rapidly to meet the need both domestically and internationally.
- D.** A, B, and C are all correct.
- E.** Only A and B are correct.

Match the primary responsibility with the appropriate health sector.

(Choose the one best answer and write the letter for the correct answer on the line next to the question number.)

Primary Responsibility	Health Sector
____ 8.16 Plan, coordinate, and evaluate TB control and prevention efforts.	A. Public health sector (TB programs, state and local public health agencies)
____ 8.17 Ensure the quality and completeness of all TB-related services.	B. Private health sector (clinicians, community health centers, hospitals, academic institutions, correctional facilities, homeless shelters, etc.)
____ 8.18 Are usually the first sources of medical care for persons with TB disease and need to be able to provide appropriate diagnostic and treatment services or referral.	

Chapter Summary

State and local health departments have the primary responsibility for preventing and controlling TB. However, TB control is a complex undertaking and requires the collaborative efforts of a broad range of persons, organizations, and institutions both inside and outside the public health sector. These various persons and organizations have a role in improving the detection of TB cases, one of the most important responsibilities of TB control, and include:

- Clinicians;
- Community health centers;
- Hospitals;
- Academic institutions;
- Medical professional organizations;
- Community-based organizations;
- Correctional facilities;
- Civil surgeons; and
- Pharmaceutical and biotechnology industries.

The essential role of the public health sector is to plan, coordinate, and evaluate TB control and prevention efforts. This role requires that state and local health departments focus on the following critical elements:

- Planning and policy development;
- Clinical and diagnostic services for patients with TB and their contacts;
- Training and education;
- Surveillance data and information management; and
- Monitoring and evaluation.

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