



CHAPTER 14: EDUCATION AND OUTREACH

INTRODUCTION

A cornerstone of the New York City (NYC) Bureau of Tuberculosis Control's (BTBC) work is conducting education, training, and outreach activities among diverse stakeholders. These activities ensure that individuals have a clear understanding of the multiple facets of tuberculosis (TB), are familiar with related guidelines and BTBC policies, and know how to access available BTBC resources.

BTBC works to facilitate the detection, treatment, and prevention of TB disease and latent TB infection (LTBI) through collaborative, comprehensive educational and outreach activities.

BUREAU OF TUBERCULOSIS CONTROL STAFF EDUCATION

BTBC staff across job titles and positions function as TB experts in the community, supporting patients through treatment completion, providing guidance to

physicians based on BTBC protocols, and educating the community about TB. To perform this work, staff need appropriate training and education on how to interact with diverse populations and communicate with patients, providers, and the public about TB.

Staff training can be divided into several key categories. These include:

- **CORE TB-RELATED TOPICS:** Core trainings are based on the Centers for Disease Control and Prevention (CDC) Self-Study Modules and are offered to new staff in a classroom (preferred) or virtual setting. Core training covers the medical aspects of TB, such as transmission and treatment, as well as programmatic topics such as surveillance, epidemiology, and case management. Refresher trainings on core topics are integrated into regular trainings and events for all staff.
- **TRAININGS MANDATED BY FEDERAL, STATE, AND LOCAL ENTITIES:** Mandated training requirements vary by Civil Service title and job duties, and include health and safety topics, human resource-related trainings, and topics related to the larger mission and guiding principles of the NYC Health Department (e.g., health equity, language access, and confidentiality).
- **ADMINISTRATIVE:** This includes new or updated programmatic policies, use of the electronic medical record (EMR) system and electronic surveillance and case management system, and human resources-related trainings.
- **PROFESSIONAL DEVELOPMENT:** These opportunities allow BTBC staff to build skills in leadership, management, time management, public speaking, and computer skills.

In addition to the more formal educational opportunities, BTBC also conducts monthly journal club and methods seminars for staff. These events allow BTBC staff to learn about innovations in TB research and practice and stimulate discussions on how to integrate new technologies and practices into daily work. These events also provide an opportunity for staff to engage with and learn about the work being done across the various offices within BTBC.

BTBC posts various policies and resources on an internal web server (intranet) for staff to access and utilize as needed. Training opportunities and other information is shared with staff via regular newsletters. BTBC also conducts monthly update meetings for all staff to learn about policy updates, program changes, and staff-related news.

PATIENT AND COMMUNITY EDUCATION AND OUTREACH

BTBC staff work with patients and communities at increased risk for TB to empower individuals in making informed decisions about their health. The goals of patient and community education and outreach include:

- Increase knowledge and awareness of TB disease, including information about susceptibility, transmission, and treatment
- Assess and influence perceptions, beliefs, and attitudes that may impact care-seeking and treatment initiation

- Refute myths and misconceptions related to TB transmission and treatment
- Demonstrate the benefits of seeking care for symptoms of TB disease
- Increase awareness about LTBI, treatment options (including shorter regimens), healthcare options, and the importance of receiving treatment for LTBI

Community and patient education occurs through a variety of avenues. Patient education occurs throughout the case management and patient care process. (See *Chapter 10: Case Management for Patients with Tuberculosis*.) BTBC also works collaboratively with community partners to develop and distribute linguistically and culturally-tailored TB educational materials; disseminate information through the media; and coordinate community-based, geographically accessible TB testing events in collaboration with local healthcare partners.

Examples of community-based events include TB education workshops, health fairs, the incorporation of TB educational content into English as a Second Language (ESL) classes, and geographically-targeted, community-based TB testing using the Health Department’s mobile van. Targeted testing in communities creates more accessible screening opportunities and helps increase the number of individuals who are tested for TB and linked to appropriate care.

BTBC’s website also serves as an educational resource for patients and the general community. Pages for the public focus on education about TB risk factors and treatment and how to access services offered by BTBC. BTBC staff also utilize social media to engage the community, posting upcoming events and other information about BTBC resources. The NYC Health Department’s official social media feeds occasionally feature TB-related content to promote various events and encourage awareness.

To improve outreach efforts in diverse communities, BTBC staff provide services, education, and outreach in numerous languages; ensure that all materials are easy to read and culturally appropriate; and tailor educational materials and resources to specific audiences.



To accommodate patients’ language needs, the Health Department offers interpretation services through Language Line. More information on interpretation and other services for patients with limited English proficiency is available from the Health Department’s Language Access Team.

HEALTHCARE PROVIDER EDUCATION AND OUTREACH

Educating and partnering with community providers is a key component of BTBC’s work. BTBC staff provide education for healthcare providers across multiple disciplines on guidelines for testing for TB infection, recommended treatment regimens, and BTBC protocols for managing patients. BTBC staff also offer support and guidance on hard-to-manage TB cases. Education, training, and outreach for this group is conducted through a variety of methods: lectures, TB Rounds, “Dear Colleague” letters, a monthly newsletter, online resources, and in-person trainings, meetings and conferences.

Through provider education and outreach, BTBC staff aim to:

- Ensure that providers promptly identify and report individuals with suspected and confirmed TB disease
- Ensure that patients receive appropriate and effective TB evaluation, treatment, and care
- Ensure that individuals who are at high risk for progression from LTBI to active TB disease initiate and complete treatment for LTBI and do not develop disease
- Encourage providers to test for LTBI in individuals who:
 - Are contacts to patients with infectious TB disease
 - Have certain medical risk factors for progression
 - May otherwise be at higher risk for TB



BTBC's **TB RISK ASSESSMENT TOOL** can be used to identify individuals who should be tested for TB infection. BTBC recommends testing anyone who meet any of these three criteria:

1. Contacts to infectious TB disease patients
2. Patients with immunosuppression
3. Persons born in or with prolonged stays in a country with a high TB incidence

See *Appendix B: Tuberculosis Risk Assessment Tool*.

BTBC coordinates trainings to share best practices in TB management and to foster collaboration with partners within and outside of NYC. BTBC physicians and other staff present TB-related topics at Grand Rounds in hospitals and outpatient facilities, and coordinate TB Rounds with hospitals throughout the city. These medical talks provide an opportunity for BTBC staff to share their expertise with community providers and discuss updates and changes to BTBC protocols. BTBC also co-sponsors an annual conference for World TB Day, giving providers an opportunity to learn about updated TB care guidelines and recommendations and hear from a variety of speakers on TB-related topics.



For more information about upcoming training events for healthcare providers, sign up for the **TB ACTION NEWS** newsletter by emailing TBO Outreach@health.nyc.gov

BTBC has numerous online resources available for providers. BTBC's website serves as an educational resource with information such as technical guidance for reporting requirements, guidelines for testing and treatment, NYC data and epidemiology, and educational materials that providers can share with their patients. BTBC also hosts an online newsletter, **TB ACTION NEWS**, with information about upcoming TB related events, updates to treatment guidelines or relevant policies, and significant TB related topics.



Reporting requirements for providers are available at nyc.gov/health; search for “TB provider resources.” Educational materials for patients and additional information on TB diagnosis and treatment are also available on the Health Department website.

EDUCATION AND OUTREACH AMONG COMMUNITY AND POLITICAL LEADERS

BTBC frequently works with elected officials and community leaders to conduct education and outreach activities. BTBC staff disseminate data related to TB in specific communities, participate in local educational and testing events for community members, and provide support for efforts to advocate for and fund TB-related initiatives. Education and outreach activities among community leaders are vital to ensure their support, learn key information about the needs of communities/constituents, and build community trust.

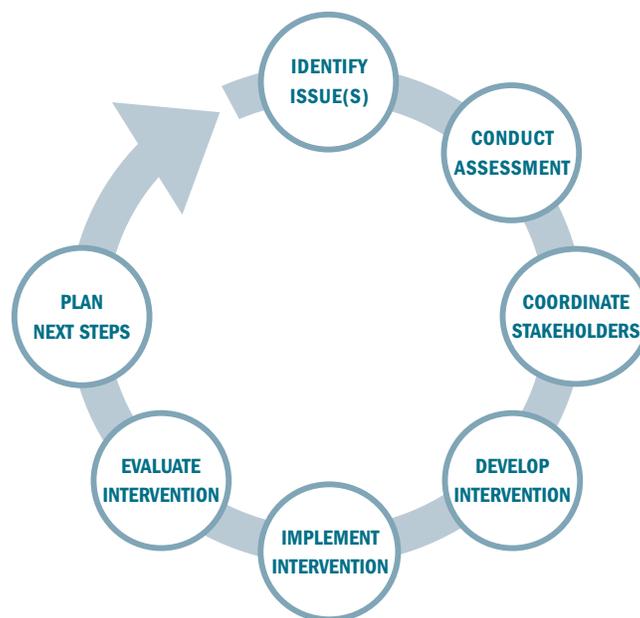
The objectives of community stakeholder education and outreach include:

- Increase awareness of the burden of TB disease within a neighborhood and/or community
- Increase knowledge and awareness of TB
- Increase awareness of Health Department resources related to TB care and management
- Develop partnerships towards developing and implementing targeted outreach efforts

PLANNING FRAMEWORK FOR EDUCATION, TRAINING, AND OUTREACH

BTBC uses a systematic approach to assessing, implementing, and evaluating TB educational, training, and outreach efforts. (See *Figure 14.1: Planning Framework for Education, Training, and Outreach.*)

FIGURE 14.1: Planning framework for education, training and outreach



STEP 1: IDENTIFY ISSUES

Staff use existing NYC Health Department epidemiologic data, census data, and other information to identify populations in NYC at high risk for TB. Examples of factors used to identify populations of concern include:

- Burden of disease
- Presence of traditional TB risk factors (e.g., immunosuppression, non-U.S.-born, contacts)
- Evidence of recent transmission
- High incidence in NYC
- High prevalence of LTBI

This step is also used to identify training needs for staff. Any missed targets or changes in epidemiologic or performance data are analyzed to determine whether staff training might be needed to help address the issue.

STEP 2: CONDUCT ASSESSMENT

Non-mandated training needs for staff are collected through ongoing communication with management and staff surveys. This information is used to develop training objectives that will give staff the skills to better and more efficiently fulfill their job requirements.

For community and provider outreach purposes, data collected through needs assessment enables BTBC to engage stakeholders; better understand healthcare-seeking practices and barriers; explore TB-related knowledge, experiences, and beliefs; identify specific areas of need for each community; and identify existing resources (internal and external) that can be leveraged for intervention development and implementation. This data is gathered through both informal and formal processes. Sources of information include patients, healthcare providers, community stakeholders, and published research.

Examples of assessment strategies include:

- Discuss with infectious disease physicians at Hospital A to determine barriers (lack of knowledge about TB testing and diagnosis) and assets (training opportunities available) to prescribing TB treatment
- Develop a survey and conduct focus groups among NYC Health Department TB clinic patients to assess factors influencing acceptance of shorter treatment regimens (three months of isoniazid [INH] and rifapentine [RPT] [3HP] or four months of rifampin [RIF] [4R])
- Hold a practice session before implementing a new EMR to identify staff training gaps

Next, a qualitative and statistical analysis of needs assessment data is done, and a report is generated that includes recommendations for areas of intervention. Needs assessment methodology, implementation, findings, and recommendations are shared internally and externally in order to verify the accuracy of results, ensure continued stakeholder involvement, and enable other jurisdictions to replicate methods and benefit from findings.

STEP 3: COORDINATE STAKEHOLDERS

For staff training, stakeholders include BTBC staff and external trainers. For community and provider-based outreach, the stakeholders may be broad and diverse. Recognizing that inter-related individual, community, and structural factors influence health beliefs and healthcare-seeking practices, multiple stakeholder groups may be identified depending on BTBC priorities and community-specific characteristics.

STEP 4: DEVELOP INTERVENTIONS

Needs assessment findings and existing BTBC data are used to develop tailored interventions in conjunction with key stakeholders. Interventions reflect BTBC and community priorities, and utilize existing internal and external resources.

1. **Determine goal(s) of intervention** (e.g., train administrative staff to use Excel, increase care seeking behaviors, increase initiation of LTBI treatment)
2. **Define barriers** (e.g., does not know how to use a spreadsheet, does not know symptoms of TB disease, does not know that there is treatment for LTBI)
3. **Determine assets** (e.g., staff have computers, strong community infrastructure, political support)
4. **Determine intervention strategies**
 - Staff training (specific training for BTBC nurses, case managers, or administrative staff)
 - Media campaign (geo-targeted, web-based ads on culturally and linguistically appropriate websites)
 - Community outreach (health fair, mobile van testing in communities where individuals are less likely to seek care)
 - Provider outreach (TB Rounds, World TB Day conference, webinars)
5. **Determine resources required** (e.g., financial, educational materials, staff with particular language skills)
6. **Involve key stakeholders in implementation and division of responsibilities** (e.g., who will conduct training, can community partners distribute flyers, organize press conference, organize community education event, etc.)
7. **Develop appropriate evaluation plan**

STEP 5: IMPLEMENT INTERVENTIONS

For staff trainings, workshops are implemented with support from key staff and external trainers where relevant. For community and provider outreach, BTBC partners with community leaders, healthcare providers, and other entities to operationalize strategies to reduce TB and improve community health.

STEP 6: EVALUATE INTERVENTIONS

BTBC works to develop adaptable and replicable approaches for the development and implementation of tailored, sustainable interventions to improve staff effectiveness, improve healthcare access, and reduce TB in NYC.

HOW IS PROGRESS MEASURED? What tool or device (surveys, tests, and data from other sources) will be used to measure the expected changes? Consider what is needed to ensure the resources/capacity (time, staff, funding, etc.) to perform the measurement.

- 1. Process evaluation:** How well is the intervention being implemented (ex. how many posters were distributed, how many people attended event, quality of educational materials, effectiveness of educational presentations/workshops, etc.)?
- 2. Impact:** What is the change in knowledge, attitude, and behaviors of the target population (did the participants in the workshop increase their knowledge about TB; was there an increase in intention to get tested/treated) or did a certain recommended policy get implemented?
- 3. Outcome:** Did the intervention improve health? (In the long term, have TB rates gone down in the target population? Did individuals who tested positive start and complete treatment?)

STEP 7: PLAN NEXT STEPS

1. Identify lessons learned
2. Share evaluation and results with stakeholders
3. Provide preliminary results to program staff and stakeholders to maintain their interest and help them see value in TB control activities
4. Identify program or evaluation problems that can be addressed immediately
5. Develop plan to communicate findings to stakeholders
6. Determine need for any policy/programmatic changes, leading to Issue Identification

SUMMARY

BTBC's education and outreach activities are integral to maintaining an effective TB program. BTBC staff engage providers, patients, communities, politicians, and other staff members to improve patient care and work towards TB elimination in NYC. Using innovative approaches such as mobile van testing and TB Rounds, BTBC continues to expand the number of New Yorkers educated about TB. In addition, targeted testing allows BTBC to educate and screen the communities at highest risk for TB in NYC.

KEY SOURCES

Centers for Disease Control and Prevention. *Self-Study Modules on Tuberculosis Module 1: Transmission and Pathogenesis of Tuberculosis*. Atlanta, GA: Centers for Disease Control and Prevention; 2019. <https://www.cdc.gov/tb/education/ssmodules/pdfs/Module1.pdf>.

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