

XVI. PROGRAM EVALUATION

MODULE OUTLINE

1. Standards of Public Health Practice
 2. National TB Indicators Project (NTIP)
 3. Case Review
 4. Cohort Review
 5. Regional/Metro Program Audits and Assessments
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1. STANDARDS OF PUBLIC HEALTH PRACTICE

- XVI-1. TTBEF statewide and regional/metro TB program performance is measured annually according to targets established by the Centers for Disease Control and Prevention (CDC) through the National TB Indicators Project (NTIP).
- XVI-2. Regional/metro TB program conduct reviews of all current patients with suspected or confirmed TB disease at least monthly.

2. NATIONAL TB INDICATORS PROJECT (NTIP)

NTIP is a monitoring system for tracking the progress of U.S. TB control programs toward achieving the National TB Program Objectives. The TTBEF statewide and regional/metro performance is measured annually according to targets established through the NTIP (**Standard of Public Health Practice XVI-1**). NTIP focuses on the 15 objective categories listed in **Table XVI-1** below.

Table XVI-1: National TB Indicators Project (NTIP) Objectives and Performance Targets

Objective Categories		Objectives and Performance Targets for 2015
1	Completion of treatment	For patients with newly diagnosed TB for whom 12 months or less of treatment is indicated, increase the proportion of patients who complete treatment within 12 months to 93.0%.
2	TB Case Rates	
	<ul style="list-style-type: none"> U.S.-born persons 	Decrease the TB case rate in U.S.-born persons to less than 0.7 cases per 100,000. <ul style="list-style-type: none"> Increase the average yearly decline in TB case rate in U.S.-born persons to at least 11.0%.
	<ul style="list-style-type: none"> Foreign-born persons 	Decrease the TB case rate for foreign-born persons to less than 14.0 cases per 100,000. <ul style="list-style-type: none"> Increase the average yearly decline in TB case rate in foreign-born persons to at least 4.0%.
	<ul style="list-style-type: none"> U.S.-born, non-Hispanic blacks 	Decrease the TB case rate in U.S.-born, non-Hispanic blacks to less than 1.3 cases per 100,000.
	<ul style="list-style-type: none"> Children younger than five (5) years of age 	Decrease the TB case rate for children younger than 5 years of age to less than 0.4 cases per 100,000.
3	Contact Investigation	
	<ul style="list-style-type: none"> Contact elicitation 	Increase the proportion of TB patients with positive acid-fast (AFB) sputum-smear results who have contacts elicited to 100.0%.
	<ul style="list-style-type: none"> Evaluation 	Increase the proportion of contacts to sputum AFB smear-positive TB patients who are evaluated for infection and disease to 93.0%.
	<ul style="list-style-type: none"> Treatment initiation 	Increase the proportion of contacts to sputum AFB smear-positive TB patients with newly diagnosed TB infection (TBI) who start treatment to 88.0%.
	<ul style="list-style-type: none"> Treatment completion 	For contacts to sputum AFB smear-positive TB patients who have started treatment for newly diagnosed LTBI, increase the proportion who complete treatment to 79.0%.

Objective Categories		Objectives and Performance Targets
4	Laboratory Reporting	
	<ul style="list-style-type: none"> • Turnaround time 	Increase the proportion of culture-positive or nucleic acid amplification test-positive TB cases with a pleural or respiratory site of disease that have the identification of <i>M. tuberculosis</i> completed reported by laboratory within 25 days from the date the initial diagnostic pleural or respiratory specimen was collected to 82.7%.
	<ul style="list-style-type: none"> • Drug-susceptibility result 	Increase the proportion of culture-positive TB cases with initial drug susceptibility results reported to 100.0%.
5	Treatment Initiation	Increase the proportion of TB patients with positive AFB sputum smear results who initiate treatment within 7 days of specimen collection to 95.2%.
6	Sputum Culture Conversion	Increase the proportion of TB patients with positive sputum culture results who have documented conversion to sputum culture-negative within 60 days of treatment initiation to 61.5%.
7	Data Reporting	
	<ul style="list-style-type: none"> • RVCT 	Increase the completeness of each core Report of Verified Case of Tuberculosis (RVCT) data item reported to CDC, as described in the TB Cooperative Agreement announcement, to 99.2%.
	<ul style="list-style-type: none"> • ARPEs 	Increase the completeness of each core Aggregated Reports of Program Evaluation (ARPEs) data item reported to CDC, as described in the TB Cooperative Agreement announcement, to 100.0%.
	<ul style="list-style-type: none"> • EDN 	Increase the completeness of each core Electronic Disease Notification (EDN) system data item reported to CDC, as described in the TB Cooperative Agreement announcement, to n%.
8	Recommended Initial Therapy	Increase the proportion of patients who are started on the recommended initial 4-drug regimen when suspected of having TB disease to 93.4%.
9	Universal Genotyping	Increase the proportion of TB culture-confirmed TB cases with a genotyping result reported to 94.0%.
10	Known HIV Status	Increase the proportion of TB cases with a positive or negative HIV test result reported to 88.7%.

Objective Categories		Objectives and Performance Targets
11	Evaluation of Immigrants and Refugees	
	<ul style="list-style-type: none"> Evaluation initiation 	For immigrants and refugees with abnormal chest X-rays read overseas as consistent with TB, increase the proportion who initiate medical evaluation within 30 days of notification to 64.8%.
	<ul style="list-style-type: none"> Evaluation completion 	For immigrants and refugees with abnormal chest X-rays read overseas as consistent with TB, increase the proportion who complete medical evaluation within 90 of notification to 62.0%.
	<ul style="list-style-type: none"> Treatment initiation 	For immigrants and refugees with abnormal chest X-rays read overseas as consistent with TB and who are diagnosed with TB infection during evaluation in the U.S., increase the proportion who start treatment to 87.3%.
	<ul style="list-style-type: none"> Treatment completion 	For immigrants and refugees with abnormal chest X-rays read overseas as consistent with TB, increase the proportion who complete TB infection treatment to 75.7%.
12	Sputum-Culture Reported	Increase the proportion of TB cases with a pleural or respiratory site of disease in patients ages 12 years or older that have a sputum-culture result reported to 95.7%.
13	Program Evaluation	
	<ul style="list-style-type: none"> Evaluation focal point (applicable to state programs only) 	<p>Increase program evaluation activities by monitoring program progress and tracking evaluation status of cooperative agreement recipients.</p> <p>Increase the percentage of cooperative agreement recipients that have an evaluation focal point.</p>
14	Human Resources Development Plan (applicable to state programs only)	<p>Increase the percent of cooperative agreement recipients who submit a program-specific human resource development plan (HRD), as outlined in the TB Cooperative Agreement announcement, to 100.0%.</p> <p>Increase the percent of cooperative agreement recipients who submit a yearly update of progress-to-date on HRD activities to 100.0%.</p>
15	Training Focal Point (applicable to state programs only)	Increase the percent of cooperative agreement recipients that have a TB training focal point.

Additional NTIP Resources

<http://www.cdc.gov/tb/publications/factsheets/statistics/NTIP.htm>

<http://www.cdc.gov/tb/publications/factsheets/statistics/NTIPFAQs.htm>

Reference:

1. CDC. <http://www.cdc.gov/tb/programs/Evaluation/Indicators/ProgramObjectives.pdf>

3. CASE REVIEW

TB case review is a systematic review of clinical, laboratory, case management, and contact investigation aspects of each suspected or confirmed TB case currently under the care of the regional TB program. The purpose of these multi-disciplinary discussions is to ensure that all activities involved in the medical and public health interventions related to each case are being conducted thoroughly, effectively, and in a timely manner to optimize the patient's clinical outcome and protection of the public health. Regional/metro TB program conduct reviews of all current patients with suspected or confirmed TB disease at least monthly (**Standard of Public Health Practice XVI-2**), and include the regional TB program manager, TB physician, nurse case manager, and investigator/DOT worker and others, as needed.

4. COHORT REVIEW

Cohort review is a multi-disciplinary and systematic review of all confirmed TB cases and is a requirement for federal funding of the TTBEF. The goal of cohort review is to identify system issues related to case reporting, case management, treatment, and contact investigations. The cohort review process can benefit the regional/metro TB program by:

- Increasing staff accountability for patient outcomes
- Improving TB case management and the identification of contacts
- Motivating staff
- Revealing program strengths and weaknesses
- Indicating staff training and education needs

The cohort review process is coordinated by TTBEF Central Office (C.O.) together with the regional/metro TB program manager and occurs on a regular basis. It examines a group or "cohort" of patients reported within a specific time interval in terms of individual patient outcomes and overall program performance. All confirmed TB cases from a time interval (e.g., one 3-month quarter or one 6-month period) are reviewed as a group approximately 6-9 months after the cases are officially counted. Therefore, most of the patients in the cohort have completed anti-TB therapy or are nearing completion of treatment.

The cohort review process includes the following three (3) phases which are repeated in a cycle:

A. Preparation

- Annually
 - Coordinate the cohort review schedule for the calendar year (CY) with TTBEF program manager
- Two (2) months before cohort review:

- Develop a case list for cohort review including RVCT and contact investigation data
- Schedule a conference room for cohort review
- Send a “save-the-date” email to participants
- Ensure completion/update of missing data in TB-PAM
- One (1) month before cohort review:
 - Ensure all case presentation and contact data are complete, sent and received at TTBEPC.O. by TB epidemiologist
- One (1) week before cohort review:
 - Route completed case presentation worksheets to regional TB program manager

B. Cohort Review Session

- Presentation and discussion of progress on previous cohort review “Action Plan”
- Ensure participation of key staff
- Present TB case summary information using cohort presentation forms
- Present related contact information
- Summary of cohort outcome indicator data
- Facilitated discussion with all participants regarding identified systems issues which need to be addressed to improve outcomes
- Development of list of key system issues for action plan

C. Follow-up

- Within one (1) week
 - Develop action plan to address identified systems issues
 - Submit action plan to TTBEPC.O. program manager for C.O. review
- Within two (2) weeks
 - TTBEPC.O. submits written response to draft action plan

Table XVI-2 outlines the minimum information that should be collected and reviewed during a cohort review.

Table XVI-2: Minimum Data Elements Collected and Reviewed during Cohort Review

Category	Data Element
Demographics	<ul style="list-style-type: none"> ● Patient initials ● Age ● Country of birth ● Patient case number ● Sex
Clinical Information	<ul style="list-style-type: none"> ● HIV status ● Chest radiograph (CXR) results ● Smear and culture results ● Drug susceptibility results
Treatment Information	<ul style="list-style-type: none"> ● Status of treatment ● Directly observed therapy status

Category	Data Element	
Contact Investigation	<ul style="list-style-type: none"> • Results of source case investigation (if applicable) • Number of contacts evaluated • Number of contacts infected and having disease • Number of contacts completing treatment for TBI 	<ul style="list-style-type: none"> • Number of contacts identified • Number of contacts infected, but without disease • Number of contacts started on treatment for TBI

More information about the cohort review process can be found at:
<http://www.cdc.gov/tb/publications/guidestoolkits/cohort/Cohort.pdf>

5. REGIONAL/METRO PROGRAM AUDITS AND ASSESSMENTS

- Metro TB Program Audits
 - The Tennessee Department of Health (TDH) requires that all six (6) metro TB programs funded by the State to be audited on a 3-year cycle and as needed. Routine metro TB program audits every three (3) years are intended to assess both the outcomes of the program’s activities as well as the efficacy and effectiveness according to established standards. Criteria for metro TB program audits will be based upon the “scope of services” of the contract with each metro and on the “Standards of Public Health Practice” found in the TTBEF Manual.
- Regional TB Program Assessments
 - The TTBEF C.O. will conduct routine annual regional TB program assessments of all thirteen (13) metro and rural regional TB programs as a mechanism to assess not only outcomes, efficacy and effectiveness but also to gauge the resource and training needs of each regional TB program. TTBEF C.O. will provide the program assessment criteria in advance to the regional TB program manager. The “Standards of Public Health Practice” found in the TTBEF Manual will form the core of the regional TB program assessments.