


 Southeastern National
Tuberculosis Center
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Program Evaluation The National TB Indicators Project

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Background: The National TB Indicators Project

- TB Program Evaluation Work Group (EWG) Initiative
 - Reinforce the national priorities for TB programs
 - Increase use of existing data for program improvement
 - Build capacity for program evaluation
 - **Product:** The National TB Indicators Project (NTIP)



What Makes NTIP Different?

- According to CDC, NTIP enables:
 - Consensus on performance measures
 - Standardized measure of program progress and impact using existing data
 - Provides performance targets to be used as **benchmarks** for self-assessment **
 - Enhanced ability to assess impact
 - Prioritization of efforts for program improvement, reporting and technical assistance





NTIP Performance Targets

Current Performance Targets

1. Known HIV Status
2. Contact Investigation
3. Completion of Treatment
4. Drug Susceptibility Results
5. TB Case Rates
(i.e. US-born, Foreign-born, US-born Non-Hispanic Blacks, Children younger than 5 yrs old)

Future Performance Targets

6. Recommended Initial Therapy
7. Treatment Initiation
8. Sputum-Culture Reported
(Document results)
9. Data Reporting
(More Complete RVCT, ARPEs, EDN)
10. Sputum culture conversion
11. Evaluation of Immigrants and Refugees
12. Laboratory Turnaround Time
13. Universal Genotyping

See: http://www.cdc.gov/tb/Program_Evaluation/Indicators/default.htm

Example: Performance Targets

Objective Categories	Objectives and Performance Targets
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%.
Contact Investigation	
Contact Elicitation	Increase the proportion of TB patients with positive acid-fast bacillus (AFB) sputum-smear results who have contacts elicited to 100.0%.
Evaluation	Increase the proportion of contacts to sputum AFB smear-positive TB patients who are evaluated for infection and disease to 93.0%.



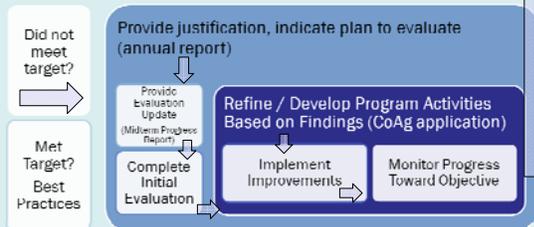
NTIP Reports

- Use existing reportable data / standardizes measurements to track state/local progress toward objectives
- Illustrate national/state progress towards national objectives
- Guide program evaluation efforts
- Help to prioritize areas for improvement
 - Detect and understand barriers, and improve program effectiveness
 - Facilitate discussion, education, and problem solving



CDC Flowchart: Integrating NTIP into Program Practice

Monitor Progress Toward NTIP Objective





Example Outcome Evaluation Monitoring Progress Toward NTIP Objective



Getting Started

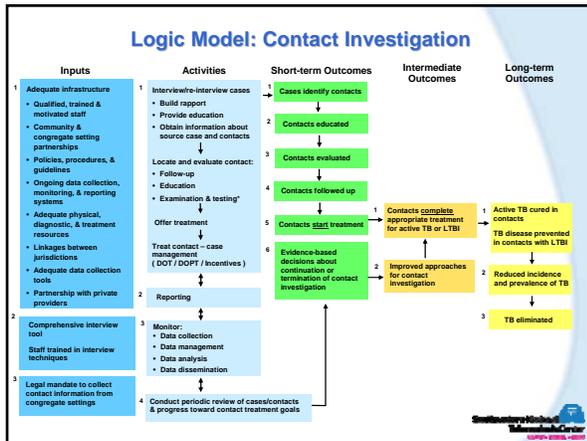
1. Examine NTIP Indicators in Relation to State/Local Program
2. Develop questions around the objective/outcome to answer "Why?" is your program seeing:
 - Increases
 - Decreases
 - No Changes
3. Look at the "big picture" and all factors needed to achieve the objective/outcome.
 - Logic models help with this process
 - Guide what to evaluate - generate hypotheses re: problems / no changes
4. Drill Down
 - What resources are available/lacking to accomplish these objectives?
 - What factors/issues contributed to no change/failure/success?
 - What activities have been undertaken (or planned) to achieve the intended outcome(s)?
 - What has been the impact of these activities?



Logic Models: Organizing the “Big Picture”

- Illustrates:
 - Scope of activities
 - How activities fit together logically
 - Maps relationships between needed resources, activities and intended effects (expected changes)
- Good starting point to help focus the evaluation
- Find TB Control Logic Models: CDC’s “A Guide to Developing a TB Program Evaluation Plan”
 - <http://www.cdc.gov/tb/programs/Evaluation/guide.htm>





Contact Investigation Trainings & NTIP

Objective Categories	Objectives and Performance Targets
Contact Elicitation	Increase the proportion of smear+ cases who have contacts elicited to 100.0%.
Contact Evaluation	Increase the proportion of contacts to smear+ cases who are evaluated for infection and disease to 93.0%.
Contact Treatment Initiation	Increase the proportion of contacts to smear+ cases with newly diagnosed latent TB infection (LTBI) who start treatment to 88.0%.
Contact Treatment Completion	For contacts to smear+ cases who start treatment for newly diagnosed LTBI, increase the proportion who complete treatment to 79.0%.

Example: Refining/Developing Program Activities

- The Evaluation Focal Point, the Education/Training Focal Point and Program Leaders (stakeholders) brainstorm potential "next steps" or an action plan for "New" Staff:
 1. Plan to repeat the standard CI course for all new staff in 2009
 2. Critically examine content of CI course – to ensure that the inputs and activities outlined in the logic model (for successful CI) are reflected in the curriculum
 3. Conduct phone interviews with a sample of field staff; ask for suggestions regarding content that might be added to the CI course to address obstacles to eliciting contacts from foreign-born and homeless cases
 4. Identify existing training materials that are responsive to staff suggestions and/or speakers with expertise in topic areas
 5. Update and expand CI Course based on staff suggestions and available materials/experts
 6. Evaluate short term outcomes and intermediate outcomes of the action plan that is implemented



Example: Refining/Developing Program Activities

Potential data to be collected ...

Implementing Improvements

1. Proportion of new staff who attended course.
2. Description of staff reported obstacles to eliciting contacts from foreign-born and homeless cases.
3. Recommendations / decisions regarding updating/expanding course after reconciling CI course content with CI logic model.
4. Description of training materials or presentations by persons with expertise incorporated into updated/expanded course
5. Others? _____

Short-term Progress Towards Objectives

1. Changes in staff knowledge
2. Changes in staff attitudes
3. Changes in staff members' confidence (self-efficacy) to elicit contacts from hard to reach populations
4. Staff members perception of the course, specifically if it met their learning needs
5. Staff members planned changes in personal practices (personal action plans)
6. Others? _____



Example: Coming Around the Evaluation "Cycle" Again Looking at Progress Towards Meeting the Target & Program Activities

Performance Targets

- Proportion of smear + cases with non-cavitary pulmonary TB with
 - No contacts identified
 - Only 1 contact identified
 - Only 2 contacts identified
- Ask public health areas to provide justifications for cases with 0,1, or 2 contacts
- Others? _____

Program Initiative / Use of Resources

- Examine the relationship between:
 - Staff trained using the old CI course curriculum with those who have been trained using the updated/expanded
- In relation to:
 - The proportion of smear + non-cavitary pulmonary TB cases with "0" contacts and only 1 or 2 contacts



Progress Attributed to Program Initiative

Examine the relationship between training and contacts elicited

You need to write the action plan for 2011. Based on these data, what would you propose?

	Contact Elicitation (Jan -Dec 2010) by Status of Training Curriculum	
	Staff Trained with Updated/Enhanced Curriculum	Staff Trained with Standard Curriculum
Number of cases with 2 or less contacts (Total = 33)	N=13	N=20
Number of Contacts		
"0" Contacts	15% (2)	30% (6)
1-2 Contacts	85% (11)	70% (14)
Total	100%	100%

Note: These data have been created for this presentation and are an example only





Selecting an Evaluation Approach

Think of these approaches this way.....
 How strong is your "evidence" to answer WHY
 your program is seeing no change Increases or decreases



Evaluation Approaches

Approach	Design			Some Limits of the Design
One-Shot Case Study One set of data from same group weakest evaluation design	X Intervention		O Post-intervention observation	Historically things happen.... In the past "things" may have been same, better or worse – you do not know. As time passes things "mature" or change, know that your intervention may or may not have caused change.
Pretest-Posttest 2 sets of data from same group Weak - results can be influenced by factors other than intervention	O Observation	X Intervention	O Observation	Changes detected may come from familiarity with evaluation tool – not the intervention itself. The amount of an "intervention" that is received varies and cannot be controlled. Example: quantity and quality of patient education provided.

"Intervention" can be defined as a new policy, procedure, form that is used, training or in-service provided etc.

Evaluation Approaches

Approach	Pretest-Posttest Control Group Design			
Design	Group 1	O	X	O
		Pretest Observation	Intervention	Posttest Observation
Strong, Popular Design	Group 2	O		O
		Pretest Observation		Posttest Observation
Features of the Design	Can detect changes in knowledge, attitudes, behaviors, practices, patient outcomes Despite many factors outside the control of the TB program (i.e. media hysteria re: a TB outbreak)			
Approach	Posttest Only Comparison Group Design			
Design	Group 1	X		O
		Intervention		Posttest Observation
Good design, but weaker than Pretest-Posttest Control Group	Group 2			O
				Posttest Observation
Features of the Design	Good when pre-test is not possible, particularly if an "intervention" has already been implemented in some areas or with some of the intended audience			



Words of Advice : Evaluation & Data Collection



Collecting Data

Brainstorm in advance.....

- What will be collected

Provide a definition for each piece of data

The ability to detect differences /changes will depend on the "operational definition" for each data point so that observations can be compared in a meaningful way (to a standard or another group)

- Why it will be collected / how the information will be used

- Where the data/information will come from
- Who will collect the data (or how will data be collected)
- How often will data be collected



National Tuberculosis Indicators Project Frequently Asked Questions

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



References / Resources

- CDC Evaluation Working Group
<http://www.cdc.gov/eval>
- TB Program Evaluation Handbook
http://www.cdc.gov/tb/Program_Evaluation/TBEvaluationHandbook_tagged.pdf
- Guide to Developing A TB Evaluation Plan
http://www.cdc.gov/tb/Program_Evaluation/default.htm
- National TB Program Objectives and Performance Targets for 2015
http://www.cdc.gov/tb/Program_Evaluation/Indicators/default.htm
- The National Tuberculosis Indicators Project (NTIP)
<http://www.cdc.gov/TB/publications/factsheets/statistics/NTIP.htm>
- National Tuberculosis Indicators Project (NTIP): Frequently Asked Questions
<http://www.cdc.gov/TB/publications/factsheets/statistics/NTIPFAQs.htm>