A pragmatic approach to measuring, monitoring and evaluating interventions for improved tuberculosis case detection
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The inability to detect all individuals with active tuberculosis has led to a growing interest in new approaches to
Aim of this presentation

*To share a pragmatic M&E framework which was developed to measure effect of and to maximize learning in innovative Tuberculosis case finding projects.*
Outline of the Presentation

Background

• Gap in TB case finding
• Pathway to care – patient pathway
• TB REACH

M&E Framework

• TB surveillance system
• Design
• Using process monitoring for improving the approach and maximizing results

Discussion
Gap in Tuberculosis (TB) case finding

- WHO estimates: 9 million individuals worldwide developed TB in 2013
- Reported to WHO: 6.1 million TB patients put on TB treatment of which 5.7 million newly diagnosed
- Gap of 2.9 million TB cases
  - Not diagnosed?
  - Diagnosed but not reported?
Limited access to diagnostic service (long distance, high cost, cultural)

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Weak referral linkages between services

System overburdened and poor motivation of health workers

Pathway to care – where do we lose the patients?
1. ACSM Community engagement

2. Minimize access barriers

3. More effective TB suspect identification in health services

4. Improve diagnostic quality, new tools

5. Screening

**Active TB**

**Infected**

**Contacts**
- Children
- Other risk groups
- All household
- Workplace
- Wider

**Clinical risk groups**
- HIV
- Previous TB
- Malnourished
- Smokers
- Diabetics
- Drug abusers

**Risk populations**
- Prisons
- Urban slums
- Poor areas
- Migrants
- Workplace
- Elderly/infants

**Health care utilisation**

**Patient pathway**

Options to increase case detection

TB REACH initiative

Supports innovative projects aiming to achieve early and increased TB case detection in population with limited access to care.
What is TB REACH?

*Fast track funding for programmatic innovation around case detection (up to 1 million USD/project)*

- Funds partners and expects activities to begin within 9 months from call for applications + short duration
- Promotes new approaches for the country and supports proving (or rejecting) a concept
- Reaching populations with poor access and vulnerable groups
- Open to all partners (NGO, CBO, NTP, university, etc.)
- Independent selection process
- Independent external M&E for projects
TB REACH Waves 1 to 4

Total 142 projects in 46 countries; over US$90 million committed
TB REACH projects target different population groups, for example:

- Contacts
- Urban slums
- PLHIV
- Children
- Prisoners
- IDPs & migrants
- Indigenous population
- Pvt. Clinics / pharmacists
TB REACH projects have implemented a variety of interventions, for example:

- Specimen transport
- Lab result reporting
- Public-private mix
- Awareness
- Incentives
- Difficult terrain
- Mobile van
- Diagnostics
TB REACH M&E Framework
TB registration and reporting (1)

- Amongst the first established and best developed surveillance systems, with approximately 200 countries reporting data using standardized forms developed through successive WHO guidance.

- The purposes of the system include both operational management of TB control efforts and surveillance of local, national and international trends.
Quarterly routine reports comprise:

- counts of diagnostic activities
- counts of cases enrolled on treatment
- outcome of treatment.
TB Case notification

TB patients put on TB treatment are registered in the health facility of diagnosis and reported locally, nationally and internationally.

Numbers/trends are influenced by:
✓ Underlying TB incidence and prevalence
✓ Quality of registration and reporting
✓ Changes in definitions or practice
✓ Coverage of the system (e.g. private sector)
✓ Changes in health system
✓ Programmatic activities
TB Case notification

- Introduction of more sensitive diagnostics
- Reduced funding influencing programmatic activities
- Severe flooding
M&E objectives

1. **Project success:**
Determine the additional number of TB patients notified and successfully treated by the projects, over and above what would have been accomplished without the grants.

2. **Effectiveness of implemented strategies**
Review case finding strategies within projects.

3. **Provide grantee possibility to respond to results**

4. **Overall success of TB REACH – meta-analyses**
M&E design

**Quasi-experimental design:**
- Intervention versus ‘control’ population
- Before/after comparison
- No randomization
- Triangulate evidence and identify confounders
Definition of Terms

Evaluation Population
e.g. sum of BMUs that capture the ‘additional cases’ found

Target population
e.g. migrants, prison inmates – ‘direct yield’

‘Halo’ of untargeted extra cases
i.e. not measure as direct yield
Key-points of M&E system

- Each project has 1st and 2nd M&E reviewer
- Reviewer involved after project selection
- Reviewer and grantee develop M&E plan together during grantee meeting
- Project reports each quarter
- Reviewer reviews results and provides feedback to grantee each quarter
- Quarterly meetings with funder
M&E time-line

- Proposal: grantee develops indicators and targets to track progress
- Baseline validation – reviewing targets
- Grantee M&E meeting – M&E plan
- Quarterly monitoring
- Project visit
- Final reviewer report + final grantee report
Activity, Process and Outcome

activities

Outcome
Measures effect on TB case notification

Process
Measures direct project yield
Example 1

*Improve access to TB care*

- Set up of sputum collection points
- Build capacities of Community Health Volunteers in sputum collection and transportation.
- Collaborate with Community Health Volunteers, Pharmacists, and Traditional and Spiritual healers to educate and refer TB presumptive persons
Process – assumptions - targets

<table>
<thead>
<tr>
<th>Process Indicator</th>
<th>Annual Targets</th>
<th>Assumptions</th>
<th>Results 2 quarters</th>
</tr>
</thead>
<tbody>
<tr>
<td># of people screened/reached</td>
<td>103,500</td>
<td>2%</td>
<td>74,060</td>
</tr>
<tr>
<td># of people identified with TB symptoms</td>
<td>2,070</td>
<td>2%</td>
<td>214</td>
</tr>
<tr>
<td># of people examined for TB</td>
<td>1,760</td>
<td>85%</td>
<td>113</td>
</tr>
<tr>
<td># of confirmed TB cases</td>
<td>176</td>
<td>10%</td>
<td>22</td>
</tr>
<tr>
<td># of confirmed TB cases put on treatment</td>
<td>167</td>
<td>95%</td>
<td>17</td>
</tr>
</tbody>
</table>

There is drop between (1) referral for testing and arriving at the lab and (2) referral for treatment and starting treatment → the project may improve this.
The results of the process indicators and the impact on notification (no impact) are discussed with the project and explanations are sought.
Example 2

A mixture of approaches in Haiti

- Improved recognition of symptoms at health facilities
- Improved access through community outreach in the IDPs and industrial workers
- Contact investigation
- Improved diagnostics
External factors

Important to know what is happening in the control population that caused this increase.
Would the same approach be successful in a different setting?

• Important to have clear description of operational arrangements (“which variables are associated with success?”)
  ✓ use of incentives?
  ✓ additional staff in the labs?
  ✓ referral mechanisms?
  ✓ ..

• Important to understand the systemic factors (e.g. quality of leadership, supervisors, cultural aspects)

• importance of data quality assurance
Strengths of the M&E framework

• Impact on notification is a stringent and fair criterion of success

• Detailed data on pathway of care provide valuable insight in project implementation

• Quarterly monitoring allows mid-term adjustments

• Active role for project grantee in M&E

• Lessons learned described by grantee and reviewer in their final reports
Challenges

1. Challenges reviewing impact
   ✓ Attribution
   ✓ One year time frame
   ✓ Minimize reporting burden

2. Measuring effect of strategies
   ✓ Multiple strategies
   ✓ Influence environmental / implementation factors
Discussion - Conclusion

M&E

- TB REACH projects provide insights in what works and what does not work in specific areas/among specific target groups
- M&E can provide some reasonable explanations for results
- M&E can guide project implementation
- M&E professionals role vs technical assistance

Sustainability

- Impact
- Level of imbedding of innovative projects in existing health system
- Using results for program planning
Thank you
Questions from conference organization

1. How can M&E responsibly support the management and governance of innovation processes towards a sustainable and equitable future?

2. How can M&E contribute to deeper reflexivity and transparent decision making?

3. What are the prerequisites for taking responsibility for systemic change in terms of:
   ✓ M&E professional’s roles & responsibilities; values and principles; competencies
   ✓ M&E process design, focus and approach
   ✓ institutional changes needed to support M&E for responsible innovation.