Results from the pilot of the checklist for TB surveillance standards and benchmarks:

Thailand and Kenya

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Standards and Benchmarks on TB Surveillance Expert Group
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Thailand
Thailand TB Surveillance System

- Thailand’s TB surveillance system is decentralized
  - Under Department of Disease Control at central level and under 12 regional Offices of Disease Prevention and Control

- System covers public hospitals and prisons in all geographic areas
  - Incomplete coverage of other providers (e.g. most private, University, and military hospitals not included)
  - Non-Thai cases reported separately within same system (e.g. annual report)

- Other parallel TB notification systems currently in place
  - Bureau of Epidemiology - national system for communicable diseases
  - National Health Security Office – system for reimbursement for Thai TB patients covered under universal health insurance
  - Other electronic recording and reporting systems (e.g. TB NET, Region 10)

- Vital registration system
  - ~95% population coverage nationally
  - ~35-40% ill-defined deaths
Thailand TB Surveillance System

<table>
<thead>
<tr>
<th>Level</th>
<th>Flow of Information</th>
<th>Responsibility</th>
<th>Timeline</th>
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</thead>
<tbody>
<tr>
<td>Central</td>
<td>DOC</td>
<td>Supervision Monitoring and Evaluation section / BTB</td>
<td>-</td>
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<tr>
<td>Regional</td>
<td>ODPC</td>
<td>RTC</td>
<td>within 21 days after each finished quarter</td>
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<tr>
<td>Provincial</td>
<td>University Hospitals</td>
<td>PTC</td>
<td>within 14 days after each finished quarter</td>
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<tr>
<td>District</td>
<td>District Public Health Office</td>
<td>DTC / TB Clinic</td>
<td>Within 7 days after each finished quarter</td>
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<td>Private Hospitals</td>
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<td></td>
<td>Provincial Hospital</td>
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<td>NGOs</td>
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<td></td>
<td>Military Hospital</td>
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<td></td>
<td>Prisons</td>
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<td>Health Department (BMA)</td>
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<td>Medical Service Department (BMA)</td>
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<td>Paper-based system</td>
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</table>

- Comprehensive M&E plan for TB control in Thailand, M&E secretariat team
Essential Features (Table 1)

- Thailand system met most standards and benchmarks (S& Bs) in Essential Features section of the checklist.

- Main challenges:
  - Some standards difficult to assess in Thailand’s decentralized system:
    - Surveillance budget
    - SOPs available at all user levels
    - >80% of users access data quality reports
  - Method for evaluation of S& Bs affected results of assessment:
    - Data quality documentation
  - Language sometimes left room for interpretation:
    - ‘>80% of users actually ‘access’ these types of results’
System Coverage (Table 2)

- Thailand system did not meet majority of S&Bs for Coverage
  - Not all providers are covered under NTP surveillance system
  - Health-system benchmarks for undiagnosed cases not satisfied
  - High proportion of ill-defined causes of death

- Main challenges
  - Data audits are time and resource intensive and required extra layer of permission
  - Limited ability of NTP staff to influence the high proportion of ill-defined causes of death in vital registration system
Core Data Items (Part 3)

- Thailand system satisfied majority of criteria for Core Data Items

- Main challenges
  - Case notification not routinely or universally disaggregated by MDR TB
    - Lack of clarity in checklist instructions
      • Evaluating whether core data were collected or reported?
  - Missing core data items on checklist might include:
    - Case diagnostic criteria
    - Microbiology results
Data Quality and Completeness (Table 3)

- Thailand system met most of S&Bs for Data Quality, among those assessed (no data audit conducted)

- Main challenges
  - Limitations of tool for paper-based system and aggregate reporting in Thailand
    - Checking for duplicate cases not feasible
  - Some S&Bs not relevant in Thailand
    - Contact tracing is not a surveillance activity
  - Challenges determining ‘success’ for S&Bs that had >1 criterion with mixed results
    - Data satisfied some benchmarks for external consistency
Kenya TB Surveillance System

- Kenya’s system is transitioning from paper to PDAs
  - Currently district coordinators transfer all facility register data to a district-based paper register
  - District registers are being replaced by PDAs
    - With new system, patient-based data will be available at the district level and above
    - 40% of districts have implemented PDA-based system
  - Prisons and 100% of districts are captured by system

- Vital registration system
  - National coverage was 49.5% in 2010
  - All deaths are recorded at the village level by the chief
    - Cause of death, if recorded, is not necessarily reliable, especially when death occurs outside of a hospital
Kenya - Essential Features (Table 1)

- Kenya system met most S&Bs in Essential Features section
- Main challenges
  - Lack of clarity in terminology and meaning in some S&Bs
    - ‘Equivalent on-the-job experience’
    - ‘Standard operating procedures’
    - ‘Data quality’ documentation
  - Some benchmarks could not be adequately assessed
    - Not feasible to check if users of all ~2,800 facilities that provide TB treatment see data quality reports
Kenya - System Coverage (Table 2)

- Kenya system met majority of S& Bs for Coverage, except for two
  - Proportion of undiagnosed cases not satisfied
    - Health system benchmarks were not met
    - Capture-recapture study was not done
  - Vital registration coverage too low

- Main challenges
  - Not clear how the benchmark for TB drugs linking to cases demonstrates a low proportion of undiagnosed patients
    - Reflects treated patients not reported by the national program
  - Some S& Bs could not be adequately assessed
    - Under-reporting from all providers
      - Regulations are in place to prevent this, but no way of knowing if some providers are not reporting
Kenya - Core Data Items (Part 3)

- Kenya system met all criteria in Core Data Items

- Main challenges
  - Only risk factor information collected is for prisoners
    - Minimum set of risk factors recommended/required?
  - Currently no place to record treatment outcomes for:
    - DST not done (majority of cases in Kenya)
Kenya - Data Quality and Completeness (Table 3)

- Kenya system met most S& Bs for Data Quality

- Main challenges
  - Some S& Bs could not be adequately assessed
    - Completeness of core variables – not possible at national level to evaluate without a case based system
    - Lab confirmed cases reported by physician to program – difficult to know what proportion of positive smears are reported (lab serves multiple facilities, may not know which lab the patient visited)
    - Duplicate records – challenging in a paper-based system
  - Some S& Bs may be unnecessary
    - Contact tracing is not a surveillance activity in Kenya
    - Dispersion indicator not clear
      - Criterion would only be met if the change in cases from year to year is under 1%?
General comments and Lessons learned

- Some standards difficult to assess uniformly in a decentralized system
- Results of assessment are likely to change over time and location and are dependent upon duration of assessment
- Procedures for collecting information will affect results
- Auditing is time consuming and resource intensive, may need extra layer of approval
  - Need to weigh the burden of data collection against need & cost
- Important that corrective actions are attainable
- Some S&BSs are not applicable (e.g. contact investigations) or beyond the control of the TB program (e.g. vital registration)
  - How would this impact the outcome of assessment?
Recommendations

- Develop instructions for data collection processes and clear definitions to help people use the checklist appropriately and consistently (e.g. a user’s guide).
  - A description of how data should be collected (what sites should be visited for data collection? National level? District level? Facilities? Other? How many?)
  - At each level, what data should be available, and what should be prepared for review?
  - For elements that require reviewing a sample of records, describe what sample size to collect, what the sampling frame should be, and how sampling should be conducted.
Recommendations

- Identify a list of minimal checklist elements to reduce burden of data collection and thereby increase uptake of checklist
- Pilot a 2nd more refined draft of the checklist
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