TB surveillance checklist: Indonesia
February 5 - 8, 2013

Babis Sismanidis, TME/WHO
Norio Yamada, RIT/Japan
PART A: CHARACTERISTICS OF THE TB SURVEILLANCE SYSTEM

Before completing the checklist, it is important to characterize the national TB surveillance system. Please provide answers to the following questions.

| A1. How are data recorded for individual TB cases at the service delivery level (e.g. in TB diagnostic units, health centres, clinics)? *(Tick all that apply)* | ☐ Data are recorded electronically on a national web-based system  
☒ Data are recorded electronically on a district web-based system ([www.depkes.go.id](http://www.depkes.go.id))  
☐ Data are recorded electronically on a local system  
☐ Data are recorded on paper only  
☐ Data are not recorded |
|---|---|
| A2. Do all service delivery points systematically use standardized TB data collection forms and tools? | ☒ Yes, completely  
☐ Mostly  
☐ Partially  
☐ No, not at all |
| A3. Which TB cases are included in the national TB surveillance data? | ☐ All TB patients from all parts of the country  
☒ Some TB patients are systematically excluded *(Tick all that apply):*  
☐ Some part(s) of the country are excluded  
☐ Some case types are excluded  
☒ Some care providers (e.g. non-NTP providers, prisons, private practitioners) are excluded. Describe: private hospitals, non-NTP providers, private GPs  
☐ Others: __________________________ |
| A4. What types of TB data are available at the national level? *(Tick all that apply)* | ☐ Patient level data (that allow multiple episodes of TB in the same person to be identified) are available  
☒ Case level data are available (since 2012)  
☐ Only district-level aggregated data were available (up to 2011) |
| A5. What is the expected frequency of data transmission from the first sub-national administrative level to the national level? *(Tick all that apply)* | ☐ Real-time  
☐ More often than monthly  
☐ Monthly  
☒ Quarterly (from districts)  
☐ Less often than quarterly |
| A6. At what levels of the system are TB data systematically verified for accuracy (treatment outcome numbers agree with registered cases from year before), timeliness (every quarter) and completeness (4 reports annually)? *(Tick all that apply)* | ☐ From the service unit upwards  
☒ From the district level upwards (at national level)  
☐ From the provincial level upwards  
☐ Only at the national level  
☐ Not at any level |
| A7. What types of quality assurance procedures are systematically undertaken for TB data? *(Tick all that apply)* | ☒ Quality controls are in place for the electronic surveillance system (automated checks at data entry and batch checking, plus SOPs)  
☒ Data are reviewed during supervisory monitoring visits to service units and sub-national levels (How often? Twice annually. National to selected provinces, provincial to selected districts, district to all health facilities)  
☒ Data are reviewed during meetings with TB staff (How often? Twice annual national meetings with provinces. Twice annual provincial meetings with districts)  
☐ Other (specify: ____________________________) |
| --- | --- |
| A8. Is feedback on TB data quality systematically provided to all lower reporting levels? | ☒ Yes, completely  
☐ Mostly  
☐ Partially  
☐ No, not at all |
| A9. When are national TB case data for a given calendar year considered ready for national analyses and reporting? | ☐ Before April the following calendar year  
☒ Before May the following calendar year (April)  
☐ Before June the following calendar year  
☐ On or after beginning of June the following calendar year |
| A10. Are there national guidelines (e.g. documentation or instructions) for recording and reporting of TB data? *(Tick all that apply)* | ☒ Yes. They are posted on the internet  
☒ Yes. They are available in a manual or other reference document (training materials exist, “surveillance” training is part of overall training)  
☐ No |
| A11. Does the TB programme have a training plan which includes staff involved in data collection and reporting at all levels of the reporting process? | ☒ Yes  
☐ No |
| A12. How often do TB programme staff receive training specifically on TB surveillance (i.e. recoding and reporting of TB data)? *(Tick all that apply)* | ☐ Training is routinely received at national and sub-national levels (How often? ____________________________)  
☒ On-the-job training is received on an ad hoc basis  
☒ Staff receive training when they are hired  
☐ No routine training is received |
### A13. How many staff work on TB surveillance at the national level? *(Tick all that apply)*

- Epidemiologist- full-time (# 1)
- Epidemiologist- part-time (#_______)
- Statistician- full-time (#_______)
- Statistician- part-time (#_______)
- Data manager- full-time (#_______)
- Data manager- part-time (#_______)
- Data quality officers-full time (# 1)
- Data quality officers-part time (#_______)
- Other (specify: 1 Public health specialist – responsible for the analysis in annual reports, 4 data collectors - responsible for collating data and communicating with provinces, 3 planning specialist – training, supplies, 2 mathematical modelling consultants, Other consultants according to identified needs)

### A14. Is a national TB surveillance report routinely produced and disseminated on an annual basis?

- Yes (paper and also available on [www.tbindonesia.or.id](http://www.tbindonesia.or.id) BUKU PEDOMAN NASIONAL TB – national guidelines, – annual report, both in Bahasa)
- No

### A15. Are there written goals of the surveillance system?

- Yes (planning indicators: case notification and success rates as impact indicators)
- No

### A16. Policies and procedures are in place to protect the confidentiality of all surveillance data (e.g. records, registers)

- Yes, completely
- Mostly (not on paper records, yes on the web system where all cases are anonymized)
- Partially
- No, not at all

### A17. Is there a long term financial plan and budget in place to support TB surveillance activities?

- Yes
- No

### A18. When was the last time the TB surveillance system was evaluated?

- Within the last year
- Within the last 1-5 years (JEMM 2011)
- Within the last 5-10 years
- Never
PART B: CHECKLIST FOR TB SURVEILLANCE AND VITAL REGISTRATION SYSTEMS

For each standard, please assess whether the system is able to satisfy the associated benchmark(s), using the methods recommended in the user guide. Indicate ‘Met’, ‘Partially met’, “Not met” or ‘Not applicable’ in the Results column. Describe the key results and any action recommended to improve the quality of the system in the last two columns.

<table>
<thead>
<tr>
<th>STANDARD</th>
<th>BENCHMARK(S)</th>
<th>RESULTS</th>
<th>RESULTS (DESCRIPTION)</th>
<th>CORRECTIVE ACTION(S)</th>
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</thead>
<tbody>
<tr>
<td><strong>B1. TB SURVEILLANCE SYSTEM DATA QUALITY</strong></td>
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| **B1.1** Case definitions are consistent with WHO guidelines | All three benchmarks should be satisfied to meet this standard:  
• Laboratory-confirmed cases are distinguished from clinically diagnosed cases  
• New cases are distinguished from previously treated cases  
• Pulmonary cases are distinguished from extrapulmonary cases | ☑ Met  
☐ Partially met  
☐ Not met | – New/previous, P/EP, no clinical examination  
– Cases put on treatment only through smear examination (culture only done for MDR-TB suspects – SP at 2 months, contact of an MDR-TB patient, etc.)  
– Page 25 of national guidelines, diagnostic flowchart | |
| **B1.2** TB surveillance system is designed to capture a minimum set of variables for reported TB cases | Data are routinely collected for at least each of the following variables:  
• Age or age group  
• Sex  
• Year of registration  
• Bacteriological results  
• History of previous treatment  
• Anatomical site of disease  
• For case-based systems, a patient identifier (e.g. numeric ID) | ☐ Met  
☑ Partially met  
☐ Not met | – “Have you received TB drugs before, for at least 1 month”  
– Patient identifier does not exist yet.  
– Phase II of SITT will include a patient identifier. To be further discussed (e.g. province, district, health facilities code)  
– National ID cards are issued for everyone 17 years and above (EKTPElectronic ID cards being rolled out) | – Ensure the plan that already exists for the generation of unique ID’s is implemented  
– Consider using national ID# for tracking transfer patients across provinces and treatment episodes, checking duplicates and for linking patients in TB system with other systems (e.g. HIV) |
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<tr>
<td>B1.3</td>
<td>All scheduled periodic data submissions (e.g. electronic data files or quarterly paper reports) have been received and processed at the national level</td>
<td>☐ Met ☑ Partially met ☐ Not met ☐ Not applicable</td>
<td>Paper-based: complete reporting of quarterly forms is monitored centrally for provinces, and provincially for districts, except 9 (out of 497 nationwide) districts in Papua</td>
<td>- Focus on Papua (strengthening M&amp;E) - Turn-over of M&amp;E staff, continuous training</td>
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<td>• For paper-based systems: 100% of expected reports from each TB basic management unit have been received and data aggregated at national level</td>
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<td></td>
<td>• For national patient-based or case-based electronic systems that import data files from sub-national (e.g. provincial or regional) electronic systems: 100% of expected data files have been imported</td>
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<td>B1.4</td>
<td>Data in quarterly reports (or equivalent) are accurate, complete, and internally consistent (For paper-based systems only)</td>
<td>☐ Met ☑ Partially met ☐ Not met ☐ Not applicable</td>
<td>Data audit not yet done</td>
<td>Link with WHO HQ to do SARA (Service Availability and Readiness Assessment) evaluation. Conduct visits to sampled TB BMUs to audit data, either as part of a review or specifically for a data quality mission</td>
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<td></td>
<td>All benchmarks should be satisfied to meet this standard:</td>
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<td>• Sub-totals of the number of TB cases by age group, sex, and case type equals the total number of reported TB cases in &gt;95% of quarterly reports (or equivalent) from basic management units.</td>
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<td>• The number of TB cases in &gt;95% of quarterly reports (or equivalent) matches the number of cases recorded in TB basic management unit registers and source documents (patient treatment cards and laboratory register)</td>
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<td>• Data for a minimum set of variables are available for &gt;95% of the total number of reported TB cases in quarterly reports</td>
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<td>B1.5</td>
<td>Data in national database are accurate, complete, internally consistent, and free of</td>
<td>☐ Met ☐ Partially met ☑ Not met ☐ Not applicable</td>
<td>SITT Phase II (case-based) will only go live in June. However, after</td>
<td>Assessment will be done in 2014 after SITT phase II goes live</td>
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<td>All benchmarks should be met to reach this standard:</td>
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<tr>
<td></td>
<td>• Data validation checks are in place at</td>
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<td>STANDARD</td>
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| duplicates *(For electronic case-based or patient-based systems only)* | national level to identify and correct invalid, inconsistent, and missing data in the minimum set (B1.2)  
• For each variable in the minimum set (standard B1.2), >90% of case records are complete, valid and internally consistent for the year being assessed.  
• <1% of case records in the national dataset for the year being assessed are unresolved potential duplicates | ☒ Not applicable | a brief assessment of the system it was found that consistency checks are already in place, a manual and training material are being developed. Trainings will be delivered first months of 2013. System could be more user-friendly | |
| B1.6 TB surveillance data are externally consistent | • Among new TB cases, the percentage of children is between 5-15% in low- and middle-income and <10% in high-income countries | ☑ Met  
☐ Partially met  
☐ Not met | – Low middle income country (data source: World Bank)  
– 8.7% (27959/321308) childhood TB over total notifications, 2011 (data source: GTBR 2012) | |
| B1.7 Number of reported TB cases is internally consistent (within country) | • Year to year change in the national number of reported TB cases is consistent with year to year change in national TB mortality (HIV-negative, from national vital registration) i.e. trajectories with the same direction | ☐ Met  
☐ Partially met  
☒ Not met | – Not possible to disaggregate notification due to PPM expansion (data available by all provinces since 2011)  
– No analysis of the SRS for TB | – Analyse the sample vital registration system (SRS) data  
– More accurate and complete cause of death data needed  
– Mid-term expand SRS  
– Long-term plan for national VR system |
| B2. TB SURVEILLANCE SYSTEM COVERAGE | | | | |
| B2.1 All diagnosed cases of TB are reported | Both benchmarks should be satisfied to meet this standard:  
• TB reporting is a legal requirement  
• >90% of TB cases are reported to national health authorities, as determined by a | ☐ Met  
☐ Partially met  
☒ Not met | – Notification of TB is not mandatory (there is a plan)  
– No nationwide inventory study to | – Conduct an inventory study to directly assess under-reporting of cases.  
– Expand current |
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<tr>
<td>B2.2</td>
<td>Population has good access to health care</td>
<td>Both benchmarks should be satisfied to meet this standard: • Under-5 mortality rate (probability of dying by age 5 per 1000 live births) is &lt;10 • &lt;25% total health expenditure is out-of-pocket</td>
<td>☐ Met ☐ Partially met ☒ Not met</td>
<td>□ Under-5 mortality, 31.8/1000 live births, 2011 (data source: UNICEF) - UN Population Division/WHO, 2010 □ 38% out of pocket expenditure (data source: WHO)</td>
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**B3. QUALITY AND COVERAGE OF VITAL REGISTRATION SYSTEM**

| B3.1 Vital registration system has high national coverage and quality | Both benchmarks should be satisfied to meet this standard: • Cause of death documented in ≥90% of total deaths recorded in a) national vital registration system OR b) sample vital registration system • <10% of deaths have ICD codes for ill-defined causes (defined as ICD-9 780-799 and ICD-10 R00-R99) | ☐ Met ☐ Partially met ☒ Not met | □ No national level vital registration system with standard coding of causes of death in place. Sample registration system in place since 2006, no published report | Further explore implementation of routine sample vital registration system, including causes of death, in community and hospitals (ICD-10) □ Further analyze existing data to better understand TB mortality |
PART C: SUPPLEMENTARY CHECKLIST FOR TB SURVEILLANCE

For each standard, please assess whether the system is able to satisfy the associated benchmark(s), using the methods recommended in the user guide. Indicate ‘Met’, ‘Partially met’, “Not met” or ‘Not applicable’ in the Results column. Describe the key results and any action recommended to improve the quality of the system in the last two columns.

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<td>C1. SURVEILLANCE OF DRUG RESISTANT TB</td>
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| C1 | Surveillance data provide a direct measure of drug resistant TB in new cases | One of the two benchmarks should be satisfied to meet this standard:  
• Rifampicin susceptibility status (positive/negative) documented for ≥75% of new pulmonary TB cases  
• Rifampicin susceptibility status (positive/negative) documented for a nationally representative drug resistance survey of new pulmonary TB cases | ☐ Met  
☒ Partially met  
☒ Not met | – GeneXpert rollout currently happening, to be used for MDR-TB suspects and TB/HIV co-infected individuals  
– No national drug resistance survey. Only provincial level ones: East and Central Java  
– Sentinel drug resistance surveillance in place in 4 provinces. To be expanded to 27 provinces (to be confirmed?) | – National drug resistance survey AND/OR sentinel surveillance |
| C2. SURVEILLANCE OF TB/HIV | | | | |
| C2 | Surveillance data provide a direct measure of the prevalence of HIV infection in TB cases | One of the two benchmarks should be satisfied to meet this standard:  
• HIV status (Positive/Negative) documented for ≥80% of all TB cases notified in all settings with a generalized epidemic state\(^i\) or concentrated epidemic state\(^ii\) and in settings with a low level epidemic state,\(^iv\) where feasible  
• HIV status is available from a representative sample from all TB cases notified in settings with a low-level epidemic state where it is not feasible to implement routine surveillance | ☐ Met  
☐ Partially met  
☒ Not met | – All TB cases are tested for HIV in 7 generalized epidemic provinces (Papua 2%, West Papua 4%, East Kalimantan 0.31%, Bali 0.66%, Jambi 0.3%, Maluku 0.35%, DKI Jakarta 1.03%).  
– Bali, 56% (728/1305), 2011  
– West Papua 1% (19/9137), 2011  
– Jambi and East Kalimantan no data  
– Maluku 23% (76/224) | – Expand routine testing with high coverage |
### COUNTRY NAME: Indonesia  
**DATE OF ASSESSMENT:** 5-8 February 2013

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#### C3. SURVEILLANCE OF PEDIATRIC TB

**C3 Surveillance data for children reported with TB (defined as ages 0-14 years) are reliable and accurate or all diagnosed childhood TB cases are reported**

Two benchmarks should be satisfied to meet this standard:

- Ratio of age groups 0-4 to 5-14 years is in the range 1.5-3.0
- >90% of childhood TB cases are reported to national health authorities, as determined by a national-level investigation (e.g. inventory study) conducted in last 10 years

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<thead>
<tr>
<th>□ Met</th>
<th>✗ Partially met</th>
<th>✗ Not met</th>
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- DKI Jakarta 2% (268/14452)
- Papua, 27% (1560/5714) 2011
- Papua and West Papua screening for all since 2009
- TB cases among all HIV high risk groups only tested for HIV. (Data sources: NTP programmatic data, NAP data HIV prevalence survey 2012)

- Ratio of 0-4/5-14 notification rates is 1.8 for 2011
- No nationwide level inventory study

- Link with pediatric hospitals and clinics for reporting of TB
- Monitor under-reporting of TB in children through inventory studies

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1. i.e. by smear, culture or WHO-endorsed molecular test (e.g. GeneXpert MTB/RIF)
2. Generalized epidemic state: HIV prevalence consistently >1% in pregnant women.
3. Concentrated epidemic state: HIV prevalence is consistently >5% in at least one defined subpopulation and is <1% in pregnant women in urban areas.
4. Low-level epidemic state: HIV prevalence has not consistently exceeded 5% in any defined subpopulation.
## Investment plan

<table>
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<tr>
<th>Activity</th>
<th>Estimated Budget</th>
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<tr>
<td>Vital registration – maintaining and scaling up the SRS</td>
<td>Costs between <strong>USD $0.5-$1</strong> per capita in the areas covered</td>
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<tr>
<td>Inventory study to measure the level of under-reporting</td>
<td><strong>US$ 200,000</strong></td>
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<td>Capacity building for data management and statistical analysis – through attending courses and extra staffing at the central level</td>
<td><strong>US$ 115,901</strong></td>
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<td>SARA tool and health facility data quality assessment</td>
<td><strong>US$ 100,000</strong></td>
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<tr>
<td>Assessment of the SITT Phase 2 in 2014</td>
<td><strong>US$ 38,575</strong></td>
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<td>Implementing mandatory notification policy</td>
<td><strong>US$ 99,518</strong></td>
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<tr>
<td>Analysis of available mortality data</td>
<td><strong>US$ 10,000</strong></td>
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<tr>
<td>Drug resistance survey or sentinel surveillance</td>
<td><strong>US$ 278,806</strong></td>
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<tr>
<td>Nationally representative survey of HIV prevalence among TB patients</td>
<td><strong>US$ 56,548</strong> (only sentinel surveillance in 6 sites (concentrated and generalized area))</td>
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<tr>
<td>Corrective actions required to compile all the reports from Papua</td>
<td><strong>US$ 16,000</strong></td>
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