Continuous monitoring of under-reporting & treatment outcomes in Thailand

26 September 2014
Background

- Under-reporting cases limit countries to understand TB situation and to monitor the quality of care delivered to the patients.
- Although, reporting TB cases are mandatory in Thailand, non-reporting cases sometimes happen.
- In 2012-2013, Thailand TB prevalence survey showed that 20% (13/66) of participants with history of TB treatment received care outside NTP facilities where TB cases are rarely notified.
- An unofficial report in Bangkok also found that 80% (8,000/10,000) of TB cases in 2013 were not reported to NTP.
- In 2013, only 0.5% (128/27,674) of new smear positive cases were children aged <15 years old and they are treated by specialists.
- Since Thailand has some knowledge of the magnitude of the under-reporting, we develop a plan of continuous monitoring.
Objectives

✦ To assess proportion of under-reporting of TB cases in Bangkok and non-Bangkok

✦ To measure proportion of under-reporting of childhood TB cases in non-Bangkok

✦ To evaluate treatment outcomes of non-reporting TB cases in Bangkok and non-Bangkok
TB reporting system in Thailand

(1) Hospitals of non-BKK provinces
- TBCM, case based

(2) BKK hospitals
- ODPC, case based
- BMA, Aggregated

(3) Hospitals for patients of universal health care scheme (70%)
- NHSO, Data Hub, Case based

(4) MOPH Hospitals
- BPS, 43 text files, case based
- TB Bureau

(5) TB Bureau
Sample size calculation for non-BKK provinces

- Cluster size = 40 cases
- Coefficient of cluster variation (k) = 0.5
- Pr = 0.2% (proportion of under-reporting)
- Design effect = 3.44
- Relative precision (d) = 0.15
- Za = 1.96
- Participation rate = 0.80 (20% may not have TB or duplication)
- N = 2,935
- Number of cluster (province) = 73
Sample size calculation for Bangkok

- Cluster size = 1 (Random sampling)
- Coefficient of cluster variation (k) = 0.5
- Pr = 0.8% (proportion of under-reporting)
- Design effect = 1
- Relative precision (d) = 0.5
- Za = 1.96
- Participation rate = 0.80 (20% may not have TB or duplication)
- N = 480
Sample size calculation for children in non-BKK provinces

- Cluster size = 1 (Random sampling)
- Coefficient of cluster variation (k) = 0.5
- Pr = 0.8% (proportion of under-reporting)
- Design effect = 1
- Relative precision (d) = 0.5
- Za = 1.96
- Participation rate = 0.80 (20% may not have TB or duplication)
- N = 480
As it will be a part of regular monitoring by the NTP, all provinces (77) will be involved instead of required clusters (73)
Data collection

- Data will be collected retrospectively.
- Case-based records from the UC scheme will be used to compare with NTP records.
- Data of non-reporting cases to NTP will be traced.
Data collection

UC scheme

NTP

Non-NTP

BKK

Non-BKK

Age < 15 years old

Randomly sampling

Age > 15 YO

Randomly sampling

480/year

480/year

40x77 province per year
Tracing non-reporting cases

TB Bureau generates the name list of non-reporting cases.

TB Bureau randomly selects

- 480 cases out of non reporting cases in Bangkok.
- 480 cases out of non reporting children cases in non-Bangkok provinces.
- 40 cases per a non-Bangkok province.

TB Bureau sends the name lists and forms to Office of Prevention and Control to get information (Diagnosis and outcomes) of non-reporting cases.
Implementing agency

- TB Bureau
- Office of Disease Prevention & Control
- Provincial Health Office
- Hospitals
## Timeline

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<td>7. Summary non-reporting cases of FS2014</td>
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Technical Assistance

- Protocol development
- Data analysis
- Report writing
Draft budget

- Country budget will be used for meetings and trainings.
- Data collection will be integrated into routine activities for sustainability.
- TA will be supported by WHO and other technical agencies.
Opportunity

- E-based system of the TB surveillance and health insurance information was introduced in 2014.
- Information sources from payment schemes, starting from the Universal Health Care Scheme (70%) can be used not only for financial purpose, but also for monitoring one.
- Treatment results of non-reported cases will be monitored.
Limitations

- UC database covering 70% of Thai citizens.
- No access to data outside UC system.
- More health insurance schemes (employees in private companies) for patients in Bangkok
Thailand has known the magnitude of non-reporting cases. Instead of conducting a one time research study, continuous checking quality reports is necessary. Due to different situation and area of work, three types of non-reporting cases are identified (Adult BKK, Adult non-BKK, Children non-BKK) are conducted.