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

Japan
Overview of surveillance system

TB Notification System

- TB surveillance system is a sub system of national surveillance of infectious disease. (NESID, National Epidemiological Surveillance of Infectious Diseases)
- TB case reporting and recording is mandatory under the infectious disease prevention law. Any doctors who diagnose TB should report to health centre.
- Public health centres register TB patient through the nationwide electronic TB surveillance system.
- Case-based electronic system.
- 100% population and geographical area coverage.
Overview of surveillance system (cont.)

TB Notification System
In 1987, the nationwide electronic TB surveillance system started. (Case-based, stand alone system)
In 2007, the system has revised. (stand alone and web-based mixed)
In 2012, the system is expected to migrate to the web-based system.

Mortality Information System
Vital statistics.
100% population coverage.
Modern vital statistics survey was established in 1899.
5 Forms based on notifications of live births, deaths, marriages, divorces, and fetal deaths.
Main findings from pilot test (1): Essential Features - Table 1

• Overall remarks:

Surveillance budget and confidentiality procedures are depend on each country’s situation.

> 5% of TB control operational budget is difficult for Japan

In Japan, health centers, local government, Ministry of Health, Labour and Welfare, National institute of infectious disease and RIT are connected with not internet but *closed* network system (dedicated-line). Surveillance database is isolated physically from internet.
Main findings from pilot test (1):
Essential Features - Table 1 (cont.)

Problems identified:
Prompt update is difficult when TB law or guideline has changed.

No data quality documentation, but RIT disseminated “TB Chart” to all Hcs and local governments.

Who operates/inputs to the system?
In Japan: public health nurse, X-ray technician and office person.
Main findings from pilot test (1): Essential Features - Table 1 (cont.)

• Standards/benchmarks that could not be adequately assessed
  – Data quality documentation.
  – Need more details how to assess the data quality.

• Standards/benchmarks identified to be important but not in the checklist:
  –

• Standards/benchmarks thought to be unnecessary:
  – None.
Main findings from pilot test (2):
System coverage - Table 2

• Overall remarks:
  Vital registration system covered whole population.
  TB system coverage is quite well in Japan.
  A few report of under-reporting and undiagnosed cases.

• Problems identified:
  Capture-TB study and capture-recapture study not done.
Main findings from pilot test (2): System coverage - Table 2 (cont.)

• Standards/benchmarks that could not be adequately assessed
  – Some problems to perform capture-recapture study.
  – Data linkage of TB data to other source (VR, insurance data) is difficult.

• Standards/benchmarks identified to be important but not in the checklist:
  –

• Standards/benchmarks thought to be unnecessary:
  – None.
Main findings from pilot test (3):
Core data items

• Overall remarks:
  Japan covers almost all core items of the standards.

• Problems identified:
  Completeness of HIV status is low. (about 50%)
  Quality of MDR status is not assured.
Main findings from pilot test (3): Core data items (cont.)

- Standards/benchmarks that could not be adequately assessed
  - None.
- Standards/benchmarks identified to be important but not in the checklist:
  - Smear / culture result
  - History of treatment

- Standards/benchmarks thought to be unnecessary:
  - None.
Main findings from pilot test (4): Data quality and completeness

- **Overall remarks:**

  Completeness of core items:
  - Age, disease form and site, geographical identifier and year: 100%
  - Occupation, nationality, history of TB treatment: 98%
  - Diabetes: 92%
  - HIV: 52%
  - Drug susceptibility among bacteriological positive cases: 58%
  - Smear results: 98%
  - Culture results: 80%

Some items are automatically verified on the system.

RIT made inquiries to health centers after registration about HIV positives, discrepancy between occupation and age, mono-drug treatment.
Main findings from pilot test (4): Data quality and completeness

• Overall remarks:
  Internal consistency
  RIT checked change of notification rate for national level and all prefecture level before making annual reports.
  Year to year difference in cases benchmark test:
  55 / 66 (83%) prefectures and big cities met the requirement of the expression in left column when k=-0.05.

  External consistency
  Benchmark test result (66 prefectures and cities)
  Range of sex ratio: 0.9 – 2.8.
  Range of percent pulmonary to all: 66% - 90%.
  Range of smear pos among pulmonary: 33% - 65%.
Main findings from pilot test (4): Data quality and completeness

• Problems identified:
Smear/Culture laboratory-confirmed results is not available because of no system of receiving report from laboratories.

Duplication cannot be checked by current system because personal identified data is only available within the health center which patient registered.

No contact investigation data.

Treatment outcome: Success rate was low (50%).
Rate of “not evaluated” was 10%.
Limitation of automatic determination of treatment outcome.
Main findings from pilot test (4): Data quality and completeness (cont.)

- Standards/benchmarks that could not be adequately assessed
  -

- Standards/benchmarks identified to be important but not in the checklist:
  -

- Standards/benchmarks thought to be unnecessary:
  -
General comments/Lessons learned

Surveillance system should have a flexible structure that can respond immediately to changes.

Need concrete procedures to assess the data quality.
Recommendations

Proposal for core items:
Smear / culture test results.
History of TB treatment.
Mode of case detection (passive or active).