Understanding and using TB surveillance data

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Decline in TB burden in England and Wales
Improvements in case fatality ratio (mortality/incidence), England & Wales

Chemotherapy introduced

Slow improvements in detection/cure efficacy
Do case notification rates in China reflect incidence?
Evidence that prevalence declined in China (1990 – 2010)

Notifications // incidence?
... probably not

TB notifications

3rd national survey

TB Mortality

DSP
Evidence of TB under-reporting in China before the SARS epidemic

- Notification rate
- Estimated incidence rate
- Reporting reform following SARS epidemic

**Graph:**
- Rate per 100,000/year
- Years: 1990 to 2010
- TB Mortality
Under-reporting in India

From Where Are Tuberculosis Patients Accessing Treatment in India? Results from a Cross-Sectional Community Based Survey of 30 Districts

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46% of cases on treatment *not known* to NTP
When will case notifications start to decline in Indonesia?

New + relapses, all forms

DOTS expansion
Less risk of TB in the North-East provinces of Cambodia? 

... or lower access to health services?
Case notifications weakly correlated with TB prevalence in Nigeria
Prevalence: Notification ratio (sm+)
Slow death of the TB epidemic in Japan

High case rates in old individuals

Transmission nearly stopped

2 orders of magnitude
Demographic transition in Japan

High prevalence of infection in nearly all age groups

High prevalence of infection in 30+ year old

High incidence of disease in 60+ year old
TB surveillance checklist of standards and benchmarks used (July 2015)

WHO - Global TB Report 2014
Case-based databases of TB patients
Decrease of 6.1% in TB rates in 2012, 44% of counties did not report a case since 2010
In summary

• TB data under-used at peripheral level
  – Training
  – Monitor trends in cases, for action
  – Detect clusters (case-based)

• Epi-reviews
  – Inform national strategic plans and requests for funding
  – Evaluate performance of surveillance (standards and benchmarks)
  – Estimate TB burden and its trends
Surveillance data collected in vital registration and TB notification systems provide essential information about the TB epidemic and programmatic efforts to control the disease at both national and local levels. Analysis of these data can help programme managers and other staff to track the level of and trends in TB disease burden, detect outbreaks of disease and identify ways to improve existing TB prevention, diagnostic and treatment services. This book provides practical guidance on the analysis and use of such surveillance data, and is suitable for a wide range of people engaged in TB control. It was produced as a major collaborative effort as part of the work of the WHO’s Global Task Force on TB Impact Measurement.

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