2010 Coordinating Board Update on TB Impact Measurement

Global Task Force on TB Impact Measurement

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Task Force mandate

- Produce **robust, rigorous, widely-endorsed** assessment of whether 2015 targets are achieved at global level, for each WHO Region and in individual countries

- **Regularly report on progress** towards impact targets in years leading up to 2015

- **Strengthen national capacity** in monitoring and evaluation of TB control
3 strategic areas of work

- **Strengthening surveillance** - use of routine surveillance data to measure incidence, prevalence and mortality
  - all countries
  - ultimate goal to measure cases and deaths directly from notification and vital registration data

- **Prevalence of TB disease surveys** in ≥ 21 global focus countries

- **Periodic review and revision of methods** used to translate data from surveillance systems and surveys into estimates of disease burden
Progress since Geneva CB 2009: main messages

- **Prevalence of TB disease surveys**: major global momentum

- **Methods**: full consensus on updated methods AND major new analyses on lives saved by TB control using these methods

- **Surveillance**: substantial progress facilitated by strong and effective collaboration with Global Fund

- **BUT**: need to accelerate progress on strengthening surveillance – slowed since mid-2010 due to insufficient funding and hence staff for secretariat
Global progress, prevalence surveys

21 Global Focus countries identified by Task Force

Number of surveys

Cambodia
Philippines
Thailand
Bahrain
Indonesia
Gambia
Viet Nam
China
Nigeria
Malawi
Indonesia

Asia
Africa
Non Global Focus country
2nd edition of Handbook – to be launched in Berlin, 15 November

Major collaborative effort January–November 2010

46 authors

Multiple agencies/universities/research institutes and NTPs

Funding from USAID, DGIS, Japan
BREAKING NEWS 3 October 2010

Ethiopia Launched National TB Prevalence Survey

(first Sub-Saharan Africa TB disease prevalence survey in 50 years)
Nigeria: to start late 2010 or early 2011
China – survey completed July 2010 results expected by mid-2011

Collect sputum specimens

Bacteriological examination
China – survey completed July 2010, results expected by mid-2011

- **Symptom survey**
  - 252,844 people surveyed for TB symptoms

- **Chest X-ray**
  - 250,638 cases accepted chest X-ray examination

- **Sputum and culture**
  - 9,693 participants eligible, 9,591 (99%) examined
Prevalence surveys: other progress to highlight

- Asia-Africa collaboration, expect Africa-Africa collaboration in future
- Global Fund closed most existing funding gaps
- Technical missions and protocol reviews covering almost all 21 global focus countries
- Two workshops, African global focus countries
  - participation of survey experts from Myanmar, Viet Nam, Cambodia and China
  - Geneva, October 2009, Addis Ababa, October 2010

Conclusion: concerted global effort gaining momentum
Disease prevalence surveys (next steps 2010-2011)

1. Focused technical assistance to 5-7 African countries starting or ready to start surveys in 2010–2011

2. Continued assistance to Asian countries in analysing data and disseminating results
   - Myanmar, China, Cambodia

3. Facilitating Asia-Africa and Africa-Africa collaboration

4. Consultants and survey investigator training
   - Cambodia, Feb/March 2011
TB estimates – review/update of methods

18 months review by TF subgroup, June 2008 - October 2009

co-led by WHO and KNCV, part funded by TBCAP

- New methods developed and agreed by expert group
- Endorsed by full Task Force in March 2010
- Used for update of WHO 2009 global report and 2010 report AND
- Updated estimates will appear in Global Burden of Disease (3rd edition)
Global decline in TB mortality

Excluding HIV

Including HIV

50% reduction target (baseline 1990)

Vital registration data from 89 countries used
Lives saved through improved TB control since 1995

Annual number of averted deaths (million)

HIV -
HIV +
Total
“Proper tuberculosis care and control averted up to 6 million deaths and cured 36 million people between 1995 and 2008. Much intensified action is needed to control and ultimately eliminate the disease.”
Tuberculosis Diagnosis — Time for a Game Change
Peter M. Small, M.D., and Madhukar Pai, M.D., Ph.D.

“…..The effective treatment of tuberculosis is a life-saving intervention. The global scale-up of tuberculosis therapy has averted 6 million deaths over the past 15 years, making it one of the greatest public health interventions of our lifetime…..”
Surveillance: Task Force framework

DATA QUALITY
- Completeness
- No duplications, no misclassifications
- Internal and external consistency

TRENDS
Do surveillance data reflect trends in TB incidence and mortality?
- Analyse time-changes in notifications and recorded deaths alongside changes in case-finding, case definitions, HIV prevalence and other determinants of changes in TB incidence and TB mortality

ARE ALL TB CASES AND DEATHS CAPTURED IN SURVEILLANCE DATA?
- "Onion" model
- Inventory studies
- Capture re-capture studies
- Prevalence surveys
- Innovative operational research

TB notifications ≈ TB incidence
TB deaths in VR system ≈ TB mortality

IMPROVE surveillance system

EVALUATE trends and impact of TB control

UPDATE estimates of TB incidence and mortality

If appropriate, CERTIFY TB surveillance data as direct measure of TB incidence and mortality
Progress in applying Task Force framework since April 2009

By July 2010
December 2010

World Health Organization
An example: framework for Tanzania

DATA QUALITY
Completeness – appears to be verified, BUT analysis not available at national level
Cannot assess duplications/ misclassifications since data are aggregated (not case-based);
Data mostly consistent, within ranges expected, but extreme values in a few regions

TRENDS
Do surveillance data reflect trends in TB incidence and mortality?
HIV and case-finding have affected trends in notification BUT difficult to disentangle effects - notifications disaggregated by HIV status not available and data on case-finding only available at national level

ARE ALL TB CASES AND TB DEATHS CAPTURED IN SURVEILLANCE DATA?
Relied on "Onion" model based on (mostly) expert opinion combined with some evidence about health system coverage/access and some TB-specific KAP study data

notifications ≈ TB incidence
VR TB mortality ≈ TB deaths

DATA QUALITY

TRENDS

ARE ALL TB CASES AND TB DEATHS CAPTURED IN SURVEILLANCE DATA?

IMPROVE surveillance
1. Roll-out case-based ERR
2. Routinely assess data quality esp. in "outliers"

EVALUATE trends and impact of TB control
3. Strengthen M&E supervision
4. Implement updated R&R recommendations

UPDATE estimates of TB incidence and mortality
Data do not yet provide direct measurement. Incidence estimates revised downwards (CDR up). Prevalence survey will provide important new data

Need data disaggregated by HIV status at district level to be compiled at national level

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Strengthening surveillance (2010-2011 plan of work)

1. Finalize harmonized WHO/GF toolkit (by TF expert group)
   - Development of standards and benchmarks
   - Pilot in a few countries
   - Roll-out, aim to achieve data quality standards in all countries

2. India – updating estimates of disease burden through application of framework, early 2011

Finalization of toolkit and subsequent roll-out requires increased capacity in TME/WHO and among technical partners
General achievements in 2010

- Policy paper published
- WHO/Global Fund TB joint "impact measurement" team
- Strong, ongoing financial support from USAID and Japanese government
- Strategic funding from Dutch government (DGIS) in 2010
Major Challenge
(urgent request to Coordinating Board)

- Need for increased funding for secretariat to strengthen *and accelerate* finalization and roll-out of toolkit to strengthen surveillance
  - Approx US$ 0.5 million per year