WHO Regional Perspectives

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Regional burden of TB
Estimated TB incidence (all forms)

Incidence rate, all forms/100,000:
- > 100
- 50-100
- 25-49
- <25
Expansion of TB care based on DOTS
Case detection rate (CDR) and treatment success rate (TSR)
EMR, 1994–2006

Case detection rate

Treatment success rate


0  10  20  30  40  50  60  70  80  90  100
Measuring MDR burden using drug resistance surveys and surveillance

Source: WHO Global TB Report 2008 plus national TB programme information
Culture and DST

- Palestine: adequate culture and DST
- Bahrain: in adequate culture/DST
- No culture and DST

WHO Global TB Report 2008

2010-04-29

RC - MDR presentation
In summary

Countries of the region are doing fine with TB treatment but case detection is still a challenge.

MDR TB is another challenge for TB control.

Both challenges are raising a question about the diagnostic capacity in terms of quantity, quality and accessibility.

To meet the challenges, we need to scale up the diagnostic capacity through strengthening the TB laboratory network and building a strong and effective SRLN.
This document is prepared to highlight the following topics in establishing a Regional Supra National Reference Laboratory Network for TB:

- **Major criteria to select a candidate NRL as Supra National Reference TB laboratory (SRL).**

- **Methodology to evaluate a TB laboratory as SRL.**

- **The Terms of Reference (the proposed duties and responsibilities) for a selected SRL.**

- **The resources required to establish a regional Supra National Reference TB Laboratory Network (SRLN).**
Major criteria to select a candidate NRL as SRL

- The technical proficiency.
- Quality assured sputum smear microscopy.
- Expanded case detection using culture, particularly liquid media.
- Adequate bio-safety measures.
- Recording reporting system in line with global standards.
- Qualified HW
Methodology to evaluate a TB lab as SRL

- Agreement of National Health Authorities.
- Evaluation tool with the following set of data:
  - The structural, functional and policy profile of the TB laboratory network which the NRL in question is heading
  - Quality assurance programme for (a) microscopy, (b) culture) and (c) DST
  - Laboratory performance analysis, such as volume of work (microscopy, culture and DST) *plus* corresponding results,
Methodology to evaluate a TB lab as SRL

- Human resource: the technical staff of the NRL, its qualifications; planning of recruitment and of training courses

- Safety measures and practices used in the NRL, both equipment (including the structure and workflow in this laboratory) and the relevant procedures;

- Budget required for adequate laboratory function

- Cooperation between the National TB Laboratory Network and the NTP,
The duties of an SRLN member

- **Technical assistance and advice** to National Reference Laboratories in all relevant matters including both visits to the NRL in question and training of staff members from the given NRLs (EQA, C and DST, DRS and IC), in addition to proficiency testing.

- **Participation in NTP oriented applied research** within the frame of the SRL network

- **Public health approach:** The laboratory networks are often prone to operate on the principle *sample* → *result*. Thus ensuring that e.g. HCWs will have an adequate level of awareness to identify a TB suspect case for further investigation.
The costing exercise of the SRL network in EMR

The cost of the following items to be considered during the budgeting exercise:

- Recruiting additional staff and improving the capacity of the current staff.
- TOT training courses annually in each SRL (Culture, DST, EQA for DSM, transport of specimens)
- Review missions annually to the targeted countries (technical assistance).
- Distributing batches for proficiency testing of DST from SRL to its targeted countries
- Regional annual meeting of the SRLN members to exchange experience.
- Web networking to share information and experience covering all the countries in the region plus the SRLN.
- The running cost of materials used for testing and other requirements.
Issues and Findings Summarized from Laboratory Network of Countries Visited

- Infection control and bio safety measures in most settings are not optimal.
- EQA is in place but analysis of errors and actions taken for improvement is not done in some settings.
- IQC for DSM in all labs visited is in place but for C& DST not done in most settings or not recorded.
- Laboratory data management is not optimal.
- Enough budget for HRD and for lab is needed.
- Operational research is deficient.
Issues and Needs Felt by SRL

- Laboratory Assessment Tool used by consultants to assess candidates for SRL need to be modified to suit laboratories other than NRLs as in case of private laboratories.

- WHO regional office is kindly requested to help in sending panel of TB isolates to NRLs.

- Enhancement & encouragement of collaboration between SRLs in developed countries and other SRLs in developing countries through regular meeting for exchange of knowledge and gaining experience.
Proposed next steps

There is a need to identify:

- Source of funds to support SRL network.

- Establish process and methodology for designation (Letter, MOU).

- Accreditation