Mapping and Analysis for Tailored disease Control and Health system strengthening

MATCH

Glion, WHO Task Force Meeting; May 2, 2018
Mirjam Bakker & Lucie Blok
Subnational data analyses are required to effectively address the ongoing TB epidemic.

- Unequal distribution of TB burden
- Local differences in response
- Heterogeneity in gaps

Tailored plans of actions
The aim of the MATCH approach:

Capitalizing on multiple readily available, yet underutilized data sources at national and subnational level, and applying a set of analytical frameworks leading to differentiated action plans...
Triangulation is key feature of our approach

a powerful technique that facilitates validation of data through cross verification of information from two or more analytical methods or data sources.
MATCH Use of subnational data for differentiated TB program planning

1. Rapid situational analysis
2. Data consolidation and collation
3. Participatory data analysis and training workshops
4. Hypothesis generation and verification
5. Definition of tailored interventions
6. Routine monitoring and updating
Rapid situational analysis

Availability of data sources: NTP, lab, census, DHS etc
At what spatially disaggregated level electronically available?

For Bangladesh:
• NTP notifications and outcome at district level (2013-2016)
• Laboratory results (No. tested, positivity, EQA) at district level
• Population census (population, age sex disaggregated, SES) at Upazila (sub-district) level.
Data consolidation and collation

Creation of a single spatial database
Access data directly from QGIS (password protected)
Participatory data analysis and training workshop

1) Know your (local) TB epidemic
   • Where are TB cases missed?
   • Who are the missing TB cases?

2) Understand the local TB response
   • Why are cases missed?

For Bangladesh:
5 days
   • 1 day situational analysis
   • 3 days mapping and analysis
   • 1 day consolidation and validation
District TB Notification rates across Bangladesh in 2016

spatial stats
Social determinants

poverty
urban/rural population density
education levels
nutritional status

...
TB services provided across Bangladesh in 2016
Hypotheses generated by NTP of Bangladesh:

Low notification, while burden expected to be similar to surrounding districts, in combination with low test rate and low positivity rate TB patients may be missed due to limited access to services and poor lab quality.

Follow-up by NTP:

Supervision to verify these findings and to find causes and take appropriate action.
What are the next steps?

- Provide support under the Strategic Initiative
  - Bangladesh
  - Pakistan
  - Kenya
- Developments: DHIS2 plugin for QGIS to improve data disclosure
- Contribute to the Health Geo Lab Collaborative (geo-enabled HIS)
- Subnational burden estimates
- Explore other sources of data (e.g. private sector)
- Update version of manual
- Apply MATCH to other health issues