TB DNA
Country Experience: Case of Ethiopia

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Outline

- Background-Country Context
- National TB Diagnostic Network: structure, coordination and management
- Situation Implementation level
- Country experience in TB DNA implementation in Ethiopia
- Achievements in the implementation of the TB DNA
- Lesson learnt and Best practices from TB DNA
- Summary
Background-Country Context

- Ethiopia: 112 million population in 2022
- TB incidence: 119 per 100,000 population
- Among 30 High TB and TB/HIV burden country for 2020-2025
- NTP annually misses 30% of incident TB and 40% of DRTB cases

  The National Diagnostic policy recommends:

  - Use of WRDs including rapid molecular technics: Xpert, Truenat
  - All presumptive TB cases are recommended to be testing using rapid molecular technology: Xpert
  - Universal DST coverage for First and Second Line TB drugs before treatment initiation
National TB Diagnostic Network

- 3-4 Tier Structure:
  - NRL with full DST capacity, including new TB drugs
  - 10 regional Culture and DST RLs
  - 513 Xpert sites (131 10-color)
  - 17 Truenat sites
  - >4000 Peripheral AFB labs
  - First TB Lab NSP in 2022
  - National TB lab Taskforce
Persistent systemic challenges in the Ethiopian TB Lab network system: TB Lab Network NSP 2021-2026:

- **No prior rigorous systematic assessment** to inform the NSP development
- The Lab section in the TB NSP **barely adequate**
- **No established TB Lab surveillance system** to track performances
- TB program **lacked standard package** for TB tailored LQMIS support to peripheral sites
- No information on **institutional capacity** of sites to optimally operate on Newer molecular technologies
Country experience in TB DNA implementation in Ethiopia

**Why?** To evaluate the organization, functionality, capacity and perf. of the TB dixtic Network

**Who?** NTP/NTRL leadership with financial support from USAID

**When?** Planning: Oct – Nov 2021 / Conducted Feb to March 2022, including a two week in-country verification

**Who?** 11 External Assessors and 15 local experts; grouped in 10 teams

**Where?** Visited 72 sites nationwide
Country experience in TB DNA implementation in Ethiopia(2)

- Concept note, Government buy-in, Resource mobilization of 12 global TB Lab Experts
- Virtual Launching event
- Pre-assessment data collection and analysis
- Self-assessment using the TB-Net Tool
- In-country verification of self-assessment a team of External Assessors during site visits and stakeholder consultations
- Review of overall findings and supportive documents to reach consensus core on 10 core capacities
- Recommendations and priority interventions
- Joint Assessment report of the Tuberculosis Diagnostic Network of Ethiopia
Lessons learnt from TB DNA

✓ **Validated** the first TB lab Diagnostic Network strengthening Network SP

✓ Provided **rigorous evidence-based recommendation** on how to strengthen
  the institutional capacity and functionality of the TB lab Network.

✓ Provided key recommended actions on **ensuring TB lab service** continuity in
  the unprecedented events of shock: pandemic, Conflict,…

✓ Guided the development of **TB lab LQMIS standards** tailored to the country
  needs
Lessons learnt from TB DNA(2)

✓ Provided data-driven spatial analysis information for the placement of Rapid molecular technologies

✓ Facilitated local government’s political will and increased commitments

✓ Created opportunities for increased resourcing:
  ✓ Incorporated in the recent TB NSP mid-term Review and latest TB NSP 2023-2030
Achievements and Best practices in Ethiopia

- Leveraged additional resource from USG, Global fund TB NFM-4 grant and domestic sources
- **TB lab information systems:**
  - added TB lab indicators in **DHIS-2 reporting system** and
  - Deployment of INTP “LabXpert Ethiopia”- a real-time connectivity system for Xpert machines and other tests as needed
- **Strengthening of TB lab Diagnostic network capacity** award from USAID/IDDS
- Facilitated for an **integrated approach for TB-Malaria program microscopy EQA** programming
USAID Donated 126 Ten Color Xpert Machines, Jan 2023

Question: How can the NTP deploy these 10-Coloro machine to optimized utilization?
I. BASELINE SERVICE AREAS WITH REFERRALS

<table>
<thead>
<tr>
<th>Service areas</th>
<th>Baseline Population Coverage (%)</th>
<th>Population With Referral (same region) (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>20km</td>
<td>38.36%</td>
<td>54.53%</td>
</tr>
<tr>
<td>50km</td>
<td>80.70%</td>
<td>91.00%</td>
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</tbody>
</table>
PHASE 2: 10-COLOR NETWORK IMPACT (50KM SA)

<table>
<thead>
<tr>
<th>Service Areas</th>
<th>Distance to Baseline Selection</th>
<th>Population Coverage (%) of 10-color GX selections</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Selected Facilities for 10-color Machine</td>
</tr>
<tr>
<td>20km</td>
<td>50km</td>
<td>25.55%</td>
</tr>
<tr>
<td>50km</td>
<td>50km</td>
<td>62.17%</td>
</tr>
</tbody>
</table>
PHASE 3: MOVING 130 6-COLOR MACHINES

Candidate criteria:
- Active, TB treatment or diagnostic health centers, hospitals, medical clinics or other health facilities
- Private facilities included in data file acceptable locations
- Without GeneXpert machines

Candidate Count = 2,822
2,500 Public
322 Private
Summary

- Conducting TB DNA is critical step for strengthening the national TB lab diagnostic capacity of priority countries

- Ethiopia benefited for the implementation of the TB DNA
Thank you!!!
Acknowledgement

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• iNTP/STP
• IDDS
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• ASLM