

Beyond DNO: The Changing Landscape of Laboratory Services – Lesotho

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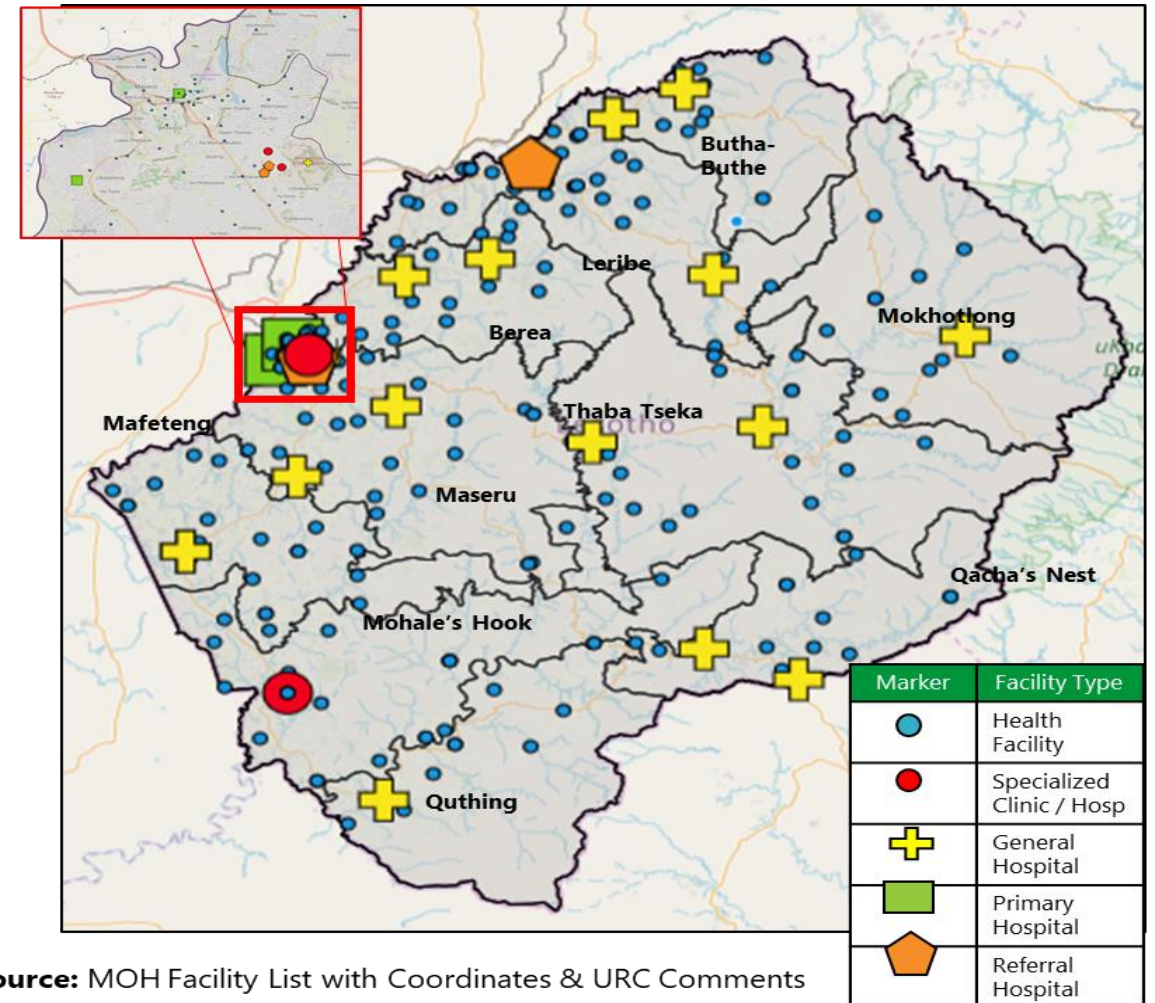
Background

By expanding the country's viral load testing capabilities, the government of Lesotho modified its HIV/AIDS services to better meet the needs of people living with HIV (PLHIV). In 2019, despite having five viral load laboratories, more than one in every four people living with HIV/AIDS in Lesotho still lacked access to viral load testing services.



Background

- To provide coverage to all HIV/AIDS clients the Ministry of Health (MOH) with the support of GHSC-PSM and other implementing partners joined forces to implement an ambitious diagnostic network optimization program.
- Diagnostic network optimization is a data-driven approach that includes the mapping of various network models to develop more efficient and cost-effective laboratory services.



Data Source: MOH Facility List with Coordinates & URC Comments

Implementation

- The program began with a workshop in September 2019 where participants mapped an optimized diagnostic network for HIV viral load, early infant and tuberculosis diagnosis that included a mix of large and small laboratory sites around the country, including 13 minilabs.
- The MOH's infectious disease control and laboratory directors combined efforts to form a task force to lead implementation, leveraging each participating organization's expertise and define clear roles.



Photo credit: Arturo Sanabria

Implementation (2)

- The task force prioritized point-of-care (POC) viral load testing for pregnant and breast-feeding women to provide faster identification and access to care and prevent mother-to-child transmission.
- MoH and Partners launched a pilot program in February 2020 at five central ‘hub’ sites, with eventual full rollout of the program in July 2020. In March 2021, POC viral load scale up began with inclusion of infants and children (0-19 years).



Photo credit: Arturo Sanabria

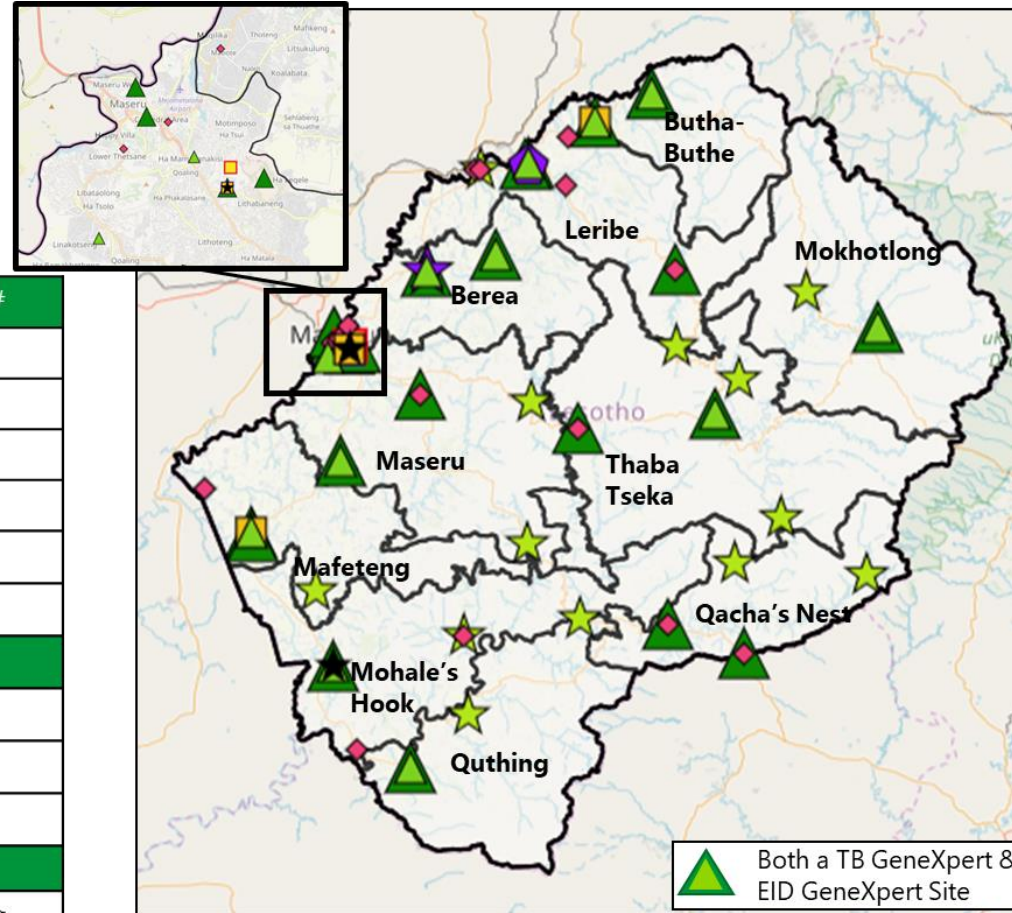
Lesotho HIV VL, EID, and TB Instruments

Instrument Overview: ALL

Current: 35 Test Sites & 72 Machines

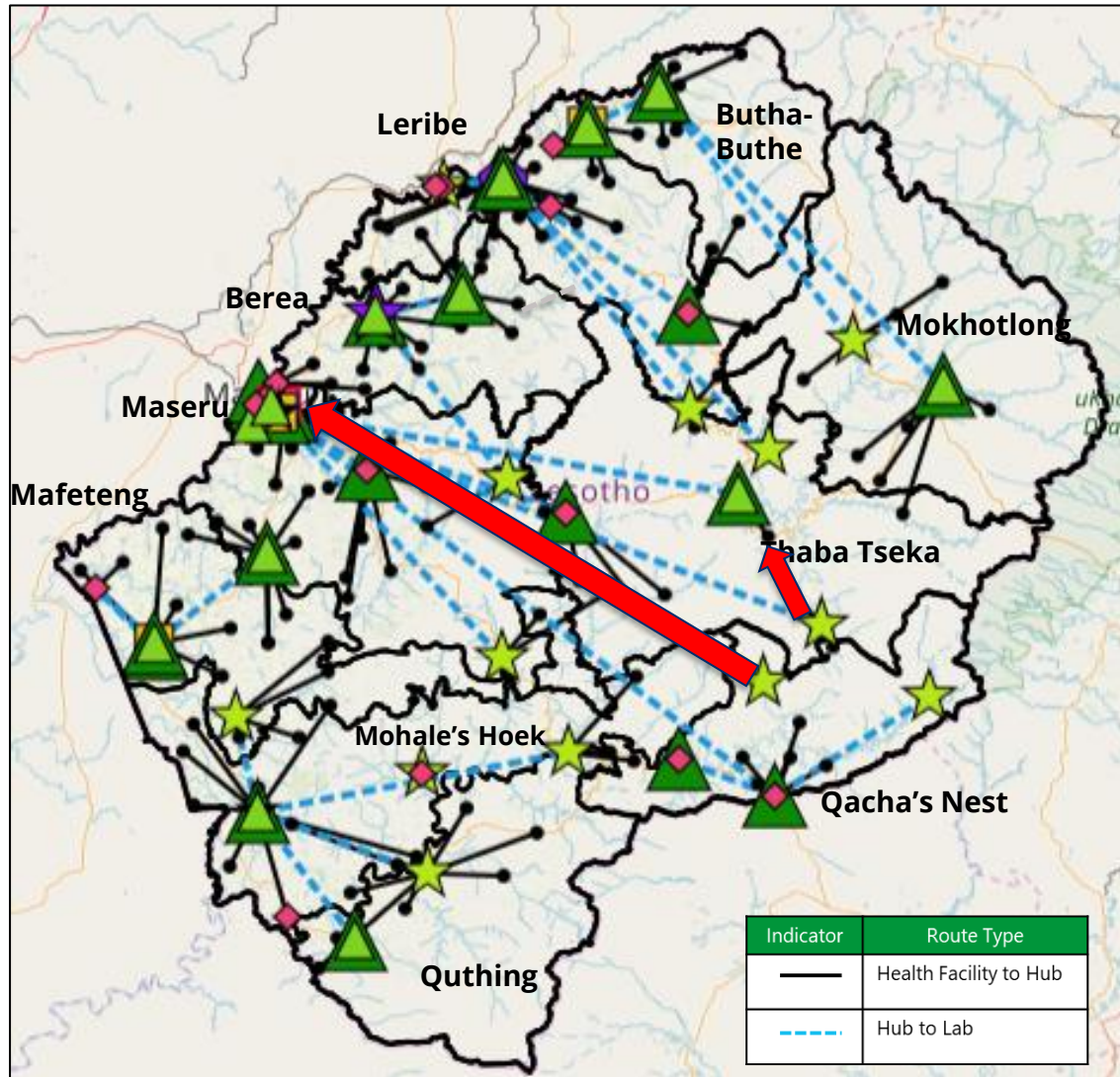
Projected: 46 Test Sites & 87 Machines

Marker	Equipment Type	Total #
◆	Alere-Q	15
▲	GeneXpert	50
■	Roche CAP/CTM48	1
■	Roche CAP/CTM96	3
⬠	Roche 4800	2
★	Hologic Panther	1
Current State: Grand Total		72
★	GeneXpert (Mini-Labs)	13
⬠	Roche 4800	1
★	Hologic Panther	1
Projected: Grand Total		87
*Roche CAP/CTM96 @ NRL does both EID & VL testing		



Data Source: Lesotho_LabEQIP Template (VL) & GeneXpert Directory – 2019 (MOH) & URC Comments

Optimized Referral Linkages



Instrument Footprint Includes:

All Projected Instruments Operational

- 13x GeneXpert Mini-Labs
- 1x Hologic Panthers
- 6x Roche C4800

Program Integration for co-located GeneXperts

GeneXpert Mini-Labs operate as sample collection hubs

Marker	Equipment Type
◆	Alere-Q
▲	GeneXpert
■	Roche CAP/CTM48
■	Roche CAP/CTM96
◆	Roche 4800
★	Hologic Panther
Current State: Grand Total	
★	GeneXpert (Mini-Labs)
◆	Roche 4800
★	Hologic Panther
Projected: Grand Total	
*Roche CAP/CTM96 @ NRL. does both EID & VL testing	

Indicator	Route Type
—	Health Facility to Hub
- - - -	Hub to Lab

Challenges Faced during Implementation

- COVID-19 restricted implementation.
- Expiry of 210 kits in April 2021.
- Poor inventory management at the facilities.
- Shortage of cartridges and delay in their delivery led to slow scale up of pediatric expansion to other remaining POC VL sites.
- Rotation of trained nurses to other departments.
- There was lack of capacity at facility level hence extensive training on POC VL testing procedures was required.

Remedial Actions

- Initiate meetings virtually to address challenges with implementing partners
- Conducted training virtually
- Supportive supervisions in collaboration with Implementing Partners

Partners Efforts



Photo credit: Arturo Sanabria

Along the way, implementing partners provided much-needed support, including advocacy to include more patient groups in viral load testing, design of tools for supportive supervision, monitoring and evaluation, roll out of training, supportive supervision and mentorship, commodity management, data management and reporting.

Partners Efforts (continued)

Sub-national partners provided key support for implementation while the District Health Management Teams and district-level staff of partner organizations co-facilitated trainings, provided post-training support and supervision, managed supply chains and supported waste management. Riders for Health provided trained for laboratory sample transportation.



Photo credit: Arturo Sanabria

Current Status

- To date more than 400 health facility staff have benefited from training in the various skills needed to implement diagnostic network optimization. Because of challenges related to COVID-19, some of the training programs took place virtually.
- After implementation of diagnostic network optimization, the time required from laboratory sample collection to delivery of results at facilities dropped from a range of 13-43 days to less than 24 hours. Most importantly, healthcare providers reported a significant increase in patient satisfaction, especially among pregnant and breast-feeding women.



Photo credit: Arturo Sanabria

Moving Forward

Preparations are underway to carry out training at remaining sites for the inclusion of infants and children. There is ongoing supervision and mentorship for the support of trained personnel, and training of more personnel to minimize gaps during rotations. The next steps of the program include plans to reach patients with unsuppressed viral load and those with advanced HIV disease.



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