

Strengthening the GeneXpert Network : bringing rapid TB testing to all in Zambia

BACKGROUND



- In 2017, the Zambian National Tuberculosis and Leprosy Program (NTLP) program adopted GeneXpert MTB/RIF as the first line test for tuberculosis (TB) diagnosis, to improve case detection for susceptible and drug resistant TB.¹
- There has been rapid increase in the number of GeneXpert machines in the country, from 69 in 2016 to 210 in 2018.
- There was a need for the continued strengthening of the GeneXpert network.
- Continuous module breakdown, irregular GeneXpert routine and annual maintenance, erratic supply of cartridges, frequent power outages, inexperienced staff and the use of a paper-based data reporting system posed serious implementation challenges for GeneXpert.

OBJECTIVE



- To ensure comprehensive, high quality TB diagnostic services by strengthening the national GeneXpert network.

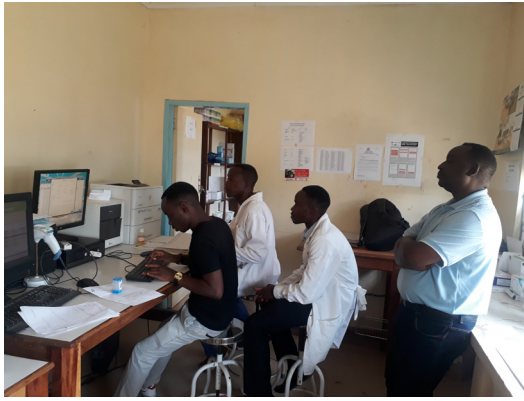
RESPONSE



From January 2017 to June 2019, the USAID-funded Challenge TB (CTB) project supported various activities to strengthen the national GeneXpert network:

- Supported the revision of the national GeneXpert scale up and implementation plan.
- Supported GeneXpert training of trainers (Provincial Biomedical Scientists, Clinical Care Specialist, Facility lab and Clinical Staff).
- Trained facility clinical and laboratory staff in GeneXpert implementation.
- Trained medical equipment officers in GeneXpert maintenance.
- Enhanced transmission of laboratory data for microscopy, line probe assay (LPA) and culture and drug susceptibility testing (DST) by introducing the DataToCare diagnostic connectivity platform.
- Based on data generated by the DataToCare system, targeted supervision of poorly performing GeneXpert sites was conducted.
- Installed back-up power at 11 GeneXpert sites.

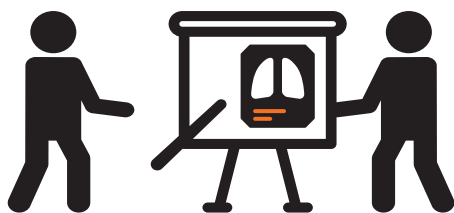
¹ Ministry of Health (2018) Implementation Guidelines and Scale-Up Plan for Xpert In Zambia. Lusaka.



RESULTS

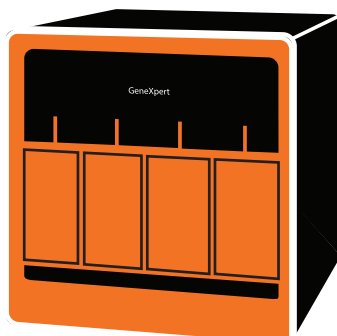


- The proportion of new and previously treated patients tested for RR/MDR TB increased from 10% in 2016 to 67% in 2019 at national level and from 11% to 70% in CTB supported areas.
- CTB trained 30 provincial and district TB managers in DataToCare system including onsite orientation for facility staff.
- DataToCare installations were done in 144 (69%) out of 210 sites countrywide and in 93 (98%) out of 95 target sites in CTB Areas.
- A total of 75,081 patient GeneXpert results were electronically transmitted to MoH, clinicians, and patients in real time.
- Of the patients tested, 7,502 (10%) were MTB-positive and 298 (4%) were rifampicin-resistant (RR) TB.²
- Replaced 59 GeneXpert modules in 25 (26%) out of 95 sites.
- Test results were shared to clinicians by SMS and/or email while a notification alert to return to the facility was sent to the patient by SMS.

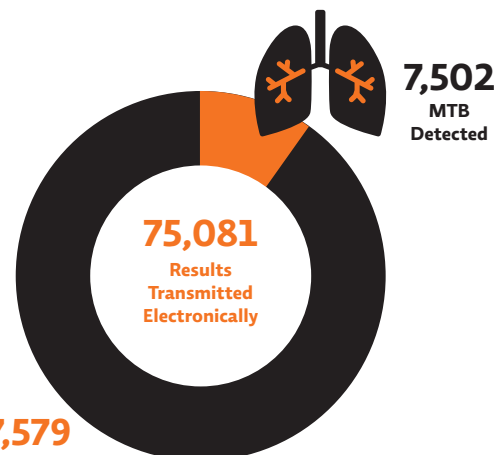


30 provincial and district TB managers were trained on the DataToCare system including onsite orientation for facility staff.

59 GeneXpert modules were replaced in 25 sites



67,579
MTB
Not Detected





LESSONS LEARNED



- Strengthening of the supply chain management system can minimize stockout of commodities such as GeneXpert cartridges
- Capacity building of staff through regular and structured mentorship programs in GeneXpert service and maintenance can reduce module failure and equipment downtime.

CONCLUSION

Capacity building of MoH staff at all levels should remain a key focus area of the TB program to strengthen the GeneXpert network.

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