

## **Harnessing technology for efficient TB diagnosis: Experience from Diagnostic Network Optimization Project in Kenya.**

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Diagnostic network optimization (DNO) aims to redesign the diagnostic network configuration in order to increase access, maximize impact and to enhance efficiencies. It seeks to align testing demand and available capacity in the most cost-effective manner. This is achieved through laying out of optimal instruments mix, appropriate locations for placement and design of referral network linkages for the entire revised network. The DNO project in Kenya was carried out with support from Bill & Melinda Gates Foundation USAID (TBARC II), CHAI, FIND & Llamasoft. A situational analysis in the country showed that 42% of people with respiratory symptoms initially seek care at private clinics, laboratories and retail chemists. Majority of the TB cases who seek care, were not diagnosed at initial health facility (prev. survey 2016). Majority of TB diagnosis was made after 4 to 5 hospital visits and 21% of bacteriologically confirmed TB cases were not notified (Initial loss to follow up). Leakages were noted since TB diagnosis was mostly done in the Chest/ TB Clinic. As of 2017, there was low Xpert utilization, limited access to Dx services with no sample referral network. Based on the available evidence, a prioritized and patient-centered National Strategic Plan was developed to meet End TB targets and diagnostic network optimization was embedded and aligned with NTP priorities and targets for case detection. Sufficient network capacity exists to meet current TB demand and is largely well placed. SRS will enable scale up of testing to find the missing cases. Network efficiencies increase, through the implementation of integrated supporting systems.

### **Key words**

Tuberculosis, Diagnosis, GeneXpert, Network, Optimization

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