

Q&A Summary from the Webinar Lessons Learned: The Nigerian Experience Overcoming GeneXpert® Operations in Challenging Settings

Utilization and Impact of GeneXpert® in Nigeria

The GeneXpert® technology is a powerful diagnostic tool within Nigeria's public health space, especially with its integration capabilities. As Prisca noted during the webinar, it was pivotal in supplementing testing during the COVID-19 pandemic, providing comprehensive service and support throughout Nigeria. Renewed education and innovative mitigation plans have helped overcome many controllable challenges.

The Cepheid project is highly dynamic, with continuous adaptation to new challenges. Solutions to one problem often lead to new issues, but the team maintains close monitoring to ensure progress.

Challenges and mitigation strategies:

- **Conflict zones:** In conflict-affected regions, the Cepheid project team sometimes relocates staff for repairs and training. However, in areas with non-functional clinics or unsafe conditions, solutions are limited, and mobile units might face attacks.
- **Service provision impact:** KNCV staff, not third-party providers, manage service provision, with an expanded team of 13 staff supported by super users and partners. Performance is measured through key performance indicators like error rates (consistently below 5%) and module replacement times, although achieving the two-week target is challenging due to environmental factors.

Performance Metrics and Training:

- **Access and utilization:** Utilization is measured through indicators such as machine downtime and module replacement rates. Downtime is minimized due to spare parts availability and an increased staff presence.
- **Cost considerations:** Comparisons between inverters and solar panels for power supply indicate solar panels as more cost-effective over time despite higher initial costs.
- **Training frequency:** Initially conducted centrally, training is now done on-site to address specific gaps. Approximately 110 on-the-bench training sessions have occurred this year alone.

Data Reporting and Ecosystem Sustainability:

- **Data Reporting:** Between 50-75% of the 546 GeneXpert® machines report data daily. Integration with other diagnostic programs (HIV, hepatitis) reduces overall costs.
- **Specimen Transport:** Managed by the National TB Program (NTP) and various contractors, specimen transport is integrated for cost efficiency. Diagnostics take priority over monitoring tests due to their critical nature.

Key Takeaways:

- The success of the GeneXpert® systems and Cepheid project in Nigeria relies heavily on innovative mitigation plans, continuous adaptation to new challenges, and strong partnerships with health programs and ministries.
- Safety of staff in conflict zones and maintaining functionality in challenging environments remain critical concerns.
- Regular training and comprehensive service support are crucial for the project's ongoing success and sustainability.
- Collaboration with various programs and ministries of health is essential to the success of operating GeneXpert®. Partnerships are crucial, as breaking this chain can lead to disruptions, evident from their decade-long experience.