The Role and Challenges of Connectivity

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The Current Situation in Countries

• Clinical laboratory service is complex that requires dealing with data and information management
• Access to testing requires proper management of multiple issues:
  – Service and Maintenance
  – Quality Management Systems
  – Forecasting
  – Procurement and Supply Chain
• Inoperable devices affect the care and treatment of patients
• Effective management of these processes in care and treatment programs requires program data management practices that rely heavily on strong data collection mechanisms
Connectivity Solutions

The need is actually not for connectivity but for intelligence to improve the quality of testing and patient care.
PIMA Reporting Situation in Zimbabwe

• Since July 2016, all 360 PIMAs connected to CHAI’s in-country POCLabs system

• Zimbabwe MOHCC has been receiving scant data, possibly due to a number of issues:
  – Insufficient cell phone signal at remote sites to transmit data
  – Lack of awareness to report data
  – SIM cards with insufficient or expired airtime

• Today almost all are connected but no updates on reporting.
Supply Chain Management

Projected Days of Inventory

- **Site 1**: Cartridges used before the expiration date
- **Site 2**: Cartridges used before the expiration date
- **Site 3**: Cartridges used before the expiration date, 169 cartridges expiring, 27% waste
- **Site 4**: Cartridges used before the expiration date, 445 cartridges expiring, 27% waste

Legend:
- Green: Cartridges used before the expiration date
- Orange: Potential to Expire
- Grey: Zero cartridges left or no inventory recorded

Note: If the device name is displayed in red, the device has less than 21 days worth of inventory left.
Error rates linked to individual modules

Tests per Day

Number of Tests


Error Rate by Module

Error Rate in Percent

8%

Most Common Errors

Number of Errors

0 1 2

5000

Average Time to Upload (weekly)

Average Tests Per Day: 1.07

Lab Hours of Operation: 8:30 AM - 4:00 PM

Average Time per Test: 85.4 minutes

Modules: 4

Average Utilization: 5%
Results to date

- Successfully connected PIMAs, GeneXperts, hematology and chemistry devices
- Sites transmitting data via 3G and satellite
- Automated EQA results reporting for PIMA (EQA provider received results within one hour of running EQA sample)
- Strengthened country telecommunications