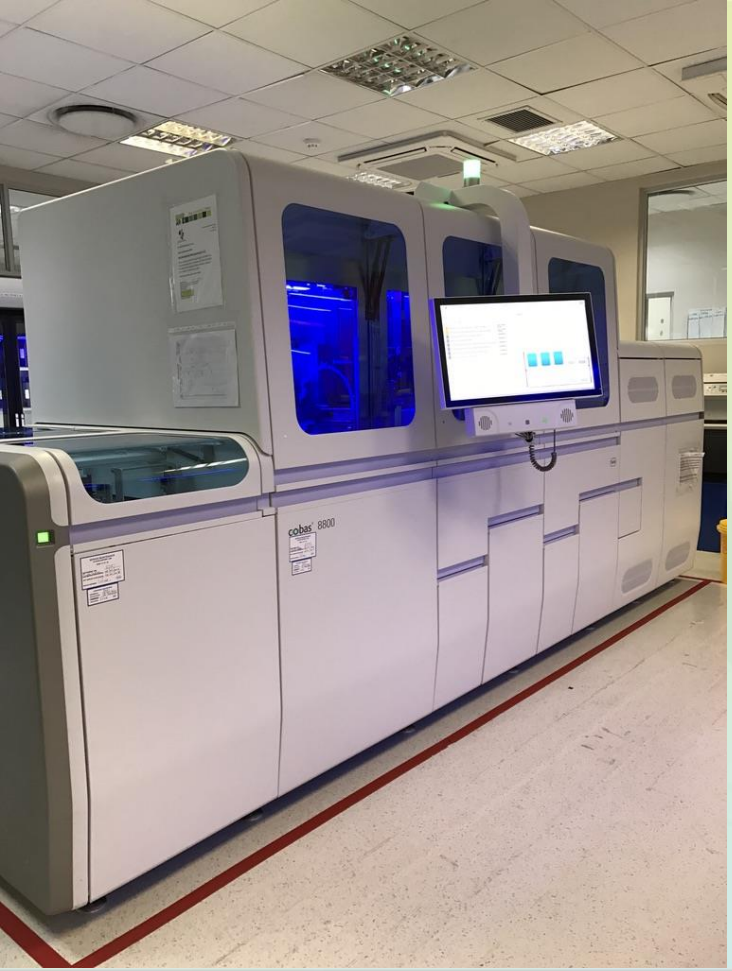

Challenges with Equipment Management - The Laboratory Perspective

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Presentation Outline

- Background and Introduction
- Major challenges managing equipment in the laboratories we support
- How we have managed some of the challenges and lessons learnt
- Recommendations for laboratories and program managers
- Acknowledgement

Background and Introduction

- APIN Public Health Initiatives is a non-governmental donor-funded organization in Nigeria
- Presents in eight states: Plateau, Benue, Oyo,Ogun,Lagos, Osun, Ekiti and Ondo
- Platforms used in the laboratories include: CAP/CTM, C311, C111, BC580 Mindray, BC380 Mindray, GeneXpert, Counter1, Counter2, SL3, Pima…

Background and Introduction

➢ The procurement process includes:

- Need assessment by the user (laboratory team)
- Bid invitation
- Evaluation of bids and award of contract
- Contract execution
- Disposal of scrap

Major Challenges Managing Equipment in the laboratories we support

Include

- Poor maintenance culture by operators
- High frequency of equipment breakdown
- Delay time to service
- Lack of spare parts
- Equipment disposal and replacement
- Power supply

Poor maintenance culture by operators

Observations

- Daily maintenance not properly carried out on Cobas AmpliPrep/ Cobas TaqMan (CAP/CTM)
- Preventive maintenance not properly carried out on chemistry and hematology equipment as indicated by manufacturers
- Centrifuges for separating viral load samples not properly cleaned and maintained

Poor maintenance culture by operators

Action

- Training of staff
- Monthly supervisory and mentoring visits by state officers
- Visit to facilities by the in house trained application specialist for daily maintenance twice a year

High Frequency of Equipment Breakdown

Observations

- High rate of QS invalid on CAP/CTM
- Inappropriate wiring of buildings housing laboratory equipment
- Frequent breakdown of UPS and voltage stabilizers
- Frequent breakdown of ACs. When functioning and the room becomes too cold, staff put them off
- Temperature dependent equipment like GeneXpert and CAP/CTM frequently break down
- Delay of service time by the biomedical engineers
- Equipment too old

High Frequency of Equipment Breakdown

Action

- Training and refresher training
- Rewiring of buildings
- Close supervision of staff
- Service contract for equipment

Prolonged Equipment Downtime

Observations

- Shortage of Biomedical engineers
- Delay intervention
- Most spare parts not readily available in country
- Waiting time may be as long as two months

Prolonged Equipment Downtime

Action

- Samples are referred to other facilities with less or no backlog samples

Erratic Power Supply

Observations

- Rationing of power supply
- Power failures

Erratic Power Supply

Action

- Provision of solar freezers for storage of samples
- Provision of inverters
- Provision of solar panels
- Provision of generators

Lessons Learnt

- Training and refresher training drastically minimized corrective maintenance and maintenance costs
- Confidence and competency of operators developed and improved
- Regular monitoring and supervisory visits improved performance at facility level

Recommendations for labs and Program Managers

- Sustainability of training and refresher training
- Sustainability of supervisory and mentoring visits to assure capacity building
- Implementation of equipment maintenance policy at all facilities
- Follow implementation of service contracts

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THANK YOU