Central de Medicamentos e Artigos Médicos
Implementing eLMIS to Improve Data Visibility and the Health Supply Chain: Lessons from Mozambique

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Central Medical Stores (CMAM)
Mozambique
Located in Southeast Africa
Total population 29,668,834
11 provinces
154 districts
HIV prevalence of 13.2%, more than 1,300,000 in ART
1,596 health facilities (INE-National Institute of Statistics)
96% of health facilities are Level 1 (former health posts)
Mozambique’s Supply Chain

- Supply Chain Structured in 4 levels; plus the community
- Central-level Central Medical Stores & 3 regional warehouses
- 11 provincial warehouses
- 147 district warehouses
- 1,596 health facilities
- 4,427 community health workers
- Serving over 29,668,834
Data Gap in Supply Chain

- Only 2% Public health supply chain visible
- Only the warehouses had computerized systems
- Main stream relies on aggregated paper based data

Lack of visibility in vast majority of the system:
- 98% of the stocking points missing critical data
- No HF consumption data
- No stockout data at the large bottom of the pyramid
SIGLUS is a cloud-based Logistics Management Information System for Health Facilities, used to report stock data via tablets.

Capture data on:
- stock on hand
- quantity issued
- quantity received
- Adjustments
- quantities requested
- patients by regimen for ARVs

Health Facilities use SIGLUS also to generate and send monthly or quarterly requisition.
SIGLUS – The Mobile app

- Online/offline
- Transactional workflows (as opposed to a reporting tool)
- Automated calculations for requisition process
- Alerts for low stock levels, overstocking, understocking and upcoming expiries
- Product expiry date and batch information
- Requisitions to supply warehouse
- User interface mimics paper forms familiar to healthcare workers to reduce training burden
- All Essential Products including Anti Malaria drugs, Anti-retroviral, Contraceptives, Rapid Diagnostic Tests, Antibiotics, Essential Medicines, Key Medical Articles
SIGLUS – The Web Portal

- Customized reports for Mozambique, such as weekly tracer drug report.
- Facility-level and aggregate reports and visualizations
- Data export for further analysis
- Access to all submitted requisitions
- Access to stock cards and transactions of products
- Tracking of synchronization status and order requisition timeliness
SIGLUS – Current Expansion

**Operational**
- 9 Provinces
- 54 Districts
- 675 HF (40% HF of Moz)

**In the Implementation process**
- 22 Districts
- 140 HF (53% HF of Moz)

HF with SIGLUS
High expansion of SIGLUS during 2018, exceeding the 30% of the HF with the system implemented by 2020 set as goal.
Mobile solution for end-to-end Visibility

Data Visibility
Managers have real-time data of the HF:
- Stock on hand
- Quantities issued
- Quantities received
- Adjustments
- Quantities requested
- Stock outs
- Expiry dates

Monthly Requisition
HF generates and sends monthly or quarterly requisitions including quantities requested

Distribution Plan
Quantities to be delivered to provinces

Monthly Requisition
Provinces and Districts generate and send monthly or quarterly requisitions

Daily movements
Quantity issued, quantity received, adjustments

Warehousing

Quantification

Procurement

Data Visibility
Managers have data visibility of the Provinces, Districts, and HF

Master Data Mngt

2018 Global Health Supply Chain Summit - Lusaka, Zambia
Example Stock Availability in one District

- AL 6x1 (ACT)
- 1 district (Nicoadala)
- Zambézia Province
- 7 Health Units
SIGLUS – Data for decision-making

Cotrimoxazol 480mg Tablets Stock
According to Plan over time

- Over stock
- Regular stock
- Low stock
- Stock out
SIGLUS – Data for decision-making

Density of Stock Outs

Density of Stock Availability

One frequent question…

What is the Malaria Medicines Stock Situation?
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What is the Malaria Medicines Stock Situation?

- GIS data
Development – deep analysis tools

- Improved data visualization and early warnings
- Comprehensive Dashboards
- Use BI tools – over time analysis SIGLUS data
- GIS
- Integration and interoperability with other LMIS and HIS systems
  - Including reagents, laboratory and health consumables
- Expanding to laboratory logistics
- Impact indicators
SIGLUS – Data for decision-making

SIGLUS – The Web Portal

Thank You!