

Impact of Electronic Information Systems on HIV Service Delivery in Zambia

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Issue

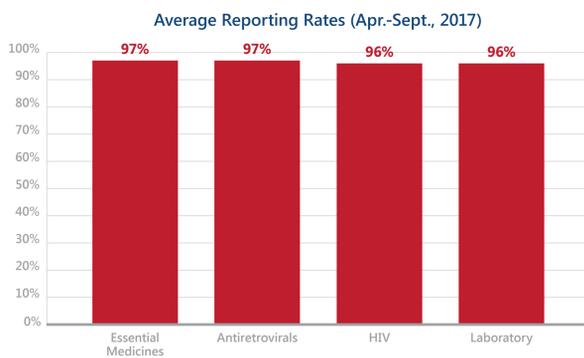
The Zambian Ministry of Health faced many challenges in managing procurement and distribution of medical products and supplies. Long lead times, stockouts, and general inefficiency characterized the in-country supply chain.

Description

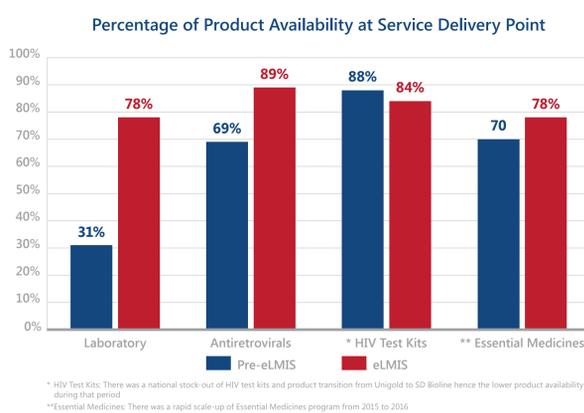
Beginning in 2014, the Strengthening High Impact Interventions for an AIDS-free Generation (AIDSFree) Project, funded by the U.S. President's Emergency Plan for AIDS Relief through the United States Agency for International Development, worked with the Zambian government to pilot and scale up an electronic Logistics Management Information System (eLMIS). This open-source supply chain software facilitates logistics data collection in low-infrastructure environments for review, aggregation, analysis, and forecasting by incorporating medical records and laboratory data, and enabling data visibility from the point of origin to the point of delivery. The eLMIS has been deployed to five countries in addition to Zambia: Tanzania, Malawi, Mozambique, Guinea, and Côte d'Ivoire.

Results

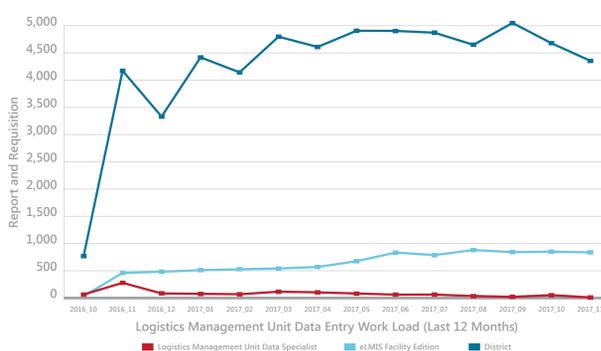
- **Improved and sustained reporting rates.** Reporting across all four program areas remains above 90%, even with newly implemented facilities as of Sept. 30, 2017



- **Improved product availability**



- **Data entry reduction at the Commodity Security Center**



Benefits of eLMIS



Generate cost savings by eliminating books and couriers



Simplifies data gathering, reporting, and authorization through commodity integration



Improves data quality and timeliness



Increases accountability by improving data visibility to manager



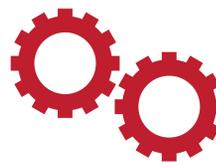
Reduces workload for health facility staff and logisticians



Provides access to real time and historical data for more informed decision making



Can adapt to changes in existing and future logistics systems



Developed to interface with other e-tools supporting health initiatives

Time It Takes for Health Facility Data to Reach the Central Level



With manual logistics systems

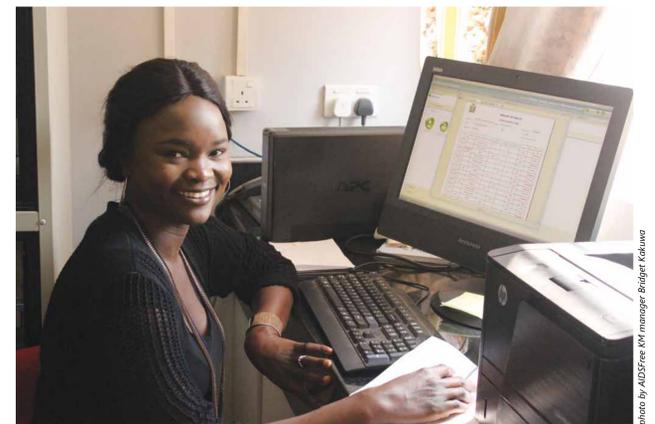


With eLMIS

Lessons Learned

The eLMIS has enabled Zambia to achieve measurable improvements in logistics management:

- **Broader involvement of user groups in data update and use**
- **Visibility of supply chain operations to all stakeholders**
- **Increased throughput of health commodities**
- **Improvements in health care service delivery**
 - Reduction of waste—overstocks are monitored and redistributed
 - Reduction in missed treatment opportunities—better adherence
- **Improved capacity to support the World Health Organization's universal test and treat strategy**, furthering the 90-90-90 goals set forth by the Joint United Nations Programme on HIV/AIDS; increase in use of HIV test kits by 141%
- **Increase in key antiretrovirals being dispensed to users by 254%**
- **Reduction in supply chain supervision costs**
 - Timely intervention in supply chain problems: targeted supervision visits conducted to easily identifiable problem sites based on insights from data
 - Lower monitoring and evaluation costs from routine data that are reliable, available, and accessible
 - More cohesive experience among implementing partners leading to improved quality and lower costs

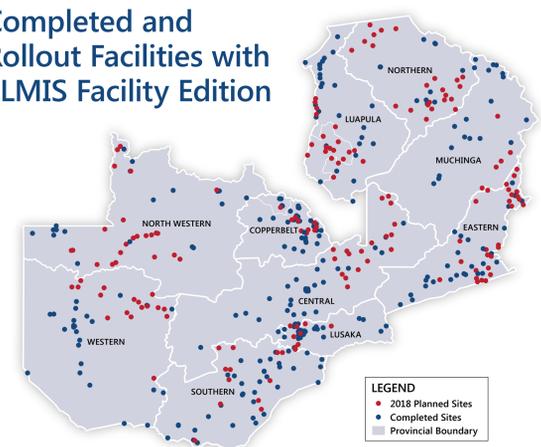


Pharmacist Tibalenge Mwanza uses the eLMIS at Chilenje Level 1 Hospital in Lusaka

Next Steps

Electronic information systems require allocation of resources and time to achieve sustainability and attain the full change management maturity model. Despite Zambia's advances, some challenges persist. There is a need to continue cultivating reliance on data for decision-making. Data are widely used to guide procurement and decisions on routine operations, but not yet used for supervision and policy development. The technology and implementation experience from Zambia will benefit all neighboring countries grappling with similar challenges.

Completed and Rollout Facilities with eLMIS Facility Edition



Sister Zulu and Mr. Nkoma at Twalumba Health Center using the system to enter data from their ARV Daily Activity Register

