Strengthening Supply Chain System Through National HIV LMIS Data Audit Exercise

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Context and Motivation

Nigeria faces a high HIV burden, with around 2 million cases across all 36 states and the capital, Abuja. As of December 2023, 1,735,808 individuals were on ART, supported by drugs supplied from roughly 1,900 sites nationwide. Reliable access to these treatments depends on quality data from the Logistics Management Information System (LMIS), as poor data can lead to stockouts and expiries.

Health facilities submit the Combined Report and Requisition Form (CRRF) via the Nigeria Health LMIS (NHLMIS) for bimonthly resupplies, with the state's Logistics Management Coordination Unit (LMCU) tasked with reviewing these reports. However, review processes vary by state, lacking a unified approach and a robust feedback mechanism to document improvements. Although NHLMIS checks reports for errors, its quality controls are limited. Recent concerns about data accuracy have driven a national Procurement and Supply Management (PSM) team study to audit logistics data for better planning and resupply decisions.

Methodology and Work Timeline

In 2023, the National AIDS, Viral Hepatitis and STI Control Program (NASCP) obtained Global Fund support to improve HIV supply chain management through various initiatives, including an LMIS data audit. This audit aimed to identify and address errors in facility-level LMIS reports prior to resupply. In Q4 2023, NASCP hosted a three-day meeting with state LMCU coordinators and implementing partners across Nigeria's six geopolitical zones to reconcile state-level commodities and resolve data quality issues flagged in the reporting cycle.

Two data quality audits were conducted:

1. State-Level Audit: Each state LMCU coordinator reconciled product receipts reported by facilities with warehouse records of last-mile distributions, using a template to aggregate and compare the September 2023 data. Discrepancies were traced back to individual facilities, and coordinators contacted facility points of contact to confirm and correct stock records.
2. Facility-Level Audit: Conducted by the PSM team, this audit identified data quality issues that were shared with state coordinators for resolution. Key audit checks included:
   o Product Viability: Ensuring reported products were still within their shelf life.
   o Stock Receipts: Validating facility-reported stock against warehouse distribution records.
   o Stock on Hand: Confirming physical stock matched reported inventory movements (e.g., received, dispensed, or adjusted items).

The resolution involved reaching out to facility contacts or partners to clarify and update NHLMIS records, as well as any available physical records at facilities.

## Results and Interpretations

State-Level Stock Reconciliation

The state-level audit reviewed 27 products, including ARVs, OI drugs, test kits, and AHD commodities. Variances mostly arose from supplies to Department of Defense (DOD) sites, as these are not tracked in the last-mile distribution matrix since the DOD independently handles its deliveries.

Facility-Level Data Quality Audit

The table below summarizes efforts to resolve discrepancies at the funder level:
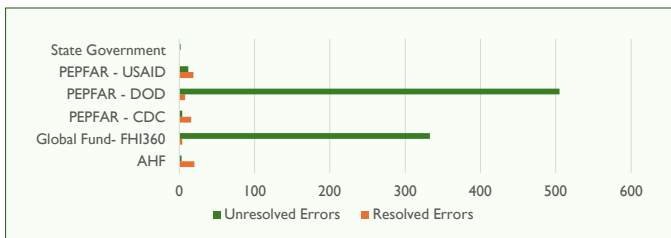
Out of 926 flagged errors, 92% came from Global Fund and PEPFAR-DOD sites, with a 7% overall resolution rate. Inaccurate documentation of stock receipts constituted over 80% of these errors.
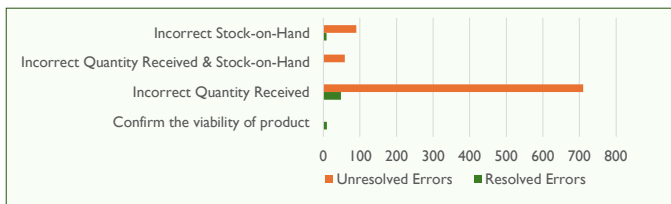
Errors were most frequent in the southeast zone, with Anambra, Lagos, and Rivers recording the highest counts.

Lessons Learned

1. The audit revealed error types, common errors, and key contributing partners, providing a foundation for targeted improvements.
2. Gaps in data management were identified, such as the lack of DOD distribution data within the national coordinating framework.
3. Some errors were resolved, although unresolved issues highlighted the need for all partners' participation in future audits.
4. Regular state-level data review meetings could embed a culture of proactive data validation.
5. Facility staff involvement in data review would likely improve data quality.
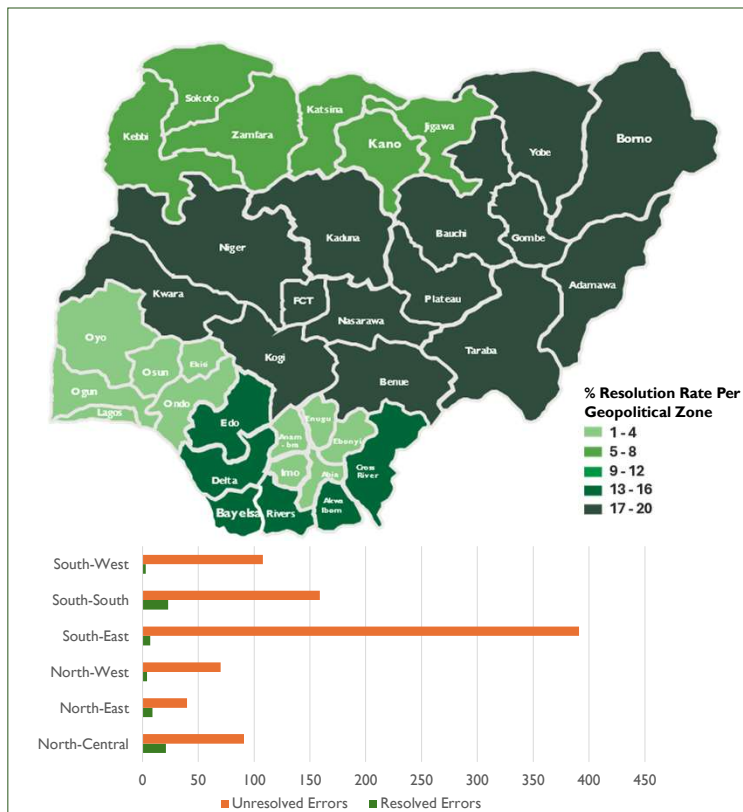
Limitations

1. Absence of certain partners limited full error resolution.
2. DOD sites presented challenges due to a lack of distribution data and limited access to facility staff for clarifications.