



Open**LMIS**

HMIS/LMIS Interoperability

Tenly Snow • Mary Jo Kochendorfer
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DHIS2 Symposium
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Open**LMIS**

1. Context
2. Opportunities
3. Challenges



Example Integrations

UN Commission Dashboard Project

- Essential strategies for building interoperable systems and keeping them in sync
 - MFLs, master product lists, interoperability layer(s) (ie. OpenHIE)
 - Coordination strategy for data integration, including ongoing maintenance and upgrades
 - MOU for defined roles/responsibilities
 - Ongoing stakeholder engagement and coordination meetings
- LMIS - HMIS : Proof of concepts in Tanzania and Senegal



Technology, People, & Processes:

Enabling Successful
HMIS/LMIS Integrations

Benefits to Integrating

Growing interest in integration between Health Management Information Systems (ex. DHIS2) and Logistics Management Information Systems (ex. OpenLMIS) to improve:

- Supply chain performance
- Service delivery
- Data quality and burden
- System harmonization

HMIS-LMIS Integration Generalized Use Cases based on Assessments in Three Countries

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VillageReach is a global health innovator that develops, tests, implements and scales new solutions to critical health system challenges in low-resource environments, with an emphasis on strengthening the "last mile" of healthcare delivery.

www.villagereach.org // info@villagereach.org

HMIS and LMIS

HMIS

Type of Information collected

- Disease incidence
- Client/patient information
- Health service utilization
- Program KPIs
- ...varies

Data Frequency/Granularity

- Point in time information based on country reporting cycle (can vary by program)
- Can be event based with tracker

Data Capture Location

- Health post, CHW, etc.
- Facility
- District, Regional, etc.

LMIS

Type of Information collected

- Commodity stock levels by product
- Stockouts
- Quantities dispensed/consumed
- Inventory management : record stock adjustments, transfers

Data Frequency/Granularity

- Point in time information based on country replenishment cycle (can vary by program)
- With each transaction (stock movement)

Data Capture Location

- Health post, CHW, etc.
- Facility
- District, Regional, etc.

Opportunities

- **Forecasting** : Aids countries in making accurate estimations of commodity consumption and predict future requirements
 - Combining disease incidence and commodity consumption to estimate national commodity needs.
 - Combining consumption, population statistics and service delivery
- **Single Data Repository** : Allows decision-makers to access data in a streamlined way, increasing efficiency
 - Single log-in to access all relevant facility, district, and national information
 - Allows performance of analysis, visualizations, and dashboards of relevant indicators from multiple data sources
- **Data for Management** : Verify data, identify problems and help managers make data driven decisions
 - Review key indicators, highlight data quality issues, reveal trends
 - Creates context for decision-makers, allowing them to build a case for known issues, identify new ones, and investigate accordingly

Example Use Case - Data for Management

Who As a national Malaria Program manager,

What I want to review and compare consumption of malaria commodities and diagnosed malaria cases,

Why so that I know if consumption is reasonable for the number of cases, or if there are issues with presumptive treatment, diversion, etc.

Challenges

- **Data quality**
 - Poor data quality in = poor data out
 - Lack of specificity in data
 - Mismatch of data sets - requires careful planning and consideration before integration (for example, do the data sets have large amounts of missing data across different time periods)
- **System harmonization**
 - Siloed data can mean variations in indicators and reference data (facility names, product data, etc.)
 - Data collection frequencies may not align
- **Data interpretation**
 - Just comparing data may not be enough - identifying issues still requires investigation
 - Processes must be in place to regularly review and clean data

Thank you



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info@openlmis.org
openlmis.org