



IMPACT STORY

Strengthening Supply Chain Systems (SSCS) Activity

April 2024

Towards Digital Health-Enabled Service Provision, Monitoring, and Visibility of Health Commodities

Background

The Government of Uganda (GoU) prioritizes the adoption of electronic logistics management information systems (eLMIS) to track and trace health commodities and supplies enhancing visibility and thus improving healthcare services. This aligns with the 2020/21 - 2024/25 Uganda Health Information and Digital Health Strategic Plan (<http://library.health.go.ug/health-information-systems/digital-health/uganda-health-information-and-digital-health-strategic>) and the 10-year Roadmap for the GoU’s Health Supply Chain self reliance 2021/2022 – 2031/2032 (<https://www.health.go.ug/cause/10-year-roadmap-for-government-of-ugandas-health-supply-chain-self-reliance-2021-2022-2031-2032/>).

In 2021, SSCS conducted an assessment across **1,774** health facilities (HFs) in **136** districts, revealing varying levels of eLMIS implementation:

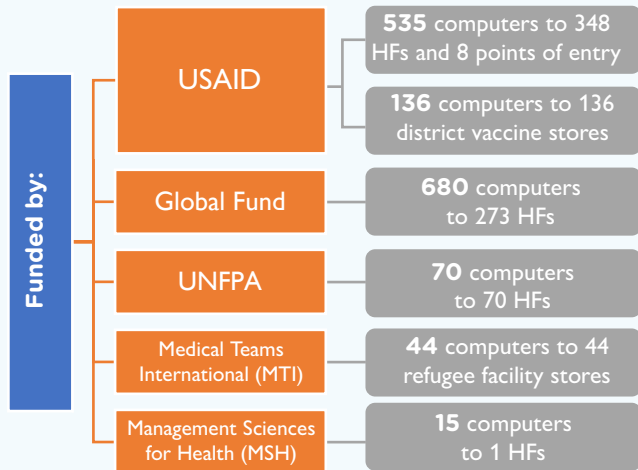
- **25%** (446/1,774) of the HFs had computers in the medicine stores, with **62%** utilizing eLMIS.
- **10%** (181/1,774) of HFs had computers in the pharmacy, with 71% functional eLMIS.
- **37%** (650/1,774) of HFs had computers in the antiretroviral therapy (ART) clinics, with **81%** functional eLMIS.

SSCS recommended providing computers to **1,328** HFs that have none.

Despite the progress, challenges such as poor infrastructure, lack of digital equipment, suboptimal power supply and poor internet access, and training persist.

Through collaborative efforts, these hurdles can be overcome. The USAID/SSCS Activity has advanced health supply chain digitalization with eLMIS systems installation in the country.

eLMIS deployed through SSCS



District representatives installing and configuring network routing and switching equipment at Namuyanja HC IV in Isingiro district.

SSCS targets to support 1500 HF with eLMIS

To focus the support, supervision visits were conducted in HF revealing that:

- Some facilities did not use their computers.
- Networking of computers in the stores, triage and a dispensing unit was essential to allow data exchange in the facilities.



SSCS installation, networking, and monitoring strategy

Installation and networking of computers followed a two-phased approach:

Phase 1: Using the SSCS team to conduct installations and networking in **412** HF that received more than one computer. Using this approach, **8** HF were networked per week.

Phase 2: Training and deploying District Information Communication Technology Officers (DICTOs) and about **40** HF were networked per week under the supervision of the SSCS team.

The monitoring process involved

- 🕒 Daily identification and resolution of challenges through task team meeting.
- 🕒 Daily tracking of the number of facilities where computers were installed and networked and linking their eLMIS to the national health data warehouse.
- 🕒 Continuous mentoring of HF to synchronize stock status data into the national health data warehouse.
- 🕒 Tracking the number of facilities that synchronized stock status data for three consecutive months.
- 🕒 Analyzing trends of (i) the number of facilities with an eLMIS and (ii) the proportion of those facilities that synchronize stock status data for three consecutive months in the national health data warehouse (NHDW).



SSCS and Mpigi District government staff preparing to install a wall-mounted network rack at Kituntu HC III in Mpigi District.

Results

- ✔ An SSCS team of **10** people completed installation and networking in only **45** out of **412** facilities by August 2023. After training and deploying **114** DICTOs, completion increased to **393** facilities by end of September 2023.
- ✔ **89** district Medicines Management Supervisors (DMMSs), **70** Clinicians, **77** Dispensers and **45** DICTOs were trained in eLMIS use so they could support HFs. The trained cadres made **288** eLMIS support supervision visits to **173** HFs.
- ✔ SSCS collaborated with district-based eLMIS mentors (DBEMs) to provide continuous hands-on mentorship to HFs. In the last quarter, **116** DBEMs conducted **419** support supervisions in **407** facilities.
- ✔ By December 2022, before computer installation, networking, and mentorship, there were **1,005** facilities with an eLMIS and **5%** synced stock status data consecutively for 3 months. As of April 2024, **1,441** out of the **1,500** target facilities had an eLMIS and **45%** (652/1,441) out of a target of **40%** synced stock status data for **3** consecutive months in the NHDW (Figure 1).
- ✔ These eLMIS data are pulled from four information systems sources including RxSolution, Signalytic, Clinic Master and Integrated Intelligence Computing Systems-Integrated Health information Management System (IICS-IHFMS) for all levels of health care.
- ✔ The data is now available through the MOH dashboards portal at dashboards.health.go.ug (Figure 2).
- ✔ Signalytic eLMIS enables communication and visibility of data between health facilities, the district health office, and the NHDW facilitating real time redistribution to mitigate stock out risks where needed.
- ✔ Digitalization of the health supply chain has facilitated evidence-based responses that have improved commodity planning, commodity visibility, transparency, along the supply chain, and demand for accountability.

Testimony



At the 2023 Health Supply Chain Week, the In-charge at Ober Health Centre (HC) IV said, “Computers were installed and networked in the store, dispensary and triage, and two nurses in dispensing and store trained in eLMIS use while others learnt through mentorship and coaching. We started navigating the eLMIS and entered data as needed.” He continued, “We had a launch of digitalization in Ober in May 2022 and had continuous support supervision and a series of mentorships that strengthened use of the system. The facility has served **2,347** patients. There is a woman who didn’t know how to use a computer at all, and she was scared, but through hands-on system navigation on Mondays and Wednesdays, she now uses the computer. The system has improved service delivery and data visibility of supply chain at a click.”

Figure 1:

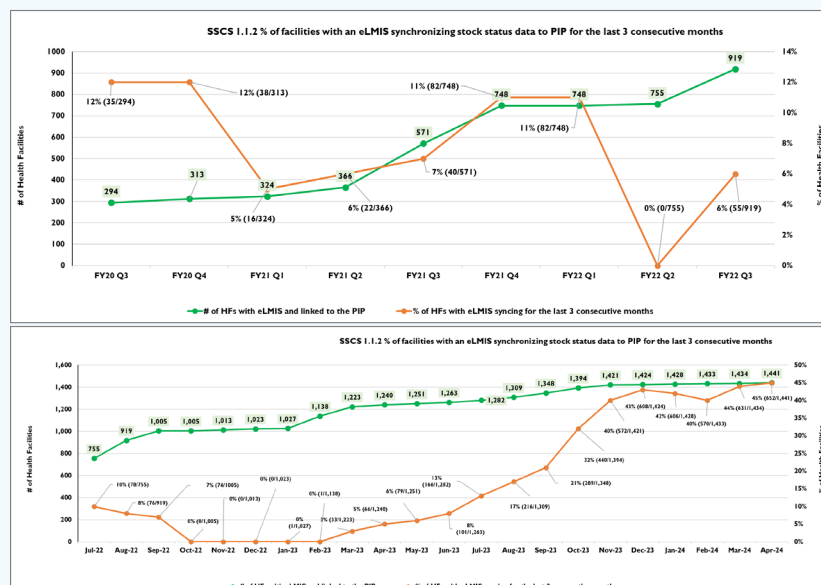
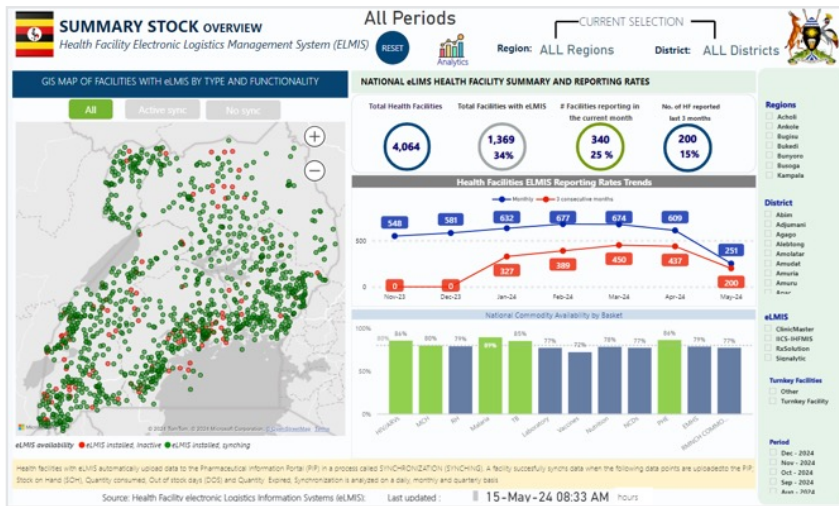


Figure 2: Dashboard visualizing eLMIS data



The SSCS team mentors staff in eLIMS use at Makongo Health Centre III, Buikwe district.

Sustainability steps

- SSCS is gradually transitioning direct support to the regional implementing partners.
 - Support to Teso region DBEMs was transitioned to AIDS Information Center – CDC/Soroti Activity effective January 2024.
- SSCS transitioned the upgraded eLMIS synchronization app to the MOH and is integrated in the NHDW.

Lessons Learned

- Using data in advocacy leads to focus and expanded results.
- Employing multipronged strategies for greater impact.
- Encouraging HFs to embrace digital systems, and once exposed, ensuring a supportive environment is in place.
- Using data for adaptability enhances efficiency, ownership, and sustainability of implementation outcomes.
- Digital literacy remains poor despite willingness to use e-Systems.
- Power is not reliable in most HFs to sustain **100%** digital systems uptime.

Recommendations

- A huge gap for supply chain computerization still exists at sub-national level. There is need to address these digitalization gaps to ensure end to end visibility in the supply chain.
- Sustainability of digitalization of the health supply chain relies on districts and facilities effective planning to maintain existing infrastructure. Existing trained District ICT Officers and eLMIS super users need to be supported to maintain and ensure use of deployed systems
- Internet reliability is a key impediment to reliable supply chain data transmission at facility level. There is need for Government through NITA (U) to scale up access to reliable internet at facility level.

About USAID SSCS Activity

The USAID-funded Strengthening Supply Chain Systems Activity aims to support the Government of Uganda to move its health supply chain system further to accelerate local capacity development by improving performance to ensure uninterrupted availability of quality essential medicines and health supplies (EMHS), improving the health status of all Ugandans. The SSCS Activity is implemented by Management Sciences for Health (MSH), in collaboration with Advocates Coalition for Development and Environment (ACODE) and Uganda HealthCare Federation (UHF).

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