AIDSFree Ethiopia

Duration of Activity: October 2016–September 2019

Life of Project Funding: $18 million

AIDSFree Ethiopia worked to improve health care outcomes by strengthening the performance of supply chain systems. The project, in conjunction with the Government of Ethiopia, aimed to increase commodity availability through enhanced data visibility, quality, and use; increase capacity to sustain the Integrated Pharmaceutical Logistics System (IPLS); and strengthen the ability of the pharmaceutical regulatory system to deliver quality medicines to realize the 90-90-90 goals.

AIDSFree Ethiopia Objectives

- Increase data visibility for all levels of the supply chain to facilitate data-driven decision-making.
- Improve data quality to catalyze increased data use and improved supply chain performance.
- Enhance the capacity of stakeholders to use data for improved decision-making.
- Increase the capacity of FMOH, EPSA, Regional Health Hubs, and their stakeholders to implement, support, and sustain the Integrated Pharmaceuticals Logistics System (IPLS).
- Complete integration of rapid test kits and commodities for malaria and MCH into the IPLS to increase data visibility for these priority commodities.
- Strengthen the ability of the pharmaceutical regulatory system to deliver quality medicines.
- Support EPSA in the development of a Center of Excellence for supply chain operations.

Technical Approach & Key Activities

AIDSFree focused on systems strengthening, reflecting the belief that the long-term security of program commodities is best served through a holistic, systems-based approach rather than by vertical supply chain programming. An emphasis on data visibility and quality served as a catalyst for improved data use. The project also used an agile software development approach to develop and deploy solutions aimed at addressing existing supply chain bottlenecks and optimizing business processes. AIDSFree's work focused on developing people, processes, and tools.

People

Strengthening and motivating staff at all levels results in an empowered workforce capable of supporting a range of supply chain functions. AIDSFree focused on building capacity through pre-service training, in-service training, and promoting data use, to ensure a more motivated and capacitated supply chain workforce supporting the IPLS at all levels. Specifically, AIDSFree:

- Implemented supply chain system strengthening quality teams (SSSC & QTs) (formerly IMPACT teams) in 18 hubs,

- Supported 1,081 health facilities to implement the IPLS through regular supportive supervision and on-the-job training, with 271 sites graduated from routine supportive supervision,
- Facilitated pre-service training of 1,997 students from the health sciences colleges,
- Trained 436 Ministry of Health (MOH) staff through the online IPLS e-learning platform with US$10,509 cost savings within six months of its introduction,
- Instructed 38 students in Master's Program in Regulatory Affairs, 49 students in Master's Program on Health Supply Chain Management at Addis Ababa University (AAU), and 49 students in Data Analytics in course with the Massachusetts Institute of Technology (MIT) (49), for a total of 136 students over the project period.

Process

AIDSFree's process improvement approach focused on supply chain integration with an emphasis on data visibility as a catalyst for improved use of quality data—across programs and levels. The open source software solutions and tools that the project developed and deployed were used as a conduit for process improvement. Specifically, AIDSFree:

- Supported IPLS to create a strong, connected health care supply chain providing accurate, timely data for decision-making,
- Supported implementation of national policies to adopt global standards for traceability and verification capability in the pharmaceutical supply chain, and
- Supported the Ethiopian Food and Drug Administration (EFDA) in the implementation of an electronic regulatory information system (eRIS) with 916 current users and 797 active product registrations.

Tools

AIDSFree employed an agile software development approach in which software solutions and tools developed were designed and deployed to address existing supply chain bottlenecks, including optimization of business processes. Having in place a comprehensive set of supply chain and regulatory information systems helped to monitor and improve the performance of the health sector. AIDSFree:

- Supported the development of seven information systems for increased data quality, visibility, and use,
- Deployed Dagu, a health facility-based inventory management system, in 973 sites with 1,039 active users and 1,200 on-the-job trainings,
- Ran Vitas, an enterprise-level information management system across the warehouse network at the Ethiopian Pharmaceuticals Supply Agency (EPSA) with ETB 3.9 trillion (US$134.1 billion) in commodities managed,
- Developed and deployed a comprehensive eRIS for EFDA, and

- Implemented user-specific dashboard pages in Fanos Supply Chain Dashboard, including a key performance indicators dashboard for EPSA and improved usage up to 269 users.

Supply Chain Integration

AIDSFree supported EPSA in implementing the IPLS, a system designed to create a strong, connected health care supply chain that provides accurate, timely data for decision-making. AIDSFree supported the integration of key maternal health and malaria commodities, and HIV test kits into the IPLS.

Supply Chain Management Information Systems

Tulu Bolo Dispensary

AIDSFree developed a comprehensive set of tools and software solutions supporting EPSA's and other IPLS supply chain stakeholders' data needs to monitor and improve supply chain performance. These technology products—all open-source and locally designed—work together to link medicine supply and demand.

To improve data visibility, quality, and use, AIDSFree strengthened data systems at all levels supporting the development and use of the Fanos dashboard, improving warehouse and stock management, and improving data visibility through mobile technology at the woreda level.

Increasing System Sustainability

AIDSFree worked with the Government of Ethiopia and other stakeholders to build a foundation to ensure long-term sustainability of systems and processes into the future. This included a focus on the improvement of business processes and training to enhance the capacity of supply chain personnel at EPSA and EFDA.

Achievements

In close partnership with EPSA, EFDA, Federal Ministry of Health, and regional health bureaus (RHBs), AIDSFree improved healthcare outcomes by strengthening supply chain systems. AIDSFree supported improved commodity availability and a strong regulatory system to ensure delivery of quality medicines through enhanced data visibility, quality, and use. Sustained increases in commodity availability testify to this success (See Figure 1).

Figure 1. Stock-out rates

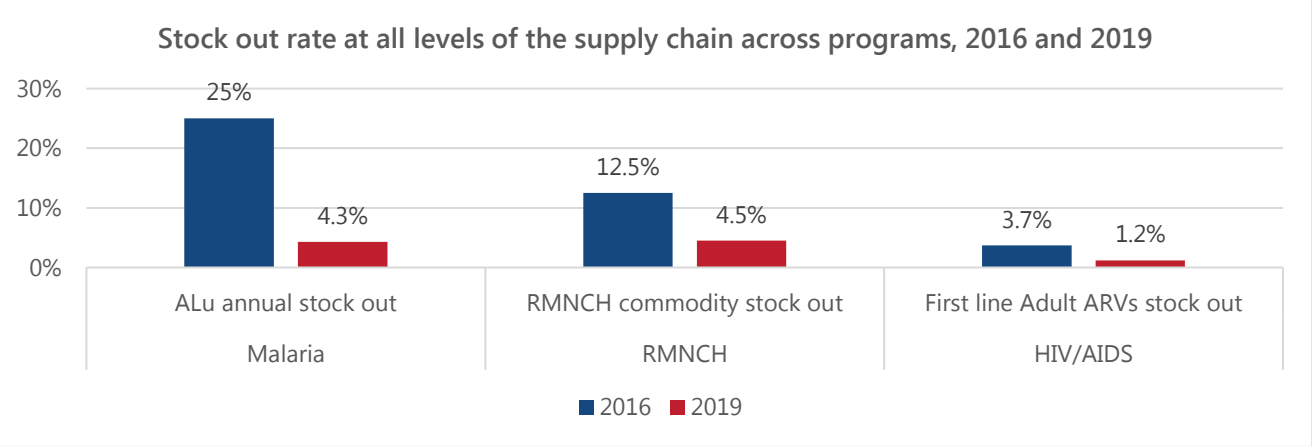

Figure 2. AIDSFree Ethiopia summary of results

Federal Ministry of Health (FMOH)

- 698 health facilities actively used Dagu
- 66 hospitals deployed Dagu view
- 1039 users
- 1200 trained through on-the-job training

Ethiopian Food and Drug Administration (EFDA)

- **eRIS implementation**
- 797 eRIS registrations
- 2901 import permits
- 10 licenses
- 916 users
- **Launched GS1 global supply chain standards and solutions**
- 95 manufacturers and wholesalers sensitized to GS1 traceability directive
- 310 attendees at Africa's first GS1 conference

Ethiopian Pharmaceuticals Supply Agency (EPSA)

- **Vitas Implementation**
- 11 directorates
- 14 staff members trained in data use / visibility
- 11 staff trained on lean six sigma
- 23,739 RRFs processed using the RRF dashboard
- ETB 3.9 trillion value of commodities managed by Vitas
- **Center of Excellence**
- 78% order fill rate
- 88% inventory accuracy
- 23.5% space optimization

Challenges, Responses, & Looking Forward

AIDSFree took innovative measures to address constraints and challenges. One major challenge was the quality of the data collected from health facilities in the Report and Request Form (RRF) and on the RRF Dashboard—making it difficult for decision makers to use. To resolve this issue, supply chain supportive supervision and SCSS & QTs tracked RRF and monitoring data on Vitas to improve data quality. Rapid test kit (RTK) integration was delayed due to unavailability of information on requirements. To resolve this, AIDSFree supported RTK integration at the Addis Ababa RHB to help to share best practices to other regions.

To address the high turnover of IPLS Health Commodity Management Information System (HCMIS) trained staff from health facilities, AIDSFree developed a long-term human resources strategy for at all levels such as pre-service training and e-IPLS. Another solution utilized focused on improving job commitment through promotion, training, and skills transfer. Additionally, while security issues across the nation limited the number of supportive supervision visits, AIDSFree Ethiopia provided remote support, leveraging data generated using the eRRF dashboard.

There has been significant progress in strengthening Ethiopia's health system by implementing locally developed, resilient, interoperable health information systems for regulatory affairs and the supply chain. However, more investment and effort are required to ensure that the existing suite of solutions are generating the accurate, complete, timely data necessary for all stakeholders to improve the health and well-being of all Ethiopians. This will require the MOH and other stakeholders to focus on:

Digitization: Build on AIDSFree's success in deploying facility-level information systems, to end persistent fragmentation; and digitize Dagu and scale it nationally to allow for true end-to-end supply chain visibility.

Data Use: Despite encouraging progress in data use, there is a need for more comprehensive, role-specific visualizations to meet the sub-national data needs of the RHB, zonal health departments (ZHD), woreda health offices (WoHO), and primary health care unit (PHCU) leaders. Furthermore, additional data use and change management capacity building initiatives are required to strengthen health care workers' capacity to use quality data for data-driven decision-making and adaptive leadership.

Governance: It is critical to ensure that support for the ecosystem of existing supply chain tools is led and managed by the Government of Ethiopia. It is also vital to continue building sub-national capacity in health information systems, not only to ensure ownership of the health system at all levels, but also to address the most significant barriers to maintaining these systems.

Related Resources

JSI in Ethiopia

AIDSFree Ethiopia End of Project Report

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