A Word from the Editor

This quarter’s edition of the Health Logistics Quarterly newsletter describes the launch of our new project, Strengthening High Impact Interventions for an AIDS-free Generation (AIDSFree). AIDSFree will focus on supply chain data visibility, quality, and use, and the closeout of the U.S. Agency for International Development (USAID) | DELIVER PROJECT. Under AIDSFree, we will continue to produce this quarterly newsletter. To help make sure this newsletter is informative and interesting, we would like to hear from you. Please email us with any comments and suggestions: paul_dowling@jsi.com.

AIDSFree Project Launch

November marked the launch of USAID’s new supply chain project to Ethiopia, AIDSFree, implemented by JSI Research & Training Institute, Inc. (JSI). With an objective of increasing the visibility, quality and use of supply chain data for decision making; and to strengthen supply chain information systems at every level. While AIDSFree addresses supply chain system strengthening generally, it pays particular attention to medicines for HIV, malaria, family planning, and maternal and child health programs.

The launch event, held in Addis Ababa, also marked the closeout of the USAID | DELIVER PROJECT. Participants in this interactive event developed a supply chain timeline showing key milestones—both those achieved in the past and those hoped for in the future. Attendees also took part in a Dashboard Quiz, answering questions on supply chain issues, and checking their answers against those displayed on the live Health Commodities Management Information System (HCMIS) dashboard.

Ethiopian Health Care Supply Chain Timeline developed at the launch event.
Supply Chain Challenges and the AIDSFree Project

By Beza Bogale and Abebe Bogale

Participants at the AIDSFree project launch in November 2016 were asked to list Ethiopia's main health care supply chain challenges, and how AIDSFree should work with the Ministry of Health and the Pharmaceutical Fund and Supply Agency to address them.

Among various challenges (see Table 1), the one cited most often was human resources, including capacity and staff turnover (cited by 27%), followed by problems with data (25%). Only 1 percent of respondents mentioned financing—specifically, financing for automation.

As to what AIDSFree can do to respond to these challenges, the largest proportion of participants (24%) cited support for ownership, communication, collaboration, and advocacy to policymakers, while 20 percent supported system strengthening. (See Table 2 for more details.)

The AIDSFree Project plans to work in all of the areas above, except for stores improvement. AIDSFree’s partner project, the Global Health Supply Chain Program—Procurement and Supply Management Project or GHSC-PSM, will continue DELIVER’s work in that area.

### Table 1. Health Care Supply Chain Challenges

<table>
<thead>
<tr>
<th>Challenge</th>
<th>Percentage of Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Data—visibility, quality, use &amp; information systems</td>
<td>25%</td>
</tr>
<tr>
<td>Human resource—capacity and staff turnover</td>
<td>27%</td>
</tr>
<tr>
<td>Lack of coordination</td>
<td>11%</td>
</tr>
<tr>
<td>Leadership and system ownership, attention</td>
<td>11%</td>
</tr>
<tr>
<td>Stockouts</td>
<td>9%</td>
</tr>
<tr>
<td>Other (includes warehousing, infrastructure, waste management etc.)</td>
<td>17%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

### Table 2. Addressing Supply Chain Challenges

<table>
<thead>
<tr>
<th>Possible Solutions</th>
<th>Percentage of Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Support for ownership, communication, coordina-</td>
<td>24%</td>
</tr>
<tr>
<td>tion, and advocacy</td>
<td></td>
</tr>
<tr>
<td>Support for system strengthening</td>
<td>20%</td>
</tr>
<tr>
<td>Strengthening HR capacity</td>
<td>14%</td>
</tr>
<tr>
<td>Increased data visibility and quality</td>
<td>14%</td>
</tr>
<tr>
<td>Stores improvement</td>
<td>5%</td>
</tr>
<tr>
<td>Other</td>
<td>23%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

Data Visibility

By Paul Dowling

The performance of a supply chain depends on its ability to quickly and efficiently match supply for materials to demand. A customer should have the product they want when and where they need it. No product means a stockout; too much product is wasteful. Matching supply and demand requires data visibility—if you don’t know what you have or what is needed, your supply chain can’t function. And you need to know not only what you have today, but what you will have next week or next month.

AIDSFree Ethiopia is working with the Pharmaceutical Fund and Supply Agency (PFSA) to enhance the visibility of procurement and shipping data in PFSA dashboards. Including procurement and shipping data in Health Commodities Management Information System (HCMIS) dashboards will enable PFSA to make better decisions, improve the availability of medicines, and reduce waste. The HCMIS is the PFSA’s logistics management information system developed and implemented by JSI under the USAID | DELIVER PROJECT and now continuing under AIDSFree. A significant milestone in this work was reached recently: AIDSFree, PFSA, and the United Nations Population Fund (UNFPA) worked together to automatically synchronize UNFPA procurement data with HCMIS. UNFPA is the lead United Nations agency for reproductive health, and is a significant supplier to PFSA of contraceptives and other maternal and child health medicines.

Now, when UNFPA place an order for Ethiopia, the information is updated automatically on HCMIS, so that PFSA know ahead of time what is coming from UNFPA. And because the data are captured automatically, there are no errors from “manual” data entry. AIDSFree and PFSA are now working with the United Nations Children’s Fund (UNICEF) and USAID’s GHSC-PSM project so their procurement data
can also be included in PFSA dashboards. This work brings PFSA a step closer to a goal of end-to-end supply chain visibility, meaning data visibility from manufacturer all the way down to point of use.

Supporting HIV Program Commodities Management in 20 High-Priority Towns

By Weletaw Nacho and Abebe Bogale

In 2015, Ethiopia adopted the UNAIDS “90-90-90” targets: 90 percent of all people living with HIV (PLHIV) will know their HIV status; 90 percent of all of PLHIV will receive antiretroviral treatment (ART); and 90 percent of all people receiving ART will achieve viral suppression. The Federal Ministry of Health launched a “Catch-up Campaign” for HIV testing and counselling in July 2016.

The United States Government is supporting this effort to reach the most affected populations where they live, and has selected 20 high-priority towns to implement intensive program interventions to achieve optimal ART coverage, including counseling and testing. As part of this initiative, AIDSFree Ethiopia is providing intensive support for HIV commodity management to public health facilities in the 20 towns. Project support includes implementation of the automated health commodities management information system (HCMIS) system (already used in 82 facilities, or over 93% of facilities in priority towns) for commodity management; monitoring tracer health commodity availability and resolving stockouts or shortages; and on-the-job mentoring for pharmacy staff. This support will improve commodity availability and help achieve targets for testing and treatment.

During the past quarter (October–December 2016), project staff monitored availability of HIV program tracer items in 339 ART sites (hospitals and health centers) and 123 prevention of mother-to-child transmission sites within 9 regions and 2 city administrations. Of the 339 ART sites visited, 62 were located in the priority towns. Figure 1 below shows the stockout rate of specific antiretrovirals (ARVs) and test kits in the high-priority towns. Notably, there was 100 percent availability of test kits. In the past, shortages of test kits have reduced the ability to meet testing targets. For ARVs, the main adult regimen also showed 100 percent availability. While there were some stockouts of pediatric and second-line regimens in some cases, this was due to absence of patients on those regimens (however, facilities are still expected to stock those regimens).

Table 3. Stockouts of Antiretrovirals and HIV Test Kits in 62 Facilities, October–December 2016

<table>
<thead>
<tr>
<th>Tracer Drugs List</th>
<th>Facilities Stocked Out (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Efavirenz 600MG/tab</td>
<td>0</td>
</tr>
<tr>
<td>Efavirenz-Lamivudine-Tenofovir disoproxil fumarate 600+300+300MG/tab</td>
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<td>11</td>
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<tr>
<td>HIV test kit</td>
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</table>
Introducing Barcodes to Increase Safety and Efficiency in the Ethiopian Health Care Sector

By Elisa Zwandeveld

We all know that familiar “beep” when the cashier at the supermarket scans your shopping. Since the first product, a pack of Wrigley’s gum, was scanned in a supermarket in the U.S. over 40 years ago, the use of barcodes has seen enormous growth across various sectors. Currently, over 5 billion barcodes are scanned around the world every day.

Not so well known is that the same standard for product identification, the GS1 barcode, can be used for our own safety. Barcodes can do more important things than distinguish Pepsi from Coke. They can distinguish 1 milligram from 10 milligrams, Iodine from Lodine; or they can tell Ato Tesfaye from Ato Tesfay, even when they are lying in the same hospital room.

Global Standards

The implementation of global standards for barcoding and naming within the health care sector has huge potential for patient safety and efficiency. Global standards for product identification ensure that products, locations, people, and assets can be uniquely identified. Unique identification, in combination with expiry date and batch number, enables the improvement of recall processes and inventory management. This prevents waste and use of expired products. Product serialization makes it possible to uniquely identify specific packages that can be authenticated against a secure database, supporting traceability through the entire supply chain and preventing the circulation of counterfeit products.

Around the World

Many regulatory bodies around the world—the European Union, the U.S., Turkey, and Argentina, for instance—see the benefits of the implementation of global standards for track and trace.

Now, with support from the AIDSFree Project, the Federal Ministry of Health in Ethiopia, along with its specialized agencies, the Food, Medicine and Health Care Administration and Control Authority of Ethiopia (FMHACA) and the Pharmaceuticals Fund and Supply Agency, or PFSA, have started initiatives to adapt information systems to GS1 standards as a way of improving patient safety and supply chain efficiency.

Currently, a working group with participants from FMHACA, PFSA, the United Nations Population Fund (UNFPA), JSI, and USAID is working on a pilot to test GS1 barcode tracking from manufacturer all the way down to end users. The findings will be used to develop a roadmap for full implementation of traceability in Ethiopia, to make sure that the right medication is available at the right time for the right patient.

For more information about this project, send an email to Elisa Zwaneveld: elisazwaneveld@gmail.com. Visit www.gs1.org or www.gs1.org/healthcare to understand how GS1 standards influence your life. Also, see McKinsey’s report on the promise of global standards in health care.
Malaria Supply Chain Integration for Improved Medicine Availability

By Sami Tewfik

Integration of malaria commodities into Ethiopia’s Integrated Pharmaceutical Logistics System (IPLS) began in 2015, as a way of enhancing sustainability, commodity security, and efficiency (among other rationales. As of early 2017, the Pharmaceutical Fund and Supply Agency (PFSA) center and almost all hubs have begun distributing malaria medicines and diagnostics as part of IPLS.

According to the supportive supervision data collected from October 2015 to December 2016, stockouts at health facilities of Arthemeter-Lumfantrine, the first-line drug for plasmodium falciparum (by far the most common form of malaria in Ethiopia), diminished significantly from 25 percent in October–December 2015 to just 3 percent in October–December 2016 (Figure 1).

Hamusit Health Center, in South Gondar Zone, Dera Woreda, is one among many health centers benefitting from supply chain integration. According to Mrs. Kassaye Sinkineh, the store head of the Hamusit Health Center, integration has greatly improved the availability of malaria medicines. Also, the facility no longer has to send pharmacy staff and vehicles to collect malaria medicines from woreda or zonal health office—now PFSA delivers based on their request.

Despite ongoing work and continuing challenges, these initial data do suggest that thanks to the hard work of PFSA staff and others, malaria supply chain integration is working well.

Pharmaceutical Stores Improvement

(Note: This article was published originally in the USAID | DELIVER PROJECT closeout report)

A proper storeroom with trained staff is a requirement for implementation of the paper system—which, in turn, is a prerequisite for automation.

With this in mind, in 2008, USAID | DELIVER began supporting improvement of pharmaceutical stores. The project provided shelving, equipment including pallets, hand trucks, and ladders, and support for stores reorganization.

These were not standalone inputs. They were part of a holistic program of project support that included training, implementation of paper systems and supportive supervision, and in some cases, automation.

By mid-2016, the project had improved 551 health facility stores in every single region of the country (see map).

To enhance sustainability, DELIVER also:

- Trained 41 government counterparts from PFSA and Regional Health Bureaus on how to do stores assessments, and supervise installation of shelving
- Shared specifications for quality shelving and other items with health facilities
- Advocated for the importance of providing adequate storerooms in newly constructed facilities, and supported facilities using their own funds for improvements.

Update: While AIDSFree will not be implementing stores improvement, work will continue in the future under our partner project Procurement and Supply Management (PSM).

Figure 1. Proportion of Service Delivery Points Experiencing Stockout of ALu Presentations by Quarter

![Figure 1. Proportion of Service Delivery Points Experiencing Stockout of ALu Presentations by Quarter](image-url)
Supportive Supervision Updates

During the year, AIDSFree field staff conduct supportive supervision visits to health facilities to provide technical support and collect data on IPLS implementation. Three critical indicators are summarized below for 2016: 1) Correct and consistent use of the Internal Facility Report and Resupply Form (Figure 1); 2) Percentage of facilities using RRF for reporting and requisition (Figure 2); and 3) Stock availability of tracer items (family planning and antiretrovirals or ARVs) (Figures 3 and 4).

Figure 1. Percentage of Facilities Using Internal Report and Resupply Form in at Least 80% of the Major Dispensing Units, 2016

Figure 2. Percentage of Facilities Using RRF for Report and Requisition, 2016

Figure 3. Percentage of Facilities Using RRF for Report and Requisition, 2016

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Technical Working Groups Promoting Use of Health Commodity Management Information System (HCMIS) Dashboard Data

The HCMIS Dashboard was developed in 2016 by JSI and the Pharmaceuticals Fund Supply Agency (PFSA) to provide access to live commodity data from the data center and hubs. The HCMIS Dashboard allows users to access live commodity data from across the PFSA network (center and 17 hubs).

Since January 2016, AIDSFree has tracked dashboard use through Google Analytics. The number of both new and repeat users visiting the dashboard was disappointing. In consultation with PFSA, AIDSFree instituted a data utilization Technical Working Group (TWG) to increase the quality and use of logistics data. The TWG is chaired by PFSA and also includes representatives from the AIDSFree, and Procurement and Supply Management Projects. TWG members:

- Assess the current status of dashboard data utilization (using Google Analytics)
- Identify and work on barriers to dashboard data use (internet connection, data completeness and/or timeliness, user reluctance, and others)
- Customize pharmaceuticals items under each program
- Help others use HCMIS dashboard data
- Propose types of reports to generate in line with current and future needs
- Align the dashboard product list with PFSA’s procurement list
- Propose generation of various analyses from dashboard data

To date (among other activities), the TWG has reviewed and updated the items included in program dashboards, including those for vaccines, child health, and tuberculosis. The TWG is also conducted a survey of HCMIS dashboard users.

A total of 237 PFSA staff members from center and hubs were surveyed on their use of and experience with the HCMIS dashboard; 180 of these (76%) completed the survey. Findings showed that among these respondents:

- Use: 115 respondents (64%) use the HCMIS dashboard.
- Frequency: Among users, 65 percent used the dashboard at least once weekly; 35 percent use it less often.
- Training: 74 percent of respondents said they needed training on the dashboard; 26 percent requested on-the-job mentoring to use the dashboard. The survey also asked respondents what they used the dashboard for (Figure 1), and reasons for not using it.

Stock management was the most common reason for using the dashboard (44%). Interestingly, the second most common reason was to generate reports. With live data, we would hope that use of the dashboards for reports would decline over time.

(continued on page 8)
Poor connectivity was by far the most common reason for not using dashboards (45%), followed by lack of skills second (28%) (see Figure 2). While AIDSFree has made significant improvements so that dashboards load faster, good connectivity is absolutely essential to monitor live data. Interestingly, relatively few respondents mentioned data quality (11%) and user-friendliness (6%) as reasons for not using the dashboards.

TWG members are analyzing these findings and planning future activities to address them and increase data usage.

**Figure 1. Reasons for Using Dashboard**

**Figure 2. Reasons for Not Using Dashboard**

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