USAID | DELIVER PROJECT
Final Country Report
Guatemala
USAID | DELIVER PROJECT, Task Order 4

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Recommended Citation

Abstract
This report summarizes the work carried out by the USAID | DELIVER PROJECT in Guatemala from 2011–2016. To provide technical assistance in family planning, the project strengthened the public health supply chains and improved the environment for commodity security.

Cover photo: Primary Care Center (CAP), San Andrés Sacapulas, 2011, Department of Quiché. USAID | DELIVER PROJECT.

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Project Overview and Context
Since 2011, the USAID | DELIVER PROJECT (the project), in collaboration with USAID, the United Nations Population Fund (UNFPA), and the Ministry of Public Health and Social Welfare (MSPAS) have worked to strengthen the supply chain logistics system, including the logistics management information system (LMIS) for medicines and health supplies; inventory control; warehousing; and the forecasting, quantification, and procurement processes for health supplies.

Within the network of health services—from the central level to the community level—the situation of understocks and stockouts of essential drugs, vaccines, micronutrients, contraceptives, and other health supplies has improved. The project contributed to efforts to integrate the functions of the supply chain in 2015, creating the logistics management unit (LMU), which manages the processes and functions of the supply chain and promotes unified approaches to managing essential drugs, contraceptives, and other health supplies.

At the request of USAID, the work of the project focused on the central level of the health supply chain and the seven priority health regions in the Western Highlands:
Investment in Technical Assistance

In 2011, the project conducted an assessment of the supply chain and identified areas for improvement. In late 2014, the National Essential Drugs List (NEDL) was developed to allow the Ministry of Health (MOH) to procure and use essential drugs more rationally. In early 2015, for the first time, an LMU was created by ministerial decree, and a Supply Chain Master Plan (SCMS) was developed to support the LMU efforts. In four years, $2.6 million was spent on technical assistance to develop the health workforce and strengthen the supply system in-country.

In the health regions, the project developed approaches adapted for local context that supported selection, forecasting, quantification, and storage of medicines and health supplies.

For example, the project used on-the-job training, virtual courses, formal training courses, pre-service training, and other approaches to develop and strengthen the skills of the MOH staff.

The project also invested in the LMIS to improve data for decisionmaking, developing a data collection and information management tool that gives seven USAID-priority health regions access to a standardized LMIS. The LMIS improved the timeliness in the availability of data, transparency, and completeness, allowing for better and faster decisions to address supply chain issues.
Family Planning in Guatemala

Family planning is one of the main activities used to prevent maternal mortality; the use of family planning methods has steadily increased since 1998, reaching 60 percent in 2014–2015.

The supply chain for family planning methods in Guatemala has, historically, been the example to follow for the logistics management of other medicines and supplies. Contraceptives were procured centrally through UNFPA. By implementing the Access Database Tool, the project helped the Family Planning Program review and modify the monthly inventory tracking sheet and consumption records to improve the logistics data collection and analysis.

During shortages, each health region rations the distribution of contraceptives to health facilities, which reduced availability at the community level. Resolving issues related to budgeting, forecasting, procurement, distribution, and transportation helped tackle most of the current understock and stockout situations, and it will continue to do so in the future.

USAID | DELIVER PROJECT shipments provided 195,000 couple-years of protection

- 52,000 Unintended pregnancies prevented
- 610 Infant deaths prevented
- 37 Maternal deaths prevented
- 220 Under-5 child deaths prevented from improved birth spacing
Essential Medicines in Guatemala
The MOH uses essential drugs more rationally because of the NEDL

The NEDL, developed jointly by the Pan American Health Organization (PAHO) and USAID | DELIVER PROJECT, has approximately 150 drugs that the first and second levels of healthcare can use.

The 29 health regions and hospitals individually procure essential drugs and health supplies. The priority health areas (DAS)—represent the largest volume of health supplies, but they also face a huge challenge to ensure their timely availability. The Reproductive Health Program (RHP) procures the contraceptives, but it is the health regions’ and hospitals’ responsibility to pick them up from the RHP’s central warehouse and transport them to the health facilities and wards, respectively.

When the NEDL was disseminated to the health facilities in 2015, the project worked closely with the priority health areas and helped reduce the number of different essential medicines they were procuring and distributing throughout the primary healthcare facilities. From the locally developed lists, they eliminated any drug that was not approved for use at this level, thus optimizing their financial resources and improving the availability of those medicines that needed to be available at each level of health facility.

Results

- The NEDL was developed and implemented.
- Standardized forecasting methodology used logistics data to calculate drug needs.
- Storage practices improved.
- Management of rational drug use improved after introducing the official NEDL by reducing the number of drugs procured and including only those permitted under the guidelines of the new NEDL. Also, the availability of drugs improved. Below is an example from the San Marcos and Huehuetenango health regions:

<table>
<thead>
<tr>
<th>Criteria</th>
<th>San Marcos</th>
<th>Huehuetenango</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drugs with therapeutic duplicity</td>
<td>5</td>
<td>0</td>
</tr>
<tr>
<td>Drugs not allowed for use at this level</td>
<td>8</td>
<td>5</td>
</tr>
<tr>
<td>Drugs not included in the NEDL</td>
<td>12</td>
<td>5</td>
</tr>
<tr>
<td>TOTAL DRUGS (before and after revision)</td>
<td>173</td>
<td>131</td>
</tr>
</tbody>
</table>

Availability of medicines in priority health areas (DAS)

- 2012: 72%
- 2013: 88%
- 2014: 81%
- 2015: 72%
- 2016: 80%
When technical assistance began in 2012, the supply chain management of vaccines had no clear guidelines. The only pieces of data available at the central level were issues data related to specific regions and stock data pertaining to the central level.

The project supported the MOH by implementing logistics guidelines for vaccines, and also developed an Excel tool to assist with the forecasting process. The tool uses both logistics and demographic data that allows comparison and analysis to establish a more accurate estimate for decisionmaking.

The project also developed another Excel tool to help determine cold chain capacity needs at service delivery points; it uses the measurements of the equipment and the annual consumption projection. This important data defined the inventory control system.

For many years, the MOH has made the immunization program a priority; with its high coverage, it is considered one of the most successful, according to Encuesta Nacional de Salud Materno Infantil (ENSMI). The program’s procurement projection for 2016 is $51.7 million.
Technical Assistance
Technical Assistance Overview

To deliver high-quality healthcare to patients and clients, health facilities and dispensaries must have a full supply of medicines and other health products. This can only happen with a well-functioning supply chain.

Using best practices and innovative approaches, the project develops and implements robust logistics solutions, fosters supportive commodity security environments, procures and ships health commodities, and partners with local organizations to build sustainable capacity.

In Guatemala, these interventions include—

**Strengthen Logistics System Performance**
- Implementing a Logistics Data Recording Tool
- Establishing a LMU for Essential Medicines and Health Supplies

**Increase National Commitment to Commodity Security**
- Establishing the Alliance for Supply Chain
- Developing a Supply Chain Master Plan for Strengthening Drug Management in the MOH

**Build Sustainable Capacity**
- Drug Logistics Management Degree
- Designing a Blended Training Model for Health Units
To improve health outcomes in the countries where we work, the USAID | DELIVER PROJECT increases the availability of health products by strengthening supply chains and creating a global commitment. These efforts are guided by the project’s supply chain integration framework.

In the public health setting, an integrated supply chain links everyone who manages essential health commodities into one cohesive management organization, ultimately helping clients access quality healthcare services and supplies.
Implementing a Logistics Data Recording Tool

At the beginning of the project's technical assistance in Guatemala, it was clear that the collection of essential logistics data for analysis and decisionmaking needed to improve; since then, a tool was developed to report and make this information available at the district, regional, and central levels.

The development of the tool, which began in December 2013, had a target use date of 2014; follow up has been continuous to ensure that its regular and correct use is consolidated at the district level and in the seven health regions.

Many challenges surfaced when the tool was implemented. Because dedicated computer equipment for logistics data processing was not available, written information on supply chain procedures was outdated and staff resisted using the tool. Initially, the tool only covered drugs, but strong demand called for including medical supplies. Through this, the project gained support; the tool also gained more visibility and was used widely by health staff at the regional and district level.
Establishing an LMU for Essential Medicines and Health Supplies

Using a series of strategic interventions, the LMU aims to ensure the availability of medicines and health supplies at the MOH health facility network by improving the performance of the supply chain.

Among the first findings identified by the project in 2011 were the fragmented logistics system within the MOH, the duplication of logistics guidelines, as well as the lack of stewardship from the MOH for managing all functions of the supply chain. Each program, hospital, and region managed parallel, uncoordinated supply chain functions and systems.

With PAHO and the Supply Chain Management System (SCMS), the project proposed to develop an LMU that would be responsible for managing all supply chain functions and would ensure the availability of medicines and health supplies, including a robust and reliable logistics information system.

The proposal to establish the LMU was initially raised to the Minister of Health in September 2012, but it was not created until December 2014 by a ministerial agreement. However, in the effort to achieve empowerment and sustainability, technical assistance to the LMU remains an ongoing activity because of the personnel turnover and political instability.

The LMU has begun the integration and standardization of the drug management system through the following activities:

- Developed a single drugs catalog for the entire health facility network.
- Completed a comprehensive analysis of the drug supply process.
- Provided leadership in implementing the electronic reverse auction.
- Developed standardized supply chain guidelines for drug management and health supplies, including strategic national program supplies.
- Actively participated in developing the Supply Chain Master Plan (SCMP).
Increase National Commitment to Commodity Security

Commodity security exists when every person is able to choose, obtain, and use quality contraceptives and other reproductive health products whenever they need them. Strong supply chains alone cannot ensure the availability of or access to these commodities.

To help countries create an enabling environment for reproductive health commodity security, the USAID | DELIVER PROJECT, in collaboration with its counterparts, undertakes a variety of policy and advocacy activities at the global, regional, and country levels.
Establishing the Alliance for Supply Chain

The project worked with donors and USAID implementing partners to promote coordination, to provide targeted technical assistance to the MOH to ensure that different resources and skills are available for the government, and to avoid duplication of effort.

The formation of the Alliance for Supply Chain began in November 2013. The alliance remained active during periods of political turmoil and instability when the MOH required more support. It was created in response to the Ministry of Health and Public Welfare (MSPAS) need to receive coordinated technical assistance in supply chain, optimize the use of resources, and avoid duplication of efforts.

Promoted by the Latin America and the Caribbean (LAC) Bureau through the regional initiative of the project—and supported by the local project—the Alliance for Supply Chain shares interests and efforts similar to PAHO; the Inter-American Development Bank (IDB); United Nations Children’s Fund; UNFPA; USAID; and the private sector, represented by the Alliance for Nutrition. These partners support the improvement of the MSPAS supply chain and reduce gaps in forecasting, procurement, and other key areas of the supply chain by providing the MOH with a coordinated technical assistance effort.

One main achievement of the alliance was the development of the SCMP, which helped the MOH identify technical and strategic areas where each agency could offer its expertise. Furthermore, the plan helped agencies harmonize their efforts, leading to better support of the MSPAS in its efforts to strengthen the supply chain management of essential drugs and health supplies.
Developing an SCMP to Strengthen Drug Management in the MOH

The SCMP provides the MOH with a systematic approach to manage all essential medicines and health supplies in an organized, professional, and effective way.

The SCMP, led by the LMU—with support from donors working at the Alliance for Supply Chain and participation from different departments of the MOH and the Ministry of Finance—had the following objectives:

- develop comprehensive and integrated supply chain management
- define the main strategies in this process
- strengthen the LMU as the governing body.

The SCMP was developed in two phases:

**First phase**
- Strength, weaknesses, opportunities, threats (SWOT) analysis
- Politics and legal framework
- Economic and social dynamics
- Mapping of internal analysis with key actors in the MOH to assess pros and cons for an SCMP.

**Second phase**
- Establish strategic objectives.
- Plan development.

To achieve the availability of essential medicines and health supplies and reduce stockouts, the MOH will focus on the SCMP’s seven strategic areas, which have been the major consequence of a fragmented supply chain management system.

**SCMP’s Seven Strategic Areas of Focus**

1. policies and regulations in supply chain management
2. selection and rational drug use
3. forecasting of essential medicines and health supplies
4. procurement
5. warehousing and distribution
6. LMIS
7. professionalization of human resources in supply chain management.
Build Sustainable Capacity

An essential component of a robust health supply chain is the staff that implements the logistics tasks. To run effectively, public health supply chains require motivated, trained, and skilled staff with competency in the various essential logistics functions, who are also empowered to make decisions that positively impact health supplies and supply chains.

The goal of the USAID | DELIVER PROJECT’s capacity-building activities is to strengthen human resources in public health supply chain systems in the developing world. A focus on developing a superior workforce allows organizations and individual staff to accomplish their customer service goals, ensuring stronger performance among public health personnel and, therefore, increased availability of contraceptives and other essential health products.
Drug Logistics Management Degree

Logistics training, at all levels, created the expertise needed to effectively run the health supply chain. Through a recognized training institution, the project developed a virtual course in drug logistics management.

In 2015, through a strategic alliance with the Organization of Iberoamerican Pharmacists (Organización de Farmaceuticos de Iberoamerica [OFIL]), the project developed a three-month virtual course in drug logistics management. The course is aimed at health professionals that work in any area related to supply chain management, not only within the MOH, but in other institutions that provide health services. The project ensured that the course responded to the needs of all students interested in the logistics management/supply chain field.

All 14 students in the first group passed the course: 11 students from the MOH staff had scholarships from the project and three students were from other health agencies. The project called for a second group to take the course during 2016.

Objectives

- Increase knowledge of supply chain management for health systems for students who plan to have a career in pharmacy and chemistry, as well as for other health professionals.

- Contribute to the sustainability of logistics processes in the public sector by incorporating the basic concepts of the supply chain into accredited/certified higher education and training schools.
Designing a Blended Training Model for Health Units

A training model in drug management and health supplies was developed to provide a sustainable training mechanism for staff from health facilities, especially in hard-to-reach, remote areas of the country.

Under LMU leadership, the training model was developed in July 2015, in a coordinated technical assistance effort between the project and the Mesoamerica Health Initiative.

The intervention included several training phases:

- Training-of-trainers facilitated central-level staff from the LMU becoming familiar with adult-learning skills and how-to tools to provide training to lower levels.
- Formal classroom trainings for district-level staff developed training skills and they became familiar with monitoring and evaluation tools.
- Distance learning tools were available for health facility staff (e.g., manuals and exercises on DVD), divided into several modules. District-level staff evaluate the modules after they are complete, and they administer pre- and post-tests.
- Monthly tutorials came from the district-level staff to resolve supply chain management questions and issues at the health facilities.

This intervention provided the following results—

- Reduced the training period for managers from the health units to guide them through the implementation of the Technical Drug Management Guidelines.
- Focused training efforts on the manager’s supply chain tasks. Decentralized training responsibility from central-level staff to logistics officers at the district level.
- Implemented a sustainable training mechanism for entry level MOH staff.
The Way Forward
The Way Forward

The MSPAS’s most significant challenges are to improve the supply chain and better position the LMU as the governing body on every issue related to supply chain management. To achieve the full integration of logistics activities, the management of health supplies must improve.

Moving forward, the procurement of health supplies must be accompanied by the necessary resources to finance logistics activities. This includes implementing activities, such as monitoring, technical assistance, storage, information management for decisionmaking; and, most important, the timely procurement and distribution of all medicines, vaccines, contraceptives, and health supplies to the last mile. These activities are essential to increasing the availability of drugs at all service delivery points.

Giving health professionals the opportunity to take pre-service training in supply chain management through accredited higher education schools will be instrumental in building the necessary skills for performing supply chain functions at different levels of the health system, including managerial responsibilities. As a complementary effort, health systems should continue to support health facility staff in taking supply chain modules as part of an ongoing capacity building effort to acquire skills and ensure the proper performance of supply chain functions.

The dissemination and implementation of the SCMP is key for the MSPAS. It should be considered one of the most important activities for the LMU during the next four years. A window of opportunity has opened now that Guatemala has a new government and authorities are committed to supply chain issues. The LMU should seek new partners internally and outside the MOH.

The role of the Alliance for Supply Chain will be instrumental in defining how the supply chain is elevated to the highest level of priority within Guatemala’s health system.

Immediate Next Steps

- Seek endorsement and approval from the new government for the SCMP.
- Coordinate technical assistance among partners and donors to achieve the results set out in the master plan.
- Revisit the supply chain costing study conducted by the regional initiative of the USAID LAC Bureau and invest in the supply chain. Focus on the costs identified for each supply chain function to ensure that MSPAS allocates the necessary funds for timely distribution of medicines and health supplies to the last mile.
- Launch the first reverse electronic auction event and expand the procurement mechanisms.
- Start developing a single, unified information system for the MSPAS.
- Discard obsolete equipment and material in poor condition to free storage space and generate better storage conditions that comply with best practices.
- Try the different options that the project developed to optimize routes for distribution of medicines and health supplies.
- Improve administrative processes to reduce procurement lead times.
- Complete multi-year forecasting needs exercises to identify/anticipate financial and programmatic gaps in medicines and health supplies.
### Acronyms

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
</tr>
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<tbody>
<tr>
<td>DAS</td>
<td>health area directorate</td>
</tr>
<tr>
<td>ENSMI</td>
<td><em>Encuesta Nacional de Salud Materno Infantil</em> (Maternal and Child Health National Survey)</td>
</tr>
<tr>
<td>IDB</td>
<td>Inter-American Development Bank</td>
</tr>
<tr>
<td>LAC</td>
<td>Latin America and the Caribbean</td>
</tr>
<tr>
<td>LMIS</td>
<td>logistics management information system</td>
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<tr>
<td>LMU</td>
<td>logistics management unit</td>
</tr>
<tr>
<td>MOH</td>
<td>Ministry of Health</td>
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<tr>
<td>MSPAS</td>
<td>Ministry of Public Health and Social Welfare (<em>Ministerio de Salud Pública y Asistencia Social</em>)</td>
</tr>
<tr>
<td>NEDL</td>
<td>National Essential Drugs List</td>
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<tr>
<td>OFIL</td>
<td>Organization of Iberoamerican Pharmacists (<em>Organización de Farmaceuticos de Iberoamérica</em>)</td>
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<tr>
<td>PAHO</td>
<td>Pan American Health Organization</td>
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<td>RHP</td>
<td>Reproductive Health Program</td>
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Further Reading


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